



BENSHAW
Applied Motor Controls

Product Catalog



JULY 2025 EDITION

Low Voltage Products

Rapid | Rugged | Global



Benshaw standard products are stocked in warehouses in the USA and Canada ... ready for shipment to support your critical needs.

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www.Benshaw.com

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BenshawExpress.com

CANADIAN WEBSTORE ...

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Benshaw Express is a convenient, time-saving tool for Benshaw authorized distributors. Our webstores provide 24/7/365 access to ...

- Check product pricing and availability
- Place and track orders for standard products (soft starters, variable frequency drives, full voltage controls, molded case circuit breakers, pilot devices, parts and accessories)
- Configure packaged products
- View recent orders
- And more ...

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Introduction

Benshaw offers a complete range of open chassis, protected chassis and packaged low voltage soft starters ... each designed to meet or exceed specific application requirements.

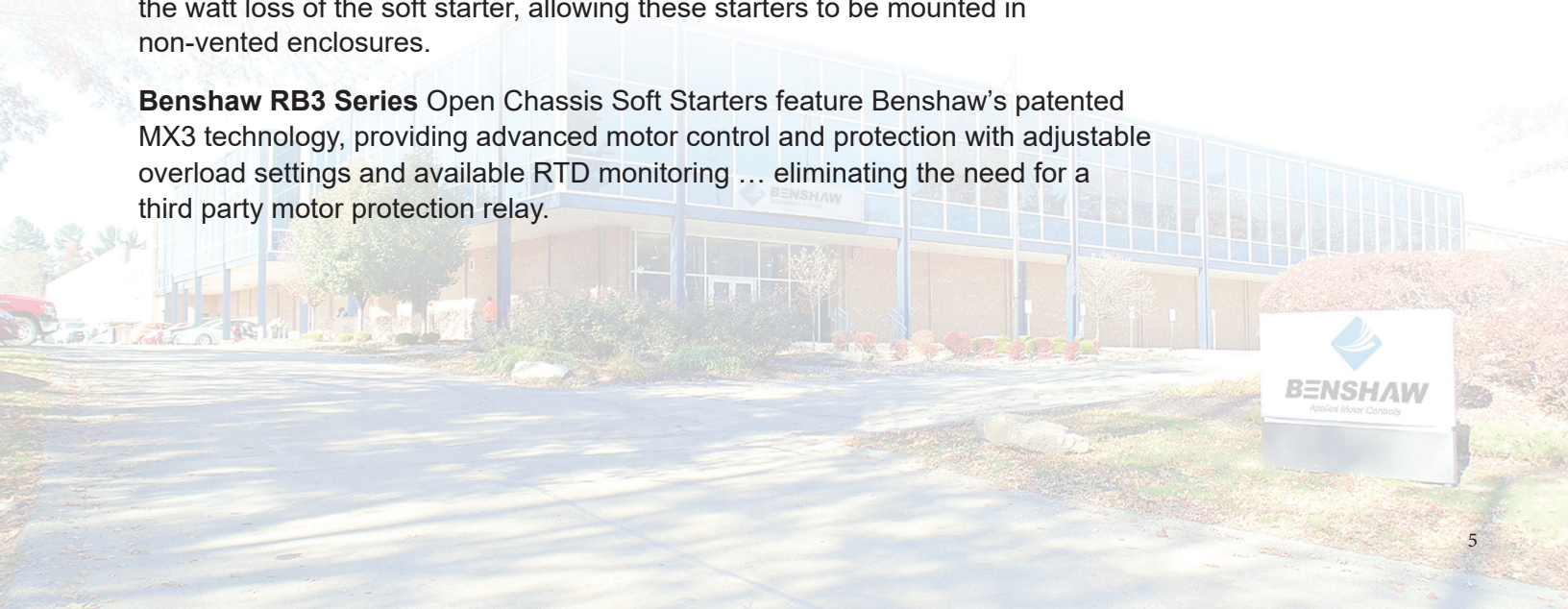
Our standard duty soft starters (CSXi Series) are ideal for a wide range of basic soft start applications. Advanced models provide “Smart Card” flexibility and added protection for standard and heavy duty (EMX4 Series) applications, and our MX2- and MX3-based starters (RB2 and RB3 Series) are well suited for use in a wide range of severe duty applications.

Benshaw CSXi Series Low Voltage Protected Chassis Soft Starters are compact, easy-to-use soft starters with built-in motor protection. CSXi Series soft starters provide greater control for starting and stopping of three phase motors, and, at only 6.5 inches (165mm) deep, are easy to mount in shallow enclosures.

Benshaw EMX4 Series Low Voltage Protected Chassis Soft Starters make it easy to access the right information ... right when you need it. EMX4 Series starters include a comprehensive graphical display, quick setup menus and comprehensive starter/motor/system protection functions, complete with alarms to alert you to any potential issues. For critical must-run applications, Power Through and Emergency Run functions provide the ability to keep running even if you lose one phase.

The **Benshaw RB2 Series** Open Chassis Soft Starter is a compact, simple to use soft starter with built-in motor protection, providing greater control in starting and stopping of three phase motors. The unit’s integral bypass contactor reduces the watt loss of the soft starter, allowing these starters to be mounted in non-vented enclosures.

Benshaw RB3 Series Open Chassis Soft Starters feature Benshaw’s patented MX3 technology, providing advanced motor control and protection with adjustable overload settings and available RTD monitoring ... eliminating the need for a third party motor protection relay.



BENSHAW LINE OF SOFT STARTERS

Benshaw offers a complete range of open chassis and packaged low voltage soft start solutions. Our standard duty soft starters (CSXi Series) are ideal for a wide range of basic soft start applications. Advanced models provide “Smart Card” flexibility and added protection for standard and heavy duty (EMX4 Series) applications, and our MX2 and MX3 motor control technology (RB2 & RB3 Series) for severe duty applications. The following comparison chart details the differences between these offerings:

Low Voltage Soft Starter Comparison

Series	CSXi	EMX4e	EMX4i	RB2	RB3
Features					
HP Range @ 230 Vac	5-75	5-200	5-450	10-350	10-350
HP Range @ 460 Vac	10-150	10-400	10-900	20-1000	20-1000
HP Range @ 575 Vac	15-200	15-500	15-1200	25-1000	20-1000
Control Voltages	110-240Vac	110-240Vac	110-240Vac	120Vac	120Vac
24V Control (optional)	•	•	•		
Run Bypass	•	•	•	•	•
HMI	opt	•	•	opt	•
LCD Keypad Programming	LED opt	•	•	opt	•
Warranty	3yrs	3yrs	3yrs	3yrs	3yrs
USB Interface	opt	std	std	N/A	N/A
Number of Inputs	start/stop only	2	2	3	8
Additional Fixed Inputs for Start/Bypass Confirm	1	1	1	2	2
Number of Outputs	1	2	2	3	6
Additional Outputs for Bypass Control	1	1	1	1	1
Real Time Clock for Data Logging		•	•		•
Event Log		•	•		•
Starts Per Hour Limiter		•	•		•
Time Between Starts Limiter		•	•		•
Zero Speed Switch Input			•		•
Communication Protocols:					
485 Modbus RTU	module	card	card	•	•
DeviceNet	module	card	card	opt	opt
Profibus	module	card	card	opt	opt
Modbus TCP	module	card	card	opt	opt
Ethernet IP	module	card	card	opt	opt
Profinet	module	card	card	N/A	N/A
NEMA/IP rating	≤ 100A = IP20 and ≥100A = IP00	≤ 100A = IP20 and ≥100A = IP00	≤ 100A = IP20 and ≥100A = IP00	Open Chassis	Open Chassis
LED Indicators	•	•	•	•	•

Series	CSXi	EMX4e	EMX4i	RB2	RB3
Standard Duty Rating					
HP Range @ 230 Vac	5-75	5-200	5-450	10-350	10-350
HP Range @ 460 Vac	10-150	10-400	10-900	20-1000	20-1000
HP Range @ 575 Vac	15-200	15-500	15-1200	25-1000	20-1000
Heavy Duty Rating					
HP Range @ 230 Vac	N/A	N/A	3-350	10-250	10-250
HP Range @ 460 Vac	N/A	N/A	10-700	20-1000	20-1000
HP Range @ 575 Vac	N/A	N/A	10-900	25-1000	25-1000
Motor Protection features:					
Current Ramp	•	•	•	•	•
Motor FLA	•	•	•	•	•
Current Limit	•	•	•	•	•
Adjustable Start Ramp Time	1	1	2	1	2
Stop Ramp Time	•	•	•	•	•
Adjustable Motor Trip Class		•	•	•	•
Auxiliary Relay	•	•	•	•	•
Phase Sequence	•	•	•	•	•
Excess Start Time	•	•	•	•	•
Simulation mode		•	•		
Automatic Timers & Schedulers			•		
Adjustable Over/Under Voltage Protection	•	•	•	•	•
Undercurrent Detection	•	•	•	•	•
Current Imbalance Detection	•	•	•	•	•
Instantaneous Electronic Overcurrent Trip	•	•	•	•	•
Residual Ground Fault Detection				•	•
Zero sequence ground fault detection		opt	opt		opt
Alarm Relay Output	•	•	•	•	•
Adjustable Overload Protection	•	•	•	•	•
Overload Lockout	•	•	•	•	•
Under/Over Frequency	•	•	•	•	•
Single-Phase Protection	•	•	•	•	•
Shorted SCR Protection	•	•	•	•	•
Mechanical Jam		•	•	•	•
Resistor Temp. Detector (RTD) Monitoring			opt		opt
Bearing RTD / Other RTD / Open RTD Alarm			opt		opt
SCR Failure Power Through			•		
Current at Stop		•	•		
Shunt Trip Output		•	•		

All low voltage soft starters from Benshaw provide:

- Mission critical reliability
- Patented soft start technology
- Integral digital protection and metering
- 24/7 service and support

EMX4 ADVANCED SOFT STARTER



Smart does not have to mean complex. The EMX4 has been designed to make your life easier with an intuitive display and connectivity functions.

Access the right information when you need it through the comprehensive graphical display and quick setup menus.

The EMX4 includes starter, motor and system protection functions, complete with alarms to alert you to any potential issues.

Optional communication cards enable network connections and the USB port allows straightforward upload, download and storage of starter performance information.

There are two models of EMX4 soft starters available: The EMX4i full featured soft starter with ratings up to 1200A or the “cost optimized” EMX4e model with limited features and ratings (up to 580A).

RELY ON EMX4

Whether you are responsible for installation, maintenance or operation the EMX4 has you covered.

Feature	Benefit
Quick Application Setup	Easy commissioning
Simulation Mode	Easy and fast testing during installation and commissioning No need for line power or motor
Automatic Timers and Schedulers	Fast and easy automation No need for external logic or timers
Emergency Mode	Continued operation in emergency situations
USB Port	Easy data retrieval without the need for PC or network No need for an adaptor or cable Easy firmware updates Easy and fast commissioning
Pluggable Terminals	Fast installation and unit exchange

Guaranteed ... for three full years. *

Only Benshaw has a three year guarantee.

Every Benshaw solid state starter is guaranteed for three full years. Other manufacturers limit their warranties to just one year. But at Benshaw, we believe that because we build them better, we can guarantee them longer.

*Subject to factory authorized startup.



EMX4 ADVANCED SOFT STARTER

Which Starter Do I Need?



EMX4i

- Standard and heavy duty ratings
- 3 starting modes
- 2 stopping modes
- Comprehensive protections
- Multi-language display
- Kickstart
- DC brake and soft brake
- Pump clean
- SCR Failure Power Through
- Daily on/off scheduling

24 - 1250 A

EMX4i Ratings:

- 230 VAC 5-450 HP
- 460 VAC 10-900 HP
- 575 VAC 15-1200HP

EMX4e

- Standard duty rating only
- 3 starting modes
- 2 stopping modes
- Comprehensive protections
- Multi-language display

24-580 A

EMX4e Ratings:

- 230 VAC 5-200 HP
- 460 VAC 10-400 HP
- 575 VAC 15-500 HP

EMX4 SERIES

ADVANCED DIGITAL SOFT STARTER

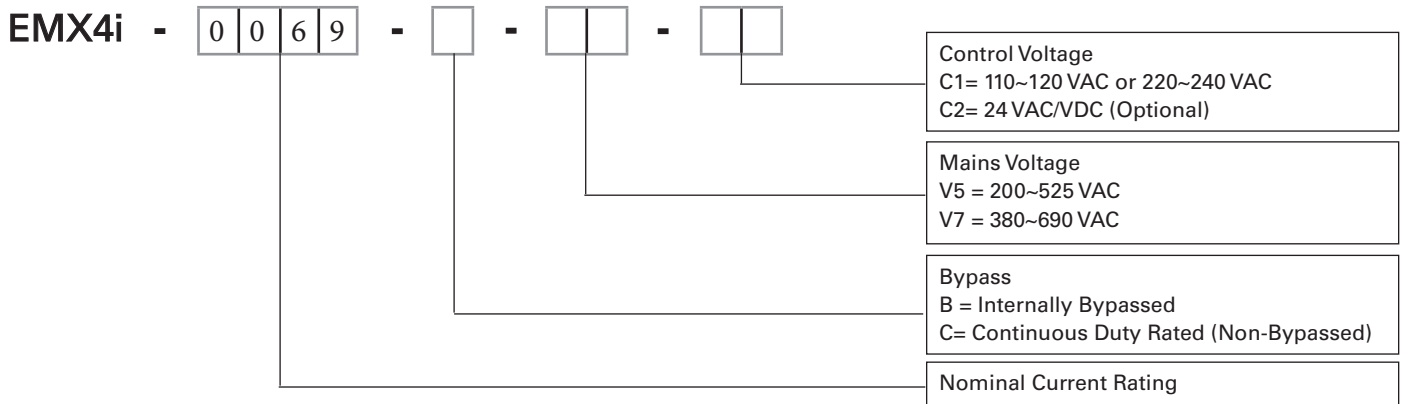
Feature Sets	EMX4e	EMX4i	Feature Sets	EMX4e	EMX4i
MOTOR CONTROL			INTEGRATION AND MANAGEMENT		
Motor Sets	1	2	Multi-Language Graphical Display	√	√
Constant Current & Current Ramp Start		√	Configurable Display Screen	√	√
Adaptive Control Starting/Stopping	√	√	I/O and Network Expansion Options	√	√
Kickstart		√	USB Port and Data Logging	√	√
Coast to Stop & Time Voltage Ramp Stop	√	√	Analog Output	√	√
DC Brake		√	Emergency Mode	√	√
Soft Brake		√	Voltage Measurement		√
Jog (Forward and Reverse)		√	SCR Fail Power Through	√	√
Inside Delta (6 wire) Control		√	Daily On/Off Scheduling		√
Soft Trip		√	Run Simulation	√	√
Pump Clean		√	COMMUNICATION OPTIONS		
Reversing Contactor Control		√	Modbus RTU	√	√
Trip Fail Safe	√	√	Profibus	√	√
MOTOR PROTECTION			Device Net	√	√
Motor Thermistor	√	√	Modbus TCP	√	√
Current Imbalance	√	√	ProfiNET	√	√
Under/Overcurrent	√	√	Ethernet IP	√	√
Under/Oversvoltage		√	SMART CARD OPTIONS		
Under/Overpower (Dry Pump Protection)		√	Pumping Smart Card	√	√
Phase Sequence	√	√	ACCESSORIES		
Phase Loss	√	√	Remote HMI	√	√
Power Loss	√	√			
Starts Per Hour Limiting	√	√			
Restart Delay (Pump Backspin Delay)	√	√			
Current At Stop	√	√			
Ground Fault Option	√	√			

All EMX4 chassis units are available to ship immediately from our Pennsylvania warehouse. Check stock or buy online at www.benshaw.com

EMX4i SERIES

ADVANCED CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION

Model Number



Supply

Mains Voltage {L1, L2, L3}	
EMX4i-xxxxB-V5	200~525 VAC {±10%}
EMX4i-xxxxB-V7	380~690 VAC {±10%}
Control Voltage {A1, A2, A3}	
EMX4i-xxxxB-xx-C1 {A1, A2}.....	110~120 VAC {+10%/-15%}, 600 mA
EMX4i-xxxxB-xx-C1 {A2, A3}.....	220~240 VAC {+10%/-15%}, 600 mA
EMX4i-xxxxB-xx-C2 {A1, A2}.....	24 VAC/VDC {±20%}, 2.8 A
Mains Frequency	50 Hz~60Hz {±5 Hz}

Inputs

Input Rating	Active 24 VDC, 8 mA approx
Motor Thermistor {B4, B5}.....	Trip >3.6 kΩ, reset < 1.6 kΩ

Outputs

Relay Outputs	10 A @ 250 VAC resistive, 5A @ 250 VAC AC15 pf 0.3
Main Contactor {33,34}.....	Normally Open
Relay Output A {41,42,44}	Changeover
Relay Output B {53,54}.....	Normally Open
Analog Outputs {21,22}	
Maximum Load600 Ω {12 VDC @ 20 mA}
Accuracy	±5

Environmental

Operating Temperature	-10°C ~ 60°C, above 40 °C with derating
Storage Temperature	-25°C ~ + 60°C
Operating Altitude.....	0~1000 m, above 1000 m with derating
Humidity 5%~95% Relative Humidity	
Pollution Degree	Pollution Degree 3
Vibration	IEC 60068-2-6
Protection	
EMX4i-0024B-EMX4i-0135B	IP20
EMX4i-0184B-EMX4i-1250B	IP00

Certification

CCC.....	GB 14048.6
CE	EN 60947-4-2
C-UL	C22.2 N° 60947-4-2
UL	UL 60947-4-2
Marine	
Lloyds	Lloyds Marine No 1 Specification
ABS	Steel Vessels Rules 2010

EMX4i SERIES



ADVANCED CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION

230 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Heavy Duty 450%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	HP	Max Amps	H	W	D		
EMX4i-0024B-V5-C1-H	5	17	3	14	13.2	6.0	9.1	11	\$1,764
EMX4i-0042B-V5-C1-H	10	28	7.5	22	13.2	6.0	9.1	11	\$1,833
EMX4i-0052B-V5-C1-H	10	35	10	28	13.2	6.0	9.1	11	\$1,892
EMX4i-0064B-V5-C1-H	15	52	10	48	13.2	6.0	9.1	11	\$1,977
EMX4i-0069B-V5-C1-H	20	59	15	46	13.2	6.0	9.1	11	\$2,022
EMX4i-0105B-V5-C1-H	25	77	15	52	13.2	6.0	9.1	12	\$2,428
EMX4i-0115B-V5-C1-H	30	81	20	65	13.2	6.0	9.1	12	\$2,716
EMX4i-0135B-V5-C1-H	30	99	25	77	13.2	6.0	9.1	12	\$3,093
EMX4i-0184B-V5-C1-H	40	124	30	96	19.5	8.5	9.6	28	\$3,405
EMX4i-0200B-V5-C1-H	50	131	40	104	19.5	8.5	9.6	28	\$3,565
EMX4i-0229B-V5-C1-H	60	156	40	124	19.5	8.5	9.6	28	\$3,935
EMX4i-0250B-V5-C1-H	75	195	60	156	19.5	8.5	9.6	28	\$5,260
EMX4i-0397B-V5-C1-H	100	261	75	203	20.6	8.5	9.6	34	\$6,531
EMX4i-0410B-V5-C1-H	150	377	100	302	20.6	8.5	9.6	34	\$7,582
EMX4i-0550B-V5-C1-H	150	414	125	321	20.6	8.5	9.6	42	\$7,934
EMX4i-0580B-V5-C1-H	200	477	150	361	20.6	8.5	9.6	42	\$8,261
EMX4i-0835B-V5-C1-H*	200	515	150	414	24.3	17.6	12.3	112	\$9,632
EMX4i-0940B-V5-C1-H*	200	590	150	480	24.3	17.6	12.3	112	\$11,123
EMX4i-1070B-V5-C1-H*	300	797	250	620	24.3	17.6	12.3	137	\$13,357
EMX4i-1230B-V5-C1-H*	400	985	300	768	24.3	17.6	12.3	139	\$15,259
EMX4i-1250B-V5-C1-H*	450	1180	350	904	24.3	17.6	12.3	143	\$16,682

Continuous Duty rated (Non-Bypassed*)

240 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Heavy Duty 450%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	HP	Max Amps	H	W	D		
EMX4i-0735C-V5-C1-H*	200	480	150	382	24.3	17.6	12.3	104	\$8,174
EMX4i-0830C-V5-C1-H*	200	576	175	431	24.3	17.6	12.3	104	\$8,361
EMX4i-1025C-V5-C1-H*	300	722	200	590	24.3	17.6	12.3	128	\$8,529
EMX4i-1170C-V5-C1-H*	350	864	300	722	24.3	17.6	12.3	130	\$9,099
EMX4i-1220C-V5-C1-H*	400	966	300	784	24.3	17.6	12.3	135	\$12,437

*Refer to EMX4i User Manual for current/HP ratings when using customer supplied, external bypass contactor.

EMX4i SERIES

ADVANCED CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION



460 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Heavy Duty 450%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	HP	Max Amps	H	W	D		
EMX4i-0024B-V5-C1-H	10	17	10	14	13.2	6.0	9.1	11	\$1,764
EMX4i-0042B-V5-C1-H	20	27	15	22	13.2	6.0	9.1	11	\$1,833
EMX4i-0052B-V5-C1-H	25	34	20	28	13.2	6.0	9.1	11	\$1,892
EMX4i-0064B-V5-C1-H	40	52	25	40	13.2	6.0	9.1	11	\$1,977
EMX4i-0069B-V5-C1-H	40	59	30	46	13.2	6.0	9.1	11	\$2,022
EMX4i-0105B-V5-C1-H	60	77	40	52	13.2	6.0	9.1	12	\$2,428
EMX4i-0115B-V5-C1-H	60	81	50	65	13.2	6.0	9.1	12	\$2,716
EMX4i-0135B-V5-C1-H	75	99	60	77	13.2	6.0	9.1	12	\$3,093
EMX4i-0184B-V5-C1-H	100	124	75	96	19.5	8.5	9.6	28	\$3,405
EMX4i-0200B-V5-C1-H	100	131	75	104	19.5	8.5	9.6	28	\$3,565
EMX4i-0229B-V5-C1-H	125	156	100	124	19.5	8.5	9.6	28	\$3,935
EMX4i-0250B-V5-C1-H	150	195	125	156	19.5	8.5	9.6	28	\$5,260
EMX4i-0352B-V5-C1-H	200	240	150	180	20.6	8.5	9.6	34	\$5,874
EMX4i-0397B-V5-C1-H	200	261	150	203	20.6	8.5	9.6	34	\$6,531
EMX4i-0410B-V5-C1-H	300	377	250	302	20.6	8.5	9.6	34	\$7,582
EMX4i-0550B-V5-C1-H	350	414	250	321	20.6	8.5	9.6	42	\$7,934
EMX4i-0580B-V5-C1-H	400	477	300	361	20.6	8.5	9.6	42	\$8,261
EMX4i-0835B-V5-C1-H*	400	515	300	414	24.3	17.6	12.3	112	\$9,632
EMX4i-0940B-V5-C1-H*	450	590	350	480	24.3	17.6	12.3	112	\$11,123
EMX4i-1070B-V5-C1-H*	600	797	500	620	24.3	17.6	12.3	137	\$13,357
EMX4i-1230B-V5-C1-H*	800	985	600	768	24.3	17.6	12.3	139	\$15,259
EMX4i-1250B-V5-C1-H*	900	1180	700	904	24.3	17.6	12.3	143	\$16,682

Continuous Duty rated (Non-Bypassed*)

460 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Heavy Duty 450%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	HP	Max Amps	H	W	D		
EMX4i-0735C-V5-C1-H*	400	480	300	382	24.3	17.6	12.3	104	\$8,174
EMX4i-0830C-V5-C1-H*	450	576	350	431	24.3	17.6	12.3	104	\$8,361
EMX4i-1025C-V5-C1-H*	600	722	500	590	24.3	17.6	12.3	128	\$8,529
EMX4i-1170C-V5-C1-H*	700	864	600	722	24.3	17.6	12.3	130	\$9,099
EMX4i-1220C-V5-C1-H*	800	966	600	784	24.3	17.6	12.3	135	\$12,437

*Refer to EMX4i User Manual for current/HP ratings when using customer supplied, external bypass contactor.

EMX4i SERIES

ADVANCED CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION

575 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Heavy Duty 450%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	HP	Max Amps	H	W	D		
EMX4i-0024B-V7-C1-H	15	17	10	14	13.2	6.0	9.1	11	\$1,816
EMX4i-0042B-V7-C1-H	25	28	20	22	13.2	6.0	9.1	11	\$1,887
EMX4i-0052B-V7-C1-H	30	35	25	28	13.2	6.0	9.1	11	\$1,949
EMX4i-0064B-V7-C1-H	40	52	30	40	13.2	6.0	9.1	11	\$2,037
EMX4i-0069B-V7-C1-H	50	59	40	46	13.2	6.0	9.1	11	\$2,081
EMX4i-0105B-V7-C1-H	60	77	50	52	13.2	6.0	9.1	12	\$2,745
EMX4i-0115B-V7-C1-H	75	81	60	65	13.2	6.0	9.1	12	\$3,067
EMX4i-0135B-V7-C1-H	100	99	75	77	13.2	6.0	9.1	12	\$3,487
EMX4i-0184B-V7-C1-H	100	124	75	96	19.5	8.5	9.6	28	\$3,780
EMX4i-0200B-V7-C1-H	125	131	100	104	19.5	8.5	9.6	28	\$3,944
EMX4i-0229B-V7-C1-H	150	156	100	124	19.5	8.5	9.6	28	\$4,367
EMX4i-0250B-V7-C1-H	200	195	150	156	19.5	8.5	9.6	28	\$5,841
EMX4i-0352B-V7-C1-H	200	240	150	180	20.6	8.5	9.6	34	\$6,285
EMX4i-0397B-V7-C1-H	250	261	200	203	20.6	8.5	9.6	34	\$6,988
EMX4i-0410B-V7-C1-H	350	377	300	302	20.6	8.5	9.6	34	\$8,111
EMX4i-0550B-V7-C1-H	450	414	300	321	20.6	8.5	9.6	42	\$8,253
EMX4i-0580B-V7-C1-H	500	477	350	361	20.6	8.5	9.6	42	\$8,590
EMX4i-0835B-V7-C1-H*	500	515	400	414	24.3	17.6	12.3	112	\$10,137
EMX4i-0940B-V7-C1-H*	600	590	450	480	24.3	17.6	12.3	112	\$11,708
EMX4i-1070B-V7-C1-H*	800	797	600	620	24.3	17.6	12.3	137	\$14,060
EMX4i-1230B-V7-C1-H*	1000	985	800	768	24.3	17.6	12.3	139	\$16,061
EMX4i-1250B-V7-C1-H*	1200	1180	900	904	24.3	17.6	12.3	143	\$17,560

Continuous Duty rated (Non-Bypassed*)

575 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Heavy Duty 450%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	HP	Max Amps	H	W	D		
EMX4i-0735C-V7-C1-H*	500	480	400	382	24.3	17.6	12.3	104	\$8,993
EMX4i-0830C-V7-C1-H*	600	576	450	431	24.3	17.6	12.3	104	\$9,197
EMX4i-1025C-V7-C1-H*	700	722	600	590	24.3	17.6	12.3	128	\$9,384
EMX4i-1170C-V7-C1-H*	900	864	700	722	24.3	17.6	12.3	130	\$10,008
EMX4i-1220C-V7-C1-H*	1000	966	800	784	24.3	17.6	12.3	135	\$13,682

*Refer to EMX4i User Manual for current/HP ratings when using customer supplied, external bypass contactor.

EMX4e SERIES

ECONOMICAL CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION



230 VAC

Model Number	Standard Duty 350%, 30 s, 4 starts per hour		Dimensions (inches)			Weight (lbs)	List Price
	HP	Max Amps	H	W	D		
EMX4e-0024B-V5-C1-H	5	17	13.2	6.0	9.1	11	\$1,499
EMX4e-0042B-V5-C1-H	10	28	13.2	6.0	9.1	11	\$1,558
EMX4e-0052B-V5-C1-H	10	35	13.2	6.0	9.1	11	\$1,609
EMX4e-0064B-V5-C1-H	15	52	13.2	6.0	9.1	11	\$1,680
EMX4e-0069B-V5-C1-H	20	59	13.2	6.0	9.1	11	\$1,719
EMX4e-0105B-V5-C1-H	25	77	13.2	6.0	9.1	12	\$2,065
EMX4e-0115B-V5-C1-H	30	81	13.2	6.0	9.1	12	\$2,309
EMX4e-0135B-V5-C1-H	30	99	13.2	6.0	9.1	12	\$2,564
EMX4e-0184B-V5-C1-H	40	124	19.5	8.5	9.6	28	\$2,895
EMX4e-0200B-V5-C1-H	50	131	19.5	8.5	9.6	28	\$3,021
EMX4e-0229B-V5-C1-H	60	156	19.5	8.5	9.6	28	\$3,345
EMX4e-0250B-V5-C1-H	75	195	19.5	8.5	9.6	28	\$4,469
EMX4e-0397B-V5-C1-H	100	261	20.6	8.5	9.6	34	\$5,552
EMX4e-0410B-V5-C1-H	150	377	20.6	8.5	9.6	34	\$6,445
EMX4e-0550B-V5-C1-H	150	414	20.6	8.5	9.6	42	\$6,745
EMX4e-0580B-V5-C1-H	200	477	20.6	8.5	9.6	42	\$7,022

* See comparison of EXM4e and EMX4i on pages 6 and 7.

EMX4e SERIES

ECONOMICAL CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION



460 VAC

Standard Duty
350%, 30 s, 4 starts per hour

Dimensions (inches)

Model Number	HP	Max Amps	H	W	D	Weight (lbs)	List Price
EMX4e-0024B-V5-C1-H	10	17	13.2	6.0	9.1	11	\$1,499
EMX4e-0042B-V5-C1-H	20	28	13.2	6.0	9.1	11	\$1,558
EMX4e-0052B-V5-C1-H	25	35	13.2	6.0	9.1	11	\$1,609
EMX4e-0064B-V5-C1-H	40	52	13.2	6.0	9.1	11	\$1,680
EMX4e-0069B-V5-C1-H	40	59	13.2	6.0	9.1	11	\$1,719
EMX4e-0105B-V5-C1-H	50	77	13.2	6.0	9.1	12	\$2,065
EMX4e-0115B-V5-C1-H	60	81	13.2	6.0	9.1	12	\$2,309
EMX4e-0135B-V5-C1-H	75	99	13.2	6.0	9.1	12	\$2,564
EMX4e-0184B-V5-C1-H	100	124	19.5	8.5	9.6	28	\$2,895
EMX4e-0200B-V5-C1-H	100	131	19.5	8.5	9.6	28	\$3,021
EMX4e-0229B-V5-C1-H	125	156	19.5	8.5	9.6	28	\$3,345
EMX4e-0250B-V5-C1-H	150	195	19.5	8.5	9.6	28	\$4,469
EMX4e-0352B-V5-C1-H	200	240	20.6	8.5	9.6	34	\$4,992
EMX4e-0397B-V5-C1-H	200	261	20.6	8.5	9.6	34	\$5,552
EMX4e-0410B-V5-C1-H	300	377	20.6	8.5	9.6	34	\$6,445
EMX4e-0550B-V5-C1-H	350	414	20.6	8.5	9.6	42	\$6,745
EMX4e-0580B-V5-C1-H	400	477	20.6	8.5	9.6	42	\$7,022

* See comparison of EXM4e and EMX4i on pages 6 and 7.

EMX4e SERIES

ECONOMICAL CHASSIS SOFT STARTER WITH BUILT-IN BYPASS AND MOTOR PROTECTION

575 VAC

Standard Duty
350%, 30 s, 4 starts per hour

Dimensions (inches)

Model Number	HP	Max Amps	H	W	D	Weight (lbs)	List Price
EMX4e-0024B-V7-C1-H	15	17	13.2	6.0	9.1	11	\$1,543
EMX4e-0042B-V7-C1-H	25	28	13.2	6.0	9.1	11	\$1,603
EMX4e-0052B-V7-C1-H	30	35	13.2	6.0	9.1	11	\$1,658
EMX4e-0064B-V7-C1-H	40	52	13.2	6.0	9.1	11	\$1,730
EMX4e-0069B-V7-C1-H	50	59	13.2	6.0	9.1	11	\$1,770
EMX4e-0105B-V7-C1-H	60	77	13.2	6.0	9.1	12	\$2,333
EMX4e-0115B-V7-C1-H	75	81	13.2	6.0	9.1	12	\$2,608
EMX4e-0135B-V7-C1-H	100	99	13.2	6.0	9.1	12	\$2,900
EMX4e-0184B-V7-C1-H	100	124	19.5	8.5	9.6	28	\$3,213
EMX4e-0200B-V7-C1-H	125	131	19.5	8.5	9.6	28	\$3,354
EMX4e-0229B-V7-C1-H	150	156	19.5	8.5	9.6	28	\$3,710
EMX4e-0250B-V7-C1-H	200	195	19.5	8.5	9.6	28	\$4,963
EMX4e-0352B-V7-C1-H	200	240	20.6	8.5	9.6	34	\$5,343
EMX4e-0397B-V7-C1-H	250	261	20.6	8.5	9.6	34	\$5,941
EMX4e-0410B-V7-C1-H	350	377	20.6	8.5	9.6	34	\$6,897
EMX4e-0550B-V7-C1-H	450	414	20.6	8.5	9.6	42	\$7,015
EMX4e-0580B-V7-C1-H	500	477	20.6	8.5	9.6	42	\$7,302

* See comparison of EXM4e and EMX4i on pages 6 and 7.

ACCESSORIES

ADD TO YOUR EMX4i AND EMX4e SERIES

Remote keypads for control and monitoring

List Price

KP-PIC-RC-02	Remote Keypad Kit (Keypad, card & cable)	\$529
CV-100018-00	N3R/N4 Remote Keypad Cover (8" x 8")	\$279

Communication interfaces for network integration

List Price

COM-PIC-DN-01	DeviceNet Card, EMX4	\$398
COM-PIC-MB-01	Modbus Card, EMX4	\$301
COM-PIC-PB-01	Profibus Card, EMX4	\$516
COM-PIC-MT-01	Modbus TCP Card, EMX4	\$1,018
COM-PIC-PN-01	Profinet Card, EMX4	\$1,018
COM-PIC-MB-02	Ground Fault + Modbus, RTU Card, EMX4	\$306
COM-PIC-MT-03	Ground Fault + Modbus, TCP Card, EMX4	\$1,052
COM-PIC-PN-03	Ground Fault + Profinet card, EMX4	\$1,052
COM-PIC-EI-03	Ground Fault + Ethernet IP Card, EMX4	\$1,052

3-wire control board option

List Price

BIPC-300200-01	3-wire control board option for wiring customer supplied (external) start/stop/reset pushbuttons, EMX4 with 120VAC control voltage	\$105
BIPC-300200-02	3-wire control board option for wiring customer supplied (external) start/stop/reset pushbuttons, EMX4 with 24VDC control voltage	\$105

Smart Cards

List Price

SCC-PC-01	Smart Card, Pump Application [EMX4]	\$438
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IP20 Finger guards for personnel safety

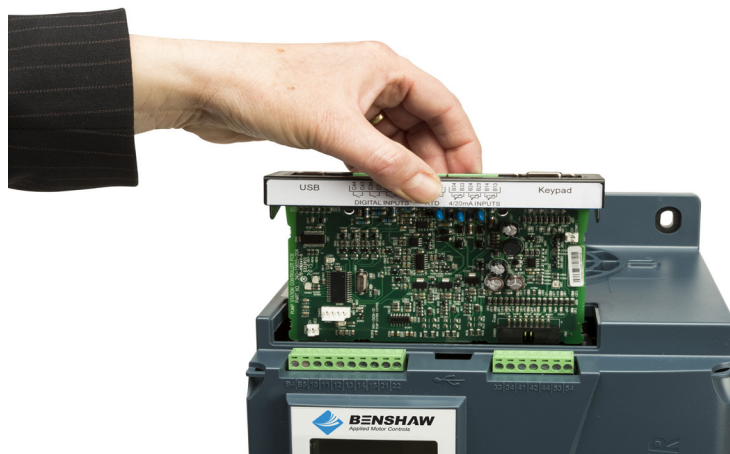
List Price

995-17309-00	Finger Guard kit, (EMX4i/e) 0184B-0580B	\$271
995-22320-00	Finger Guard kit, (EMX4i) 0835B-1250B	\$226

Additional Accessories

List Price

995-18637-00	Cover Remote Tool, EMX4	\$172
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CSXi SERIES

BASIC COMPACT SOFT STARTER

Specifications

General

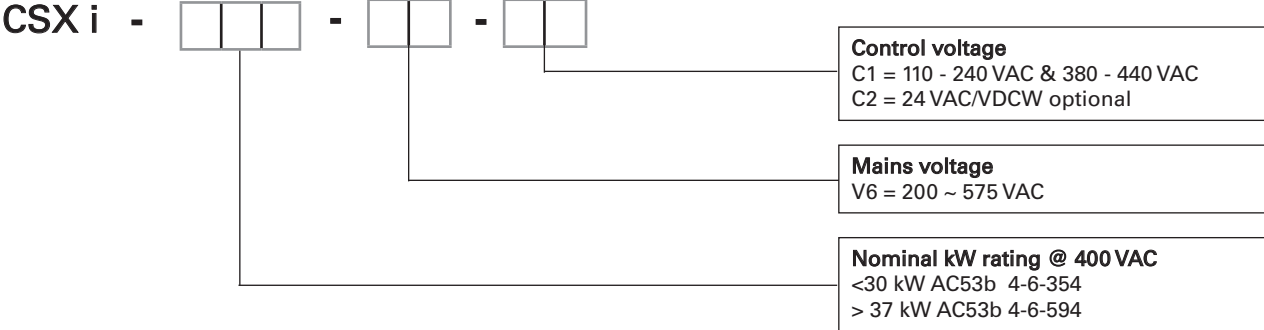
Current range 18 A ~ 200 A (nominal)
 Motor connection Inline
 Bypass Internal

Supply

Mains voltage
 CSXi-xxxx-V6..... 3 x 200 VAC ~ 575 VAC (+10% / -15%)
 Control voltage (A1,A2,A3)
 C1 110 ~ 240 VAC (+10% / -15%)
 or 380 ~ 440 VAC (+10% / -15%)
 C2 24 VAC / 24 VDC (±20%)
 Mains frequency 45 Hz to 66 Hz



Model Number




All CSXi chassis units are available for immediate shipping from our Pennsylvania warehouse. Check stock or buy online at www.benshaw.com.

Guaranteed ... for three full years. *
Only Benshaw has a three year guarantee.

Every Benshaw solid state starter is guaranteed for three full years. Other manufacturers limit their warranties to just one year. But at Benshaw, we believe that because we build them better, we can guarantee them longer.

*Subject to factory authorized startup.



CSXi SERIES

BASIC CHASSIS UNITS WITH BUILT-IN BYPASS AND MOTOR OVERLOAD



Model Number	Standard Duty (HP)			Max Amps		Dimensions (inches)			Weight (lbs)	List Price
	230 VAC	460 VAC	575 VAC	40 °C	50 °C	H	W	D		
CSXi-007-V6-C1	5	10	15	18	17	8.0	3.9	6.5	6	\$834
CSXi-015-V6-C1	10	25	30	34	32	8.0	3.9	6.5	6	\$989
CSXi-018-V6-C1	15	30	40	42	40	8.0	3.9	6.5	6	\$1,086
CSXi-022-V6-C1	15	30	40	48	44	8.0	3.9	6.5	6	\$1,154
CSXi-030-V6-C1	20	40	50	60	55	8.0	3.9	6.5	6	\$1,320
CSXi-037-V6-C1	25	50	60	75	68	8.5	5.7	7.6	10	\$1,873
CSXi-045-V6-C1	30	60	75	85	78	8.5	5.7	7.6	10	\$1,900
CSXi-055-V6-C1		75	100	100	100	8.5	5.7	7.6	10	\$2,137
CSXi-075-V6-C1	50	100	125	140	133	9.5	8.0	8.4	15	\$2,686
CSXi-090-V6-C1	60	125	150	170	157	9.5	8.0	8.4	15	\$2,984
CSXi-110-V6-C1	75	150	200	200	186	9.5	8.0	8.4	15	\$3,243

* Ratings are based on 6 second start time at 400% current limit.

For other duty ratings, or for assistance in selecting the correct starter for your application, please contact Benshaw Inc.

CSXi SERIES

ACCESSORIES

Remote keypads for control and monitoring

List Price

KP-PIM-RO-01	CSXi Remote Operator & Interface Kit (complete set)	\$560
KP-PIM-RZ-01	CSXi Remote Operator interface (does not include keypad)	\$243
KP-RCM01	CSXi Remote Operator (keypad only)	\$425
KP-RCM02	CSXi Remote Operator & PT Kit	\$747

Communication interfaces for network integration

List Price

COM-PIM-DN-01	DeviceNet Interface	\$383
COM-PIM-MB-01	Modbus Interface	\$265
COM-PIM-PB-01	Profibus Interface	\$486
COM-PIM-USB-01	USB Interface	\$243
COM-PIM-MT-03	Modbus TCP Interface (direct replacement for COM-PIM-MT-01)	\$881
COM-PIM-PN-02	Profinet Interface (direct replacement for COM-PIM-PN-01)	\$1,086
COM-PIM-EI-02	Ethernet IP Interface (direct replacement for COM-PIM-EI-01)	\$985

IP20 Finger guards for personnel safety

List Price

995-03503-00	Fingerguard Kit, CSXi 075-110	\$293
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Communication Interfaces



Finger Guard Kit



Remote Operator



CSXi SERIES



PUMP PANELS STARTERS

STANDARD ENCLOSED SOFT START PUMP PANELS

STANDARD FEATURES:

- NEMA 3R enclosure
- CSXi solid state starter with built-in bypass
- Circuit breaker with door operator (35kAIC)
- Control power transformer
- Space heater with thermostat
- Start/Stop Pushbutton, HOA, Power On/Run/Fault lights
- UL certified and listed



Model Number	Standard Duty (HP)			Max Amps		CB Rating amps	Dimensions (inches)			Weight (lbs)	List Price
	230 VAC	460 VAC	575 VAC	40 °C	50 °C		H	W	D		
CSXi-0014-4-PP-N3R-CB-PD	5	10	15	18	17	40	20	16	8	39	\$3,761
CSXi-0034-4-PP-N3R-CB-PD	10	25	30	34	32	60	20	16	8	40	\$4,069
CSXi-0040-4-PP-N3R-CB-PD	15	30	40	42	40	70	20	16	8	42	\$4,151
CSXi-0052-4-PP-N3R-CB-PD	20	40	50	60	55	100	20	16	8	43	\$4,357
CSXi-0065-4-PP-N3R-CB-PD	25	50	60	75	68	125	24	20	10	66	\$5,212
CSXi-0077-4-PP-N3R-CB-PD	30	60	75	85	78	150	24	20	10	67	\$5,246
CSXi-0096-4-PP-N3R-CB-PD	---	75	100	100	100	150	24	20	10	75	\$5,537
CSXi-0125-4-PP-N3R-CB-PD	50	100	125	140	133	200	24	20	10	80	\$6,393
CSXi-0156-4-PP-N3R-CB-PD	60	125	150	170	157	250	24	20	10	86	\$6,755
CSXi-0180-4-PP-N3R-CB-PD	75	150	200	200	186	300	24	20	10	88	\$7,155

Note: These codes are for 480 VAC units. For 230 VAC change [4] to [2]; for 575 VAC change [4] to [5].
230V and 575V models built to order.

Guaranteed ... for three full years. *

Only Benshaw has a three year guarantee.

Every Benshaw solid state starter is guaranteed for three full years. Other manufacturers limit their warranties to just one year. But at Benshaw, we believe that because we build them better, we can guarantee them longer.

*Subject to factory authorized startup.



RB SERIES

OPEN CHASSIS STARTERS WITH INTEGRAL BYPASS

AVAILABLE WITH MX² AND MX³ TECHNOLOGY RUGGED INDUSTRIAL SOLID STATE STARTERS WITH INTEGRAL BYPASS

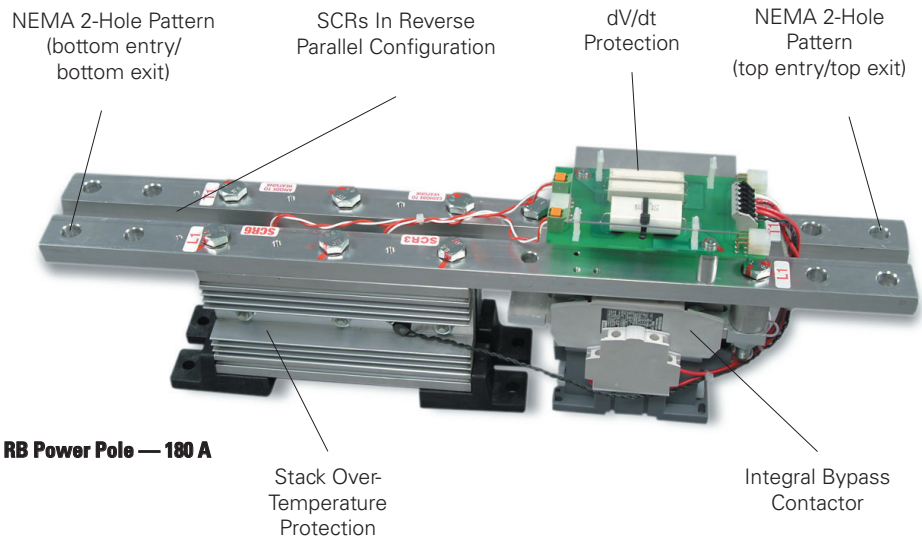
RB SERIES PRODUCT HIGHLIGHTS:

Benshaw's RB series solid state starter combines the high performance MX² or MX³ technology with a rugged, compact, integral bypass RB series power section.

The MX² or MX³ technology provides users with a powerful group of programming parameters, designed for flexibility in across a wide range of industrial applications. Both MX² and MX³ controls provide simple setup and commissioning via the Quick Start Menu.

The RB power section is a rugged, heavy duty solid state starter section designed with integral bypass contactor for a compact, efficient profile. The modular design includes separate poles for each phase for ease of maintenance.

Note: Units require 120V control power



KEY ADVANTAGES:

- Modular power stack assembly for ease of maintenance
- ModBus standard/other Fieldbus optional
- Multiple starting ramps for various applications
- Integrated metering system diagnostics
- Fieldbus
- Ethernet IP/TCP
- Profibus
- DeviceNet
- Integral bypass contactor for efficient operation, eliminating the need for external fans
- Integrated motor protection
- Dual ramp capability for loaded/unloaded applications
- Power stack has multiple ratings for application flexibility

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RB2 SERIES

OPEN CHASSIS STARTERS WITH INTEGRAL BYPASS

	RB2 Series Model Number	Horsepower				Dimensions (inches)*			Wgt. (lbs.)	List Price
		208 V	240 V	480 V	575 V	H	W	D		
Standard Duty 350% for 30 sec 115% continuous	RB2-1-S-027A-11C	7.5	10	20	25	14	10	6.9	14	\$2,544
	RB2-1-S-040A-11C	10	15	30	40	14	10	6.9	14	\$2,668
	RB2-1-S-052A-12C	15	20	40	50	14	10	8.4	17	\$2,777
	RB2-1-S-065A-12C	20	25	50	60	14	10	8.4	17	\$2,857
	RB2-1-S-077A-13C	25	30	60	75	15	10	8.4	17	\$2,986
	RB2-1-S-096A-13C	30	40	75	100	15	10	8.9	18	\$3,885
	RB2-1-S-125A-14C	40	50	100	125	21.7	12.3	9	43	\$4,377
	RB2-1-S-156A-14C	50	60	125	150	21.4	14	9	43	\$5,107
	RB2-1-S-180A-14C	60	75	150	200	21.4	14	9	43	\$6,109
	RB2-1-S-240A-15C	75	100	200	250	23.8	12.5	10.3	51	\$6,504
	RB2-1-S-302A-15C	100	125	250	300	23.8	12.5	10.3	51	\$7,157
	RB2-1-S-361A-16C	125	150	300	400	23.9	13.3	9.2	56	\$8,190
	RB2-1-S-414A-17C	150	–	350	–	27.9	18	11.1	151	\$9,173
	RB2-1-S-477A-17C	–	200	400	500	28.9	18	11.1	155	\$10,018
	RB2-1-S-515A-17C	200	–	450	–	28.9	18	11.1	155	\$10,734
	RB2-1-S-590A-18C	–	250	500	600	28.8	18	11.1	159	\$11,450
RB2-1-S-720A-19C	250	300	600	700	30.7	18.5	10.9	159	\$12,880	
RB2-1-S-838A-20C	300	350	700	800	29.1	26.1	12.5	160	\$15,029	
Heavy Duty 500% for 30 sec 125% continuous	RB2-1-S-027A-11C	7.5	10	20	25	14	10	6.9	14	\$2,544
	RB2-1-S-040A-11C	10	15	30	40	14	10	6.9	14	\$2,668
	RB2-1-S-052A-12C	15	20	40	50	14	10	8.4	17	\$2,777
	RB2-1-S-096A-13C	30	40	75	100	15	10	8.4	18	\$3,885
	RB2-1-S-156A-14C	40	50	100	125	21.4	14	9	43	\$5,107
	RB2-1-S-180A-15C	60	75	150	200	21.4	14	9	51	\$6,832
	RB2-1-S-361A-16C	75	100	200	250	23.9	13.3	9.2	56	\$8,190
	RB2-1-S-414A-17C	125	150	300	400	27.9	18	11.1	151	\$9,173
	RB2-1-S-590A-18C	200	200	450	500	28.8	18	11.1	159	\$11,450
RB2-1-S-720A-19C	–	250	500	600	30.7	18.5	10.9	160	\$12,880	
Severe Duty 600% for 30 sec 125% continuous	RB2-1-S-027A-11C	5	7.5	15	20	14	10	6.9	14	\$2,544
	RB2-1-S-040A-11C	10	10	30	40	14	10	6.9	14	\$2,668
	RB2-1-S-052A-12C	–	15	–	–	14	10	8.4	17	\$2,777
	RB2-1-S-096A-13C	25	30	60	75	15	10	8.4	18	\$3,885
	RB2-1-S-180A-14C	30	40	75	100	21.4	14	9	43	\$6,109
	RB2-1-S-180A-15C	50	60	125	150	21.4	14	9	51	\$6,832
	RB2-1-S-361A-16C	60	75	150	200	23.9	13.3	9.2	56	\$8,190
	RB2-1-S-414A-17C	100	125	250	300	28.9	18	11.1	151	\$9,173
	RB2-1-S-590A-18C	150	200	450	500	28.8	18	11.1	159	\$11,450

*Remote keypad: KPMX3CBL2M is optional for \$526

RB3 SERIES

OPEN CHASSIS STARTERS WITH INTEGRAL BYPASS

	RB3 Series Model Number	Horsepower				Dimensions (inches)*			Wgt. (lbs.)	List Price
		208 V	240 V	480 V	575 V	H	W	D		
Standard Duty 350% for 30 sec 115% continuous	RB3-1-S-027A-11C	7.5	10	20	25	14	10	7.7	14	\$3,794
	RB3-1-S-040A-11C	10	15	30	40	14	10	8.4	14	\$3,831
	RB3-1-S-052A-12C	15	20	40	50	14	10	9.2	17	\$3,969
	RB3-1-S-065A-12C	20	25	50	60	14	10	9.2	17	\$4,028
	RB3-1-S-077A-13C	25	30	60	75	15	10	9.2	17	\$4,457
	RB3-1-S-096A-13C	30	40	75	100	15	10	9.2	18	\$5,204
	RB3-1-S-125A-14C	40	50	100	125	21.7	12.3	9.7	43	\$5,578
	RB3-1-S-156A-14C	50	60	125	150	21.4	14	9.8	43	\$6,369
	RB3-1-S-180A-14C	60	75	150	200	21.4	14	9.8	43	\$7,157
	RB3-1-S-240A-15C	75	100	200	250	23.8	12.5	11.1	51	\$7,514
	RB3-1-S-302A-15C	100	125	250	300	23.8	12.5	11.1	51	\$8,190
	RB3-1-S-361A-16C	125	150	300	400	23.9	13.3	10	56	\$8,385
	RB3-1-S-414A-17C	150	–	350	–	27.9	18	11.9	151	\$9,948
	RB3-1-S-477A-17C	–	200	400	500	28.9	18	11.9	155	\$10,734
	RB3-1-S-515A-17C	200	–	450	–	28.9	18	11.9	155	\$11,450
RB3-1-S-590A-18C	–	250	500	600	28.8	18	11.9	159	\$12,451	
RB3-1-S-720A-19C	250	300	600	700	30.7	18.5	11.7	159	\$13,596	
RB3-1-S-838A-20C	300	350	700	800	29.1	26.1	13.3	160	\$15,938	
Heavy Duty 500% for 30 sec 125% continuous	RB3-1-S-027A-11C	7.5	10	20	25	14	10	7.7	14	\$3,794
	RB3-1-S-040A-11C	10	15	30	40	14	10	8.4	14	\$3,831
	RB3-1-S-052A-12C	15	20	40	50	14	10	9.2	17	\$3,969
	RB3-1-S-096A-13C	30	40	75	100	15	10	9.2	18	\$5,204
	RB3-1-S-156A-14C	40	50	100	125	21.4	14	9.7	43	\$6,369
	RB3-1-S-180A-15C	60	75	150	200	21.4	14	9.8	51	\$7,808
	RB3-1-S-361A-16C	75	100	200	250	23.9	13.3	10	56	\$8,385
	RB3-1-S-414A-17C	125	150	300	400	27.9	18	11.9	151	\$9,948
	RB3-1-S-590A-18C	200	200	450	500	28.8	18	11.9	159	\$12,451
RB3-1-S-720A-19C	–	250	500	600	30.7	18.5	11.7	160	\$13,596	
Severe Duty 600% for 30 sec 125% continuous	RB3-1-S-027A-11C	5	7.5	15	20	14	10	6.9	14	\$3,794
	RB3-1-S-040A-11C	10	10	30	40	14	10	6.9	14	\$3,831
	RB3-1-S-052A-12C	–	15	–	–	14	10	8.4	17	\$3,969
	RB3-1-S-096A-13C	25	30	60	75	15	10	8.4	18	\$5,204
	RB3-1-S-180A-14C	30	40	75	100	21.4	14	9	43	\$7,157
	RB3-1-S-180A-15C	50	60	125	150	21.4	14	9	51	\$7,808
	RB3-1-S-361A-16C	60	75	150	200	23.9	13.3	9.2	56	\$8,385
	RB3-1-S-414A-17C	100	125	250	300	28.9	18	11.1	151	\$9,948
	RB3-1-S-590A-18C	150	200	450	500	28.8	18	11.1	159	\$12,451

* Keypad is included with MX³ technology

Price Effective July 1, 2025

MX4PB WITH EMX4i TECHNOLOGY



STANDARD AND HEAVY DUTY RATINGS

Prepackaged Starters with Integral Run Duty Bypass

Configure the MX4PB to fit your application

To choose a stock starter, simply select a unit from the following pages. Stock units ship the same-day.

To modify a starter, select a unit from the following pages, other options as needed from the Options section. We will modify the stock unit for next day shipment.

MX4PB configurable solid state starters stocked as:

- Combination starter with circuit breaker*
- High fault rated (65KAIC)
- Rotary disconnect operator
- EMX4i soft starter chassis
- Run duty bypass
- NEMA 4, 12 (3R enclosure with option adders)
- 240 / 480 V
- Standard 120V control power transformer
- Service entrance rated
- Door mounted keypad with NEMA 3R/4 cover (included)
- KP door mounted keypad NEMA 12 (included)
- 65KAIC rated standard
- UL certified and listed

EMX4i FEATURES

- Current limit ramp
- Soft brake
- SCR Failure PowerThrough
- Daily on/off scheduling
- Full graphical LCD display
- Real language feedback messages
- 8 languages: English, Chinese, German, Italian, French, Spanish, Brazilian Portuguese, Russian
- Real time graphs of motor operating performance
- Main menu and Quick Setup
- Logs: 384 events
- Easy and fast to operate interface
- Quick start application setup for easy commissioning
- Emergency Run (Fire Mode)
- Built-in Simulation Mode
- QR codes on display for fast and easy diagnostics
- USB port for Parameter upload/download, firmware upgrades, diagnostic logs



*Also available as non-combination (without circuit breaker)

Guaranteed ... for three full years.*

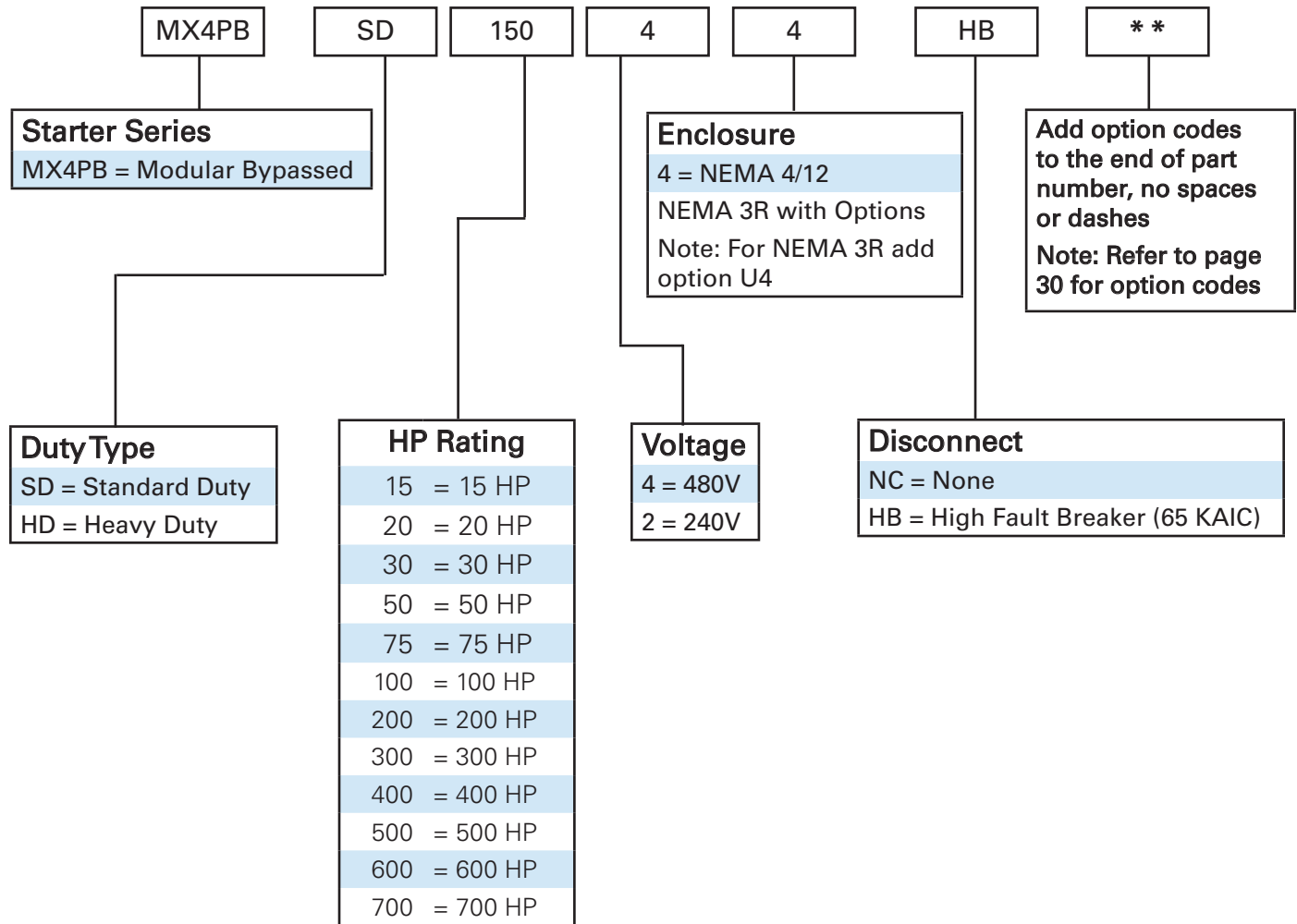
Only Benshaw has a three year guarantee.

Every Benshaw solid state starter is guaranteed for three full years. Other manufacturers limit their warranties to just one year. But at Benshaw, we believe that because we build them better, we can guarantee them longer.



*Subject to factory authorized startup.

MX4PB PART NUMBER ASSEMBLER



MX4PB SERIES NEMA 4/12

Prepackaged Starters with Run Duty Bypass, Combination Starters with Circuit Breaker

Standard Duty / High Fault Breaker (65kA Interrupt Rating)

240 VAC

Model Number	SD High Fault HP	Max Amps	Breaker Size	V	Dimensions (Inches)			Weight (lbs)	NEMA 4/12 List Price
					H	W	D		
✘MX4PB-SD-015-2-4-HB**	15	42	70	240	24	20	12	175	\$5,189
✘MX4PB-SD-020-2-4-HB**	20	54	80	240	24	20	12	175	\$5,335
✘MX4PB-SD-030-2-4-HB**	30	80	125	240	24	20	12	200	\$5,657
✘MX4PB-SD-050-2-4-HB**	50	130	200	240	36	30	16	220	\$8,385
✘MX4PB-SD-075-2-4-HB**	75	192	300	240	36	30	16	220	\$9,818
✘MX4PB-SD-100-2-4-HB**	100	248	400	240	36	30	16	220	\$11,447
✘MX4PB-SD-150-2-4-HB**	150	360	600	240	36	30	16	220	\$12,573
✘MX4PB-SD-200-2-4-HB**	200	477	800	240	36	30	16	220	\$15,486

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Standard duty = 350% current for 30 seconds, 1.15 S.F.

✘ Built-to-order. Please allow 2 week lead time.

For NEMA 3R add option U4 (see page 32).



480 VAC

Model Number	SD High Fault HP	Max Amps	Breaker Size	V	Dimensions (inches)			Weight (lbs)	NEMA 4/12 List Price
					H	W	D		
☒MX4PB-SD-030-4-4-HB**	30	40	100	480	24	20	12	175	\$5,189
☒MX4PB-SD-050-4-4-HB**	50	65	100	480	24	20	12	175	\$5,349
☒MX4PB-SD-075-4-4-HB**	75	96	150	480	24	20	12	200	\$5,657
☒MX4PB-SD-100-4-4-HB**	100	124	200	480	36	30	16	220	\$8,385
☒MX4PB-SD-150-4-4-HB**	150	180	300	480	36	30	16	220	\$9,818
☒MX4PB-SD-200-4-4-HB**	200	240	400	480	36	30	16	220	\$11,447
☒MX4PB-SD-300-4-4-HB**	300	361	600	480	36	30	16	220	\$12,573
☒MX4PB-SD-400-4-4-HB**	400	477	800	480	36	30	16	400	\$15,486
☒MX4PB-SD-500-4-4-HB**	500	590	1000	480	79	31.5	24	566	\$27,950
☒MX4PB-SD-600-4-4-HB**	600	702	1200	480	79	31.5	24	590	\$28,716
☒MX4PB-SD-700-4-4-HB**	700	828	1200	480	79	31.5	24	592	\$29,275

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Standard duty = 350% current for 30 seconds, 1.15 S.F.

☒ Web stocked.

For NEMA 3R add option U4 (see page 32).

Price Effective July 1, 2025

MX4PB SERIES NEMA 4/12

Prepackaged Starters with Run Duty Bypass Combination Starters with Circuit Breaker

Heavy Duty / High Fault Breaker (65kA Interrupt Rating)

240 VAC

Model Number	HD High Fault HP	Max Amps	Breaker Size	V	Dimensions (inches)			Weight (lbs)	NEMA 4/12 List Price
					H	W	D		
✂MX4PB-HD-015-2-4-HB**	15	42	70	240	24	20	12	175	\$5,189
✂MX4PB-HD-020-2-4-HB**	20	54	90	240	24	20	12	175	\$5,442
✂MX4PB-HD-030-2-4-HB**	30	80	150	240	36	30	16	200	\$8,411
✂MX4PB-HD-050-2-4-HB**	50	130	225	240	36	30	16	220	\$8,640
✂MX4PB-HD-075-2-4-HB**	75	192	350	240	36	30	16	220	\$11,292
✂MX4PB-HD-100-2-4-HB**	100	248	400	240	36	30	16	220	\$11,447
✂MX4PB-HD-150-2-4-HB**	150	360	600	240	36	30	16	220	\$14,559

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Heavy duty = 450% current for 30 seconds, 1.25 S.F.

For NEMA 3R add option U4 (see page 32).

✂ Built-to-order. Please allow 2 week lead time.

480 VAC

Model Number	HD High Fault HP	Max Amps	Breaker Size	V	Dimensions (inches)			Weight (lbs)	NEMA 4/12 List Price
					H	W	D		
✂MX4PB-HD-030-4-4-HB**	30	40	100	480	24	20	12	175	\$5,189
✂MX4PB-HD-050-4-4-HB**	50	65	125	480	24	20	12	175	\$8,658
✂MX4PB-HD-075-4-4-HB**	75	96	150	480	36	30	16	200	\$8,863
✂MX4PB-HD-100-4-4-HB**	100	124	200	480	36	30	16	220	\$9,316
✂MX4PB-HD-150-4-4-HB**	150	180	300	480	36	30	16	220	\$11,292
✂MX4PB-HD-200-4-4-HB**	200	240	400	480	36	30	16	220	\$11,498
✂MX4PB-HD-300-4-4-HB**	300	361	600	480	36	30	16	400	\$14,559
✂MX4PB-HD-400-4-4-HB**	400	477	800	480	79	31.5	24	557	\$22,222
✂MX4PB-HD-500-4-4-HB**	500	590	1000	480	79	31.5	24	590	\$28,716
✂MX4PB-HD-600-4-4-HB**	600	702	1200	480	79	31.5	24	592	\$29,275
✂MX4PB-HD-700-4-4-HB**	700	828	1200	480	79	31.5	24	596	\$32,539

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Heavy duty = 450% current for 30 seconds, 1.25 S.F.

For NEMA 3R add option U4 (see page 32).

✂ Built-to-order. Please allow 2 week lead time.

MX4PB SERIES NEMA 4/12



Prepackaged Starters with Run Duty Bypass, Non-Combination Starters

Standard Duty

240 VAC

Model Number	Interrupt Rating	Standard Duty HP	Max Amps	Interrupt Rating	V	Dimensions (Inches)			Weight (lbs)	NEMA 4/12 List Price
						H	W	D		
☞MX4PB-SD-015-2-4-NC**	10kA	15	42	10	240	24	20	12	175	\$4,341
☞MX4PB-SD-020-2-4-NC**	10kA	20	54	10	240	24	20	12	175	\$4,502
☞MX4PB-SD-030-2-4-NC**	10kA	30	80	10	240	24	20	12	200	\$4,583
☞MX4PB-SD-050-2-4-NC**	18kA	50	130	18	240	36	30	16	220	\$7,066
☞MX4PB-SD-075-2-4-NC**	18kA	75	192	18	240	36	30	16	220	\$7,480
☞MX4PB-SD-100-2-4-NC**	18kA	100	248	18	240	36	30	16	220	\$9,039
☞MX4PB-SD-150-2-4-NC**	30kA	150	360	30	240	36	30	16	220	\$9,108
☞MX4PB-SD-200-2-4-NC**	30kA	200	477	30	240	36	30	16	220	\$11,013

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Standard duty = 350% current for 30 seconds, 1.15 S.F.

For NEMA 3R add option U4 (see page 32).

☞ Web stocked.

480 VAC

Model Number	Interrupt Rating	Standard Duty HP	Max Amps	Interrupt Rating	V	Dimensions (inches)			Weight (lbs)	NEMA 4/12 List Price
						H	W	D		
☞MX4PB-SD-030-4-4-NC**	10kA	30	40	10	480	24	20	12	175	\$4,341
☞MX4PB-SD-050-4-4-NC**	10kA	50	65	10	480	24	20	12	175	\$4,502
☞MX4PB-SD-075-4-4-NC**	10kA	75	96	10	480	24	20	12	200	\$4,583
☞MX4PB-SD-100-4-4-NC**	18kA	100	124	18	480	36	30	16	220	\$7,066
☞MX4PB-SD-150-4-4-NC**	18kA	150	180	18	480	36	30	16	220	\$7,480
☞MX4PB-SD-200-4-4-NC**	18kA	200	240	18	480	36	30	16	220	\$9,039
☞MX4PB-SD-300-4-4-NC**	30kA	300	361	30	480	36	30	16	220	\$9,108
☞MX4PB-SD-400-4-4-NC**	30kA	400	477	30	480	36	30	16	220	\$11,174

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Standard duty = 350% current for 30 seconds, 1.15 S.F.

For NEMA 3R add option U4 (see page 32).

☞ Web stocked.

MX4PB SERIES NEMA 4/12

Prepackaged Starters with Run Duty Bypass, Non-Combination Starters

Heavy Duty

240 VAC

Model Number	Interrupt Rating	Heavy Duty HP	Max Amps	Interrupt Rating	V	Dimensions (Inches)			Weight (lbs)	NEMA 4/12 List Price
						H	W	D		
✘MX4PB-HD-015-2-4-NC**	10kA	15	42	10	240	24	20	12	175	\$4,341
✘MX4PB-HD-020-2-4-NC**	10kA	20	54	10	240	24	20	12	175	\$4,592
✘MX4PB-HD-030-2-4-NC**	18kA	30	80	18	240	36	30	16	200	\$7,364
✘MX4PB-HD-050-2-4-NC**	18kA	50	130	18	240	36	30	16	220	\$7,321
✘MX4PB-HD-075-2-4-NC**	18kA	75	192	18	240	36	30	16	220	\$8,954
✘MX4PB-HD-100-2-4-NC**	30kA	100	248	30	240	36	30	16	220	\$9,108
✘MX4PB-HD-150-2-4-NC**	30kA	150	360	30	240	36	30	16	220	\$11,095

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Heavy duty = 450% current for 30 seconds, 1.25 S.F.

For NEMA 3R add option U4 (see page 32).

✘ Built-to-order. Please allow 2 week lead time.

480 VAC

Model Number	Interrupt Rating	Heavy Duty HP	Max Amps	Interrupt Rating	V	Dimensions (inches)			Weight (lbs)	NEMA 4/12 List Price
						H	W	D		
✘MX4PB-HD-030-4-4-NC**	10kA	30	40	10	480	24	20	12	175	\$4,341
✘MX4PB-HD-050-4-4-NC**	10kA	50	65	10	480	24	20	12	175	\$7,586
✘MX4PB-HD-075-4-4-NC**	18kA	75	96	18	480	36	30	16	200	\$7,364
✘MX4PB-HD-100-4-4-NC**	18kA	100	124	18	480	36	30	16	220	\$8,270
✘MX4PB-HD-150-4-4-NC**	18kA	150	180	18	480	36	30	16	220	\$8,954
✘MX4PB-HD-200-4-4-NC**	30kA	200	240	30	480	36	30	16	220	\$9,108
✘MX4PB-HD-300-4-4-NC**	30kA	300	361	30	480	36	30	16	220	\$11,095

** Insert option code. See page 32 for a list of available options. Add options to the end of part number.

Heavy duty = 450% current for 30 seconds, 1.25 S.F.

For NEMA 3R add option U4 (see page 32).

✘ Built-to-order. Please allow 2 week lead time.

MX4PB SERIES NEMA 4/12

Prepackaged Starters with Integral Bypass

Options

Option Code		List Price
U4	Space Heater with Thermostat (add for NEMA 3R)	\$589

Control Options (only one code can be selected)

Option Code		List Price
QN	Run Light	\$164
QF	Reset Push-Buttons	\$113
CP	Start / Stop Push-Buttons	\$232
CQ	Start / Stop Push-Buttons and Run Light	\$311
CR	Start / Stop Push-Buttons, Run Light, Fault Light and Reset Push-Button	\$663
RK	Fault Light	\$164
CS	Fault Light and Reset Push-Button	\$278
CT	Run Light, Fault Light and Reset Push-Button	\$444
CU	HOA and Start / Stop Push-Buttons	\$431
CV	HOA , Start / stop Push-Buttons and Run Light	\$589
CW	HOA, Start / Stop Push-Buttons, Run Light, Fault Light and Reset Push-Button	\$869

Communication Interfaces for Network Integration

Option Code		List Price
CE	DeviceNet Card, EMX4i	\$398
CJ	Modbus Card, EMX4i	\$301
CD	Profibus Card, EMX4i	\$517
CK	Modbus TCP Card, EMX4i	\$1,018
CL	Profinet Card. EMX4i	\$1,018
CF	Ethernet IP Card, EMX4i	\$1,018

Note: Only one can be selected

Smart Cards

		List Price
SCC-PC-01	Smart Card, Pump Application [EMX4]	\$428

Fingerguard

		List Price
995-17309-00	Fingerguard IP20 Kit for Personnel Safety	\$264

RX4E SERIES

Prepackaged Starters with ATL Bypass Heavy Duty with EMX4i Technology

STANDARD FEATURES:

- EMX4i Soft Starter, Chassis
- Circuit breaker with Flange operator
- 65KAIC rated
- 450% rated for 30 seconds
- 1.15 service factor
- Bypass contactor, starting duty
- Class 30 overload on bypass
- Internally mounted bypass switch
- Control power transformer
- Terminal strip remote connections
- Option adder for NEMA 3R
- Door-mounted start and stop push-buttons
- Door-mounted keypad
- Door-mounted run indicating light
- Door-mounted local-off remote switch
- Door-mounted fault indicating light
- Door-mounted overload reset
- UL certified and listed



EMX4i FEATURES:

- Current limit ramp
- Soft brake
- SCR Failure PowerThrough
- Daily on/off scheduling
- Full graphical LCD display
- Real language feedback messages
- 8 languages: English, Chinese, German, Italian, French, Spanish, Brazilian Portuguese, Russian
- Real time graphs of motor operating performance
- Main menu and Quick Setup
- Logs: 384 events
- Easy and fast to operate interface
- Quick start application setup for easy commissioning
- Emergency Run (Fire Mode)
- Built-in Simulation Mode
- QR codes on display for fast and easy diagnostics
- USB port for Parameter upload/download, firmware upgrades, diagnostic logs



Guaranteed ... for three full years.*

Only Benschaw has a three year guarantee.

Every Benschaw solid state starter is guaranteed for three full years. Other manufacturers limit their warranties to just one year. But at Benschaw, we believe that because we build them better, we can guarantee them longer.

*Subject to factory authorized startup.



