

# CONTROL

## Quick Selector Guide



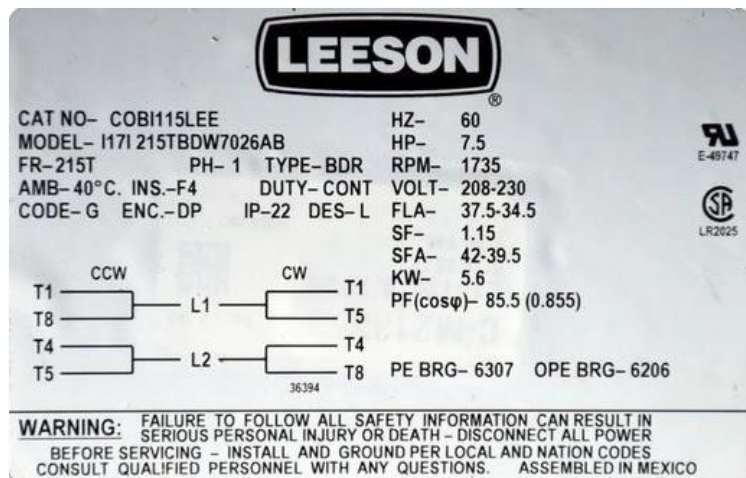
## Motor Current Rating Chart

*for Full Load Amps*

1-Phase AC Motor F.L.A.			3-Phase AC Motor F.L.A.			
HP	110-120 Volts	220-240 Volts	HP	208 Volts	220-240 Volts	440-480 Volts
1/4	5.8	2.9	1/2	2.4	2.2	1.1
1/3	7.2	3.6	3/4	3.5	3.2	1.6
1/2	9.8	4.9	1	4.6	4.2	2.1
3/4	13.8	6.9	1.5	6.6	6	3
1	16	8	2	7.5	6.8	3.4
1.5	20	10	3	10.6	9.6	4.8
2	24	12	5	16.7	15.2	7.6
3	34	17	7.5	24.2	22	11
5	56	28	10	30.8	28	14
7.5	80	40	15	46.2	42	21
10	100	50	20	59.4	54	27
			25	74.8	68	34
			30	88	80	40
			40	114	104	52
			50	143	130	65
			60	169	154	77
			75	211	192	96
			100	273	248	124
			125	343	312	156
			150	396	360	180
			200	528	480	240

The full-load current values are for motors running at usual speeds and motors with normal torque characteristics. Motors built for especially low speeds or high torques may have higher full-load currents, and multi-speed motors will have full-load currents varying with speed. In these cases, the nameplate current ratings should be used.

This table is intended to be a general guide for AC motor Full Load Amperes. Always use the F.L.A. written on the motor nameplate first if it is available.





Womack Electric Supply Company's focus on the industrial market brings the resources that promote energy savings, increase efficiency, reduce downtime, and save money. Womack Electric provides industrial solutions by understanding the business, anticipating needs, and working to attack the most critical areas. From world class products to trained specialists, Womack Electric is the local source to serve this rapidly changing market.

Established in 1938, Womack Electric's customer centric philosophy serves to focus our efforts on consistent conformance to customer expectations for quality products and professional service. We understand that our own success is a direct result of the success of those we serve. We articulate this philosophy every day in the capabilities and pride of workmanship of every Womack Electric employee serving you.

Womack Electric is proud to be a member of the Crescent Electric Supply family. Crescent Electric is one of the largest electrical distribution companies in the United States with branches nationwide.



Contact your local Womack Electric Supply representative to learn more about Womack's industrial product and service solutions.

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# IEC Contactors & Starters



## EATON XT Contactors

Part Number	Description	HP @480V	Frame
XTCE007B10A	Contactors 7A 120V Coil	3	B
XTCE009B10A	Contactors 9A, 120V Coil	5	B
XTCE009B10TD	Contactors 9A, 24VDC Coil	5	B
XTCE009B10T	Contactors 9A, 24VAC Coil	5	B
XTCE012B10A	Contactors 12A, 120V Coil	10	B
XTCE015B10TD	Contactors 15A, 24VDC Coil	10	B
XTCE018C10A	Contactors 18A, 120V Coil	10	C
XTCE018C10B	Contactors 18A, 240V Coil	10	C
XTCE018C10TD	Contactors 18A, 24VDC Coil	10	C
XTCE025C10A	Contactors 25A, 120V Coil	15	C
XTCE032C10A	Contactors 32A, 120V Coil	20	C
XTCE032C10TD	Contactors 32A, 24VDC Coil	20	C
XTCE038C10A	Contactors 32A, 120V Coil	25	C
XTCE040DS1A	Contactors 40A, 120V Coil, W/1NO-1NC AUX	30	D
XTCE050DS1A	Contactors 50A, 120V Coil W/1NO-1NC AUX	40	D
XTCE065DS1A	Contactors 65A, 120V Coil W/1NO-1NC AUX	50	D
XTCE080FS1A	Contactors 80A, 120V Coil, W/1NO-1NC AUX	60	F
XTCE095FS1A	Contactors 95A, 120V Coil, W/1NO-1NC AUX	75	F
XTCE115GS1A	Contactors 115A, 120V Coil, W/1NO-1NC AUX	100	G

## EATON XT Solid State Electronic Overload Relays

Part Number	Description	Aux Contact Config	Frame
XTOE1P6BCS	SS Overload .33-1.65A Frame B	NO-NC	B
XTOE005BCS	SS Overload 1-5A Frame B	NO-NC	B
XTOE020BCS	SS Overload 4-20A Frame B	NO-NC	B
XTOE1P6CCS	SS Overload .33-1.65A Frame C	NO-NC	C
XTOE005CCS	SS Overload 1-5A Frame C	NO-NC	C
XTOE020CCS	SS Overload 4-20A Frame C	NO-NC	C
XTOE045CCS	SS Overload 9-45A Frame C	NO-NC	C
XTOE045DCS	SS Overload 9-45A Frame D	NO-NC	D
XTOE100DCS	SS Overload 20-100A Frame D	NO-NC	D
XTOE100GCS	SS Overload 20-100A Frame F	NO-NC	F
XTOE175GCS	SS Overload 35-175A Frame G	NO-NC	G

## EATON Auxiliary Contacts and Accessories

Part Number	Description	Frame
XTCEXFAC11	Aux Contact, Top Mount 1NO-1NC	B-C
XTCEXFAC22	Aux Contact, Top Mount 2NO-2NC	B-C
XTCEFBG11	Aux Contact, Top Mount 1NO-1NC	D-G
XTCEFBG22	Aux Contact, Top Mount 2NO-2NC	D-G
XTCEXSAB10	Aux Contact, Side Mount 1NO	B
XTCEXSAB01	Aux Contact, Side Mount 1NC	B
XTCEXSCC11	Aux Contact, Side Mount 1NO-1NC	C
XTCEXSBN11	Aux Contact, Side Mount 1NO-1NC	D-H
XTOBXDINC	DIN Rail Adapter CC1	B-C

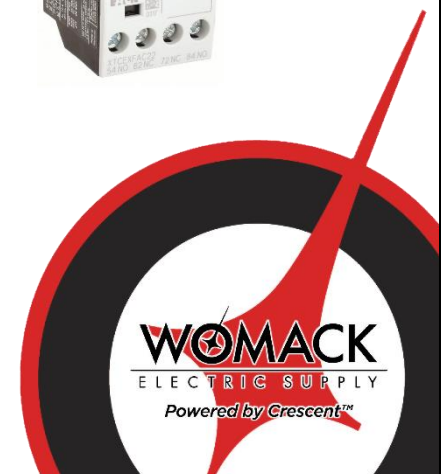
## EATON XT Solid State Electronic Overload Relays Remote Mount

Part Number	Description
XTOE005CCSS	Solid State Overload, 1-5 AMP, Stand Alone
XTOE020CCSS	Solid State Overload, 4-20 AMP, Stand Alone
XTOE045CCSS	Solid State Overload, 9-45 AMP, Stand Alone
XTOE100GCSS	Solid State Overload, 20-100 AMP, Stand Alone

The XT Line of IEC Power Control, consisting of contactors, overload relays, mini controls, manual motor protectors and combination style starters, is one of the world's newest and most complete IEC Power Control product lines on the market.

The XT line applies new technology and design to help OEMs address five basic needs:

- Improving production
- Lowering material cost
- Improving performance
- Improving usability
- Improving safety





# Manual Motor Protectors



Part Number	Description	HP @ 480V	Frame
XTPRP16BC1	MMP Rotary .1 - .16A	*	B
XTPRP25BC1	MMP Rotary .16 - .25A	*	B
XTPRP40BC1	MMP Rotary .25 - .4A	*	B
XTPRP63BC1	MMP Rotary .4 - .63A	*	B
XTPR001BC1	MMP Rotary .63 - 1A	*	B
XTPR1P6BC1	MMP Rotary 1 - 1.6A	3/4	B
XTPR2P5BC1	MMP Rotary 1.6 - 2.5A	1	B
XTPR004BC1	MMP Rotary 2.5 - 4A	2	B
XTPR6P3BC1	MMP Rotary 4 - 6.3A	3	B
XTPR10BC1	MMP Rotary 6.3- 10A	7-1/2	B
XTPR12BC1	MMP Rotary 8 - 12A	7-1/2	B
XTPR16BC1	MMP Rotary 10 - 16A	10	B
XTPR20BC1	MMP Rotary 16 - 20A	10	B
XTPR25BC1	MMP Rotary 20 - 25A	15	B
XTPR32BC1	MMP Rotary 25 - 32A	25	B
XTPR040DC1	MMP Rotary 32 - 40A	30	D
XTPR050DC1	MMP Rotary 40 - 50A	30	D
XTPR058DC1	MMP Rotary 50 - 58A	40	D
XTPR063DC1	MMP Rotary 58 - 63A	40	D

## Accessories

Part Number	Description	Frame
XTPAXLSA	MMP Accessory Line Side Adapter	ALL
XTPAXFA11	MMP Accessory Front Mount Aux A 1NO/1NC	ALL
XTPAXSA11	MMP Accessory Side Mount Aux 1NO/1NC	ALL
XTPAXSA12	MMP Accessory Side Mount Aux 1NO/2NC	ALL
XTPAXSA21	MMP Accessory Side Mount Aux 2NO/1NC	ALL
XTPAXCLKA2	Commoning Link, 3PH to connect 2 MMPs together	B
XTPAXCLKA2D	Commoning Link, 3PH to connect 2 MMPs together	D
XTPAXCLKA3	Commoning Link, 3PH to connect 3 MMPs together	B
XTPAXCLKA3D	Commoning Link, 3PH to connect 3 MMPs together	D
XTPAXCLKA4	Commoning Link, 3PH to connect 4 MMPs together	B
XTPAXCLKA4D	Commoning Link, 3PH to connect 4 MMPs together	D
XTPAXCLKA5	Commoning Link, 3PH to connect 5 MMPs together	B
XTPAXLSA	Line Side Adapter for UL508 Combo Starter Installation	B
XTPAXLSAD	Line Side Adapter for UL508 Combo Starter Installation	D
XTPAXTPCB	Combo Connection Kit - for adjoining XTCE and XTPR combo	B
XTPAXECMC	Electrical Connection Kit for adjoining XTCE and XTPR	B
XTPAXECMD	Electrical Connection Kit for adjoining XTCE and XTPR	D
XTPAXENCSEM65RY	MMP Enclosure (NEMA 1, 12, 3R, Red & Yellow Handle)	B

## Eaton XT IEC Power Control Family

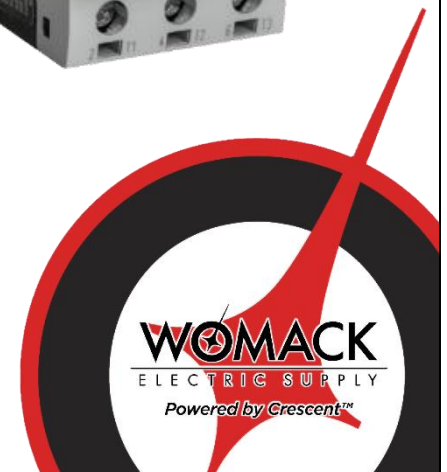
### XT Series - Electronic Manual Motor Protectors and Electronic Motor Starters

- Electronic coil controller allows contactors to reduce power consumption and generate less heat, resulting in lower cooling requirements, the ability to mount more contactors/starters per cabinet, and an extended life on pilot devices that carry control signals.
- AC and DC devices with the same dimensions achieved with an electronically controlled coil system allow for space savings and reduced engineering design time.
- Wiring is not required, therefore increasing installation and maintenance efficiency.
- Twin terminals with separate sockets in contactors up to 400A offer installation and application flexibility when using different size wires. The improved integrity of the connections reduces cabling faults.

**\*For smaller motors, use FLA data on nameplate.**



*This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.*



# NEMA Starters with Solid State Overloads



Part Number	Description	HP @ 480V
AN19BN0A5E005	SZ 0 AN19 FVNR Starter w/ C440 (1-5A) Electronic OL, 120V Coil	1/2-3HP
AN19DN0A5E020	SZ 1 AN19 FVNR Starter w/ C440 (4-20A) Electronic OL, 120V Coil	5-10HP
AN19GN0A5E045	SZ 2 AN19 FVNR Starter w/ C440 (9-45A) Electronic OL, 120V Coil	10-25HP
AN19KN0A5E100	SZ 3 AN19 FVNR Starter w/ C440 (20-100A) Electronic OL, 120V Coil	25-50HP
AN19NN0A5E140	SZ 4 AN19 FVNR Starter w/ C440 (28-140A) Electronic OL, 120V Coil	25-100HP

## Accessories

Part Number	Description	NEMA Size
C320KGS4	Side Mounted AUX Contact Block 1NO/1NC	00-2
9-2875-3	Replacement Coil - 480V For 00	00
9-2876-3	Replacement Coil - 480V For 0	0
9-2703-3	Replacement Coil - 480V For Size 1	1

## Replacement SS Overloads – C441

Part Number	Description	NEMA Size
XTOE005CCS	1-5 AMP NEMA 0/1	0/1
XTOE020CCS	4-20 AMP NEMA 1	1
XTOE045CCS	9-45 AMP NEMA 2	2
XTOE100DCS	20-100 AMP NEMA 3	3
XTOE175GCS	35-175 AMP NEMA 4	4

## Replacement SS Overloads – C440 – SAME AS IEC!!!

## NEMA Starter Solutions - Reliable, accurate, intelligent motor protection

Eaton's Freedom NEMA AN19 starter series combines exceptional Freedom contactor ratings with the C440 electronic overload's superior motor protection features.

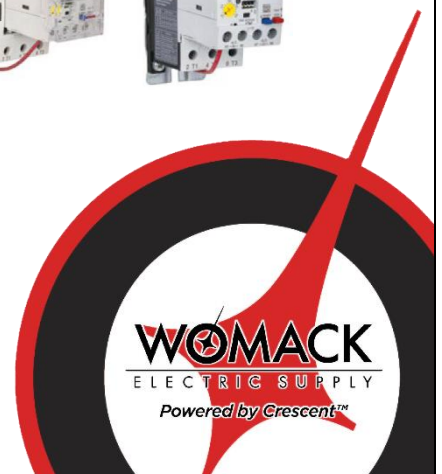
AN19 starters can be monitored in real-time over communications, allowing for reduced troubleshooting efforts and downtime.

### Benefits

- Ease of use
- Compact design
- Real-time accuracy
- Open and enclosed offerings



*This Control Quick Selection Guide shows commonly used, in-stock items.  
Additional configurations for all items shown are available.*



# Variable Frequency Drives



## Input 480V 3 Phase

## Out 480V 3 Phase

Part Number	Description	HP	A
DG1-344D3FB-C21C	Eaton DG1 Variable Frequency Drive	2	4.3
DG1-347D6FB-C21C	Eaton DG1 Variable Frequency Drive	5	7.6
DG1-34016FB-C21C	Eaton DG1 Variable Frequency Drive	10	16
DG1-34023FB-C21C	Eaton DG1 Variable Frequency Drive	15	23
DG1-34031FB-C21C	Eaton DG1 Variable Frequency Drive	20	31

## Kits and Accessories

Part Number	Description
DXG-KEY-RMTKIT	REMOTE KEYPAD MOUNTING KIT
DXG-ACC-FR2N12KIT	NEMA 1 Kit for Frame MI-2
DXG-ACC-FR3N12KIT	NEMA 1 Kit for Frame MI-3
DXG-ACC-SOFTWARE	Software Kit: (Software, Cable, Manual)

## PowerXL DG1 General Purpose Variable Frequency Drives

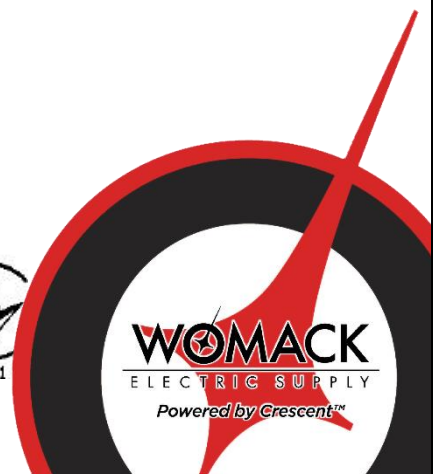
Eaton's PowerXL DG1 general purpose, variable frequency drives are engineered for today's demanding commercial and industrial applications. With an industry leading energy efficiency algorithm, high short-circuit current rating and robust design, the DG1 offers customers increased efficiency, safety, and reliability.