RX4E SERIES



Prepackaged Starters with ATL Bypass 480V, NEMA 12 and 3R

HEAVY DUTY WITH EMX4i TECHNOLOGY/ HIGH FAULT BREAKER (65kA Interrupt Rating)

Model Number	Amps	HP	Breaker	Dimensions (inches)			Wgt. (lbs.)	NEMA 12 List Price		NEMA 3R List Price
		480 V	Size	H	W	D				
RX4E-050-480-XXKP-HB	65	50	100	26	24	12	215	\$7,668	☒	\$8,686
RX4E-075-480-XXKP-HB	96	75	225	48	24	12	220	\$9,339	☒	\$10,173
RX4E-100-480-XXKP-HB	124	100	225	48	24	12	230	\$10,386	☒	\$11,797
RX4E-125-480-XXKP-HB	156	125	225	48	24	12	320	\$10,451	☒	\$12,296
RX4E-150-480-XXKP-HB	180	150	300	48	24	12	325	\$10,837	☒	\$13,130
RX4E-200-480-XXKP-HB	240	200	400	48	24	12	335	\$14,045	☒	\$15,422
RX4E-250-480-XXKP-HB	302	250	400	48	36	16	510	\$15,701	☒	\$17,120
RX4E-300-480-XXKP-HB	361	300	600	48	36	16	515	\$16,205	☒	\$17,471
RX4E-400-480-XXKP-HB	477	400	800	72	39.5	18	765	\$25,938	☒	\$27,421
RX4E-500-480-XXKP-HB	590	500	1000	72	39.5	18	790	\$32,487	☒	\$32,971
RX4E-600-480-XXKP-HB	720	600	1200	72	39.5	18	815	\$33,065	☒	\$33,549

☒ NEMA 3R web stocked.
 XX Add 12 or 3R to part number.

REDISTART RX2E SERIES

Prepackaged Starters with ATL Bypass Heavy Duty 480V, NEMA 12 and 3R, Dual Redundant

RX2E SERIES PRODUCT HIGHLIGHTS:

RX2E starters provide solid state reduced voltage starting for normal operation and full voltage emergency backup starting with complete electronic motor protection at the flip of a switch. This unique dual redundant design is the ideal solution for critical applications where downtime is extremely disruptive to production operations and cannot be tolerated. Benshaw's MX solid state controls provide precise digital starting and stopping, motor protection, metering, diagnostics and communications standard.

Units are built to order with MX² technology, but are also available with MX³ technology.

Rugged. Reliable. Ready.



STANDARD FEATURES:

- NEMA 12, dual redundant, combination/circuit breaker
- Shunt trip on main circuit breaker
- 500% — 30 seconds rated solid state starter, UL certified and listed
- 1800 PIV rated SCRs, UL certified and listed
- 125% continuous duty rated solid state starter, UL certified and listed
- Selector switch for selecting solid state or full voltage operation mounted inside enclosure
- Full HP rated bypass contactor with a 1.15 service factor, wired for normal bypass operation and full voltage start and run operation, with normally open auxiliary contact
- Separately mounted "SPE" series overload relay wired for full voltage start and run operation.
- 110 volt control power transformer with primary and secondary fuses
- Door-mounted start and stop push-buttons
- Door-mounted keypad
- Door-mounted run indicating light
- Door-mounted local-off remote switch
- Door-mounted overload reset
- Terminal strip mounted inside enclosure for remote start/stop connection
- Auxiliary relay with (2) Form C run contacts
- Benshaw MX² or MX³ programmable motor controller with soft start, soft stop and motor protection capabilities
- RS485 ModBus communications
- Analog I/O
- Available with MX³ technology

Guaranteed ... for three full years. *

Only Benshaw has a three year guarantee.

Every Benshaw solid state starter is guaranteed for three full years. Other manufacturers limit their warranties to just one year. But at Benshaw, we believe that because we build them better, we can guarantee them longer.

*Subject to factory authorized startup.



REDISTART RX2E/RX3E SERIES

Packaged Starters with ATL Bypass Heavy Duty 480V

COMBINATION/DUAL REDUNDANT PACKAGED STARTER WITH CIRCUIT BREAKER, EMERGENCY ACROSS-THE-LINE BYPASS/NEMA12/NEMA3R



RX2E SERIES WITH MX2 TECHNOLOGY

Model Number	Amps	HP	CB	Dimensions (inches)			Wgt. (lbs.)	NEMA 12 List Price	NEMA 3R List Price
		480 V	Trip	H	W	D			
RX2E-050-480-XX	65	50	100	26	24	12	215	\$8,733	☒ \$9,542
RX2E-075-480-XX	96	75	225	26	24	12	220	\$10,127	☒ \$10,641
RX2E-100-480-XX	124	100	225	48	24	12	230	\$11,295	☒ \$12,374
RX2E-125-480-XX	156	125	225	48	24	12	320	\$11,394	☒ \$13,431
RX2E-150-480-XX	180	150	300	48	24	12	325	\$11,601	☒ \$13,623
RX2E-200-480-XX	240	200	400	48	36	12	335	\$15,189	☒ \$16,753
RX2E-250-480-XX	302	250	400	70	30	18	510	\$17,314	☒ \$18,992
RX2E-300-480-XX	361	300	600	70	30	18	515	\$18,345	☒ \$21,787
RX2E-400-480-XX	477	400	800	87	37	20	765	\$24,360	☒ \$28,303
RX2E-500-480-XX	590	500	1200	87	37	20	790	\$31,142	☒ \$33,853
RX2E-600-480-XX	720	600	1200	87	37	20	815	\$32,104	☒ \$34,256

☒ NEMA 3R web stocked.

XX Add 12 or 3R to part number 500% current for 30 seconds.

RX3E SERIES WITH MX3 TECHNOLOGY

Model Number	Amps	HP	CB	Dimensions (inches)			Wgt. (lbs.)	NEMA 12 List Price	NEMA 3R* List Price
		480 V	Trip	H	W	D			
✳ RX3E-050-480-XX	65	50	100	48	24	13	240	\$9,961	\$10,518
✳ RX3E-075-480-XX	96	75	225	48	24	13	245	\$10,531	\$11,436
✳ RX3E-100-480-XX	124	100	225	48	24	17	255	\$12,283	\$13,048
✳ RX3E-125-480-XX	156	125	225	48	36	17	355	\$13,313	\$13,972
✳ RX3E-150-480-XX	180	150	300	48	36	17	360	\$13,519	\$14,868
✳ RX3E-200-480-XX	240	200	400	48	36	17	370	\$17,122	\$18,074
✳ RX3E-250-480-XX	302	250	400	70	30	18	565	\$18,629	\$19,456
✳ RX3E-300-480-XX	361	300	600	70	30	18	570	\$19,221	\$20,089
✳ RX3E-400-480-XX	477	400	800	87	37	20	850	\$26,588	\$28,493
✳ RX3E-500-480-XX	590	500	1200	87	37	20	875	\$35,818	\$37,378
✳ RX3E-600-480-XX	720	600	1200	87	37	20	905	\$37,378	\$38,928

✳ Built-to-order. Please allow 2 week lead time.

XX Add 12 or 3R to part number 500% current for 30 seconds.

Price Effective July 1, 2025

Notes

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Introduction

As an industry leader in motor control, Benshaw is known for their offering of standard and custom engineered drive packages. If an off-the-shelf unit does not meet your needs, our dedicated team can design the drive solution you need.

Benshaw now offers a complete range of low voltage variable speed drive solutions ... from multi-purpose micro drives and high performance industrial drives to IEEE 519 clean power drives, NEMA 4X washdown duty drives and custom configured packaged drive solutions.

Benshaw GM2 Series is a sensorless vector, variable frequency drive. This micro-drive may be small...but don't let looks fool you. The GM2 Series offers enhanced performance and reliable operation in a robust, yet compact, user-friendly design. Powerful, yet small...it is the ideal choice for cost sensitive OEM or end user requirements. And it is the ideal drive for Benshaw distributors to keep in stock because of its versatility.

The **Benshaw S Series** is a compact yet powerful AC drive designed for the most demanding applications. Available in 'normal duty' ratings up to 15HP and 'heavy duty' ratings up to 10HP, the S Series puts you in control. Whether your application calls for V/Hz control, Sensorless Vector Control or Torque Control, the S Series has you covered. Modbus RTU is standard with optional communication protocols available.

The **Benshaw SW Series** NEMA 4X Washdown Drives are heavy duty rated for applications from 0.5-30HP. Designed for high pressure washdown, all SW Series drives feature a rugged UL Type 4X (IP66) indoor rated polycarbonate enclosure that exceeds NEMA 1, 12, 4 and 4X standards. A convenient built-in power disconnect switch, 4 digit, 7-segment display and an optional remote LCD Display/Keypad with a Quick Start menu, make it easy to program and control.

The **Benshaw H2 Series** sets the new standard for variable frequency drives. It can be used as a general purpose industrial drive with V/hz or Vector control (with ratings for normal or heavy duty applications from 5-800HP). For fan and pumps applications, simply use the built-in macros designed to meet the basic requirements of the water/wastewater, irrigation and HVAC industries. Built in communication protocols include Modbus-RTU, BACnet and Metasys-N2.



GM2 SERIES - GENERAL PURPOSE MICRO DRIVE

The Benschaw GM2 Series is a sensorless vector, variable frequency drive. This micro-drive may be small...but don't let looks fool you. The GM2 Series offers enhanced performance and reliable operation in a robust, yet compact, user-friendly design. Powerful, yet small...it is the ideal choice for cost sensitive OEM or end user requirements. And it is the ideal drive for Benschaw distributors to keep in stock because of its versatility. The GM2 Series is easy to install, simple to program and offers dual ratings for both normal and heavy duty applications.

STANDARD FEATURES - HARDWARE

- Dual Rated - Normal and Heavy Duty
- 240V: 1HP~15 HP (ND), 0.5 HP~10HP (HD)
- 480V: 1HP~15 HP (ND), 0.5 HP~10 HP (HD)
- Display - 4 digit, 7 Segment with 4 LED Indicators
- Protected Chassis - UL Open (IP20)
- DIN Rail mounting (up to 7.5 HP, 5.5 kW)
- EMC Filter (480V only)
- Internal Brake IGBT
- Single Phase Input (derating required)
- Built in Potentiometer
- RJ45 Port (Modbus-RTU) or Remote 7-Segment Display/Keypad

STANDARD FEATURES - SOFTWARE

- Modbus - RTU
- Control - V/Hz, Sensorless Vector, Slip Compensation
- Auto Tuning
- Torque Limits
- PID Control
- Regen Avoidance
- Kinetic Energy Buffering (KEB), RideThrough

COMMUNICATIONS

- Standard: Modbus-RTU
- Option: Ethernet/IP - Modbus-TCP
- WinDRIVE:** PC Based Software for Commissioning and Monitoring



Feature	Benefit
Robust Design	Construction of the air flow design minimizes exposure of critical components (IGBT, PCB, etc.) to outside contaminants
Built-in EMC Filter	Embedded C3 EMC filter to meet EN618000-3 standards and provide noise reduction
V/F Acceleration and Deceleration Function	<ul style="list-style-type: none"> • Auto torque boost (ATB) enhancing acceleration performance in V/F mode • Flux braking enhancing deceleration performance in V/F mode
Sensorless Vector Control	Performs enhanced high torque at low speed with sensorless vector control
KEB Operation (Kinetic Energy Buffering)	DC link voltage is maintained during power loss or brownout by using regenerative energy from the motor
Flying Start	Select optimal flying start operation for different applications
Fan Life-cycle Diagnosis	Keypad displays a replacement warning at 50,000 hours of fan operating time or user setting level of fan replacement
Material Design	Enhanced thermal resistance and increased thickness to prevent damage

GM2 SERIES - PRICING

240V - Open Chassis	Normal Duty 120% OL / 1 min.		Heavy Duty 150% OL / 1min.		Dimensions (inches)			Weight (lbs)	List Price
	HP	Amps	HP	Amps	H	W	D		
VFD-RSI-001-GM2-2C	1.0	3.1	0.5	2.5	6.46	3.40	5.50	2.3	\$520
VFD-RSI-002-GM2-2C	2.0	6	1.0	5	6.46	3.40	5.50	2.3	\$549
VFD-RSI-003-GM2-2C	3.0	9.6	2.0	8	6.98	3.98	6.25	3.0	\$584
VFD-RSI-005-GM2-2C	5.0	12	3.0	11	6.98	3.98	6.25	3.1	\$608
VFD-RSI-007-GM2-2C	7.5	18	5.0	17	7.60	5.31	6.25	4.2	\$741
VFD-RSI-010-GM2-2C	10	30	7.5	24	9.46	7.10	6.00	6.8	\$1,163
VFD-RSI-015-GM2-2C	15	40	10	32	9.46	7.10	6.00	7.1	\$1,315

480V - Open Chassis	Normal Duty 120% OL / 1 min.		Heavy Duty 150% OL / 1min.		Dimensions (inches)			Weight (lbs)	List Price
	HP	Amps	HP	Amps	H	W	D		
VFD-RSI-001-GM2-4C	1.0	2	0.5	1.3	6.46	3.40	5.50	2.3	\$547
VFD-RSI-002-GM2-4C	2.0	3.1	1.0	2.5	6.46	3.40	5.50	2.4	\$571
VFD-RSI-003-GM2-4C	3.0	5.1	2.0	4	6.98	3.98	6.25	3.2	\$601
VFD-RSI-005-GM2-4C	5.0	6.9	3.0	5.5	6.98	3.98	6.25	3.2	\$630
VFD-RSI-007-GM2-4C	7.5	10	5.0	9	7.60	5.31	6.25	4.4	\$713
VFD-RSI-010-GM2-4C	10	16	7.5	12	9.46	7.10	6.00	7.1	\$1,018
VFD-RSI-015-GM2-4C	15	23	10	16	9.46	7.10	6.00	7.2	\$1,087

GM2 Series - Accessories

Model Number	Description	List Price
PC-100093-00	Ethernet / IP, Modbus - TCP option, dual port	\$388
KP-100002-00	Keypad / display (7-Segment LED), remote, w / 1M cable	\$136
KP-100002-01	Keypad / display (7-Segment LED), remote, w / 2M cable	\$136
KP-100002-02	Keypad / display (7-Segment LED), remote, w / 3M cable	\$141
KP-100002-03	Keypad / display (7-Segment LED), remote, w / 5M cable	\$147
EN-101036-00	Conduit box, 1HP - 2HP, 230V / 480V	\$92
EN-101036-01	Conduit box, 3HP - 5HP, 230V / 480V	\$95
EN-101036-02	Conduit box, 7.5HP, 230V / 480V	\$101
EN-101036-03	Conduit box, 10HP - 15HP, 230V / 480V	\$113

GM2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

3-Phase 240V, 1 HP - 15 HP (0.75 - 11 kW)

RSI-XXX-GM2-2C			001	002	003	005	007	010	015
240V, w/3Ø Input	Normal Duty, 120% OL	HP	1	2	3	4	7.5	10	15
		kW	0.75	1.5	2.2	4	5.5	7.5	11
		Amps	3.1	6	9.6	12	18	30	40
		KVA	1.2	2.3	3.8	4.6	6.9	11.4	15.2
	Heavy Duty, 150% OL	HP	0.5	1	2	3	5	7.5	10
		kW	0.4	0.75	1.5	2.2	4	5.5	7.5
		Amps	2.5	5	8	11	17	24	32
		KVA	1	1.9	3	4.2	6.5	9.1	12.2
240V, w/1Ø Input	Normal Duty	HP	-	0.75	1.5	2	3	5	7.5
		Amps	2	3.6	5.9	6.7	9.8	16.3	22
	Heavy Duty	HP	-	0.5	1	1.5	3	3	5
		Amps	1.5	2.8	4.6	6.1	9.3	12.8	17.4
Rated Output	Output frequency		0-400 Hz (IM Sensorless: 0 - 120 Hz)						
	Output voltage (V)		3-phase 200-240V						
	Voltage (V)		3-phase 200-240VAC (- 15% to + 10%)						
			1-phase 240VAC (- 5% to + 10%)						
	Input frequency		3-phase 50-60 Hz (± 5%)						
			1-phase 60Hz only (± 5%)						
Rated Current (A)	Normal Duty	3	6.3	10.8	13.1	19.4	32.7	44.2	
	Heavy Duty	2.2	4.9	8.4	11.8	18.5	25.8	34.9	
Weight (lb / kg)		lbs	2.3	2.3	3	3	4.2	6.8	7.1
		kg	1.04	1.06	1.36	1.4	1.89	3.08	3.21
Heat Dissipation (W)		22	45	79	117	208	281	382	
Degree of Protection		UL Open Type (IP20), UL Type 1 achieved with optional conduit box							

GM2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

3-Phase 480V, 1 HP - 15 HP (0.75 - 11 kW)

RSI-XXX-GM2-4C			001	002	003	005	007	010	015
480V, w/3Ø Input	Normal Duty, 120% OL	HP	1	2	3	5	7.5	10	15
		kW	0.75	1.5	2.2	4	5.5	7.5	11
		Amps	2	3.1	5.1	6.9	10	16	23
		KVA	1.5	2.4	3.9	5.3	7.6	12.2	17.5
	Heavy Duty, 150% OL	HP	0.5	1	2	3	5	7.5	10
		kW	0.4	0.75	1.5	2.2	4	5.5	7.5
		Amps	1.3	2.5	4	5.5	9	12	16
		KVA	1	1.9	3	4.2	6.5	9.1	12.2
480V, w/1Ø Input	Normal Duty	HP	0.5	0.75	1~1.5	2	3	5	7.5
		Amps	1.3	1.9	2.8	3.6	5.4	8.7	12.6
	Heavy Duty	HP	-	0.5	1	1.5	3	3	5
		Amps	0.7	1.4	2.1	2.8	4.9	6.4	8.7
Rated Output	Output frequency		0-400 Hz (IM Sensorless: 0-120 Hz)						
	Output voltage (V)		3-phase 380-480 V						
Rated Input	Voltage (V)		3-phase 380-480 VAC (- 15% to + 10%)						
			1-phase 480VAC (- 5% - + 10%)						
	Input frequency		3-phase 50-60 Hz (± 5%)						
			1-phase 60 Hz only (± 5%)						
Rated Current (A)	Normal Duty	2	3.3	5.5	7.5	10.8	17.5	25.4	
	Heavy Duty	1.1	2.4	4.2	5.9	9.8	12.9	17.5	
Weight (lb / kg)		lbs	2.3	2.4	3.2	3.2	4.4	7.1	7.2
		kg	1.04	1.08	1.44	1.46	1.98	3.24	3.28
Heat Dissipation (W)			24	42	71	99	176	231	315
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box						

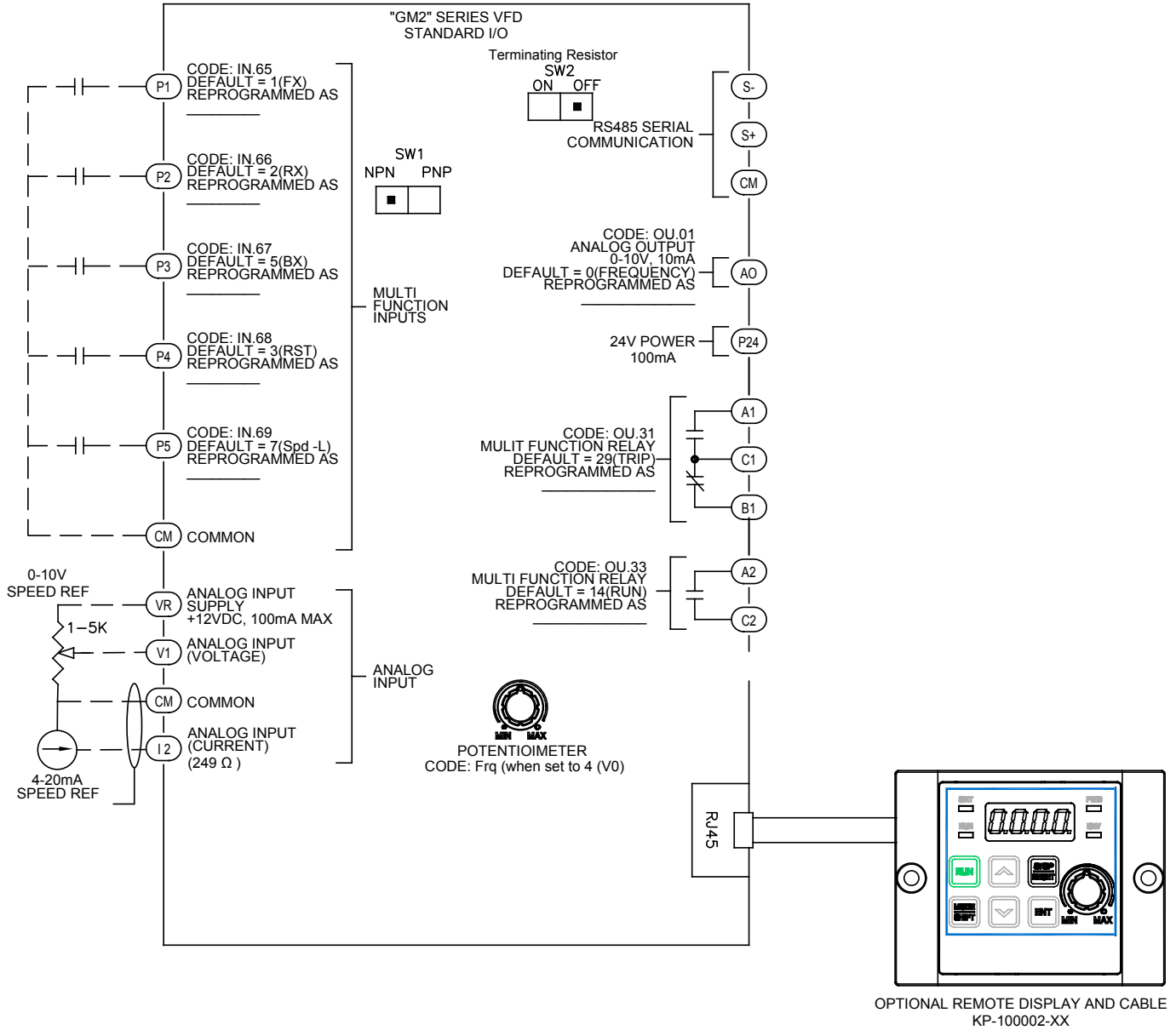
GM2 SERIES - PRODUCT SPECIFICATION DETAILS

Feature		Description			
Control	Control method	V/F control, Sensorless Vector, Slip Compensation			
	Frequency settings resolution	Digital command: 0.01 Hz			
		Analog command: 0.06 Hz (60 Hz standard)			
	Frequency accuracy	1% of maximum output frequency			
	V/F pattern	Linear, Square Reduction, User V/F			
	Overload capacity	Normal Duty: 120%, 1 minute			
Heavy Duty: 150%, 1 minute					
Torque boost	Manual torque boost, Automatic torque boost				
Operation	Start/Stop	Keypad, terminal strip, communication operation			
	Frequency settings	Analog type: 0-10 V, 4-20 mA, -10 +10 V (bipolar)			
		Digital type: keypad			
	Operation functions	Basic	Advanced		
		Start/Stop operation	Sensorless Vector Control		
		Start/Stop Modes	Auto Tuning		
		Frequency Reference Sources	Torque Limits		
		Auxiliary Frequency Reference	PID Control		
		Multi-Step Speeds	Slip Compensation		
		Multi-Step Accel/Decel Times	Energy Save Mode		
		2nd Source (HOA)	Regen Avoidance		
		Accel/Decel Times	VFD Fan Control		
		Accel/Decel Patterns			
		Dwell Frequency Operation	Loss of Power		
		Jog	Ride Through (KEB)		
		Auto Start	Safe Stop		
		Auto Resert/Restart	Speed Search		
			V/Hz. Control Pattern	Braking	
			Linear, Squared, User V/Hz	DC Injection Braking	
			Torque Boost	Stall Prevention	
				Power Braking	
		FWD/REV Run Prevention	Flux Braking		
		Frequency Limits	External Brake Control		
		Jump Frequencies			
		3-wire Control			
		Fire Mode			
Input	(5) Multi-function terminals (P1 -P5)	Select PNP (Source) or NPN (Sink) mode			
		Functions of the digital inputs are set with parameters In. 65 - In. 69			
		• Forward/Reverse	• Run Enable (Interlock)		
		• Reset	• External trip		
		• Emergency stop	• Jog operation (FWD/REV)		
		• Multi-Step frequencies	• Multi-Step Acc/Dec		
		• DC braking during stop	• Second motor selection		
		• Frequency increase	• Up/Down Frequency		
		• 3-wire	• Analog Hold (frequency)		
		• Acc/Dec/Stop	• Exit PID Operation		

GM2 SERIES - PRODUCT SPECIFICATION DETAILS

Feature		Description		
Operation	Output	Programmable Output Relays		
		Relay 1 (A1-C1-B1)		
		Relay 2 (A2-C2)		
	Analog output	0-12 VDC: Programmable Analog Output		
Protection	Trip	<ul style="list-style-type: none"> Motor Overload Motor Under Load Over Current (OC1) Over Voltage Low Voltage Ground Fault Motor Over Heat (Eth) Phase Open (In/Out) Inverter Overload No Motor Trip Over Torque 		
		<ul style="list-style-type: none"> Under Torque Inverter Over Heat Short Circuit (OC2) External Trip Hardware Fault Temperature Sensor (NTC) Fan Fault Pre-PID Operation Failure External Brake Trip Reference Loss Option Board Trip 		
		Alarm	Warnings: Reference Loss, Motor Overload, Motor Under Load, Inverter Overload, Fan, Dynamic Braking Rate Warning, Auto Tuning Error, Inverter Overheat	
		Instantaneous Power Outage	Normal Duty: Less than 8ms (~1/2 cycle)	
			Heavy Duty: Less than 15ms (~1 cycle)	
			For longer outages use KEB operation and/or Auto Restart operation	
		Structure / Working Environment	Cooling type	Forced fan cooling structure
			Protection structure	UL Open Type (IP20), UL Enclosed Type 1 is achieved with conduit box installation (option)
			Ambient Operating Temperature	14°F ~ + 104°F (- 10°C ~+ 40°C)
				Derating: 2% output amps for every degree above 104°F (40°C), maximum 122°F (50°C)
				No ice or frost should be present
			Ambient humidity	Less than 95% RH (avoid condensation forming)
Storage temperature	-4°F ~ + 149°F (- 20°C ~ + 65°C)			
Environmental factors	Prevent contact with corrosive gases, flammable gases, oil stains, dust, and other pollutants (Pollution Degree 2 Environment)			
Operation /Altitude/Vibration	3280 ft (1,000 m)			
	Apply derating of 1% voltage/output current for every 100 m above 1,000 m, maximum of 4,000 m			
	Less than 9.8 m/sec ² (1G)			
Air pressure	10 ~ 15 PSI (70 ~ 106 kPa)			

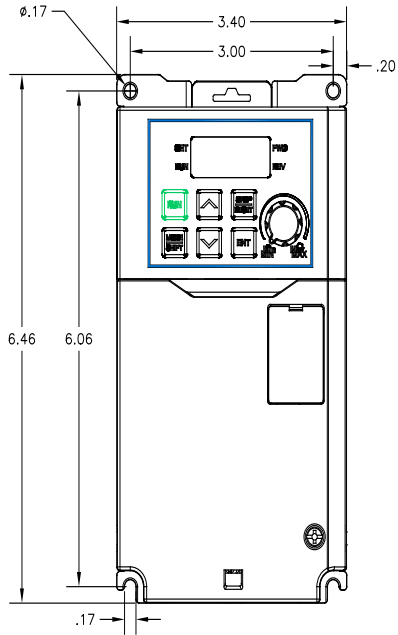
GM2 SERIES - WIRING



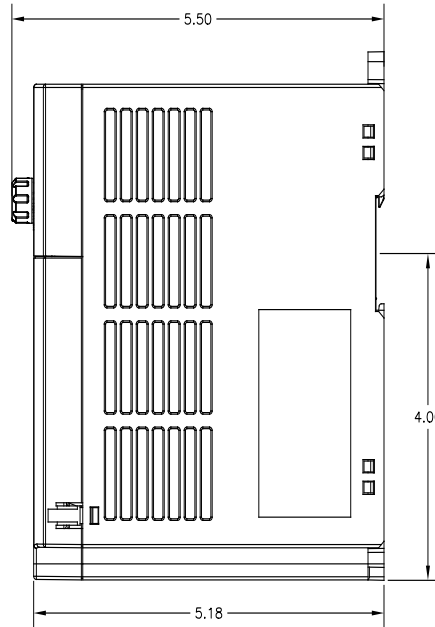
GM2 SERIES - DRAWINGS

240V, 1 HP - 2 HP

480V, 1 HP - 2 HP



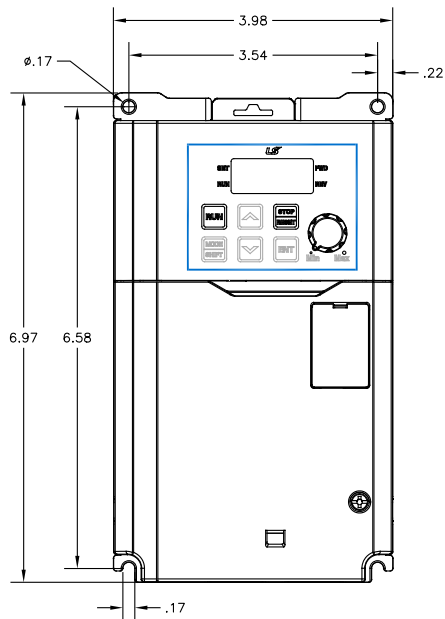
FRONT VIEW



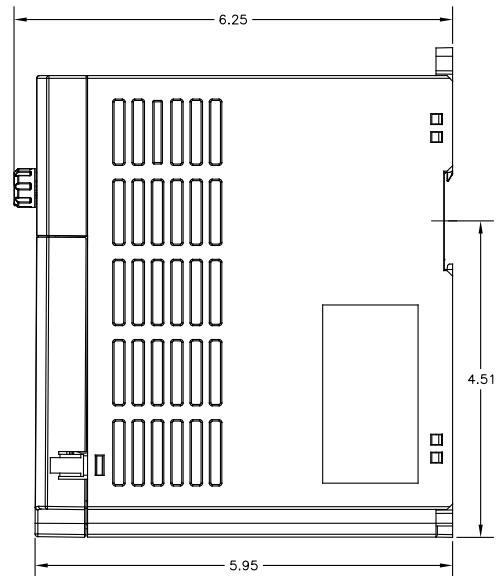
SIDE VIEW

240V, 3 HP - 5 HP

480V, 3 HP - 5 HP



FRONT VIEW

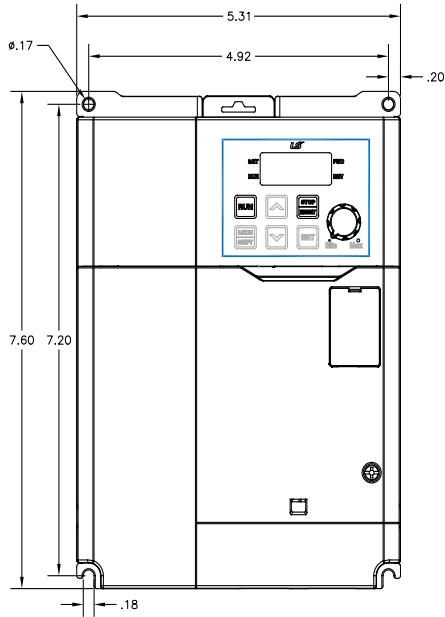


SIDE VIEW

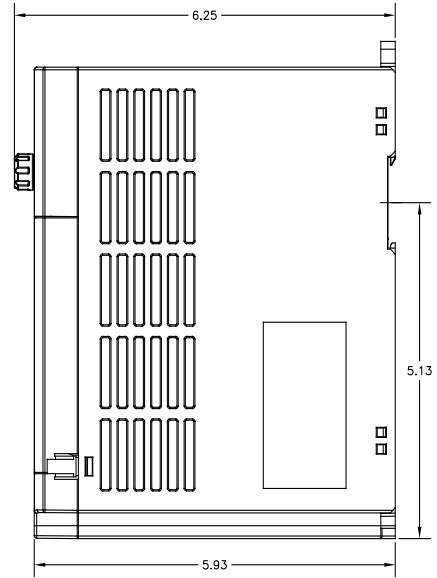
GM2 SERIES - DRAWINGS

240V, 7.5 HP

480V, 7.5 HP



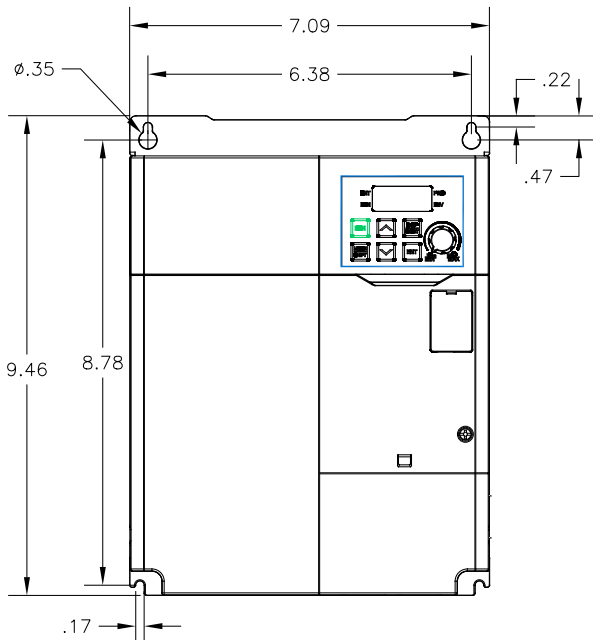
FRONT VIEW



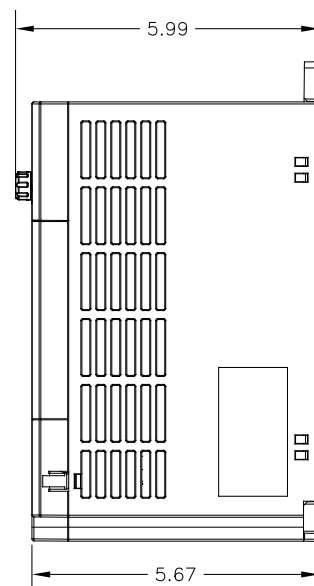
SIDE VIEW

240V, 10 HP - 15 HP

480V, 10 HP - 15 HP



FRONT VIEW



SIDE VIEW

S SERIES - MICRO DRIVES

The Benschaw S Series is a compact yet powerful AC drive designed for the most demanding applications. Available in 'normal duty' ratings up to 15HP and 'heavy duty' ratings up to 10HP, the S Series puts you in control. Whether your application calls for V/Hz control, Sensorless Vector Control or Torque Control, the S Series has you covered. Modbus RTU is standard with optional communication protocols available. And, as with all Benschaw AC drives, the S Series complies with industrial standards including UL/cUL, CE and includes built-in EMC filters (480V models) and Safe Torque Off (STO) input. The best part about the S Series drive is how easy it is to convert from an IP20 protected chassis to a UL Type 1 per UL 61800-5-1 rating with the addition of a convenient conduit box (a standard Benschaw stock item). A plenum rating per UL 2043 is also achieved with the addition of the conduit box.



FEATURES

Dual Rated:

- Normal Duty up to 15HP
- Heavy Duty up to 10HP

Control Modes:

- V/Hz Control
- Sensorless Vector (IM and PMAC)
- Slip Compensation
- Torque Control

Hardware:

- Compact Size
- EMC Filter Built in (460V only)
- Internal Brake IGBT (external resistor required)
- Single Phase Input (derating required)
- IP20 Protected Chassis Enclosure Standard

Functions:

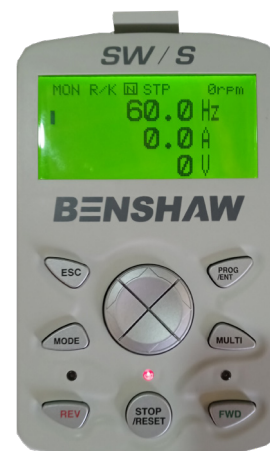
- PID Control
- Kinetic Energy Buffering (KEB) for power loss ride through
- Regen Avoidance for press applications
- Fire Pump Mode
- STO (Safe Torque Off)
- Energy Savings
- Flying Start
- PLC Functionality with 18 steps user programmable sequence
- Peer to Peer communications for Master/Slave Control

OPTIONS

- Extended I/O Card
- Remote LCD Display/Keypad
- Conduit Box for UL Type 1 and Plenum rating
- Adapter Flange for Fins Out Cooling

COMMUNICATIONS

- Ethernet IP/Modbus - TCP
- Profibus -DP
- Profinet
- CANopen



S SERIES - PRICING

Model Number	Normal Duty 120% for 60 sec.		Heavy Duty 150% for 60 sec.		Dimensions (inches)			List Price
	HP	Amps	HP	Amps	H	W	D	
VFD-RSI-001-SS-2C	1	3.1	0.5	2.5	5.04	2.68	4.84	\$659
VFD-RSI-002-SS-2C	2	6	1	5	5.04	2.68	5.04	\$757
VFD-RSI-003-SS-2C	3	10	2	8	5.04	3.94	5.12	\$824
VFD-RSI-005-SS-2C	5	12	3	11	5.04	3.94	5.71	\$965
VFD-RSI-007-SS-2C	7.5	18	5.4	17	5.04	5.51	5.71	\$1,173
VFD-RSI-010-SS-2C	10	30	7.5	24	9.13	6.3	5.51	\$1,708
VFD-RSI-015-SS-2C	15	40	10	32	9.13	6.3	5.51	\$2,089

Model Number	Normal Duty 120% for 60 sec.		Heavy Duty 150% for 60 sec.		Dimensions (inches)			List Price
	HP	Amps	HP	Amps	H	W	D	
VFD-RSI-001-SS-4C	1	2.0	0.5	1.3	7.09	2.68	5.12	\$879
VFD-RSI-002-SS-4C	2	3.1	1	2.5	7.09	2.68	5.12	\$957
VFD-RSI-003-SS-4C	3	5.1	2	4	7.09	3.94	5.51	\$965
VFD-RSI-005-SS-4C	5	6.9	3	5.5	7.09	3.94	5.51	\$1,008
VFD-RSI-007-SS-4C	7.5	10	5.4	9	7.09	5.51	5.51	\$1,242
VFD-RSI-010-SS-4C	10	16	7.5	12	9.13	6.3	5.51	\$1,764
VFD-RSI-015-SS-4C	15	23	10	16	9.13	6.3	5.51	\$2,137

S SERIES - ACCESSORIES

DISPLAY / KEYPAD REMOTE MOUNTING

Part Number	Description	List Price
LCD-100004-00	Remote LCD Display/Keypad, S & SW Series VFD	\$184
VFD-2M-RE-CABLE-H2	Bezel & Cable, RJ45, 2M, S/SW/H2 Series VFD, for Remote Mounting	\$46
VFD-3M-RE-CABLE-H2	Bezel & Cable, RJ45, 3M, S/SW/H2 Series VFD, for Remote Mounting	\$63
CV-100017-00	LCD Cover, Remote Mounting, NEMA 4X, S, SW & H2 Series VFD	\$278

COMMUNICATION CARDS AND I/O CARDS

Part Number	Description	List Price
PC-100090-00	Extended I/O Card, S & SW Series VFD	\$430
PC-100092-00	Ethernet IP & Modbus TCP Option Card	\$339
PC-100091-00	Profibus-DP Option Card*	\$61
PC-100094-00	CANopen Option Card	CF
PC-100095-00	Profinet Option Card	\$677

* Profibus cannot be use with SW VFD.
 CF Consult Factory

NEMA 1 CONDUIT KITS

Part Number	Description	List Price
EN-100994-00	Conduit Box, 1 HP~2 HP, 230V	\$70
EN-100994-01	Conduit Box, 3 HP~5 HP, 230V	\$72
EN-100994-02	Conduit Box, 7.5 HP, 230V	\$77
EN-100994-03	Conduit Box, 10 HP~15 HP, 230V/460V	\$83
EN-100994-04	Conduit Box, 1 HP~2 HP, 460V	\$70
EN-100994-05	Conduit Box, 3 HP~5 HP, 460V	\$72
EN-100994-06	Conduit Box, 7.5 HP, 460V	\$83

FINS OUT MOUNTING FLANGES

Part Number	Description	List Price
BRKT-100770-00	Mounting flange, 1 HP~2 HP, 230V	\$197
BRKT-100770-01	Mounting flange, 3 HP~5 HP, 230V	\$198
BRKT-100770-02	Mounting flange, 7.5 HP, 230V	\$198
BRKT-100770-03	Mounting flange, 10 HP~15 HP, 230V/460V	\$198
BRKT-100770-04	Mounting flange, 1 HP~2 HP, 460V	\$184
BRKT-100770-05	Mounting flange, 3 HP~5 HP, 460V	\$195
BRKT-100770-06	Mounting flange, 7.5 HP, 460V	\$195

S SERIES - INPUT AND OUTPUT SPECIFICATIONS

3-Phase 240V, 1 HP - 15 HP (0.75 - 11 kW)

RSI-XXX-SS-2C		001	002	003	005	007	010	015	
240V, w/3Ø Input	Normal Duty 120% OL	HP	1	2	3	5	7.5	10	15
		kW	0.75	1.5	2.2	3.7	5.5	7.5	11
		Amps	3.1	6	10	12	18	30	40
		KVA	1.2	2.3	3.8	4.6	6.9	11.4	15.2
	Heavy Duty 150% OL	HP	0.5	1	2	3	5.4	7.5	10
		kW	0.4	0.75	1.5	2.2	4	5.5	7.5
		Amps	2.5	5	8	11	17	24	32
		KVA	1	1.9	3	4.2	6.5	9.1	12.2
240V, w/1Ø Input	Normal Duty 120% OL	HP	-	0.75	1	1.5	3	5	7.5
		Amps	1.8	3.3	5.7	6.6	9.9	16	22
	Heavy Duty 150% OL	HP	-	0.5	1	1.5	2	3	5
		Amps	1.5	2.8	4.6	6.1	9.3	13	18
Rated Output	Output frequency		0.00~400.00 (Hz), V/F, Slip Compensation						
			0.00~120.00 (Hz), IM Sensorless						
			0.00~180.00 (Hz), PM Sensorless						
Output voltage (V)		3-phase 0-240 V							
Rated Input	Working voltage (V)		3-phase 200-240 VAC (-15% to +10%)						
			1-phase 240 VAC (-5% to +10%)						
	Input frequency		3-phase 50-60 Hz (±5%)						
			1-phase 60Hz (±5%.)						
	3-phase current (A)	Normal Duty	3	6.3	10.8	13.1	19.4	32.7	44.2
Heavy Duty		2.2	4.9	8.4	11.8	18.5	25.8	34.9	
Weight (lb/kg)		lbs	2	2	2.86	3.3	4.4	7.3	7.3
		kg	0.9	0.9	1.3	1.5	2	3.3	3.3

S SERIES - INPUT AND OUTPUT SPECIFICATIONS

3-Phase 480V, 1 HP - 15 HP (0.75 - 11 kW)

RSI-XXX-SS-2C			001	002	003	005	007	010	015
480V, w/3Ø Input	Normal Duty 120% OL	HP	1	2	3	5	7.5	10	15
		kW	0.75	1.5	2.2	3.7	5.5	7.5	11
		Amps	2	3.1	5.1	6.9	10	16	23
		KVA	1.5	2.4	3.9	5.3	7.6	12.2	17.5
	Heavy Duty 150% OL	HP	0.5	1	2	3	5.4	7.5	10
		kW	0.4	0.75	1.5	2.2	4	5.5	7.5
		Amps	1.25	2.5	4	5.5	9	12	16
		KVA	1	1.9	3	4.2	6.5	9.1	12.2
480V, w/1Ø Input	Normal Duty 120% OL	HP	0.5	0.75	1.5	2	3	5	10
		Amps	1.3	1.9	3	3.9	5.9	9.5	14
	Heavy Duty 150% OL	HP	-	0.5	0.75	1	2	2	3
		Amps	0.8	1.5	2.3	3.1	5.4	7.1	9.5
Rated Output	Output frequency		0.00~400.00 (Hz), V/F, Slip Compensation						
			0.00~120.00 (Hz), IM Sensorless						
			0.00~180.00 (Hz), PM Sensorless						
Output voltage (V)		3-phase 0-480 V							
Rated Input	Working voltage (V)		3-phase 380-480 VAC (-15% to +10%)						
			1-phase 480 VAC (-5% to +10%)						
	Input frequency		3-phase 50-60 Hz (±5%)						
			1-phase 60Hz (±5%.)						
	3-phase current (A)	Normal Duty	2	3.3	5.5	7.5	10.8	17.5	25.4
Heavy Duty		1.1	2.4	4.2	5.9	9.8	12.9	17.5	
Weight (lb/kg) w/EMC filter		lbs	2.6	2.6	3.9	4.1	4.9	7.3	7.5
		kg	1.18	1.18	1.77	1.8	2.23	3.3	3.4

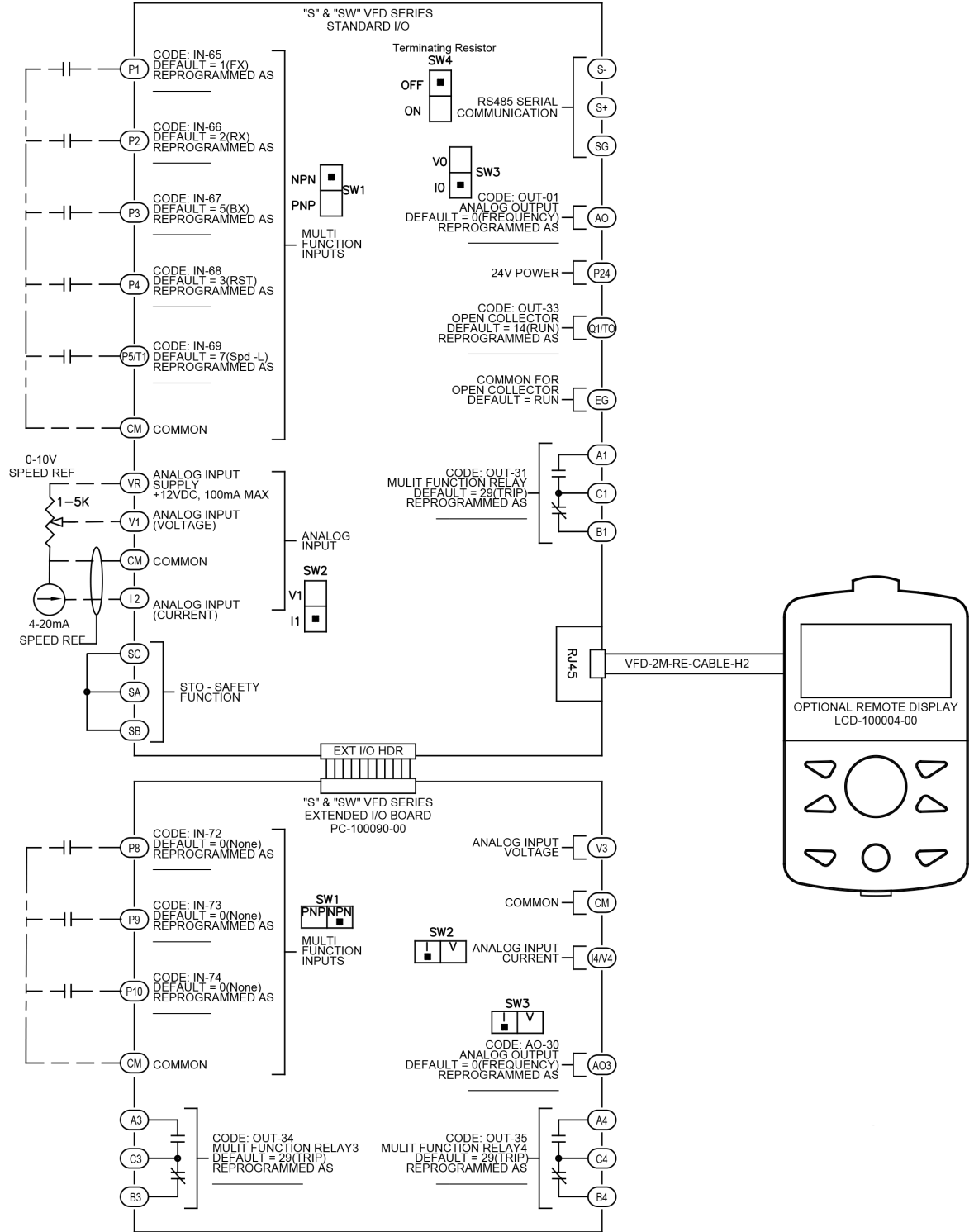
S SERIES - PRODUCT SPECIFICATION DETAILS

Feature		Description			
Control	Control method	V/F control, Slip Compensation, Sensorless Vector (IM and PM), IM Torque Control			
	Frequency settings resolution	Digital command: 0.01 Hz	Analog command: 0.06 Hz (60Hz standard)		
	Frequency accuracy	1% of maximum output frequency			
	V/F pattern	Linear, Square Reduction, User V/F			
	Overload capacity	Normal Duty: 120%, 1 minute	Heavy Duty: 150%, 1 minute		
	Torque boost	Manual torque boost, Automatic torque boost			
Operation	Operation Type				
	Start/Stop	Keypad, terminal strip or communications			
	Frequency settings	Analog type: 0~10V, 0/4~20mA, -10~10V Digital type: Keypad, Pulse Train input, communications			
	Operation function	Basic		Advanced	
		Start/Stop Operation	Sensorless Vector Control		
		Start/Stop Modes	IM and PM motors		
		Frequency Reference Sources	Auto Tuning		
		Auxiliary Frequency Reference	Torque Control, Torque Limits		
		Multi-Step Speeds	PID Control		
		Multi-Step Accel/Decel Times	Slip Compensation		
		2nd Source (HOA)	Energy Save Mode		
		Accel/Decel Times	Regen Avoidance		
		Accel/Decel Patterns	VFD Fan Control		
		Dwell Frequency Operation			
		Jog	Loss of Power		
		Auto Start	Ride Through (KEB)		
		Auto Reset/Restart	Safe Stop		
			Speed Search		
		V/Hz. Control Pattern			
		Linear, Squared, User V/Hz	Braking		
		Torque Boost	DC Injection Braking		
			Stall Prevention		
		FWD/REV Run Prevention	Power Braking		
		Frequency Limits	Flux Braking		
		Jump Frequencies	External Brake Control		
		3-Wire Control			
		Fire Mode			
		Input	(5) Multi-function input terminal (P1 - P5)	Select PNP (Source) or NPN (Sink) mode	
				Functions of the digital inputs are set with parameters In.65 - In.69	
	• Forward/Reverse			• Run Enable (Interlock)	
• Reset	• External trip				
• Emergency stop	• Jog operation (FWD/REV)				
• Multi-Step frequencies	• Multi-step Accel/Decel				
• DC braking during stop	• Second motor selection				
• Frequency increase	• Up/Down Frequency				

S SERIES - PRODUCT SPECIFICATION DETAILS

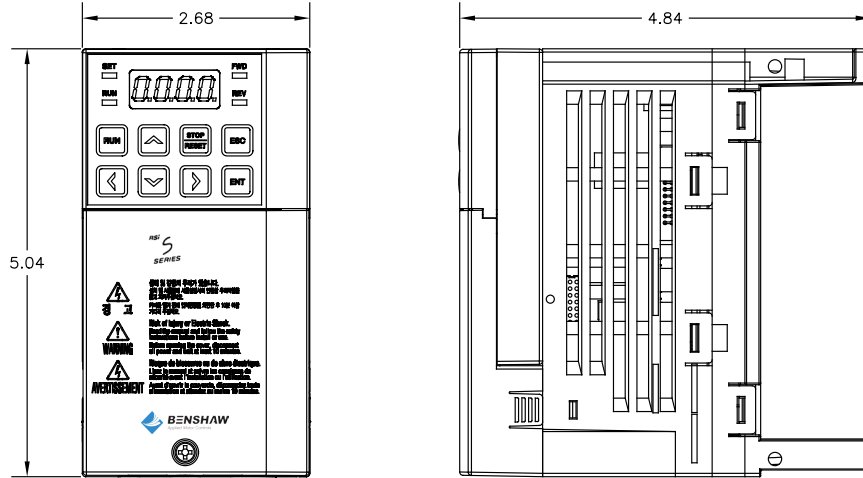
Feature		Description			
Operation	Input	(5) Multi-function input terminal (P1 -P5)	<ul style="list-style-type: none"> 3-Wire Accel/Decel/Stop Analog Hold (frequency) Exit PID Operation Auxiliary Input (2nd Source), HOA 		
		Pulse Train	0-32 kHz, Low Level: 0-2, 5V, High Level: 3, 5-12V		
	Output	Open collector (Q1)	Less than DC 24V, 50mA		
		Relay, R1	Fault output, VFD operating status, many others Less than AC 250V, 1A Less than DC 30V, 1A		
		Analog Output	0/4-20mA / 0-12 VDC (Switch Selectable): Select frequency, output current, output voltage, DC terminal voltage and others		
		Pulse Train	Maximum 32kHz, 10-12V		
			<ul style="list-style-type: none"> Motor Overload Motor Under Load Over Current (OC1) Over Voltage Low Voltage Ground Fault Motor Over Heat (Eth) Phase Open (In/Out) Inverter Overload No Motor Trip Over Torque Safety (STO) A, B Trip Under Torque Inverter Over Heat Short Circuit (OC2) External Trip Hardware Fault Temperature Sensor (NTC) Fan Fault Pre-PID Operation Failure External Brake Trip Reference Loss Option Board Trip Loss of Communications 		
			Alarm	Warnings: Reference Loss, Motor Overload, Motor Under Load, Inverter Overload, Fan, Dynamic Braking Rate Warning, Auto Tuning Error, Inverter Overheat	
			Instantaneous Loss of Power	Normal Duty: Less than 8 ms (~ 1/2 cycle)	
				Heavy Duty: Less than 15 ms (~ 1 cycle)	
				For longer outages use KEB operation and/or Auto Restart operation	
			Structure / working environment	Cooling type	Forced cooling type: 240V: 2 HP ~ 15 HP 480V: 1 HP ~ 15 HP
				Protection structure	IP20, UL Open Type
					UL Type 1 is achieved with conduit box installation (option)
				Ambient temperature	14°F ~+ 104°F (- 10°C ~ + 40°C)
Derating: 2% output amps for every degree above 104°F (40°C) maximum 122°F (50°C)					
Ambient humidity				Less than 90% RH (to avoid condensation forming)	
Storage temperature				- 4°F ~ + 149°F (- 20°C ~ + 65°C)	
Surrounding environment	Prevent contact with corrosive gases, inflammable gases, oil stains, dust, and other pollutants (Pollution Degree 2 Environment)				
Operation altitude/oscillation	3,280 ft (1000 m). Apply derating of 1% voltage/output current for every 328 ft (100m) above 3,280 ft (1,000 m), maximum of 13,123 ft (4,000 m)				
	Less than 9.8 m/sec ² (1G)				
Pressure	10 ~ 15 PSI (70 ~ 106 kPa)				

S SERIES - WIRING

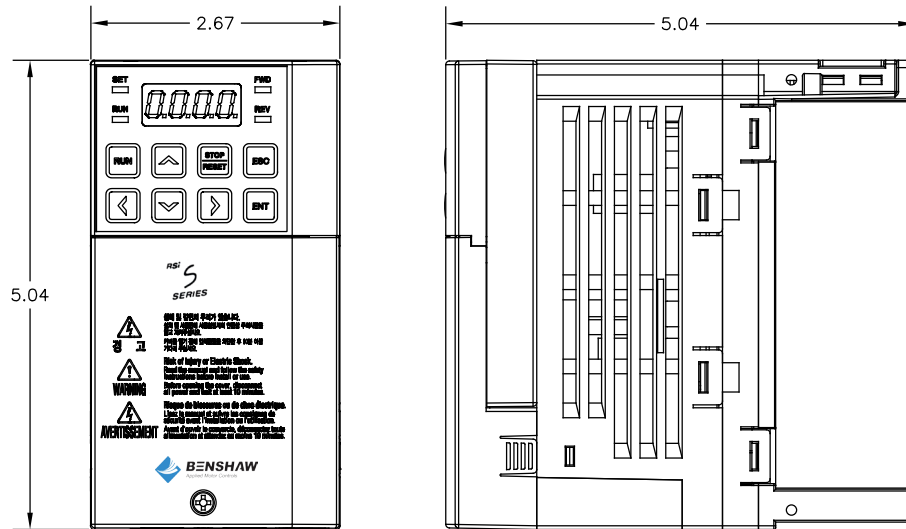


S SERIES - DRAWINGS

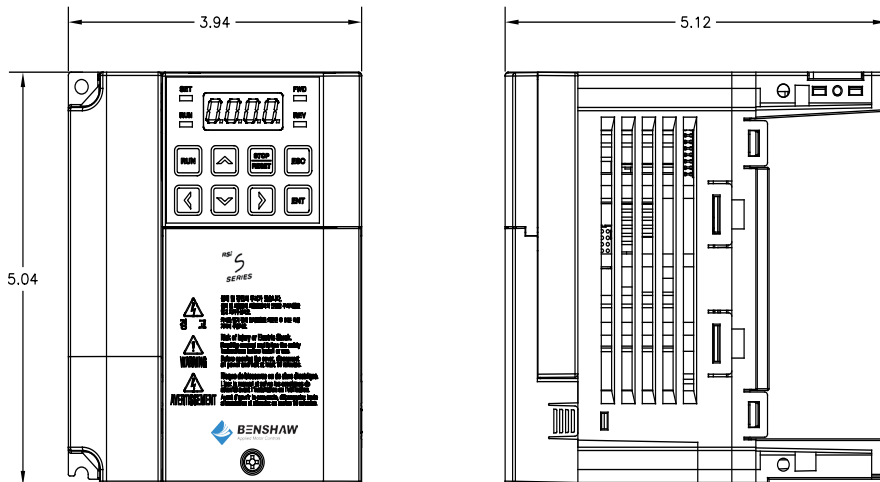
240V, 1 HP



240V, 2 HP

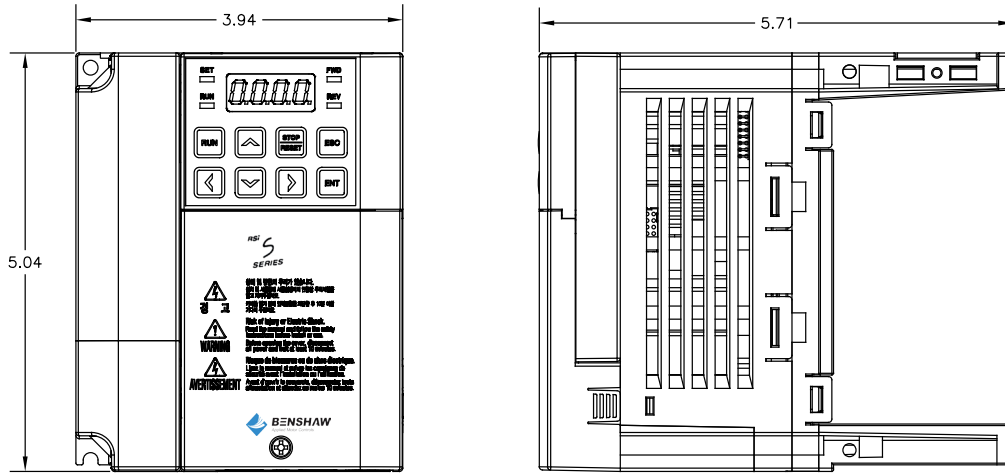


240V, 3 HP

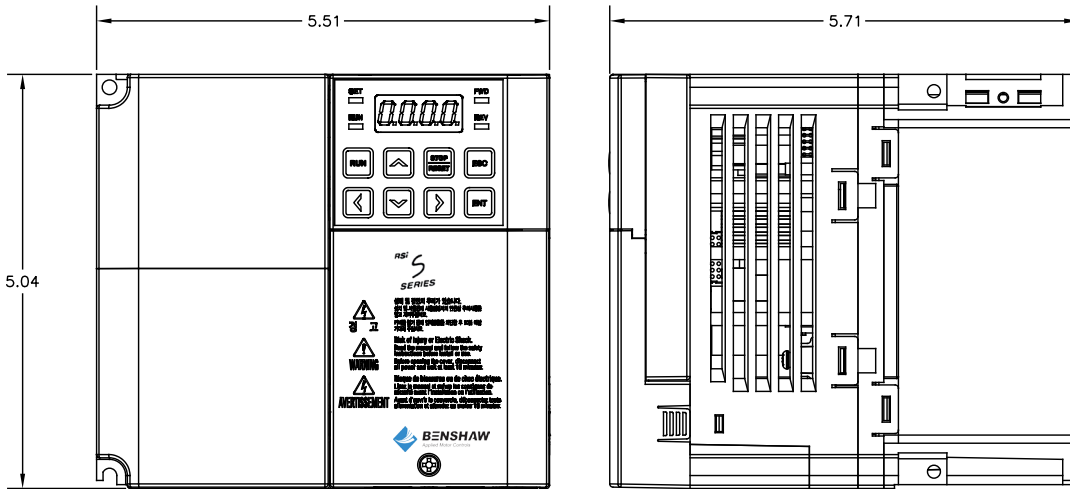


S SERIES - DRAWINGS

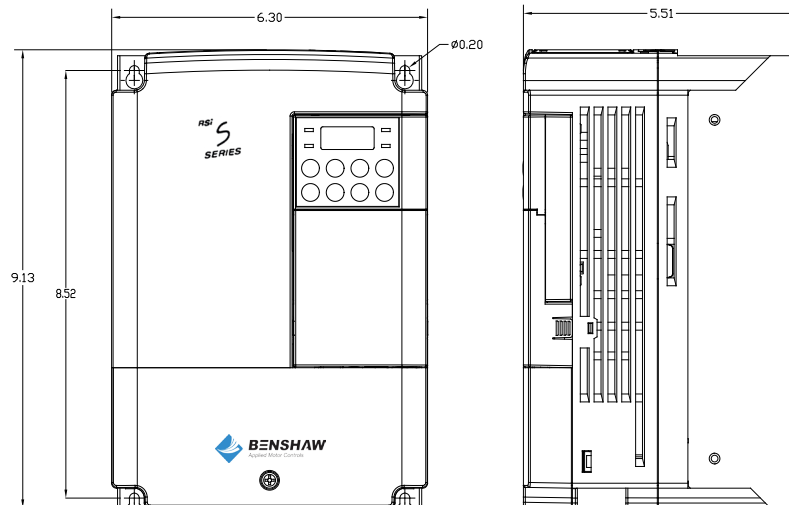
240V, 5 HP



240V, 7.5 HP



240V, 10 HP - 15 HP
480V, 10 HP - 15 HP

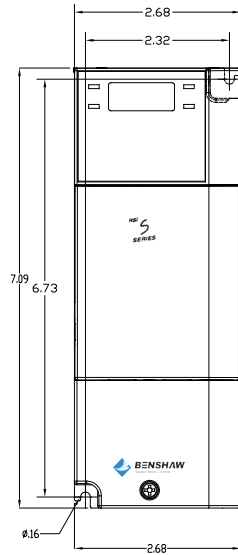


FRONT VIEW

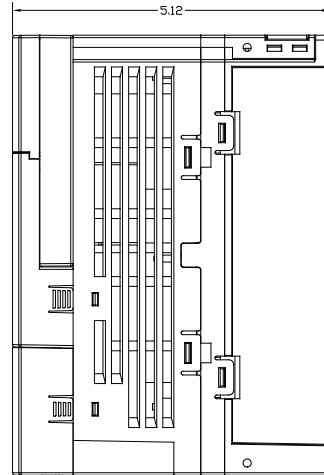
SIDE VIEW

S SERIES - DRAWINGS

480V, 1 HP - 2 HP

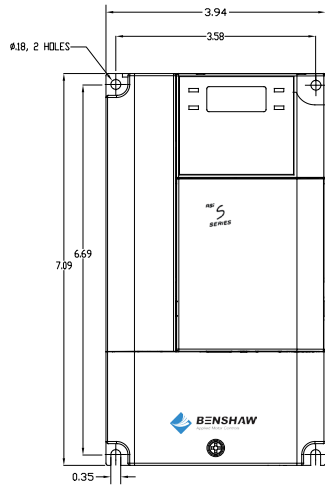


FRONT VIEW

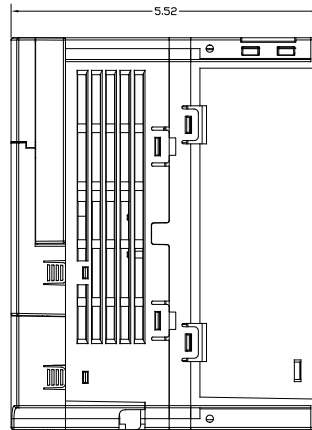


SIDE VIEW

480V, 3 HP - 5 HP

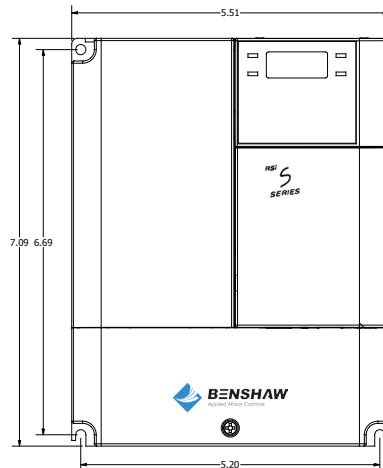


FRONT VIEW

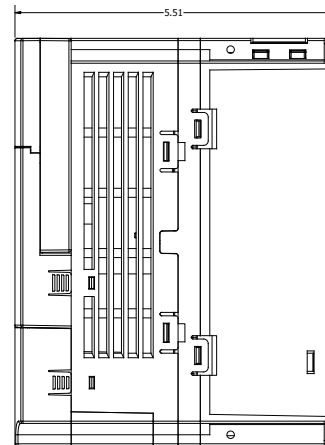


SIDE VIEW

480V, 7.5 HP



FRONT VIEW



SIDE VIEW

SW SERIES - OVERVIEW

The Benschaw SW Series NEMA 4X Washdown Drives are heavy duty rated for applications from 0.5-30HP. Designed for high pressure washdown, all SW Series drives feature a rugged UL Type 4X (IP66) indoor rated polycarbonate enclosure that exceeds NEMA 1, 12, 4 and 4X standards. A convenient built-in power disconnect switch, 4 digit- 7 segment display and an optional remote LCD Display/Keypad with a Quick Start menu, make it easy to program and control. And, standard software gives you the flexibility of programming the drive for V/Hz, Sensorless Vector or Slip Compensation operation...whatever your application requires. An on-board RJ45 Port (Modbus-RTU) and built in EMC filter (480V models) are included in this unique, compact AC drive. The SW Series is the ideal product for either stand-alone or side-by-side installation in the harshest of environments and washdown installations.



STANDARD FEATURES - HARDWARE

- Heavy Duty rated
 - 240V 0.5 HP ~ 20 HP
 - 480V 0.5 HP ~ 30 HP
- Power Disconnect Switch - Built-in
- Display - 4 digit, 7 segment with 4 LED Indicators
- Washdown rated - UL Type 4X (IP66), Indoor only
- EMC Filter (480V only)
- Internal Brake IGBT
- Single Phase Input (derating required)
- RJ45 Port (Modbus - RTU or Remote LCD)

STANDARD FEATURES - SOFTWARE

- Modbus - RTU (via RJ45 or I/O Terminals)
- Control - V/Hz., Sensorless Vector (SVC), Slip Compensation
- Auto Tuning
- SVC (Induction and Permanent Magnet Motors)
- Torque Limits
- PID Control
- Safe Torque Off (STO)
- Fire Mode Input
- Regen Avoidance
- Kinetic Energy Buffering (KEB), Ride Through

SW SERIES - PRICING

240V

Model Number	kW Rating	Heavy Duty 150% OL / 1min.		Dimensions (inches)			Degree of Protection*	Weight (lbs)	List Price
		HP	Amps	H	W	D			
VFD-RSI-0F5-SW-24	0.4	0.5	2.5	10.1	7.09	6.85	UL Type 4X / IP66	7.9	\$1,070
VFD-RSI-001-SW-24	0.75	1	5	10.1	7.09	6.85	UL Type 4X / IP66	7.9	\$1,089
VFD-RSI-002-SW-24	1.5	2	8	10.19	8.66	7.91	UL Type 4X / IP66	11.5	\$1,395
VFD-RSI-003-SW-24	2.2	3	11	10.19	8.66	7.91	UL Type 4X / IP66	11.7	\$1,484
VFD-RSI-005-SW-24	3.7	5	16	10.19	8.66	7.91	UL Type 4X / IP66	12.3	\$1,987
VFD-RSI-007-SW-24	5.5	7.5	24	12.91	9.84	8.94	UL Type 4X / IP66	19.8	\$2,720
VFD-RSI-010-SW-24	7.5	10	32	12.91	9.84	8.94	UL Type 4X / IP66	19.8	\$2,980
VFD-RSI-015-SW-24	11	15	46	15.73	10.24	9.66	UL Type 4X / IP66	21.2	\$3,682
VFD-RSI-020-SW-24	15	20	60	18.11	11.81	9.84	UL Type 4X / IP66	26.7	\$4,190

* Indoor Washdown only.

480V

Model Number	kW Rating	Heavy Duty 150% OL / 1min.		Dimensions (inches)			Degree of Protection*	Weight (lbs)	List Price
		HP	Amps	H	W	D			
VFD-RSI-0F5-SW-44	0.4	0.5	1.3	10.1	7.09	6.85	UL Type 4X / IP66	8.2	\$1,173
VFD-RSI-001-SW-44	0.75	1	2.5	10.1	7.09	6.85	UL Type 4X / IP66	8.2	\$1,334
VFD-RSI-002-SW-44	1.5	2	4	10.19	8.6	7.91	UL Type 4X / IP66	11.7	\$1,431
VFD-RSI-003-SW-44	2.2	3	5.5	10.19	8.6	7.91	UL Type 4X / IP66	12.1	\$1,772
VFD-RSI-005-SW-44	3.7	5	8	10.19	8.6	7.91	UL Type 4X / IP66	12.3	\$2,485
VFD-RSI-007-SW-44	5.5	7.5	12	12.91	9.84	8.94	UL Type 4X / IP66	19.4	\$3,301
VFD-RSI-010-SW-44	7.5	10	16	12.91	9.84	8.94	UL Type 4X / IP66	19.6	\$3,662
VFD-RSI-015-SW-44	11	15	24	15.73	10.24	9.66	UL Type 4X / IP66	21.2	\$3,876
VFD-RSI-020-SW-44	15	20	30	15.73	10.24	9.66	UL Type 4X / IP66	21.6	\$4,701
VFD-RSI-025-SW-44	18.5	25	39	18.11	11.81	9.84	UL Type 4X / IP66	27.3	\$4,787
VFD-RSI-030-SW-44	22	30	45	18.11	11.81	9.84	UL Type 4X / IP66	27.3	\$5,114

* Indoor Washdown only.

SW Series - Accessories

DISPLAY / KEYPAD REMOTE MOUNTING

Part Number	Description	List Price
LCD-100004-00	Remote LCD Display/Keypad, S & SW Series VFD	\$184
VFD-2M-RE-CABLE-H2	Bezel & Cable, RJ45, 2M, S/SW/H2 Series VFD, for Remote Mounting	\$46
VFD-3M-RE-CABLE-H2	Bezel & Cable, RJ45, 3M, S/SW/H2 Series VFD, for Remote Mounting	\$63
CV-100017-00	LCD Cover, Remote Mounting, NEMA 4X, S, SW & H2 Series VFD with 3M Cable	\$278

COMMUNICATION CARDS AND I/O CARDS

Part Number	Description	List Price
PC-100090-00	Extended I/O Card, S & SW Series VFD	\$430
PC-100092-00	Ethernet IP & Modbus TCP Option Card	\$339
PC-100094-00	CANopen Option Card	CF
PC-100095-00	Profinet Option Card	\$677

CF Consult Factory

Price Effective July 1, 2025

SW SERIES - INPUT AND OUTPUT SPECIFICATIONS

240V, 0.5 HP - 5 HP (0.4 - 3.7 kW)

RSI-XXX-SW-24			0F5	001	002	003	005
240V, w/3Ø Input	Heavy Duty 150% OL	HP	0.5	1	2	3	5
		kW	0.4	0.75	1.5	2.2	3.7
		Amps	2.5	5	8	11	16
		KVA	1	1.9	3	4.2	6.1
240V, w/1Ø Input		HP	-	0.5	1	1.5	2
		Amps	1.5	2.8	4.6	6.1	8.8
Rated Output	Output frequency		0-400 Hz (V/Hz, Slip Comp.) 0-120 Hz (IM Sensorless) 0-180 Hz (PM Sensorless)				
	Output voltage (V)		3-phase 0-240V				
Rated Input	Working voltage (V)		3-phase 200-240 VAC (-15% to + 10%) Single Phase: 240 VAC (-5% to + 10%)				
	Input frequency		3-phase 50-60 Hz (± 5%) Single Phase 60 Hz (± 5%)				
	Rated current (A)		2.2	4.9	8.4	11.8	17.5
Heat Dissipation		Watts	11.6	10.5	39.5	41.9	100.0
Weight	lbs		7.9	7.9	11.5	11.9	12.1
	kg		3.6	3.6	5.2	5.4	5.5
Degree of Protection			UL Type 4X (IP66) - Indoor Only				

240V, 7.5 HP - 20 HP (5.5 - 15 kW)

RSI-XXX-SW-24			007	010	015	020
240V, w/3Ø Input	Heavy Duty 150% OL	HP	7.5	10	15	20
		kW	5.5	7.5	11	15
		Amps	24	32	46	60
		KVA	9.1	12.2	17.5	22.9
240V, w/1Ø Input		HP	3	5	7.5	10
		Amps	13	18	26	33
Rated Output	Output frequency		0-400 Hz (V/Hz, Slip Comp.) 0-120 Hz (IM Sensorless) 0-180 Hz (PM Sensorless)			
	Output voltage (V)		3-phase 0-240V			
Rated Input	Working voltage (V)		3-phase 200-240 VAC (-15% to + 10%) Single Phase: 240 VAC (-5% to + 10%)			
	Input frequency		3-phase 50-60 Hz (± 5%) Single Phase 60 Hz (± 5%)			
	Rated current (A)		25.8	34.9	50.8	66.7
Heat Dissipation		Watts	137	149	191	302
Weight	lbs		19.4	19.4	20.7	26.2
	kg		8.8	8.8	9.4	11.9
Degree of Protection			UL Type 4X (IP66) - Indoor Only			

SW SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 0.5 HP - 5 HP (0.4 - 3.7 kW)

RSI-XXX-SW-24			0F5	001	002	003	005
480V, w/3Ø Input	Heavy Duty 150% OL	HP	0.5	1	2	3	5
		kW	0.4	0.75	1.5	2.2	3.7
		Amps	1.3	2.5	4	5.5	8
		KVA	1	1.9	3	4.2	6.1
480V, w/1Ø Input		HP	-	0.5	1	1.5	3
		Amps	0.8	1.5	2.3	3.1	4.8
Rated Output	Output frequency	0-400 Hz (V/Hz, Slip Comp.) 0-120 Hz (IM Sensorless) 0-180 Hz (PM Sensorless)					
	Output voltage (V)	3-phase 0-480V					
Rated Input	Working voltage (V)	3-phase 380-480 VAC (-15% to + 10%) Single Phase: 480 VAC (-5% to + 10%)					
	Input frequency	3-phase 50-60 Hz (± 5%) Single Phase 60 Hz (± 5%)					
	Rated current (A)	1.1	2.4	4.2	5.9	8.7	
Heat Dissipation	Watts	8.1	4.7	27.9	25.6	62.8	
Weight	lbs	7.9	7.9	11.5	11.9	12.1	
	kg	3.6	3.6	5.2	5.4	5.5	
Degree of Protection		UL Type 4X (IP66) - Indoor Only					

480V, 7.5 HP - 30 HP (5.5 - 22 kW)

RSI-XXX-SW-24			007	010	015	020	025	030
480V, w/3Ø Input	Heavy Duty 150% OL	HP	7.5	10	15	20	25	30
		kW	5.5	7.5	11	15	18.5	22
		Amps	12	16	24	30	39	45
		KVA	9.1	12.2	18.3	22.9	29.7	34.3
480V, w/1Ø Input		HP	3	5	10	10	15	20
		Amps	7.1	9.5	15	18	23	27
Rated Output	Output frequency	0-400 Hz (V/Hz, Slip Comp.) 0-120 Hz (IM Sensorless) 0-180 Hz (PM Sensorless)						
	Output voltage (V)	3-phase 0-480V						
Rated Input	Working voltage (V)	3-phase 380-480 VAC (-15% to + 10%) Single Phase: 480 VAC (-5% to + 10%)						
	Input frequency	3-phase 50-60 Hz (± 5%) Single Phase 60 Hz (± 5%)						
	Rated current (A)	12.9	17.5	26.5	33.4	43.6	50.7	
Heat Dissipation	Watts	95	87	155	169	277	287	
Weight	lbs	19	19.2	20.7	21.2	26.9	26.9	
	kg	8.6	8.7	9.4	9.6	12.2	12.2	
Degree of Protection		UL Type 4X (IP66) - Indoor Only						

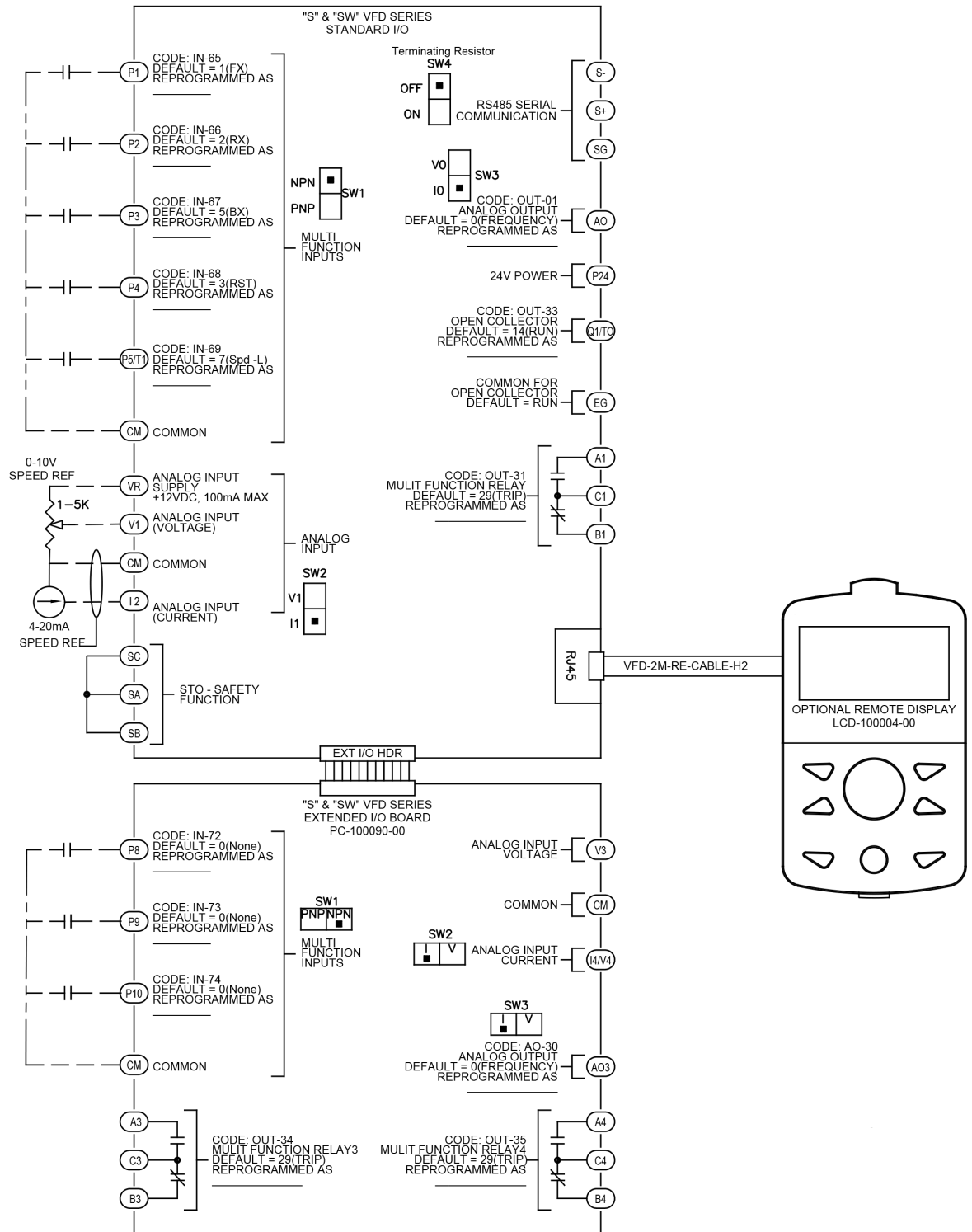
SW SERIES - PRODUCT SPECIFICATION DETAILS

Feature		Description		
Control	Control method	V/F control, Slip compensation, Sensorless vector (IM and PM), IM Torque Control		
	Frequency settings resolution	Digital command: 0.01 Hz		
		Analog command: 0.06 Hz (60 Hz standard)		
	Frequency accuracy	1% of maximum output frequency		
	V/F pattern	Linear, Square Reduction, User V/F		
	Overload capacity	Heavy Duty: 150%, 1 minute		
	Torque boost	Manual torque boost, Automatic torque boost		
	Start/Stop	Keypad, terminal strip, or communication operation		
Frequency settings	Analog type: 0~10V, 0/4~20mA, -10~10V			
	Digital type: Keypad, Pulse Train input, communications			
Operation	Operation functions	Basic		
		Advanced		
		Start/Stop Operation	Sensorless Vector Control	
		Start/Stop Modes	IM and PM motors	
		Frequency Reference Sources	Auto Tuning	
		Auxiliary Frequency Reference	Torque Control, Torque Limits	
		Multi-Step Speeds	PID Control	
		Multi-Step Accel/Decel Times	Slip Compensation	
		2nd Source (HOA)	Energy Save Mode	
		Accel/Decel Times	Regen Avoidance	
		Accel/Decel Patterns	VFD Fan Control	
		Dwell Frequency Operation		
		Jog	Loss of Power	
		Auto Start	Ride Through (KEB)	
		Auto Reset/Restart	Safe Stop	
			Speed Search	
		V/Hz. Control Pattern		
		Linear, Squared, User V/Hz	Braking	
		Torque Boost	DC Injection Braking	
			Stall Prevention	
		FWD/REV Run Prevention	Power Braking	
		Frequency Limits	Flux Braking	
		Jump Frequencies	External Brake Control	
		3-Wire Control		
		Fire Mode		
		Input	(5) Multi-function terminals (P1 -P5)	Select PNP (Source) or NPN (Sink) mode
				Functions of the digital inputs are set with parameters In. 65 - In. 69
				<ul style="list-style-type: none"> Forward/Reverse Run Enable (Interlock)
<ul style="list-style-type: none"> Reset External trip 				
<ul style="list-style-type: none"> Emergency stop Jog operation (FWD/REV) 				
<ul style="list-style-type: none"> Multi-Step frequencies Multi-Step Acc/Dec 				

SW SERIES - PRODUCT SPECIFICATION DETAILS

Feature		Description		
Input	(5) Multi-function terminals (P1-P5))	• DC braking during stop	• Second motor selection	
		• Frequency increase	• Up/Down Frequency	
• 3-Wire		• Analog Hold (frequency)		
• Acc/Dec/Stop		• Exit PID Operation		
• Select acc/dec/stop		• Auxiliary Input (2nd Source), HOA		
	Pulse train	0-32 kHz, 10-12V		
Operation	Output	Open collector (Q1)	Fault output, inverter operating status, many others	
		Relay, R1		Less than DC 24V, 50mA
				Less than (N.O., N.C.) AC250V 1A
		Analog output	Less than DC 30V, 1A	
	Pulse train	0-12VDC 0(4)-20mA / 0-12VDC (Switch Selectable): Select frequency, output current, output voltage, DC terminal voltage and others		
		0-32 kHz, Low Level: 0-2.5V, High Level: 3.5-12V		
Protection	Trip	• Motor Overload	• Under Torque	
		• Motor Under Load	• Inverter Over Heat	
		• Over Current (OC1)	• Short Circuit (OC2)	
		• Over Voltage	• External Trip	
		• Low Voltage	• Hardware Fault	
		• Ground Fault	• Temperature Sensor (NTC)	
		• Motor Over Heat (Eth)	• Fan Fault	
		• Phase Open (In/Out)	• Pre-PID Operation Failure	
		• Inverter Overload	• External Brake Trip	
		• No Motor Trip	• Reference Loss	
		• Over Torque	• Option Board Trip	
		• Safety (STO) A, B Trip		
	Alarm	Warnings: Reference Loss, Motor Overload, Motor Under Load, Inverter Overload, Fan, Dynamic Braking Rate Warning, Auto Tuning Error, Inverter Overheat		
	Instantaneous Loss of Power	Heavy Duty: Less than 15 ms (~1 cycle) For longer outages use KEB operation and/or Auto Restart operation		
Structure / Working Environment	Cooling type	Forced fan cooling structure		
		Forced cooling type: 240V 0.5HP ~ 20HP 480V: 0.5HP ~ 30HP		
	Protection structure	IP66 (NEMA 4X Indoor Only)		
	Ambient Operating Temperature	14°F ~ + 104°F (-1 0°C ~+ 40°C)		
		No ice or frost should be present		
	Ambient humidity	Less than 90% RH (avoid condensation forming)		
	Storage temperature	-4°F ~ + 149°F (- 20°C ~ + 65°C)		
	Surrounding environment	Prevent contact with corrosive gases, inflammable gases, oil stains, dust, and other pollutants (Pollution Degree 3 Environment).		
Operation /Altitude/Vibration	3,280 ft. (1000m). Apply derating of 1%voltage/output current for every 328 ft. (100m) above 3280 ft (1,000m)			
	Less than 9.8 m/sec ² (1G)			
Pressure	10 ~ 15 PSI (70~106 kPa)			

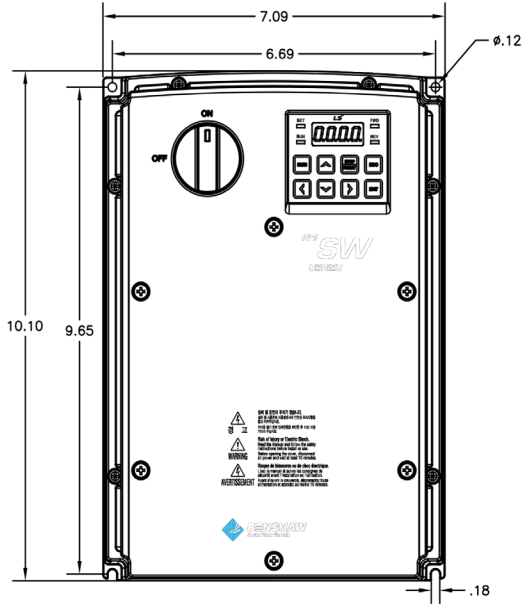
SW SERIES - WIRING



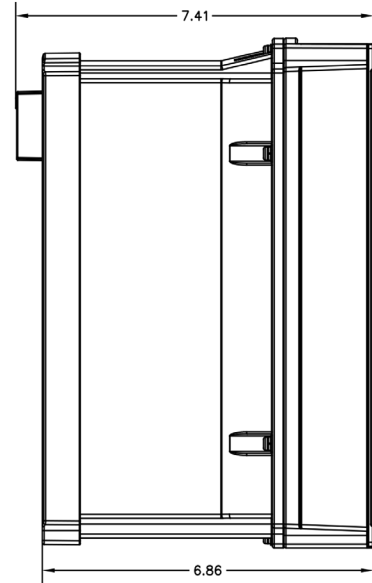
SW SERIES - DRAWINGS

240V, 0.5 HP - 1 HP

480V, 0.5 HP - 1 HP



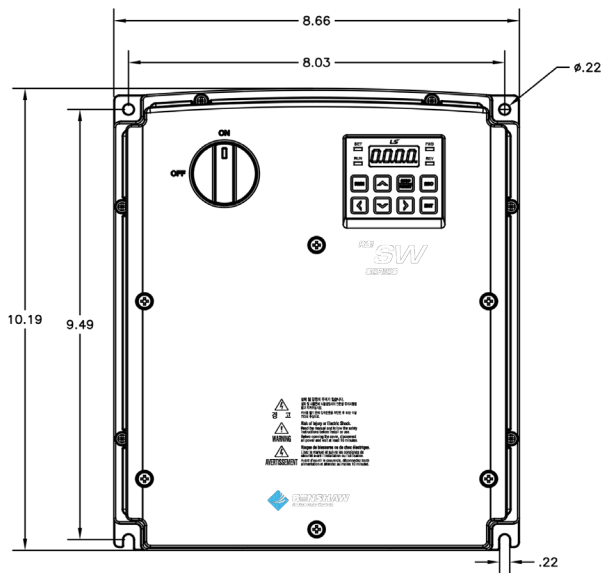
FRONT VIEW



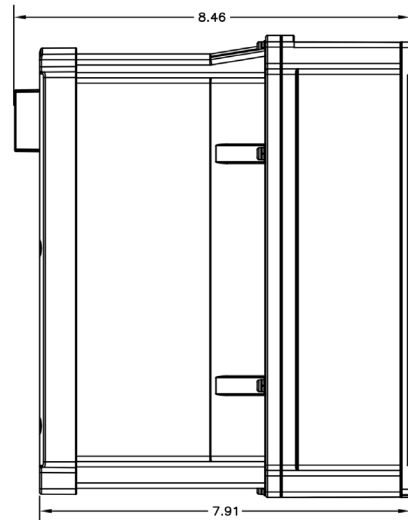
SIDE VIEW

240V, 2 HP - 5 HP

480V, 2 HP - 5 HP



FRONT VIEW

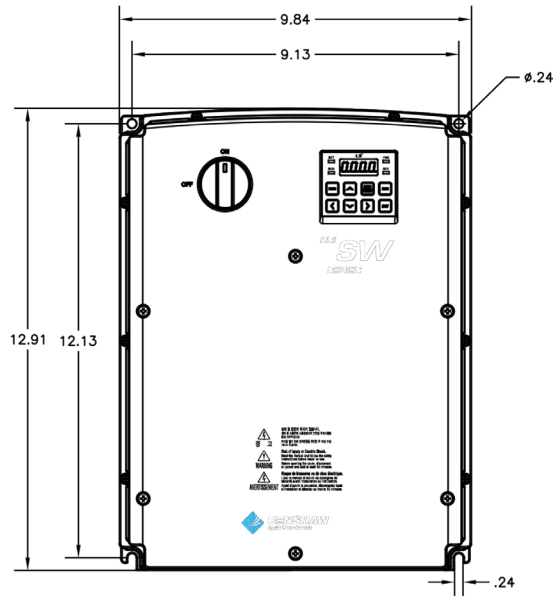


SIDE VIEW

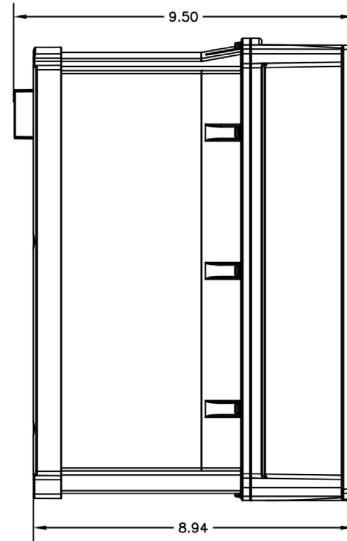
SW SERIES - DRAWINGS

240V, 7.5 HP - 10 HP

480V, 7.5 HP - 10 HP



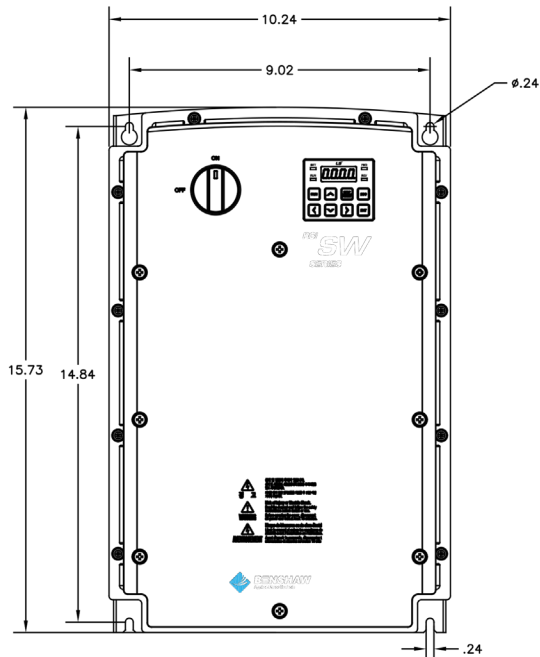
FRONT VIEW



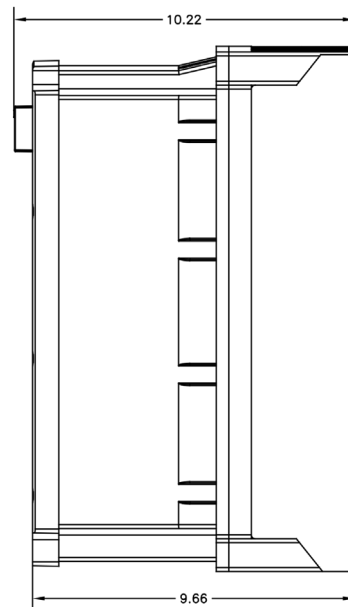
SIDE VIEW

240V, 15 HP

480V, 15 HP - 20 HP



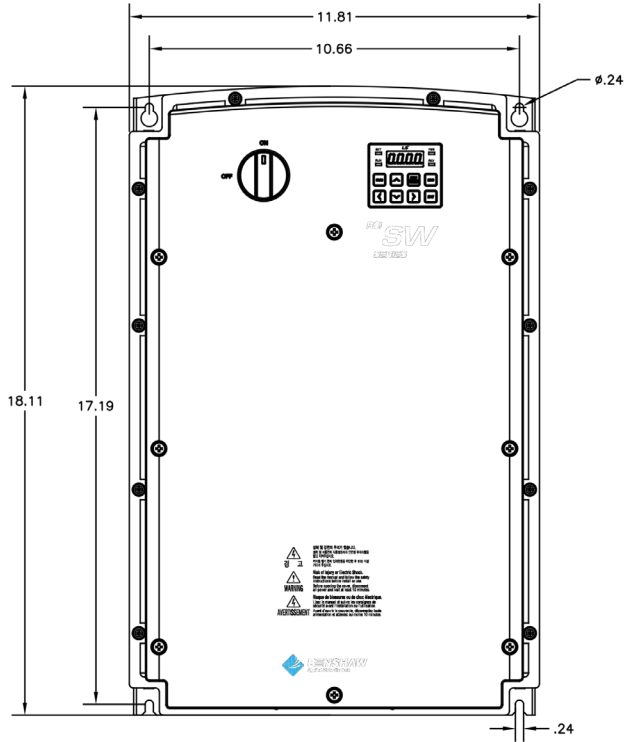
FRONT VIEW



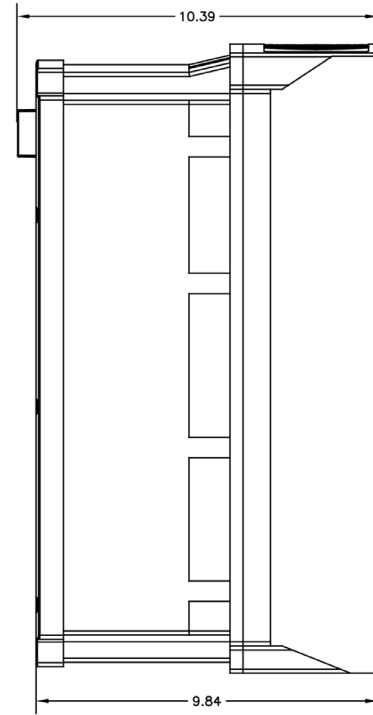
SIDE VIEW

SW SERIES - DRAWINGS

480V, 25 HP - 30 HP



FRONT VIEW



SIDE VIEW

H2 SERIES - MULTI-PURPOSE DRIVE

The Benschaw H2 Series sets the new standard for variable frequency drives. It can be used as a general purpose industrial drive with V/hz or Vector control (with ratings for normal or heavy duty applications from 5-800HP). For fan and pumps applications, simply use the built-in macros designed to meet the basic requirements of the water/wastewater, irrigation and HVAC industries.

This multi-purpose drive complies with industries standards including UL/cUL, CE and has built-in EMC filters (standard in all 480V models). Compact, yet full-featured...the H2 Series is the ideal choice for OEMs, panel builders and end users.



STANDARD FEATURES - HARDWARE

- Dual rating - Normal and Heavy Duty
- 240V: 7.5HP~125HP (ND), 5HP~100HP (HD)
- 480V: 7.5HP~800HP (ND), 5HP~600HP (HD)
- 575V: 7.5HP~125HP (ND), 5HP~100HP (HD)
- Protected Chassis IP20
- LCD Display/Keypad
- EMC Filter
- Internal Brake IGBT (240V all, 480V \leq 40HP)
- Single Phase Input (derating required)
- Plenum Rated (with Conduit Option)
- Built in DC Reactor

STANDARD FEATURES - SOFTWARE

- Quick Start Menu on Power Up
- Control - V/Hz, Sensorless Vector Control, Slip Compensation
- Auto Tuning
- Macro Selection - Pump, Fan, or Constant Torque
- Torque Limits
- PID Control
- Regen Avoidance
- Kinetic Energy Buffering(KEB), Ride Through
- Decel Brake Control

H2 SERIES PUMP / FAN SOFTWARE - STANDARD FEATURES

- PID control with sleep and wake-up, broken pipe and under load detection
- Multi Motor Control - One drive to control the starting and stopping of up to 5 auxiliary motors
- Lead/lag and alternating control
- Pre-fill and Soft-fill
- Standard BACnet and Metasys-N2
- Fire mode input
- Start and End Ramp - settings for quicker accel/decel times when below minimum speeds
- Decel Valve Ramp - Separate decel ramp frequency and time settings when stopping
- Time Event Scheduling - Program run times for 7 days operation
- Flow Compensation - Compensate for losses in long pipe lengths
- Backspin Timer
- Pump Clean Operation
- Load Tuning
- Drive Output Level Detection - Set warning/trip limits (current, power, others) to detect drive operation beyond limits
- Energy Saving Operation
- Oil Pump Starter Control (compressor systems)

COMMUNICATIONS

Standard: RS-485 Modbus-RTU, BACnet, Metasys-N2

Options: Ethernet/IP, Modbus-TCP, Lonworks

WinDRIVE - PC Based Software for Commissioning and Monitoring

H2 SERIES - PRICING

240V	Normal Duty 110/120% OL/1 min.		Heavy Duty 150% OL/1min.		Dimensions (inches)			Degree of Protection*	Weight (lbs)	DC Link Reactor	Dynamic Braking	List Price
	Model Number	HP	Amps	HP	Amps	H	W					
VFD-RSI-007-H2-2C	7.5	22	5	17	9.13	6.30	7.13	IP20	7.3	No	Internal IGBT	\$1,731
VFD-RSI-010-H2-2C	10	30	7.5	24	9.13	6.30	7.13	IP20	7.3	No	Internal IGBT	\$1,972
VFD-RSI-015-H2-2C	15	42	10	32	9.13	6.30	7.13	IP20	7.3	No	Internal IGBT	\$2,171
VFD-RSI-020-H2-2C	20	56	15	46	11.42	7.09	8.08	IP20	10.1	No	Internal IGBT	\$3,040
VFD-RSI-025-H2-2C	25	69	20	60	13.78	8.66	8.79	IP20	15.7	No	Internal IGBT	\$3,763
VFD-RSI-030-H2-2C	30	82	25	68	17.72	10.83	11.18	IP20	55.8	No	No	\$5,444
VFD-RSI-040-H2-2C	40	110	30	81	20.08	12.80	11.18	IP20	72.5	No	No	\$7,085
VFD-RSI-050-H2-2C	50	142	40	106	21.65	12.80	12.17	IP20	86.4	No	No	\$9,099
VFD-RSI-060-H2-2C	60	169	50	136	21.65	12.80	12.17	IP20	90.6	No	No	\$11,064
VFD-RSI-075-H2-2C	75	223**	60	169	27.80	11.81	15.20	IP20	118.2	No	No	\$13,768
VFD-RSI-100-H2-2C	100	264**	75	195	27.80	11.81	15.20	IP20	121.9	No	No	\$15,489
VFD-RSI-125-H2-2C	125	325**	100	255	27.76	14.96	15.59	IP20	159.2	No	No	\$16,093

480V	Normal Duty 110/120% OL/1 min.		Heavy Duty 150% OL/1min.		Dimensions (inches)			Degree of Protection*	Weight (lbs)	DC Link Reactor	Dynamic Braking	List Price
	Model Number	HP	Amps	HP	Amps	H	W					
VFD-RSI-007-H2-4C	7.5	12	5	8	9.13	6.30	7.13	IP20	7.3	No	Internal IGBT	\$1,770
VFD-RSI-010-H2-4C	10	16	7.5	12	9.13	6.30	7.13	IP20	7.3	No	Internal IGBT	\$1,846
VFD-RSI-015-H2-4C	15	24	10	15	9.13	6.30	7.13	IP20	7.4	No	Internal IGBT	\$2,026
VFD-RSI-020-H2-4C	20	30	15	22	11.42	7.09	8.08	IP20	10.1	No	Internal IGBT	\$2,750
VFD-RSI-025-H2-4C	25	38	20	28	11.42	7.09	8.08	IP20	10.6	No	Internal IGBT	\$3,330
VFD-RSI-030-H2-4C	30	45	25	35	13.78	8.66	8.79	IP20	16.5	No	Internal IGBT	\$3,835
VFD-RSI-040-H2-4C	40	61	30	41	13.78	8.66	8.79	IP20	16.5	No	Internal IGBT	\$4,052
VFD-RSI-050-H2-4C	50	75	40	55	17.72	10.83	11.18	IP20	57	Yes	External***	\$5,789
VFD-RSI-060-H2-4C	60	91	50	67	20.08	12.80	11.18	IP20	77	Yes	External***	\$7,236
VFD-RSI-075-H2-4C	75	107	60	81	20.08	12.80	11.18	IP20	77	Yes	External***	\$7,670
VFD-RSI-100-H2-4C	100	142	75	106	21.67	12.80	12.17	IP20	95	Yes	External***	\$9,697
VFD-RSI-125-H2-4C	125	169	100	136	21.67	12.80	12.17	IP20	95	Yes	External***	\$10,854
VFD-RSI-150-H2-4C	150	223**	125	169	27.80	11.81	15.20	IP20	123	Yes	External***	\$14,473
VFD-RSI-200-H2-4C	200	264**	150	195	27.80	11.81	15.20	IP20	123	Yes	External***	\$15,340
VFD-RSI-250-H2-4C	250	325**	200	255	27.76	14.96	15.59	IP20	165	Yes	External***	\$18,740
VFD-RSI-300-H2-4C	300	370**	250	303	27.76	14.96	15.59	IP20	165	Yes	External***	\$21,621
VFD-RSI-400-H2-4C	400	481**	300	375	36.34	16.77	17.32	IP00	265	Yes	External***	\$31,837
VFD-RSI-500-H2-4C	500	613**	400	478	39.37	23.62	19.69	IP00	409	Yes	External***	\$51,445
VFD-RSI-650-H2-4C	650	770**	500	591	39.37	23.62	19.69	IP00	409	Yes	External***	\$57,522
VFD-RSI-800-H2-4C	800	962**	600	740	41.50	30.55	19.67	IP00	584	Yes	External***	\$69,028

* For UL type 1 add conduit box option.

** Normal Duty 110%.

*** Requires External Braking (DBU and DBR), Consult Factory.

Price Effective July 1, 2025

H2 SERIES - PRICING

575V Model Number	Normal Duty 110% OL/1 min.		Heavy Duty 150% OL/1min.		Dimensions (inches)			Degree of Protection*	Weight (lbs)	DC Link Reactor	Dynamic Braking	List Price
	HP	Amps	HP	Amps	H	W	D					
VFD-RSI-007-H2-61	7.5	9	5	6.6	18.90	7.09	8.08	UL Type 1	20.9	In condit	Internal IGBT	\$2,517
VFD-RSI-010-H2-61	10	12	7.5	9	18.90	7.09	8.08	UL Type 1	21.2	In condit	Internal IGBT	\$2,690
VFD-RSI-015-H2-61	15	17	10	12	18.90	7.09	8.08	UL Type 1	21.9	In condit	Internal IGBT	\$2,980
VFD-RSI-020-H2-61	20	23	15	17	18.90	7.09	8.08	UL Type 1	22.1	In condit	Internal IGBT	\$3,219
VFD-RSI-025-H2-61	25	27	20	23	18.90	7.09	8.08	UL Type 1	22.4	In condit	Internal IGBT	\$3,543
VFD-RSI-030-H2-61	30	34	25	27	21.65	8.66	8.79	UL Type 1	31.5	In condit	No	\$4,212
VFD-RSI-040-H2-61	40	43	30	34	21.65	8.66	8.79	UL Type 1	32.3	In condit	No	\$4,374
VFD-RSI-050-H2-6C	50	55	40	43	17.72	10.83	11.18	IP00/UL Open	55.1	Yes	No	\$6,690
VFD-RSI-060-H2-6C	60	64	50	55	20.08	12.80	11.18	IP00/UL Open	74.1	Yes	No	\$8,147
VFD-RSI-075-H2-6C	75	80	60	64	20.08	12.80	11.18	IP00/UL Open	74.3	Yes	No	\$8,956
VFD-RSI-100-H2-6C	100	104	75	80	21.65	12.80	12.09	IP00/UL Open	96.1	Yes	No	\$11,405
VFD-RSI-125-H2-6C	125	128	100	104	21.65	12.80	12.09	IP00/UL Open	96.4	Yes	No	\$12,214

H2 SERIES - OPTIONS AND ACCESSORIES

Option Cards

Model Number	Description	List Price
PC-100096-00	Lonworks Option Card	\$464
PC-100097-00	Extended I/O Card	\$294
PC-100098-00	Ethernet/IP, Modbus-TCP Option, Dual Port	\$525

Fins Out Mounting

Model Number	Description	List Price
BRKT-100770-03	Mounting Flange, 240V : 7.5~15HP / 480V: 7.5~15HP	\$198
BRKT-100794-00	Mounting Flange, 240V : 20HP / 480V : 20~25HP	\$118
BRKT-100794-01	Mounting Flange, 240V : 25HP / 480V : 30~40HP	\$111
BRKT-100794-02	Mounting Flange, 240V: 30HP / 480V: 50HP / 575V: 50HP	\$69
BRKT-100794-03	Mounting Flange, 240V: 40HP / 480V : 60~75HP / 575V: 60~75HP	\$69
BRKT-100794-04	Mounting Flange, 240V: 50~60HP / 480V: 100~25HP / 575V: 100~125HP	\$69
BRKT-100794-05	Mounting Flange, 240V: 75~100HP / 480V : 150~200HP	\$1,174
BRKT-100794-06	Mounting Flange, 240V: 125HP / 480V : 250~300HP	\$1,109
BRKT-100794-07	Mounting Flange, 480V : 400HP	\$1,300
BRKT-100794-08	Mounting Flange, 480V : 500~650HP	\$1,411
BRKT-100794-09	Mounting Flange, 480V : 800HP	\$1,624

Conduit Box

Model Number	Description	List Price
EN-101040-00	Conduit Box, 240V : 20HP/ 480V : 20~25HP	\$90
EN-101040-01	Conduit Box, 240V : 25HP/480V : 30~40HP	\$90
EN-101040-02	Conduit Box, 240V: 30HP / 480V : 50HP / 575V: 50HP	\$120
EN-101040-03	Conduit Box, 240V: 40HP / 480V : 60~75HP / 575V: 60~75HP	\$120
EN-101040-04	Conduit Box, 240V: 50~60HP / 480V: 100~125HP / 575V: 100~125HP	\$151
EN-101040-05	Conduit Box, 240V: 75~100HP/ 480V : 150~200HP	\$508
EN-101040-06	Conduit Box, 240V: 125HP / 480V : 250~300HP / 575V: 150~300HP	\$603
EN-101040-07	Conduit Box, 480V : 400HP / 575V: 300~400HP	\$668
EN-101040-08	Conduit Box, 480V : 500~650HP	\$1,111
EN-101040-09	Conduit Box, 480V : 800HP	\$1,289
EN-101040-10	Conduit Box, 240V : 7.5HP~15HP / 480V : 7.5HP~15HP	\$69

Keypad / LCD Display Items

Model Number	Description	List Price
KP-100003-00	Keypad Blank Insert (at VFD when Remote Mounting LCD)	CF
VFD-2M-RE-CABLE-H2	Bezel & Cable, RJ45, 2M, S/SW/H2 Series VFD, for Remote Mounting	\$44
VFD-3M-RE-CABLE-H2	Bezel & Cable, RJ45, 3M, S/SW/H2 Series VFD, for Remote Mounting	\$63
CV-100017-00	LCD Cover, Remote Mounting, NEMA 4X, S, SW & H2 Series VFD	\$278
LCD-100003-00	LCD Keypad/Display, H2 Series VFD (Spare Part)	\$174

CF Consult Factory

Price Effective July 1, 2025

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

240V, 7.5HP - 25HP (5.5 - 18.5 kW)

RSI-XXX-H2-2C			007	010	015	020	025
240V, w/3Ø Input	Normal Duty 120% OL	HP	7.5	10	15	20	25
		kW	5.5	7.5	11	15	18.5
		Amps	22	30	42	56	69
	Heavy Duty 150% OL	HP	5	7.5	10	15	20
		kW	3.7	5.5	7.5	11	15
		Amps	17	24	32	46	60
240V, w/1Ø Input	Normal Duty 120% OL	HP	3.0	5.0	7.5	10.0	-
		Amps	11	16	23	30	37
Rated Capacity (kVA)			8.4	11.4	16.0	21.3	26.3
Output frequency			0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless) 0-180Hz (PM Sensorless)				
Output voltage (V)			3-Phase 0-240 V				
Rated Input	Voltage (V)	Three-Phase	3-Phase 200-240 VAC (- 15% -+ 10%)				
		Single-Phase	1-Phase 240 VAC (- 5% -+ 10%)				
	Input frequency	Three-Phase	50-60Hz (+/- 5%)				
		Single-Phase	60Hz (+/- 5%) only				
Rated Current (A)			23.7	32.7	46.4	62.3	77.2
Weight lbs (kg)	lbs		7.3	7.3	7.3	10.1	15.6
	(kg)		(3.3)	(3.3)	(3.3)	(4.6)	(7.1)
Heat Dissipation (W)			180	248	330	451	600
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box				

240V, 30HP -125HP (22 kW - 90 kW)

RSI-XXX-H2-2C			030	040	050	060	075*	100*	125*
240V, w/3Ø Input	Normal Duty 110%* / 120% OL	HP	30	40	50	60	75	100	125
		kW	22	30	37	45	55	75	90
		Amps	82	110	142	169	223	264	325
	Heavy Duty 150% OL	HP	25	30	40	50	60	75	100
		kW	18.5	22	30	37	45	55	75
		Amps	68	81	106	136	169	195	255
240V, w/1Ø Input	Normal Duty 110%* / 120% OL	HP	15	20	25	30	40	50	60
		Amps	45	58	78	92	122	145	178
ND Rated Capacity (kVA)			31.2	41.9	54.1	64.4	85	100.6	123.8
Output frequency			0-400Hz (V/Hz, Slip Compensation)						
Output voltage (V)			3-Phase 0-240 V						
Rated Input	Voltage (V)	Three-Phase	3-Phase 200-240 VAC (- 15% -+ 10%)						
		Single-Phase	1-Phase 240 VAC (- 5% -+ 10%)						
	Input frequency	Three-Phase	50-60Hz (+/- 5%)						
		Single-Phase	60Hz (+/- 5%) only						
Rated Current (A)			74.8	101	131.2	159	211.1	251.4	313.2
Weight lbs (kg)	lbs		55.8	72.5	86.4	90.6	118.2	121.9	159.2
	(kg)		(25.3)	(32.9)	(39.2)	(41.1)	(53.6)	(55.3)	(72.2)
Heat Dissipation (W)			893	1245	1480	1814	2150	2963	3438
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box						

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 7.5HP - 30HP (5.5 - 22 kW)

RSI-XXX-H4-4C			007	010	015	020	025	030
480V, w/3Ø Input	Normal Duty 120% OL	HP	7.5	10	15	20	25	30
		kW	5.5	7.5	11	15	18.5	22
		Amps	12	16	24	30	38	45
	Heavy Duty 150% OL	HP	5.0	7.5	10	15	20	25
		kW	3.7	5.5	7.5	11	15	18.5
		Amps	8	12	15	22	28	35
480V, w/1Ø Input	Normal Duty 120% OL	HP	3-5	5	10	10	15	20
		Amps	6.8	9.2	14	17	22	26
Rated Capacity (kVA)			9.1	12.2	18.3	23.0	29.0	34.3
Output frequency		0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless) 0-180Hz (PM Sensorless)						
Output voltage (V)		3-Phase 0-480 V						
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)					
		Single-Phase	1-Phase 480 VAC (- 5% - + 10%)					
	Input frequency	Three-Phase	50-60Hz (+/- 5%)					
		Single-Phase	60Hz (+/- 5%) only					
Rated Current (A)			12.2	17.5	26.5	33.4	42.5	50.7
Weight lbs (kg)		lbs	7.3	7.3	7.5	10.1	10.6	16.5
		(kg)	(3.3)	(3.3)	(3.4)	(4.6)	(4.8)	(7.5)
Heat Dissipation (W)			172	237	322	451	615	740
Degree of Protection		UL Open Type (IP20), UL Type 1 achieved with optional conduit box						

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 40 HP -125 HP (30 - 90 kW)

RSI-XXX-H2-4C			040	050	060	075	100	125
480V, w/3Ø Input	Normal Duty 120% OL	HP	40	50	60	75	100	125
		kW	30	37	45	55	75	90
		Amps	61	75	91	107	142	169
	Heavy Duty 150% OL	HP	30	40	50	60	75	100
		kW	22	30	37	45	55	75
		Amps	41	55	67	81	106	136
480V, w/1Ø Input	Normal Duty 120% OL	HP	25	30	30	40	50-60	60
		Amps	36	39	47	55	73	86
Rated Capacity (kVA)			46.5	57.1	69.4	82.0	108.2	128.8
Output frequency			0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless) 0-180Hz (PM Sensorless)					
Output voltage (V)			3-Phase 0-480V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)					
		Single-Phase	1-Phase 480 VAC (- 5% - + 10%)					
	Input frequency	Three-Phase	50-60Hz (+/- 5%)					
		Single-Phase	60Hz (+/- 5%) only					
Rated Current (A)			69.1	69.3	84.6	100.1	133.6	160.0
Weight lbs (kg)	lbs	16.5	57.3	77.2	77.2	94.8	94.8	
	(kg)	(7.5)	(26)	(35)	(35)	(43)	(43)	
Heat Dissipation (W)			880	1170	1443	1710	2090	2775
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box					

480V, 150 HP -800 HP (110 - 500 kW)

RSI-XXX-H2-4C			150	200	250	300	400	500	650	800
480V, w/3Ø Input	Normal Duty 110% OL	HP	150	200	250	300	400	500	650	800
		kW	110	132	160	185	250	315	400	500
		Amps	223	264	325	370	481	613	770	962
	Heavy Duty 150% OL	HP	125	150	200	250	300	400	500	600
		kW	90	110	132	160	185	250	315	375
		Amps	169	195	255	303	375	478	591	740
Rated Capacity (kVA)			170	201	248	282	367	467	587	733
Output frequency			0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless)							
Output voltage (V)			3-Phase 0-480V							
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)							
	Input frequency	Three-Phase	50-60Hz (+/-5%)							
	Rated Current (A)			215.1	254.6	315.3	358.9	469.3	598.1	751.3
Weight lbs (kg)	lbs	123	123	164.7	164.7	264.6	409	409	584	
	(kg)	(55.8)	(55.8)	(74.7)	(74.7)	(120)	(185.5)	(185.5)	(265)	
Heat Dissipation (W)			3960	4752	5600	6475	8500	10.4k	13.2k	16k
Degree of Protection			75HP~300HP (0.75 kW~185 kW): UL Open (IP20), UL Type 1 achieved with optional conduit box 400HP~800HP (250 kW~500 kW): UL Open (IP00), UL Type 1 achieved with optional conduit box							

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

575V, 7.5HP -30HP (5.5 kW - 22 kW)

VFD-RSI-XXX-H2-61			007	010	015	020	025	030
575V, w/3Ø Input	Normal Duty 110% OL	HP	7.5	10	15	20	25	30
		kW	5.5	7.5	11	15	18.5	22
		Amps	9	12	17	23	27	34
	Heavy Duty 150% OL	HP	5	7.5	10	15	20	25
		kW	3.7	5.5	7.5	11	15	18.5
		Amps	6.6	9	12	17	23	27
Rated Output	ND Rated Capacity (kVA)		9	12	16.9	22.9	26.9	33.9
	Output frequency		0-120 Hz (V/Hz, Slip Comp., IM Sensorless)					
	Output voltage (V)		3-Phase 0-600 V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 525-600 VAC (-15%--+10%)					
	Input frequency	Three-Phase	60 Hz (+/-5%)					
	ND Rated Current (A)		8	10.7	15.3	20.9	25	30.8
	HD Rated Current (A)		6.5	8.9	12	17.2	23.5	27
Weight lbs (kg)		lbs	20.86	21.21	21.87	22.09	22.35	31.53
		(kg)	(9.46)	(9.62)	(9.92)	(10.02)	(10.14)	(14.3)
Heat Dissipation (W)			224	282	376	527	644	773
Degree of Protection			UL Type 1 with installed conduit box					
<ul style="list-style-type: none"> The horse power rating is based on a standard 4-pole motor rating. The KVA rating is based on the Normal Duty rating and 575 V for 575 V inverters. The rated output current is limited based on the carrier frequency set at CON-04. 								

575V, 40HP -125HP (30 kW - 90 kW)

VFD-RSI-XXX-H2-6C			040	050	060	075	100	125
575V, w/3Ø Input	Normal Duty 110% OL	HP	40	50	60	75	100	125
		kW	30	37	45	55	75	90
		Amps	43	55	64	80	104	128
	Heavy Duty 150% OL	HP	30	40	50	60	75	100
		kW	22	30	37	45	55	75
		Amps	34	43	55	64	80	104
Rated Output	ND Rated Capacity (kVA)		42.8	54.8	63.7	79.7	103.6	127.5
	Output frequency		0-120 Hz (V/Hz, Slip Comp., IM Sensorless)					
	Output voltage (V)		3-Phase 0-600 V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 525-600 VAC (-15%--+10%)					
	Input frequency	Three-Phase	60 Hz (+/-5%)					
	ND Rated Current (A)		40.2	52	60	74	102	123
	HD Rated Current (A)		35.2	45	57	65	87	110
Weight lbs (kg)		lbs	32.32	55.07	74.12	74.25	96.12	96.43
		(kg)	(14.66)	(24.98)	(33.62)	(33.68)	(43.60)	(43.74)
Heat Dissipation (W)			992	1245	1496	1848	2553	2942
Degree of Protection			UL Open (IP20), UL Type 1 achieved with optional conduit box					
<ul style="list-style-type: none"> The horse power rating is based on a standard 4-pole motor rating. The KVA rating is based on the Normal Duty rating and 575 V for 575 V inverters. The rated output current is limited based on the carrier frequency set at CON-04. 								

H2 SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description		
Control	Control method	V/F control, Slip Compensation, Sensorless Vector (IM* and PM**) with Torque Limits (240V and 480V only) * IM Sensorless does not apply to 240V, 30HP~125HP. ** PM Sensorless does not apply to 240V, 30HP~125, 480V, 150HP~800HP and all 575V inverters.		
	Frequency setting	Digital command: 0.01Hz		
	Frequency accuracy	1% of maximum output frequency		
	V/F pattern	Linear, Square Reduction, User V/F		
	Overload capacity (Normal Duty)	240V, 7.5 HP ~ 60HP	120% / 1 min.	
		240V, 75 HP ~ 125 HP	110% / 1 min.	
		480V, 7.5 HP ~ 125 HP	120% / 1 min.	
		480V, 150 HP ~ 800 HP	110% / 1 min.	
		575V, 7.5 HP ~ 125 HP	110% / 1 min.	
	Overload Capacity (Heavy Duty)	240V, 5.0 HP ~ 100 HP	150% / 1 min.	
480V, 5.0 HP ~ 600 HP		150% / 1 min.		
575V, 5.0 HP ~ 100 HP		150% / 1 min.		
Torque boost	Manual torque boost, automatic torque boost			
Operation	Operation Type			
	Start/Stop	Keypad, Terminal strip, Communications		
	Frequency (Speed) settings	Analog Input: (1) 0–10 V, (1) 0/4–20 mA, Switch selectable to 0–10 Vdc		
		Digital Inputs: Keypad, Fixed Speed, Pulse Train		
		Communication: RS-485 (Modbus), Metasys-N2, BACnet, Fieldbus Options		
	Functions	Basic	Advanced	
		Quick Start Menu	Sensorless Vector Control*	
		Start/Stop Operation	IM* and PM** motors	
		Start/Stop Modes	Auto Tuning	
		Frequency Reference Sources	Torque Limits	
		Auxiliary Frequency Reference	PID Control	
		Multi-Step Speeds	Slip Compensation	
		Multi-Step Accel/Decel Times	Event Timer (RTC)	
		2nd Source (HOA)	Energy Save Mode	
		Accel/Decel Times	Regen Avoidance	
		Accel/Decel Patterns	VFD Fan Control	
		Dwell Frequency Operation		
		Jog	Other	
		Auto Start	Timer Relay Input/Output Function	
		Auto Reset/Restart	Pre Heat	
Jog and Jog Start		Oil Pump Starter Control		
FWD/REV Run Prevention		Damper Monitor and Control		
Frequency Limits				
Jump Frequencies		Loss of Power		
3-Wire Control		Ride Through (KEB)		
Fire Mode	Safe Stop			
	Speed Search			

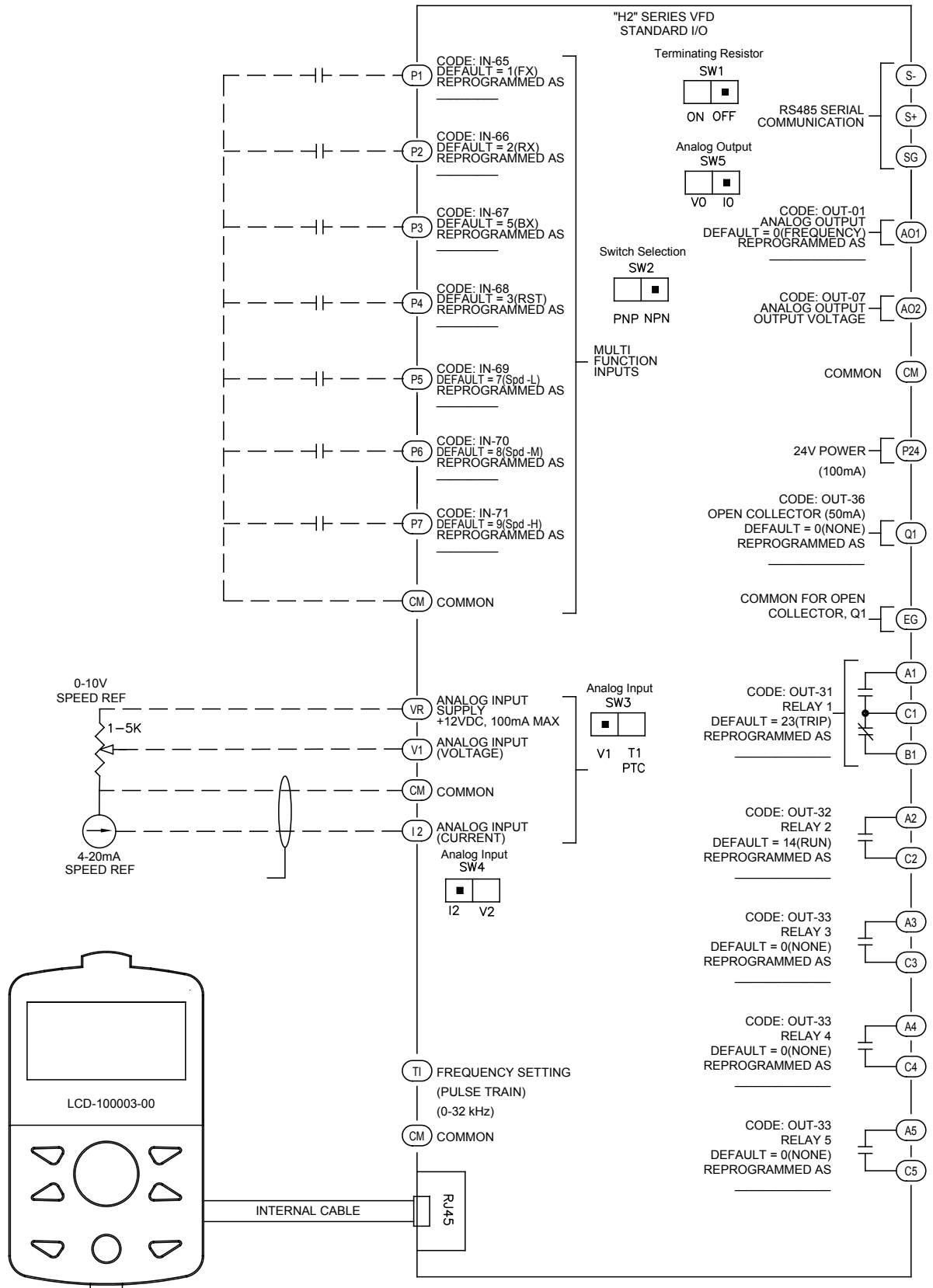
H2 SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description		
Operation	Functions	V/Hz. Control Pattern	Braking	
		Linear, Squared, User V/Hz	DC Injection Braking	
		Torque Boost	Stall Prevention	
			Power Braking	
			Flux Braking	
			External Brake Control	
		H2 Pump Software		
		Lead/Lag and Alternating	Broken Pipe Detection	
	Jockey Pump Control	BACnet and Metasys-N2		
	MMC - Multi-Motor Control	Pump Load Tuning		
	Pre-Fill, Soft Fill	Decel Valve Ramp		
	Start and End Ramp	Time Event Scheduling		
	Backspin Timer	Flow Compensation		
	Pump Clean Operation	Energy Saving Operation		
		Analog	(1) 0-10 V, (1) 0/4-20 mA, Switch selectable to 0-10 Vdc	
	Input	Digital inputs	(7), Select PNP (Source) or NPN (Sink) mode. NO/NC selectable. Functions of the digital inputs are set with parameters IN-65 through IN-71.	
		Functions	Forward/Reverse Operation	2nd Source - HOA/LOR
			Reset	Up/Down Operation
			External Trip	Analog Hold
			Emergency Stop	PID Disable
			Output Disable (Bx)	Jog Start FWD/REV
			Jog	Pre-Excite
			Fixed Speed - Step Freq's	Timer Input
Run Enable/Disable (Safety)			Fire Mode	
3-Wire Control Select			Event Timer	
Damper Monitor and Control			Pre-Heat	
	Pulse train	0-30 kHz, Low Level: 0-0.8 V, High Level: 3.5-12 V		
Output	(1) Fault relay (Form C)	N.O. : Less than AC 250V, 2A, DC 30V, 3A N.C.: Less than AC 250V, 1A, DC 30V, 1A		
	(4) Programmable relays (Form A)	N.O. (A-C): Less than 250V, 5A Less than DC 30V, 5A		
	(1) Open collector terminal	Less than DC 26V, 50 mA		
	(2) Analog Outputs	AO1: 0(4) - 20mA, Switch selectable to 0-10 VDC		
		AO2: 0-10VDC		
	Pulse train	Maximum 32 kHz, 0-12V		

H2 SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description	
Protection Functions	Trip	Motor Over Load	Fan Trip
		Under Load	Internal Fan Trip
		Over Current 1	Motor Over Heat (PTC Input)
		Over Voltage	Lost Keypad
		Low Voltage	Fuse Open
		Low Voltage 2	Pipe Broken
		Ground Fault	Broken Belt
		E-Thermal	Lost Speed Reference
		Out Phase Open	I/O Board Trip
		In Phase Open	
		Inverter Over Load	Fan/Pump related trips
		No Motor Trip	Damper Trip
		Inverter over Heat	Level Detect Trip
		Over Current 2	Pump Cleaning Trip
		External Trip	
	Hardware Diagnostic		
	Alarm	Overload/underload, Lost Command, Inverter overload, DB (braking) rate	
Instantaneous Power	Less than 8 ms: Continue Operation		
Structure / working environment	Cooling type	Force fan cooling structure	
	Protection structure	UL Open, IP 20: 7.5 HP ~ 300 HP (5.5 kW ~ 185 kW) UL Open, IP00: 400 HP ~ 800 HP (250 kW ~ 500kW) UL Type 1 with conduit box (option) installation (up to 800 HP).	
	Ambient temperature	14°F~104°F (- 10°C~40°C)	
	Ambient humidity	Relative humidity less than 95% RH (to avoid condensation)	
	Storage temperature	-4°F~149°F (-20 °C-65°C)	
	Environment	Prevent contact with corrosive gases, flammable gases, oil stains, dust, and other pollutants. 7.5 HP ~ 800 HP (5.5 kW ~ 500 kW) Pollution Degree 2	
	Altitude	Maximum 3,280 ft (1,000m) above sea level for standard operation. Above derate the drive rated voltage and the rated output current by 1% for every 328 ft (100m) up to 13,123 ft (4,000) max.	
	Vibration	Less than 1.0 G (9.8m/sec²).	
	Pressure	10 ~ 15 PSI (70-106 kPa)	

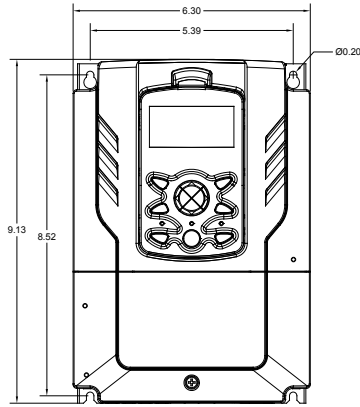
H2 SERIES - WIRING



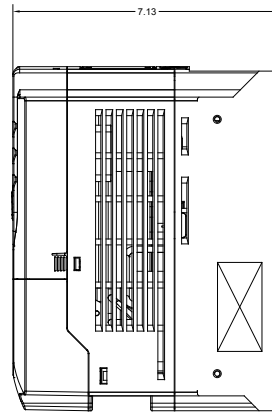
H2 SERIES - DRAWINGS

240V, 7.5 HP - 15 HP

480V, 7.5 HP - 15 HP



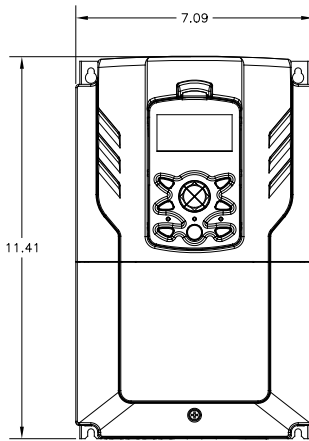
FRONT VIEW



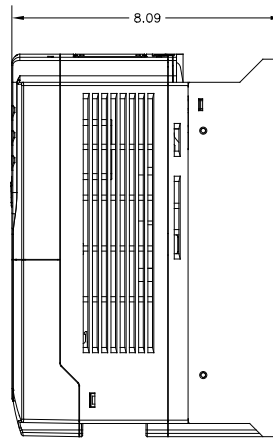
RIGHT SIDE VIEW

240V, 20 HP

480V, 20 HP - 25 HP



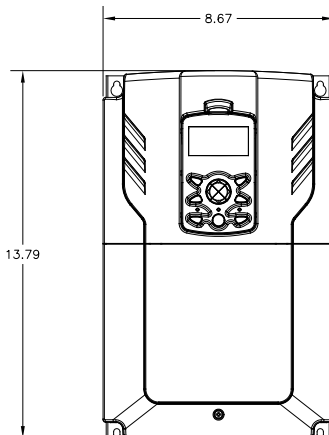
FRONT VIEW



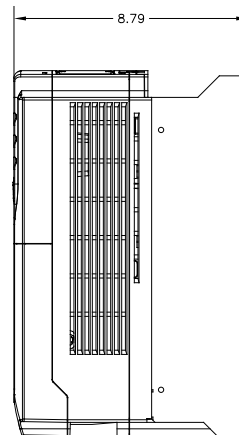
RIGHT SIDE VIEW

240V, 25 HP

480V, 30 HP - 40 HP



FRONT VIEW



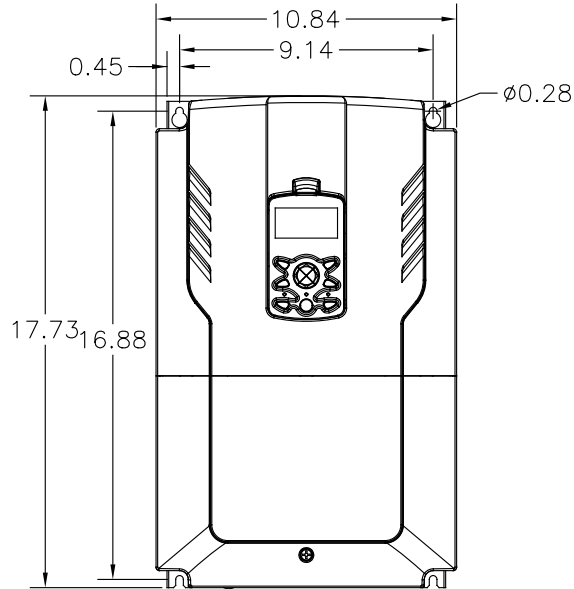
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

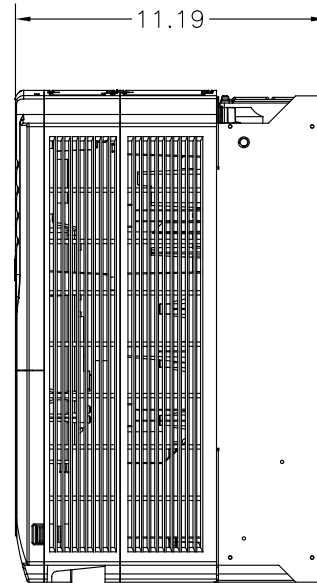
240V, 30HP

480V, 50 HP

575V, 50HP



FRONT VIEW

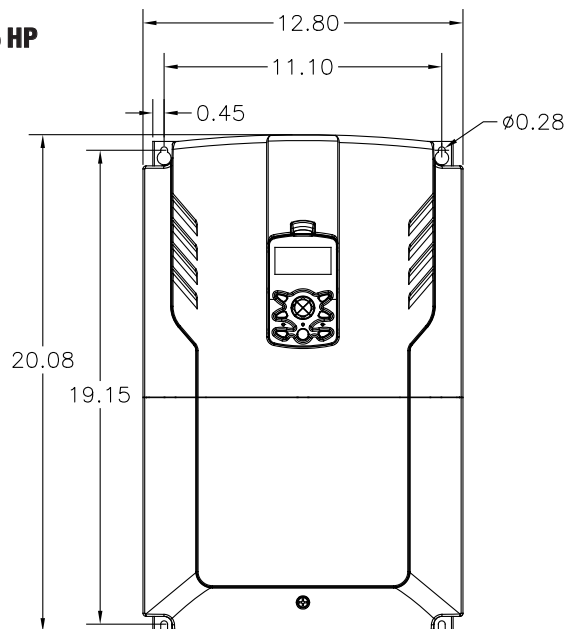


RIGHT SIDE VIEW

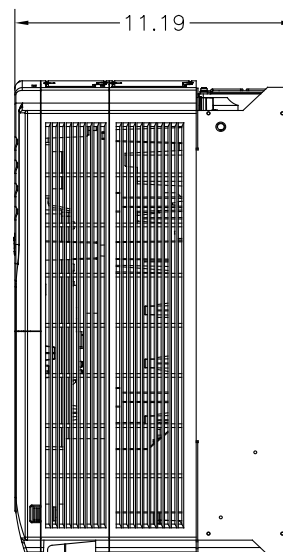
240V, 40 HP

480V, 60 HP - 75 HP

575V, 60 HP - 75 HP



FRONT VIEW



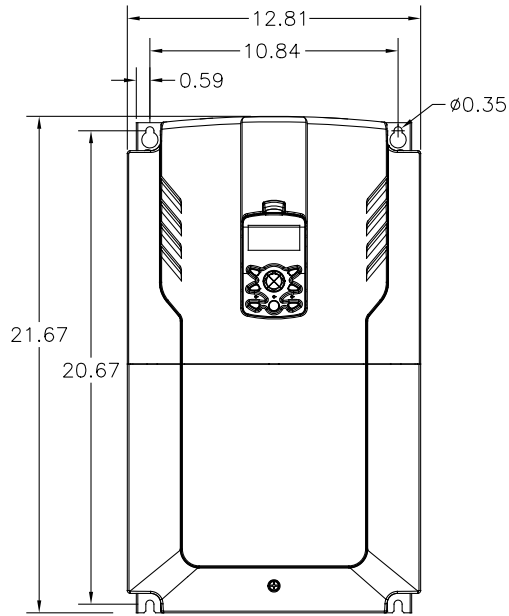
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

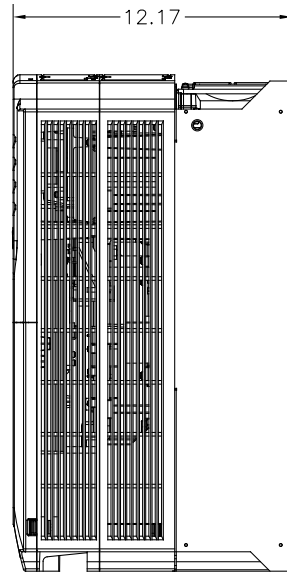
240V, 50 HP - 60 HP

480V, 100 HP - 125 HP

575V, 100 HP -125 HP



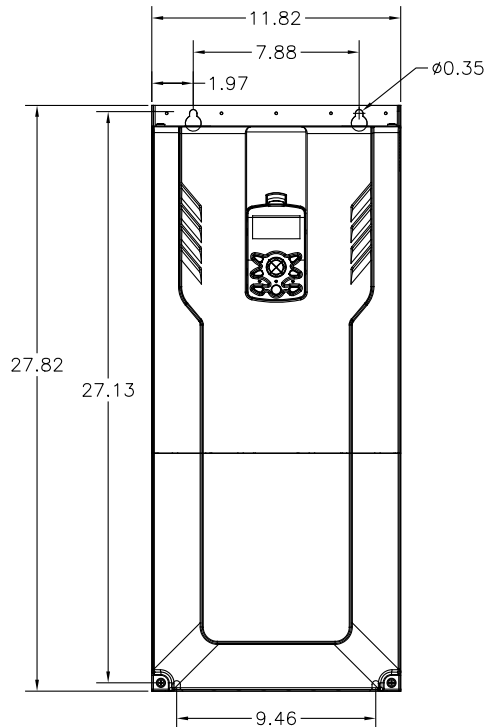
FRONT VIEW



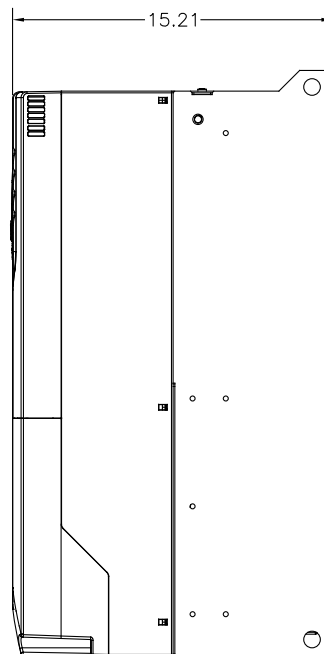
RIGHT SIDE VIEW

240V, 75 HP -100 HP

480V, 150 HP - 200 HP



FRONT VIEW

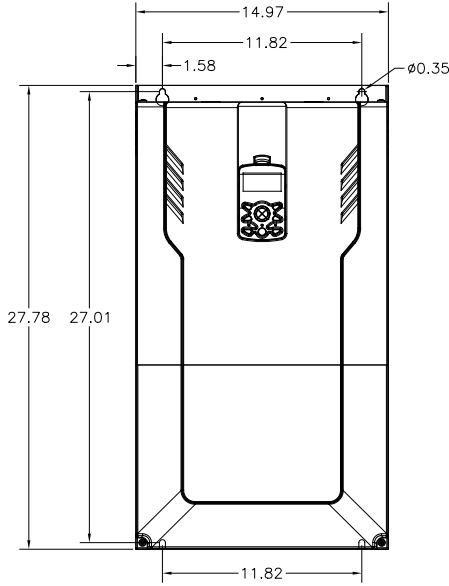


RIGHT SIDE VIEW

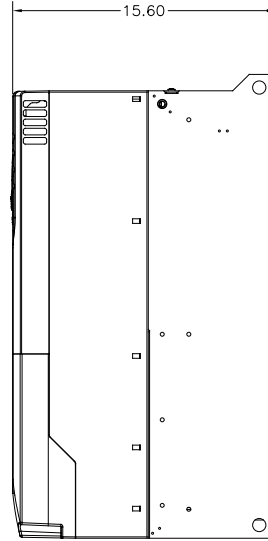
H2 SERIES - DRAWINGS

240V, 125 HP

480V, 250 HP - 300 HP

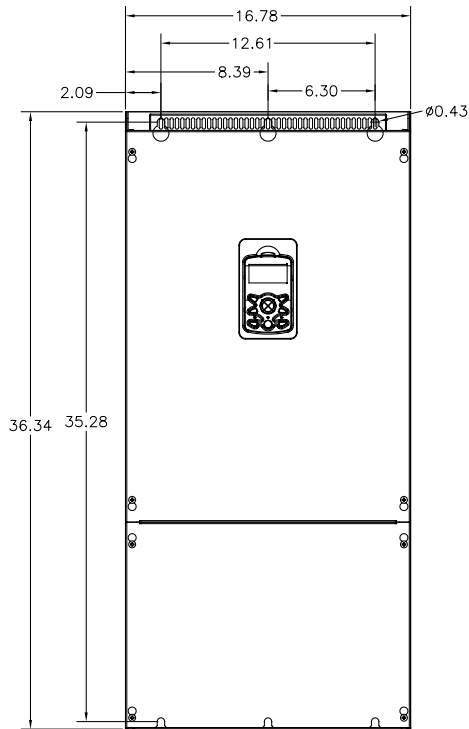


FRONT VIEW

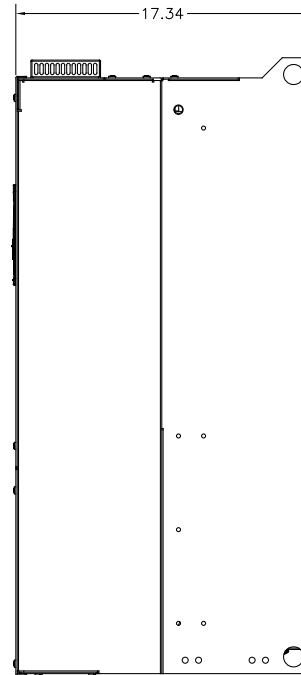


RIGHT SIDE VIEW

480V, 400 HP



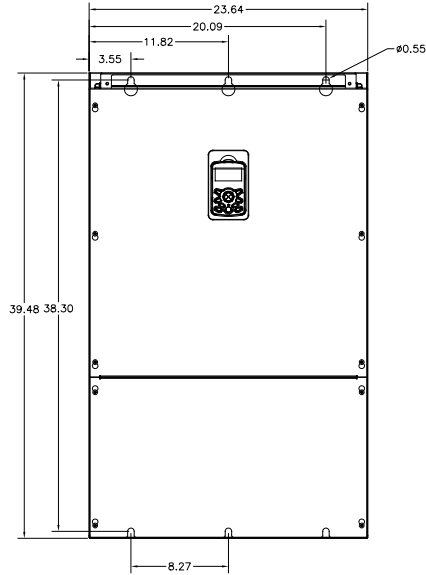
FRONT VIEW



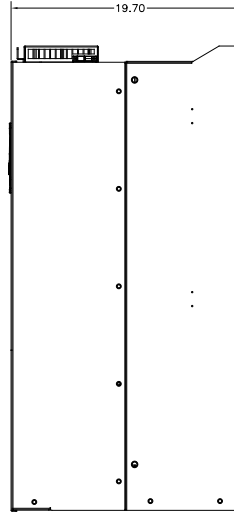
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

480V, 500 HP - 650 HP

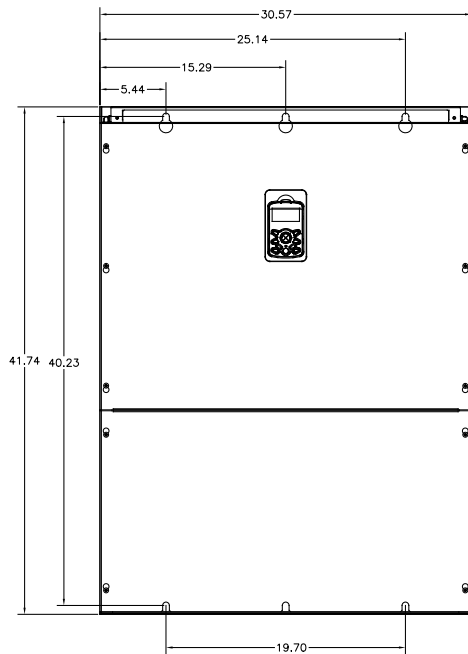


FRONT VIEW

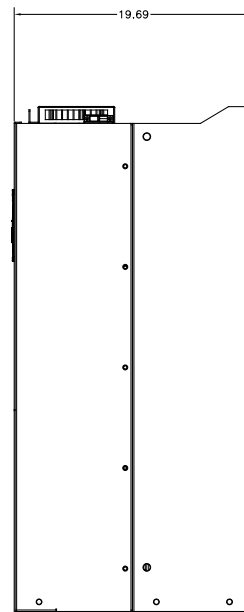


RIGHT SIDE VIEW

480V, 800 HP



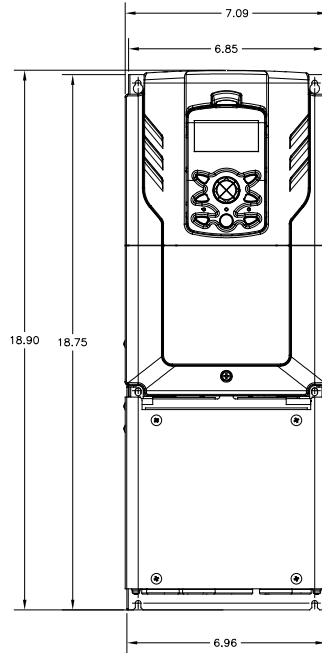
FRONT VIEW



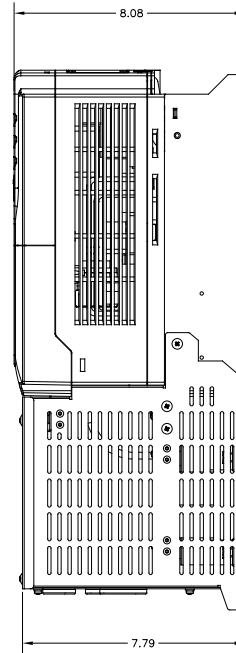
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

575V, 7.5 HP - 25 HP

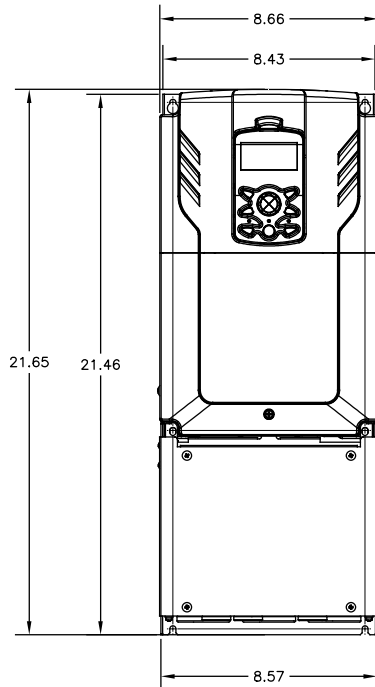


FRONT VIEW

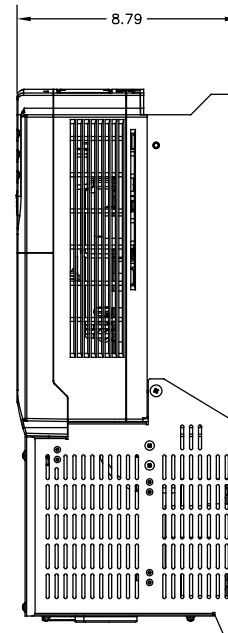


RIGHT SIDE VIEW

575V, 30 HP - 40 HP



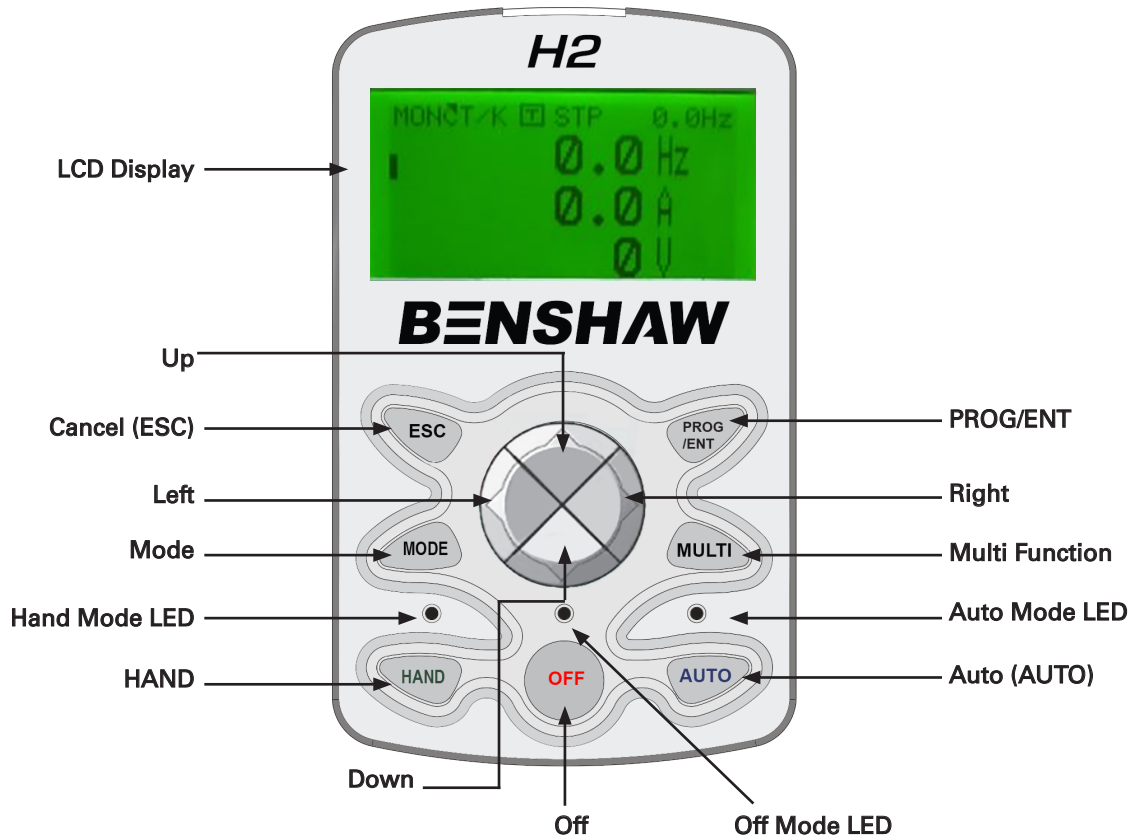
FRONT VIEW



RIGHT SIDE VIEW

H2 SERIES - PROGRAMMING

H2 Series - LCD Display/Keypad



Key	Description
LCD Display	<ul style="list-style-type: none"> Displays Operating Modes and Parameter Groups Command Source Operating Status and four (4) monitor items
Cancel (ESC)	<ul style="list-style-type: none"> While in the Edit state, reverts back to previously saved value When pressed while switching codes within the group, it is switched to the first parameter of the group
Program (PROG/ENT)	<ul style="list-style-type: none"> When pressed once, enter the Program mode (Parameter Edit mode). When pressed again, after changes, changed data is saved.
Left/Right	<ul style="list-style-type: none"> Move between PAR groups and move the cursor when in PROG Mode
Up/Down	<ul style="list-style-type: none"> Move between parameters and increase/decrease parameter values when in PROG Mode
Hand (HAND)	<ul style="list-style-type: none"> It is used to select Keypad (HAND) operation
OFF	<ul style="list-style-type: none"> Off and Fault Reset
Multifunction (MULTI)	<ul style="list-style-type: none"> Can be used to assign User Group parameters
Auto (AUTO)	<ul style="list-style-type: none"> It is used to select AUTO operation
MODE	<ul style="list-style-type: none"> Monitor Mode -> Parameter Mode -> Configure Mode

COMPARISON CHART - H2 SERIES AND H2 PUMP

Series	H2	H2 Pump
Features		
LCD Keypad with Hand/Auto/Off modes and Read/Write/Save	•	•
Quick Start Menu for easy basic commissioning	•	•
Constant Torque Macro for Quick Setup	•	
Pump and Fan Macros for Quick Setup	•	•
Single VFD, Multi-Motor/Pump Control (ATL Contactor based)		•
Multi-VFD, Multi-Motor/Pump Control (Lead/Lag, Alternating, Jockey Pump Control)		•
User Defined Parameter Lists for custom applications	•	•
PID Control	•	•
V/Hz control: Linear, Squared, or User Defined	•	•
Sensorless Vector for Induction* or PM** motors		
* SVC IM Motor Control	•	
240 max. 25 HP		
** SVC PM Motor Control	•	
240V max 25 HP		
480V max 125 HP		
575V not applicable		
Torque Limiting Functions	•	
Slip Compensation	•	
Auto-Tuning: Stationary and Rotating	•	
Auto and Manual Torque Boost	•	•
Dwell Operation	•	•
Motor Brake Control	•	•
On/Off Delay Timers for Digital Inputs	•	•
Regen Prevention for cyclical regenerative loads	•	•
Flow Compensation	•	•
Lube Pump Operation	•	•
Pump Clean Operation	•	•
Start and End Ramp Optimization	•	•
Load Tuning	•	•
Level Detection	•	•
Pipe Break Detection	•	•
Pre-Heating Function	•	•
Timed Event Scheduling	•	•
Kinetic Energy Buffering/Power Loss Ride Through	•	•
Anti-Resonance/Skip Frequency	•	•
Fire Mode	•	•
Energy Save Mode	•	•
Speed Search/Flying Start	•	•
Auto-Restart/Auto-Fault Reset	•	•
Backspin Delay Start	•	•

NOTE: H2 Pump does not apply to 575V inverters.