### Core Features

- Ease of use: Easy Startup Wizard, PC Tool software, four built-in applications, diagnostics, local/remote button, removable keypad with copy/paste functionality
- Space-savings: Compact size, open Type 12 option, on-board communication, and I/O
- Energy Optimization: Active energy control algorithm, 5% DC choke, input surge protection, EMI/RFI filter built-in
- Certifications: UL, CE, cUL, RoHS, C-Tick



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# Variable Frequency Drives

# YASKAWA

**GA500 AC Microdrive (Applications: Conveyors, Pumps, Fans) ([Click to Learn More](#))**

Power Output (HP)		240V Models								480V Models			
		Single-Phase				Three-Phase				Three-Phase			
		Catalog Code	Output Amps		Frame	Catalog Code	Output Amps		Frame	Catalog Code	Output Amps		Frame
Normal Duty	Heavy Duty		ND	HD			ND	HD			ND	HD	
1/6	1/6	GA50UB001ABA	1.2	0.8	1.1	GA50U2001ABA	1.2	0.8	1.1				
1/4	1/4	GA50UB002ABA	1.9	1.6	1.1	GA50U2002ABA	1.9	1.6	1.1				
1/2	1/2									GA50U4001ABA	1.2	1.2	2.1
3/4	1/2	GA50UB004ABA	3.5	3	1.3	GA50U2004ABA	3.5	3	1.2				
1	3/4									GA50U4002ABA	2.1	1.8	2.2
1.5	1	GA50UB006ABA	6	5	2.4	GA50U2006ABA	6	5	1.4				
2	2									GA50U4004ABA	4.1	3.4	2.4
3	2	GA50UB010ABA	9.6	8	2.5	GA50U2010ABA	9.6	8	2.3				
3	3	GA50UB012ABA	12.2	11	3.2					GA50U4005ABA	5.4	4.8	2.5
4	3					GA50U2012ABA	12.2	11	2.4	GA50U4007ABA	7.1	5.6	2.5
5	4									GA50U4009ABA	8.9	7.3	2.5
N/A	5	GA50UB018ABA	N/A	17.6	4								
7.5	5					GA50U2021ABA	21	17	3.1	GA50U4012ABA	11.9	9.2	3.1
10	7.5					GA50U2030ABA	30	25	5				
10	10									GA50U4018ABA	17.5	14.8	5
15	10					GA50U2042ABA	42	33	5	GA50U4023ABA	23.4	18	5
20	20					GA50U2070ABA	70	60	7	GA50U4031ABA	31	24	6
25	20					GA50U2082ABA	82	75	7	GA50U4038ABA	38	31	6
30	25									GA50U4044ABA	44	39	8
40	30									GA50U4060ABA	60	45	8

Popular Options (More Found in Catalog)					
Communication Cards		IP20/UL Type 1 Adapter Kits (For GA50U...)		Keypads and Remote Mounting	
Part Number	Description	Part Number	Description	Part Number	Description
SI-N3	DeviceNet™	ZBAA-GA50V2-4	4001ABA & 4002ABA	JVOP-KPLCA04MEB	Standard Keypad
SI-ES3	EtherCAT®	ZBAA-GA50V2-5	4004ABA	JVOP-KPLCC04MBB	Keypad with Bluetooth
SI-EN3	Ethernet/IP Card	ZBAA-GA50V2-2	4005ABA thru 4009ABA	ZPBA-GA500	Remote Mount Kit- Standard Keypad
SI-EN3/D	Ethernet/IP dual port	ZBAA-GA50V3-2	4012ABA	900-239-230-001	Outdoor Type 12/3/3R Keypad Mount
SI-EM3	Modbus/TCP	ZBAA-GA50V5-1	4018ABA & 4023ABA	UWR0051	Remote Mount Cable-1M
SI-EP3	PROFINET®	ZBAA-GA50V6-1	4031ABA & 4038ABA	UWR0052	Remote Mount Cable-3M
JOHB-GA50	Option Card Carrier	ZBAA-GA50V8-1	4044ABA & 4060ABA	UWR01258	USB Cable for PC to Drive Comm - 3M

## Questions to consider...

### What is the application?

Constant Torque Applications (Conveyors, loaders, etc.) require a suitable drive (GA500 OR GA800). Variable torque loads (fans and centrifugal pumps) can be controlled with either CT Drives or specialized Fan/Pump Drives (P1000 on opposite side).

### What are your Full Load Amps?

Check motor nameplate to make sure voltages and full load amps (FLA) are known. Pick next larger size drive as compared to FLA.

### How/Where is the drive being mounted?

There are a lot of options to mount inside and enclosure, or as a stand-alone controller. NEMA 1 Kits are available, as well as configured drives in NEMA 1, NEMA 12 or NEMA 3R Enclosures.

### How is the Drive being communicated with?

If using a PLC to start and stop the drive, make sure to choose the proper communication card (i.e., Ethernet IP).



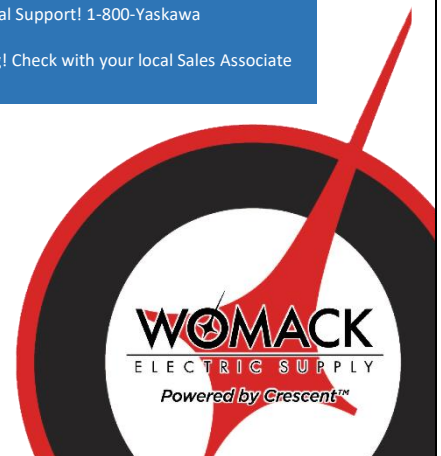
### V1000-4X AC Micro-Drive in 4X Enclosure

**Ranges:**  
1/8 to 25HP 230V, 460V.  
**Applications:**  
Food processing, wash-down areas.  
**Accessories Available:**  
Serial and ethernet comms.  
**Notes:**  
Current-Wet or dusty environments.  
Off the shelf as complete.  
No configuration needed.

([Click to Learn More](#))

Free Software! [www.yaskawa.com](http://www.yaskawa.com)  
Free Technical Support! 1-800-Yaskawa  
Free Training! Check with your local Sales Associate

This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.





# Variable Frequency Drives

# YASKAWA

**GA800 AC Industrial Drive (Applications: Conveyors, Pumps, Fans, Closed Loop Systems, or Any Application!) [\(Click to Learn More\)](#)**