H2P SERIES - PUMP/FAN DRIVE

The Benschaw H2P Series sets the new standard for variable frequency drives for pump and fans applications. It includes application software designed to perform many functions including advanced PID functions, multiple pump or multistage pump control, lead lag, simplex, duplex, triplex, multiplex with the capacity of multiplexing up to 8 drives. Cost saving result by reducing PLC's and peripherals typically required to achieve these functions that are now integral to the drive... The results are reduced maintenance cost, better system control, and improved pump and pipe monitoring and protection. If you have one or multiple motors/pumps in a system that require constant pressure or flow, then this is the drive for you.

STANDARD FEATURES - HARDWARE

- 240V: 7.5HP~125HP (ND), 5HP~100HP (HD)
- 480V: 7.5HP~800HP (ND), 5HP~600HP (HD)
- Protected Chassis IP20, 7.5~300HP / Open Chassis IP00, 400~800HP
UL Enclosed Type 1 with optional conduit box (7.5HP~800HP)
- LCD Display/Keypad
- EMC Filter (240V, all, 480V, 7.5HP - 800HP)
- Single Phase Input (derating required)
- Plenum Rated (conduit option required)
- Built in DC Reactor (480V, 50HP~800HP)

COMMUNICATIONS

Standard: RS-485 Modbus - RTU, BACnet, Metasys-N2

Options: Ethernet/IP, Modbus -TCP, Lonworks

H2P SERIES PUMP / FAN SOFTWARE

- PID Control with Sleep Mode and Wake Up Boost, Broken Pipe and Under Load Detection
- Multi Motor Control - One drive to control the starting and stopping of up to 5 auxiliary motors up to 8 with option card
- Multiplex mode, simplex, duplex, triplex up to 8 motors
- Master-follower
- Multiplex via RS-485
- Jockey Pump Control
- Lead/Lag and Alternating
- Pre-Fill and Soft-Fill
- Fire Mode Input
- Start and End Ramp - settings for quicker accel/decel times when below minimum speeds
- Decel Valve Ramp - Separate decel ramp frequency and time settings when stopping
- Time Event Scheduling - Program run times for 7 days operation
- Flow Compensation - Compensate for losses in long pipe lengths
- Backspin Timer
- Pump Clean Operation
- Load Tuning
- Drive Output Level Detection - Set warning/trip limits (current, power, others) to detect drive operation beyond limits
- Oil Pump Starter Control
- Damper Control and Monitoring
- Broken Pipe Detection
- Under Load Detection
- Pre-Heat Function (Condensation Control)

WinDRIVE - PC Based Software for Commissioning and Monitoring



H2P SERIES - LEAD LAG OPERATION

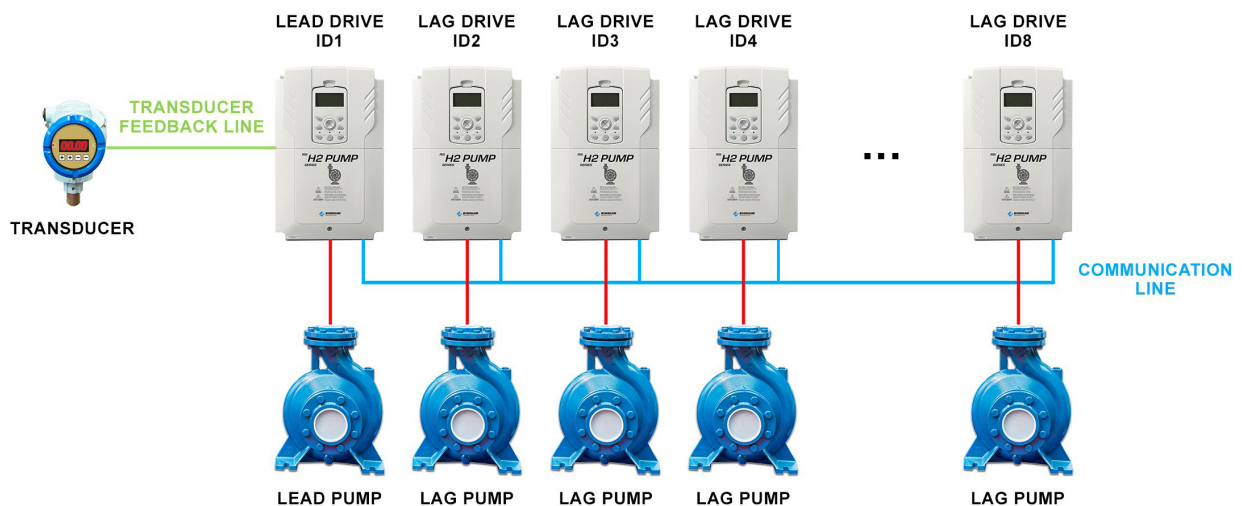
MULTI-STAGE PUMP CONTROL

This mode is also referred to as “Master-Follower” or Lead-Lag/ with Alternating option.”

The system can be configured without using a controller (such as a PLC) by connecting the drives via communications. Wiring is minimized with the use of Modbus-RTU communications, which eliminates the need for additional options. Running order and alterations are based upon operation time. If a failure occurs to the master drive, the next drive will run as the master.

FEATURES:

- Pumps are individually connected to AC drives, and a master drive controls the entire system
- Pumps are controlled by the unique PID function of the AC drives, so external devices such as PLCs or contactors are not required
- The speed of each pump is controlled by individual AC drives to save energy
- Since the operating time of each pump can be evenly distributed, the life expectancy of the pumping equipment is extended, reducing the total system operating cost
- If the master AC drive malfunctions, the next AC drive takes over as the master, and continuously controls the system without failure



H2P SERIES - PRICING

240V	Normal Duty 110%** 120% OL/1 min.		Heavy Duty 150% OL/1min.		Dimensions (inches)			Degree of Protection*	Weight	List Price
	HP	Amps	HP	Amps	H	W	D			
VFD-RSI-007-H2P-2C	7.5	22	5	17	9.13	6.30	7.13	IP20	7.3	\$1,741
VFD-RSI-010-H2P-2C	10	30	7.5	24	9.13	6.30	7.13	IP20	7.3	\$1,935
VFD-RSI-015-H2P-2C	15	42	10	32	9.13	6.30	7.13	IP20	7.3	\$2,185
VFD-RSI-020-H2P-2C	20	56	15	46	11.42	7.09	8.08	IP20	10.1	\$3,040
VFD-RSI-025-H2P-2C	25	69	20	60	13.78	8.66	8.79	IP20	15.7	\$3,732
VFD-RSI-030-H2P-2C	30	82	25	68	17.72	10.83	11.18	IP20	55.8	CF
VFD-RSI-040-H2P-2C	40	110	30	81	20.08	12.80	11.18	IP20	72.5	CF
VFD-RSI-050-H2P-2C	50	142	40	106	21.65	12.80	12.17	IP20	86.4	CF
VFD-RSI-060-H2P-2C	60	169	50	136	21.65	12.80	12.7	IP20	90.6	CF
VFD-RSI-075-H2P-2C	75	223**	60	169	27.80	11.81	15.20	IP20	118.2	CF
VFD-RSI-100-H2P-2C	100	264**	75	195	27.80	11.81	15.20	IP20	121.9	CF
VFD-RSI-125-H2P-2C	125	325**	100	255	27.76	14.96	15.59	IP20	159.2	CF

* For UL type 1 add conduit box option.

** Normal Duty 110%.

CF Consult Factory

480V	Normal Duty 110%** 120% OL/1 min.		Heavy Duty 150% OL/1min.		Dimensions (inches)			Degree of Protection	Weight	List Price
	HP	Amps	HP	Amps	H	W	D			
VFD-RSI-007-H2P-4C	7.5	12	5	8	9.13	6.30	7.13	IP20	7.3	\$1,737
VFD-RSI-010-H2P-4C	10	16	7.5	12	9.13	6.30	7.13	IP20	7.3	\$1,768
VFD-RSI-015-H2P-4C	15	24	10	15	9.13	6.30	7.13	IP20	7.4	\$2,114
VFD-RSI-020-H2P-4C	20	30	15	22	11.42	7.09	8.08	IP20	10.1	\$2,894
VFD-RSI-025-H2P-4C	25	38	20	28	11.42	7.09	8.08	IP20	10.6	\$3,473
VFD-RSI-030-H2P-4C	30	45	25	35	13.78	8.66	8.79	IP20	16.5	\$4,023
VFD-RSI-040-H2P-4C	40	61	30	41	13.78	8.66	8.79	IP20	16.5	\$4,198
VFD-RSI-050-H2P-4C	50	75	40	55	17.72	10.83	11.18	IP20	57	\$6,050
VFD-RSI-060-H2P-4C	60	91	50	67	20.08	12.80	11.18	IP20	77	\$7,526
VFD-RSI-075-H2P-4C	75	107	60	81	20.08	12.80	11.18	IP20	77	\$8,076
VFD-RSI-100-H2P-4C	100	142	75	106	21.67	12.80	12.17	IP20	95	\$10,116
VFD-RSI-125-H2P-4C	125	169	100	136	21.67	12.80	12.17	IP20	95	\$11,287
VFD-RSI-150-H2P-4C	150	223**	125	169	27.80	11.81	15.20	IP20	123	\$15,166
VFD-RSI-200-H2P-4C	200	264**	150	195	27.80	11.81	15.20	IP20	123	\$16,063
VFD-RSI-250-H2P-4C	250	325**	200	255	27.76	14.96	15.59	IP20	165	\$19,681
VFD-RSI-300-H2P-4C	300	370**	250	303	27.76	14.96	15.59	IP20	165	\$22,721
VFD-RSI-400-H2P-4C	400	481**	300	375	36.34	16.77	17.32	IP00	265	\$33,429
VFD-RSI-500-H2P-4C	500	613**	400	478	39.37	23.62	19.69	IP00	409	\$53,978
VFD-RSI-650-H2P-4C	650	770**	500	591	39.37	23.62	19.69	IP00	409	\$60,345
VFD-RSI-800-H2P-4C	800	962**	600	740	41.50	30.55	19.67	IP00	584	\$72,502

* For UL type 1 add conduit box option.

** Normal Duty 110%.

*** Requires External Braking (DBU and DBR), Consult Factory.

Price Effective July 1, 2025

H2P SERIES - INPUT AND OUTPUT SPECIFICATIONS

240V, 7.5HP - 25HP (5.5 - 18.5 kW)

RSI-XXX-H2P-2C			007	010	015	020	025
240V, w/3Ø Input	Normal Duty 120% OL	HP	7.5	10	15	20	25
		kW	5.5	7.5	11	15	18.5
		Amps	22	30	42	56	69
	Heavy Duty 150% OL	HP	5	7.5	10	15	20
		kW	3.7	5.5	7.5	11	15
		Amps	17	24	32	46	60
240V, w/1Ø Input	Normal Duty 120% OL	HP	3.0	5.0	7.5	10.0	-
		Amps	11	16	23	30	37
Rated Capacity (kVA)			8.4	11.4	16.0	21.3	26.3
Output frequency		0-400Hz (V/Hz, Slip Compensation)					
Output voltage (V)		3-Phase 0-240 V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 200-240 VAC (- 15% - + 10%)				
		Single-Phase	1-Phase 240 VAC (- 5% - + 10%)				
	Input frequency	Three-Phase	50-60Hz (+/- 5%)				
		Single-Phase	60Hz (+/- 5%) only				
	Rated Current (A)			23.7	32.7	46.4	62.3
Weight lbs (kg)		lbs	7.3	7.3	7.3	10.1	15.6
		kg	(3.3)	(3.3)	(3.3)	(4.6)	(7.1)
Heat Dissipation (W)			180	248	330	451	600
Degree of Protection		UL Open Type (IP20), UL Type 1 achieved with optional conduit box					

240V, 30HP -125HP (22 kW - 90 kW)

RSI-XXX-H2P-2C			030	040	050	060	075*	100*	125*
240V, w/3Ø Input	Normal Duty 110%* / 120% OL	HP	30	40	50	60	75	100	125
		kW	22	30	37	45	55	75	90
		Amps	82	110	142	169	223	264	325
	Heavy Duty 150% OL	HP	25	30	40	50	60	75	100
		kW	18.5	22	30	37	45	55	75
		Amps	68	81	106	136	169	195	255
240V, w/1Ø Input	Normal Duty 110%* / 120% OL	HP	15	20	25	30	40	50	60
		Amps	45	58	78	92	122	145	178
ND Rated Capacity (kVA)			31.2	41.9	54.1	64.4	85	100.6	123.8
Output frequency		0-400Hz (V/Hz, Slip Compensation)							
Output voltage (V)		3-Phase 0-240 V							
Rated Input	Voltage (V)	Three-Phase	3-Phase 200-240 VAC (- 15% - + 10%)						
		Single-Phase	1-Phase 240 VAC (- 5% - + 10%)						
	Input frequency	Three-Phase	50-60Hz (+/- 5%)						
		Single-Phase	60Hz (+/- 5%) only						
	Rated Current (A)			74.8	101	131.2	159	211.1	251.4
Weight lbs (kg)		lbs	55.8	72.5	86.4	90.6	118.2	121.9	159.2
		(kg)	(25.3)	(32.9)	(39.2)	(41.1)	(53.6)	(55.3)	(72.2)
Heat Dissipation (W)			893	1245	1480	1814	2150	2963	3438
Degree of Protection		UL Open Type (IP20), UL Type 1 achieved with optional conduit box							

H2P SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 7.5HP - 30HP (5.5 - 22 kW)

RSI-XXX-H2P-4C			007	010	015	020	025	030
480V, w/3Ø Input	Normal Duty 120% OL	HP	7.5	10	15	20	25	30
		kW	5.5	7.5	11	15	18.5	22
		Amps	12	16	24	30	38	45
	Heavy Duty 150% OL	HP	5.0	7.5	10	15	20	25
		kW	3.7	5.5	7.5	11	15	18.5
		Amps	8	12	15	22	28	35
480V, w/1Ø Input	Normal Duty 120% OL	HP	3-5	5	10	10	15	20
		Amps	6.8	9.2	14	17	22	26
Rated Capacity (kVA)			9.1	12.2	18.3	23.0	29.0	34.3
Output frequency		0-400Hz (V/Hz, Slip Compensation)						
Output voltage (V)		3-Phase 0-480 V						
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)					
		Single-Phase	1-Phase 480 VAC (- 5% - + 10%)					
	Input frequency	Three-Phase	50-60Hz (+/- 5%)					
		Single-Phase	60Hz (+/- 5%) only					
	Rated Current (A)			12.2	17.5	26.5	33.4	42.5
Weight lbs (kg)	lbs		7.3	7.3	7.5	10.1	10.6	16.5
	kg		(3.3)	(3.3)	(3.4)	(4.6)	(4.8)	(7.5)
Heat Dissipation (W)			172	237	322	451	615	740
Degree of Protection		UL Open Type (IP20), UL Type 1 achieved with optional conduit box						

480V, 40 HP -125 HP (30 - 90 kW)

RSI-XXX-H2P-4C			040	050	060	075	100	125
480V, w/3Ø Input	Normal Duty 120% OL	HP	40	50	60	75	100	125
		kW	30	37	45	55	75	90
		Amps	61	75	91	107	142	169
	Heavy Duty 150% OL	HP	30	40	50	60	75	100
		kW	22	30	37	45	55	75
		Amps	41	55	67	81	106	136
480V, w/1Ø Input	Normal Duty 120% OL	HP	25	30	30	40	50-60	60
		Amps	36	39	47	55	73	86
Rated Capacity (kVA)			46.5	57.1	69.4	82.0	108.2	128.8
Output frequency		0-400Hz (V/Hz, Slip Compensation)						
Output voltage (V)		3-Phase 0-480V						
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)					
		Single-Phase	1-Phase 480 VAC (- 5% - + 10%)					
	Input frequency	Three-Phase	50-60Hz (+/- 5%)					
		Single-Phase	60Hz (+/- 5%) only					
	Rated Current (A)			69.1	69.3	84.6	100.1	133.6
Weight lbs (kg)	lbs		16.5	57.3	77.2	77.2	94.8	94.8
	kg		(7.5)	(26)	(35)	(35)	(43)	(43)
Heat Dissipation (W)			880	1170	1443	1710	2090	2775
Degree of Protection		UL Open Type (IP20), UL Type 1 achieved with optional conduit box						

H2P SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 150 HP - 800 HP (110 - 500 kW)

RSI-XXX-H2P-4C		150	200	250	300	400	500	650	800	
480V, w/3Ø Input	Normal Duty 110% OL	HP	150	200	250	300	400	500	650	800
		kW	110	132	160	185	250	315	400	500
		Amps	223	264	325	370	481	613	770	962
	Heavy Duty 150% OL	HP	125	150	200	250	300	400	500	600
		kW	90	110	132	160	185	250	315	375
		Amps	169	195	255	303	375	478	591	740
Rated Capacity (kVA)		170	201	248	282	367	467	587	733	
Output frequency		0-400Hz (V/Hz, Slip Compensation)								
Output voltage (V)		3-Phase 0-480V								
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (-15% - + 10%)							
	Input frequency	Three-Phase	50-60Hz (+/-5%)							
	Rated Current (A)		215.1	254.6	315.3	358.9	469.3	598.1	751.3	938.6
Weight lbs (kg)	lbs	123	123	164.7	164.7	264.6	409	409	584	
	kg	(55.8)	(55.8)	(74.7)	(74.7)	(120)	(185.5)	(185.5)	(265)	
Heat Dissipation (W)		3960	4752	5600	6475	8500	10.4k	13.2k	16k	
Degree of Protection		1HP~300HP (0.75 kW~185 kW): UL Open (IP20), UL Type 1 achieved with optional conduit box 400HP~800HP (250 kW~500 kW): UL Open (IP00), UL Type 1 achieved with optional conduit box								

H2P SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description		
Control	Control method	V/F control, Slip Compensation		
	Frequency setting	Digital command: 0.01 Hz		
	Frequency accuracy	1% of maximum output frequency		
	V/F pattern	Linear, Square Reduction, User V/F		
	Overload capacity (Normal Duty)	240V, 7.5 HP ~ 60 HP	120% / 1 min.	
		240V, 75 HP ~ 125 HP	110% / 1 min.	
		480V, 7.5 HP ~ 125 HP	120% / 1 min.	
		480V, 150 HP ~ 800 HP	110% / 1 min.	
Overload capacity (Heavy Duty)	240V, 5.0 HP ~ 100 HP	150% / 1 min.		
	480V, 5.0 HP ~ 600 HP	150% / 1 min.		
Torque boost	Manual torque boost, automatic torque boost			
Operation	Operation Type			
	Start/Stop	Keypad, Terminal strip, Communications		
	Frequency (Speed) Settings	Analog Inputs: (1) 0–10 V, (1) 0/4–20 mA, Switch selectable to 0–10 Vdc		
		Digital Inputs: Keypad, Fixed Speed, Pulse Train		
		Communications: RS-485 (Modbus), Metasys-N2, BACnet, Fieldbus Options		
	H2 Pump Software			
		Lead/Lag and Alternating	Broken Pipe Detection	
		Jockey Pump Control	BACnet and Metasys-N2	
		MMC - Multi-Motor Control	Pump Load Tuning	
		Pre-Fill, Soft Fill	Decel Valve Ramp	
		Start and End Ramp	Time Event Scheduling	
		Backspin Timer	Flow Compensation	
		Pump Clean Operation	Energy Saving Operation	
		Functions	Basic	Advanced
	Quick Start Menu		Auto Tuning	
	Start/Stop Operation		PID Control	
	Start/Stop Modes		Slip Compensation	
	Frequency Reference Sources		Event Timer (RTC)	
	Auxiliary Frequency Reference		Energy Save Mode	
	Multi-Step Speeds		Regen Avoidance	
	Multi-Step Accel/Decel Times		VFD Fan Control	
	2nd Source (HOA)		Other	
	Accel/Decel Times		Timer Relay Input/Output Function	
	Accel/Decel Patterns		Pre Heat	
	Dwell Frequency Operation		Oil Pump Starter Control	
	Jog		Damper Monitor and Control	
	Auto Start			
Auto Reset/Restart	Loss of Power			
Jog and Jog Start	Ride Through (KEB)			
FWD/REV Run Prevention	Safe Stop			
Frequency Limits	Speed Search			
	Jump Frequencies			

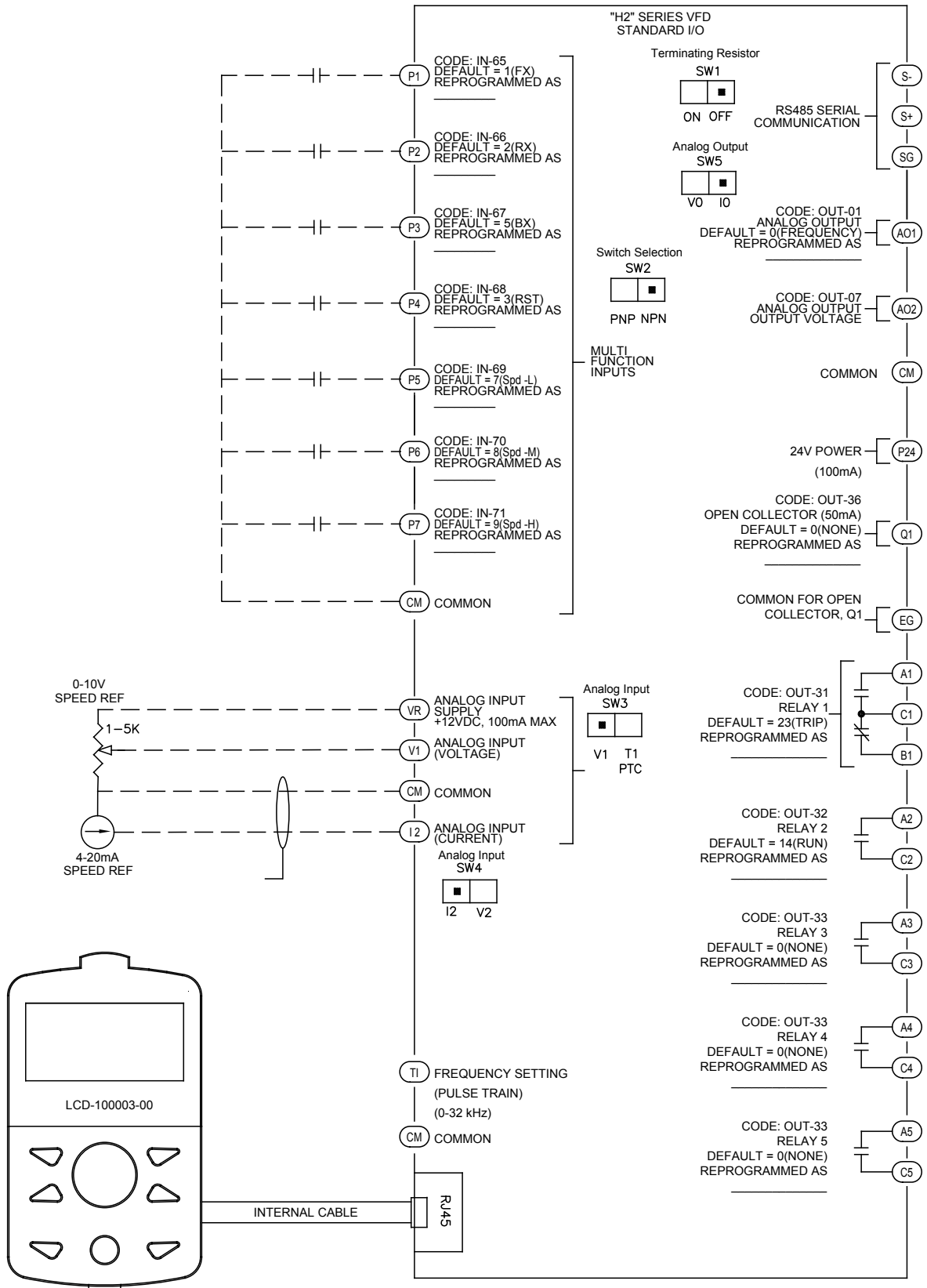
H2P SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description		
Operation	Functions	3-Wire Control	Braking	
		Fire Mode	DC Injection Braking	
			Stall Prevention	
		V/Hz. Control Pattern	Power Braking	
		Linear, Squared, User V/Hz	Flux Braking	
		Torque Boost	External Brake Control	
		Input	Analog	(1) 0–10 V, (1) 0/4–20 mA, Switch selectable to 0–10 Vdc
	Digital inputs		(7), Select PNP (Source) or NPN (Sink) mode. NO/NC selectable. Functions of the digital inputs are set with parameters IN-65 through IN-71	
	Functions		Forward/Reverse Operation	2nd Source - HOA/LOR
			Reset	Up/Down Operation
			External Trip	Analog Hold
			Emergency Stop	PID Disable
			Output Disable (Bx)	Jog Start FWD/REV
			Jog	Pre-Excite
			Fixed Speed - Step Freq's	Timer Input
			Run Enable/Disable (Safety)	Fire Mode
			3-Wire Control Select	Event Timer
			Damper Monitor and Control	Pre-Heat
			Pulse train	0-32 kHz, Low Level: 0-0.8 V, High Level: 3.5-12 V
	Output	(1) Fault relay (Form C)	N.O. : Less than AC 250V, 2A, DC 30V, 3A N.C.: Less than AC 250V, 1A, DC 30V,1A	
		(4) Programmable relays (Form A)	N.O. (A-C): Less than 250V, 5A Less than DC 30V, 5A	
		(1) Open collector terminal	Less than DC 26V, 50 mA	
		(2) Analog Outputs	AO1: 0(4) - 20 mA, Switch selectable to 0–10 Vdc	
AO2: 0-10VDC Frequency, Current, Voltage, Power, DC Bus Voltage, Fixed, more.				
Pulse train	Maximum 32 kHz, 0-12 V			
Protection Function	Trip	Motor Over Load	Fan Trip	
		Under Load	Internal Fan Trip	
		Over Current 1	Motor Over Heat (PTC Input)	
		Over Voltage	Lost Keypad	
		Low Voltage	Fuse Open	
		Low Voltage 2	Pipe Broken	
		Ground Fault	Broken Belt	
		E-Thermal	Lost Speed Reference	
		Out Phase Open	I/O Board Trip	
		In Phase Open		
		Inverter Over Load	Fan/Pump related trips	
		No Motor Trip	Damper Trip	
		Inverter over Heat	Level Detected Trip	
		Over Current 2	MMC Interlock Trip	
		External Trip	Pump Cleaning Trip	
		Hardware Diagnostic		

H2P SERIES - PRODUCT SPECIFICATION DETAILS

	Items	Description
Protection Functions	Alarm	Overload/underload, Lost Command, Inverter overload, DB (braking) rate alarm, Pump Clean, Pipe Broken, Broken Belt, Fire Mode, Level Detection (LDT).
	Instantaneous Power	Less than 8 ms: Continue Operation
Structure / working environment	Cooling type	Forced fan cooling structure
	Protection structure	UL Open, IP 20: 7.5 HP ~ 300 HP (5.5 kW ~ 185 kW) UL Open, IP 00: 400 HP ~ 800 HP (250 kW ~ 500kW) UL Type 1 with conduit box (option) installation (up to 800 HP).
	Ambient temperature	14°F~104°F (-10°C~40°C) 2.5% / amp current derating up to 122°F (50°C) max. No ice or frost should be present
	Ambient humidity	Relative humidity less than 95% RH (to avoid condensation)
	Storage temperature	- 4°F~149°F (- 20°C ~ 65°C)
	Environment	Prevent contact with corrosive gases, inflammable gases, oil stains, dust and other pollutants. 7.5HP~800HP (5.5 kW ~ 500 kW) Pollution Degree 2
	Altitude	Maximum 3,280 ft (1,000m) above sea level for standard operation. Above derate the drive rated voltage and the rated output current by 1% for every 328 ft (100m) up to 13,123 ft (4,000m) max.
	Vibration	Less than 1.0 G (9.8 m/sec ²)
	Pressure	10~15 PSI (70-106 kPa)

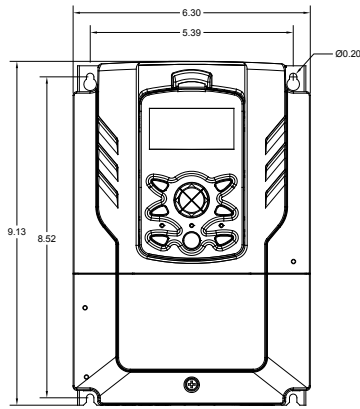
H2P SERIES - WIRING



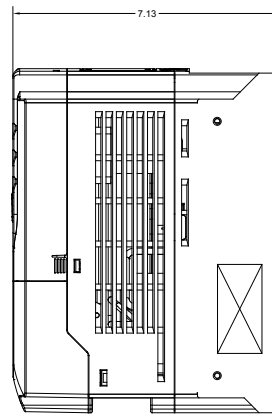
H2P SERIES - DRAWINGS

240V, 7.5 HP - 15 HP

480V, 7.5 HP - 15 HP



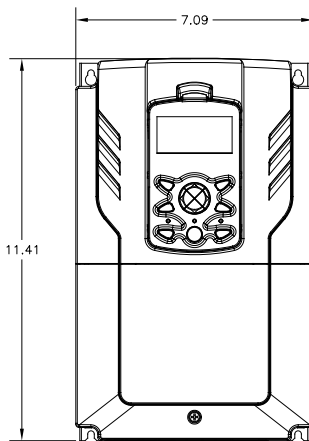
FRONT VIEW



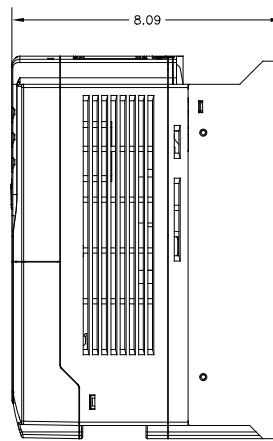
RIGHT SIDE VIEW

240V, 20 HP

480V, 20 HP - 25 HP



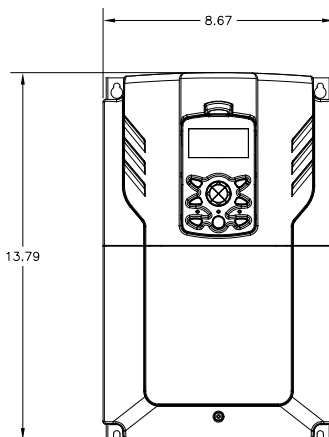
FRONT VIEW



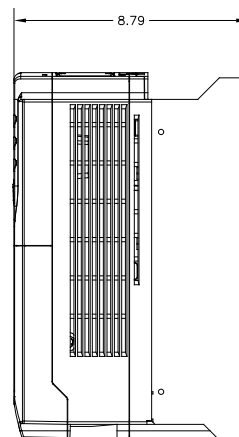
RIGHT SIDE VIEW

240V, 25 HP

480V, 30 HP - 40 HP



FRONT VIEW

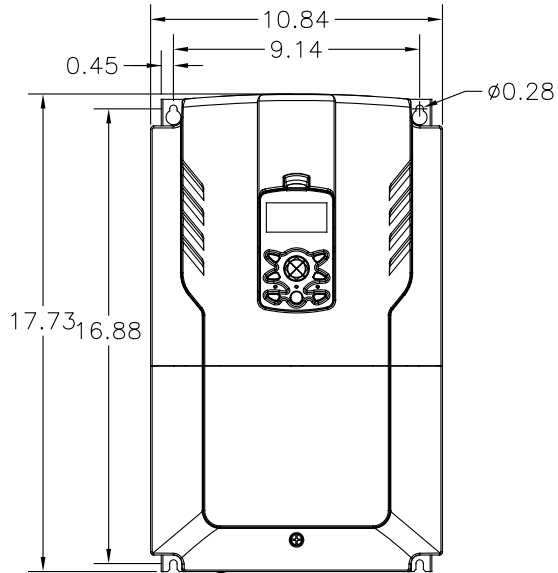


RIGHT SIDE VIEW

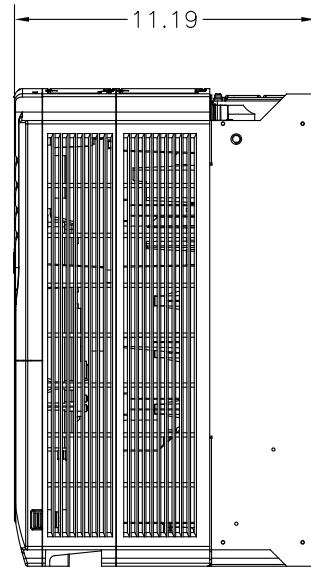
H2P SERIES - DRAWINGS

240V, 30 HP

480V, 50 HP



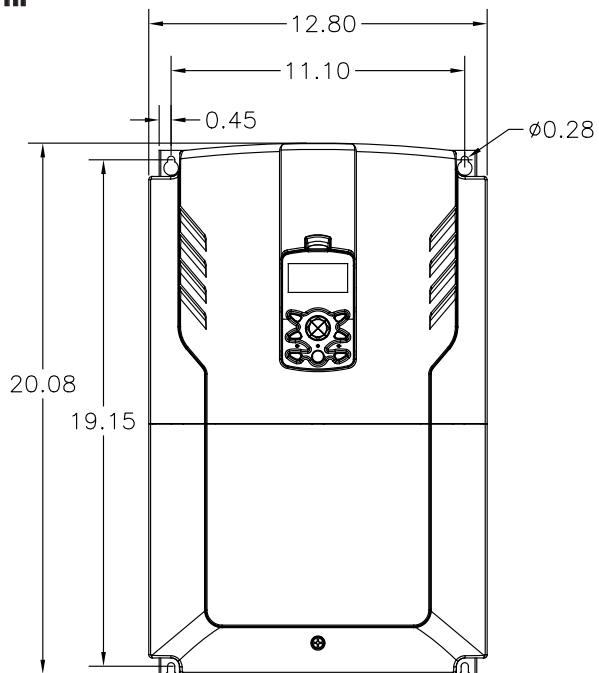
FRONT VIEW



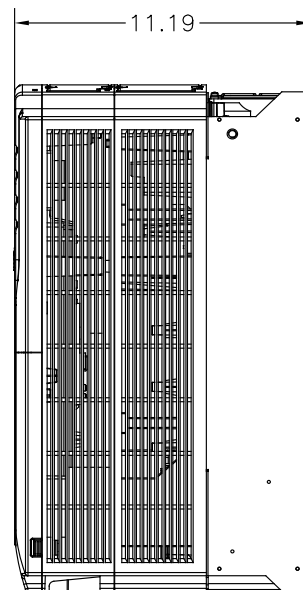
RIGHT SIDE VIEW

240V, 40 HP

480V, 60 HP - 75 HP



FRONT VIEW

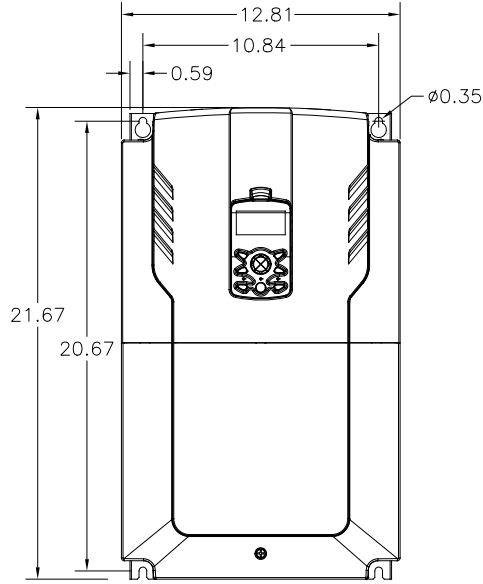


RIGHT SIDE VIEW

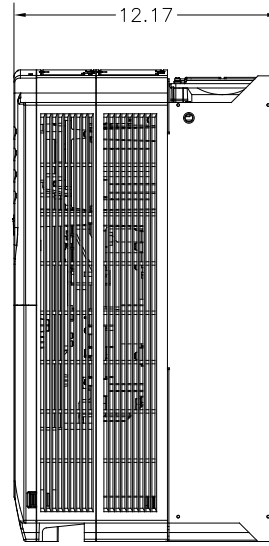
H2P SERIES - DRAWINGS

240V, 50 HP ~ 60 HP

480V, 100 HP - 125 HP



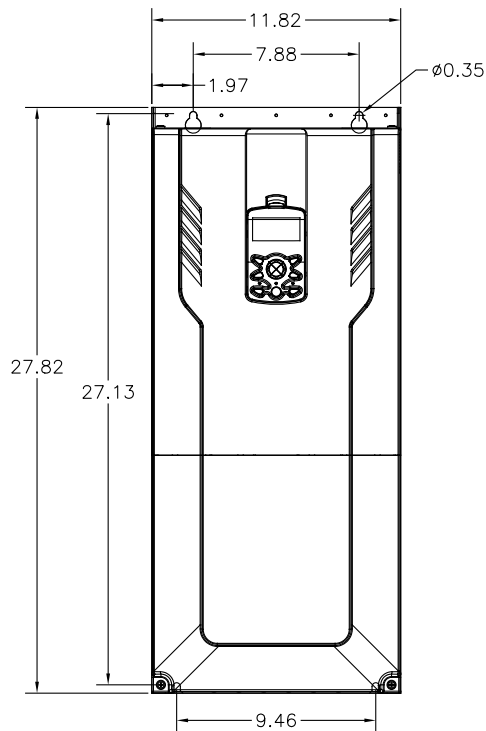
FRONT VIEW



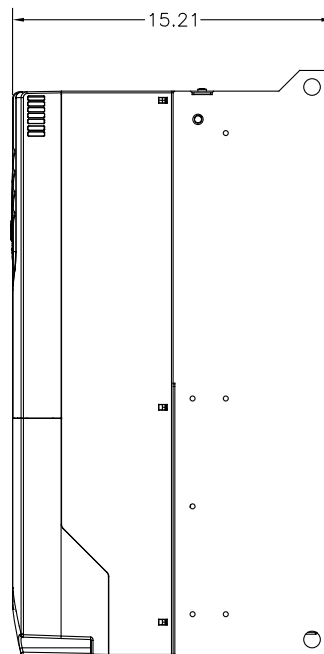
RIGHT SIDE VIEW

240V, 75 HP ~ 100 HP

480V, 150 HP - 200 HP



FRONT VIEW

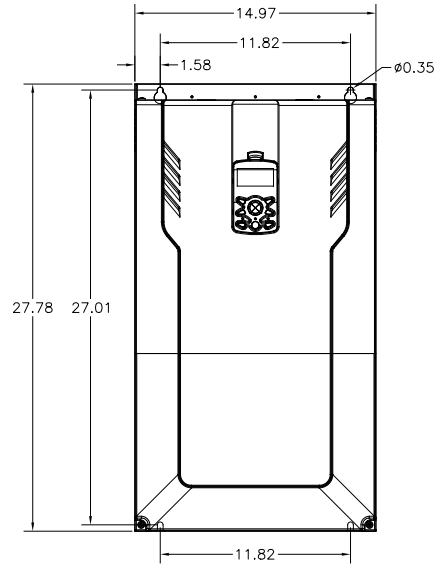


RIGHT SIDE VIEW

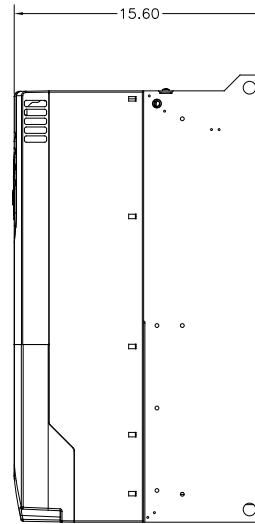
H2P SERIES - DRAWINGS

240V, 125 HP

480V, 250 HP - 300 HP

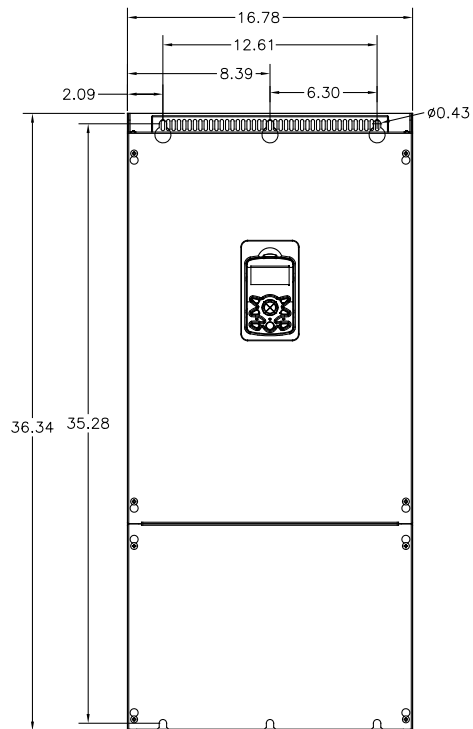


FRONT VIEW

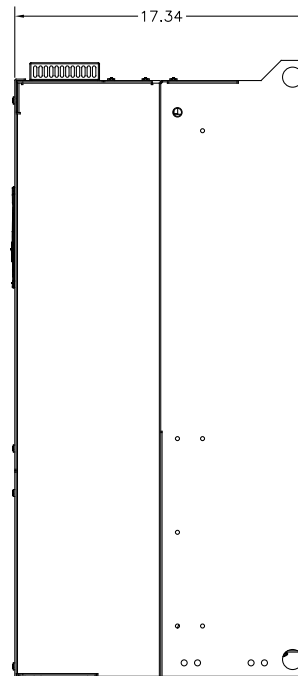


RIGHT SIDE VIEW

480V, 400 HP



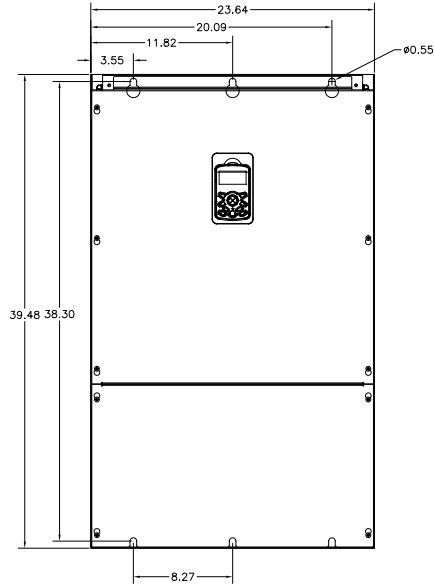
FRONT VIEW



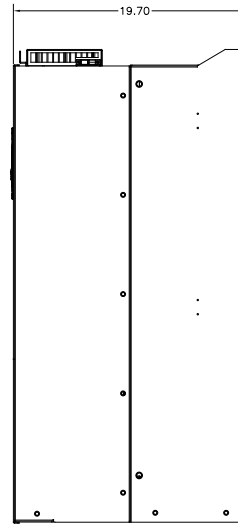
RIGHT SIDE VIEW

H2P SERIES - DRAWINGS

480V, 500 HP - 650 HP

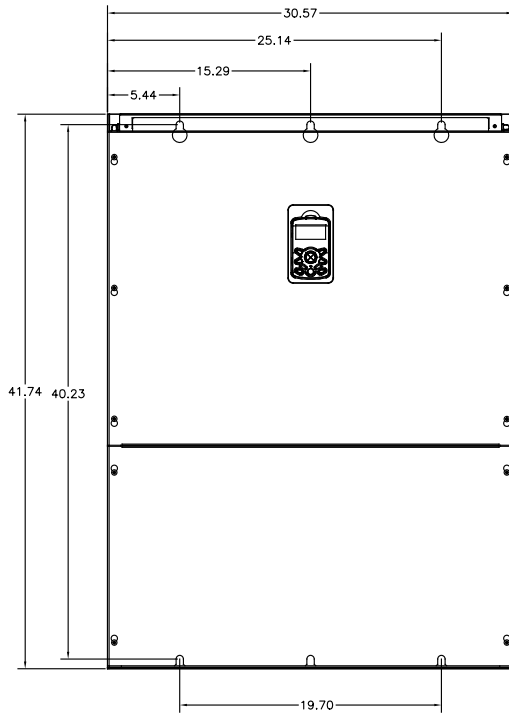


FRONT VIEW

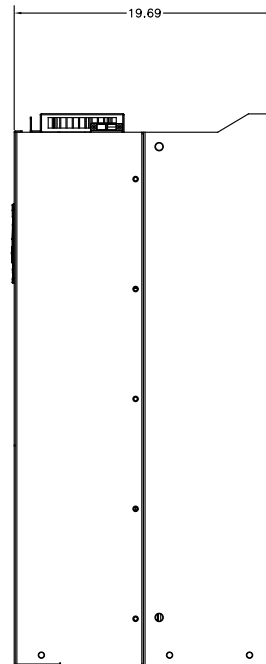


RIGHT SIDE VIEW

480V, 800 HP



FRONT VIEW



RIGHT SIDE VIEW

H2X / H2E SERIES

Standard and Engineered Low Voltage Drive Packages

As an industry leader in motor control, Benshaw is known for their offering of standard and custom engineered drive packages. If an off-the-shelf unit does not meet your needs, our dedicated engineering team can design the drive solution you need. With our extensive inventory of components from Benshaw circuit breakers and contactors to our variety of VFDs, enclosures, and pilot devices...we've got you covered. Select the enclosure, disconnect, bypass, pilot devices and the control scheme required for your application and we'll do the rest. You can count on Benshaw to get it 'right from the start'.

**Standard and customized
engineered solutions for your
most demanding applications.**



COMBINATION DRIVE PACKAGES — TO MEET YOUR REQUIREMENTS

- Circuit breaker (65 KAIC rated)
- Fusible disconnect protection
- Flange or rotary handle mechanism

CONTROL & PROTECTION — TO YOUR SPECIFICATIONS

- Pilot devices, control power transformers, switches, meters, relays, space heaters, protective devices and more

BYPASS OPTIONS — FOR SERVICE AND RELIABILITY

- Three contactor bypass
- Soft starter bypass

FILTERS & REACTORS — FOR YOUR UNIQUE APPLICATION

- Line reactors, 3% and 5%
- Long lead filters
- Load reactors
- Harmonic filters
- 18-pulse systems

ENCLOSURES — TO MATCH YOUR ENVIRONMENT

- Standard designs — NEMA 1, 12, 3R
- Special enclosures — NEMA 4, 4X, air conditioned
- Custom enclosures
- Motor control panel (MCP), multiple VFD's in one package

H2X SERIES

Standard Low Voltage Drive Packages



STANDARD HARDWARE FEATURES:

- Heavy duty rated packaged H2 Series drive
- NEMA 3R ventilated enclosure
- 65 KAIC Circuit breaker with rotary operator
- Stock models up to 200HP
- Door mounted:
 - Keypad
 - Start/Stop push buttons
 - Run indicator light
 - Fault indicator light
 - Speed potentiometer
 - Hand-Off-Auto selector switch



H2X SERIES - STANDARD SOFTWARE FEATURES

- Control Modes
 - V/Hz. (Linear, Squared, User defined)
 - Sensorless Vector (IM or PM) with Auto Tuning (Static or Rotational)
 - Slip Compensation
- Application Macros
 - Pump
 - Fan
 - Constant Torque
- Communications (built in)
 - BACnet
 - Metasys-N2
- PID Control (Single Loop, Dual Loop) with:
 - Sleep, Sleep Boost and Wake Up
 - Broken Pipe Detection
 - Under Load Detection
 - Select from 40 units of measure
- Pump Clean Operation
- Time Event Scheduling (24/7 Programmable Operation)
- Pump Load Tuning
- Energy Saving Operation
- Flow Compensation
- Backspin Timer
- Pre-fill and Soft-fill
- Fire mode input
- Oil Pump Starter Control (compressor systems)

H2X SERIES - PRICING



Standard Low Voltage Drive Packages

480V Model Number	Drive Rating Heavy Duty 150% OL/1 min		Circuit Breaker (65 KAIC) Size	Dimensions (inches) (H x W x D)	NEMA 3R List Price
	HP	Amps	Amps		
☒RSI-005-H2XHD4-CB-A-3R	5	8	15	24" x 24" x 12"	\$8,758
☒RSI-007-H2XHD4-CB-A-3R	7.5	12	20	24" x 24" x 12"	\$8,782
☒RSI-010-H2XHD4-CB-A-3R	10	15	30	24" x 24" x 12"	\$9,222
☒RSI-015-H2XHD4-CB-A-3R	15	22	40	30" x 30" x 12"	\$11,331
☒RSI-020-H2XHD4-CB-A-3R	20	28	50	30" x 30" x 12"	\$12,094
☒RSI-025-H2XHD4-CB-A-3R	25	35	60	30" x 30" x 12"	\$12,865
☒RSI-030-H2XHD4-CB-A-3R	30	41	80	30" x 30" x 12"	\$13,103
☒RSI-040-H2XHD4-CB-A-3R	40	55	100	36" x 30" x 16"	\$16,037
☒RSI-050-H2XHD4-CB-A-3R	50	67	125	36" x 30" x 16"	\$17,900
☒RSI-060-H2XHD4-CB-A-3R	60	81	150	36" x 30" x 16"	\$18,562
☒RSI-075-H2XHD4-CB-A-3R	75	106	200	36" x 30" x 16"	\$19,624
☒RSI-100-H2XHD4-CB-A-3R	100	136	225	36" x 30" x 16"	\$24,293
☒RSI-125-H2XHD4-CB-A-3R	125	169	250	48" x 36" x 20"	\$29,357
☒RSI-150-H2XHD4-CB-A-3R	150	195	300	48" x 36" x 20"	\$32,034
☒RSI-200-H2XHD4-CB-A-3R	200	255	400	48" x 36" x 20"	\$40,313
✖RSI-250-H2XHD4-CB-A-3R	250	303	500	72" x 48" x 24"	\$43,588
✖RSI-300-H2XHD4-CB-A-3R	300	375	600	72" x 48" x 24"	\$63,113
✖RSI-400-H2XHD4-CB-A-3R	400	478	800	72" x 48" x 24"	\$90,200
✖RSI-500-H2XHD4-CB-A-3R	500	591	1000	72" x 48" x 24"	\$99,859
✖RSI-600-H2XHD4-CB-A-3R	600	740	1200	72" x 72" x 24"	\$116,300

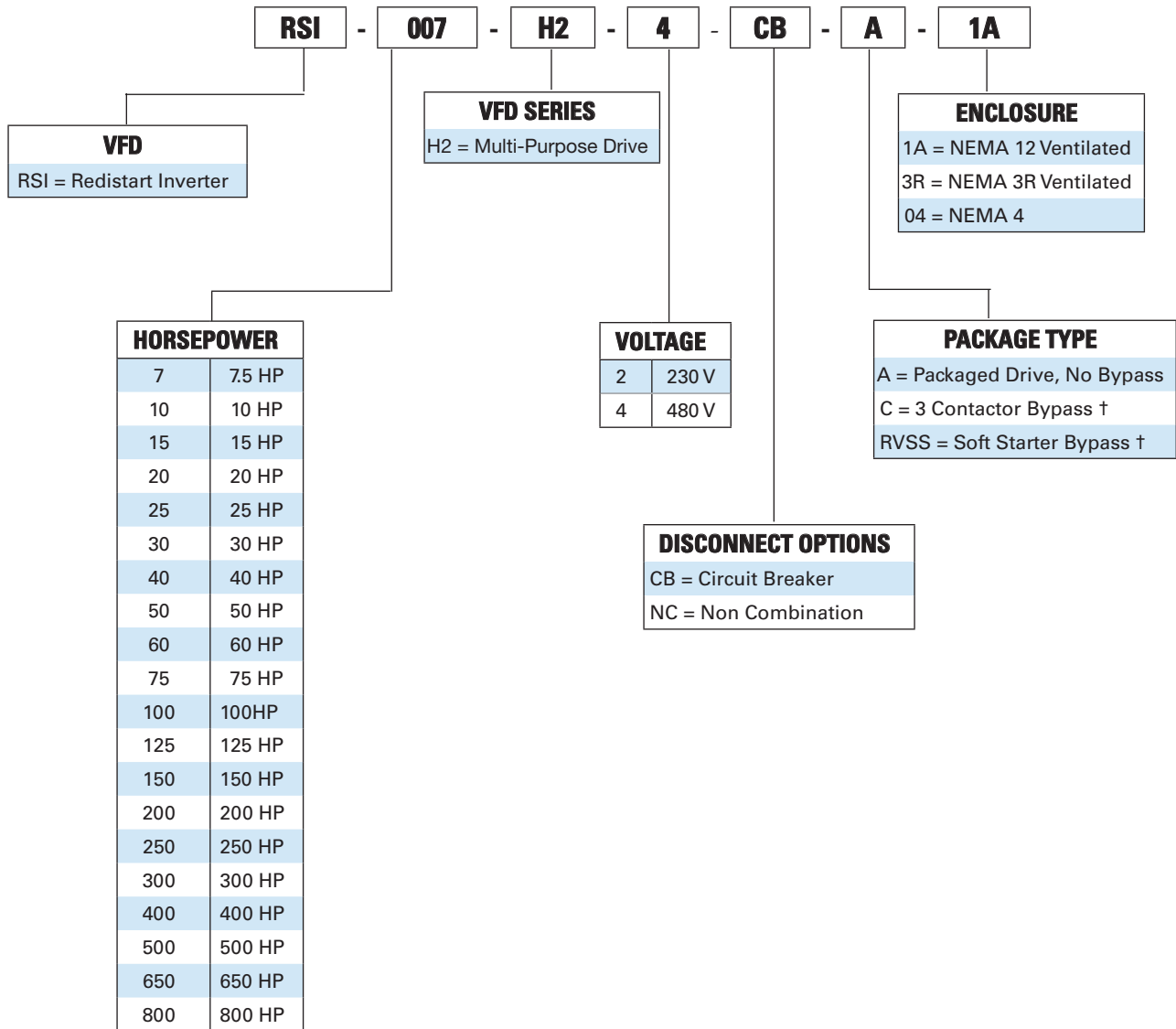
☒ Web stocked. Allow 2 weeks build if out of stock on web.

✖ Built-to-order. Please allow 4 weeks lead time.

BenshawExpress.com

H2E SERIES - PART NUMBER ASSEMBLER

Engineered Low Voltage Drive Packages



† Contact Factory.

H2E SERIES - PRICING

Engineered Low Voltage Drive Packages

Enclosed Drives - Combination Circuit Breaker 230V

7.5 HP - 25 HP NEMA 12 AND 3R VENTILATED

230V Model Number	Normal Duty 120% Current/1min.		Heavy Duty 150% Current/1min.		Circuit Breaker (65KAIC)	Dimensions (inches)	List Price	
	HP	Amps	HP	Amps	Amp Rating	(H x W x D)	A-1A	A-3R
RSI-007-H2-2-CB-X-XX	7	22	5	17	30 A	24" x 24" x 12"	\$7,466	\$8,913
RSI-010-H2-2-CB-X-XX	10	30	7.5	24	40 A	30" x 30" x 12"	\$7,781	\$9,227
RSI-015-H2-2-CB-X-XX	15	42	10	32	60 A	30" x 30" x 12"	\$8,456	\$9,916
RSI-020-H2-2-CB-X-XX	20	56	15	46	70 A	30" x 30" x 12"	\$9,955	\$11,415
RSI-025-H2-2-CB-X-XX	25	69	20	60	90 A	30" x 30" x 12"	\$10,894	\$12,354

Enclosed Drives - Combination Circuit Breaker 460V

7.5 HP - 800 HP NEMA 12 AND 3R VENTILATED

480V Model Number	Normal Duty 120% Current/1min.		Heavy Duty 150% Current/1min.		Circuit Breaker (65KAIC)	Dimensions (inches)	List Price	
	HP	Amps	HP	Amps	Amp Rating	(H x W x D)	A-1A	A-3R
RSI-007-H2-4-CB-X-XX	7.5	12	5	8	15 A	24" x 24" x 12"	\$7,377	\$8,821
RSI-010-H2-4-CB-X-XX	10	16	7.5	12	20 A	24" x 24" x 12"	\$7,398	\$8,845
RSI-015-H2-4-CB-X-XX	15	24	10	15	30 A	24" x 24" x 12"	\$8,243	\$9,704
RSI-020-H2-4-CB-X-XX	20	30	15	22	40 A	30" x 30" x 12"	\$9,578	\$11,040
RSI-025-H2-4-CB-X-XX	25	38	20	28	50 A	30" x 30" x 12"	\$10,343	\$11,805
RSI-030-H2-4-CB-X-XX	30	45	25	35	60 A	30" x 30" x 12"	\$11,103	\$12,561
RSI-040-H2-4-CB-X-XX	40	61	30	41	80 A	30" x 30" x 12"	\$12,116	\$13,576
RSI-050-H2-4-CB-X-XX	50	75	40	55	100 A	36" x 30" x 16"	\$14,411	\$15,872
RSI-060-H2-4-CB-X-XX	60	91	50	67	125 A	36" x 30" x 16"	\$16,249	\$17,708
RSI-075-H2-4-CB-X-XX	75	107	60	81	150 A	36" x 30" x 16"	\$16,910	\$18,371
RSI-100-H2-4-CB-X-XX	100	142	75	106	200 A	36" x 30" x 16"	\$20,982	\$22,442
RSI-125-H2-4-CB-X-XX	125	169	100	136	225 A	36" x 30" x 16"	\$23,710	\$25,189
RSI-150-H2-4-CB-X-XX*	150	223**	125	169	250 A	48" x 36" x 20"	\$28,033	\$29,511
RSI-200-H2-4-CB-X-XX*	200	264**	150	195	300 A	48" x 36" x 20"	\$30,305	\$31,785
RSI-250-H2-4-CB-X-XX*	250	325**	200	255	400 A	48" x 36" x 20"	\$34,763	\$36,240
RSI-300-H2-4-CB-X-XX*	300	370**	250	303	500 A	72" x 48" x 24"	\$41,539	\$43,019
RSI-400-H2-4-CB-X-XX*	400	481**	300	375	600 A	72" x 48" x 24"	\$60,994	\$62,545
RSI-500-H2-4-CB-X-XX*	500	613**	400	478	800 A	72" x 48" x 24"	\$88,082	\$89,632
RSI-650-H2-4-CB-X-XX*	650	770**	500	591	1000 A	72" x 48" x 24"	\$97,740	\$99,291
RSI-800-H2-4-CB-X-XX*	800	962**	600	740	1200 A	72" x 48" x 24"	\$114,180	\$115,732

A-1A = VFD in fan and filtered enclosure.

A-3R = VFD in fan and filtered 3R enclosure.

*Units should be mounted out of direct sunlight.

For options refer to pages 110.

** 110% current for 1 minute.

Price Effective July 1, 2025

H2E SERIES - OPTIONS

Engineered Low Voltage Drive Packages

PUSH-BUTTONS

Model Number	Description	List Price
QB	Raised Stop Push-Button — Red	\$135
QC	Flush Start Push-Button — Green	\$135
QD	Jog Push-Button - Yellow	\$135
QE	OI Reset Push-Button — (For External OI Relay) — Black	\$135
QF	Reset Push-Button — Black	\$135
QG	Raised Push-Button — Specify Color and Function	\$135
QH	Flush Push-Button — Specify Color and Function	\$135
QJ	Mushroom Head Stop Push-Button — Red	\$168
QK	Illuminated Push-Button — Specify Color and Function	\$271
QL	On/Off Push-Button	\$135
QM	O/L trip Reset Button	\$135

PILOT LIGHTS

Model Number	Description	List Price
QN	Red Run Light	\$168
RJ	Green Stop Light	\$168
RK	Amber Fault Light	\$168
RL	Green Ready Light	\$168
RM	Amber Bypass Light	\$168
RN	Red Light — Specify Function	\$168
RP	Green Light — Specify Function	\$168
RQ	Amber Light — Specify Function	\$168
RR	White Light — Specify Function	\$168
RS	Blue Light — Specify Function	\$168
RT	Push to Test Contact Assembly (Addition to Above)	\$271
QP	Power On Light — White	\$271

POTENTIOMETERS

Model Number	Description	List Price
S7	1 Turn Potentiometer - NEMA 1	\$303
S8	10 Turn Potentiometer - NEMA 1	\$338

For additional options, contact factory.

CF - Contact Factory

SELECTOR SWITCHES

Model Number	Description	List Price
QV	Hand-Off-Auto Selector Switch	\$271
QW	Local-Off-Remote Selector Switch	\$271
TV	Key-Operated Hand-Off-Auto Selector Switch	\$338
TW	Dual Ramps Selector Switch	\$271
TX	Two-Position Selector Switch — Specify Function	\$271
TY	Three-Position Selector Switch — Specify Function	\$271
TZ	Other Selector Switch — Specify Function and Type	CF

METERS

Model Number	Description	List Price
KT	Analog Ammeter	\$405
KU	Analog Ammeter (3-phase with selector)	\$405
KV	Analog Voltmeter	\$405
KW	Analog Voltmeter (3-phase with selector)	\$405
KX	Elapsed Timer Meter (analog, non-resettable)	\$405
KY	Operations Counter	CF
KZ	AC Wattmeter	CF
L2	AC Watt Hour Meter	CF
L3	Other Power Metering - Specify Function	CF
L4	Analog Ammeter (utilizes VFDs analog output)	CF
L5	Analog Voltmeter (utilizes VFDs analog output)	CF

SPACE HEATERS

Model Number	Description	List Price
A171	Space Heater with Thermostat	\$607

H2 IEEE 519/519P CLEAN POWER DRIVES

Benshaw H2 519 and 519P (passive filter) Series Clean Power Drives are designed and manufactured to limit voltage and current distortion levels to within the levels defined by IEEE-Std 519™. This eliminates the need for expensive, time consuming harmonic analysis. Our municipal projects and engineering team will work with you to configure a clean power solution that meets your specifications and requirements.

KEY FEATURES

- H2 Series drive
- NEMA 1 ventilated enclosure
- 65 kAIC circuit breaker with lockable disconnect
- 519 (18 Pulse) includes phase-shifting transformer, a line reactor and a 12-pulse rectifier chassis unit
- 519P includes a passive harmonic filter design
- Control transformer with extra 120V capacity
- Door-mounted control
 - Keypad/LCD display
 - Start/stop buttons
 - Reset button
 - Hand-Off-Auto switch
 - Speed potentiometer
 - Run light
 - Fault light
 - Power On light
 - VFD-Off-Bypass switch (with bypass option)

OPTIONS

- Line Surge Protection
- Input (line) Fusing
- Bypass (Three Contactor or Soft Starter)
- Output Reactor or Long Lead Filter (dV/dT)
- Enclosures: NEMA 12, 3R



H2 519P with Passive Filter



STANDARD DUTY: 100HP to 800HP @ 460 Vac

HEAVY DUTY: 75HP to 600HP @ 460 Vac

MODULAR DESIGN

The modular design of Benshaw H2 519/519P Series Clean Power Drives eliminates significant maintenance problems that were inherent in older drive designs. Drive reliability is enhanced by significantly reducing power module part counts. This design approach also allows each H2 Series drive unit to be custom-tailored to your specific requirements. An optional bypass design configuration (ATL or RVSS) is available for H2 519/519P drive packages when mission critical reliability is important and disruptive downtime cannot be tolerated.

H2 IEEE 519/519P CLEAN POWER DRIVES

18 Pulse, IEEE-519

The 519 Series drive packages combine Benschaw's H2 Series drive with an 18 Pulse Input. The input consists of a high impedance line reactor, a special designed auto-transformer with 9 phase shifted secondary taps and a 12 pulse rectifier unit. All components are housed in a Nema 1 enclosure (other ratings available) along with a 65Kaic rated Circuit Breaker and door mounted control.

460V, H2 SERIES, NEMA 1, NO BYPASS

Model Number	Standard Duty		Heavy Duty		Dimensions (in.)		
	HP	Amps	HP	Amps	H	W	D
RSI-519-050-H2-4-CB-A-01	50	65	40	52	90	36	30
RSI-519-060-H2-4-CB-A-01	60	77	50	65	90	36	30
RSI-519-075-H2-4-CB-A-01	75	96	60	77	90	36	30
RSI-519-100-H2-4-CB-A-01	100	124	75	96	90	36	30
RSI-519-125-H2-4-CB-A-01	125	156	100	124	90	36	30
RSI-519-150-H2-4-CB-A-01	150	180	125	156	90	48	30
RSI-519-200-H2-4-CB-A-01	200	240	150	180	90	48	30
RSI-519-250-H2-4-CB-A-01	250	302	200	240	90	54	30
RSI-519-300-H2-4-CB-A-01	300	361	250	302	90	72	36
RSI-519-400-H2-4-CB-A-01	400	477	300	361	90	72	36
RSI-519-500-H2-4-CB-A-01	500	590	400	477	90	78	36
RSI-519-650-H2-4-CB-A-01	650	770	500	590	90	120	36
RSI-519-800-H2-4-CB-A-01	800	962	600	740	90	120	36

H2 IEEE 519/519P CLEAN POWER DRIVES

18 Pulse, IEEE-519

460V, H2 SERIES, NEMA 1, WITH BYPASS (THREE CONTACTOR)

Model Number	Standard Duty		Heavy Duty		Dimensions (in.)		
	HP	Amps	HP	Amps	H	W	D
RSI-519-050-H2-4-CB-C-01	50	65	40	52	90	42	30
RSI-519-060-H2-4-CB-C-01	60	77	50	65	90	42	30
RSI-519-075-H2-4-CB-C-01	75	96	60	77	90	54	30
RSI-519-100-H2-4-CB-C-01	100	124	75	96	90	54	30
RSI-519-125-H2-4-CB-C-01	125	156	100	124	90	54	30
RSI-519-150-H2-4-CB-C-01	150	180	125	156	90	54	30
RSI-519-200-H2-4-CB-C-01	200	240	150	180	90	54	30
RSI-519-250-H2-4-CB-C-01	250	302	200	240	90	54	30
RSI-519-300-H2-4-CB-C-01	300	361	250	302	90	114	36
RSI-519-400-H2-4-CB-C-01	400	477	300	361	90	114	36
RSI-519-500-H2-4-CB-C-01	500	590	400	477	90	120	36
RSI-519-650-H2-4-CB-C-01	650	770	500	590	90	132	36
RSI-519-800-H2-4-CB-C-01	800	962	600	740	90	132	36

460V, H2 SERIES, NEMA 1, WITH BYPASS (RVSS)

Model Number	Standard Duty		Heavy Duty		Dimensions (in.)		
	HP	Amps	HP	Amps	H	W	D
RSI-519-050-H2-4-CB-SS-01	50	65	40	52	90	42	30
RSI-519-060-H2-4-CB-SS-01	60	77	50	65	90	42	30
RSI-519-075-H2-4-CB-SS-01	75	96	60	77	90	54	30
RSI-519-100-H2-4-CB-SS-01	100	124	75	96	90	54	30
RSI-519-125-H2-4-CB-SS-01	125	156	100	124	90	54	30
RSI-519-150-H2-4-CB-SS-01	150	180	125	156	90	54	30
RSI-519-200-H2-4-CB-SS-01	200	240	150	180	90	54	30
RSI-519-250-H2-4-CB-SS-01	250	302	200	240	90	54	30
RSI-519-300-H2-4-CB-SS-01	300	361	250	302	90	114	36
RSI-519-400-H2-4-CB-SS-01	400	477	300	361	90	114	36
RSI-519-500-H2-4-CB-SS-01	500	590	400	477	90	120	36
RSI-519-650-H2-4-CB-SS-01	650	770	500	590	90	132	36
RSI-519-800-H2-4-CB-SS-01	800	962	600	740	90	132	36

H2 IEEE 519/519P CLEAN POWER DRIVES

Passive Filter, IEEE-519P

The 519P Series drive packages combine Benshaw's H2 Series drive with a Passive Harmonic Filter. The input consists of (a) the main high impedance reactor, (b) the tuning reactor and (c) the capacitor bank. All components are housed in a Nema 1 enclosure (other ratings available) along with a 65Kaic rated Circuit Breaker and door mounted control.