Power Output (HP)		240V Models				480V Models			
Normal Duty	Heavy Duty	Catalog Code	Output Amps		Frame	Catalog Code	Output Amps		Frame
			ND	HD			ND	HD	
1	3/4	GA80U2004ABM	4.2	3.5	1	GA80U4002ABM	2.1	1.8	1
1.5	1	GA80U2006ABM	6	5	1				
2	1.5	GA80U2008ABM	8	6.9	1	GA80U4004ABM	4.1	3.4	1
3	2	GA80U2010ABM	9.6	8	1	GA80U4005ABM	5.4	4.8	1
4	3	GA80U2012ABM	12.2	11	1	GA80U4007ABM	7.1	6.5	1.5
5	4	GA80U2018ABM	17.5	14	1.5	GA80U4009ABM	8.9	7.2	1.5
7.5	5	GA80U2021ABM	21	17.5	1.5	GA80U4012ABM	11.9	9.2	1.5
10	7.5	GA80U2030ABM	30	25	1.5	GA80U4018ABM	17.5	14.8	1.5
15	10	GA80U2042ABM	42	33	1.5	GA80U4023ABM	23.4	18	1.5
20	15	GA80U2056ABM	56	47	2	GA80U4031ABM	31	24	2
25	20	GA80U2070ABM	70	60	3	GA80U4038ABM	38	31	2
30	25	GA80U2082ABM	82	75	3	GA80U4044ABM	44	39	3
40	30	GA80U2110ABM	110	88	4	GA80U4060ABM	59.6	45	3.5
50	40	GA80U2138ABM	138	115	6	GA80U4075ABM	74.9	60	4
60	50	GA80U2169ABM	169	145	7	GA80U4089ABM	89.2	75	6
75	60	GA80U2211ABM	211	180	7	GA80U4103ABM	103	91	6
100	75	GA80U2257ABM	257	215	9	GA80U4140ABM	140	112	7
125	100	GA80U2313ABM	313	283	9	GA80U4168ABM	168	150	7
150	125	GA80U2360ABM	360	346	10	GA80U4208ABM	208	180	9
150	150	GA80U2415ABM	415	415	10				
200	150					GA80U4250ABM	250	216	9
250	200					GA80U4302ABM	302	260	9
300	250					GA80U4371ABM	371	304	10
350	300					GA80U4414ABM	414	371	10
400	350					GA80U4477ABM	477	414	11
450	400					GA80U4568ABM	568	477	11
500	450					GA80U4605ABM	675	605	11
600	500					GA80U4720ABM	720	605	11

Popular Options (More Found in Catalog)						
Communication Cards		NEMA 1 Type Adapters		Keypads and Remote Mounting		Custom Configurations
Part Number	Description	Part Number	Description	Part Number	Description	Description
SI-EN3	EtherNet/IP	900-192-121-001	240V - 42A / 480V - 23A	JVOP-KPLCC04MBB	LCD KP with Bluetooth	• Installed in N1, 3R, or 12 Enclosure.
SI-ES3	EtherCAT	900-192-121-002	240V - 56A / 480V 31-38A	900-192-933-001	Type 1 KP Panel Mount Kit	• Circuit Breaker or Disconnect.
SI-EP3	Profinet			UWR0051	KP Remote Mount Cable - 1M	• Additional Line Reactors.
SI-P3	Profibus-DP					• Cover Control.
SI-N3	DeviceNet					• Flange Mounted Heat Sink.

## Choose YASKAWA and Get Connected!

Whether you prefer discrete / analog control or high-speed communication, GA800 covers all your needs for control interface and provides robust connections on all major networks.



### Additional YASKAWA Drive Families

#### FP605 Industrial Fan and Pump Drive



#### RANGES:

- IP20/UL Type 1 - 240 VAC: 3 to 150 HP - 480 VAC: 3 to 600 HP
- IP55/UL Type 12 - 240 VAC: 3 to 40 HP - 480 VAC: 3 to 100 HP

**APPLICATIONS:** Delivers a highly efficient and sustainable solution for all your pump and fan motor control needs.

[\(Click Here to Learn More\)](#)

### U1000 Matrix Drive-IEEE 519 Compliant for Clean Power



#### RANGES: 1 - 800HP 230V, 460V

**APPLICATIONS:** Water/Wastewater, IEEE 519 Specifications where Clean-Power is a requirement. Used when 75% or greater regeneration capacity is needed. Meets specifications for 18-Pulse Applications.

**ACCESSORIES AVAILABLE:** Serial & Ethernet comms, NEMA 1 end cap (needed for 150HP & higher).

[\(Click Here to Learn More\)](#)

This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.



**WOMACK**  
ELECTRIC SUPPLY  
Powered by Crescent™

# Control Relays



Part Number	Description
EASY-E4-UC-12RC1	24V DC/AC 4 IN, 4 Analog Out, 4 Relay Out
EASY-E4-AC-12RC1	120V AC, 8 Digital In, 4 Relay Out
EASY-E4-UC-8RE1	24V DC Expander Module 8IO
EASY-E4-UC-16RE1	24V DC Expander Module 16 IO
EASY-E4-AC-8RE1	120V AC Expander Module 8 IO
EASY-BOX-E4-UC1	Starter Kit (Base Unit Plus Software)
EASYSOFT-SWLIC	Software

## TRL Series Multi-Function Timing Relays

Features time adjustment from 50 milliseconds up to 100 hours. Outgoing change-over contact rated 8 amps/250V. Flexible voltage supply and control input: 12V – 240Vac/dc for TRL07 and 24V – 240Vac/dc for TRL04.

Function	Part # TRL04	Part # TRL07
ON DELAY (Voltage Controlled)	X	X
OFF Delay (w/Control Input)	X	X
Single Shot Leading Edge		X
Single Shot Trailing Edge		X
ON DELAY (w/Control Input)		X
Single Shot Leading Edge (Voltage)	X	X
Symmetric Pulse Generator	X	X

## IDEC Ice Cube Relays

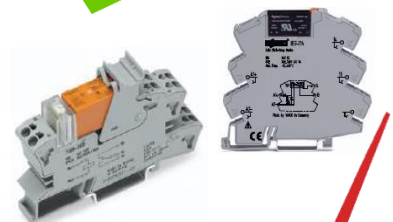
Part Number	Description	Base
RH1BUL24VDC	Relay, 1P, 10A, 24VDC Coil	SH1B05
RH1BUL24VAC	Relay, 1P, 10A, 24VAC Coil	SH1B05
RH1BUL120VAC	Relay, 1P, 10A, 120VAC Coil	SH1B05
RH2BUL24VDC	Relay, 2P, 10A, 24VDC Coil	SH2B05
RH2BUL24VAC	Relay, 2P, 10A, 24VAC Coil	SH2B05
RH2BUL120VAC	Relay, 2P, 10A, 120VAC Coil	SH2B05
RH3BUL120VAC	Relay, 3P, 10A, 120VAC Coil	SH3B05
RH3BUL24VDC	Relay, 3P, 10A, 24VDC Coil	SH3B05
RH4BUL24VDC	Relay, 4P, 10A, 24VDC Coil	SH4B05
RH4BUL120VAC	Relay, 4P, 10A, 120VAC Coil	SH4B05

## WAGO DIN Rail Relays

Part Number	Description
788-303	Relay, 1Pole, 16A, Red Ind., 15MM, Gray, 12 VDC Coil
788-304	Relay, 1Pole, 16A, Red Ind., 15MM, Gray, 24 VDC Coil
788-311	Relay, 2Pole, 16A, Red Ind., 15MM, Gray, 12 VDC Coil
788-312	Relay, 2Pole, 16A, Red Ind., 15MM, Gray, 24 VDC Coil
788-512	Relay, 2Pole, 16A, Red Ind., 15MM, Gray, 24 VAC Coil
857-304	Relay, 1Pole, Slim 6MM Wide, 6A, Gray, 24V DC Coil
857-357	Relay, 1Pole, Slim 6MM Wide, 6A, Gray, 120V AC Coil



Think Automation and beyond...



This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.

# Voltage Management

## Power Supplies

### PSG Series - Single Phase 85-264V AC Input, 24V DC Output

Part Number	Description
PSG60E24RM	2.5A Output, 60W
PSG120E24RM	5A Output, 120W
PSG240E24RM	10A Output, 240W
PSG480E24RM	20A Output, 480W

### PSL- Economy Series - Single Phase 100-240V AC Input, 24V DC Output

Part Number	Description
PSL30E24RP	1.25A Output, 30W
PSL60E24RP	2.5A Output 60W

### PSG Series - Three Phase 400-500V AC Input, 24V DC Output

Part Number	Description
PSG60F24RM	2.5A Output
PSG120F24RM	5A Output
PSG240F24RM	10A Output
PSG480F24RM	20A Output
PSG960F24RM	40A Output



### Wago "Cage Clamp" Power Supplies

#### Single Phase 90-264V AC Input, 24V DC Output

Part Number	Description
787-712	2.5A Output
787-722	5A Output
787-732	10A Output
787-734	20A Output
787-736	40A Output

### Wago "Cage Clamp" Power Supplies

#### Three Phase 400-500V AC Input, 24V DC Output

Part Number	Description
787-738	6.5A Output
787-1640	10A Output
787-1642	20A Output
787-1644	40A Output