460V, H2 SERIES, NEMA 1, NO BYPASS

Model Number	Standard Duty		Heavy Duty		Dimensions (in.)		
	HP	Amps	HP	Amps	H	W	D
RSI-519P-050-H2-4-CB-A-01	50	65	40	52	90	36	30
RSI-519P-060-H2-4-CB-A-01	60	77	50	65	90	36	30
RSI-519P-075-H2-4-CB-A-01	75	96	60	77	90	36	30
RSI-519P-100-H2-4-CB-A-01	100	124	75	96	90	36	30
RSI-519P-125-H2-4-CB-A-01	125	156	100	124	90	36	30
RSI-519P-150-H2-4-CB-A-01	150	180	125	156	90	48	30
RSI-519P-200-H2-4-CB-A-01	200	240	150	180	90	48	30
RSI-519P-250-H2-4-CB-A-01	250	302	200	240	90	54	30
RSI-519P-300-H2-4-CB-A-01	300	361	250	302	90	72	36
RSI-519P-400-H2-4-CB-A-01	400	477	300	361	90	72	36
RSI-519P-500-H2-4-CB-A-01	500	590	400	477	90	78	36
RSI-519P-650-H2-4-CB-A-01	650	770	500	590	90	120	36
RSI-519P-800-H2-4-CB-A-01	800	962	600	740	90	120	36

H2 IEEE 519/519P CLEAN POWER DRIVES

Passive Filter, IEEE-519P

460V, H2 SERIES, NEMA 1, WITH BYPASS (THREE CONTACTOR)

Model Number	Standard Duty		Heavy Duty		Dimensions (in.)		
	HP	Amps	HP	Amps	H	W	D
RSI-519P-050-H2-4-CB-C-01	50	65	40	52	90	42	30
RSI-519P-060-H2-4-CB-C-01	60	77	50	65	90	42	30
RSI-519P-075-H2-4-CB-C-01	75	96	60	77	90	54	30
RSI-519P-100-H2-4-CB-C-01	100	124	75	96	90	54	30
RSI-519P-125-H2-4-CB-C-01	125	156	100	124	90	54	30
RSI-519P-150-H2-4-CB-C-01	150	180	125	156	90	54	30
RSI-519P-200-H2-4-CB-C-01	200	240	150	180	90	54	30
RSI-519P-250-H2-4-CB-C-01	250	302	200	240	90	54	30
RSI-519P-300-H2-4-CB-C-01	300	361	250	302	90	114	36
RSI-519P-400-H2-4-CB-C-01	400	477	300	361	90	114	36
RSI-519P-500-H2-4-CB-C-01	500	590	400	477	90	120	36
RSI-519P-650-H2-4-CB-C-01	650	770	500	590	90	132	36
RSI-519P-800-H2-4-CB-C-01	800	962	600	740	90	132	36

460V, H2 SERIES, NEMA 1, WITH BYPASS (RVSS)

Model Number	Standard Duty		Heavy Duty		Dimensions (in.)		
	HP	Amps	HP	Amps	H	W	D
RSI-519P-050-H2-4-CB-SS-01	50	65	40	52	90	42	30
RSI-519P-060-H2-4-CB-SS-01	60	77	50	65	90	42	30
RSI-519P-075-H2-4-CB-SS-01	75	96	60	77	90	54	30
RSI-519P-100-H2-4-CB-SS-01	100	124	75	96	90	54	30
RSI-519P-125-H2-4-CB-SS-01	125	156	100	124	90	54	30
RSI-519P-150-H2-4-CB-SS-01	150	180	125	156	90	54	30
RSI-519P-200-H2-4-CB-SS-01	200	240	150	180	90	54	30
RSI-519P-250-H2-4-CB-SS-01	250	302	200	240	90	54	30
RSI-519P-300-H2-4-CB-SS-01	300	361	250	302	90	114	36
RSI-519P-400-H2-4-CB-SS-01	400	477	300	361	90	114	36
RSI-519P-500-H2-4-CB-SS-01	500	590	400	477	90	120	36
RSI-519P-650-H2-4-CB-SS-01	650	770	500	590	90	132	36
RSI-519P-800-H2-4-CB-SS-01	800	962	600	740	90	132	36

SECTION 3

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Introduction

Benshaw Molded Case Circuit Breaker UL 489 Listed.

The Benshaw R2CB Series of Molded Case Circuit Breakers is designed to provide overload and short-circuit protection for industrial electrical equipment. Available in seven different compact frame sizes, the Benshaw MCCB is a safe, reliable solution for applications from 15 to 1200 Amps.

Standard Features:

- High short-circuit interrupting ratings - up to 100kA @ 480V
- Fixed Thermal trip settings
- Mechanical Lugs (Line and Load Side included)
- Mounting-Hardware (Screws included)
- Handle and cable ordered separately
- Suitable for reverse feed applications
- Compact frame
- 800-1200 Amp breakers have electronic trip (see page 130)



R2CB SERIES - OVERVIEW

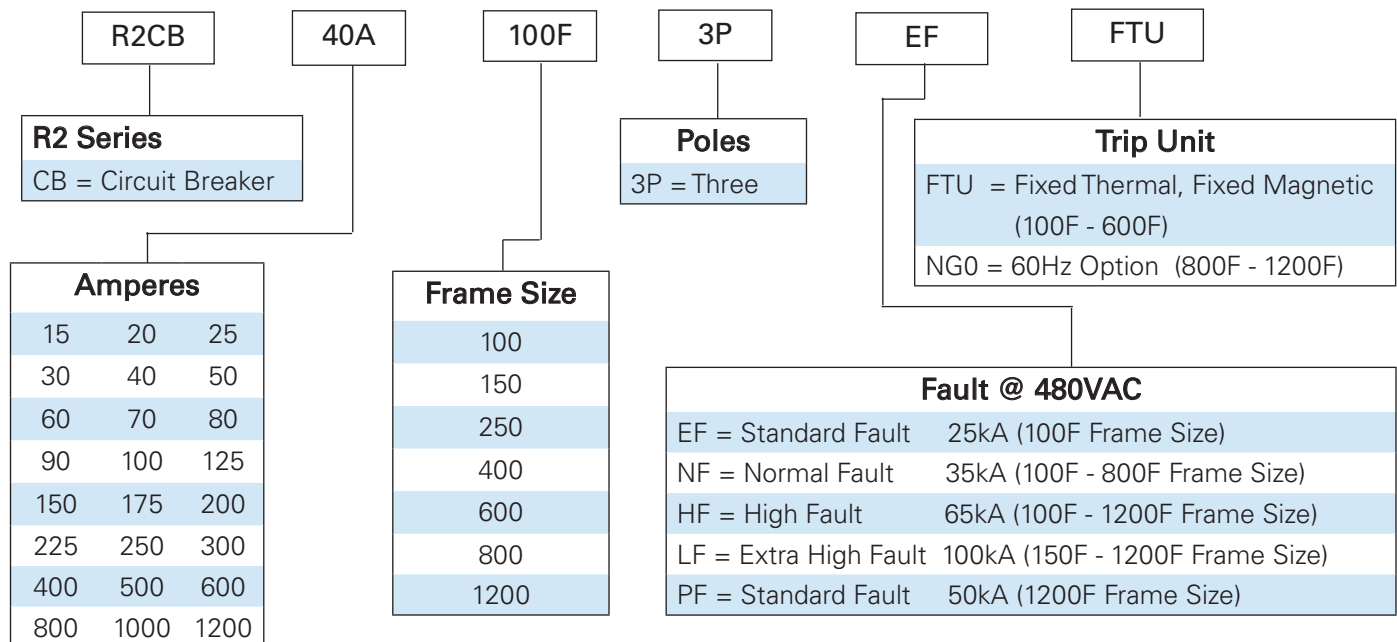


The following circuit breaker models have been tested to provide current limiting capabilities:

100F	E, N
150F	N, H, L
250F	N, H, L
400F	N, H, L

600F	N, H, L
800F	H, L
1200F	H, L

R2CB PART NUMBER ASSEMBLER



R2CB SERIES - RATINGS

Molded-Case Circuit Breaker 100F, 150F, 250F



FRAME

100F

150F

250F

Maximum Rated Current		100A	100A	30A		150A		250A				
Number of Poles		3	3	3		3		3				
Breaker Type		EF	NF	HF		NF	HF	LF				
UL489/CSA C22.2		100F				150F				250F		
Interrupting Capacity (kA rms) AC(50/60HZ) UL, CSA	120/240V	50	65	100		-	-	-		-	-	-
	240Vac	50	65	100		65	100	150		65	100	150
	480Vac	25	35	65		35	65	100		35	65	100
	600Vac		-			18	35	50		18	35	50
	600Y/347Vac	14	18	35		-	-	-		-	-	-
UL489 DC		100F				150F				250F		
Interrupting Capacity	250V dc-2P	16	25	-		35	50	65		35	50	65
(kA) DC	500V dc-3P	25	35	-		-	-	-		-	-	-
UL, CSA	600V dc-3P		-			35	50	65		35	50	65
IEC 60947-2		100F				150F				250F		
Ultimate Breaking Capacity,	220/240V	50	65	65		65	100	150		65	100	150
(kA rms) AC	380/415V	25	35	35		35	65	100		35	65	100
50/60Hz, Icu	480/500V		-			18	35	50		18	35	50
Service Breaking Capacity, Ics (%Icu)		100%				100%				100%		
Insulation Voltage, UI		750 Vac				750 Vac				750 Vac		
Impulse Withstand Voltage, UImp		8 kVac				8 kVac				8 kVac		
Rated Short-Time Withstand Current (Icw)		-				-				-		
Utilization Category		A				A				A		

R2CB SERIES - ACCESSORIES

Accessories Overview for Circuit Breaker 100F, 150F, 250F



FRAME

	100F			150F			250F		
Unit Mounted (allows for direct connection to busbar)	std			std			std		
Mechanical Line and Load Lugs	std			std			std		
Busbar Connectors	opt			opt			opt		
Terminal Shields	std			std			std		
Shunt Trip	opt			opt			opt		
Auxiliary Switch	opt			opt			opt		
Flange Cable Handle and Mechanism	opt			opt			opt		
NEMA-Door-Mounted Rotary Operating Handle and Mechanism	opt			opt			opt		
Mechanical Interlocking Device	opt			opt			opt		
Weight Lbs. (kg)	2.33(1.06)			3.95(1.79)			4.49(2.04)		
Dimensions Inches (mm) W x H x D	W	H	D	W	H	D	W	H	D
	2.99 (76)	5.12 (130)	3.44 (87.5)	4.13 (105)	6.50 (165)	3.44 (87.5)	4.13 (105)	7.48 (190)	3.44 (87.5)

R2CB SERIES - RATINGS

Molded-Case Circuit Breaker 400F, 600F



FRAME

		400F			600F		
Maximum Rated Current		400A			600A		
Number of Poles		3			3		
Breaker Type		NF	HF	LF	NF	HF	LF
UL489/CSA C22.2		400F			600F		
Interrupting Capacity (kA rms) AC(50/60HZ) UL, CSA	120/240V	-	-	-	-	-	-
	240V ac	65	100	150	65	100	150
	480V ac	35	65	100	35	65	100
	600V ac	18	35	50	18	35	50
	600Y/347Vac	-	-	-	-	-	-
UL489 DC		400F			600F		
Interrupting Capacity (kA) DC	250V dc-2P	35	50	65	35	50	65
UL, CSA	600V dc-3P	-	-	-	-	-	-
	600V dc-3P	35	50	65	35	50	65
IEC 60947-2		400F			600F		
Ultimate Breaking Capacity, (kA rms) AC	220/240V	65	100	150	65	100	150
50/60Hz, Icu	380/415V	35	65	100	35	65	100
	480/500V	18	35	50	18	35	50
Service Breaking Capacity, Ics (%Icu)		100%			100%		
Insulation Voltage, Ui		750 Vac			750 Vac		
Impulse Withstand Voltage, UImp		8kVac			8 kVac		
Rated Short-Time Withstand Current (Icw)		-			-		
Utilization Category		A			A		

R2CB SERIES - ACCESSORIES

Accessories Overview for Circuit Breaker 400F, 600F



FRAME

Unit Mounted (allows for direct connection to busbar)
Mechanical Line and Load Lugs
Busbar Connectors
Terminal Shields
Shunt Trip
Auxiliary Switch
Flange Cable Handle and Mechanism
NEMA-Door-Mounted Rotary Operating Handle and Mechanism
Mechanical Interlocking Device
Weight Lbs. (kg)
Dimensions Inches (mm) W x H x D

400F

std
std
opt
std
opt
opt
opt
opt
13.89(6.30)
W H D
5.51(140) 11.42(290) 4.33(110)

600F

std
std
opt
std
opt
opt
opt
opt
15.79(7.16)
W H D
5.51(140) 13.39(340) 4.33(110)

R2CB SERIES - RATINGS

Molded-Case Circuit Breaker 800F, 1200F



800F



1200F

FRAME

	800F			1200F			
Maximum Rated Current	800A			1200A			
Number of Poles	3			3			
Breaker Type	NF	HF	LF	PF	HF	LF	
UL489/CSA C22.2	800F			1200F			
Interrupting Capacity (kA rms) AC(50/60HZ) UL, CSA	120/240V 240V ac	-	-	-	-	-	
	480V ac	65	100	150	65	100	
	600V ac	35	65	100	50	65	
	600Y/347Vac	18	35	50	50	25	
		-	-	-	-	-	
UL489 DC	800F			1200F			
Interrupting Capacity (kA) DC	250V dc-2P	-		-		-	
	500V dc-3P	-		-		-	
	600V dc-3P	-		-		-	
IEC 60947-2	800F			1200F			
Ultimate Breaking Capacity, (kA rms) AC	220/240V	65	100	150	65	100	
	380/415V	35	65	100	50	65	
	480/500V	18	35	50	50	35	
Service Breaking Capacity, Ics (%Icu)		100%			100%		
Insulation Voltage, Ui		1000 Vac			1000 Vac		
Impulse Withstand Voltage, UImp		8 kVac			8 kVac		
Rated Short-Time Withstand Current (Icw)		18kA	-	-	25kA	-	-
Utilization Category		B	A	A	B	A	A

R2CB SERIES - ACCESSORIES

Accessories Overview for Circuit Breaker 800F, 1200F



FRAME

800F

1200F

Unit Mounted (allows for direct connection to busbar)	std	std	
Mechanical Line and Load Lugs	std	std	
Busbar Connectors	opt	opt	
Terminal Shields	std	std	
Shunt Trip	opt	opt	
Auxiliary Switch	opt	opt	
Flange Cable Handle and Mechanism	opt	opt	
NEMA-Door-Mounted Rotary Operating Handle and Mechanism	opt	opt	
Mechanical Interlocking Device	opt	opt	
Weight Lbs. (kg)	31.35(14.22)	48.28 (18.27)	
Dimensions Inches (mm) W x H x D	W	H	D
	8.27(210)	12.88(327.2)	6(152.5)
	W	H	D
	8.27(210)	16.26(413)	6(152.5)

R2CB SERIES - PRICING

Circuit Breakers - Fixed Thermal, Fixed Magnetic



100F Frame Standard Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-15A-100F-3P-EF-FTU	15	400A	50	25	N/A	\$378
R2CB-20A-100F-3P-EF-FTU	20	400A	50	25	N/A	\$378
R2CB-25A-100F-3P-EF-FTU	25	400A	50	25	N/A	\$378
R2CB-30A-100F-3P-EF-FTU	30	400A	50	25	N/A	\$378
R2CB-40A-100F-3P-EF-FTU	40	400A	50	25	N/A	\$378
R2CB-50A-100F-3P-EF-FTU	50	800A	50	25	N/A	\$378
R2CB-60A-100F-3P-EF-FTU	60	800A	50	25	N/A	\$378
R2CB-70A-100F-3P-EF-FTU	70	800A	50	25	N/A	\$378
R2CB-80A-100F-3P-EF-FTU	80	800A	50	25	N/A	\$378
R2CB-90A-100F-3P-EF-FTU	90	1000A	50	25	N/A	\$378
R2CB-100A-100F-3P-EF-FTU	100	1000A	50	25	N/A	\$378

Note: Line and load lugs and mounting hardware (screws) included as standard.

100F Frame Normal Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-15A-100F-3P-NF-FTU	15	400A	65	35	N/A	\$378
R2CB-20A-100F-3P-NF-FTU	20	400A	65	35	N/A	\$378
R2CB-25A-100F-3P-NF-FTU	25	400A	65	35	N/A	\$378
R2CB-30A-100F-3P-NF-FTU	30	400A	65	35	N/A	\$378
R2CB-40A-100F-3P-NF-FTU	40	400A	65	35	N/A	\$378
R2CB-50A-100F-3P-NF-FTU	50	800A	65	35	N/A	\$378
R2CB-60A-100F-3P-NF-FTU	60	800A	65	35	N/A	\$378
R2CB-70A-100F-3P-NF-FTU	70	800A	65	35	N/A	\$378
R2CB-80A-100F-3P-NF-FTU	80	800A	65	35	N/A	\$378
R2CB-90A-100F-3P-NF-FTU	90	1000A	65	35	N/A	\$378
R2CB-100A-100F-3P-NF-FTU	100	1000A	65	35	N/A	\$378

Note: Line and load lugs and mounting hardware (screws) included as standard.

100F Frame High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-15A-100F-3P-HF-FTU	15	400A	100	65	N/A	\$536
R2CB-20A-100F-3P-HF-FTU	20	400A	100	65	N/A	\$536
R2CB-25A-100F-3P-HF-FTU	25	400A	100	65	N/A	\$536
R2CB-30A-100F-3P-HF-FTU	30	400A	100	65	N/A	\$536

Note: Line and load lugs and mounting hardware (screws) included as standard.

Price Effective July 1, 2025

R2CB SERIES - PRICING



Circuit Breakers - Fixed Thermal, Fixed Magnetic

150F Frame Normal Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-40A-150F-3P-NF-FTU	40	500A	65	35	18	\$617
R2CB-50A-150F-3P-NF-FTU	50	500A	65	35	18	\$617
R2CB-60A-150F-3P-NF-FTU	60	800A	65	35	18	\$617
R2CB-70A-150F-3P-NF-FTU	70	800A	65	35	18	\$617
R2CB-80A-150F-3P-NF-FTU	80	800A	65	35	18	\$617
R2CB-90A-150F-3P-NF-FTU	90	1000A	65	35	18	\$617
R2CB-100A-150F-3P-NF-FTU	100	1000A	65	35	18	\$617
R2CB-125A-150F-3P-NF-FTU	125	1250A	65	35	18	\$617
R2CB-150A-150F-3P-NF-FTU	150	1500A	65	35	18	\$617

Note: Line and load lugs and mounting hardware (screws) included as standard.

150F Frame High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-40A-150F-3P-HF-FTU	40	500A	100	65	35	\$684
R2CB-50A-150F-3P-HF-FTU	50	500A	100	65	35	\$684
R2CB-60A-150F-3P-HF-FTU	60	800A	100	65	35	\$684
R2CB-70A-150F-3P-HF-FTU	70	800A	100	65	35	\$684
R2CB-80A-150F-3P-HF-FTU	80	800A	100	65	35	\$684
R2CB-90A-150F-3P-HF-FTU	90	1000A	100	65	35	\$684
R2CB-100A-150F-3P-HF-FTU	100	1000A	100	65	35	\$684
R2CB-125A-150F-3P-HF-FTU	125	1250A	100	65	35	\$684
R2CB-150A-150F-3P-HF-FTU	150	1500A	100	65	35	\$684

Note: Line and load lugs and mounting hardware (screws) included as standard.

150F Extra High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-40A-150F-3P-LF-FTU	40	500A	150	100	50	\$802
R2CB-50A-150F-3P-LF-FTU	50	500A	150	100	50	\$802
R2CB-60A-150F-3P-LF-FTU	60	800A	150	100	50	\$802
R2CB-70A-150F-3P-LF-FTU	70	800A	150	100	50	\$802
R2CB-80A-150F-3P-LF-FTU	80	800A	150	100	50	\$802
R2CB-90A-150F-3P-LF-FTU	90	1000A	150	100	50	\$802
R2CB-100A-150F-3P-LF-FTU	100	1000A	150	100	50	\$802
R2CB-125A-150F-3P-LF-FTU	125	1250A	150	100	50	\$802
R2CB-150A-150F-3P-LF-FTU	150	1500A	150	100	50	\$802

Note: Line and load lugs and mounting hardware (screws) included as standard.

Price Effective July 1, 2025

R2CB SERIES - PRICING

Circuit Breakers - Fixed Thermal, Fixed Magnetic



250F Frame Normal Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-150A-250F-3P-NF-FTU	150	1500A	65	35	18	\$869
R2CB-175A-250F-3P-NF-FTU	175	1750A	65	35	18	\$869
R2CB-200A-250F-3P-NF-FTU	200	2000A	65	35	18	\$869
R2CB-225A-250F-3P-NF-FTU	225	2250A	65	35	18	\$869
R2CB-250A-250F-3P-NF-FTU	250	2500A	65	35	18	\$869

Note: Line and load lugs and mounting hardware (screws) included as standard.

250F Frame High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-150A-250F-3P-HF-FTU	150	1500A	100	65	35	\$975
R2CB-175A-250F-3P-HF-FTU	175	1750A	100	65	35	\$975
R2CB-200A-250F-3P-HF-FTU	200	2000A	100	65	35	\$975
R2CB-225A-250F-3P-HF-FTU	225	2250A	100	65	35	\$975
R2CB-250A-250F-3P-HF-FTU	250	2500A	100	65	35	\$975

Note: Line and load lugs and mounting hardware (screws) included as standard.

250F Frame Extra High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-150A-250F-3P-LF-FTU	150	1500A	150	100	50	\$1,203
R2CB-175A-250F-3P-LF-FTU	175	1750A	150	100	50	\$1,203
R2CB-200A-250F-3P-LF-FTU	200	2000A	150	100	50	\$1,203
R2CB-225A-250F-3P-LF-FTU	225	2250A	150	100	50	\$1,203
R2CB-250A-250F-3P-LF-FTU	250	2500A	150	100	50	\$1,203

Note: Line and load lugs and mounting hardware (screws) included as standard.

R2CB SERIES - PRICING

Circuit Breakers - Fixed Thermal, Fixed Magnetic



400F Frame Normal Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-250A-400F-3P-NF-FTU	250	2500A	65	35	18	\$1,682
R2CB-300A-400F-3P-NF-FTU	300	3000A	65	35	18	\$1,682
R2CB-400A-400F-3P-NF-FTU	400	4000A	65	35	18	\$1,682

Note: Line and load lugs and mounting hardware (screws) included as standard.

400F Frame High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-250A-400F-3P-HF-FTU	250	2500A	100	65	35	\$1,883
R2CB-300A-400F-3P-HF-FTU	300	3000A	100	65	35	\$1,883
R2CB-400A-400F-3P-HF-FTU	400	4000A	100	65	35	\$1,883

Note: Line and load lugs and mounting hardware (screws) included as standard.

400F Frame Extra High Fault Rating

Model Number	Thermal Setting	Magnetic Setting	Short Circuit Interrupting Capacity (kA)			List Price
	Amps	Amps	240VAC	480VAC	600VAC	
R2CB-250A-400F-3P-LF-FTU	250	2500A	150	100	50	\$2,314
R2CB-300A-400F-3P-LF-FTU	300	3000A	150	100	50	\$2,314
R2CB-400A-400F-3P-LF-FTU	400	4000A	150	100	50	\$2,314

Note: Line and load lugs and mounting hardware (screws) included as standard.

R2CB SERIES - PRICING

Circuit Breakers - Fixed Thermal, Fixed Magnetic



600F Frame Normal Fault Rating

Model Number	Thermal Setting Amps	Magnetic Setting Amps	Short Circuit Interrupting Capacity (kA)			List Price
			240VAC	480VAC	600VAC	
R2CB-500A-600F-3P-NF-FTU	500	5000A	65	35	18	\$2,530
R2CB-600A-600F-3P-NF-FTU	600	6000A	65	35	18	\$2,530

Note: Line and load lugs and mounting hardware (screws) included as standard.

600F Frame High Fault Rating

Model Number	Thermal Setting Amps	Magnetic Setting Amps	Short Circuit Interrupting Capacity (kA)			List Price
			240VAC	480VAC	600VAC	
R2CB-500A-600F-3P-HF-FTU	500	5000A	100	65	35	\$2,923
R2CB-600A-600F-3P-HF-FTU	600	6000A	100	65	35	\$2,923

Note: Line and load lugs and mounting hardware (screws) included as standard.

600F Frame Extra High Fault Rating

Model Number	Thermal Setting Amps	Magnetic Setting Amps	Short Circuit Interrupting Capacity (kA)			List Price
			240VAC	480VAC	600VAC	
R2CB-500A-600F-3P-LF-FTU	500	5000A	150	100	50	\$3,851
R2CB-600A-600F-3P-LF-FTU	600	6000A	150	100	50	\$3,851

Note: Line and load lugs and mounting hardware (screws) included as standard.

R2CB SERIES - PRICING



Circuit Breakers - Normal Type Trip Unit

800F Frame Normal Fault Rating

Model Number	Thermal Setting	Instantaneous Trip	Short Circuit Interrupting Capacity (kA)			List Price
	Amps		Amps	240VAC	480VAC	
R2CB-600A-800F-3P-NF-NG0	600	Adjustable - (2 - 15) x Rated Current	65	35	18	\$3,232
R2CB-800A-800F-3P-NF-NG0	800	Adjustable - (2 - 15) x Rated Current	65	35	18	\$3,232

Note: Line and load lugs and mounting hardware included as standard.
 NG0 is for a 60Hz supply only.
 Consult factory for 50Hz applications.

800F Frame High Fault Rating

Model Number	Thermal Setting	Instantaneous Trip	Short Circuit Interrupting Capacity (kA)			List Price
	Amps		Amps	240VAC	480VAC	
R2CB-600A-800F-3P-HF-NG0	600	Adjustable - (2 - 15) x Rated Current	100	65	35	\$3,879
R2CB-800A-800F-3P-HF-NG0	800	Adjustable - (2 - 15) x Rated Current	100	65	35	\$3,879

Note: Line and load lugs and mounting hardware included as standard.
 NG0 is for a 60Hz supply only.
 Consult factory for 50Hz applications.

800F Frame Extra High Fault Rating

Model Number	Thermal Setting	Instantaneous Trip	Short Circuit Interrupting Capacity (kA)			List Price
	Amps		Amps	240VAC	480VAC	
R2CB-600A-800F-3P-LF-NG0	600	Adjustable - (2 - 15) x Rated Current	150	100	50	\$4,265
R2CB-800A-800F-3P-LF-NG0	800	Adjustable - (2 - 15) x Rated Current	150	100	50	\$4,265

Note: Line and load lugs and mounting hardware included as standard.
 NG0 is for a 60Hz supply only.
 Consult factory for 50Hz applications.

R2CB SERIES - PRICING

Circuit Breakers - Normal Type Trip Unit



1200F Frame Standard Fault Rating

Model Number	Thermal Setting	Instantaneous Trip	Short Circuit Interrupting Capacity (kA)			List Price
	Amps		Amps	240VAC	480VAC	
R2CB-1000A-1200F-3P-PF-NG0	1000	Adjustable - (2 - 15) x Rated Current	65	35	18	\$4,265
R2CB-1200A-1200F-3P-PF-NG0	1200	Adjustable - (2 - 15) x Rated Current	65	35	18	\$4,265

Note: Line and load lugs and mounting hardware included as standard.
 NG0 is for a 60Hz supply only.
 Consult factory for 50Hz applications.

1200F Frame High Fault Rating

Model Number	Thermal Setting	Instantaneous Trip	Short Circuit Interrupting Capacity (kA)			List Price
	Amps		Amps	240VAC	480VAC	
R2CB-1000A-1200F-3P-HF-NG0	1000	Adjustable - (2 - 15) x Rated Current	100	65	25	\$4,368
R2CB-1200A-1200F-3P-HF-NG0	1200	Adjustable - (2 - 15) x Rated Current	100	65	25	\$4,368

Note: Line and load lugs and mounting hardware included as standard.
 NG0 is for a 60Hz supply only.
 Consult factory for 50Hz applications.

1200F Frame Extra High Fault Rating

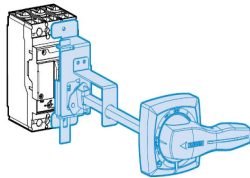
Model Number	Thermal Setting	Instantaneous Trip	Short Circuit Interrupting Capacity (kA)			List Price
	Amps		Amps	240VAC	480VAC	
R2CB-1000A-1200F-3P-LF-NG0	1000	Adjustable - (2 - 15) x Rated Current	150	100	35	\$5,576
R2CB-1200A-1200F-3P-LF-NG0	1200	Adjustable - (2 - 15) x Rated Current	150	100	35	\$5,576

Note: Line and load lugs and mounting hardware included as standard.
 NG0 is for a 60Hz supply only.
 Consult factory for 50Hz applications.

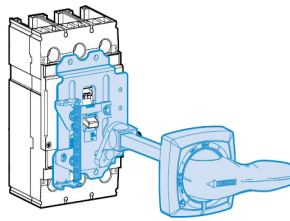
R2CB SERIES - PRICING

Circuit Breakers - Accessories

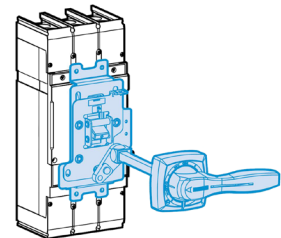
Rotary Operator and Shaft Extension



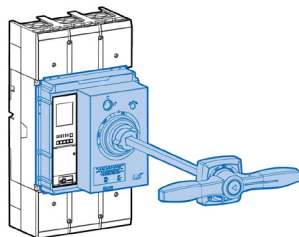
R2CB-EH [V0C12, X0C12]



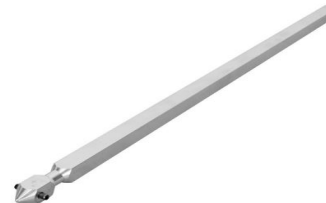
R2CB-EH [V212, X212]



R2CB-EH [V312, X312]



R2CB-EH [V512, X512]



R2CB-ESHAFTXX

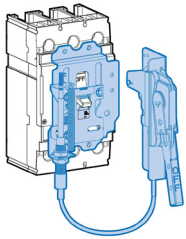
Model Number	Description	Frame	List Price
R2CB-EHU0C12	Front Mount Rotary Operator, NEMA Type: 1,12, 12inch Shaft	100F	\$151
R2CB-EHV0C12	Front Mount Rotary Operator, NEMA Type: 3, 3R, 4, 12inch Shaft	100F	\$151
R2CB-EHX0C12	Front Mount Rotary Operator, NEMA Type: 3, 4, 4X, 12inch Shaft	100F	\$168
R2CB-EHU212	Front Mount Rotary Operator, NEMA Type: 1, 12, 12inch Shaft	150F / 250F	\$191
R2CB-EHV212	Front Mount Rotary Operator, NEMA Type: 3, 3R, 4, 12inch Shaft	150F / 250F	\$191
R2CB-EHX212	Front Mount Rotary Operator, NEMA Type: 3, 4, 4X, 12inch Shaft	150F / 250F	\$212
R2CB-EHU312	Front Mount Rotary Operator, NEMA Type: 1, 12, 12inch Shaft	400F / 600F	\$220
R2CB-EHV312	Front Mount Rotary Operator, NEMA Type: 3, 3R, 4, 12inch Shaft	400F / 600F	\$220
R2CB-EHX312	Front Mount Rotary Operator, NEMA Type: 3, 4, 4X, 12inch Shaft	400F / 600F	\$245
R2CB-EHU512	Front Mount Rotary Operator, NEMA Type: 1, 12, 12inch Shaft	800F / 1200F	\$443
R2CB-EHV512	Front Mount Rotary Operator, NEMA Type: 3, 3R, 4, 12inch Shaft	800F / 1200F	\$443
R2CB-EHX512	Front Mount Rotary Operator, NEMA Type: 3, 4, 4X, 12inch Shaft	800F / 1200F	\$479
R2CB-ESHAFT16-100	Shaft for Extended Rotary Handle, 16inch Shaft	100F	\$30
R2CB-ESHAFT24-100	Shaft for Extended Rotary Handle, 24inch Shaft	100F	\$42
R2CB-ESHAFT16-600	Shaft for Extended Rotary Handle, 16inch Shaft	150F - 600F	\$42
R2CB-ESHAFT24-600	Shaft for Extended Rotary Handle, 24inch Shaft	150F - 600F	\$65
R2CB-ESHAFT16-1200	Shaft for Extended Rotary Handle, 16inch Shaft	800F / 1200F	\$72
R2CB-ESHAFT24-1200	Shaft for Extended Rotary Handle, 24inch Shaft	800F / 1200F	\$107

Price Effective July 1, 2025

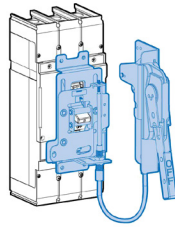
R2CB SERIES - PRICING

Circuit Breakers - Accessories

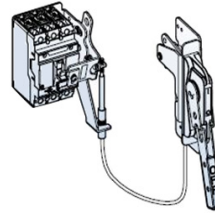
Flange Handle, Operating Mechanism and Cable



R2CB-FH [U2,X2]



R2CB-FH [U3,X3]



R2CB-FH [US,XS]



R2CB-FH [2,3,5]

Model Number	Description	Frame	List Price
R2CB-FHUS*	Flange Handle with Cable Operating Mechanism, NEMA Type: 1, 12, 3, 3R, 4	100F	\$548
R2CB-FHXS*	Flange Handle with Cable Operating Mechanism, NEMA Type: 4, 4X	100F	\$580
R2CB-FHU2*	Flange Handle with Sliding Operating Mechanism, NEMA Type: 1, 12, 3, 3R, 4	150F / 250F	\$409
R2CB-FHX2*	Flange Handle with Sliding Operating Mechanism, NEMA Type: 4, 4X	150F / 250F	\$443
R2CB-FHU3*	Flange Handle with Sliding Operating Mechanism, NEMA Type: 1, 12, 3, 3R, 4	400F / 600F	\$409
R2CB-FHX3*	Flange Handle with Sliding Operating Mechanism, NEMA Type: 4, 4X	400F / 600F	\$443
R2CB-FHUL*	Flange Handle with Sliding Operating Mechanism, NEMA Type: 1, 12, 3, 3R, 4	800F / 1200F	\$887
R2CB-FHXL*	Flange Handle with Sliding Operating Mechanism, NEMA Type: 4, 4X	800F / 1200F	\$941
R2CB-FH2-36	Max Flex Cable 36inch	100F - 250F	\$145
R2CB-FH2-48	Max Flex Cable 48inch	100F - 250F	\$160
R2CB-FH3-36	Max Flex Cable 36inch	400F / 600F	\$171
R2CB-FH3-48	Max Flex Cable 48inch	400F / 600F	\$187
R2CB-FH3-60	Max Flex Cable 60inch	400F / 600F	\$201
R2CB-FH5-60	Max Flex Cable 60inch	800F / 1200F	\$215
R2CB-FH5-84	Max Flex Cable 84inch	800F / 1200F	\$252
R2CB-FH5-120	Max Flex Cable 128inch	800F / 1200F	\$323

* Flange cable sold separately.

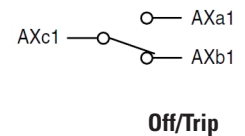
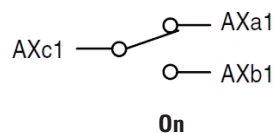
Auxiliary Switch



R2CB-AX-UTE100-R



R2CB-AX-UTSXX



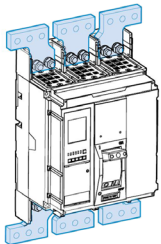
Model Number	Description	Frame	List Price
R2CB-AX-UTE100-R	Aux 1 Form C (1no/1nc) for Frame 100 CB Left Pole Installation	100F	\$30
R2CB-AX-UTS600	Aux 1 Form C (1no/1nc) for Frame 150 - 600 CB	150 - 600F	\$30
R2CB-AX-UTS1200	Aux 1 Form C (1no/1nc) for Frame 800/1200 CB Right Pole Installation	800 / 1200F	\$30

Price Effective July 1, 2025

R2CB SERIES - PRICING

Circuit Breakers - Accessories

Bus Bar Connector



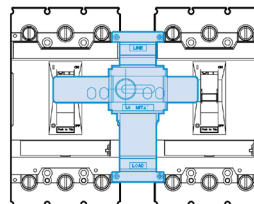
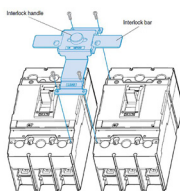
R2CB-SPXX

Model Number	Description	List Price
R2CB-SP03A	Bus Bar Connections Accessory for Frame 100, 3 Piece Set	\$21
R2CB-SP2A3A	Bus Bar Connections Accessory for Frame 150, 3 Piece Set	\$23
R2CB-SP2B3A	Bus Bar Connections Accessory for Frame 250, 3 Piece Set	\$35
R2CB-SP33A	Bus Bar Connections Accessory for Frame 400/600, 3 Piece Set	\$416
R2CB-SP53A	Bus Bar Connections Accessory for Frame 800/1200, 3 Piece Set	\$613

Mechanical Interlock



R2CB-MITXX



Model Number	Description	List Price
R2CB-MIT03	Mechanical Interlock Frame 100	\$99
R2CB-MIT23	Mechanical Interlock Frame 150/250	\$107
R2CB-MIT33	Mechanical Interlock Frame 400/600	\$116
R2CB-MIT53	Mechanical Interlock Frame 800/1200	\$122

Shunt Trip



R2CB-SHT-UTE100-120



R2CB-SHT-UTS600-120



R2CB-SHT-UTS1200-120

Model Number	Description	List Price
R2CB-SHT-UTE100-120	Shunt Trip for Frame 100 CB AC/DC 100-130vac Right Pole Installation	\$58
R2CB-SHT-UTS600-120	Shunt Trip for Frame 150 - 600 CB AC/DC 100-130vac Left Pole Installation	\$72
R2CB-SHT-UTS1200-120	Shunt Trip for Frame 800/1200 CB AC/DC 100-130vac Right Pole Installation	\$145

Price Effective July 1, 2025

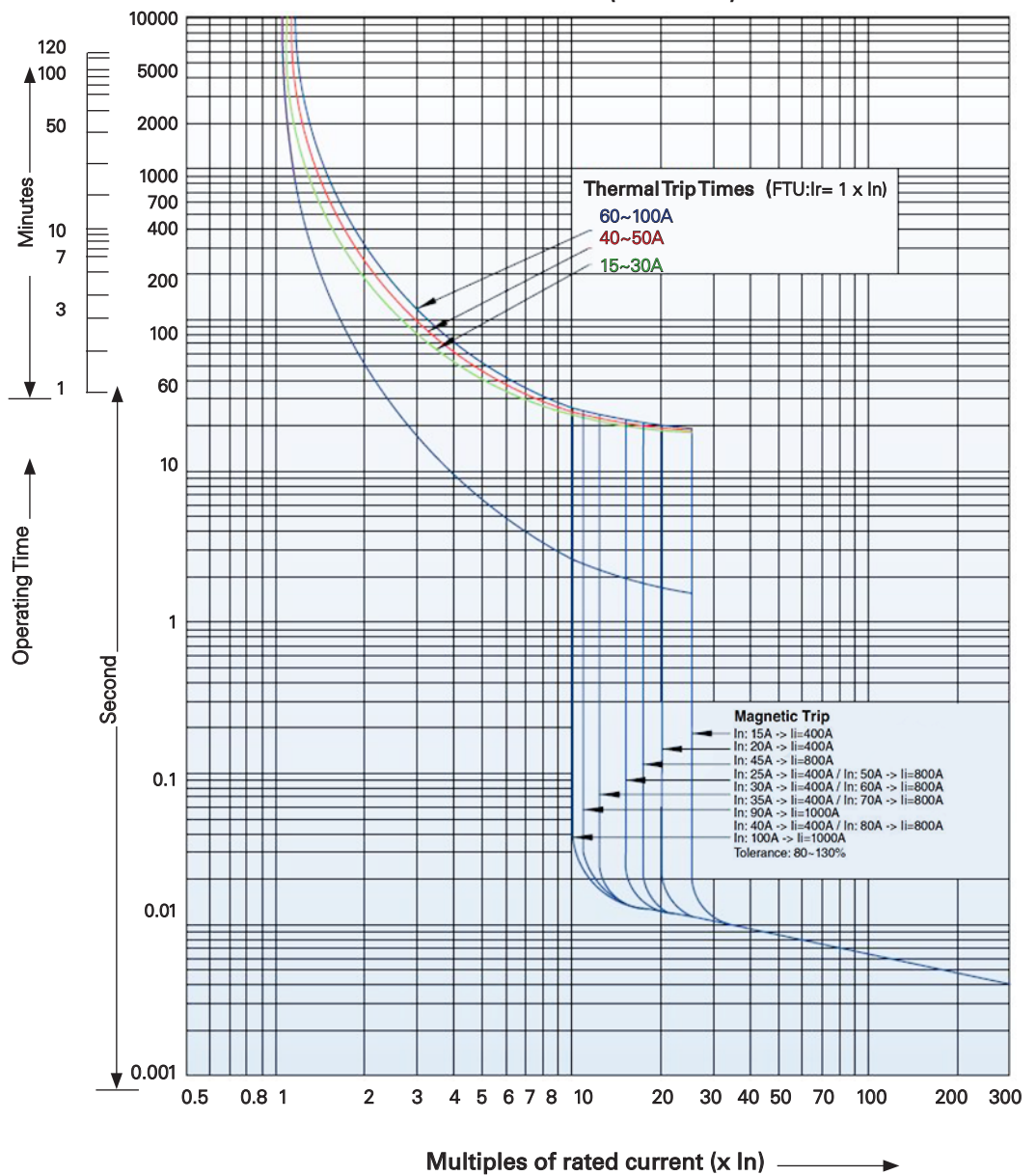
R2CB SERIES

Molded-Case Circuit Breakers

Frame 100 Trip Curves

This curve is to be used for application and coordination purposes only.
 All time/current characteristic curve data is based on 40°C ambient cold start.

100F FTU (15~100A)



Rating	FTU	
100F	3P	Mag Trip (80%~130%)
15	•	
20	•	
25	•	400A
30	•	
35	•	
40	•	
45	•	
50	•	
60	•	800A
70	•	
80	•	
90	•	
100	•	1000A

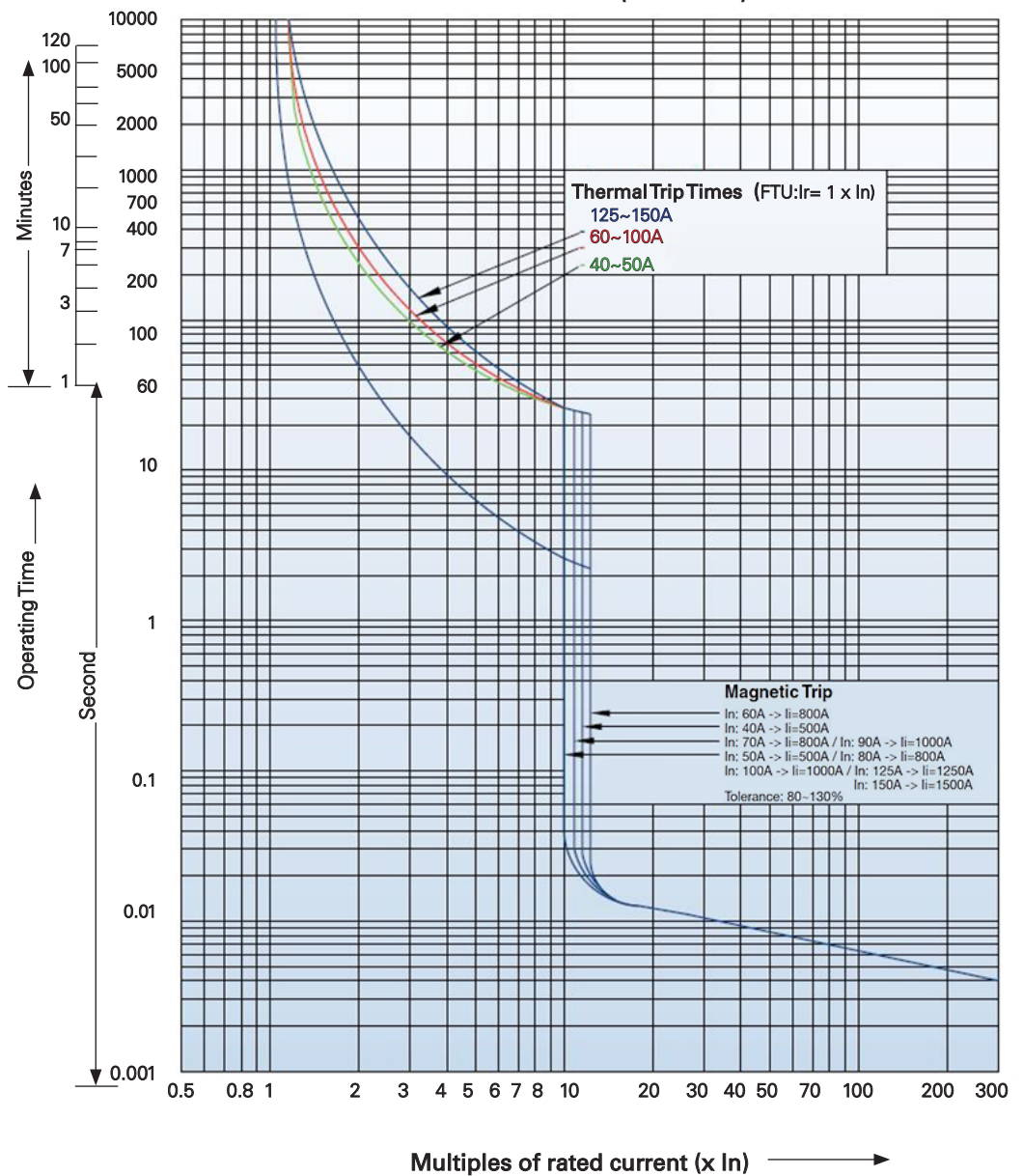
R2CB SERIES

Molded-Case Circuit Breakers

Frame 150 Trip Curves

This curve is to be used for application and coordination purposes only.
 All time/current characteristic curve data is based on 40°C ambient cold start.

150F FTU (40~150A)



Rating	FTU	
150F	3P	Mag Trip (80%~130%)
40	•	500A
50	•	
60	•	800A
70	•	
80	•	
90	•	1000A
100	•	
125	•	1250A
150	•	1500A

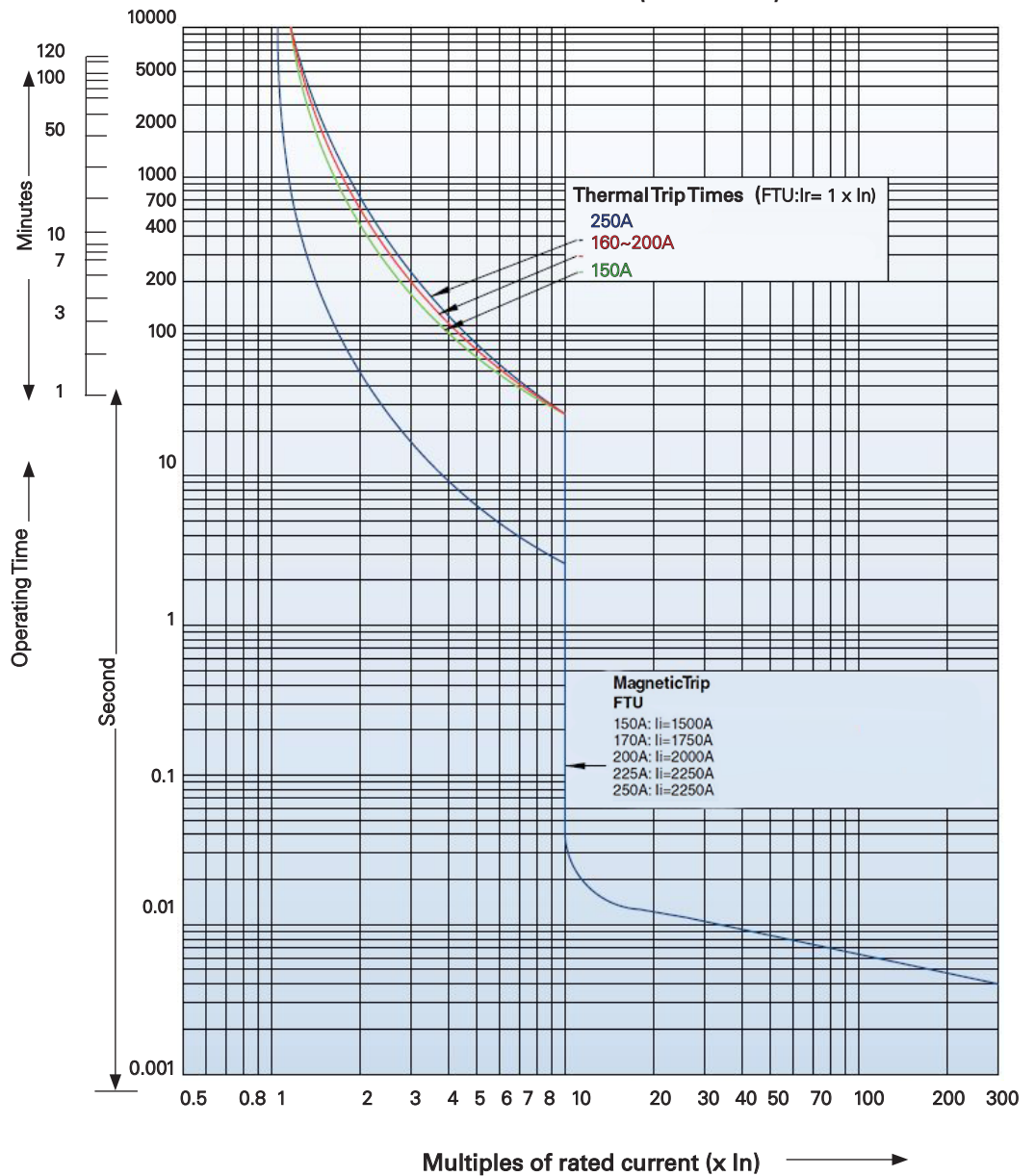
R2CB SERIES

Molded-Case Circuit Breakers

Frame 250 Trip Curves

This curve is to be used for application and coordination purposes only.
 All time/current characteristic curve data is based on 40°C ambient cold start.

250F FTU (150~250A)



Rating	FTU	
250F	3P	Mag Trip (80%~130%)
150	•	1500A
175	•	1750A
200	•	2000A
225	•	2250A
250	•	2500A

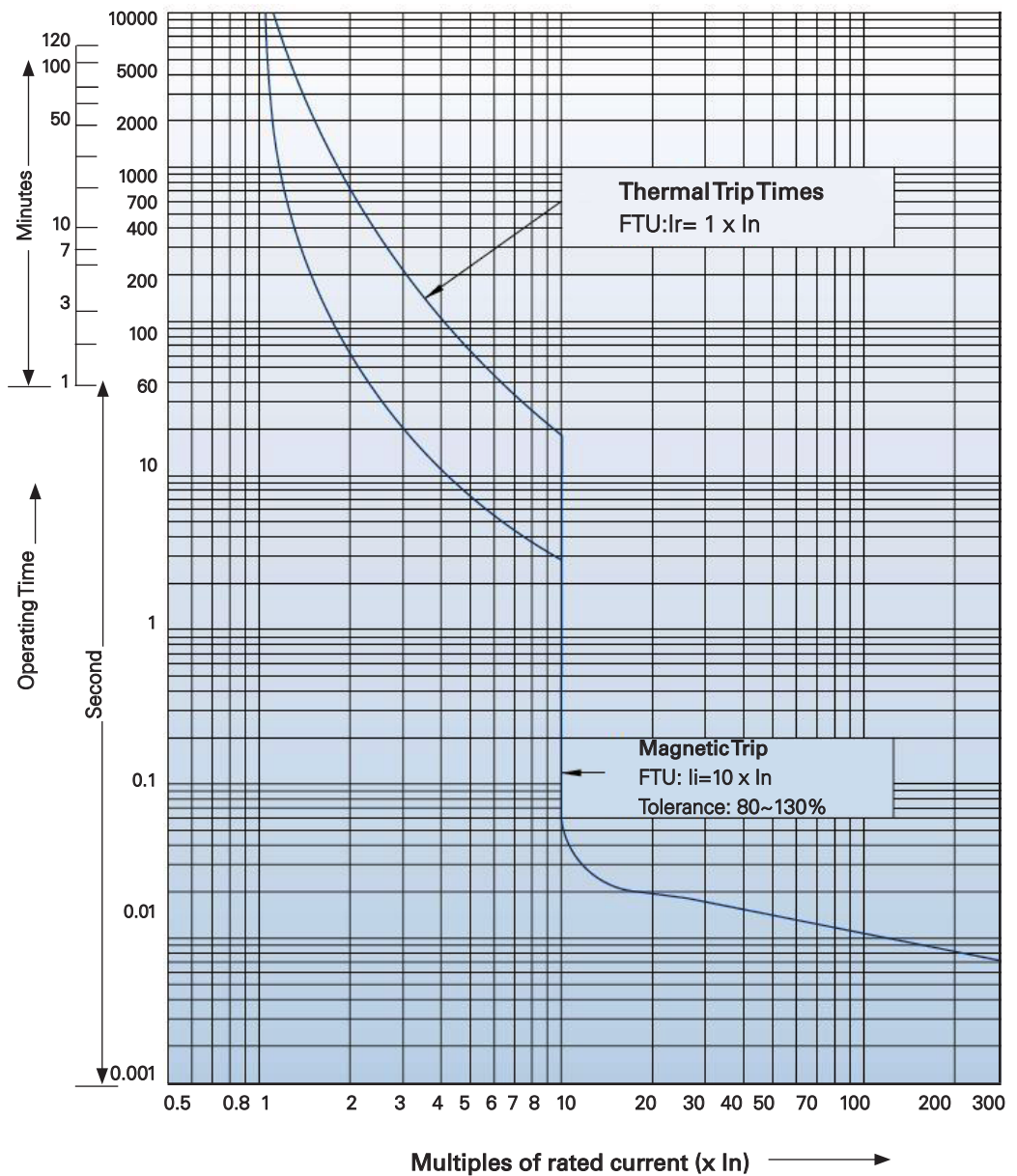
R2CB SERIES

Molded-Case Circuit Breakers

Frame 400 Trip Curves

This curve is to be used for application and coordination purposes only.
 All time/current characteristic curve data is based on 40°C ambient cold start.

400F FTU (250~400A)



Rating	FTU	
400F	3P	Mag Trip (80%~130%)
250	•	2500A
300	•	3000A
400	•	4000A

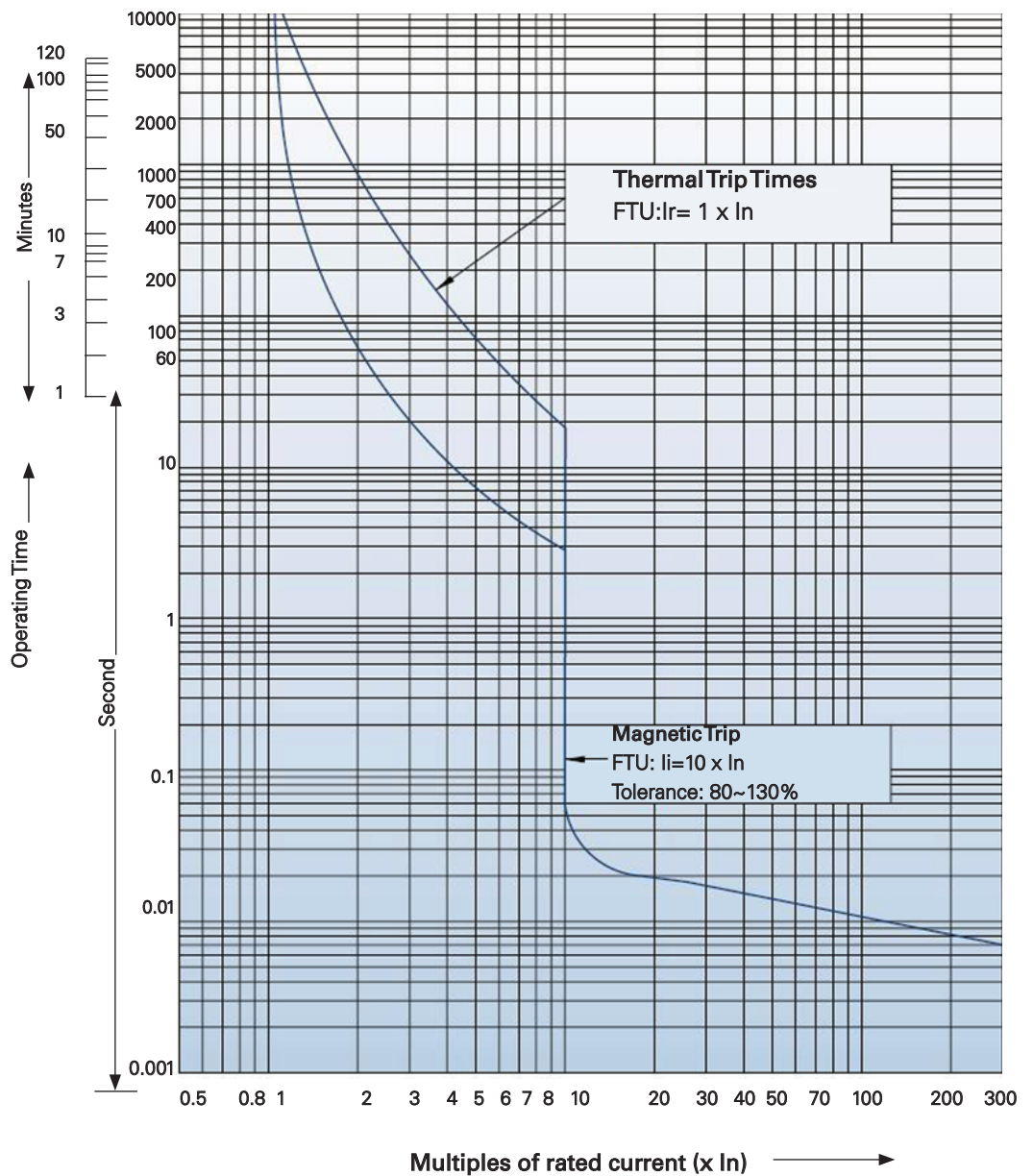
R2CB SERIES

Molded-Case Circuit Breakers

Frame 600 Trip Curves

This curve is to be used for application and coordination purposes only.
 All time/current characteristic curve data is based on 40°C ambient cold start.

600F FTU (500~600A)



Rating	FTU	
600F	3P	Mag Trip (80%~130%)
500	•	5000A
600	•	6000A

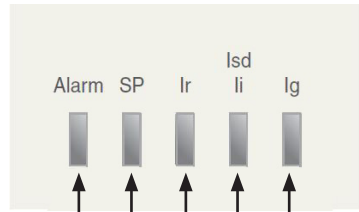
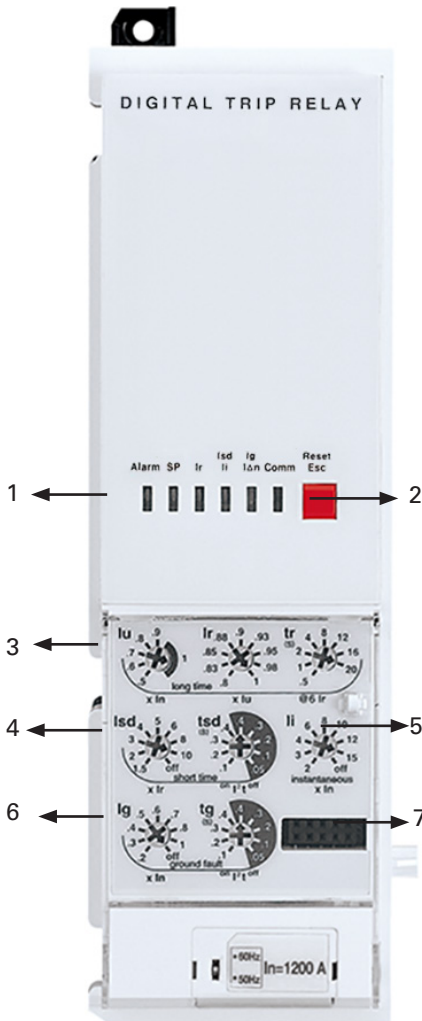
R2CB SERIES - TRIP UNITS FOR 800F AND 1200F

The 800F and 1200F frame circuit breakers include factory-installed internal trip units. Each trip unit has various protective functions as follows.

N type: Normal type

- Optimized protection function
- OCR, OCGR function according to IEC60947-2
- Overload protection
 - Long-time delay
 - Thermal
- Short-circuit protection
 - Short-time delay / instantaneous
 - I²t On/Off optional (for short-time delay)
- Ground fault protection
 - I²t On/Off optional
- Self-Power

1 **LED:** Indication of trip info, and overload state



- **Ilg:** LED indicating ground-fault
- **Isd / Ii:** LED indicating short-time or instantaneous tripping
- **Ir:** LED indicating long-time delay
- **SP:** Self-protection and battery test LED
- **Alarm:** LED indicating an overload
(Turn on above 90%, Blink above 105%)

- 2 **Reset Key:** Fault reset or battery check
- 3 **lu, lr:** Long-time current setting, **tr:** Long-time tripping delay setting
- 4 **Isd:** Short-time current setting, **tsd:** Short-time tripping delay setting
- 5 **Ii:** Instantaneous current setting
- 6 **Ilg:** Ground fault setting, **tg:** Ground fault tripping delay setting
- 7 **Test Terminal:** OCR test terminal (Connected with OCR tester)

R2CB SERIES

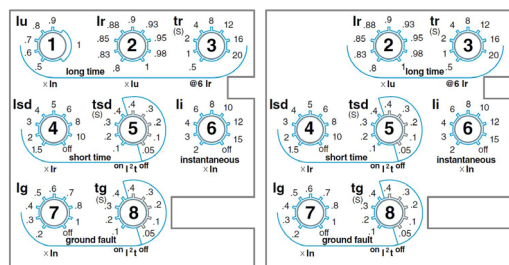
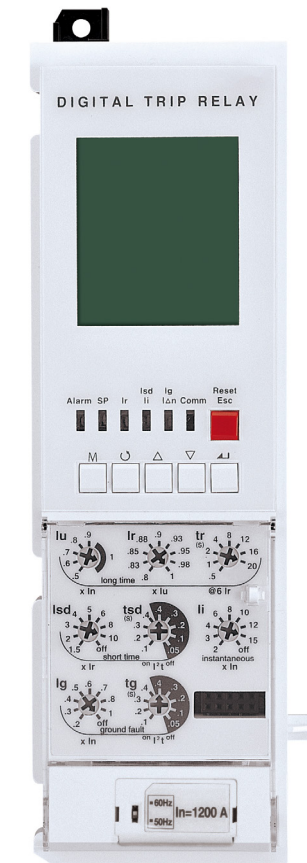
Molded-Case Circuit Breakers

Frame 800, 1200 Trip Curves

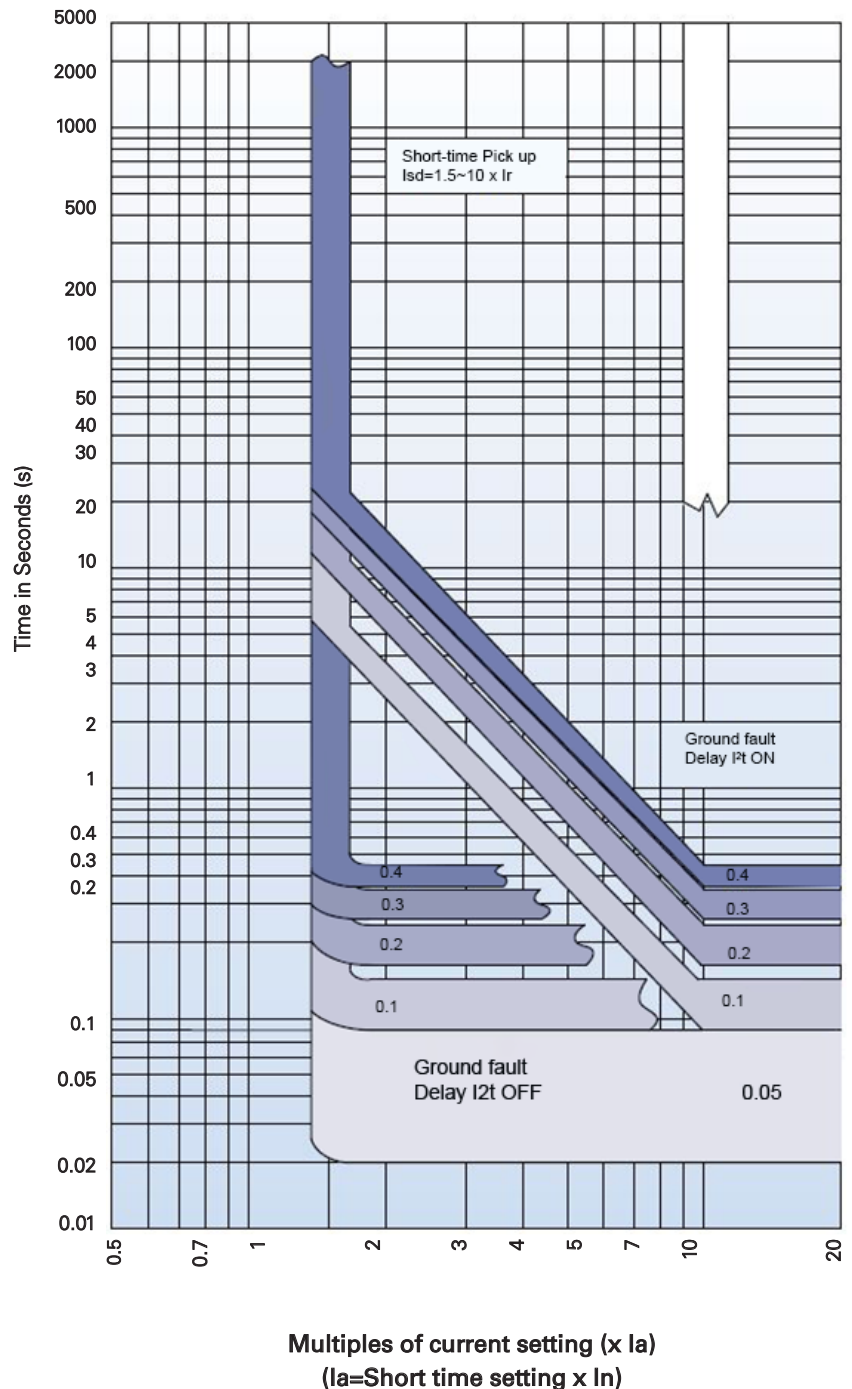
This curve is to be used for application and coordination purposes only.

Short-Time Delay (400~1200A)

Short-time pickup $1.5 \sim 10 \times I_a$
and delay $0.1 \sim 0.4s$



④, ⑤ Short-time setting



R2CB SERIES

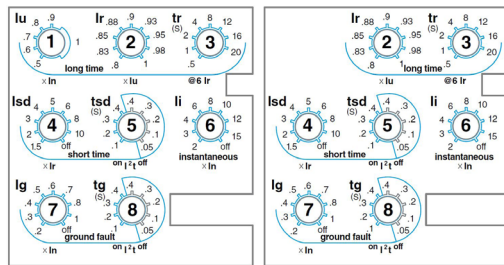
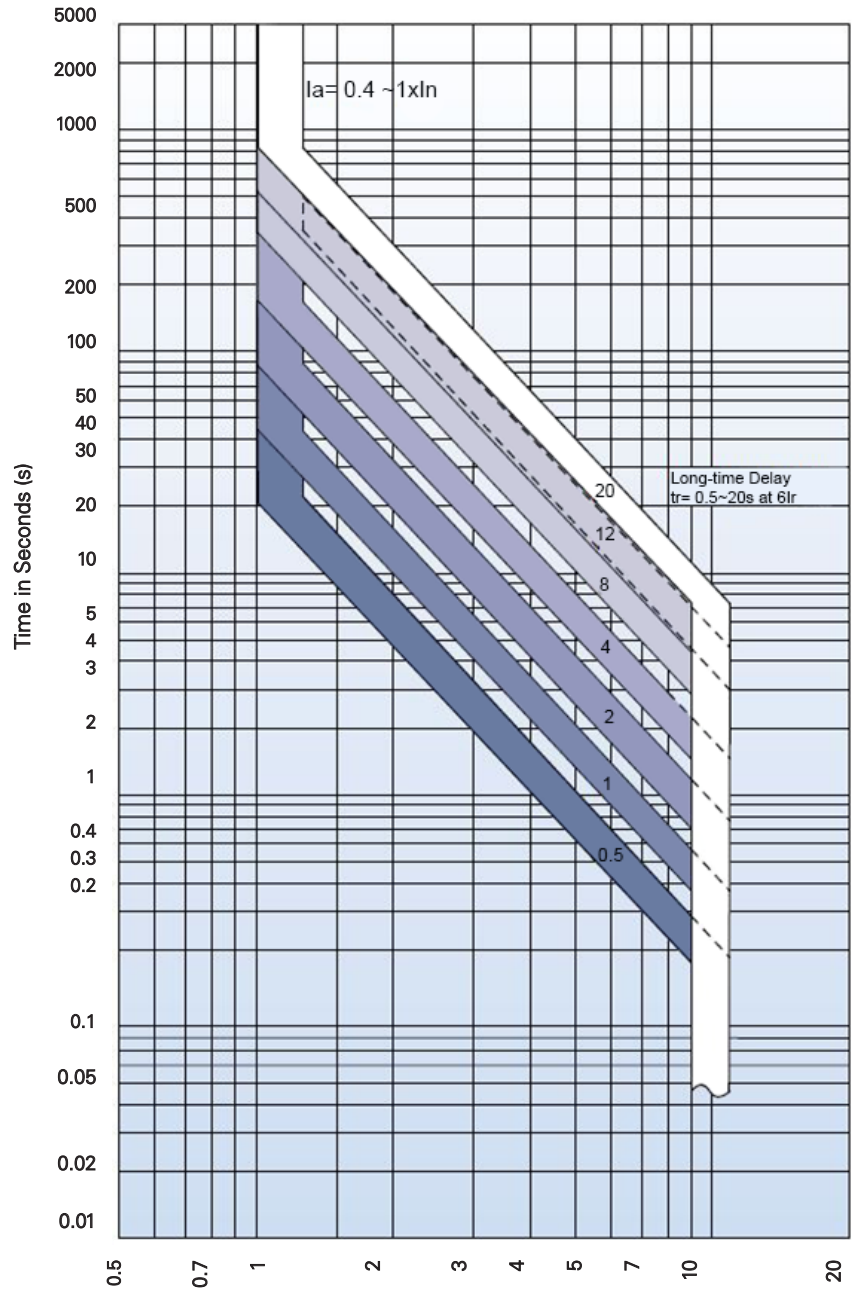
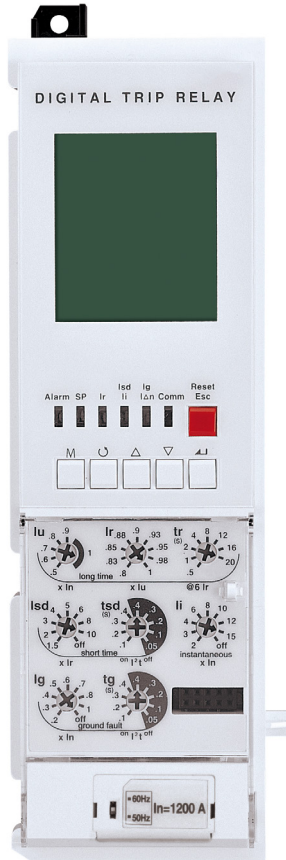
Molded-Case Circuit Breakers

Frame 800, 1200 Trip Curves

This curve is to be used for application and coordination purposes only.

Long-Time Delay (400~1200A)

Long-time pickup $0.4 \sim 1 \times I_a$
and delay $0.5 \sim 20s$



①, ②, ③ Short-time setting

Multiples of current setting ($\times I_a$)
($I_a = \text{Long time setting} \times I_n$)

R2CB SERIES

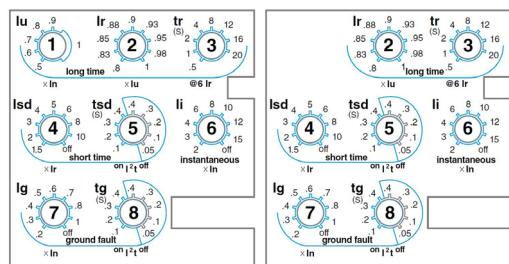
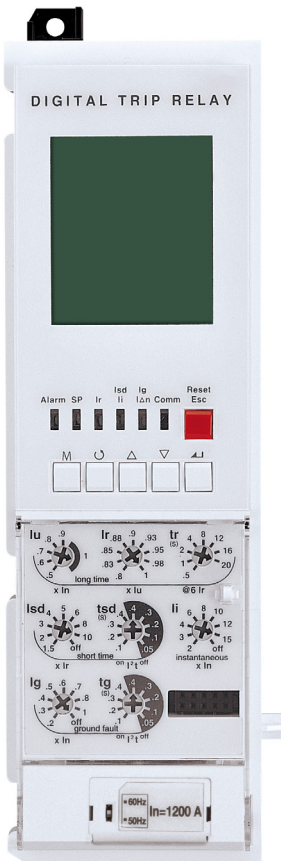
Molded-Case Circuit Breakers

Frame 800,1200 Trip Curves

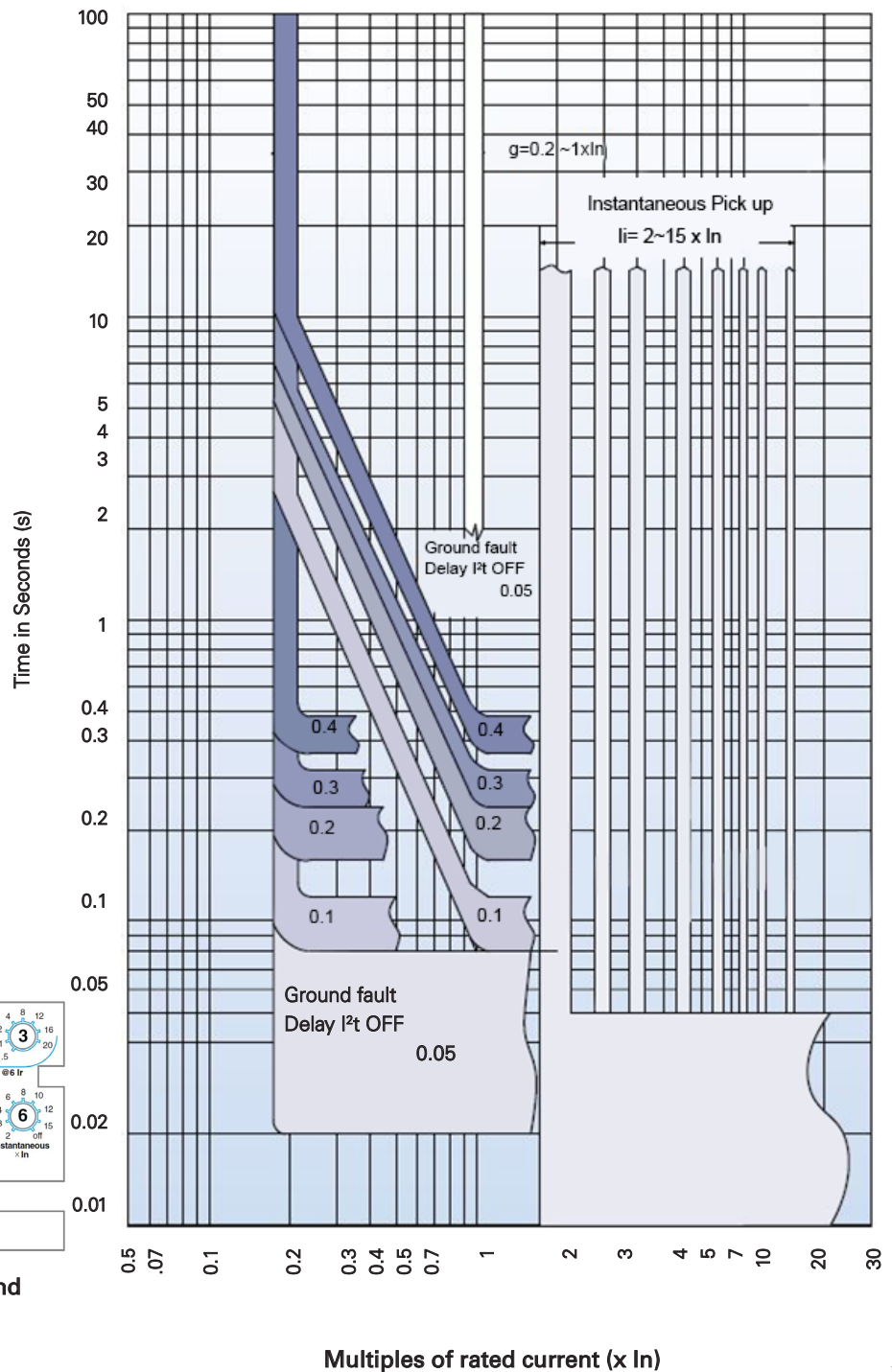
This curve is to be used for application and coordination purposes only.

Instantaneous and Ground Fault (400~1200A)

Instantaneous pickup $2\sim 15 \times I_n$
and Ground fault pickup $0.2\sim 1 \times I_n$
and delay $0.1\sim 0.4s$



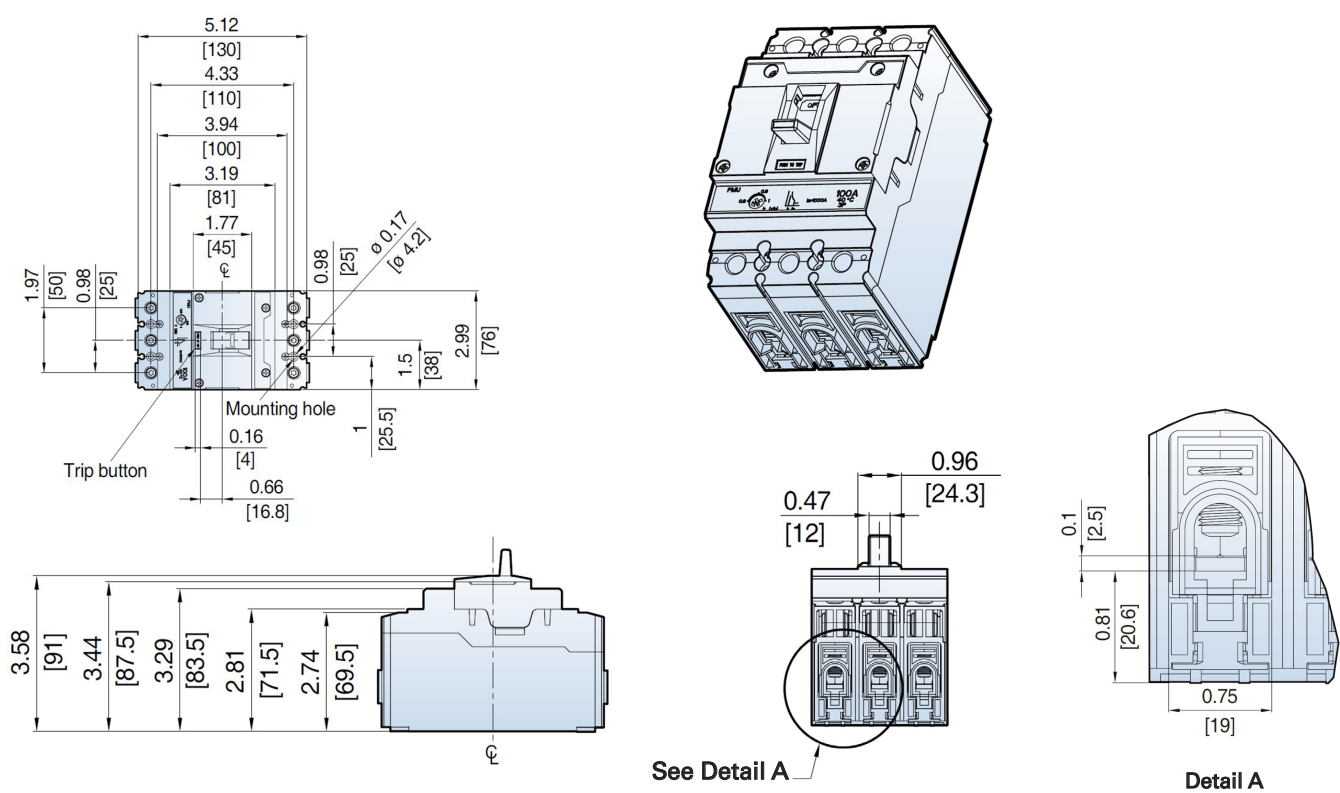
⑥, ⑦, ⑧ Instantaneous and Ground fault setting



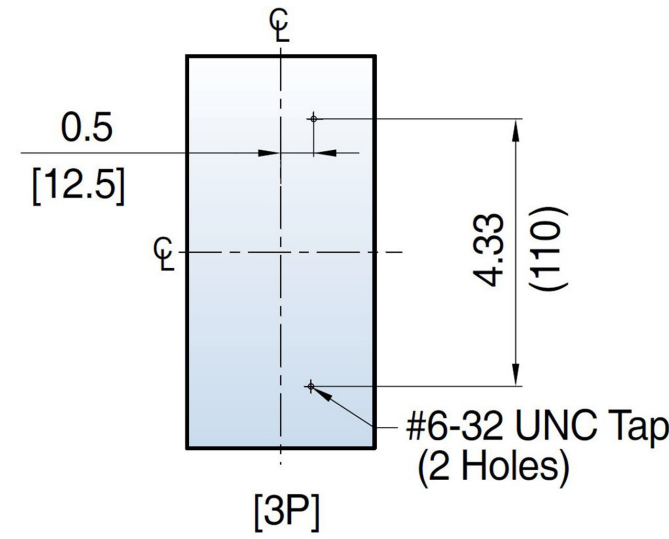
Multiples of rated current ($\times I_n$)

DIMENSIONS - 100F FRAME CIRCUIT BREAKERS

100F Frame 3P Circuit Breaker [Lug Type]

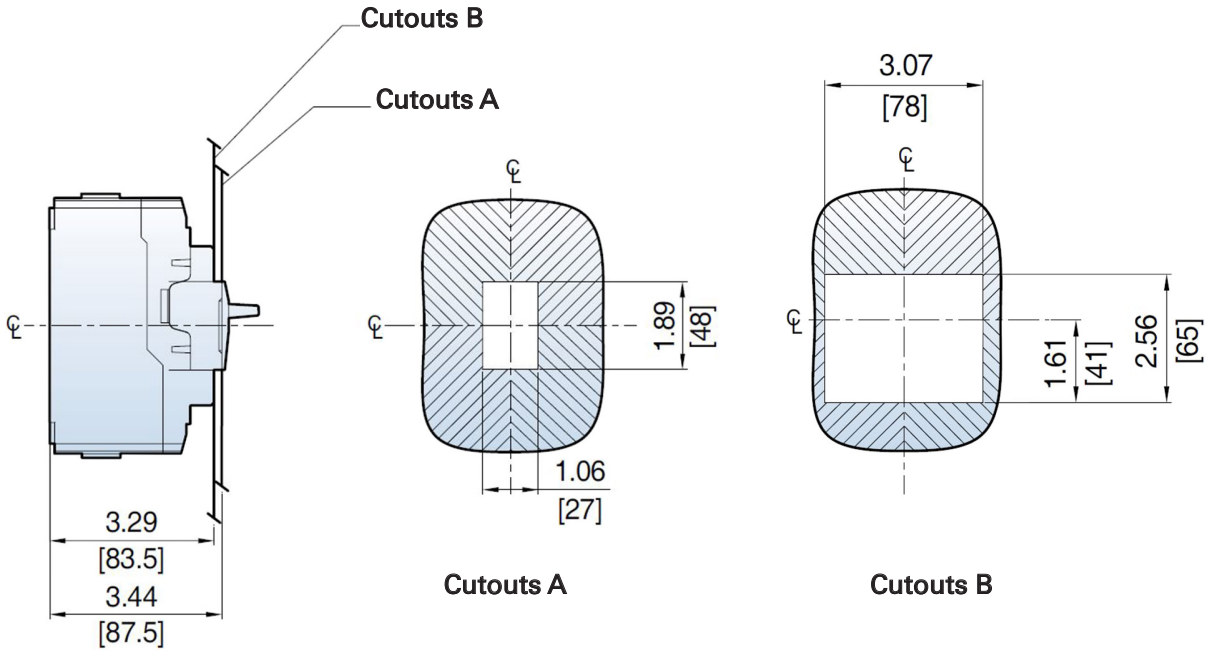


100F Frame Circuit Breaker Mounting

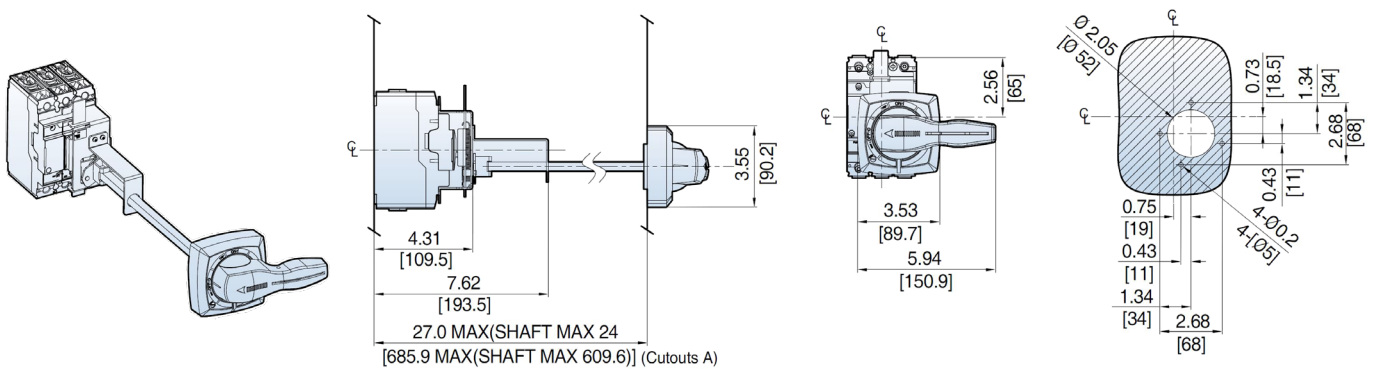


DIMENSIONS - 100F FRAME CIRCUIT BREAKERS

100F Frame Circuit Breaker Door Cutouts

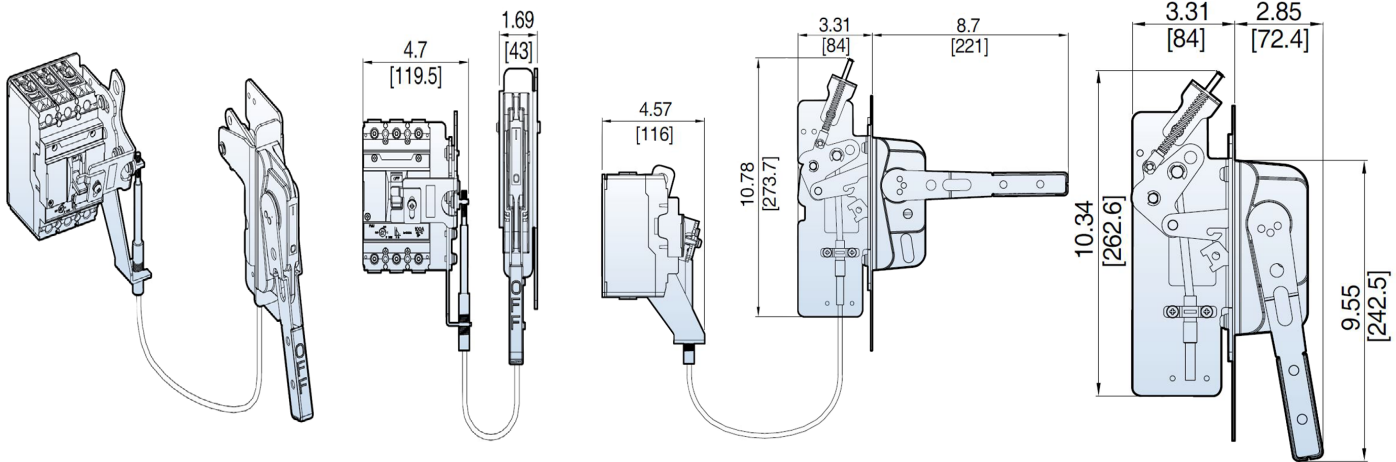


100F NEMA Door-Mounted Rotary Operating Handle R2CB-EH [VOC12, X0C12]



DIMENSIONS - 100F FRAME CIRCUIT BREAKERS

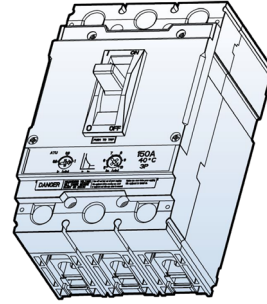
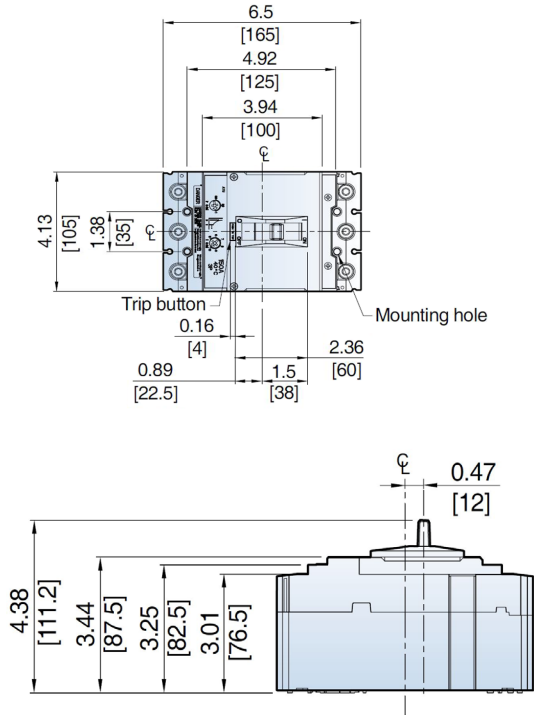
100F Flange-Mounted Cable Operating Handle R2CB-FH [US, XS]



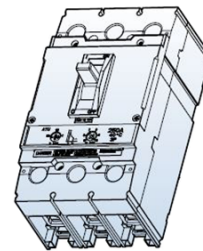
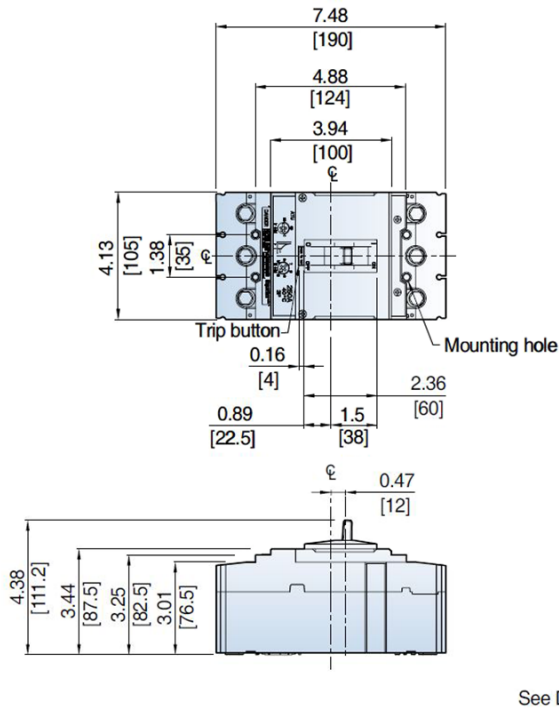
Note: Flange cable sold separately.

DIMENSIONS - 150F / 250F FRAME CIRCUIT BREAKERS

150F Frame 3P Circuit Breaker [Lug Type]

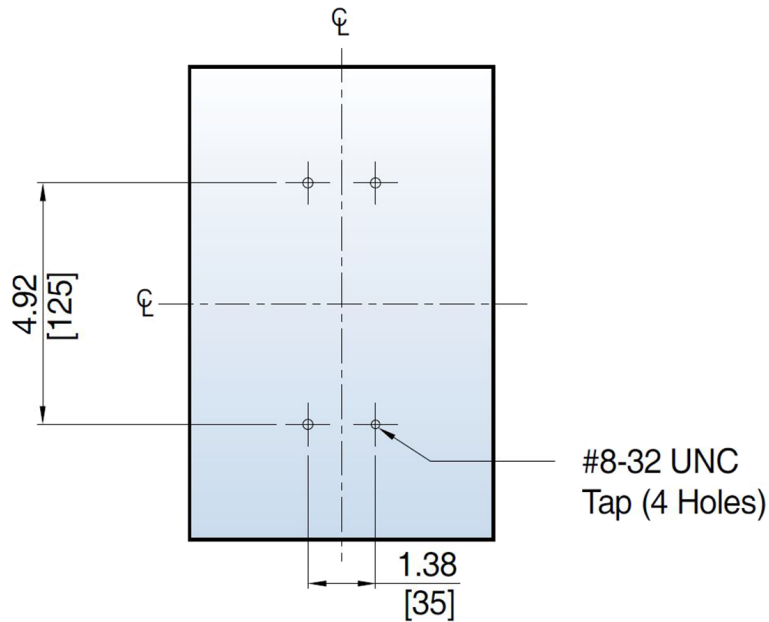


250F Frame 3P Circuit Breaker [Lug Type]

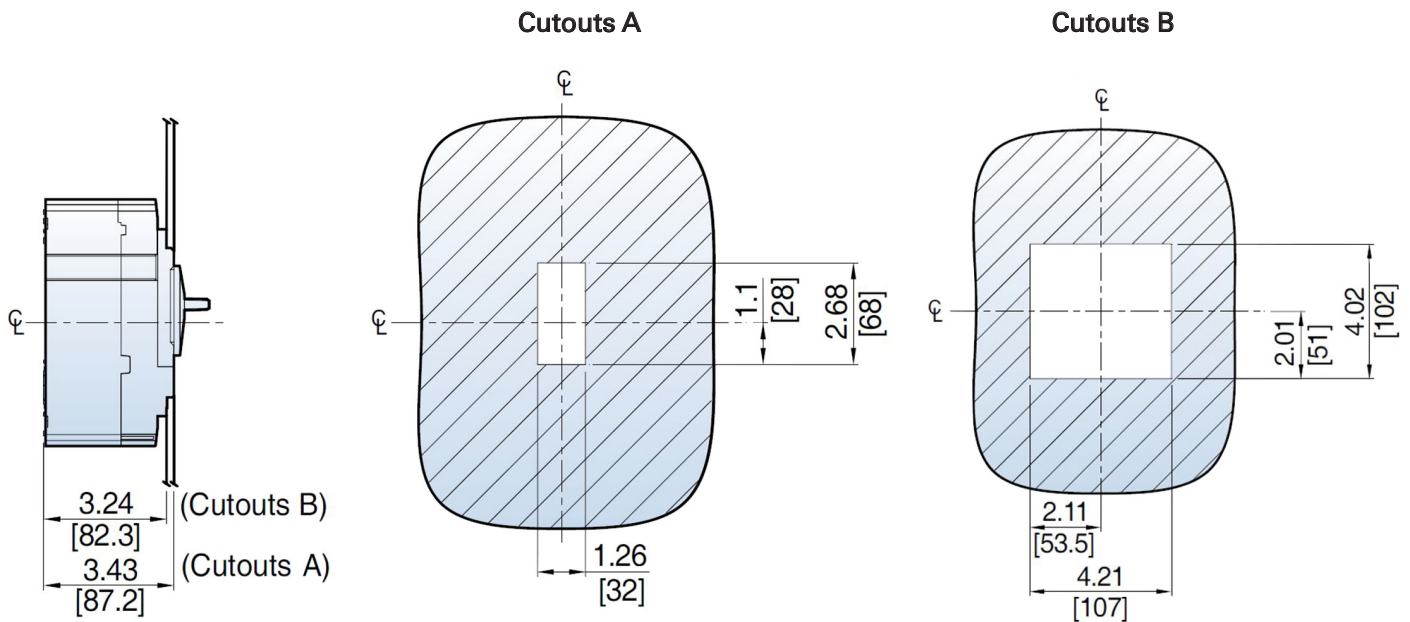


DIMENSIONS - 150F / 250F FRAME CIRCUIT BREAKERS

150F / 250F Circuit Breaker and Accessory Mounting

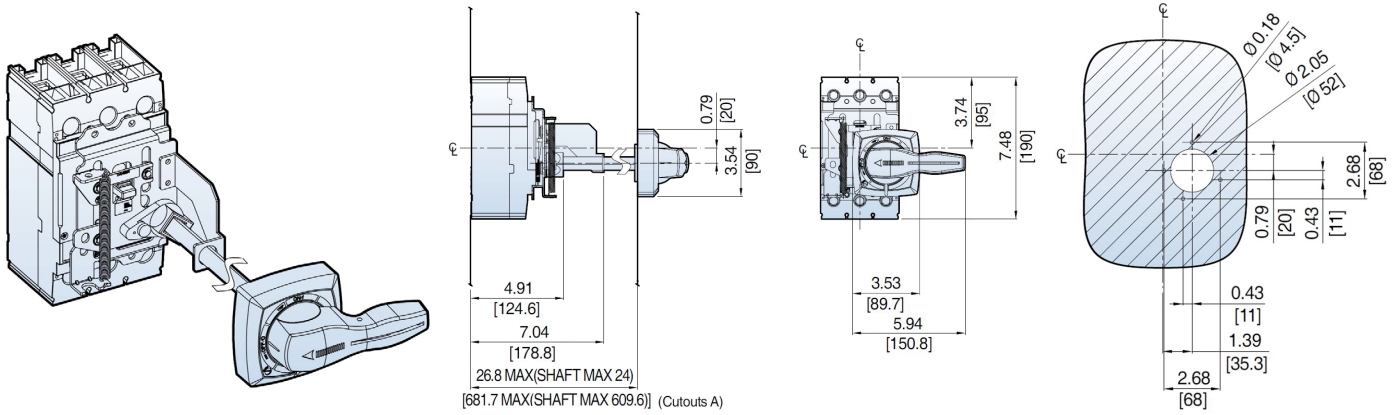


150F / 250F Circuit Breaker Door Cutouts

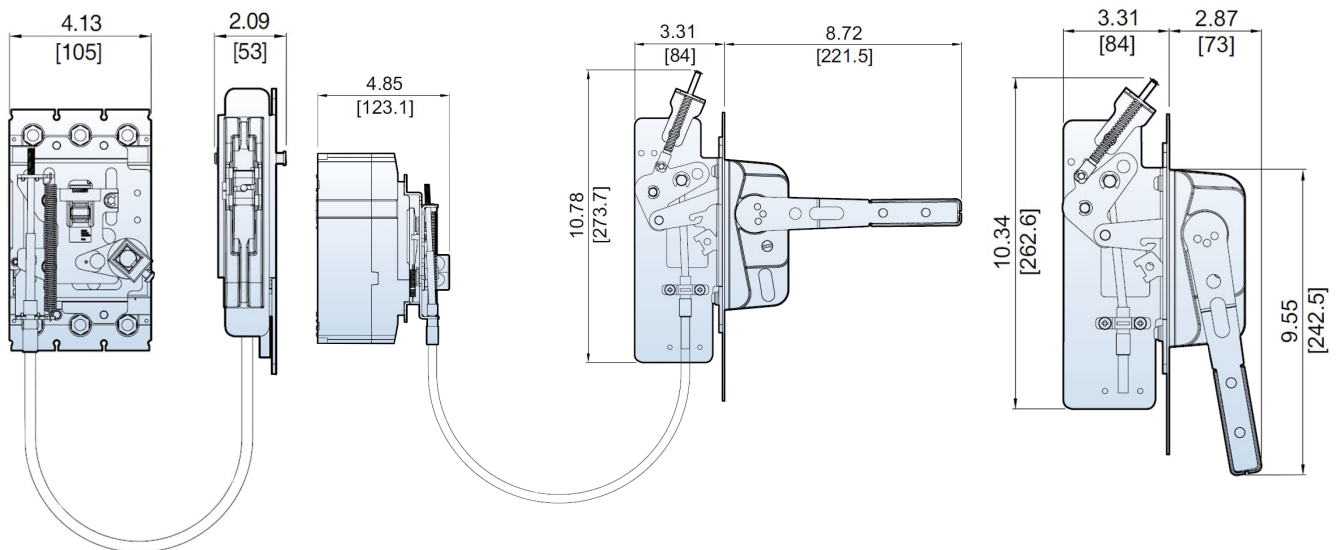


DIMENSIONS - 150F / 250F FRAME CIRCUIT BREAKERS

150F / 250F NEMA Door-Mounted Rotary Operating Handle R2CB-EH [V212, X212]



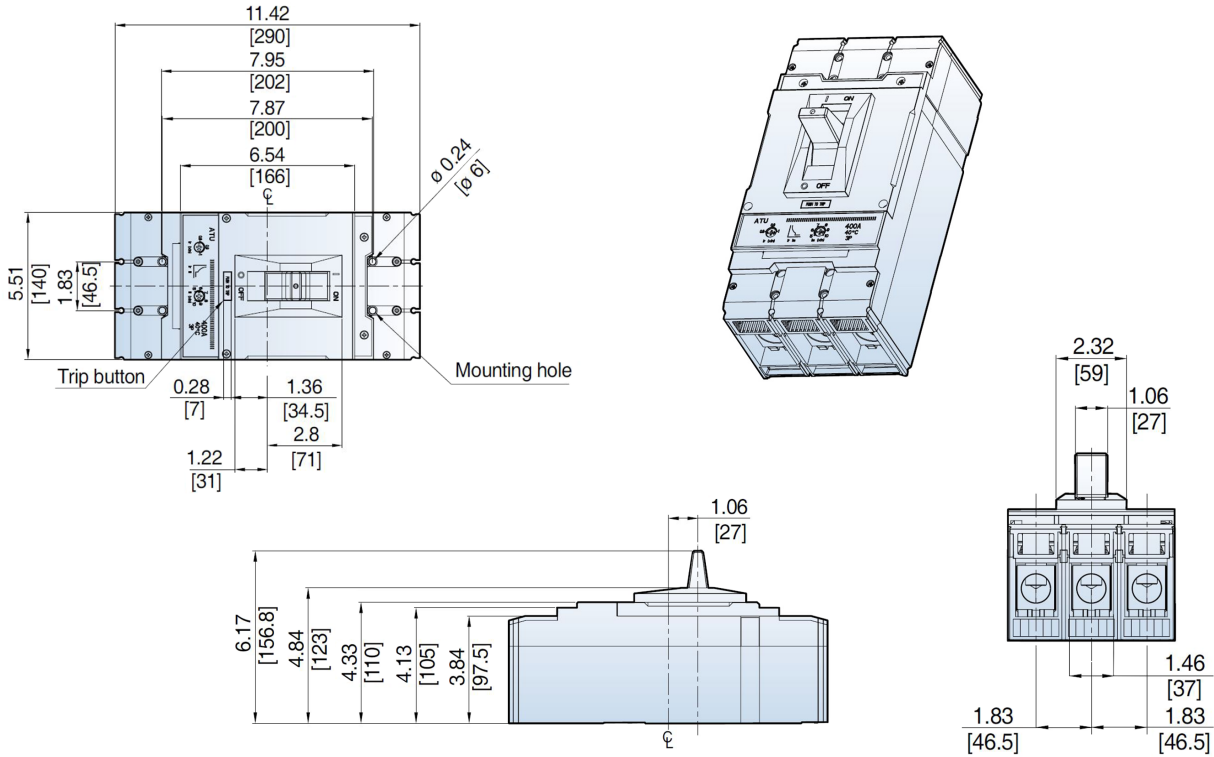
150F / 250F Flange-Mounted Cable Operating Handle R2CB-FH [U2, X2]



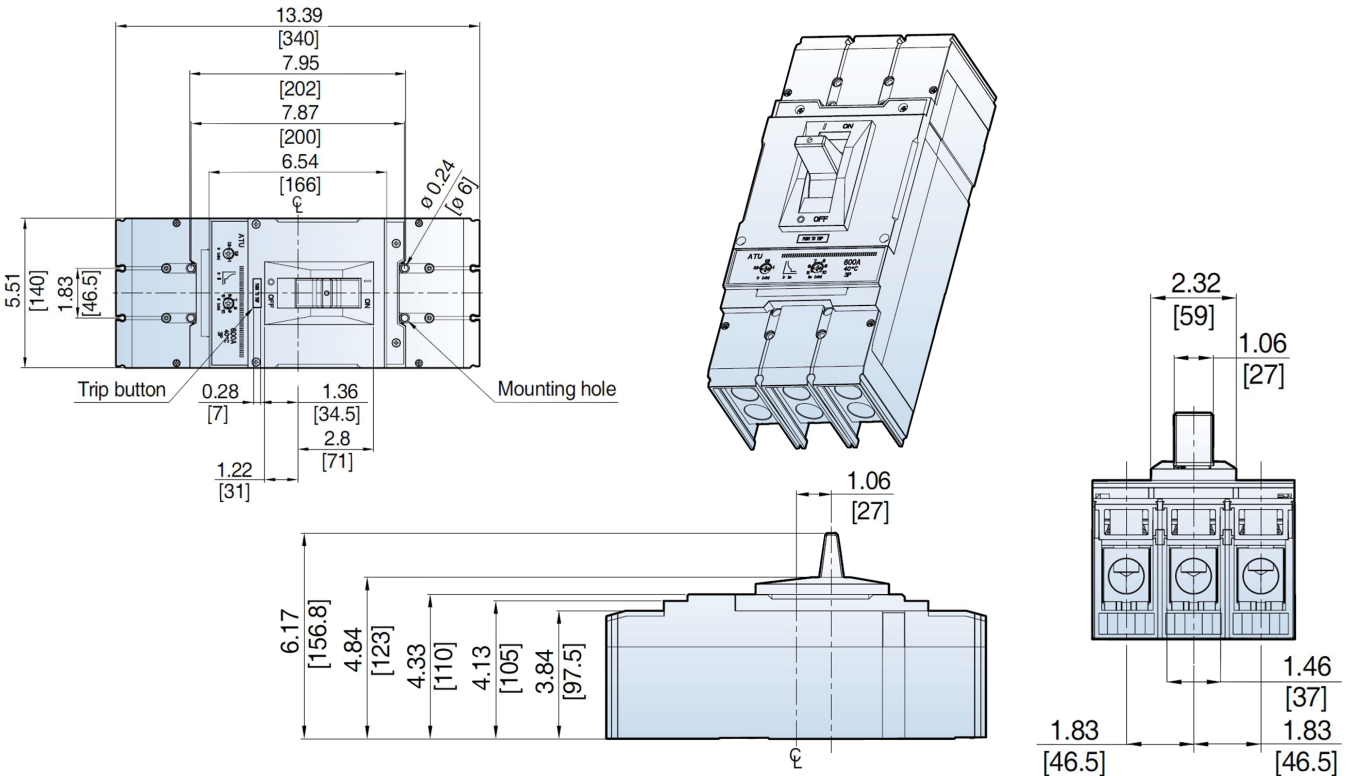
Note: Flange cable sold separately.

DIMENSIONS - 400F / 600F FRAME CIRCUIT BREAKERS

400F Frame 3P Circuit Breaker [Lug Type]

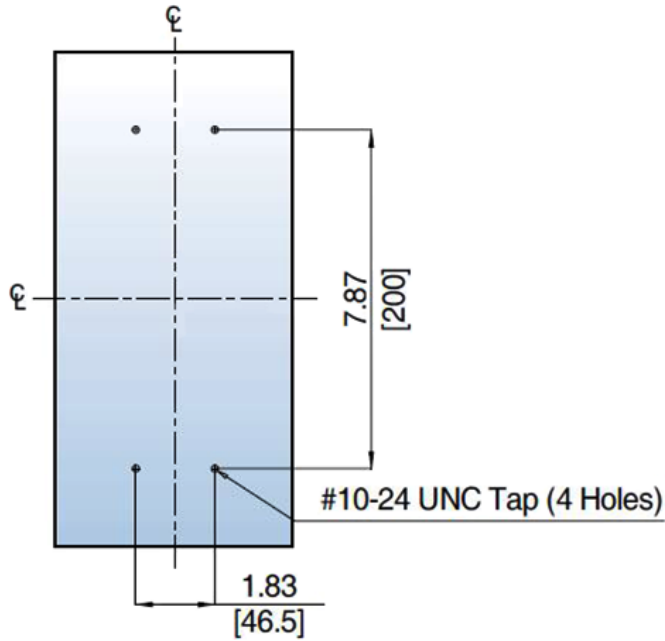


600F Frame 3P Circuit Breaker [Lug Type]

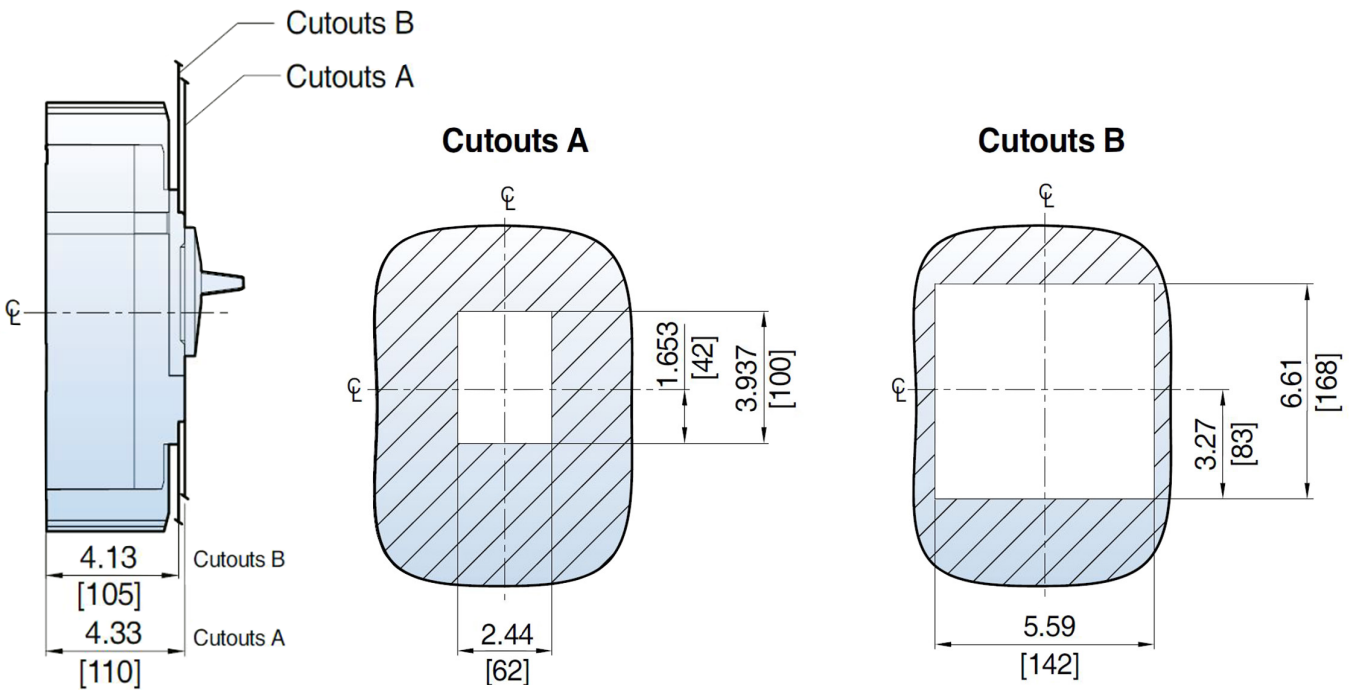


DIMENSIONS - 400F / 600F FRAME CIRCUIT BREAKERS

400F / 600F Circuit Breaker Mounting

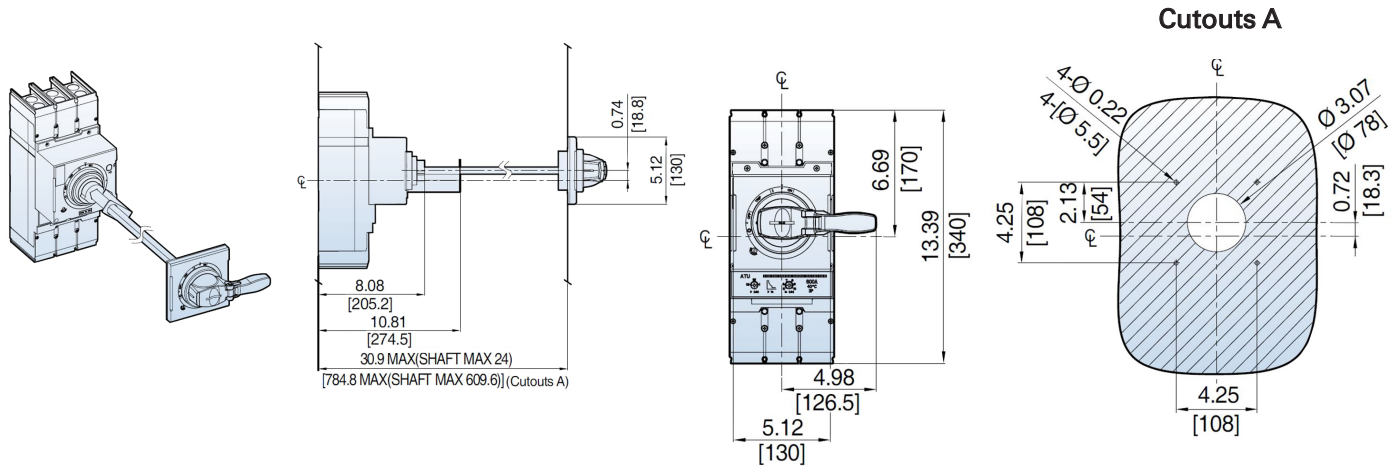


400F / 600F Circuit Breaker Door Cutouts

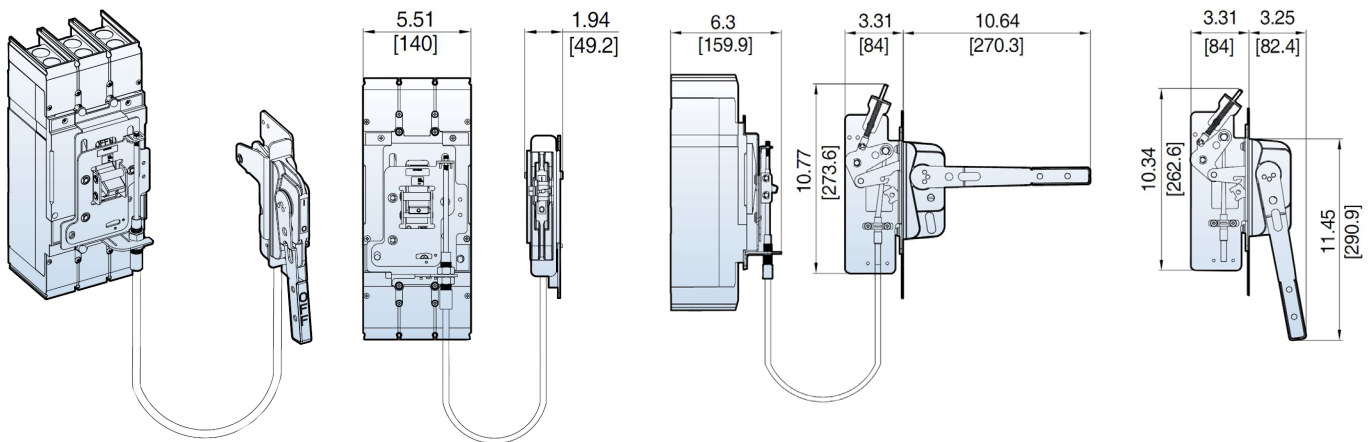


DIMENSIONS - 400F / 600F FRAME CIRCUIT BREAKERS

400F / 600F NEMA Door-Mounted Rotary Operating Handle R2CB-EH [V312, X312]



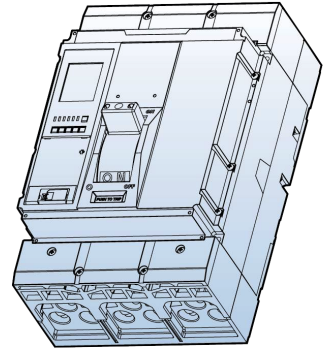
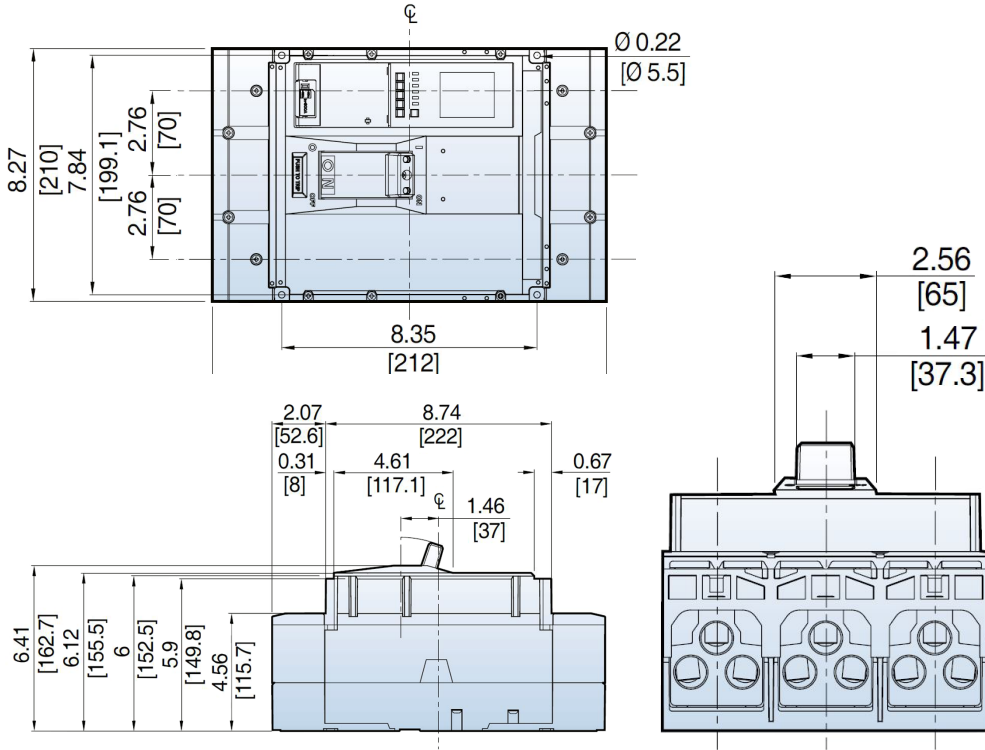
400F / 600F Flange-Mounted Cable Operating Handle R2CB-FH [U3, X3]



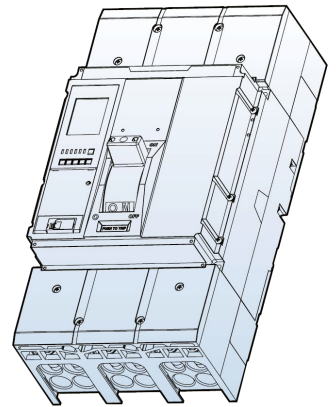
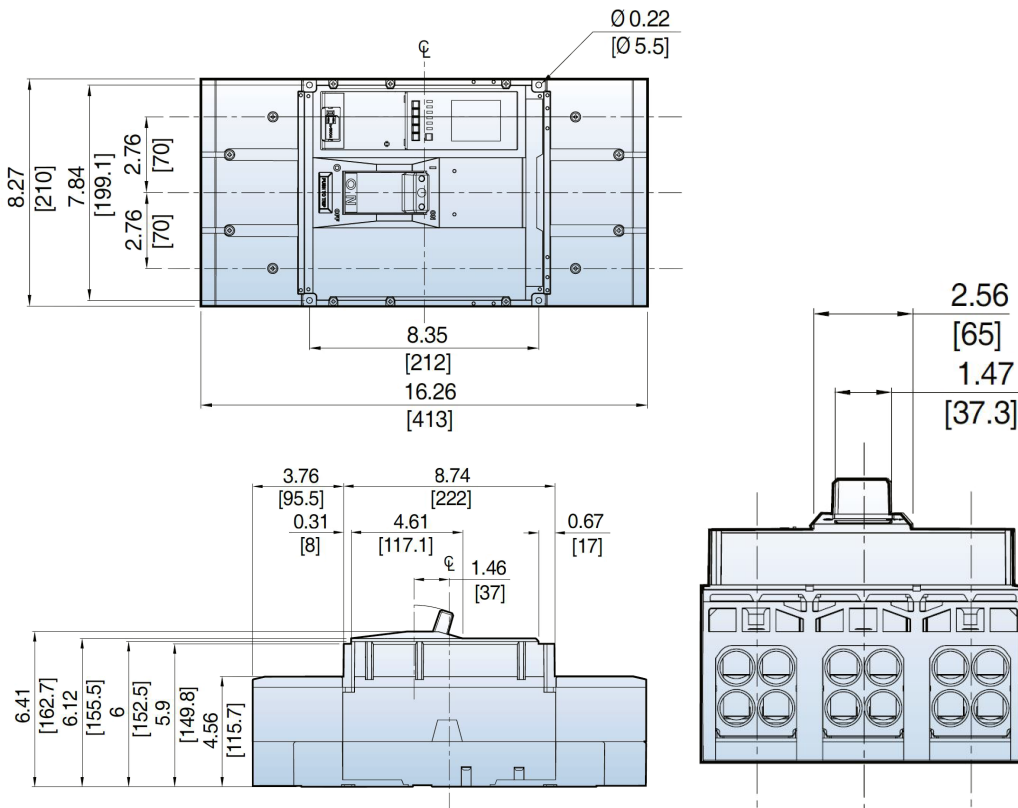
Note: Flange cable sold separately.

DIMENSIONS - 800F / 1200F FRAME CIRCUIT BREAKERS

800F Frame 3P Circuit Breaker [Lug Type]

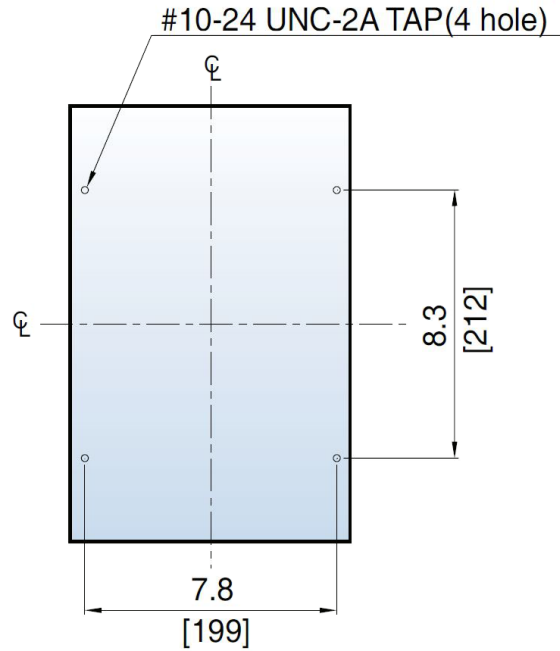


1200F Frame 3P Circuit Breaker [Lug Type]

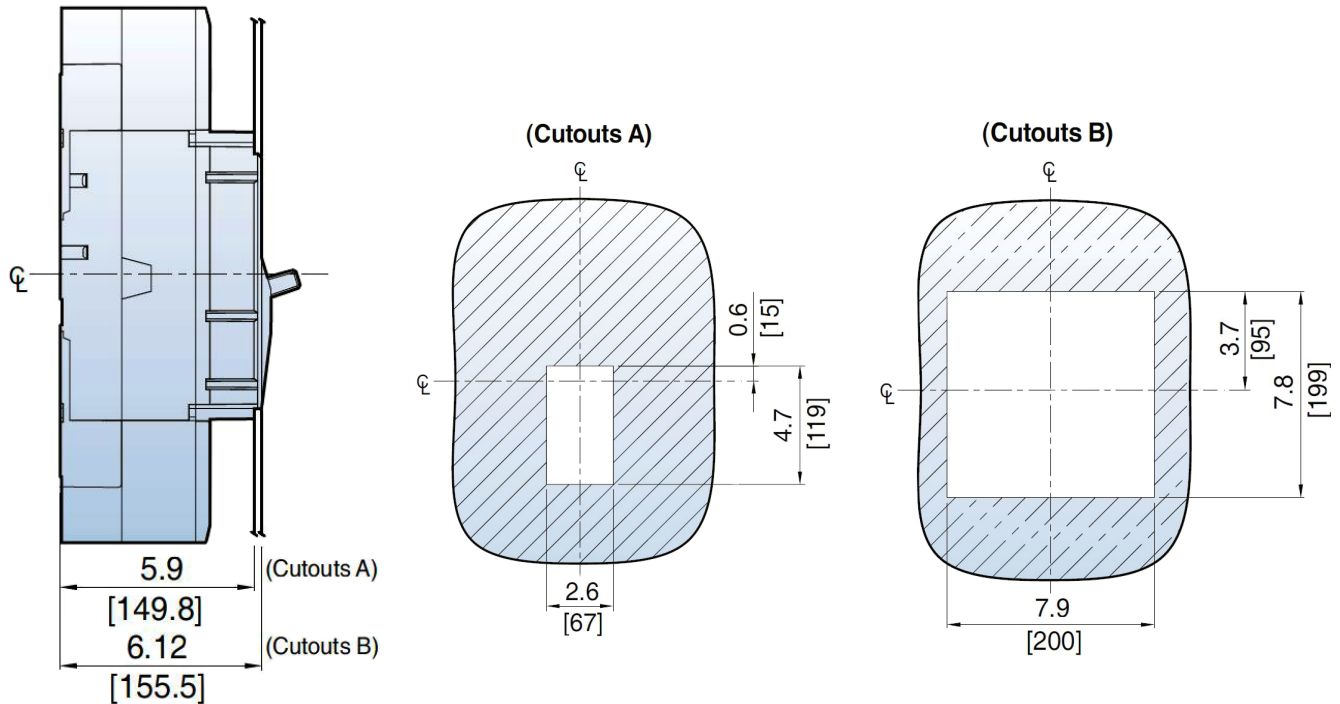


DIMENSIONS - 800F / 1200F FRAME CIRCUIT BREAKERS

800F / 1200F Circuit Breaker Mounting

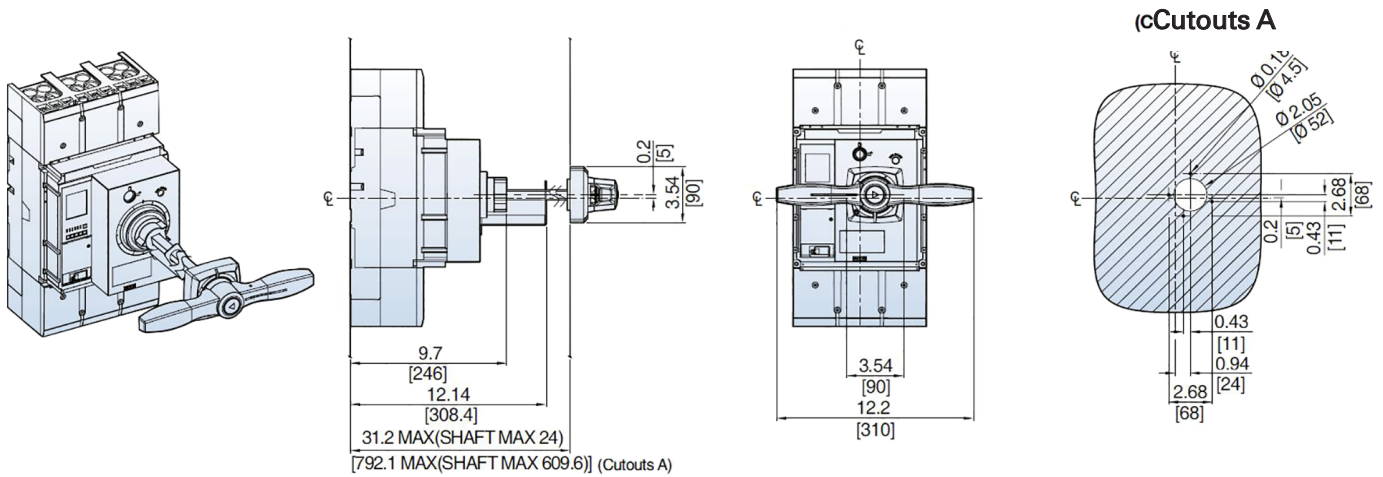


800F / 1200F Circuit Breaker Door Cutouts



DIMENSIONS - 800F / 1200F FRAME CIRCUIT BREAKERS

800F / 1200F NEMA Door-Mounted Rotary Operating Handle R2CB-EH [V512, X512]



SECTION 4

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Introduction

Benshaw offers a complete line of contactors, overload relays and full voltage starters. All units are UL and cUL listed, IEC or NEMA rated and backed by the industry's only two-year factory warranty.

Contactors

Benshaw contactors are used for controlling single- and three-phase motors, as well as for switching resistive or inductive loads up to 690 VAC. Our RediStart™ contactor line is built and tested to world-leading electrical and mechanical standards.

Overload Relays

Our RMSO SPO Series overload relays are bimetallic-style and are designed to protect AC circuits and motors against overloads, phase failure, long starting times and stalling of the motor. We also offer a selection of electronic and digital relays.

Full Voltage Starters

Benshaw full voltage full voltage starters (both reversing and non-reversing) are NEMA rated, feature direct-mount overload relays, draw-out cassette coils above 150 amps, a bimetallic overload relay, and integral coil surge suppression above 150 amps.

Benshaw's prepackaged full voltage starters are NEMA rated, cUL listed, and completely integrated. The rugged NEMA 12/3R design is ideal for industrial duty applications such as pumps, compressors, conveyors, fans and any other continuous duty equipment. The "three wires in/out" design includes a Benshaw SPE field-adjustable electronic overload relay, which enables quick installation and startup with precision motor protection ... standard.

Motor Starter Protectors

RMSP Series manual starters meet or exceed all universal standards and offer efficient motor starting functionality in a compact design. Protection functions include protection of group installation, protection of circuits, motor protection, starter protection and phase failure protection. They couple directly to RC Series contactors for a complete electromechanical combination starter.

CONTACTOR — UL / IEC / NEMA

RC / RSC SERIES
UP TO 690 VAC CONTACTORS

RATINGS

NEMA:	Size 00–7
IEC:	9–800 Amps
UL:	1–600 HP



IEC / NEMA CONTACTOR HIGHLIGHTS

Benschaw contactors are used for controlling single- and three-phase motors and for switching resistive or inductive loads up to 690 VAC.

The RediStart™ contactor line is built and tested to world-leading electrical and mechanical standards.



RoHS compliant
KEPIC compliant

KEY ADVANTAGES:

- World’s longest electrical and mechanical lifespan
- UL/CSA, IEC, NEMA, BS, EN, VDE ratings
- Direct mount thermal overload relays
- Full line of field installable, modularized accessories
- Device marking strip
- AC or DC coil options

STANDARD FEATURES:

- DIN rail mountable to 150 amps
- Full product family to 800 amps
- Direct mount overload relays
- Draw out cassette coils 180 amps and above
- Integral coil surge suppression 180 amps and above
- Low coil power consumption
- Phase barriers supplied as standard
- Uni-directional mounting
- Extremely long lifespan
- Compact size
- Unit identification marker

RC-9 – 150A

- Finger-proof design
- DIN rail or screw mountable
- Top/side mount accessories
- Small physical size
- Dual auxiliary contacts above 22 A
- Integral voltage barriers

RSC-180 – 800

- Draw-out cassette-type coil
- Wide voltage range coils
- Integral coil surge suppression
- Dual auxiliary contacts

* Consult factory for certifications.

CONTACTOR - PART NUMBER ASSEMBLER

RC / RSC SERIES

RSC - **220** - **U120**

REDISTART™ CONTACTOR
 RC 9A–150A
 RSC 180–800

CONTACTOR FRAME & RATING		
Contactor	IEC AC3 480 Rating	NEMA Size
9A	9 A	00
12A	12 A	0
18A	18 A	1
22A	22 A	–
32A	32 A	–
40A	40 A	2
50A	50 A	–
65A	60 A	–
75A	75 A	–
85A	85 A	3
100A	105 A	–
130A	130 A	–
150A	150 A	4
180	185 A	–
220	225 A	–
300	330 A	5
400	400 A	–
600	630 A	6
800	800 A	7

	Frames 9A–150A	Frames 180–400	Frames 600/800
Coil Voltage	Suffix Part # AC 50 & 60 Hz	Suffix Part # AC 50 & 60 Hz	Suffix Part #
24	56AC24	–	–
48	56AC48	–	–
110	56AC110	U120	U120
120	56AC120	U120	U120
208	56AC208	U120	U200
240	56AC240	U120	U200
380	56AC380	–	–
480	56AC500	U500	U500
575	56AC500	U500	U500

RC-9A– RC -150A coil voltages: 85%~110% of rated voltage.

For DC and other coils not listed, consult factory.

U120 coils are universal 100–240 VAC / 100–220 VDC (100–400 amp frames only).

U120 coils are 100–127 VAC only for 600 and 800 amp frames.

U200 coils are 200–240 VAC for 600 and 800 amp frames.

U500 coils are universal 440–600 VAC.

56AC24 coils are 24 V 50/60 Hz.

56AC48 coils are 48V 50/60 Hz

56AC110 coils are 110V 50/60 Hz

56AC120 coils are 120V 50/60 Hz

CONTACTOR - PRICING



RC / RSC SERIES

UL / IEC RATED

Model Number	Amp Ratings					HP Ratings							Aux. Contact		List Price
	AC1	AC3				UL	One-Phase		Three-Phase			NO	NC		
	lth	200/240	380/440	500/550	690	lth	115	230	200	230	460	690			
☒ RC-9A-*	25	11	9	7	6	25	0.5	1.5	2	3	5	7.5	1	1	\$63
☒ RC-12A-*	25	13	12	12	9	25	0.75	2	3	5	7.5	10	1	1	\$92
☒ RC-18A-*	32	18	18	13	9	32	1	3	5	7.5	10	15	1	1	\$120
☒ RC-22A-*	40	22	22	20	18	40	2	3	7.5	10	15	20	1	1	\$134
☒ RC-32A-*	50	32	32	28	20	50	2	5	7.5	10	20	25	2	2	\$162
☒ RC-40A-*	60	40	40	32	23	60	3	7.5	15	15	30	30	2	2	\$183
☒ RC-50A-*	70	55	50	43	28	70	3	10	20	25	40	50	2	2	\$248
☒ RC-65A-*	100	65	65	60	35	100	5	15	25	30	50	60	2	2	\$268
☒ RC-75A-*	110	75	75	64	42	110	5	15	25	30	50	60	2	2	\$303
☒ RC-85A-*	135	85	85	75	45	135	7.5	15	30	40	60	75	2	2	\$323
☒ RC-100A-*	160	105	105	85	65	160	10	20	30	40	75	75	2	2	\$360
☒ RC-130A-*	160	130	130	90	60	160	10	20	40	40	75	75	2	2	\$416
☒ RC-150A-*	210	150	150	100	60	210	15	25	40	50	100	75	2	2	\$502
☒ RSC-180-*	230	180	180	180	120	230	15	30	60	60	125	125	2	2	\$739
☒ RSC-220-*	275	250	250	200	150	275	15	40	60	75	150	150	2	2	\$966
☒ RSC-300-*	350	300	300	250	220	350	-	-	100	100	200	200	2	2	\$1,172
☒ RSC-400-*	450	400	400	350	300	450	-	-	125	150	300	300	2	2	\$1,409
☒ RSC-600-*	660	630	630	500	420	660	-	-	150	200	400	400	2	2	\$3,234
☒ RSC-800-*	900	800	800	720	630	900	-	-	250	300	600	600	2	2	\$3,345

AC1: Resistive Loads

AC3: AC Motor Loads

*Add coil suffix. See page 159 for Contactor part number assembler.

NEMA RATED

Model Number	NEMA Size	NEMA Amps	Full Voltage Starting			Part Winding Starting			Wye Delta Starting			List Price
			200V	230V	460V 575V	200V	230V	460V 575V	200V	230V	460V 575V	
☒ RC-9A-*	00	9	1 1/2	1 1/2	2	-	-	-	-	-	-	\$63
☒ RC-12A-*	0	18	3	3	5	-	-	-	-	-	-	\$92
☒ RC-18A-*	1	27	7.5	7.5	10	10	10	15	10	10	15	\$120
☒ RC-40A-*	2	45	10	15	25	20	25	40	20	25	40	\$183
☒ RC-85A-*	3	90	25	30	50	40	50	75	40	50	75	\$323
☒ RC-150A-*	4	135	40	50	100	75	75	150	60	75	150	\$502
☒ RSC-300-*	5	270	75	100	200	150	150	350	150	150	300	\$1,172
☒ RSC-600-*	6	540	150	200	400	-	300	600	300	350	700	\$3,234
☒ RSC-800-*	7	810	-	300	600	-	450	900	500	500	1000	\$3,345

*Add coil suffix. See page 159 for Contactor part number assembler.

☒ Web stocked

Price Effective July 1, 2025

CONTACTOR - TECHNICAL INFORMATION

RC / RSC SERIES

Specification	Contactor Type	RC	RC	RC	RC	RC	RC	RC	RC	RC	RC	RC	RC	RC	RSC	RSC	RSC	RSC	RSC	RSC
		9A	12A	18A	22A	32A	40A	50A	65A	75AW	85A	100A	130A	150A	180	220	300	400	600	800
Lighting Duty AC 5	120–690 V	11A	13A	18A	22A	32A	40A	50A	65A	75A	85A	105A	120A	150A	180A	250A	300A	400A	630A	800A
Rated Life (million)	Electrical	2.5	2.5	2.5	2.5	2	2	2	2	2	2	1	1	1	1	1	1	0.5	0.5	0.5
	Mechanical	25	25	25	25	15	15	10	10	10	10	5	5	5	5	5	5	5	5	5
Withstand Voltage Rating	6000V																			
Ambient Temperature Range	-5 to 50°C Operation, -40 to 65°C Storage Without Derating																			
Operating Times (AC coil)	Closing (ms)	15–30						15–30				20–40		45–60		45–68		66–70		
	Opening (ms)	4–19						10–30				60–70		41–45		43–52		45–55		
Resistance to Shock	49 m/s ² (<5g)																			
Conductor Size (max.)*Note	#10AWG	#8		#6	#4	#3	#2	1/0	2/0	4/0	Limited Only by Crimp Size									
Switching Frequency (OP/HR) AC3	1800	1800	1800	1800	1800	1800	1800	1800	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	
Interrupt Current @ 460 VAC	5KA	5KA	5KA	5KA	5KA	5KA	5KA	5KA	10KA	10KA	10KA	10KA	10KA	10KA	10KA	18KA	18KA	30KA	30KA	
Maximum Make Current (A)	480 V, AC3	90	120	180	220	320	400	500	650	750	950	1050	960	1200	1800	2500	3000	4000	6300	8000
Maximum Break Current (A)	480 V, AC3	72	96	144	176	256	320	400	520	600	650	840	1200	1500	1800	2500	3000	4000	6300	8000
Rated Insulation Voltage	690V			690V						690V										
Vibration Resistance	19.6 m/s ² (<2g)																			

*Note: ≤ RC-40A have screws with clamp-type washer

CONTACTOR - COIL RATINGS

RC / RSC SERIES

Type	Coil Consumption AC (VA)		Heat Dissipation (W)	Operational Voltage (% of rated coil voltage)		Operating Time	
	Inrush	Sealed		Min.	Max.	Closing	Opening
						(ms)	(ms)
RC-9A~22A	80	11	2.3	85%	110%	15~30	4~19
RC-32A~40A	80	9	2.7	85%	110%	15~30	4~19
RC-50A~65A	120	11	2.8	85%	110%	15~30	4~19
RC-75A~100A	220	16	5.4	85%	110%	15~30	10~30
RC-130A~150A	110	24	2.7	85%	110%	20~40	60~70
Pick Up (V) U120 Drop Out (V) U120							
RSC-180~220	220	9.1	3.4	77%	48%	60	41
RSC-300~400	393	14	4.4	77%	48%	64~68	43~47
RSC-600~800	1000	17	6.3	77%	48%	66~70	45~49

Type	Coil Consumption DC (W)		Operational Voltage (% of rated coil voltage)		Operating Time	
	Inrush	Sealed	Min.	Max.	Closing	Opening
					(ms)	(ms)
RC-9A~22A	3	5	85%	110%	40~60	4~19
RC-32A~40A	2.2	9	85%	110%	50~65	4~19
RC-50A~65A	2.2	9	85%	110%	50~65	4~19
RC-75A~100A	5.1	18	85%	110%	100~120	10~45
RC-130A~150A	213	7.5	85%	110%	70~80	60~70



CONTACTOR - PRICING

RC / RSC SERIES ACCESSORIES

OPTIONAL CONTACTOR BOX LUG KITS

Model Number	Description	Contactors Range	Conductors Per Phase	Wire Size	List Price
☞ RSC-AJ-220	1 Kit = 3 Lugs for Line or Load	180–220	1	1 AWG–350 MCM	\$78
☞ RSC-AJ-400		300–400	2	3/0–500 MCM	\$177
☞ RSC-AJ-800		600–800	2	3/0–600 MCM	\$205

No box lug kits for RC-9A–150A.

AUXILIARY CONTACT BLOCKS

Model Number	Description	Contactors Range	Poles	List Price
☞ RC-AU2-1A1B	Top Mount	RC-9A–150A	2 (1 NO/1 NC)	\$37
☞ RC-AU4-2A2B	Top Mount	RC-9A–150A	4 (2 NO/2 NC)	\$51
☞ RC-UA1	Side Mount	RC-9A–150A	2 (1 NO/1 NC)	\$37
☞ RC-AU100	Side Mount	RSC-180–800	2 (1 NO/1 NC)	\$37

SURGE SUPPRESSORS

Model Number	Description	Coil Voltage	Contactors Range	List Price
☞ RC-US1	RC + Varistor	AC 24–48 V	RC-9A–150A	\$36
☞ RC-US2	RC + Varistor	AC 120 V	RC-9A–150A	\$37
☞ RC-US3	RC + Varistor	AC 200–240 V	RC-9A–150A	\$37
☞ RC-US4	RC + Varistor	DC 24–48 V	RC-9A–150A	\$50
☞ RC-MO125	Varistor	AC 100–125 V	All	\$43
☞ RC-MO240	Varistor	AC 200–240 V	All	\$43
☞ RC-MO48	Varistor	AC 24–48 V	All	\$43

RSC-A100 and RC-AU100 are the same part. RSC-A100 is the old part number

RSC-180–800 contactors have built-in surge suppression.

☞ Web stocked

CONTACTOR - PRICING

RC / RSC SERIES ACCESSORIES



MECHANICAL INTERLOCK UNITS

Model Number	Description	Contactor Range	List Price
☞ RC-M150*	Mechanical interlock for two contactors. Prevents both contactors from closing simultaneously.	RC-9A–150A	\$37
☞ RSC-M400		RSC-180–400	\$63
☞ RSC-M800		RSC-600–800	\$846

*RC-M150A includes (2) NC contacts for electrical interlock.

REVERSE WIRE KITS*



Model Number	Description	List Price
☞ RMSC-UW-22	Reversing Wire Kit for RC-22 contactor	\$29
☞ RMSC-UW-32	Reversing Wire Kit for RC-32 contactor	\$37
☞ RMSC-UW-63	Reversing Wire Kit for RC-63 contactor	\$46
☞ RMSC-UW-95	Reversing Wire Kit for RC-95 contactor	\$84

*The reverse wire kit is used when 2 contactors are connected together to create a reversing contactor set, remember to order the appropriate mechanical interlock RC-M150.

TERMINAL COVER KITS*



Model Number	Contactor Range	List Price
☞ RSC-AP220	RSC-180–220	\$36
☞ RSC-AP400	RSC-300–400	\$43
☞ RSC-AP600	RSC-600–800	\$70

*Terminal cover kits included with RC-9A–RC-150A.

Kits include line and load terminal covers.

CAPACITOR UNIT



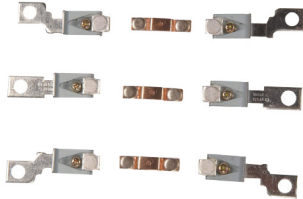
Model Number	Description	Configuration	Contactor Range	List Price
☞ RSC-AC-9	Capacitor Unit	—	RC-9A–RC-40A	\$50
☞ RSC-AC-50	Capacitor Unit	—	RC-50A–RC-100A	\$64

Use when connecting PFCCs, reduces inrush current caused by charging of capacitors

☞ Web stocked

CONTACTOR - PRICING

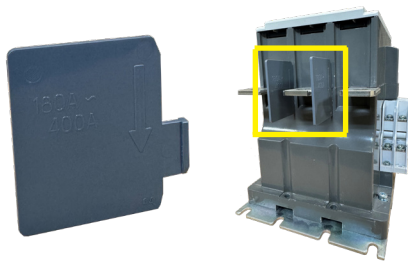
RC / RSC SERIES SPARE PARTS



REPLACEMENT CONTACT KITS

Model Number	Description	Contactor Range	List Price
☑ RSC-T180		RSC-180	\$563
☑ RSC-T220	Each kit includes: 6 stationary and 3 movable contacts	RSC-220	\$633
☑ RSC-T300		RSC-300	\$774
☑ RSC-T400	(Replaces all three phases of one contactor)	RSC-400	\$846
☑ RSC-T600		RSC-600	\$1,760
☑ RSC-T800		RSC-800	\$2,114

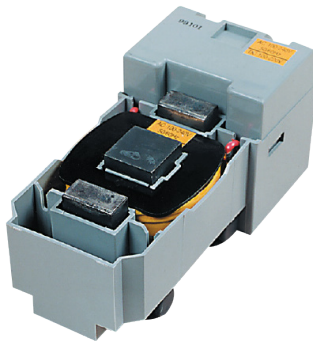
No contact kits are available for RC-9A-150A.



PHASE BARRIER KITS

Model Number	Description	Contactor Range	List Price
☑ RSC-B400	Each kit includes: 2 phase barriers for line or load side of one contactor	RSC-180-400	\$70
☑ RSC-B800		RSC-600-800	\$85

No replacement phase barriers are available for RC-9A-150A



CONTACTOR COILS

Model Number	Coil Voltage	Contactor Range	List Price
☑ RSC-C220U120	100 V-240 V	RSC-180-220	\$282
☑ RSC-C220U500	440 V-575 V	RSC-180-220	\$282
☑ RSC-C400U120	100 V-240 V	RSC-300-400	\$458
☑ RSC-C400U400	380 V-450 V	RSC-300-400	\$458
☑ RSC-C400U500	440 V-575 V	RSC-300-400	\$458
☑ RSC-C800U120	100 V-127 V	RSC-600-800	\$563
☑ RSC-C800U200	200 V-240 V	RSC-600-800	\$563
☑ RSC-C800U500	440 V-575 V	RSC-600-800	\$563

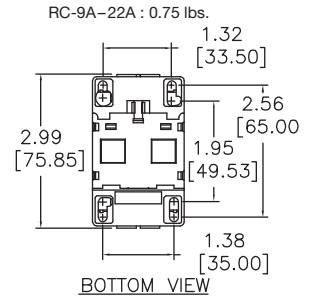
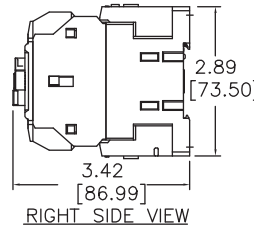
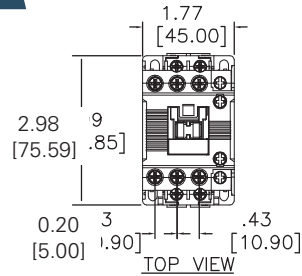
No replacement coils available for RC-9A-150A

☑ Web stocked

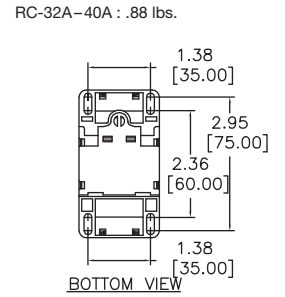
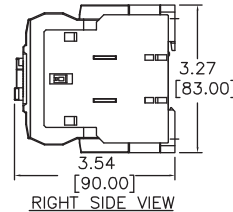
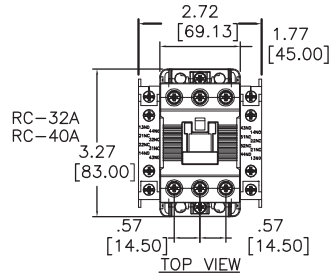
CONTACTOR - MOUNTING DIMENSIONS

RC-9A – RC-65A CONTACTORS

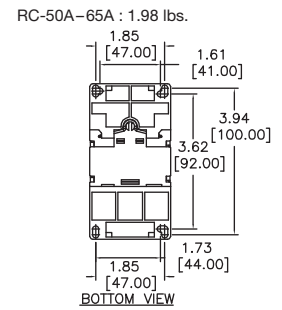
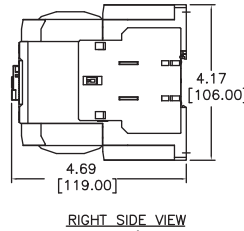
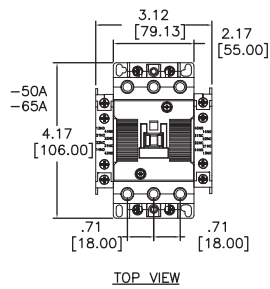
RC-9A, RC-12A, RC-18A, RC-22A



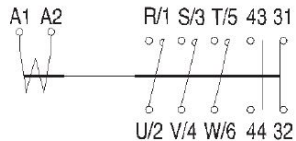
RC-32A, RC-40A



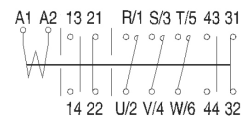
RC-50, RC-65A



Circuit Diagram



RC-9 A-22A —
With one aux. contact block



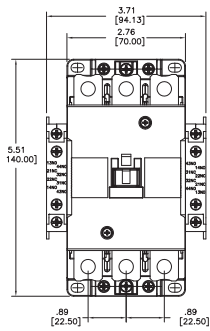
RC-32A-150A —
With two aux. contact blocks

CONTACTOR - MOUNTING DIMENSIONS

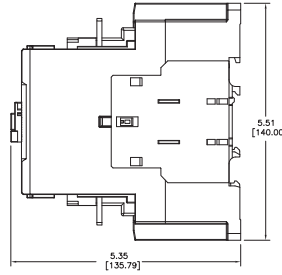
RC-75A – 150A CONTACTORS AND RSC-180 – 220 CONTACTORS

RC-75A, RC-85A, RC-100A

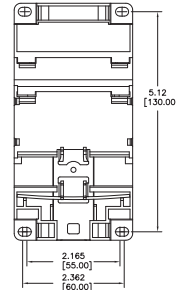
RC-75A-100A : 3.52 lbs.