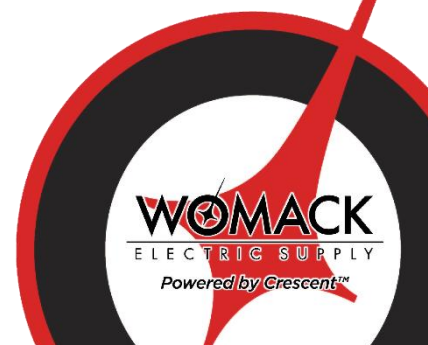
## Control Transformers

### Primary 240 X 480VAC - Secondary 120VAC

Part Number	VA	Description
C0050E2AFB	50	Transformer with Primary and Secondary Fuse Blocks
C0100E2AFB	100	Transformer with Primary and Secondary Fuse Blocks
C0250E2AFB	250	Transformer with Primary and Secondary Fuse Blocks
C0350E2AFB	350	Transformer with Primary and Secondary Fuse Blocks
C0500E2AFB	500	Transformer with Primary and Secondary Fuse Blocks

### Primary 240/480VAC - Secondary 24VAC

Part Number	VA	Description
C0075E2BFB	75	Transformer with Primary and Secondary Fuse Blocks
C0100E2BFB	100	Transformer with Primary and Secondary Fuse Blocks



# Terminal Blocks – Cage Clamp



## Cage Clamp (Tool Type) Terminal Blocks 22-12 AWG, 600V, 20A

Part Number	Description
2002-1201	2-Conductor, 5.2MM, Gray
2002-1207	2-Conductor, Ground, 5.2MM Green/Yellow
2002-1301	3-Conductor, 5.2MM, Gray
2002-1401	4-Conductor, 5.2MM, Gray
2002-1407	4-Conductor, Ground, 5.2MM Green/Yellow
2002-2201	Double-deck, 5.2MM, Gray
2002-3201	Triple-deck, 5.2MM, Gray
2002-3227	Triple-deck, 5.2MM w/Ground Cond., Gray
2004-1401	4-Conductor, 6.2MM, Gray
2004-1407	4-Conductor, 6.2MM, Green/Yellow
2006-1201	2-Conductor, 7.5MM, Gray
2006-1301	3-Conductor, 7.5MM, Gray
2006-1307	3-Conductor, 7.5MM, Green/Yellow
2010-1301	3-Conductor, 10MM, Gray
270-570	4-Conductor Sensor Block, 2.5MM <sup>2</sup> , Gray

## Push Button Terminal Blocks

Part Numbers	Description
2202-1201	2-Conductor, 5.2MM, Gray
2202-1207	2-Conductor, Ground, 5.2MM Green/Yellow
2202-1301	3-Conductor, 5.2MM, Gray
2202-1401	4-Conductor, 5.2MM, Gray
2210-1201	2-Conductor, 10MM, Gray

## Fused Terminal Blocks- Cage Clamp

Part Numbers	Description
282-120	2-Conductor Fuse block, Gray, for 1/4 x 1 Fuse, W/O Ind
2002-1611	2-Conductor Fuse block, Gray, for 5X20MM Fuse, W/O Ind
2002-2611/1000-541	Double Deck Fuse block, Gray, for 5X20MM Fuse, W/O Ind

## Unmanaged Ethernet Switches by Wago

Part Number	Description
852-111/000-001	5 Port ECO Switch
852-112/000-001	8 Port ECO Switch

Unmanaged industrial ethernet switches have ethernet ports for easily setting up small- to medium-sized networks. Its slim design paired with a DIN-rail adapter simplifies installation in the control cabinet and provides high vibration and shock resistance.



As the world leader in spring pressure connection technology, WAGO offers the perfect connection system to meet your specific needs.

### Convenience Outlets - DIN RAIL

#### 510-17643

15A Duplex Receptacle, DIN Rail Mountable



#### 511-97944

15A Duplex GFI, DIN Rail Mountable





# Terminal Block – Cage Clamp Accessories and Printing Options



## End/Separator Plates, Anchors, and DIN RAIL

Part Numbers	Description
2002-1291	Plate for 2002-12xx series; 0.8 MM wide; gray
2002-1292	Plate for 2002-12xx series; 0.8 MM wide; orange
2002-1293	Plate for 2002-12xx series; 2 MM wide; gray
2002-1392	Plate for 2002-13xx series; 0.8 MM wide; orange
2002-1393	Plate for 2002-13xx series; 2 MM wide; gray
2002-1492	Plate for 2002-14xx series; 0.8 MM wide; orange
2002-1493	Plate for 2002-14xx series; 2.0 MM wide; gray
2002-1494	Plate for 2002-14xx series; 2.0 MM wide; orange
2002-2291	Plate for 2002-22xx series; 0.8 MM wide; gray
2002-2292	Plate for 2002-22xx series; 0.8 MM wide; orange
2002-3291	Plate for 2002-32xx series; 0.8 MM wide; gray
2002-3292	Plate for 2002-32xx series; 0.8 MM wide; orange
2002-4192	Plate for 2002-41xx series; 1.0 MM wide; orange
2002-991	Plate for 2002 series fuse blocks; 2.0 MM wide; gray
2002-992	Plate for 2002 series fuse blocks; 2.0 MM wide; orange
249-116	Screwless end stop; 6MM wide; for 35MM DIN-rail, Gray
249-117	Screwless end stop; 10MM wide; for 35MM DIN-rail, Gray
XBANS3575P	Eaton Din Rail- Steel Slotted 2M

## Terminal Block Label Printing, Wire Marking, and Tools

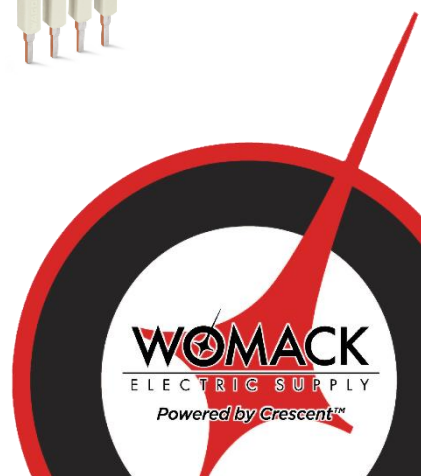
Part Numbers	Description
258-5000	Thermal transfer printer; Smart Printer
2009-110	Marking strips on reel; snap-on type; white, non-stretch
2009-115	Marking strips on reel; snap-on type; white, stretch
258-5005	Thermal transfer ink ribbon for Smart Printer
258-5006	Replacement Roller
793-5502	WMB Marking Card, White; 1-10
793-5503	WMB Marking Card, White; 11-20
793-5504	WMB Marking Card, White; 21-30
210-719	Operating tool; Blade: 2.5 x 0.4 mm;

## Jumpers (Insulated)

Part Numbers	Description
<b>2002 Series</b>	
2002-402	2-way; light-gray
2002-403	3-way; light-gray
2002-404	4-way; light-gray
2002-405	5-way; light-gray
2002-406	6-way; light-gray
2002-407	7-way; light-gray
2002-408	8-way; light-gray
2002-410	10-way; light-gray
<b>2004 Series</b>	
2004-402	2-way; light-gray
2004-403	3-way; light-gray
2004-404	4-way; light-gray
2004-405	5-way; light-gray
2004-406	6-way; light-gray
2004-407	7-way; light-gray
2004-410	10-way; light-gray
<b>2006 Series</b>	
2006-402	2-way; light-gray
2006-403	3-way; light-gray
2006-404	4-way; light-gray
2006-405	5-way; light-gray



This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.