TOP VIEW



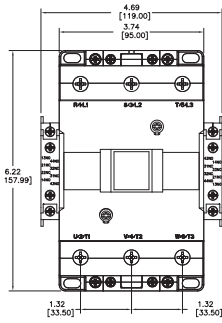
RIGHT SIDE VIEW



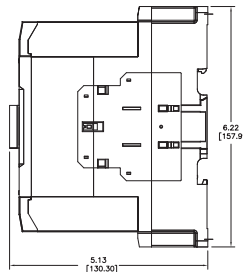
BOTTOM VIEW

RC-130A, RC-150A

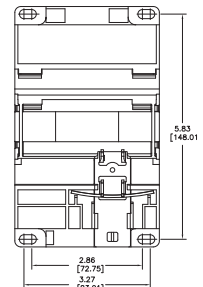
RSC-130A-150A : 5.3 lbs.



TOP VIEW



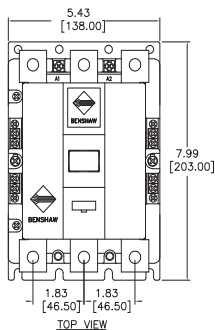
RIGHT SIDE VIEW



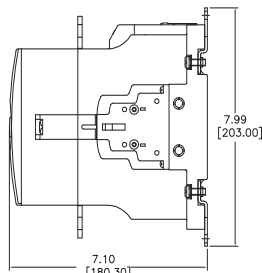
BOTTOM VIEW

RSC-180, RSC-220

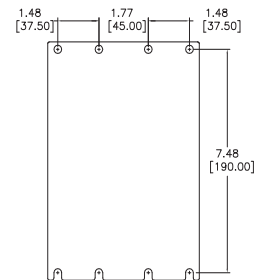
RSC-180-220 : 11.9 lbs.



TOP VIEW

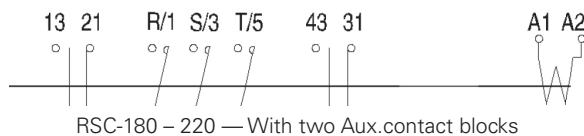


RIGHT SIDE VIEW



BOTTOM VIEW

Circuit Diagram

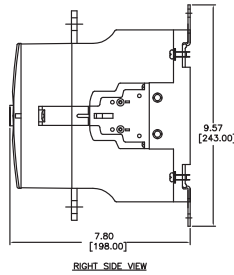
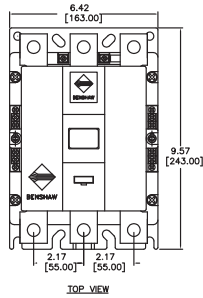


RSC-180 – 220 — With two Aux.contact blocks

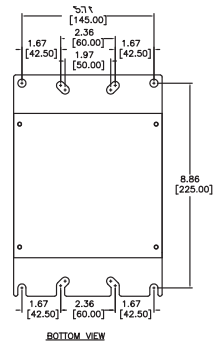
CONTACTOR - MOUNTING DIMENSIONS

RSC-300 – 800 CONTACTORS

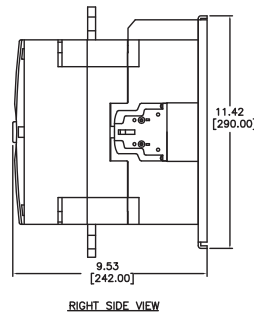
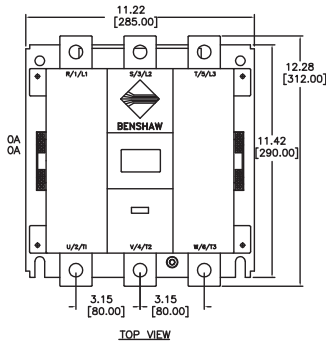
RSC-300, RSC-400



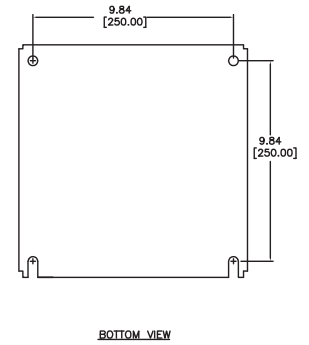
RSC-300-400 : 20.3 lbs.



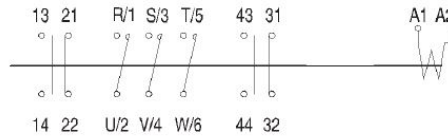
RSC-600, RSC-800



RSC-600-800 : 49.4



Circuit Diagram



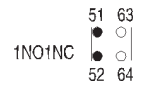
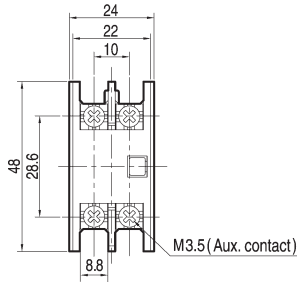
RSC-300 – 800

CONTACTOR - MOUNTING DIMENSIONS

AUXILIARY CONTACTS

RC-AU2-1A1B

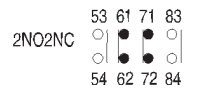
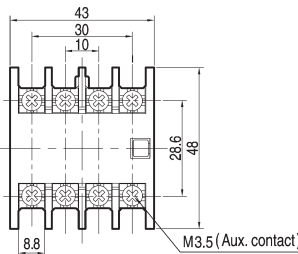
Weight: 28 g



Wiring Diagram

RC-AU4-2A2B

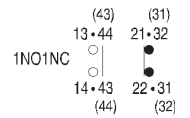
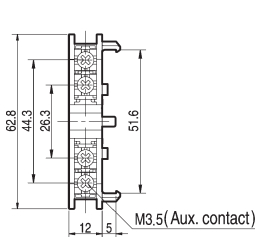
Weight: 50 g



Wiring Diagram

RC-UA1

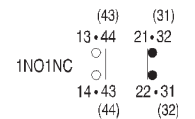
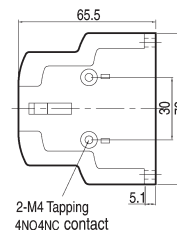
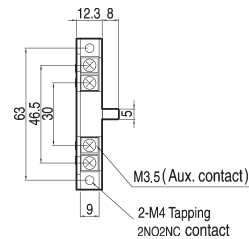
Weight: 33 g



Wiring Diagram

RC-AU100

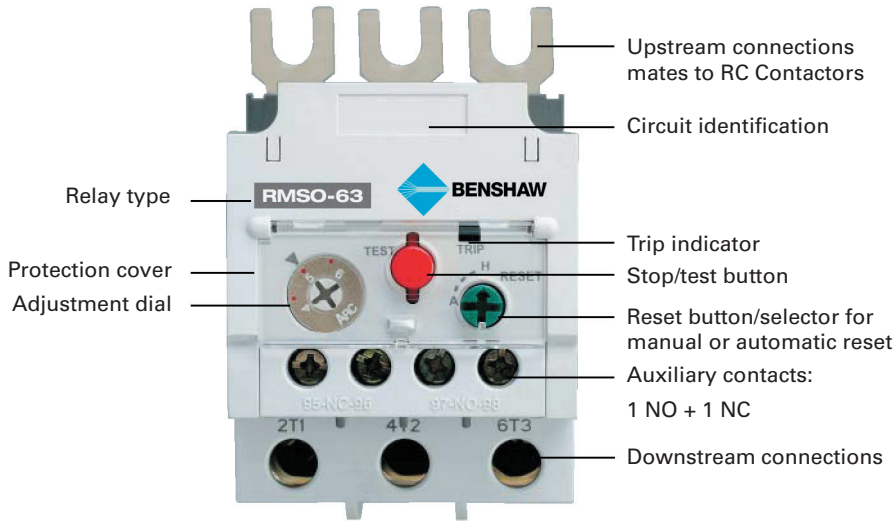
Weight: 45 g



Wiring Diagram

BIMETALLIC OVERLOAD RELAYS

RMSO/SPO SERIES — FOR MOTOR PROTECTION UP TO 800 A
UP TO 690 V FOR CATEGORY AC-3



	Stop	Test/Trip	Reset
NC 95-96			
NO 97-98			

RMSO overload relay highlights:

RMSO SPO Series overload relays are bimetallic-style and are designed to protect AC circuits and motors against overloads, phase failure, long starting times and stalling of the motor.

KEY ADVANTAGES:

- Meet EN 60947-1, EN 60947-4-1 standards
- CE, CSA, cUL, UL listed
- Trip indicator
- Reset button/selector for manual or auto reset
- Finger-safe terminals
- Differential-type phase failure protection
- Add-on accessories available
- Close couple to RC contactors (see page 163–164)
- Separate mount bases available for RMSO-32-150

STANDARD FEATURES:

- IP20 protection (IEC 60 529)
- Trip indicator
- Reset button/selector for manual or auto reset
- Test trip device
- Finger-safe terminals
- Overload adjustment dial cover
- 1 NO and 1 NC auxiliary contacts
- Identification labels
- Temperature compensation
- -60°C to 70°C storage temperature range
- -5°C to 55°C operating temperature range
- Differential-type phase loss protection
- 6 kV dielectric strength at 50 Hz (IEC 25505)
- 6 kV impulse withstand voltage (IEC 801-5)

Guaranteed ... for two full years.

Only Benschaw has a two year guarantee.

Every Benschaw modular overload relay is guaranteed for two full years. Other manufacturers limit their warranties to just one year. But at Benschaw, we believe that, because we build them better, we can guarantee them longer.



BIMETALLIC OVERLOAD RELAYS - SPECIFICATIONS

RMSO SERIES

ELECTRICAL CHARACTERISTICS OF POWER CIRCUIT

Specification	RMSO-32	RMSO-63	RMSO-95	RMSO-150
Differential Type (Phase failure protection)	Yes	Yes	Yes	Yes
Tripping Class (IEC 60947-4-1)	10 A, 20	10 A, 20	10 A, 20	10 A, 20
Terminal Type	Screw Clamp	Screw Clamp	Screw Clamp	Screw/Lug
Number of Poles	3	3	3	3
Rated Operational Voltage (Ue)	Up to 690 V	Up to 690 V	Up to 690 V	Up to 690 V
Rated Insulation Voltage (Ui)	690 V	690 V	690 V	690 V
Rated Impulse Voltage (Uimp)	6 kV	6 kV	6 kV	6 kV
Setting Range	0.1~32 A	4~65 A	7~95 A	34~150 A
Degree of Protection (IEC 60 529)	IP20	IP20	IP20	IP20
Temperature Compensation (°C)	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
Trip Indicating Function	•	•	•	•
Stop Function	•	•	•	•
Test Function	•	•	•	•
Manual/Automatic Reset Function	•	•	•	•
Applied Contactors	RC-9A, 12A, 18A, 22A, 32A, 40A	RC-50A, 65A	RC-75A, 85A, 100A	RC-130A, 150A

SPO SERIES








ELECTRICAL CHARACTERISTICS OF POWER CIRCUIT

Specification	SPO-220	SPO-400	SPO-800
Differential Type (Phase failure protection)	Yes	Yes	Yes
Trip Class	10 A, 20	10 A, 20	10 A, 20
Terminal Type	Screw/Lug	Screw/Lug	Screw/Lug
Number of Poles	3	3	3
Rated Operational Voltage (Ue)	Up to 690 V	Up to 690 V	Up to 690 V
Rated Insulation Voltage (Ui)	690 V	690 V	690 V
Rated Impulse Voltage (Uimp)	6 kV	6 kV	6 kV
Setting Range	65~240A	85~400 A	200~800 A
Degree of Protection (IEC 60 529)	IP20	IP20	IP20
Temperature Compensation (°C)	-5 ~ +40	-5 ~ +40	-5 ~ +40
Trip Indicating Function	•	•	•
Stop Function	•	•	•
Test Function	•	•	•
Applied Contactors	RSC-180,RSC-220	RSC-300, RSC-400	RSC-600, RSC-800
Separate Mounting Unit		-	-

BIMETALLIC OVERLOAD RELAYS

RMSO/SPO SERIES — BIMETALLIC — CLASS 10A AND 20

Simple, fully adjustable overload relays.

Extended Part No.	Setting Range Min. (A) to Max. (A)	Overload Frame (Contactor Mount)
0.14	0.1 to 0.16	
0.21	0.16 to 0.25	
0.33	0.25 to 0.4	
0.52	0.4 to 0.63	
0.82	0.63 to 1	
1.3	1 to 1.6	
2.1	1.6 to 2.5	
3.3	2.5 to 4	
5	4 to 6	
6.5	5 to 8	
7.5	6 to 9	
8.5	7 to 10	
11	9 to 13	
15	12 to 18	
19	16 to 22	
22	18 to 26	
30	24 to 36	
34	28 to 40	
42	34 to 50	
55	45 to 65	
65	54 to 75	
74	63 to 85	
80	65 to 100	
107	85 to 125	
130	100 to 160	
150	120 to 180	
200	160 to 240	
250	200 to 300	
350	260 to 400	
500	400 to 600	
660	520 to 800	

Benshaw bimetallic overload relays integrally mount to RC and RSC contactors to provide thermal overload protection.



THE SURPROTEX OVERLOAD RELAY

The SurProtex overload relay can be mounted directly to the magnetic contactors without additional brackets.



SAFETY COVER

A “finger-proof” safety cover prevents any contact with live parts.



SIMPLE ADJUSTMENTS

Overload adjustments are easy to access and straightforward to set.



TRIP/RESET INDICATOR

Each overload relay has a manual trip operator and indicator flag.

NOTE: Direct mount to RC and RSC Series contactors only.

BIMETALLIC OVERLOAD RELAYS - PRICING

RMSO/SPO — BIMETALLIC — CLASS 10A



Model Number	Overload Range (A)	List Price
--------------	--------------------	------------

For Contactors RC-9A, 12A, 18A, 22A, 32A, 40A

☞ RMSO-32-0.14	0.1–0.16	\$92
☞ RMSO-32-.2A1	0.16–0.25	\$92
☞ RMSO-32-.3A3	0.25–0.4	\$92
☞ RMSO-32-.5A2	0.4–0.63	\$92
☞ RMSO-32-.8A2	0.63–1	\$92
☞ RMSO-32-1.3A	1–1.6	\$92
☞ RMSO-32-2.1A	1.6–2.5	\$92
☞ RMSO-32-3.3A	2.5–4	\$92
☞ RMSO-32-5A	4–6	\$92
☞ RMSO-32-6.5A	5–8	\$92
☞ RMSO-32-7.5A	6–9	\$92
☞ RMSO-32-8.5A	7–10	\$92
☞ RMSO-32-11A	9–13	\$92
☞ RMSO-32-15A	12–18	\$92
☞ RMSO-32-19A	16–22	\$92
☞ RMSO-32-21.5A	18–25	\$92
☞ RMSO-32-27A	22–32	\$92
☞ RMSO-32-30A	28–40	\$92

For Contactors RC-50A and 65A

☞ RMSO-63-8.5A	7–10	\$143
☞ RMSO-63-11A	9–13	\$143
☞ RMSO-63-15A	12–18	\$143
☞ RMSO-63-19A	16–22	\$143
☞ RMSO-63-21.5A	18–25	\$143
☞ RMSO-63-30A	24–36	\$143
☞ RMSO-63-34A	28–40	\$143
☞ RMSO-63-42A	34–50	\$143
☞ RMSO-63-55A	45–65	\$143

☞ Web stocked

Model Number	Overload Range (A)	List Price
--------------	--------------------	------------

For Contactors RC-75A, 85A and 100A

☞ RMSO-95-8.5A	7–10	\$176
☞ RMSO-95-11A	9–13	\$176
☞ RMSO-95-15A	12–18	\$176
☞ RMSO-95-19A	16–22	\$176
☞ RMSO-95-21.5A	18–25	\$176
☞ RMSO-95-30A	24–36	\$176
☞ RMSO-95-34A	28–40	\$176
☞ RMSO-95-42A	34–50	\$176
☞ RMSO-95-55A	45–65	\$176
☞ RMSO-95-65A	54–75	\$176
☞ RMSO-95-80A	80–100	\$176

For Contactors RC-130A and 150A

☞ RMSO-150-42A	34–50	\$233
☞ RMSO-150-55A	45–65	\$233
☞ RMSO-150-65A	54–75	\$233
☞ RMSO-150-74A	63–85	\$233
☞ RMSO-150-93A	80–105	\$233
☞ RMSO-150-113A	95–130	\$233
☞ RMSO-150-130A	110–150	\$233

Model Number	Overload Range (A)	List Price
--------------	--------------------	------------

For Contactors RSC-180 and 220

SPO-220-80A	65–100	\$361
SPO-220-107A	85–125	\$361
SPO-220-130A	100–160	\$361
SPO-220-153	120–180	\$361
SPO-220-200A	160–240	\$361

For Contactors RSC-300 and 400

SPO-400-107	85–125	\$388
SPO-400-130	100–160	\$388
SPO-400-150A	120–180	\$388
SPO-400-200	160–240	\$388
SPO-400-265	200–300	\$388
SPO-400-350A	260–400	\$388

For Contactors RSC-600 and 800

SPO-800-250A	200–300	\$1,262
SPO-800-350	260–400	\$1,262
SPO-800-515	400–600	\$1,262
SPO-800-660A	520–800	\$1,262

BIMETALLIC OVERLOAD RELAYS - PRICING

RMSO/SPO SERIES — BIMETALLIC — CLASS 20



Model Number	Overload Range (A)	List Price
For Contactors RC-9A, 12A, 18A, 22A, 32A, 40A		
☒ RMSO-32H-1.3A	1–1.6	\$92
☒ RMSO-32H-2.1A	1.6–2.5	\$92
☒ RMSO-32H-3.3A	2.5–4	\$92
☒ RMSO-32H-5A	4–6	\$92
☒ RMSO-32H-7.5A	6–9	\$92
☒ RMSO-32H-11A	9–13	\$92
☒ RMSO-32H-15A	12–18	\$92
☒ RMSO-32H-19A	16–22	\$92
☒ RMSO-32H-21.5A	18–25	\$92
☒ RMSO-32H-27A	22–32	\$92
☒ RMSO-32H-34A	28–40	\$92
For Contactors RC-50A and 65A		
RMSO-63H-21.5A	18–25	\$143
RMSO-63H-30A	24–36	\$143
RMSO-63H-34A	28–40	\$143
RMSO-63H-42A	34–50	\$143
RMSO-63H-55A	45–65	\$143

Model Number	Overload Range (A)	List Price
For Contactors RC-75A, 85A and 100A		
RMSO-95H-21.5A	18–25	\$176
RMSO-95H-30A	24–36	\$176
RMSO-95H-34A	28–40	\$176
RMSO-95H-42A	34–50	\$176
RMSO-95H-55A	45–65	\$176
RMSO-95H-65A	54–75	\$176
RMSO-95H-74A	63–85	\$176
RMSO-95H-80A	70–95	\$176
RMSO-95H-90A	80–100	\$176
For Contactors RC-130A and 150A		
RMSO-150H-42A	34–50	\$233
RMSO-150H-65A	54–75	\$233
RMSO-150H-93A	80–105	\$233
RMSO-150H-113A	95–130	\$233
RMSO-150H-130A	110–150	\$233

Model Number	Overload Range (A)	List Price
For Contactors RSC-180 and 220		
SPO-220H-80A	65–100	\$361
SPO-220H-130A	100–160	\$361
SPO-220H-200A	160–240	\$361
For Contactors RSC-300 and 400		
SPO-400H-130A	100–160	\$422
SPO-400H-200A	160–240	\$422
SPO-400H-250A	200–300	\$422
SPO-400H-350A	260–400	\$422
For Contactors RSC-600 and RSC - 800		
SPO-800H-250A	200–300	\$1,262
SPO-800H-350A	260–400	\$1,262
SPO-800H-500A	400–600	\$1,262
SPO-800H-660A	520–800	\$1,262

☒ Web stocked

BIMETALLIC OVERLOAD RELAYS - PRICING

RMSO/SPO SERIES ACCESSORIES



SEPARATE MOUNT ADAPTERS

Used to individually mount the RMSO overload relays.
 Can be DIN rail or panel mounted.

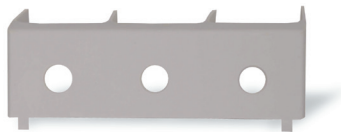
Model Number	Description	Terminal Type	Overload Type	List Price
RMSO-B32	Overload Mounting Base	Screw	RMSO-32/32H	\$30
RMSO-B63	Overload Mounting Base	Screw	RMSO-63/63H	\$42
RMSO-B95	Overload Mounting Base	Screw	RMSO-95/95H	\$51
RMSO-B150	Overload Mounting Base	Screw	RMSO-150/150H	\$70



REMOTE RESET DEVICE

Model Number	Description	Overload Type	List Price
🗄 RMSOUM4R	400mm Cable	RMSO32-95	\$30
🗄 RMSOUM5R	500mm Cable	RMSO32-95	\$36
🗄 RMSOUM6R	600mm Cable	RMSO32-95	\$43

🗄 Web stocked



SPO OVERLOAD TERMINAL COVERS

Model Number	Overload Frame	List Price
🗄 SPO-APT25	SPO-125	\$28
🗄 SPO-APT150	SPO-150	\$28
🗄 SPO-APT220	SPO-220	\$28
🗄 SPO-APT400	SPO-400	\$36
🗄 SPO-APT600	SPO-600	\$92

Kits include line and load terminal covers.

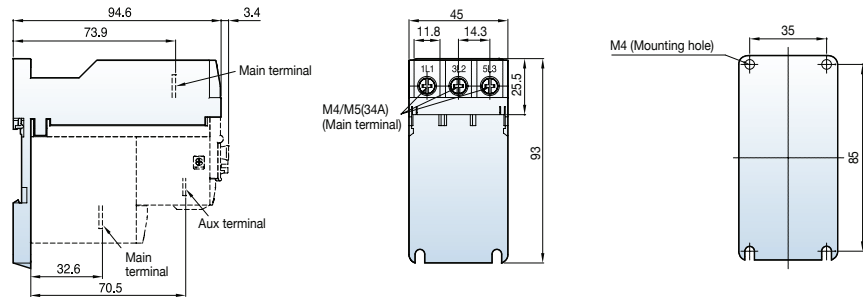
🗄 Web stocked

OVERLOAD RELAY DIMENSIONS

RMSO SEPARATE MOUNTING BASE, SCREW TYPE — DIMENSIONS

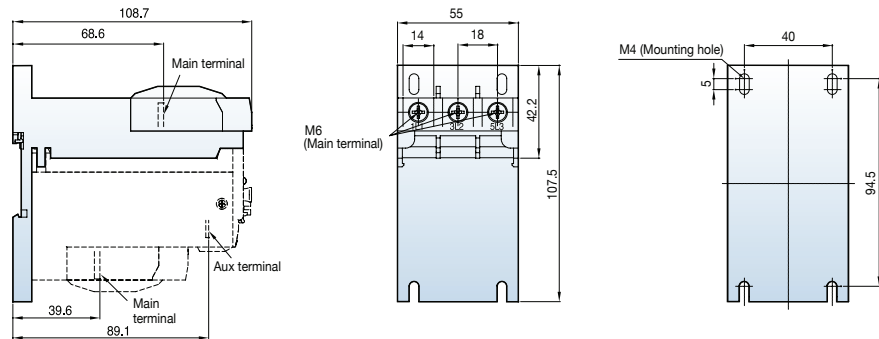
RMSO-B32

Weight: 68g



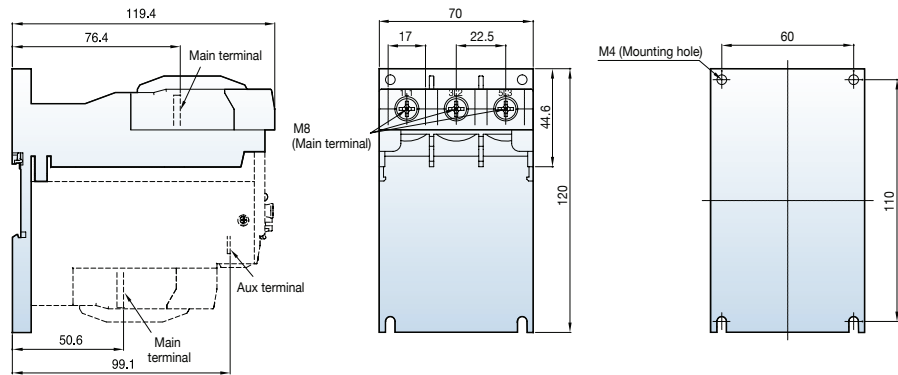
RMSO-B63

Weight: 134g



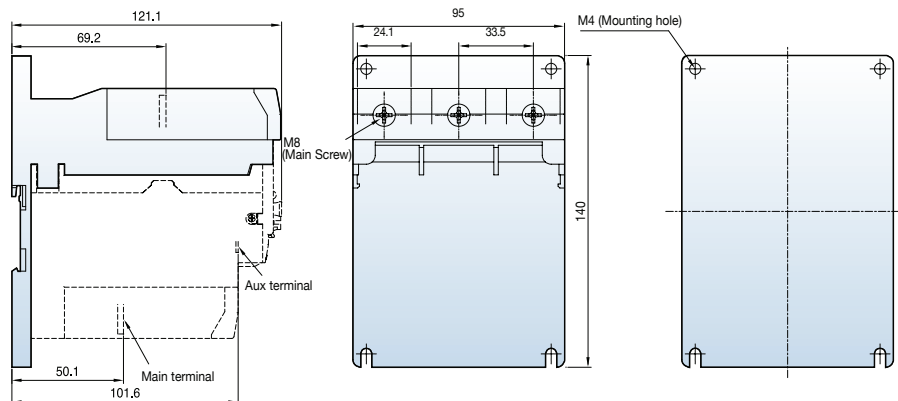
RMSO-B95

Weight: 230g



RMSO-B150

Weight: 284g

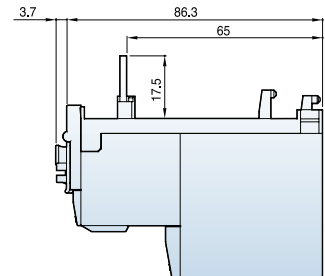
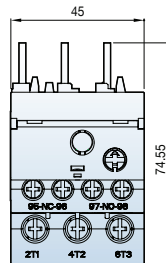


OVERLOAD RELAY DIMENSIONS

RMSO CLASS 10, 20 DIRECT MOUNT

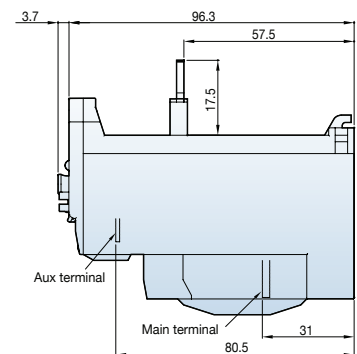
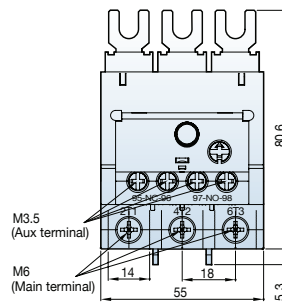
RMSO-32/32H

Weight: 167g



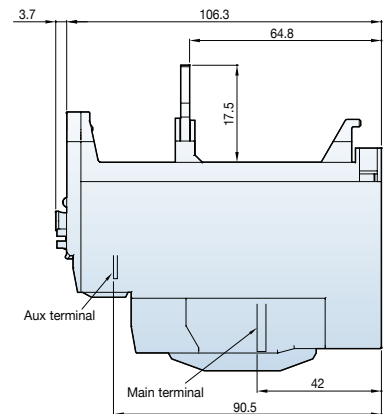
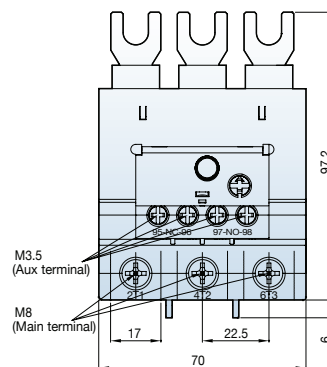
RMSO-63/63H

Weight: 303g



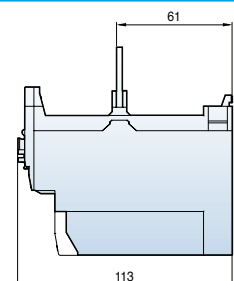
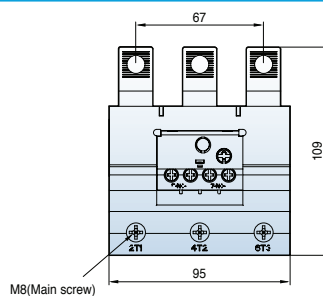
RMSO-95/95H

Weight: 474g



RMSO-150/150H

Weight: 0.7kg

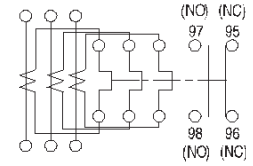
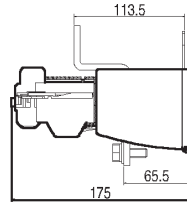
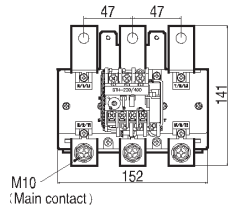


OVERLOAD RELAY MOUNTING DIMENSIONS

SPO CLASS 10, 20 DIRECT MOUNT

SPO-220

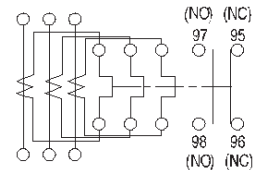
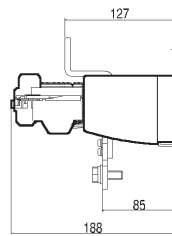
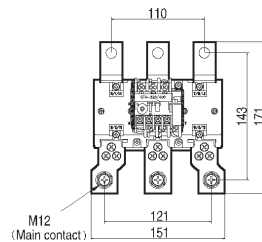
Weight: 2.5 Kg



Wiring Diagram

SPO-400

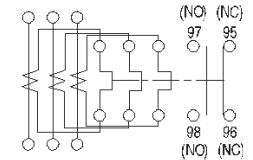
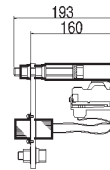
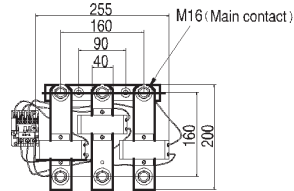
Weight: 2.6 Kg



Wiring Diagram

SPO-800

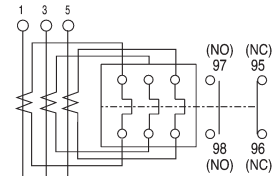
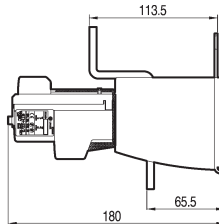
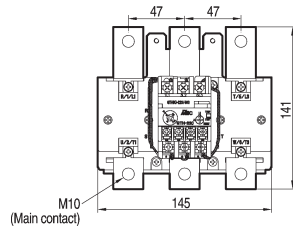
Weight: 5.5 Kg



Wiring Diagram

SPO-220H

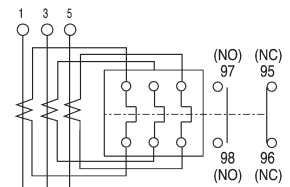
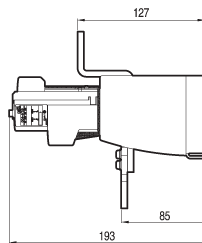
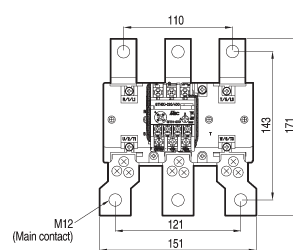
Weight: 2.5 Kg



Wiring Diagram

SPO-400H

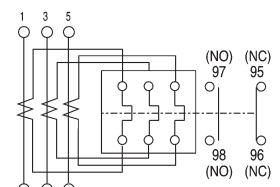
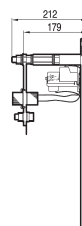
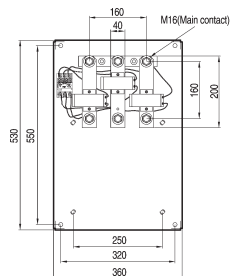
Weight: 2.6 Kg



Wiring Diagram

SPO-800H

Weight: 11.5 Kg



Wiring Diagram

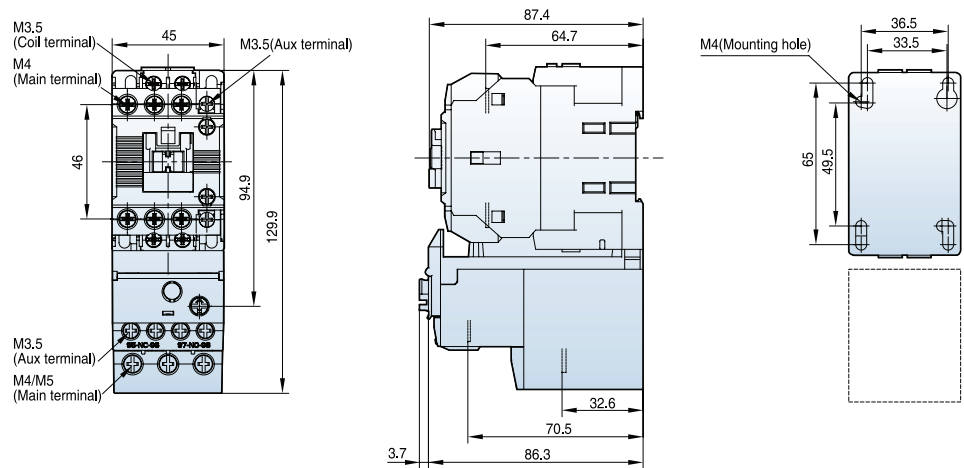
Dimensions are in mm (1 inch = 25.4 mm).

MOTOR STARTER OVERALL DIMENSIONS

RC+RMSO SERIES

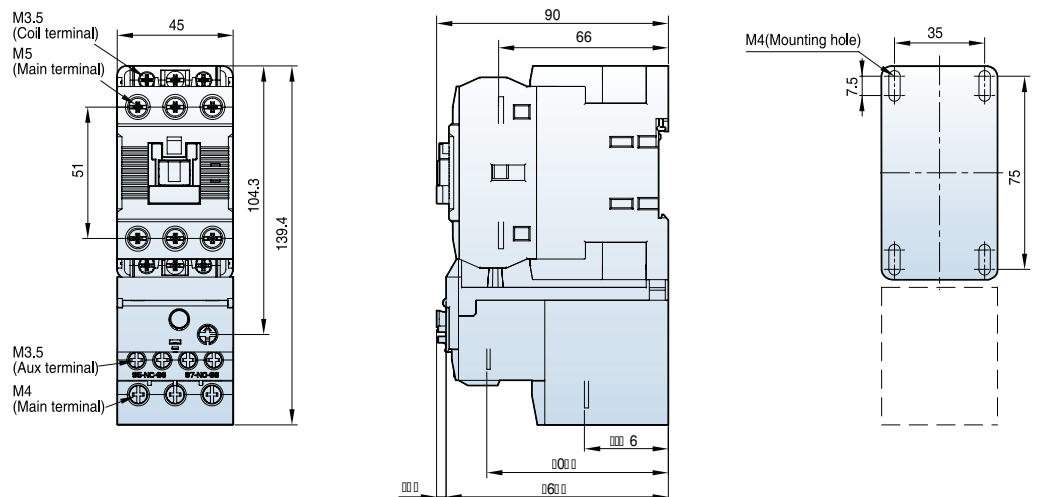
RC-9A through RC-22A with RMSO-32

Weight: 0.5 kg



RC-32A and RC-40A with RMSO-32

Weight: 0.6 kg



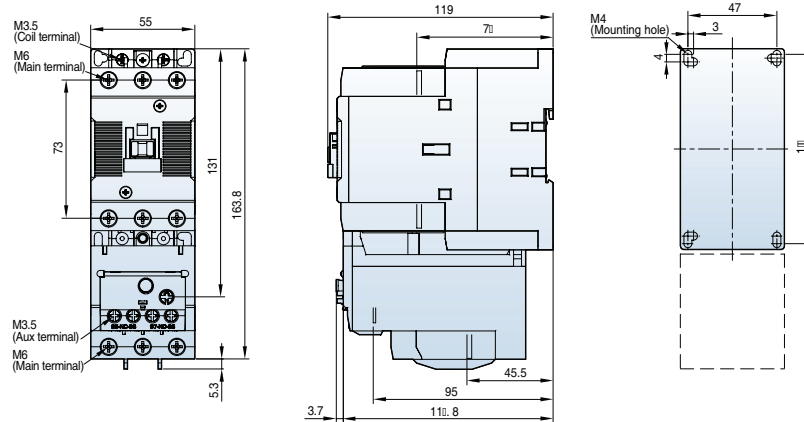
Dimensions are in mm (1 inch = 25.4 mm).

BIMETALLIC STARTER DIMENSIONS (65AF~150AF)

RC+RMSO SERIES

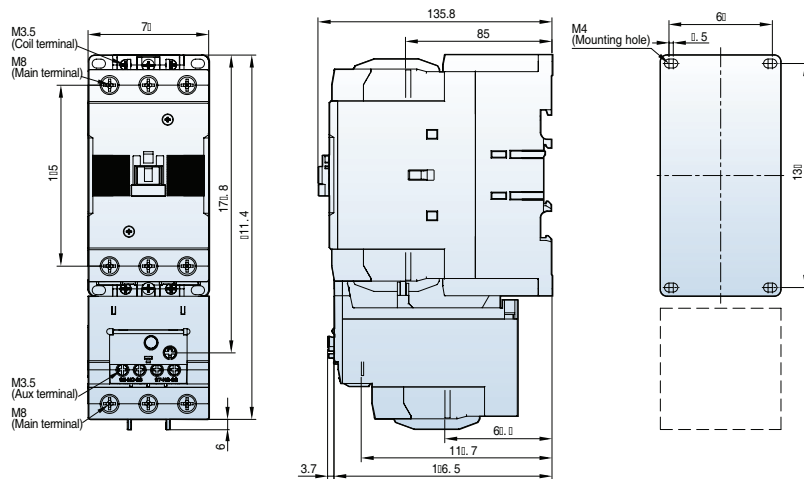
RC-50A and RC-65A
with RMSO-63

Weight: 1.3 kg



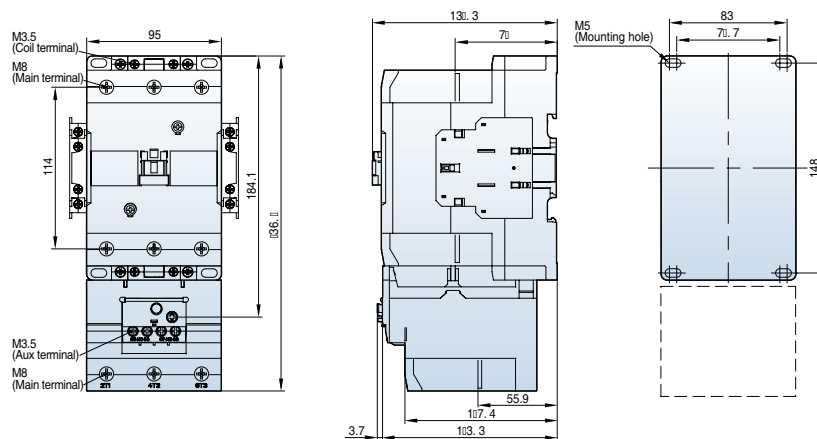
RC-75A through RC-100A
with RMSO-95

Weight: 2.3 kg



RC-130A and RC-150A
with RMSO-150

Weight: 2.9 kg



Dimensions are in mm (1 inch = 25.4 mm).

ELECTRONIC OVERLOAD RELAYS - PRICING

SPE SERIES — ELECTRONIC TYPE — CLASS 1–30



SPE22-3PR-1.5A, -5A, -22A, 32A -40A

Direct mount on RC- 9, 12, 18, 22, 32, 40

DESCRIPTION:

- Wide and adjustable current range
- Adjustable trip time class 5, 10, 15, 20, 30
- Direct mount to RC 9 to 40 contactors
- Separate mount using 3SR type with screw terminals
- DIN rail mountable except SPE-80S
- Manual reset is standard



SPE22-3SR-1.5A, -5A, -22A, -40A

Screw terminals

FEATURES:

- Operation status LED indicator
 - Normal operation
 - Overload
 - Phase imbalance
- Trip cause indication
 - Overcurrent
 - Phase loss
 - Reverse phase
- Test / Reset push-button
- Trip time setting 0–30 sec. @ 6 x set current
- Setting range 0.1–80 amps



SPE80-3SR-80A

Separate mount with all contactors

Model Number	Overload Range (A)	List Price
Contactor RC - 9, 12, 18 & 22 — Direct Mount to RC Contactor ONLY		
☞ SPE22-3PR-1.5A	0.3~1.5	\$176
☞ SPE22-3PR-5A	1–5	\$176
☞ SPE22-3PR-22A	4.4~22	\$206
Contactor RC - 32 & 40 — Direct Mount to RC Contactor ONLY		
☞ SPE40-3PR-40A	8~40	\$317
All Contactors — Separate Mount*		
☞ SPE22-3SR-1.5A	0.3~1.5	\$176
☞ SPE22-3SR-5A	1–5	\$176
☞ SPE22-3SR-22A	4.4~22	\$206
☞ SPE40-3SR-40A	8~40	\$351
All Contactors — Separate Mount*		
☞ SPE80-3SR-80A	16–80	\$351

Separate 120 VAC control source is required for operation.

*Optional CTs can be used for higher current ratings with SPE22-35R-5A

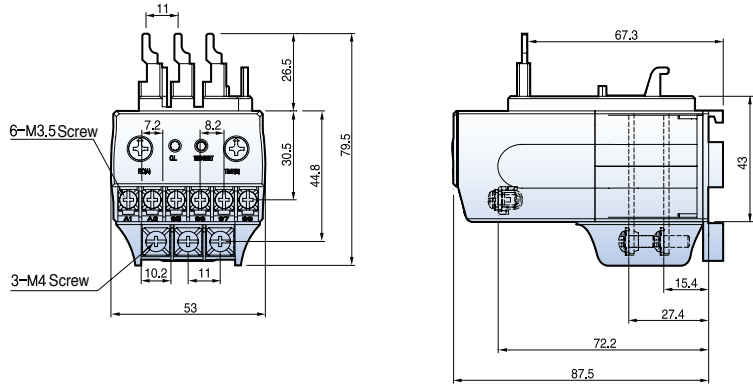
☞ Web stocked

ELECTRONIC OVERLOAD RELAYS - DIMENSIONS

SPE SERIES — ELECTRONIC TYPE — CLASS 1-30

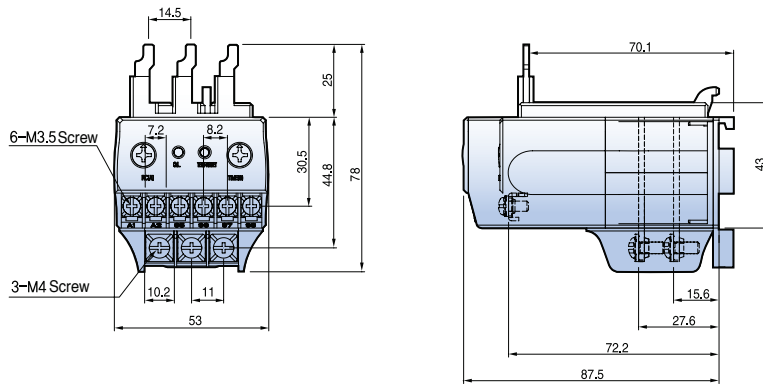
SPE22-3PR

Weight: 0.18kg



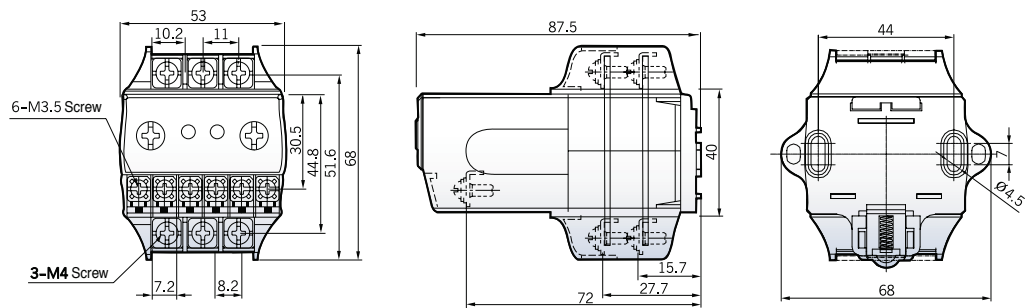
SPE40-3PR

Weight: 0.20kg/0.22kg



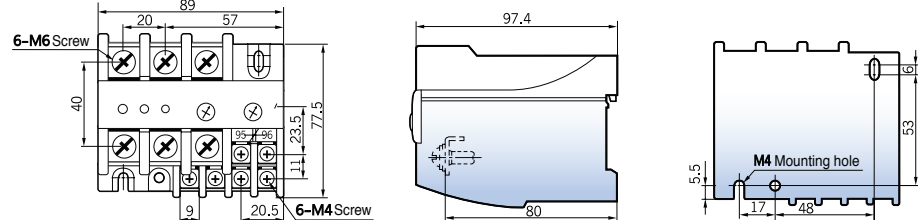
SPE22-3SR and SPE40-3SR

Weight: 0.19kg/0.21kg



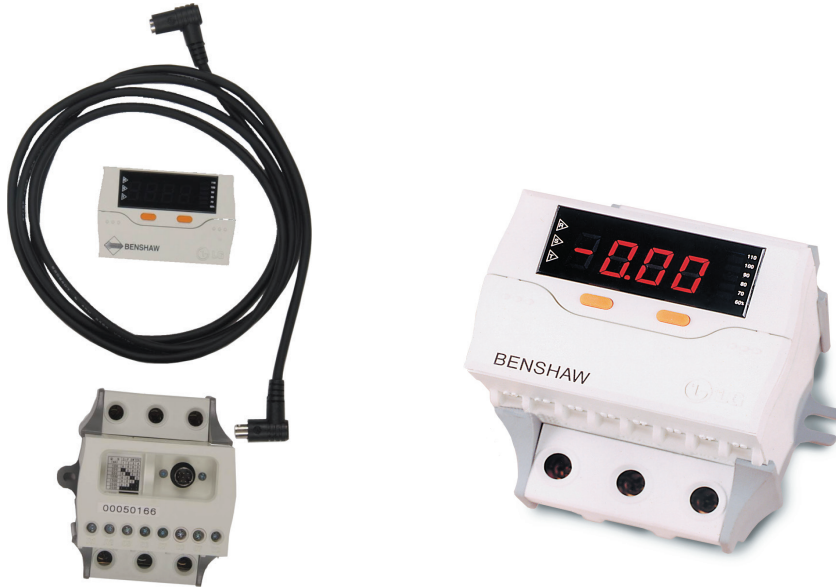
SPE80-3SR

Weight: 0.42kg/0.46kg



DIGITAL OVERLOAD RELAYS - PRICING

SPD SERIES — CLASS 1-60



Model Number	GFI Protection	Setting Range (A)	Wire Method	List Price
Separate Mount — All Contactors				
SPD-06S	No	0.5~6	Tunnel or Screw	\$705
SPD-06SZ	Yes	0.5~6	Tunnel or Screw	\$776
SPD-60S	No	5~60	Tunnel or Screw	\$705
SPD-60SZ	Yes	5~60	Tunnel or Screw	\$811

Separate 120VAC control source is required for operation.

Operational CTs can be used for higher current rated contactors.

Z Includes ground fault CT protection. See page 181 for ground fault CT information.

Kit Part Number	Description	List Price
Cable for Door Mounting (use existing display)		
SPD-C1	1m cable for remote mounting the display	\$92
SPD-C2	2m cable for remote mounting the display	\$98
SPD-C3	3m cable for remote mounting the display	\$107

Kit includes cable and mounting hardware

DIGITAL OVERLOAD RELAY - RATINGS

SPD SERIES — CLASS 1–60

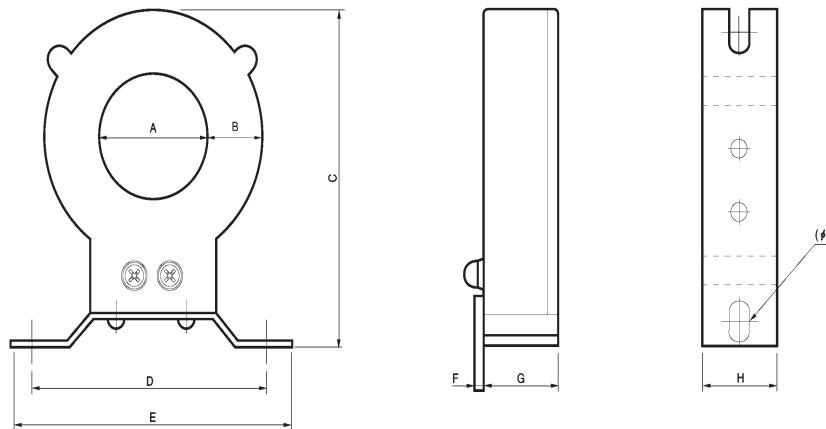
Model Number		SPD-06S	SPD-60S	SPD-06SZ	SPD-60SZ
Wiring		Screw Type or Tunnel Type			
Display		Unit Mount or Remote Mount			
Operation Time		Select Either Reverse Time or Definite Time			
Characteristics	Protection	Overcurrent Adjustable			
	Phase Failure	3 Sec.			
	Reverse Phase	Within 0.1 Sec.			
	Asymmetry	5 Sec.			
	Stall	5 Sec.			
	Lock	Within 0.5 Sec.			
	Under Current	3 Sec.			
	Ground Fault	Within 0.05–1 Sec. Selectable (0.05–1.0 sec.) Z Models Only			
	Short Circuit	Within 50ms			
Alarm		Variable (60–110% of the setting current)			
Current Setting Range (A)		0.5–6	5–60	0.5–6	5–60
Time Setting Range (sec.)	Definite	Delay in Starting	0–60 sec.		
	Time	Delay in Operating	0–30 sec.		
	Inverse Time		0–60 sec.		
	Reset		Manual Reset		
Tolerance	Current	+ 5%			
	Time	± 5% (or ± 0.5% sec.)			
Operating Power	Voltage	AC 120 V			
	Frequency	60 Hz (50 Hz)			
Aux. Contact	OL	2-SPST	3 A/250 VAC Resistive load		
	AL	SPST	3 A/250 VAC Resistive load		
Insulation Resistance			Over DC 500 V 100 MO		
Surge Impulse Voltage (IEC1000 - 4-5)		1.2 x 50us 6 kV (apply standard wave form)			
Fast Transient Burst (IEC1000 - 4-4)		2.5 kV/5 min.			
Environment	Temperature	Operation	-25 to 70°C		
		Storage	-30 to 80°C		
	Humidity	30–90% RH (non-condensing)			
Display	7 - Segment	3-Phase Current and Fault Indication			
	Bar-Graph	60–110% of Real Load Current			
Mounting Type		3mm DIN Rail or Panel Mount			

DIGITAL OVERLOAD RELAY ZCT

OPTIONAL ZERO SEQUENCE GROUND FAULT CURRENT TRANSFORMER (ZCT)

RATINGS

Model	Type	Diameter (mm)	Ratio	Weight (kg)
SPD-06SZCT	ZCT, D50, SPD-Z	50	200 mA/100 mV	0.7
SPD-60SZCT	ZCT, D65, SPD-Z	65	200 mA/100 mV	0.9



DIMENSIONS

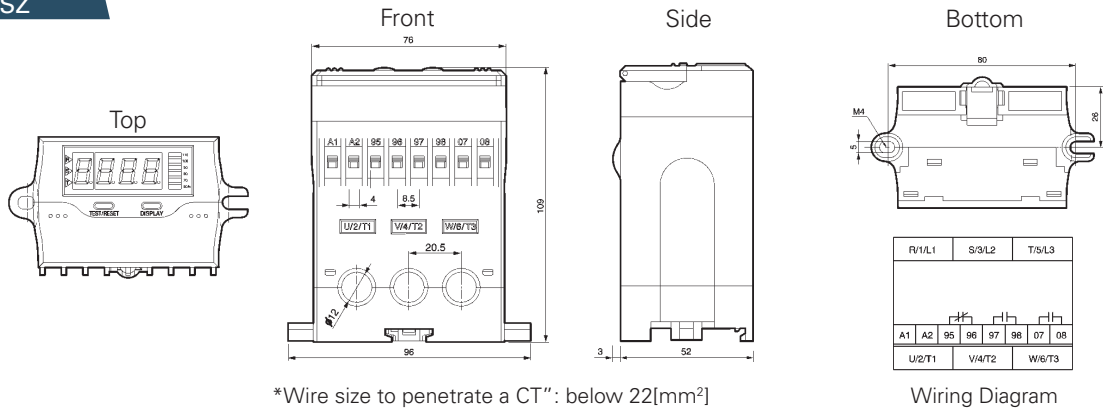
Model	A	B	C	D	E	F	G	H	I
SPD-06SZCT	50	25	131	100	122	7	32	36	6
SPD-60SZCT	65	26	143	114	133	7	39	37	6

DIGITAL OVERLOAD RELAY MOUNTING DIMENSIONS

SPD SERIES

SPD-06S, SPD-06SZ,
SPD-60S, SPD-60SZ

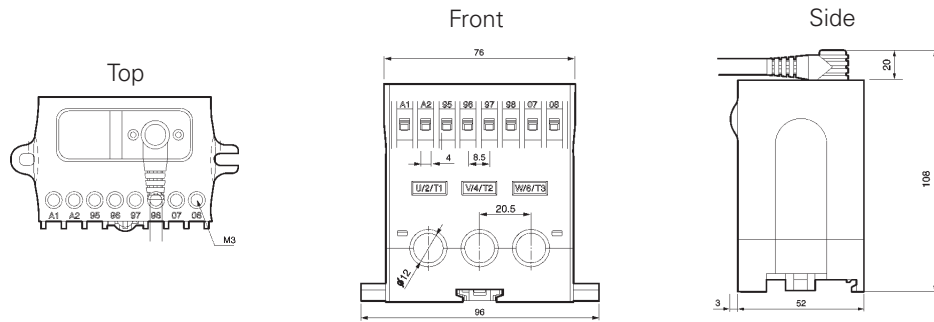
Weight: 0.56 kg



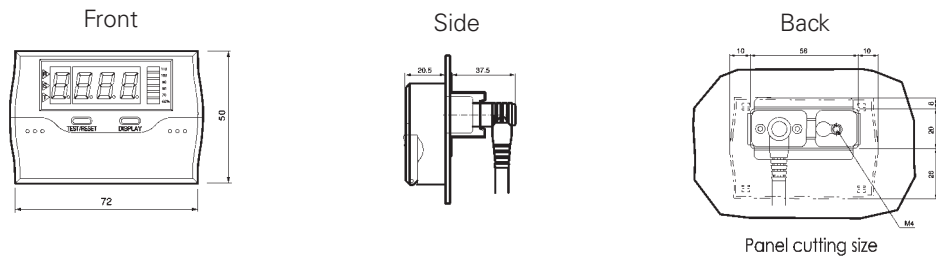
Wire size to penetrate a CT: below 22[mm²]

SPD with LED display removed

Weight: 0.5 kg



Panel mounting the LED display



Dimensions are in mm (1 inch = 25.4 mm).

Note: When remote mounting the display, the display and main body of the SPD are calibrated as a unit.

Do not swap displays with other units.

Note: For units with ground fault, the 07 and 08 terminals are for ZCT connection.

MOTOR STARTER PROTECTORS

RMSP SERIES — EFFICIENT FUNCTIONALITY AND COMPACT DESIGN



Snap together with an RC contactor to make a complete electro-mechanical combination starter



RMSP Series motor starter protector highlights:

RMSP Series manual starters meet or exceed all universal standards and offer efficient motor starting functionality in a compact design.

Protection functions include protection of group installation, protection of circuits, motor protection, starter protection and phase failure protection. RMSP starters provide a wide range of ambient temperature compensation. They couple directly to RC Series contactors for a complete electro-mechanical combination starter.

KEY ADVANTAGES:

- 45mm width up to 32 amps
- 55mm width up to 63 amps
- 70mm width up to 100 amps
- Three position operator (ON-OFF-TRIP) (on 100AF only)
- Complete range of accessories
- Handle locks in the off position
- Class 10 overload trip characteristics
- Trip test
- Finger-safe terminals
- DIN rail and screw mounting

STANDARD FEATURES:

- Front-mounted auxiliary contact
- Easy mounting onto DIN rail
- Large scale for current setting
- Auxiliaries snap on without tools
- Dial cover lock device
- Test trip device for checks of the trip mechanism
- Finger-safe terminals
- Dial cover
- Handle lock device (off positions)
- Three position operator handle (ON-OFF-TRIP) (on 100AF only)
- Identification labels
- High interrupt capability

Guaranteed ... for two full years.

Only Benschaw has a two year guarantee.

Every Benschaw modular overload relay is guaranteed for two full years. Other manufacturers limit their warranties to just one year. But at Benschaw, we believe that, because we build them better, we can guarantee them longer.



RMSP MANUAL STARTER SPECIFICATIONS



Specification		RMSP-32H	RMSP-63H	RMSP-100H
Frame		32AF	63AF	100AF
Rated Operational Voltage (Ue)		Up to 690 V	Up to 690 V	Up to 690 V
Rated Frequency		50/60 Hz	50/60 Hz	50/60 Hz
Rated Insulation Voltage (Ui)		690 V	1,000 V	1,000 V
Rated Impulse Voltage (Uimp)		6 kV	8 kV	8 kV
Utilization Category	IEC 60 947-2 (Breaker)	Cat. A	Cat. A	Cat. A
	IEC 60 947-4 (Starter)	AC3	AC3	AC3
Shock Resistance (IEC 68 Part 2-27)		25 g	25 g	25 g
Degree Of Protection (IEC 60 529)		IP20	IP20	IP20
Instantaneous Short Circuit Release		13 x Ie max.	13 x Ie max.	13 x Ie max.
Mechanical Endurance (Operating)		100,000	50,000	50,000
Electrical Indurance (Cycles)		100,000	25,000	25,000
Max. Operating Frequency Per Hour		25	25	25
Temperature Compensation (Operation) (°C)		-20 ~ +60-	20 ~ +60	-20 ~ +60
Phase Failure Function		Yes	Yes	Yes
Trip Indicating Function		Yes	Yes	Yes
Test Function		Yes	Yes	Yes

RMSP SERIES UL/CSA PERFORMANCE DATA

MOTOR PROTECTION FOR GROUP INSTALLATION

RMSP-32H

Rated Operational Current I _e [A]		0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Max. Short-Circuit Current	240 V [KA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	480Y/277 V [KA]	65	65	65	65	65	65	65	65	65	65	65	65	30	30	30	30
	600Y/347 V [KA]	25	25	25	25	25	25	25	25	25	25	25	25	10	10	10	10
Motor Load (1 Phase)	115 V [HP]	—	—	—	—	—	—	—	1/8	1/4	1/3	1/2	1/2	1	2	2	2
	230 V [HP]	—	—	—	—	—	1/10	1/6	1/3	3/4	1	1 1/2	2	3	3	5	5
Motor Load (3 Phase)	230 V [HP]	—	—	—	—	—	1/3	1/2	1	1 1/2	2	3	3	5	7 1/2	7 1/2	10
	480 V [HP]	—	—	—	—	1/2	3/4	1 1/2	2	5	5	7 1/2	7 1/2	10	15	15	20
	575 V [HP]	—	—	—	—	1/2	1	1 1/2	3	5	5	10	10	15	20	20	30
Max. Rated Current of Breaker [A]		15	15	15	15	15	15	15	15	20	30	40	50	60	80	100	125



RMSP-63H

Rated Operational Current I _e [A]		10	13	17	22	26	32	40	50	63
Max. Short-Circuit Current	240 V [KA]	100	100	100	100	100	100	100	100	100
	480Y/277 V [KA]	65	65	50	50	50	50	50	50	50
	600Y/347 V [KA]	25	25	10	10	10	10	10	10	10
Motor Load (1 Phase)	115 V [HP]	1/2	1/2	1	2	2	3	3	5	5
	230 V [HP]	1 1/2	2	3	3	5	5	7 1/2	10	15
Motor Load (3 Phase)	230 V [HP]	3	3	5	7 1/2	10	10	15	15	20
	480 V [HP]	7 1/2	7 1/2	10	15	20	25	30	40	50
	575 V [HP]	10	10	15	20	25	30	40	50	60
Max. Rated Current of Fuse/Breaker [A]		600	600	600	600	600	600	600	600	600



RMSP-100H

Rated Operational Current I _e [A]		17	22	26	32	40	50	63	75	90	100
Max. Short-Circuit Current	240 V [kA]	100	100	100	100	100	100	100	100	100	100
	480Y/277 V [kA]	65	65	65	65	65	65	50	50	50	50
	600Y/347 V [kA]	25	25	25	20	20	20	10	10	10	10
Motor Load	115 V [HP]	1	1 1/2	2	3	3	5	5	7 1/2	10	10
	230 V [HP]	3	3	5	5	7 1/2	10	15	15	20	20
Motor Load	230 V [HP]	5	7 1/2	10	10	15	15	20	25	30	40
	480 V [HP]	10	15	20	25	30	40	50	60	75	75
	575 V [HP]	15	20	25	30	40	50	60	75	100	100
Max. Rated Current of Fuse/Breaker [A]		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Manual motor controller "group installation" or "Type E starter" (UL 508, CSA C22.2 No. 14, for group installation, in connection with a short-circuit protection device.

RMSP SERIES UL/CSA PERFORMANCE DATA

MOTOR PROTECTION

Rated Operational Current I _e [A]	Thermal Release Adjustment Range [A]	Magnetic Release Operating Current [A]	Switching of 3-Phase AC Motors, AC-2, AC-3					
			3-Phase [kW] (50/60 Hz)			3-Phase HP (60 Hz)		
			230 V	400 V	690 V	230 V	480 V	575 V
RMSP-32H								
0.16	0.1...0.16	2.1	-	0.02	—	—	—	—
0.25	0.16...0.25	3.3	0.03	0.06	—	—	—	—
0.4	0.25...0.4	5.2	0.06	0.09	—	—	—	—
0.63	0.4...0.63	8.2	0.09	0.12	0.25	—	—	—
1	0.63...1.0	13	0.12	0.25	0.55	—	½	½
1.6	1.0...1.6	20.8	0.25	0.55	1.1	⅓	¾	1
2.5	1.6...2.5	32.5	0.37	0.75	1.5	½	1½	1½
4	2.5...4.0	52	0.75	1.5	3	1	2	3
6	4...6	78	1.5	2.2	4	1½	5	5
8	5...8	104	1.5	3	5.5	2	5	5
10	6...10	130	3	4	7.5	3	7½	10
13	9...13	169	3	5.5	11	3	7½	10
17	11...17	221	4	7.5	11	5	10	15
22	14...22	286	4	7.5	15	7½	15	20
26	18...26	338	5.5	11	18.5	7½	15	20
32	22...32	416	7.5	15	22	10	20	30
RMSP-63H								
10	6~10	130	3	4	7.5	3	7½	10
13	9~13	169	3	5.5	11	3	7½	10
17	11~17	221	4	7.5	11	5	10	15
22	14~22	286	4	7.5	15	7½	15	20
26	18~26	338	5.5	11	18.5	10	20	25
32	22~32	416	7.5	15	22	10	25	30
40	28~40	520	7.5	18.5	30	15	30	40
50	34~50	650	11	22	45	15	40	50
63	45~63	819	15	30	55	20	50	60
RMSP-100H								
17	11~17	221	4	7.5	11	5	10	15
22	14~22	286	4	7.5	15	7½	15	20
26	18~26	338	5.5	11	18.5	10	20	25
32	22~32	416	7.5	15	22	10	25	30
40	28~40	520	7.5	18.5	30	15	30	40
50	34~50	650	11	22	45	15	40	50
63	45~63	819	15	30	55	20	50	60
75	55~75	975	22	37	63	25	60	75
90	70~90	1170	30	45	75	30	75	100
100	80~100	1300	30	45	90	40	75	100

MOTOR STARTER PROTECTOR - PRICING

RMSP SERIES



32 AMP FRAME CLASS 10

Model Number	Rated Operational Current (A)	Thermal Release Adj. Range (A)	Disconnect Type	Weight	Dimensions (in.)			List Price
					H	W	D	
☒ RMSP-32HA16	0.16	0.1–0.16	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$90
☒ RMSP-32HA25	0.25	0.16–0.25	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$90
☒ RMSP-32HA4	0.4	0.25–0.4	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$90
☒ RMSP-32HA63	0.63	0.4–0.63	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$90
☒ RMSP-32H1A	1	0.63–0.1	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$90
☒ RMSP-32H1A6	1.6	1–1.6	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$97
☒ RMSP-32H2A5	2.5	1.6–2.5	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$97
☒ RMSP-32H4A	4	2.5–4	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H6A	6	4–6	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H8A	8	5–8	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H10A	10	6–10	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H13A	13	9–13	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H17A	17	11–17	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H22A	22	14–22	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H26A	26	18–26	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105
☒ RMSP-32H32A	32	22–32	Rotary	0.36 kg/1 lb.	3.7	1.7	3.9	\$105

63 AMP FRAME CLASS 10

Model Number	Rated Operational Current (A)	Thermal Release Adj. Range (A)	Disconnect Type	Weight	Dimensions (in.)			List Price
					H	W	D	
☒ RMSP-63H10A	10	6–10	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H13A	13	9–13	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H17A	17	11–17	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H22A	22	14–22	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H26A	26	18–26	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H32A	32	22–32	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H40A	40	28–40	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H50A	50	34–50	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349
☒ RMSP-63H63A	63	45–63	Rotary	1 kg/2.2 lbs.	5.5	2.2	5.7	\$349

☒ Web stocked

MOTOR STARTER PROTECTOR - PRICING

RMSP SERIES



100 AMP FRAME CLASS 10

Model Number	Rated Operational Current (A)	Thermal Release Adj. Range	Disconnect Type	Weight	Dimensions (in.)			List Price
					H	W	D	
RMSP-100H17A	17	11-17	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H22A	22	14-22	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H26A	26	18-26	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H32A	32	22-32	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H40A	40	28-40	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H50A	50	34-50	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H63A	63	45-63	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H75A	75	55-75	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H90A	90	70-90	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586
RMSP-100H100A	100	80-100	Rotary	2.2 kg/5 lbs.	6.5	2.8	6.7	\$586

Web stocked

MOTOR STARTER PROTECTOR - ACCESSORIES

RMSP SERIES

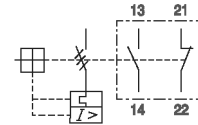
RMSP-FX11



AUXILIARY SWITCH

- Front mounting
- 2-pole
- One front-mounting module per RMSP

1NO1NC



Connection Diagram

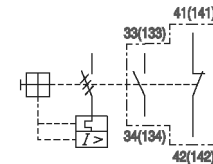
RMSP-LX11



AUXILIARY SWITCH

- Side mounting on the left
- 2-pole
- One side-mounting module per RMSP

1NO1NC



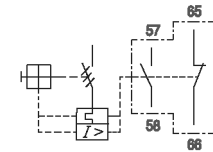
Connection Diagram

RMSP-LA



ANY TRIP ALARM SWITCH

- Side mounting on the left
- 2-pole
- One side-mounting module per RMSP (always directly fitted to the RMSP)



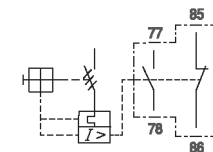
Connection Diagram

RMSP-LAM



MAGNETIC TRIP ALARM SWITCH

- Side mounting on the left
- 2-pole
- One side-mounting module per RMSP (directly fitted to RMSP except when using with any Trip Alarm)



Connection Diagram

MOTOR STARTER PROTECTOR - ACCESSORIES

RMSP SERIES

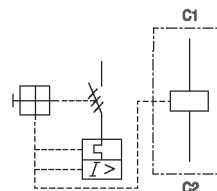


RMSP-RS120



SHUNT RELEASE

- Side mounting on the right
- One side-mounting module per RMSP (always directly fitted to the RMSP)



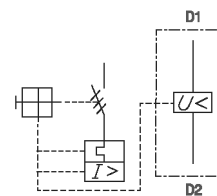
Connection Diagram — 120 V 60 Hz

RMSP-RU120



UNDERVOLTAGE RELEASE

- Side mounting on the right
- 2-pole
- One side-mounting module per RMSP (always directly fitted to the RMSP)



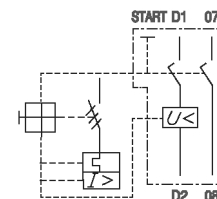
Connection Diagram — 120 V 60 Hz

RMSPR-UX



UNDERVOLTAGE RELEASE WITH SWITCH (ROTARY HANDLE ONLY)

- Side mounting on the right
- Include 2 NO auxiliary contacts
- One side-mounting module per RMSP (always directly fitted to the RMSP)



Connection Diagram — 120 V 60 Hz

MOTOR STARTER PROTECTOR - PRICING

RMSP SERIES ACCESSORIES

RMSP-PIL32



PUSH-IN LUG

- For screwing the RMSP on to the mounting plates

Applied Types: RMSP-32H

RMSP-IB-100

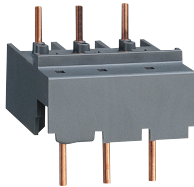


INSULATION BARRIERS

- Insulation barriers with increased creepage distances and clearances for UL

Applied Types: RMSP-100H

RMSP-DA



RMSC CONTACTOR ADAPTER

- For direct connection of RMSP to RC contactor

Applied Types: RC Contactors

Model Number	Description	Configuration	Number of Units Per RMSP	List Price
RMSP-FX11	Front-Mount Auxiliary Contact	I NO / 1 NC	1	\$30
RMSP-LX11	Side-Mount Auxiliary Contact	I NO / 1 NC	1	\$42
RMSP-LA	Side-Mount Alarm Switch ¹	I NO / 1 NC	1	\$42
RMSP-LAM	Side-Mount Alarm Switch ²	I NO / 1 NC	1	\$42
RMSP-RS120	Shunt Release 120V ³	-	1	\$63
RMSP-RU120	Undervoltage Release 120V ³	-	1	\$63
RMSP-RUX	Undervoltage Release with Switch 120V ³	2 NO	1	\$86
RMSP-IB-100	Insulation Barrier ⁴	-	4	\$30
RMSP-DA-32HA	RMSC Contactor Adapter RMSP32	-	1	\$30
RMSP-DA-63A	RMSC Contactor Adapter RMSP63	-	1	\$30
RMSP-DA-95A	RMSC Contactor Adapter RMSP95	-	1	\$30
RMSP-PB-322	Phase Bus Parallel Circuit 63H	-	1	\$35
RMSP-PB-362	Phase Bus Parallel Circuit 32H	-	1	\$48
RMSP-MU45	Mounting Unit 32H	-	1	\$63
RMSP-MU55	Mounting Unit 63H	-	1	\$86
RMSP-MU70	Mounting Unit 100H	-	1	\$97
RMSP-PIL32	Push-In Lug (for connection to mounting unit)	-	1	\$30

¹ RMSP-63 cannot accept LX and LA together

² Magnetic units only

³ Cannot be used with RU or RUX

⁴ For RMSP-100 only

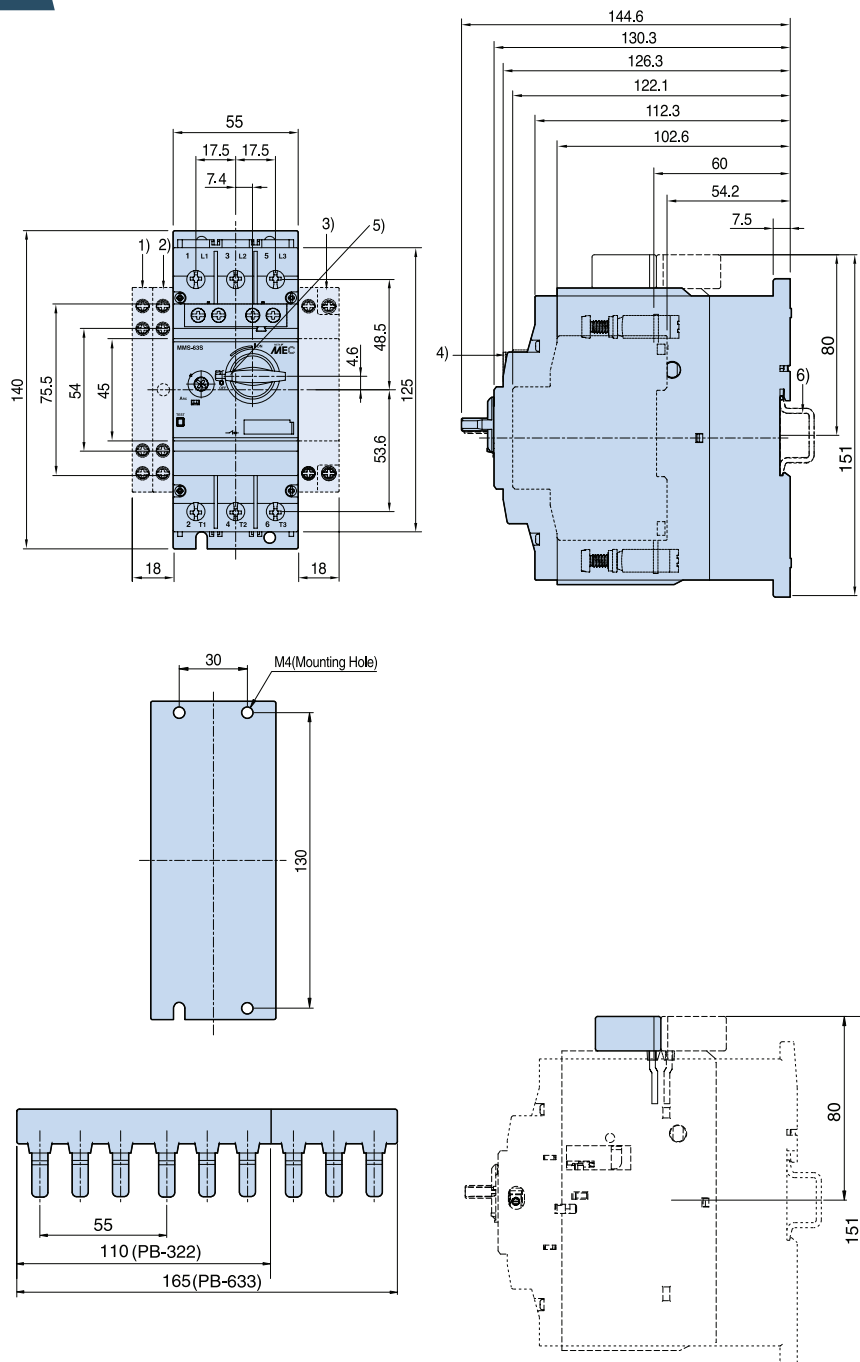
Price Effective July 1, 2025

MOTOR STARTER PROTECTOR - DIMENSIONS

RMSP SERIES

RMSP-63H

Weight: 1 kg



- 1) Side auxiliary switch
- 2) Side magnetic trip alarm switch
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary switch
- 5) Handle lock in OFF position (Ø5mm)
- 6) 35mm standard mounting rail acc. to EN 50 022

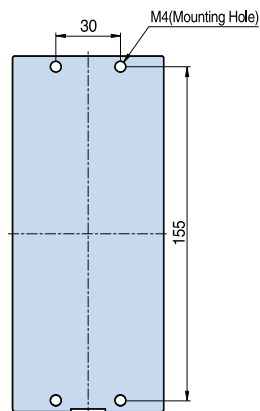
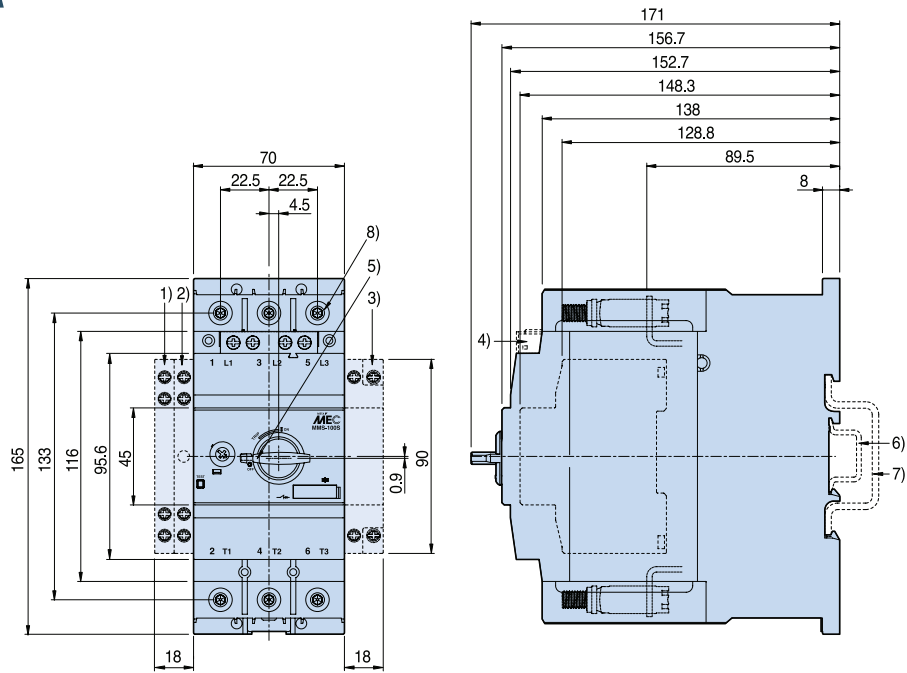
Dimensions are in mm (1 inch = 25.4 mm) .

MOTOR STARTER PROTECTOR - DIMENSIONS

RMSP SERIES

RMSP-100H

Weight: 2.2 kg



- 1) Side auxiliary switch
- 2) Side magnetic trip alarm switch
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary switch
- 5) Handle lock in OFF position (Ø5mm)
- 6) 35mm standard mounting rail acc. to EN 50 022
- 7) 75mm standard mounting rail acc. to EN 50 023
- 8) 4mm hexagon socket screw

Dimensions are in mm (1 inch = 25.4 mm) .

PREPACKAGED FULL VOLTAGE STARTERS WITH DOOR-MOUNTED CONTROLS

RCI2 SERIES — NON-COMBINATION / COMBINATION /
NEMA 12/3R / ELECTRONIC OVERLOAD PROTECTION



NCRCI2-18-4-3R Full Voltage Starter

- Control Terminal Block
- Fused Control Power Transformer
- Grounding Lug
- Circuit Breaker with Operator CBRCI2 (Type)
- NEMA Rated Contactor
- SPE Electronic Overload Relay



SPE Electronic Overload Relay

RCI Series Product Highlights:

RCI starters are NEMA rated, cUL listed, completely integrated, full voltage/non reversing starter packages. The rugged NEMA 12/3R design is ideal for industrial duty applications such as pumps, compressors, conveyors, fans and any other continuous duty equipment. The “three wires in/out” design includes the Benshaw SPE field-adjustable electronic overload relay, which enables quick installation and startup with precision motor protection ...standard. Rugged. Reliable. Ready.

- cUL listed
- NEMA rated, heavy-duty contactors
- NEMA 12/3R enclosure
- Field-adjustable SPE electronic overload relay
- Two year warranty — standard
- Complete door-mounted operator control package
- 600/480/240:120 fused control power transformer
- “Three wires in/out” installation and startup
- Combination or non-combination

Provided with SPE Electronic Overload Relay

SPE electronic overload relays provide field adjustable, precise motor protection, including:

- Adjustable overload class (1–30)
- Wide range of current adjustments
- 1 NO and 1 NC auxiliary contact
- Current imbalance detection
- Phase loss detection
- Phase reversal protection
- Trip-free design
- Test function/trip indication
- Fault indication

PREPACKAGED FULL VOLTAGE STARTERS WITH DOOR-MOUNTED CONTROLS



CBRC12 SERIES — COMBINATION / NEMA 12/3R / OVERLOAD PROTECTION

NCRC12 SERIES — NON-COMBINATION / NEMA 12/3R / OVERLOAD PROTECTION

- NEMA 12/3R enclosure
- cUL listed
- NEMA rated contactor and separately mounted electronic class 20 protection relay
- 480/240:120 fused control power transformer
- Units set up to have 240 VAC fuses shipped loose with unit
- Labels for 480 and 240 installed
- Door-mounted start and stop push-buttons
- Door-mounted overload reset push-button
- Red run indicator light
- (2) Auxiliary contacts
- Hand-off-auto selector switch
- Ground lug
- Terminal block



CBRC12



NCRC12

CBRC12 - 230VAC OR 460VAC

Model Number	Footnote	NEMA Size	NEMA Horsepower				Dimensions (in.)			Weight	List Price
			230VAC	FLA at 230VAC	460VAC	FLA at 460VAC	H	W	D		
CBRC12-N00-3R-HB	1	00	1	4.2	2	3.4	20	16	8	48	\$2,163
CBRC12-N0-3R-HB	1	0	3	9.6	5	7.6	20	16	8	48	\$2,271
CBRC12-N1-3R-HB	1	1	5	15.2	10	14	20	16	8	63	\$2,384
CBRC12-N2-3R-HB	1	2	10	28	25	34	20	16	8	63	\$2,455
CBRC12-N3-3R-HB	1	3	25	68	50	65	24	20	10	125	\$2,781
CBRC12-N4-3R-HB	1	4	50	130	100	124	36	24	12	125	\$4,491
CBRC12-N5-3R-HB	2	5	100	248	200	240	48	24	12	250	\$6,894
CBRC12-N6-3R-HB	2	6	200	480	400	477	48	36	16	N/A	\$11,075

- 1) Web stocked.
- 2) Built to order - Please allow two weeks for shipment.

NCRC12 - 230VAC OR 460VAC

Model Number	Footnote	NEMA Size	NEMA Horsepower				Dimensions (in.)			Weight	List Price
			230VAC	FLA at 230VAC	460VAC	FLA at 460VAC	H	W	D		
NCRC12-N00-3R	2	00	1	4.2	2	3.4	12	10	8	30	\$1,203
NCRC12-N0-3R	2	0	3	9.6	5	7.6	12	10	8	30	\$1,209
NCRC12-N1-3R	2	1	5	15.2	10	14	12	10	8	32	\$1,231
NCRC12-N2-3R	2	2	10	28	25	34	12	10	8	32	\$1,248
NCRC12-N3-3R	2	3	25	68	50	65	16	12	8	60	\$1,677
NCRC12-N4-3R	2	4	50	130	100	124	20	16	8	60	\$2,529
NCRC12-N5-3R	2	5	100	248	200	240	36	24	12	N/A	\$3,952
NCRC12-N6-3R	2	6	200	480	400	477	36	24	12	N/A	\$5,694

- 2) Built to order - Please allow two weeks for shipment.

Price Effective July 1, 2025

ENGINEERED PACKAGES

APPLICATION-SPECIFIC STARTERS FOR ANY APPLICATION

“Build to Order” capability combined with an extensive inventory of control components, protective relays, circuit breakers, contactors, enclosures and other electrical / electronic devices provides our customers with the quickest shipment of engineered products in the industry.

STANDARD RATINGS

- 1/2–600 HP, single or 3-phase
- 120–600 VAC
- UL / CSA, IEC and NEMA

CONTROL MODIFICATIONS — WHATEVER YOU SPECIFY

- Pilot devices, control power transformers, switches, meters, relays, space heaters, protective devices and more

COMBINATION STARTERS TO MEET YOUR REQUIREMENTS

- 15 to 1200 amp circuit breakers
- 40 to 1200 amp non-fused disconnects
- 30 to 800 amp fusible disconnects
- Flange or rotary handle mechanism

ENCLOSURES TO MATCH YOUR ENVIRONMENT

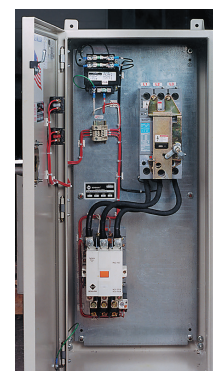
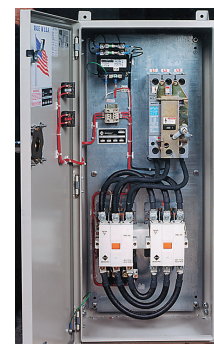
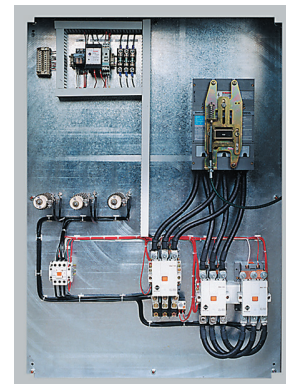
- Standard designs — NEMA 1, 12, 3R, 4, 4X or open chassis
- Custom enclosures

SPECIALTY ELECTROMECHANICAL STARTERS

- Full voltage, non-reversing
- Full voltage, reversing
- 2-Speed, one winding
- 2-Speed, two windings
- Part winding
- Wye-Delta open transition
- Wye-Delta closed transition

INDUSTRY-SPECIFIC SOLUTIONS

- Pump control starters
- Compressor starters
- Chiller starters
- VFD bypass units



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Introduction

Benshaw stocks a wide selection of pilot devices, including push buttons, selector switches, toggle and rocker switches, indicator lights and more.

Push Buttons

Benshaw's line of 30mm push buttons are durable, flexible and well-suited to a variety of applications. We stock both non-illuminated and illuminated versions, and we can also customize buttons to suit your needs. All of our push buttons are UL listed and rated NEMA 4X for use in even harsh applications.

Selector Switches

Benshaw's comprehensive line of 30mm selector switches encompasses two-, three- and four-position models, with both maintained and spring return options. Our selector switches are also customizable via several handle insert color options and contact block configurations. All selector switches are UL rated up to NEMA 4X.

Pilot Lights

Benshaw offers a complete line of standard and push-to-test 30mm pilot lights, both at 24V or 120V. As with all of Benshaw's pilot devices, our pilot lights are UL rated up to NEMA 4X.

Contact Blocks

Benshaw's line of 30mm contact blocks is designed to save you time and cost. These robust yet easy to install blocks enable one pilot device to operate several control circuits. Our heavy-duty construction ensures that these contact blocks stay connected. Our mix and match flexibility allows you to create a unique product to accommodate your needs. An IP20 guard is standard on all contact blocks.



PUSH BUTTONS (30mm) - PRICING







Benshaw's line of 30mm push buttons are durable, flexible, and ideal for a variety of uses. Available in two versions (non-illuminated and illuminated), these push buttons can be customized to suit your needs. All of our push buttons are UL listed and rated NEMA 4X for use in even harsh environments.

- UL listed
- NEMA RATING: 1, 2, 3, 3R, 12, 13, 4, 4X


Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.

Non-Illuminated Push Buttons


Momentary

	Part Number	Color	Type	Rating Type	List Price
 Flush	ⒸR2PB30-F-K-O	Black	Flush	4/4X	\$32
	ⒸR2PB30-F-G-O	Green	Flush	4/4X	\$32
	ⒸR2PB30-F-R-O	Red	Flush	4/4X	\$32
	ⒸR2PB30-F-R-C	Red	Flush	4/4X	\$32
	ⒸR2PB30-F-Y-O	Yellow	Flush	4/4X	\$32
 Guarded	ⒸR2PB30-G-K-O	Black	Guarded	4/4X	\$37
	ⒸR2PB30-G-G-O	Green	Guarded	4/4X	\$37
	ⒸR2PB30-G-R-O	Red	Guarded	4/4X	\$37
	ⒸR2PB30-G-R-C	Red	Guarded	4/4X	\$37
	ⒸR2PB30-G-Y-O	Yellow	Guarded	4/4X	\$37
 Extended	ⒸR2PB30-E-K-O	Black	Extended	4/4X	\$32
	ⒸR2PB30-E-G-O	Green	Extended	4/4X	\$32
	ⒸR2PB30-E-R-O	Red	Extended	4/4X	\$32
	ⒸR2PB30-E-R-C	Red	Extended	4/4X	\$32
	ⒸR2PB30-E-Y-O	Yellow	Extended	4/4X	\$32
 Mushroom	ⒸR2PB30-M-K-O	Black	Mushroom	4/4X	\$41
	ⒸR2PB30-M-G-O	Green	Mushroom	4/4X	\$41
	ⒸR2PB30-M-R-O	Red	Mushroom	4/4X	\$41
	ⒸR2PB30-M-R-C	Red	Mushroom	4/4X	\$41
	ⒸR2PB30-M-Y-O	Yellow	Mushroom	4/4X	\$41

Maintained

	Part Number	Color	Type	Rating Type	List Price
 Mushroom	ⒸR2PB30-2PM-G-O	Green	Mushroom	4/4X	\$73
	ⒸR2PB30-2PM-R-O	Red	Mushroom	4/4X	\$73
	ⒸR2PB30-2PM-R-C	Red	Mushroom	4/4X	\$73

Push Pull

	Part Number	Color	Type	Rating Type	List Price
 Mushroom	ⒸR2PB30-2TM-K-O	Black	Mushroom	4/4X	\$78
	ⒸR2PB30-2TM-R-C	Red	Mushroom	4/4X	\$78

Note: For customized options, please refer to page 211.

Price Effective July 1, 2025

PUSH BUTTONS (30mm) - PRICING




Illuminated Push Buttons

Momentary

	Part Number	Color	Type	Voltage	Rating Type	List Price
 Extended	☰R2PB30-ILE-120-G	Green	Extended	120V	4/4X	\$86
	☰R2PB30-ILE-120-A	Amber	Extended	120V	4/4X	\$86
	☰R2PB30-ILE-120-B	Blue	Extended	120V	4/4X	\$86
	☰R2PB30-ILE-24-R	Red	Extended	24V	4/4X	\$86
	☰R2PB30-ILE-24-G	Green	Extended	24V	4/4X	\$86
	☰R2PB30-ILE-24-A	Amber	Extended	24 ac/dc	4/4X	\$86
	☰R2PB30-ILE-24-B	Blue	Extended	24 ac/dc	4/4X	\$86
 Mushroom	☰R2PB30-ILM-120-R	Red	Mushroom	120V	4/4X	\$92
	☰R2PB30-ILM-120-G	Green	Mushroom	120V	4/4X	\$92
	☰R2PB30-ILM-120-A	Amber	Mushroom	120V	4/4X	\$92
	☰R2PB30-ILM-120-B	Blue	Mushroom	120V	4/4X	\$92
	☰R2PB30-ILM-24-R	Red	Mushroom	24 ac/dc	4/4X	\$92
	☰R2PB30-ILM-24-G	Green	Mushroom	24 ac/dc	4/4X	\$92
	☰R2PB30-ILM-24-A	Amber	Mushroom	24 ac/dc	4/4X	\$92
	☰R2PB30-ILM-24-B	Blue	Mushroom	120V	4/4X	\$92
 Guarded	☰R2PB30-ILG-120-R	Red	Guarded	120V	4/4X	\$92
	☰R2PB30-ILG-120-G	Green	Guarded	120V	4/4X	\$92
	☰R2PB30-ILG-120-A	Amber	Guarded	120V	4/4X	\$92
	☰R2PB30-ILG-120-B	Blue	Guarded	24 ac/dc	4/4X	\$92
	☰R2PB30-ILG-24-R	Red	Guarded	24 ac/dc	4/4X	\$92
	☰R2PB30-ILG-24-G	Green	Guarded	24 ac/dc	4/4X	\$92
	☰R2PB30-ILG-24-A	Amber	Guarded	24 ac/dc	4/4X	\$92
	☰R2PB30-ILG-24-B	Blue	Guarded	120V	4/4X	\$92
 Shrouded	☰R2PB30-ILS-120-R	Red	Shrouded	120V	4/4X	\$90
	☰R2PB30-ILS-120-G	Green	Shrouded	120V	4/4X	\$90
	☰R2PB30-ILS-120-A	Amber	Shrouded	120V	4/4X	\$90
	☰R2PB30-ILS-120-B	Blue	Shrouded	24 ac/dc	4/4X	\$90
	☰R2PB30-ILS-24-R	Red	Shrouded	24 ac/dc	4/4X	\$90
	☰R2PB30-ILS-24-G	Green	Shrouded	24 ac/dc	4/4X	\$90
	☰R2PB30-ILS-24-A	Amber	Shrouded	24 ac/dc	4/4X	\$90
	☰R2PB30-ILS-24-B	Blue	Shrouded	24 ac/dc	4/4X	\$86

Push Pull

	Part Number	Color	Type	Voltage	Rating Type	List Price
 Mushroom	☰R2PB30-IL2P-120-R	Red	Mushroom	120V	4/4X	\$108
	☰R2PB30-IL2P-120-G	Green	Mushroom	120V	4/4X	\$108
	☰R2PB30-IL2P-120-A	Amber	Mushroom	120V	4/4X	\$108
	☰R2PB30-IL2P-120-B	Blue	Mushroom	120V	4/4X	\$108
	☰R2PB30-IL2P-24-R	Red	Mushroom	24 ac/dc	4/4X	\$108
	☰R2PB30-IL2P-24-G	Green	Mushroom	24 ac/dc	4/4X	\$108
	☰R2PB30-IL2P-24-A	Amber	Mushroom	24 ac/dc	4/4X	\$108
	☰R2PB30-IL2P-24-B	Blue	Mushroom	24 ac/dc	4/4X	\$102

Note: For customized options, please refer to page 213.

Price Effective July 1, 2025

SELECTOR SWITCHES - PRICING




Benshaw's comprehensive line of 30mm selector switches encompasses 2 and 3 position models, with both maintained and spring return options. Highly customizable via several handle insert color options and contact block configurations, all selector switches are rated up to NEMA 4X.

All selector switches come with a black base.
Handle color is customizable.

- UL listed
- NEMA RATING: 1, 2, 3, 3R, 12, 13, 4, 4X

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.

	Part Number	Handle Color	Contacts	Rating Type	List Price
	⌘R2SW30-2PM-W-C	Black	1 N.C.	4/4X	\$54
	⌘R2SW30-2PM-W-O	Black	1 N.O.	4/4X	\$54
	⌘R2SW30-3PM-W-2O	White	2 N.O.	4/4X	\$54

PILOT LIGHTS (30mm) - PRICING




Benshaw offers a complete line of standard and push-to-test 30mm pilot lights, both at 24V or 120V. As with all of Benshaw's pilot devices, all pilot lights are rated up to NEMA 4X.

All pilot lights are LED type.

- UL listed

- NEMA RATING: 1, 2, 3, 3R, 12, 13, 4, 4X

Standard Pilot Lights

	Part Number	Color	Type	Voltage	Rating Type	List Price
	✓R2PL30-120-A	Amber	Guarded	120V	4/4X	\$69
	✓R2PL30-120-R	Red	Guarded	120V	4/4X	\$69
	✓R2PL30-120-G	Green	Guarded	120V	4/4X	\$69
	✓R2PL30-120-B	Blue	Guarded	120V	4/4X	\$69
	✓R2PL30-120-W	White	Guarded	120V	4/4X	\$69
	✓R2PL30-24-A	Amber	Guarded	24 ac/dc	4/4X	\$69
	✓R2PL30-24-R	Red	Guarded	24 ac/dc	4/4X	\$69
	✓R2PL30-24-G	Green	Guarded	24 ac/dc	4/4X	\$69
	✓R2PL30-24-B	Blue	Guarded	24 ac/dc	4/4X	\$69
	✓R2PL30-24-W	White	Guarded	24 ac/dc	4/4X	\$69

PILOT LIGHTS (30mm) - PRICING



Push to Test Pilot Lights

	Part Number	Color	Type	Contact Type	Voltage	Rating Type	List Price
 Extended	✓R2PL30-TE-120-A	Amber	Extended	Silver	120V	4/4X	\$117
	✓R2PL30-TE-120-B	Blue	Extended	Silver	120V	4/4X	\$117
	✓R2PL30-TE-120-G	Green	Extended	Silver	120V	4/4X	\$117
	✓R2PL30-TE-120-R	Red	Extended	Silver	120V	4/4X	\$117
	✓R2PL30-TE-120-W	White	Extended	Silver	120V	4/4X	\$117
	✓R2PL30-TE-24-A	Amber	Extended	Gold Plated	24 ac/dc	4/4X	\$132
	✓R2PL30-TE-24-B	Blue	Extended	Gold Plated	24 ac/dc	4/4X	\$132
	✓R2PL30-TE-24-G	Green	Extended	Gold Plated	24 ac/dc	4/4X	\$132
	✓R2PL30-TE-24-R	Red	Extended	Gold Plated	24 ac/dc	4/4X	\$132
	✓R2PL30-TE-24-W	White	Extended	Gold Plated	24 ac/dc	4/4X	\$132
 Mushroom	✓R2PL30-TM-120-A	Amber	Mushroom	Silver	120V	4/4X	\$128
	✓R2PL30-TM-120-B	Blue	Mushroom	Silver	120V	4/4X	\$128
	✓R2PL30-TM-120-G	Green	Mushroom	Silver	120V	4/4X	\$128
	✓R2PL30-TM-120-R	Red	Mushroom	Silver	120V	4/4X	\$128
	✓R2PL30-TM-120-W	White	Mushroom	Silver	120V	4/4X	\$128
	✓R2PL30-TM-24-A	Amber	Mushroom	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TM-24-B	Blue	Mushroom	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TM-24-G	Green	Mushroom	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TM-24-R	Red	Mushroom	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TM-24-W	White	Mushroom	Gold Plated	24 ac/dc	4/4X	\$143
 Guarded	✓R2PL30-TG-120-A	Amber	Guarded	Silver	120V	4/4X	\$128
	✓R2PL30-TG-120-B	Blue	Guarded	Silver	120V	4/4X	\$128
	✓R2PL30-TG-120-G	Green	Guarded	Silver	120V	4/4X	\$128
	✓R2PL30-TG-120-R	Red	Guarded	Silver	120V	4/4X	\$128
	✓R2PL30-TG-120-W	White	Guarded	Silver	120V	4/4X	\$128
	✓R2PL30-TG-24-A	Amber	Guarded	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TG-24-B	Blue	Guarded	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TG-24-G	Green	Guarded	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TG-24-R	Red	Guarded	Gold Plated	24 ac/dc	4/4X	\$143
	✓R2PL30-TG-24-W	White	Guarded	Gold Plated	24 ac/dc	4/4X	\$143
 Shrouded	✓R2PL30-TS-120-A	Amber	Shrouded	Silver	120V	4/4X	\$139
	✓R2PL30-TS-120-B	Blue	Shrouded	Silver	120V	4/4X	\$139
	✓R2PL30-TS-120-G	Green	Shrouded	Silver	120V	4/4X	\$139
	✓R2PL30-TS-120-R	Red	Shrouded	Silver	120V	4/4X	\$139
	✓R2PL30-TS-120-W	White	Shrouded	Silver	120V	4/4X	\$139
	✓R2PL30-TS-24-A	Amber	Shrouded	Gold Plated	24 ac/dc	4/4X	\$155
	✓R2PL30-TS-24-B	Blue	Shrouded	Gold Plated	24 ac/dc	4/4X	\$155
	✓R2PL30-TS-24-G	Green	Shrouded	Gold Plated	24 ac/dc	4/4X	\$155
	✓R2PL30-TS-24-R	Red	Shrouded	Gold Plated	24 ac/dc	4/4X	\$155
	✓R2PL30-TS-24-W	White	Shrouded	Gold Plated	24 ac/dc	4/4X	\$155

ADDITIONAL ACCESSORIES - PRICING




Potentiometers

Benshaw offers standard 2 Watt potentiometers with prewired terminal blocks.

- UL listed
- NEMA RATING: 1, 2, 3, 3R, 12, 13, 4, 4X


Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.

	Part Number	Color	Contacts	Rating Type	List Price
	☞R2PB30-POT-5	Black	5K Ohm	4/4X	\$117
	☞R2PB30-POT-10	Black	10K Ohm	4/4X	\$117

* 5/64" Allen Wrench needed for installation.



Wobble Stick

	Part Number	Color	Contacts	Rating Type	List Price
 - UL listed - NEMA RATING: 4, 4X	☞R2PB-WS-OC	Black	1 N.O. 1 N.C.	4/4X	\$67

*Spring return action to center.

ADDITIONAL ACCESSORIES - PRICING

Legends

Benshaw offers a comprehensive line of legends in order to properly label all pilot devices.

2" x 2" Square Legends Adhesive Back



Part Number	Legend	Description	List Price
LG-100300-000	Close	Black with white lettering	\$4
LG-100300-001	Down	Black with white lettering	\$4
LG-100300-002	Emergency Stop	Black with white lettering	\$4
LG-100300-003	Fault	Black with white lettering	\$4
LG-100300-004	Forward	Black with white lettering	\$4
LG-100300-005	Hand	Black with white lettering	\$4
LG-100300-006	Jog	Black with white lettering	\$4
LG-100300-007	Jog Forward	Black with white lettering	\$4
LG-100300-008	Jog Reverse	Black with white lettering	\$4
LG-100300-009	Manual	Black with white lettering	\$4
LG-100300-010	Motor Run	Black with white lettering	\$4
LG-100300-011	Off	Black with white lettering	\$4
LG-100300-012	On	Black with white lettering	\$4
LG-100300-013	Open	Black with white lettering	\$4
LG-100300-014	Overload	Black with white lettering	\$4
LG-100300-015	Power Off	Black with white lettering	\$4
LG-100300-016	Power On	Black with white lettering	\$4
LG-100300-017	Push to Reset	Black with white lettering	\$4
LG-100300-018	Push to Test	Black with white lettering	\$4
LG-100300-019	Raise	Black with white lettering	\$4
LG-100300-020	Ready	Black with white lettering	\$4
LG-100300-021	Reset	Black with white lettering	\$4
LG-100300-022	Reverse	Black with white lettering	\$4
LG-100300-023	Run	Black with white lettering	\$4
LG-100300-024	Start	Black with white lettering	\$4
LG-100300-025	Stop	Black with white lettering	\$4
LG-100300-026	Test	Black with white lettering	\$4
LG-100300-027	Trip	Black with white lettering	\$4
LG-100300-028	Auto / Hand	Black with white lettering	\$4
LG-100300-029	Auto / Manual	Black with white lettering	\$4
LG-100300-030	Down / Up	Black with white lettering	\$4
LG-100300-031	Fast / Slow	Black with white lettering	\$4
LG-100300-032	Fwd / Rev	Black with white lettering	\$4
LG-100300-033	Hand / Auto	Black with white lettering	\$4

ADDITIONAL ACCESSORIES - PRICING

2" x 2" Square Legends Adhesive Back

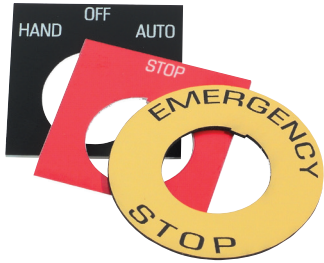


Part Number	Legend	Description	List Price
LG-100300-034	Local / Remote	Black with white lettering	\$4
LG-100300-035	Manual / Auto	Black with white lettering	\$4
LG-100300-036	Off / On	Black with white lettering	\$4
LG-100300-037	On / Off	Black with white lettering	\$4
LG-100300-038	Open / Close	Black with white lettering	\$4
LG-100300-039	Pull Start / Push Stop	Black with white lettering	\$4
LG-100300-040	Push Off / Pull On	Black with white lettering	\$4
LG-100300-041	Pull On / Push Off	Black with white lettering	\$4
LG-100300-042	Push to Stop / Pull to Start	Black with white lettering	\$4
LG-100300-043	Rev / Fwd	Black with white lettering	\$4
LG-100300-044	Run / Jog	Black with white lettering	\$4
LG-100300-045	Start / Stop	Black with white lettering	\$4
LG-100300-046	Stop / Start	Black with white lettering	\$4
LG-100300-047	Up / Down	Black with white lettering	\$4
LG-100300-048	Auto / Off / Hand	Black with white lettering	\$4
LG-100300-049	Auto / Man / Off	Black with white lettering	\$4
LG-100300-050	Fwd / Off / Rev	Black with white lettering	\$4
LG-100300-051	Fwd / Off / Rev	Black with white lettering	\$4
LG-100300-052	H / O / A	Black with white lettering	\$4
LG-100300-053	Off / Start	Black with white lettering	\$4
LG-100300-054	Start / Run	Black with white lettering	\$4
LG-100300-055	Speed 0-100	Black with white lettering	\$4
LG-100300-056	Close	White with black lettering	\$4
LG-100300-057	Down	White with black lettering	\$4
LG-100300-058	Emergency Stop	White with black lettering	\$4
LG-100300-059	Fault	White with black lettering	\$4
LG-100300-060	Forward	White with black lettering	\$4
LG-100300-061	Hand	White with black lettering	\$4
LG-100300-062	Jog	White with black lettering	\$4
LG-100300-063	Jog Forward	White with black lettering	\$4
LG-100300-064	Jog Reverse	White with black lettering	\$4
LG-100300-065	Manual	White with black lettering	\$4
LG-100300-066	Motor Run	White with black lettering	\$4
LG-100300-067	Off	White with black lettering	\$4
LG-100300-068	On	White with black lettering	\$4
LG-100300-069	Open	White with black lettering	\$4
LG-100300-070	Overload	White with black lettering	\$4
LG-100300-071	Power Off	White with black lettering	\$4
LG-100300-072	Power On	White with black lettering	\$4
LG-100300-073	Push to Reset	White with black lettering	\$4

ADDITIONAL ACCESSORIES - PRICING

2" x 2" Square Legends Adhesive Back

Part Number	Legend	Description	List Price
LG-100300-074	Push to Test	White with black lettering	\$4
LG-100300-075	Raise	White with black lettering	\$4
LG-100300-076	Ready	White with black lettering	\$4
LG-100300-077	Reset	White with black lettering	\$4
LG-100300-078	Reverse	White with black lettering	\$4
LG-100300-079	Run	White with black lettering	\$4
LG-100300-080	Start	White with black lettering	\$4
LG-100300-081	Stop	White with black lettering	\$4
LG-100300-082	Test	White with black lettering	\$4
LG-100300-083	Trip	White with black lettering	\$4
LG-100300-084	Auto / Hand	White with black lettering	\$4
LG-100300-085	Auto / Manual	White with black lettering	\$4
LG-100300-086	Down / Up	White with black lettering	\$4
LG-100300-087	Fast / Slow	White with black lettering	\$4
LG-100300-088	Fwd / Rev	White with black lettering	\$4
LG-100300-089	Hand / Auto	White with black lettering	\$4
LG-100300-090	Local / Remote	White with black lettering	\$4
LG-100300-091	Manual / Auto	White with black lettering	\$4
LG-100300-092	Off / On	White with black lettering	\$4
LG-100300-093	On / Off	White with black lettering	\$4
LG-100300-094	Open / Close	White with black lettering	\$4
LG-100300-095	Pull Start / Push Stop	White with black lettering	\$4
LG-100300-096	Push Off Pull On	White with black lettering	\$4
LG-100300-097	Push On / Push Off	White with black lettering	\$4
LG-100300-098	Push to Stop / Pull to Start	White with black lettering	\$4
LG-100300-099	Rev / Fwd	White with black lettering	\$4
LG-100300-100	Run / Jog	White with black lettering	\$4
LG-100300-101	Start / Stop	White with black lettering	\$4
LG-100300-102	Stop / Start	White with black lettering	\$4
LG-100300-103	Up / Down	White with black lettering	\$4
LG-100300-104	Auto / Off / Hand	White with black lettering	\$4
LG-100300-105	Auto / Man / Off	White with black lettering	\$4
LG-100300-106	Fwd / Auto / Rev	White with black lettering	\$4
LG-100300-107	Fwd / Off / Rev	White with black lettering	\$4
LG-100300-108	H / O / A	White with black lettering	\$4
LG-100300-109	Off / Run / Start	White with black lettering	\$4
LG-100300-110	Off / Start / Run	White with black lettering	\$4
LG-100300-111	Speed 0-100	White with black lettering	\$4



"Emergency Stop", 2 - 13/32" Diameter" Circle, Yellow Face with Black Lettering Adhesive Back

Part Number	Legend	List Price
LG-100300-112	Emergency Stop	\$6

CONTACT BLOCKS - PRICING



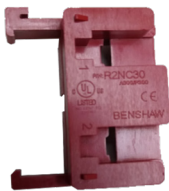
Benshaw's line of 30mm Contact Blocks is designed to save you time and cost. These robust yet easy to install blocks enable one pilot device to operate several control circuits. Our heavy-duty construction ensures that these contact blocks stay connected. This mix and match flexibility allows you to create a unique product to accommodate your needs.



R2N030
(with IP20 guard removed)



R2DB30
(with IP20 guard)



R2NC30
(with IP20 guard removed)

Ratings

	Designation	Maximum Voltage	Make	Break	Maximum Continuous Thermal Current
AC Contact Rating	A600	600V AC	7200 VA	720 VA	Ith: 10A
DC Contact Rating	P300	250V DC	138 VA	138 VA	Ith: 5A

Part Number	Color	Contacts	List Price
☞R2NO30	Green	1 N.O.	\$13
☞R2NC30	Red	1 N.C	\$13
☞R2EM30	White	1 N.O. Early make	\$17
☞R2DB30	Black	1 N.C Delayed Break	\$17
☞R2NOG30	Green	1 N.O. Gold Terminals	\$23
☞R2NCG30	Red	1 N.C Gold Terminals	\$23
☞R2EMG30	White	1 N.O. Early make Gold Terminals	\$26
☞R2DBG30	Black	1 N.C Delayed Break Gold Terminals	\$26

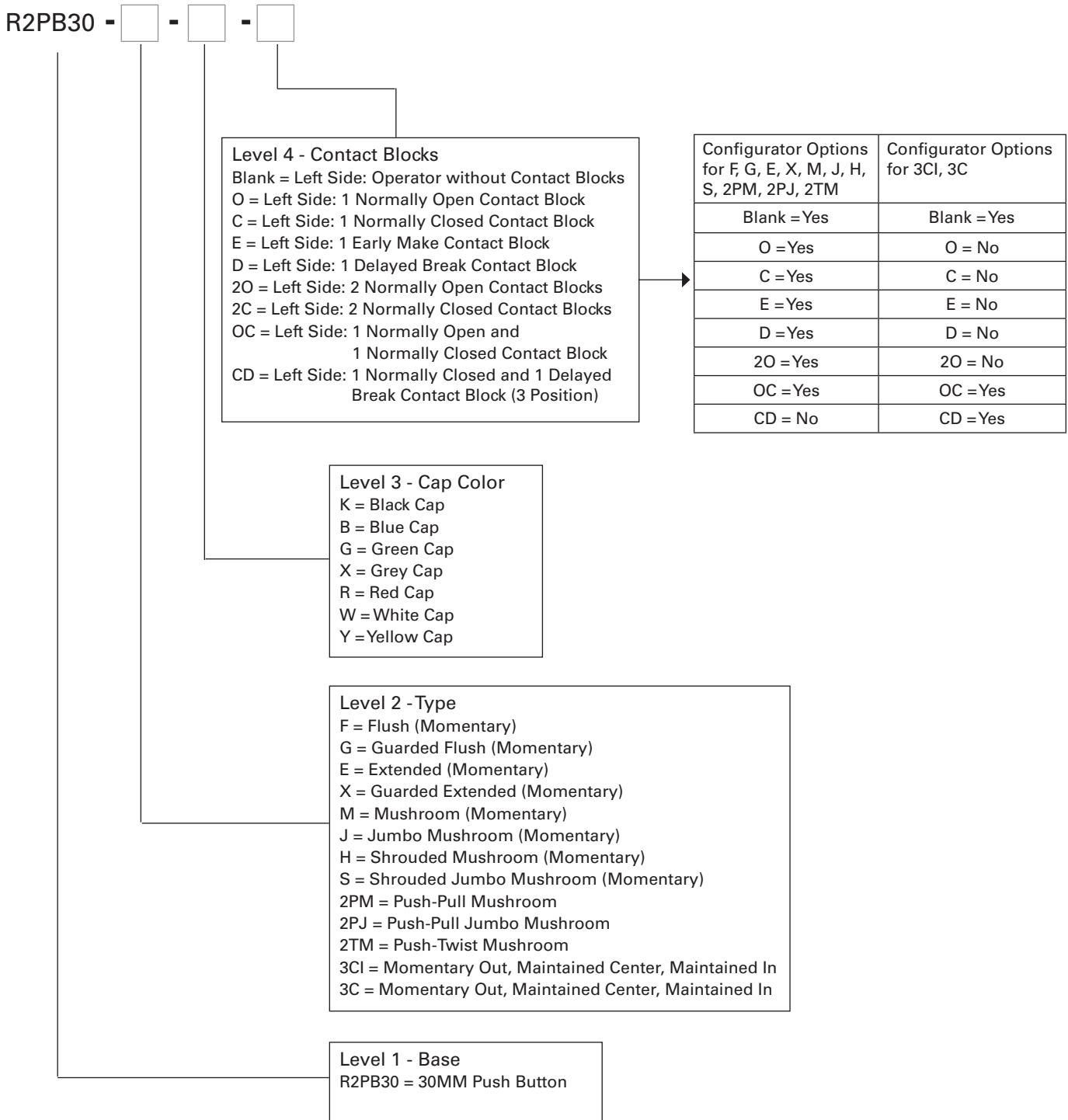
*Each Contact Block comes standard with an IP20 guard.

DESIGN YOUR CUSTOMIZED PUSH BUTTONS

Non-Illuminated Push Buttons

Configurator

Only one option can be selected from each group.



DESIGN YOUR CUSTOMIZED PUSH BUTTONS - PRICING

Non-Illuminated Push Buttons

Pricing

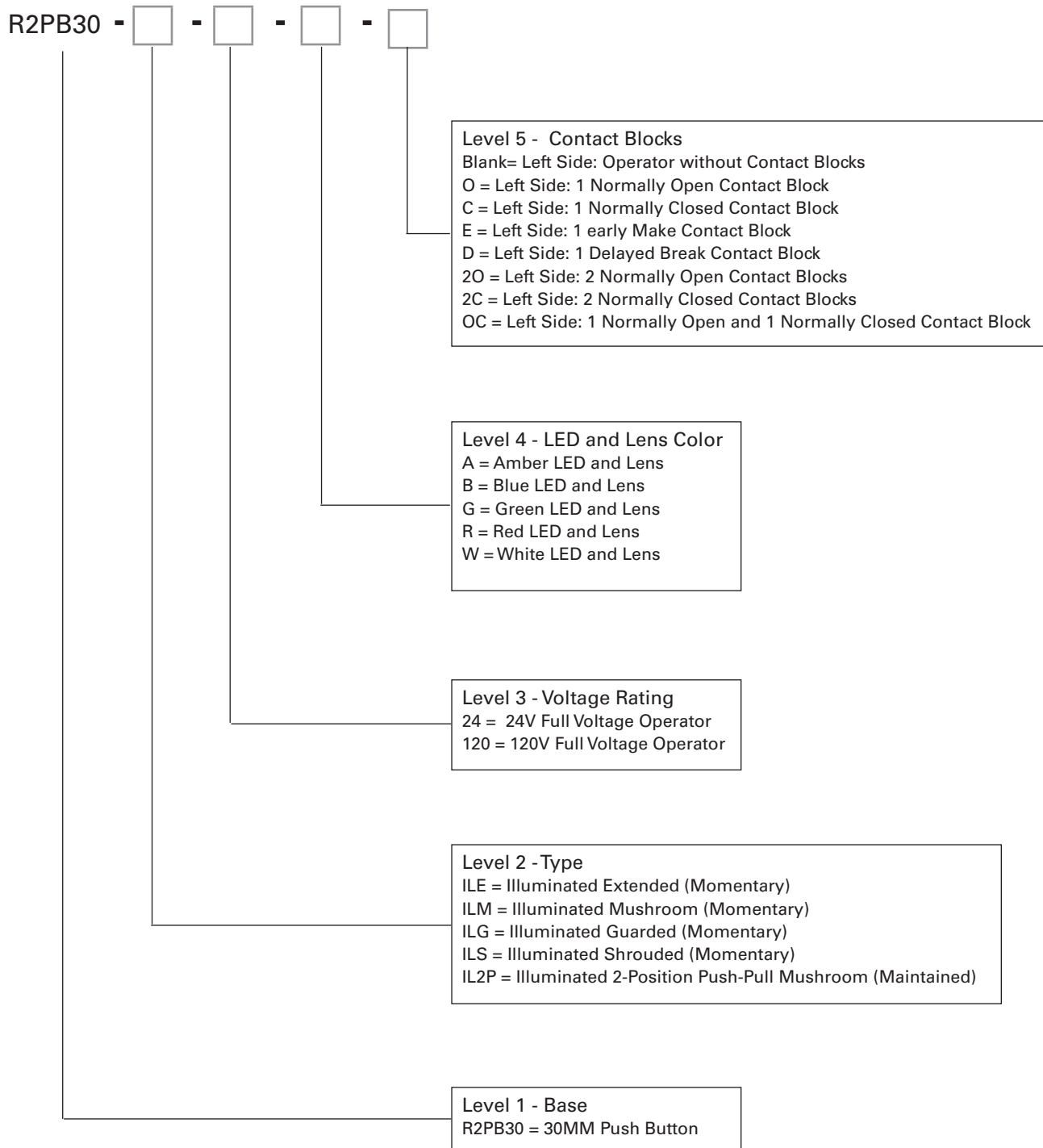
	Part Number	Description	List Price
Level 1 - Base	R2PB30	30MM Push Button	Included
	F	Flush (Momentary)	\$18
	G	Guarded Flush (Momentary)	\$22
	E	Extended (Momentary)	\$18
	X	Guarded Extended (Momentary)	\$22
	M	Mushroom (Momentary)	\$25
	J	Jumbo Mushroom (Momentary)	\$29
Level 2 - Type	H	Shrouded Mushroom (Momentary)	\$33
	S	Shrouded Jumbo Mushroom (Momentary)	\$36
	2PM	Push-Pull Mushroom	\$56
	2PJ	Push-Pull Jumbo Mushroom	\$63
	2TM	Push-Twist Mushroom	\$61
	3CI	Momentary Out, Maintained Center, Maintained In	\$55
	3C	Momentary Out, Maintained Center, Momentary In	\$55
	K	Black Cap	Included
	B	Blue Cap	Included
	G	Green Cap	Included
Level 3 - Cap Color	X	Grey Cap	Included
	R	Red Cap	Included
	W	White Cap	Included
	Y	Yellow Cap	Included
	Blank	Left Side: Operator without Contact Blocks	Included
Level 4 - Contact Blocks	O	Left Side: 1 Normally Open Contact Block	\$14
	C	Left Side: 1 Normally Closed Contact Block	\$14
	E	Left Side: 1 Early Make Contact Block	\$17
	D	Left Side: 1 Delayed Break Contact Block	\$17
	2O	Left Side: 2 normally Open Contact Blocks	\$25
	2C	Left Side: 2 Normally Closed Contact Blocks	\$25
	OC	Left Side: 1 Normally Open and 1 Normally Closed Contact Block	\$25
	CD	Left Side: 1 Normally Closed and 1 Delayed Break Contact Block (3 Position)	\$35

DESIGN YOUR CUSTOMIZED PUSH BUTTONS

Illuminated Push Buttons

Configurator

Only one option can be selected from each group.



DESIGN YOUR CUSTOMIZED PUSH BUTTONS - PRICING

Illuminated Push Buttons

Pricing

	Part Number	Description	List Price
Level 1 - Base	R2PB30	30MM Push Button	Included
Level 2 - Type	ILE	Illuminated Extended (Momentary)	\$68
	ILM	Illuminated Mushroom (Momentary)	\$77
	ILG	Illuminated Guarded (Momentary)	\$77
	ILS	Illuminated Shrouded (Momentary)	\$86
	IL2P	Illuminated 2-Position Push-Pull Mushroom (Maintained)	\$98
Level 3 - Voltage Rating	24	24V Full Voltage Operator	Included
	120	120V Full Voltage Operator	Included
Level 4 - LED and Lens Color	A	Amber LED and Lens	Included
	B	Blue LED and Lens	Included
	G	Green LED and Lens	Included
	R	Red LED and Lens	Included
	W	White LED and Lens	Included
Level 5 - Contact Blocks	(Blank)	Left Side: Operator without Contact Blocks	Included
	O	Left Side: 1 Normally Open Contact Block	\$14
	C	Left Side: 1 Normally Closed Contact Block	\$14
	E	Left Side: 1 Early Make Contact Block	\$17
	D	Left Side: 1 Delayed Break Contact Block	\$17
	2O	Left Side: 2 Normally Open Contact Blocks	\$25
	2C	Left Side: 2 Normally Closed Contact Blocks	\$25
	OC	Left Side: 1 Normally Open and 1 Normally Closed Contact Block	\$25

DESIGN YOUR CUSTOMIZED SELECTOR SWITCHES

Configurator

Only one option can be selected from each group.

R2SW30 - - -

Level 4 - Contact Blocks
 Blank = Left Side: Operator without Contact Blocks
 O = Left Side: 1 Normally Open Contact Block
 C = Left Side: 1 Normally Closed Contact Block
 E = Left Side: 1 early Make Contact Block
 D = Left Side: 1 Delayed Break Contact Block
 2O = Left Side: 2 Normally Open Contact Blocks
 2C = Left Side: 2 Normally Closed Contact Blocks
 OC = Left Side: 1 Normally Open and 1 Normally Closed Contact Block

Level 3 - Handle Color
 B = Blue LED and Lens
 G = Green LED and Lens
 X = Grey
 R = Red LED and Lens
 W = White LED and Lens
 Y = Yellow

Level 2 - Operator Function
 2PM = Position Maintained
 2PRLR = 2 Position Spring Return, Left to Right
 2PRRL = 2 Position Spring Return, Right to Left
 3PM = 3 Position Maintained
 3PRLC = 3 Position Spring Return, Left to Center
 3PRRC = 3 Position Spring Return, Right to Center
 3PLRC = 3 Position Spring Return, Left and Right to Center
 4PM = 4 Position Maintained
 4PR43 = 4 Position Spring Return, Position 4 to 3
 4P1243 = 4 Position Spring Return, Position 1 to 2 and 4 to 3

Level 1 - Base
 R2SW30 = 30MM Selector Switch

DESIGN YOUR CUSTOMIZED SELECTOR SWITCHES - PRICING

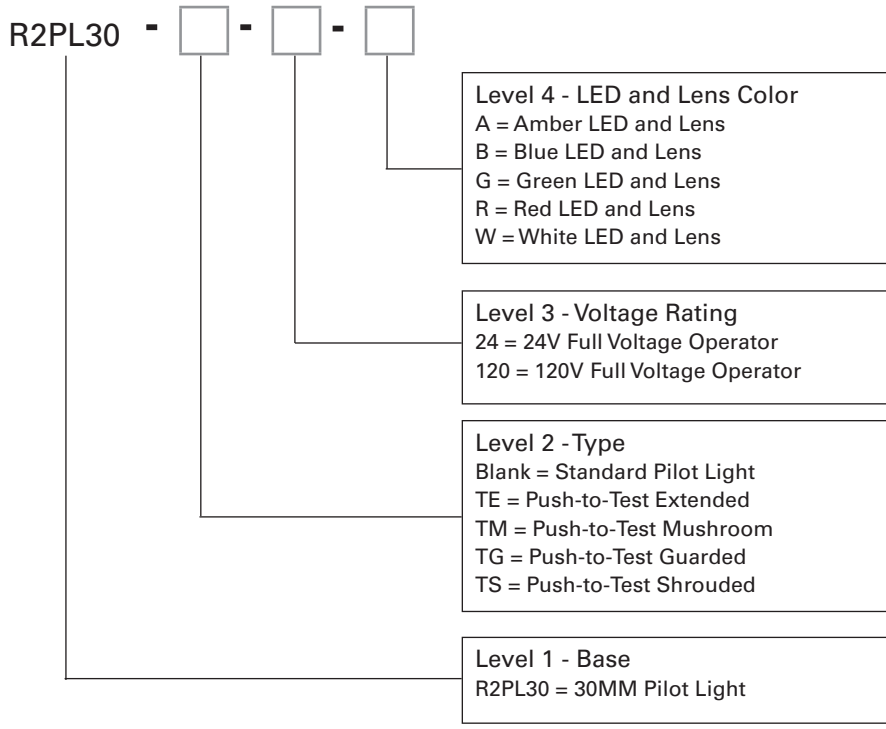
Pricing

	Part Number	Description	List Price
Level 1 - Base	RS2W30	30MM Selector Switch	Included
	2PM	2 Position Maintained	\$24
	2PRLR	2 Position Spring Return, Left to Right	\$39
	2PRRL	2 Position Spring Return, Right to Left	\$39
	3PM	3 Position Maintained	\$24
Level 2 - Operator Function	3PRLC	3 Position Spring Return, Left to Center	\$39
	3PRRC	3 Position Spring Return, Right to Center	\$39
	3PLRC	3 Position Spring Return, Left and Right to Center	\$39
	4PM	4 Position Maintained	\$24
	4PR43	4 Position Spring Return, Position 4 to 3	\$39
	4P1243	4 Position Spring Return, Position 1 to 2 and 4 to 3	\$39
Level 3 - Handle Color	B	Blue	Included
	G	Green	Included
	X	Grey	Included
	R	Red	Included
	W	White	Included
	Y	Yellow	Included
Level 4 - Contact Blocks	(Blank)	Left Side: Operator without Contact Blocks	Included
	O	Left Side: 1 Normally Open Contact Block	\$14
	C	Left Side: 1 Normally Closed Contact Block	\$14
	E	Left Side: 1 Early Make Contact Block	\$17
	D	Left Side: 1 Delayed Break Contact Block	\$17
	2O	Left Side: 2 Normally Open Contact Blocks	\$25
	2C	Left Side: 2 Normally Closed Contact Blocks	\$25
	OC	Left Side: 1 Normally Open and 1 Normally Closed Contact Block	\$25

DESIGN YOUR CUSTOMIZED PILOT LIGHTS - PRICING

Configurator

Only one option can be selected from each group.



Pricing

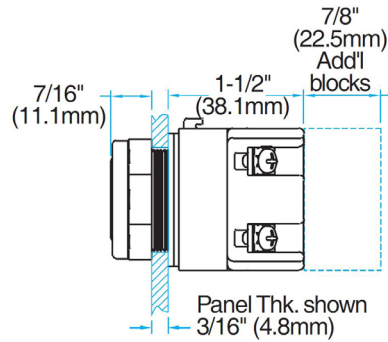
	Part Number	Description	List Price
Level 1 - Base	R2PL30	30MM Pilot Light	Included
Level 2 - Type	(Blank)	Standard Pilot Light	\$59
	TE	Push-to-Test Extended	\$98
	TM	Push-to-Test Mushroom	\$107
	TG	Push-to-Test Guarded	\$107
	TS	Push-to-Test Shrouded	\$116
Level 3 - Voltage Rating	24	24V Full Voltage Operator (Standard Operator)	Included
	24	24V Full Voltage Operator (Push-to-Test)*	\$14
	120	120V Full Voltage Operator	Included
Level 4 - LED and Lens Color	A	Amber LED and Lens	Included
	B	Blue LED and Lens	Included
	G	Green LED and Lens	Included
	R	Red LED and Lens	Included
	W	White LED and Lens	Included

* All 24V Push-to-Test Pilot Lights come standard with gold plated contacts.

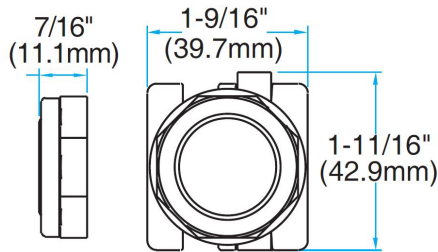
DIMENSIONAL DRAWINGS

Momentary Non-Illuminated Push Buttons

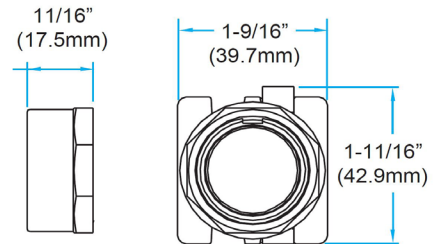
Non-Illuminated Operator
 (Shown with Momentary Flush Cap, but used on all Non-Illuminated Push buttons)



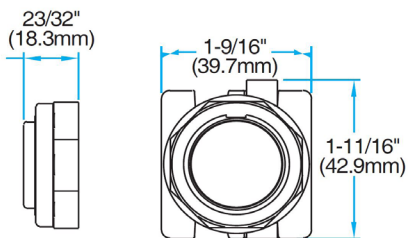
F = Momentary Flush Cap



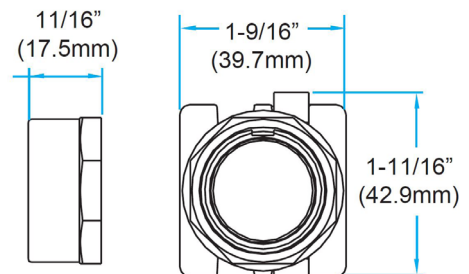
G = Momentary Guarded Flush Cap



E = Momentary Extended Cap



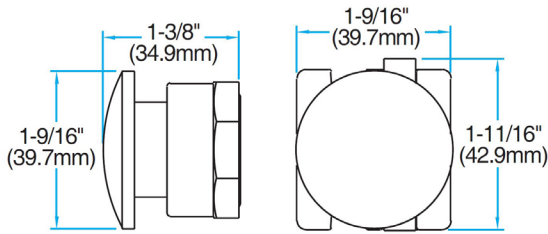
X = Momentary Guarded Extended Cap



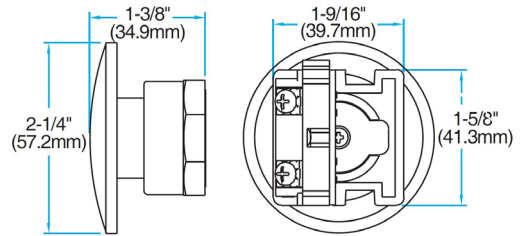
DIMENSIONAL DRAWINGS

Momentary Non-Illuminated Push Buttons

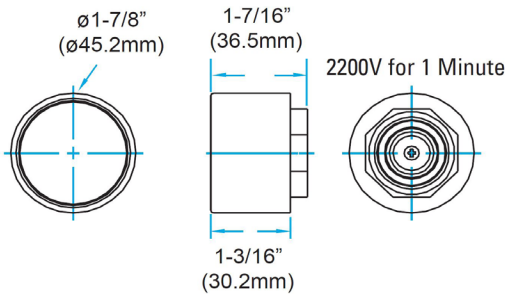
M = Momentary Mushroom Cap (1 - 1/2")



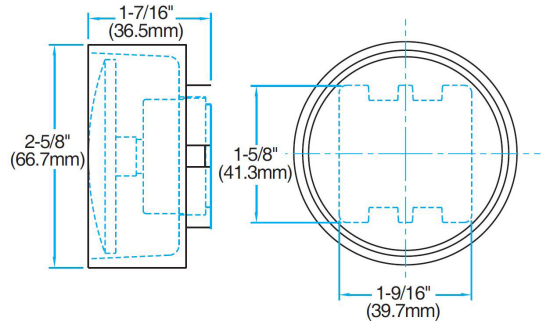
J = Momentary Jumbo Mushroom Cap (2 - 1/4")



H = Momentary Shrouded Mushroom Cap (1 - 1/2")

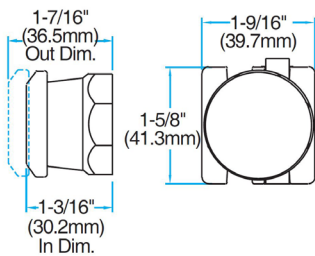


S = Momentary Shrouded Jumbo Mushroom Cap (2 - 1/4")

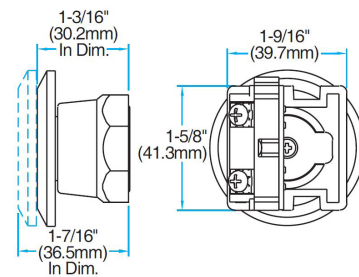


Maintained Non-Illuminated Push Buttons

2PM = 2-Position Push-Pull Maintained Mushroom Cap (1 - 1/2")

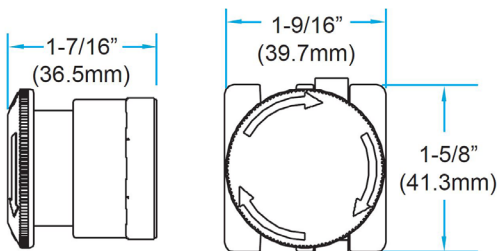


2PJ = 2-Position Push-Pull Maintained Jumbo Mushroom Cap (2 - 1/4")



Push Pull Maintained Non-Illuminated Push Buttons

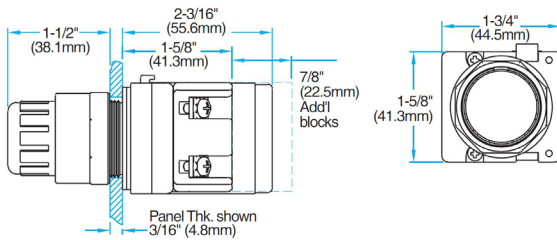
2TM = 2-Position Push-Twist Maintained Mushroom Cap (1 - 1/2")



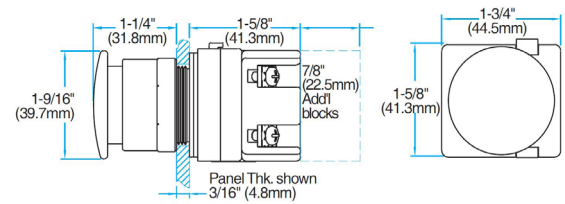
DIMENSIONAL DRAWINGS

Momentary Illuminated Push Buttons

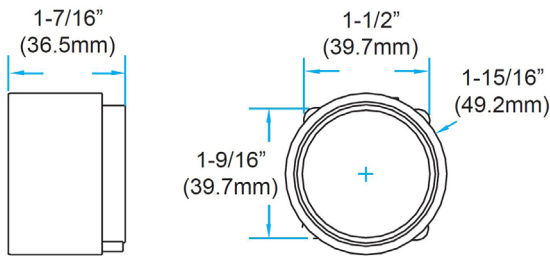
ILE = Extended Illuminated Push Button



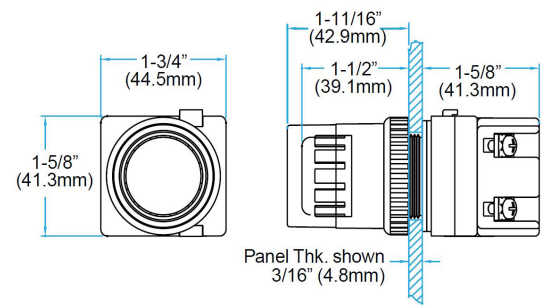
ILM = Illuminated Push Button with Mushroom Lens



ILS = Illuminated Shrouded Mushroom Lens

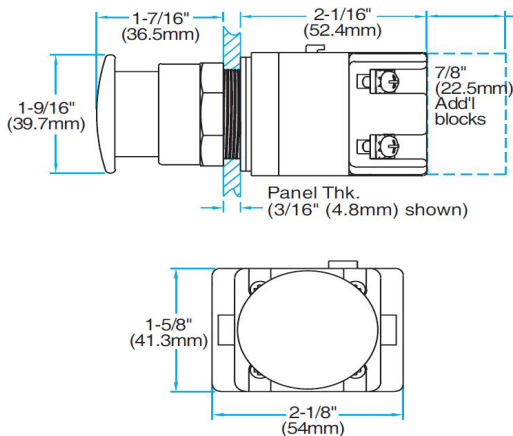


ILG = Guarded Illuminated Push Button



Push Pull Maintained Illuminated Push Buttons

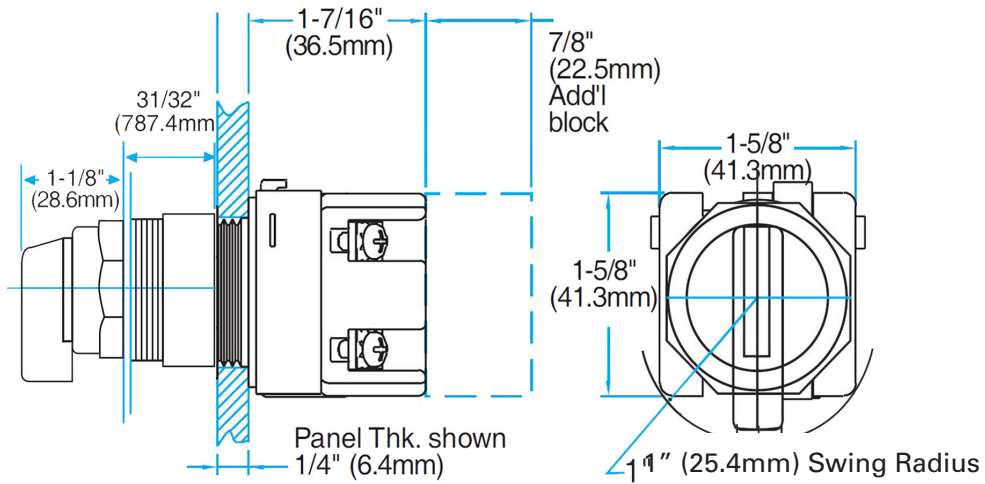
IL2P = 2-Position Push-Pull Mushroom



DIMENSIONAL DRAWINGS

Selector Switches

Selector Switch Lever Handle (Dimensions same for all Operator Functions)

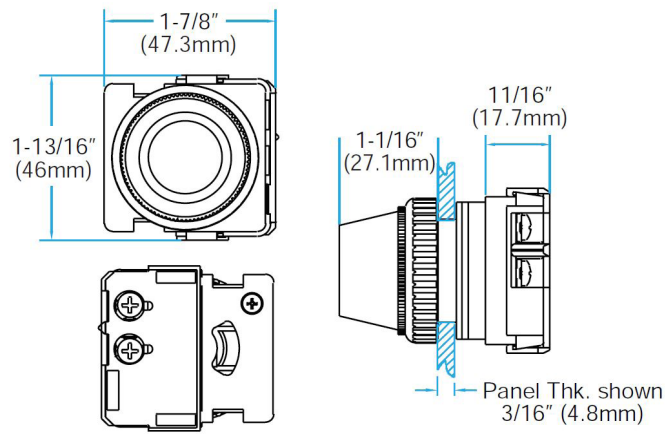


DIMENSIONAL DRAWINGS

Pilot Lights

Pilot Light (with IP20 guard)

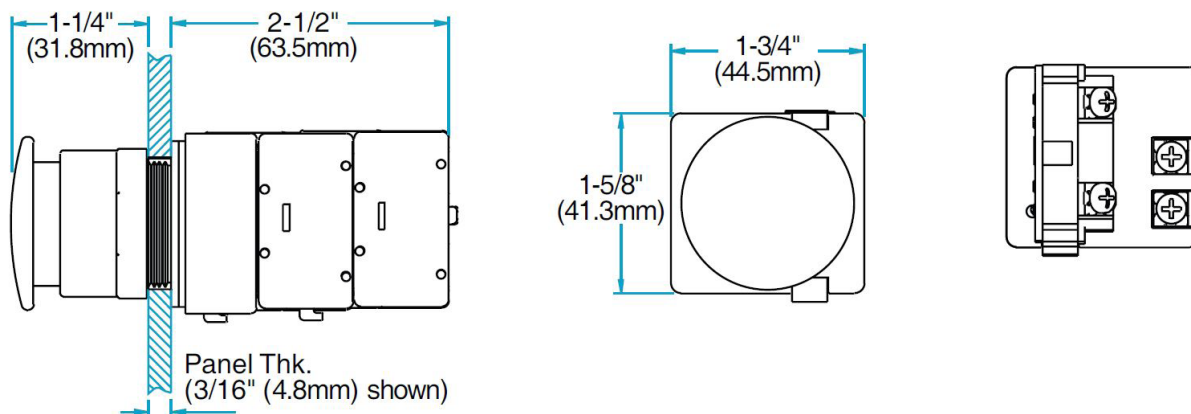
Fully-assembled operators come standard with one 3/16" (4.8mm) and two 1/16" (1.6mm) gaskets.



Push-to-Test Pilot Lights

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.

TM = Mushroom Lens

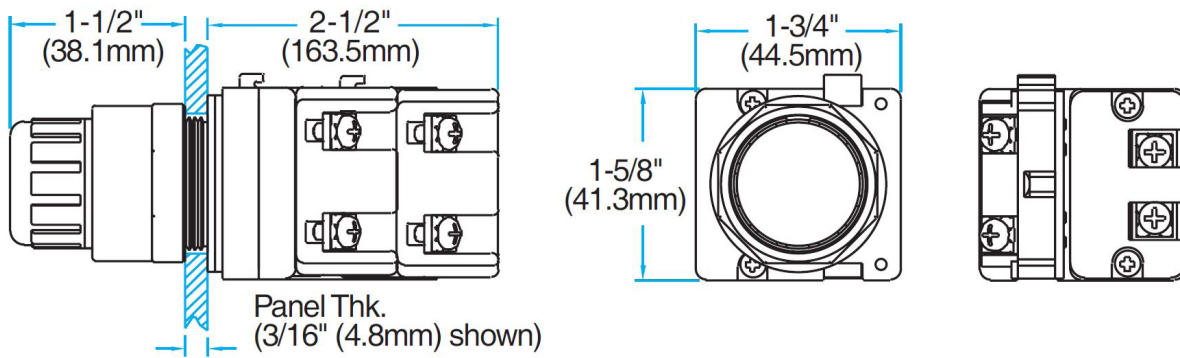


DIMENSIONAL DRAWINGS

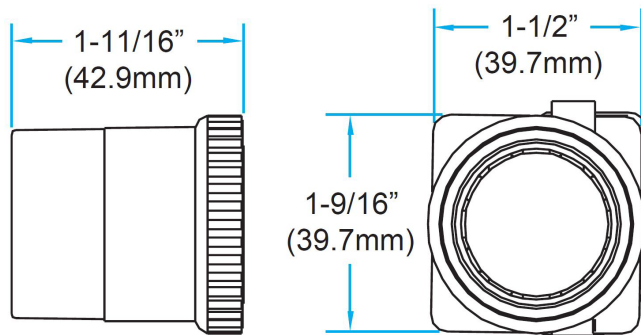
Pilot Lights

Push-to-Test Pilot Lights

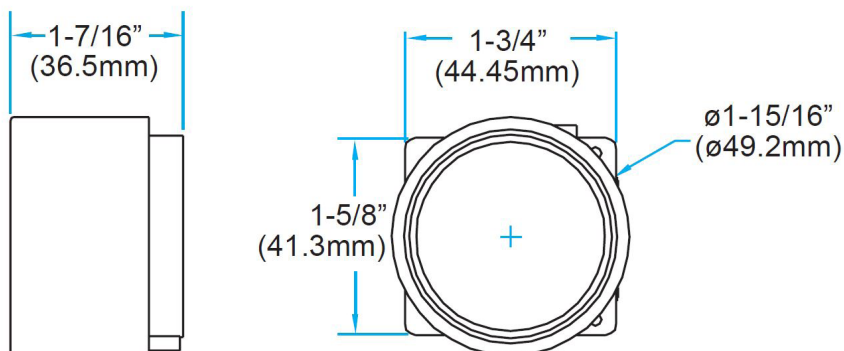
TE = Extended Lens



TG = Guarded Lens



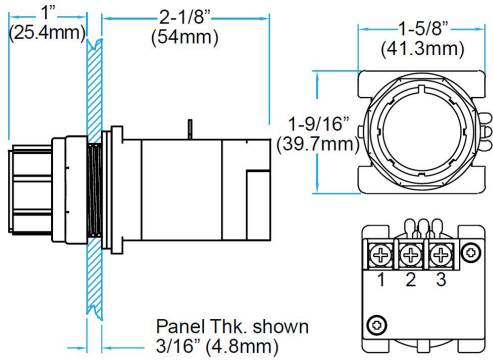
TS = Shrouded Lens



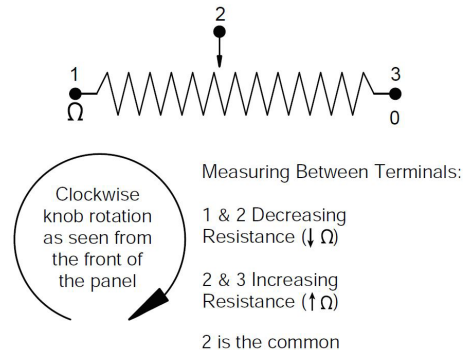
DIMENSIONAL DRAWINGS

Potentiometers

Potentiometer Operator

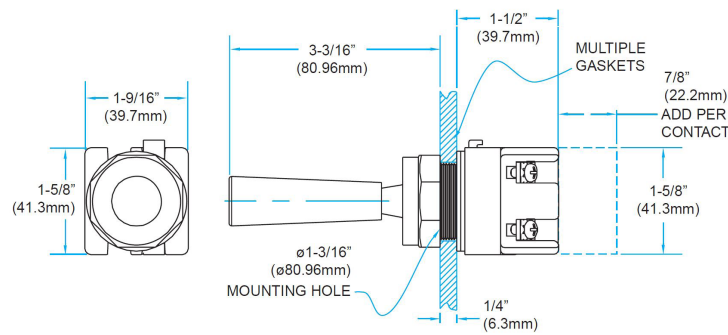


Wiring Diagram



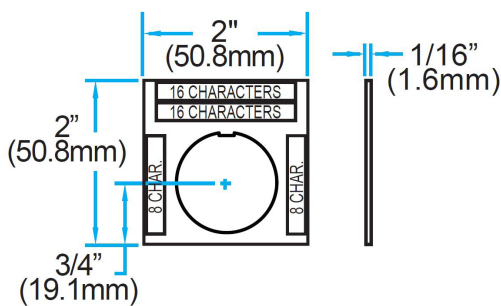
Wobble Stick

Fully-assembled operators come standard with one 3/16" (4.8mm) and three 1/16" (1.6mm) gaskets.

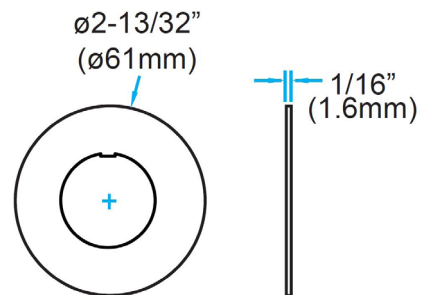


Legends

2" x 2" Square Legends



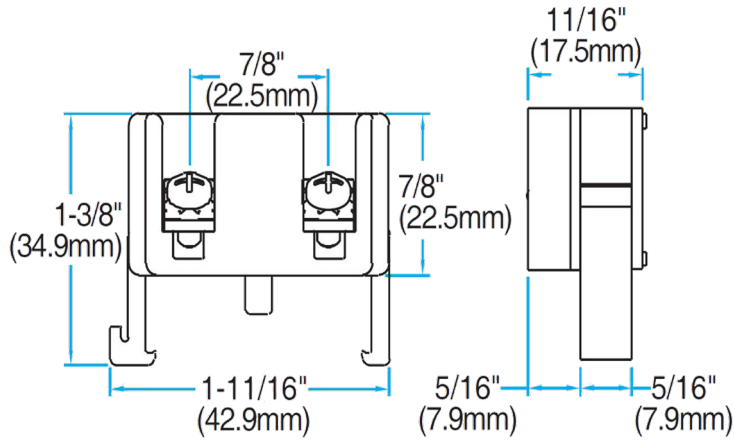
2 - 13/32" Diameter Circle Legends



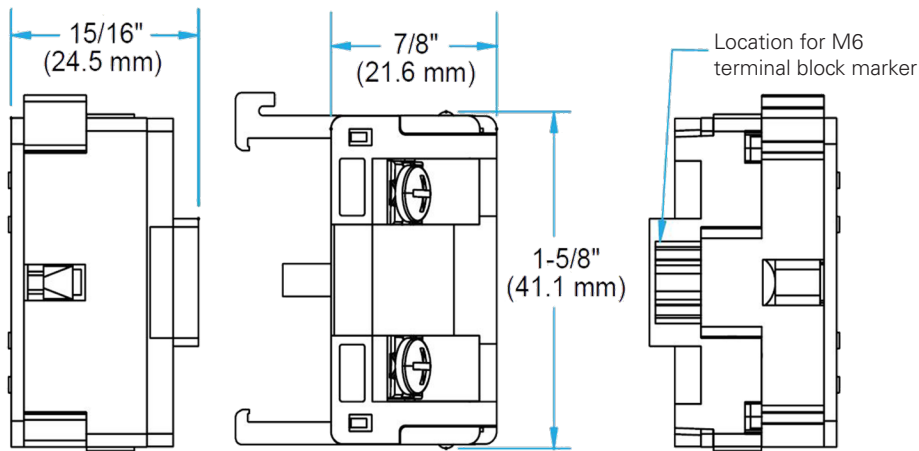
DIMENSIONAL DRAWINGS

Contact Blocks

Standard Contact Block



Contact Block (Shown with IP20 terminal guard)



IP20 guard included

The Benschaw Advantage



Mission Critical Motor Controls and Drives for ANY Application

Medium Voltage Soft Starters and Drives

Benschaw provides a full line of application solutions for motors ranging from 2.3 through 15kV Class up to 25,000 HP. Applications for our medium voltage product line range from pumps, compressors and chillers to fans and blowers, crushers, chippers and conveyors; for every motor type: Induction, synchronous, two-speed, reversing, wound rotor and more.

Our medium voltage product lines include:

- M2L and MVH2 Series - Medium Voltage VFDs
- MVRXE Series - Solid State Medium Voltage Soft Starters
- MV2H Series - 2-High Medium Voltage Soft Starters
- ATL Medium Voltage Starters
- Switchgear and Lineups

As you can see, Benschaw manufactures an extensive selection of standard motor controls and drives — serving a wide range of industries. And if a standard product doesn't fit your requirements, our design and engineering teams can help tailor a solution that does ... no matter how complex or demanding the application.



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