# Terminal Blocks – Screw Connection / Distribution Blocks



## 6.2MM, 10G, Screw Connection, Through Feed, Single Level

Part Number	Description
XBUT4	Grey
XBUT4BU	Blue
XBUT4OR	Orange
XBUT4BK	Black
XBUT4PE	Green Ground Block
XBUT4FBE	Fuse Block for 5X20MM Fuse

## 6.2MM, 10G, Spring Cage, Through Feed, Single Level

Part Number	Description
XBPT4	Grey
XBATPT4	Partition Plate

## 6.2MM, 10G, Screw Connection, Through Feed, Double Level

Part Number	Description
XBUTT4	Grey Double Level
XBUTT4PE	Ground Block Double Level

## Accessories

Part Number	Description
XBACUT10	End Cover
XBATUT10	Partition Plate
XBAFBS26	Plug In Bridge - 2 Pole
XBAFBS36	Plug In Bridge - 3 Pole
XBAFBS56	Plug In Bridge - 5 Pole
XBAFBS106	Plug In Bridge - 10 Pole
XBATSPA14	Test Adapter
XBMZB6	Blank Marker Strip
XBAES35C	End Stop, One Screw Mount
XBAES35N	End Stop, Snap On
XBANS3575P	35MM DIN Rail, Slotted 1M

## Power Distribution Blocks

Part Number	Description
UD80A	80A 1 Pole Distribution Block – 1in (#4Ga), 6 Out (#4 to #16)
UDJ160A	160A 1 Pole Distribution Block – 1 in (3/0), 6 Out (#4 to #14)
UD250A	250A 1 Pole Distribution Block – 1in (250MCM), 11 Out (#1)
UD-400112CU	400A 1 Pole Distribution Block – 1in (400MCM), 11 Out (#6)

## nVent ERIFLEX Single Pole Distribution Block Features

- Tinned CU or AL block allows for CU/AL direct connections, or using ferrule
- Design allows for visual inspection of conductor and confirmation of connection
- Modular snap-together blocks for building multi-pole power blocks
- Easily clips onto DIN rail or mounts to panel with screws
- 95% fill ratio

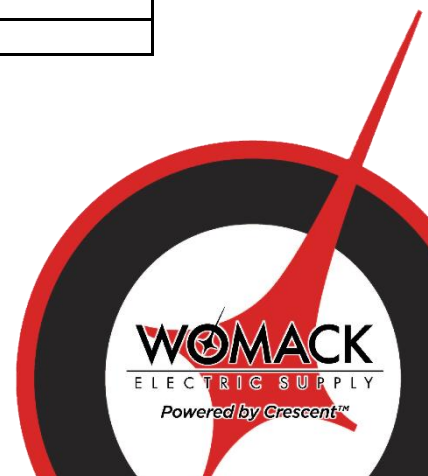
This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.

## XBUT Series IEC Terminal Blocks - Screw Connection

### Key Features:

- Maintenance-free connections
- Global acceptance
- Multi-conductor connections
- Flexible plug-in bridge system
- Large surface area for marking
- Standardized testing system
- Metal parts made of tin-plated copper

This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.



# Molded Case Industrial Circuit Breakers



## Power Defense Breakers

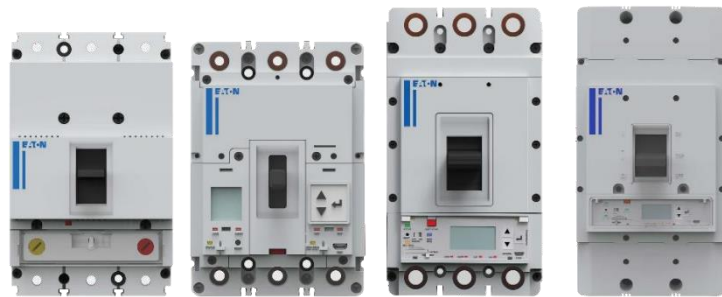
Part Number	Description
PDG-1-3-C-0015-TFFJ	15A 600V 3P 18KAIC Breaker
PDG-1-3-C-0025-TFFJ	20A 600V 3P 18KAIC Breaker
PDG-1-3-C-0020-TFFJ	25A 600V 3P 18KAIC Breaker
PDG-1-3-C-0030-TFFJ	30A 600V 3P 18KAIC Breaker
PDG-1-3-C-0050-TFFJ	50A 600V 3P 18KAIC Breaker
PDG-1-3-C-0060-TFFJ	60A 600V 3P 18KAIC Breaker
PDG-1-3-C-0100-TFFJ	100A 600V 3P 18KAIC Breaker

## Accessories

Part Number	Description
PDG1X3TA1256W	Multi-wire Terminal 6 Wire
PDG1XHMDE	Handle and Mechanism (Shaft Separate)
PDG12XHMS307	12' Shaft

GLOBAL  
IEC / CCC / UL / CSA

**Power  
Defense**



**A globally rated platform from Eaton.**

The Power Defense Molded Case Circuit Breaker portfolio is globally rated in a small footprint for easy adaptability no matter the application or project requirement. A circuit breaker with communicating electronic trip units and the ability to generate the data to help you optimize your facilities' performance, and to help keep your employees, customers, and end-users safe by reducing the risk of arc flash events.

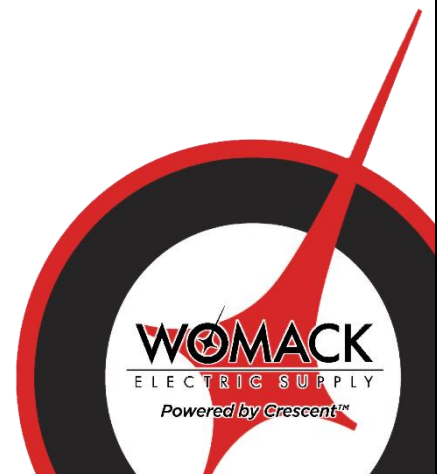
Explore the features and functionalities of Eaton's globally rated molded case circuit breaker platform.

You will be able to:

- Increase equipment uptime
- Reduce the effort and costs involved with servicing or replacing equipment
- Predict potential points of failure with advances in trip unit
- View data directly from the breaker that helps you determine breaker health
- Improve system reliability
- Best use data available to you to reduce maintenance cost and increase safety



*This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.*



# Rotary Disconnects



## Non-Fused Switches

Part Number	Description
R5A3016U	16 AMP 3P Non Fused Disc Switch UL 508
R5A3030U	30 AMP 3P Non Fused Disc Switch UL 508
R5A3040U	40 AMP 3P Non Fused Disc Switch UL 508
R5A3080U	80 AMP 3P Non Fused Disc Switch UL 508
R9C3100U	100 AMP 3P Non Fused Disc Switch UL 508

## Handles

Part Number	Description
SHB00N12	Black Door Handle
SHR00N12	Red Door Handle

## Shafts

Part Number	Description
SF150SH5X5	5.9 Inch Shaft
SF320SH5X5	12.6 Inch Shaft

## Accessories

Part Number	Description
TS3R5A	3 Pole Terminal Shroud
AC1NONC	1 NO/ 1 NC Aux Contact

## Fused Switches

Part Number	Description
R9I3030FCC	Fusible Disconnect Switch 30A Class CC
R9J3060FJ	Fusible Disconnect Switch 60A Class J
R9K3100FJ	Fusible Disconnect Switch 100A Class J
R9L3200FJ	Fusible Disconnect Switch 200A Class J

## Handles

Part Number	Description
SHB00N12	Black Door Handle for 30 and 60A, N3R/12
SHR00N12	Red Door Handle for 30 and 60A, N3R/12
PHB2N12F	Black handle for 100A and 200A Switches N1/3R/12
PHR2N12F	Red Handle for 100A and 200A Switches N1/3R/12

## Shafts

Part Number	Description
SF200SH5X5H	7.9 Inch Shaft 5mmx5mm
SF200PH10X10	7.9 Inch Shaft 10mmx10mm
SF320PH10X10	12.6 Inch Shaft 10mmx10mm

## Accessories

Part Number	Description
AC1NOR9	1 NO Aux Contact

Eaton's full-range of rotary disconnects offers a compact, economical, and high- quality choice for switching and isolation spanning a range from 16A - 1200A.

The R5 Series of switches are UL 508 listed devices, suitable for use as motor disconnects. The R9 offering consists of UL 98 listed fusible and non-fusible products that may be used for service entrance, or anywhere a local means of disconnect is needed or required.

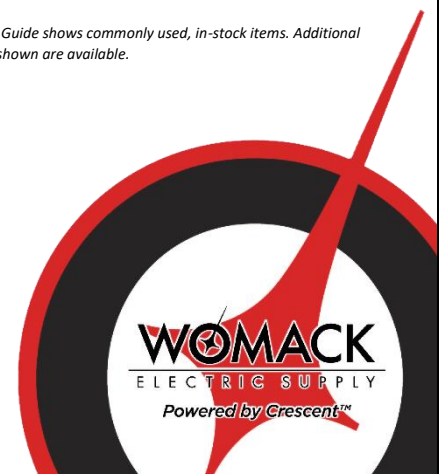
### R5 Product Description:

R5 Series (UL 508 listed) products are manually operated modular switches. Load break switching and isolation provide safety solutions for any low voltage circuit, particularly for machine and control circuits. The R5 Series products are manual motor controllers suitable as motor disconnect.

### R9 Product Description:

R9 Series (UL98 listed) Fusible 30–800A manual operated multi-pole fusible disconnect switches use double break contacts per pole that ensure complete isolation of the fuse when the switch is in the OFF position. When installed with fuses, they provide protection for low voltage electrical installations against short circuit and overload.

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# Circuit Protection



## UL 489 Mini DIN Breakers C-Curve

Amperage	1 pole	2 pole	3 Pole
0.5	FAZ-C0.5/1-NA	FAZ-C0.5/2-NA	FAZ-C0.5/3-NA
1	FAZ-C1/1-NA	FAZ-C1/2-NA	FAZ-C1/3-NA
2	FAZ-C2/1-NA	FAZ-C2/2-NA	FAZ-C2/3-NA
3	FAZ-C3/1-NA	FAZ-C3/2-NA	FAZ-C3/3-NA
4	FAZ-C4/1-NA	FAZ-C4/2-NA	FAZ-C4/3-NA
5	FAZ-C5/1-NA	FAZ-C5/2-NA	FAZ-C5/3-NA
6	FAZ-C6/1-NA	FAZ-C6/2-NA	FAZ-C6/3-NA
7	FAZ-C7/1-NA	FAZ-C7/2-NA	FAZ-C7/3-NA
8	FAZ-C8/1-NA	FAZ-C8/2-NA	FAZ-C8/3-NA
10	FAZ-C10/1-NA	FAZ-C10/2-NA	FAZ-C10/3-NA
13	FAZ-C13/1-NA	FAZ-C13/2-NA	FAZ-C13/3-NA
15	FAZ-C15/1-NA	FAZ-C15/2-NA	FAZ-C15/3-NA
16	FAZ-C16/1-NA	FAZ-C16/2-NA	FAZ-C16/3-NA
20	FAZ-C20/1-NA	FAZ-C20/2-NA	FAZ-C20/3-NA
25	FAZ-C25/1-NA	FAZ-C25/2-NA	FAZ-C25/3-NA
30	FAZ-C30/1-NA	FAZ-C30/2-NA	FAZ-C30/3-NA
32	FAZ-C32/1-NA	FAZ-C32/2-NA	FAZ-C32/3-NA
40	FAZ-C40/1-NA	FAZ-C40/2-NA	FAZ-C40/3-NA
50	FAZ-C50/1-NA	FAZ-C50/2-NA	FAZ-C50/3-NA
63	FAZ-C63/1-NA	FAZ-C63/2-NA	FAZ-C63/3-NA

Optimum product quality, tested reliability, and safety stand for best protection of personnel, installations, and plant.

Eaton's FAZ-NA DIN rail mountable circuit breaker is designed for use in branch service applications.

The Curve type (B, C, D, etc...) designates the instantaneous trip current range, or the amount of

- **B Curve:** Trips above 3 Times In Up To 5 Times In
- **C Curve:** Trips above 5 Times In Up To 10 Times In
- **D Curve:** Trips above 10 Times In Up To 20 Times In

An "SP" may be added to the end of the part number for single pack

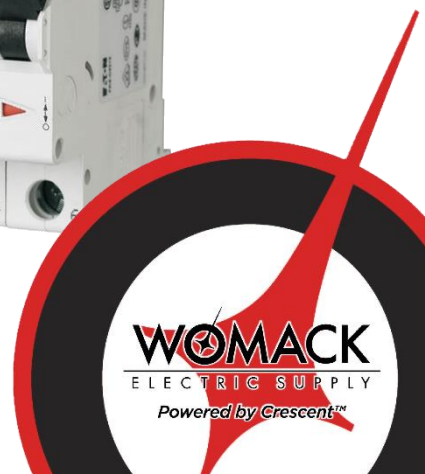


## Typical applications Feeder and branch circuit protection

- HACR equipment (heating, air conditioning, refrigeration) (internal/external)
- Convenience receptacle circuits (internal/external)
- Load circuits leaving the equipment (external)
- Motor control circuits
- Power conditioners
- Power supplies
- PLC I/O points
- Computers
- Relays
- UPS



This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.



# Control Circuit Fuses and Blocks

# Bussmann®

## Glass Fuses 1/4 X 1-1/4, 250V Fast Acting (For Use With Control Transformers, Terminal Blocks)

AGC-1/8-R	AGC-1-R	AGC-3-R	AGC-8-R	AGC-25-R
AGC-1/2-R	AGC-1-1/2R	AGC-4-R	AGC-10-R	AGC-30-R
AGC-6/10-R	AGC-2-R	AGC-5-R	AGC-15-R	
AGC-3/4-R	AGC-2-1/-2R	AGC-7-R	AGC-20-R	

## Glass Fuses 5x20mm, 250V Fast Acting (For Use With Certain Terminal Blocks)

GMA-500-R	GMA-2-R	GMA-4-R	GMA-7-R	GMA-15-R
GMA-1-R	GMA-3-R	GMA-5-R	GMA-10-R	

## RK5 Fuses, 600V Time Delay (For Use In Class R Rotary Disconnects And Fuse Blocks)

FRSR-2-1/2	FRSR-5	FRSR-12	FRSR-25	FRSR-40
FRSR-3	FRSR-6	FRSR-15	FRSR-30	FRSR-50
FRSR-4	FRSR-10	FRSR-20	FRSR-35	FRSR-60

## Class CC 600V Time Delay (For Use With CC Fuse Holders)

LP-CC-.5	LP-CC-2	LP-CC-6	LP-CC-10	LP-CC-25
LP-CC-1	LP-CC-3	LP-CC-7	LP-CC-12	LP-CC-30
LP-CC-1.25	LP-CC-4	LP-CC-8	LP-CC-15	
LP-CC-1.4	LP-CC-5	LP-CC-9	LP-CC-20	

## Class CC 600V Fast Acting (For Use With CC Fuse Holders And ICT)

KRK-R-.5	KRK-R-3	KRK-R-6	KRK-R-15	KRK-R-30
KRK-R-1	KRK-R-5	KRK-R-10	KRK-R-20	

## Class J 600V Time Delay

JDL-2	JDL-15	JDL-30	JDL-45	JDL-80
JDL-6	JDL-20	JDL-35	JDL-50	JDL-100
JDL-10	JDL-25	JDL-40	JDL-60	JDL-125

## Fuse Blocks

RM60030-3CR	30A, 600V 3P, Class R, Fuse Block
RM60060-3CR	60A, 600V, 3P, Class R, Fuse Block
JM60030-3CR	30A, 600V 3P, Class J, Fuse Block
JM60060-3CR	60A, 600V, 3P, Class J, Fuse Block

## Bussman Class CC Fuse Holders

CHCC1DIU	1 Pole Class CC DIN Rail Fuse Holder w/Indicator
CHCC2DIU	2 Pole Class CC DIN Rail Fuse Holder w/Indicator
CHCC3DIU	3 Pole Class CC DIN Rail Fuse Holder w/Indicator

Bussmann series fuses play a major role in industrial or commercial facilities by providing reliable, maximum protection to power systems via electrical and electronic fuses, fuse holders, and power distribution blocks.



This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.

# Wiring Duct & Accessories



Part Number	Description
PW50F-T20	Pan-Wrap Split Harness Wrap 1/2", Black
PW75F-C20	Pan-Wrap Split Harness Wrap 3/4", Black
T38F-C	Spiral Wrap, 3/8", Natural
T50F-C	Spiral Wrap, 1/2", Natural
F1X1.5LG6	1" x 1.5" Slotted Wiring Duct, Light Gray
F1X2LG6	1" x 2" Slotted Wiring Duct, Light Gray
F1X3LG6	1" x 3" Slotted Wiring Duct, Light Gray
F1.5X1.5LG6	1.5" x 1.5" Slotted Wiring Duct, Light Gray
F1.5X3LG6	1.5" x 3" Slotted Wiring Duct, Light Gray
F2X1.5LG6	2" x 1.5" Slotted Wiring Duct, Light Gray
F2X2LG6	2" x 2" Slotted Wiring Duct, Light Gray
F2X3LG6	2" x 3" Slotted Wiring Duct, Light Gray
F2X4LG6	2" x 4" Slotted Wiring Duct, Light Gray
F3X3LG6	3" x 3" Slotted Wiring Duct, Light Gray
F3X4LG6	3" x 4" Slotted Wiring Duct, Light Gray
F4X4LG6	4" x 4" Slotted Wiring Duct, Light Gray
C1LG6	1" Wiring Duct Cover, Light Gray
C1.5LG6	1.5" Wiring Duct Cover, Light Gray
C2LG6	2" Wiring Duct Cover, Light Gray
C3LG6	3" Wiring Duct Cover, Light Gray
C4LG6	4" Wiring Duct Cover, Light Gray

**\* Wide Finger Duct Available**

**Panduit offers a wide variety of sizes, colors, and materials to meet your application's wire capacity needs and space constraints. This allows for reduced control panel footprints by utilizing unused 3D space within your control panels.**

*This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.*



**WOMACK**  
ELECTRIC SUPPLY  
Powered by Crescent™

# Wire Terminals and Ferules



Part Number	Description
BSN10-L	Butt Splice Nylon Insulated 12-10AWG PK50
BSN14-C	Butt Splice Nylon Insulated 16-14AWG PK100
BSN18-C	Butt Splice Nylon Insulated 22-18AWG PK100
PN10-10F-L	Fork Nylon Insulated 12-10AWG #10 PK50
PN10-8F-L	Fork Nylon Insulated 12-10AWG #8 PK50
PN10-14F-L	Fork Nylon Insulated 12-10AWG 1/4" PK50
PN14-10F-C	Fork Nylon Insulated 18-14AWG #10 PK100
PN14-6F-C	Fork Nylon Insulated 18-14AWG #6 PK100
PN14-8F-C	Fork Nylon Insulated 18-14AWG #8 PK100
PN18-10F-C	Fork Nylon Insulated 22-18AWG #10 PK100
PN18-6F-C	Fork Nylon Insulated 22-18AWG #6 Stud PK100
PN18-8F-C	Fork Nylon Insulated 22-18AWG #8 Stud PK100
PN14-10R-C	Ring Nylon 18-14AWG #10 Stud PK100
PN14-6R-C	Ring Nylon 18-14AWG #6 Stud PK100
PN14-8R-C	Ring Nylon 18-14AWG #8 Stud PK100
PN18-10R-C	Ring Nylon 22-18AWG #10 Stud PK100
PN18-6R-C	Ring Nylon 22-18AWG #6 Stud PK100
PN18-8R-C	Ring Nylon 22-18AWG #8 Stud PK100
PN10-10R-L	Ring Nylon Insulated 12-10AWG #10 PK50
PN10-8R-L	Ring Nylon Insulated 12-10AWG #8 Stud PK50
PN10-14R-L	Ring Nylon Insulated 12-10AWG 1/4" Stud PK50



## Insulated Ferules

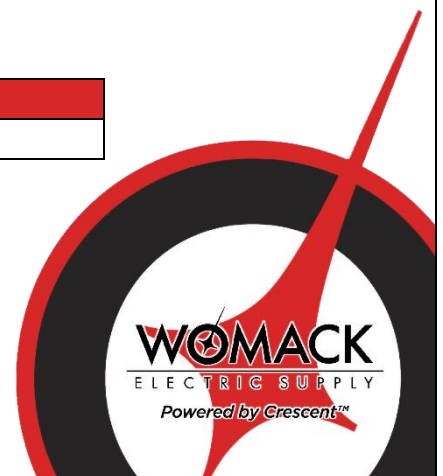
Part Number	Description
FSD75-8-D	Ferrule 20AWG
FSD76-8-D	Ferrule 18AWG
FSD78-8-D	Ferrule 16AWG
FSD80-8-D	Ferrule 14AWG
FSD81-12-C	Ferrule 12AWG
FSD82-12-C	Ferrule 10AWG
FSD83-12-C	Ferrule 8AWG

## Crimp Tool

Part Number	Description
CT-1000	Ferrule Crimp Tool



*This Control Quick Selection Guide shows commonly used, in-stock items.  
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## Panel / Wire Identification Printing



Part Number	Description
M210	Portable Label Printer
M211	Bluetooth Printer, access files and design on phone, compact and wearable

### Labels

Part Number	Label Type	Color	Width Inches
M21-500-595-WT	Continuous Vinyl, All Weather	Black on White	0.5
M21-750-595-WT	Continuous Vinyl, All Weather	Black on White	0.75
M21-500-595-YL	Continuous Vinyl, All Weather	Black on Yellow	0.5
M21-750-595-YL	Continuous Vinyl, All Weather	Black on Yellow	0.75
M21-750-427	Self-Laminating	Black on White	0.75
M21-1000-427	Self-Laminating	Black on White	1
M21-1500-429	Self-Laminating	Black on White	1.5
M21-500-499	Wire-Cable Wrap, Multi-purpose	Black on White	0.5
M21-750-499	Wire-Cable Wrap, Multi-purpose	Black on White	0.75
M21-125-C-342	Heat Shrink, 0.125 in. diameter x 7 ft	Black on White	0.125
M21-187-C-342	Heat Shrink, 0.187 in. diameter x 7 ft	Black on White	0.187



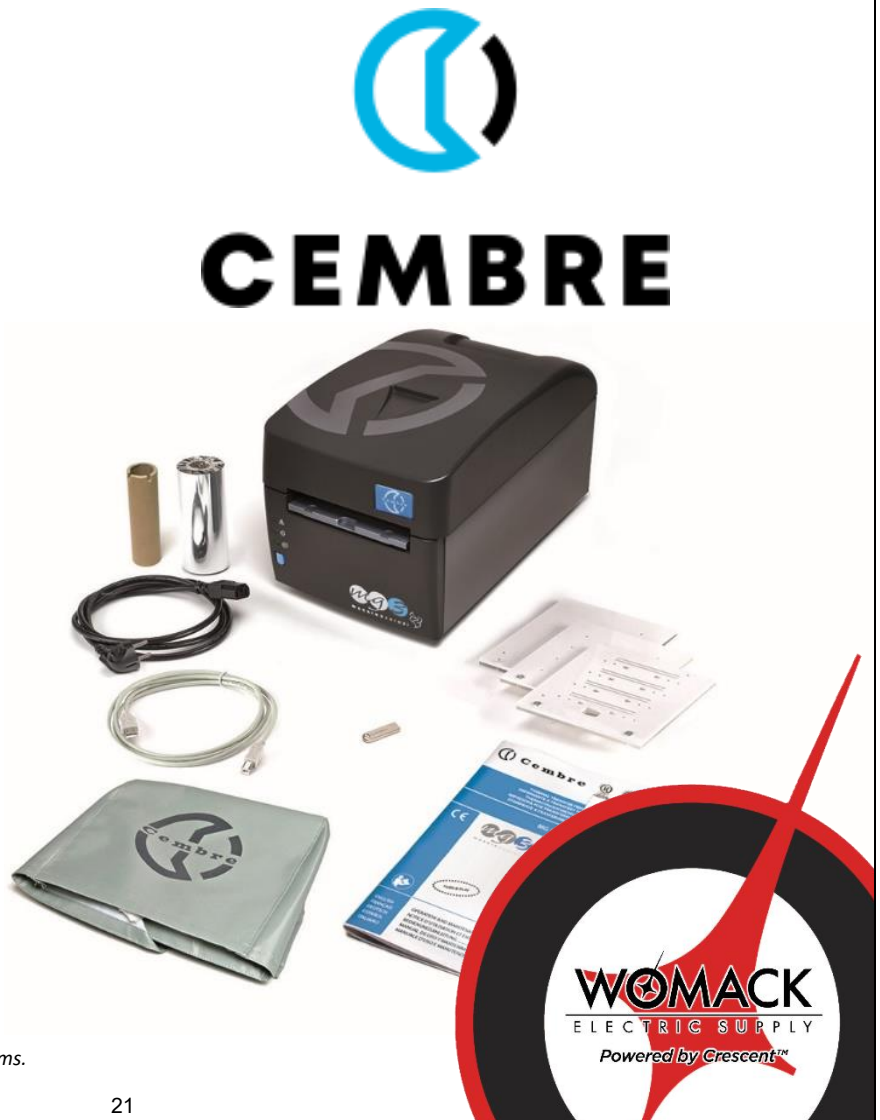
## CEMBRE IDENTIFICATION AND LABELING SYSTEMS

CEMBRE offers a number of innovative solutions to meet the demands for high performance and reliability in the industrial and manufacturing sectors.

### THERMAL TRANSFER SHEET PRINTER MARKINGGENIUS®

The revolution in identification systems, MARKINGGENIUS®MG3 is a high-speed flatbed printer using thermal transfer technology to produce identification and labeling media for cables and tubing, panel building components and equipment of all types.

Windows® based, the high resolution MARKINGGENIUS®MG3 prints monochrome true type fonts, while also reproducing Clipart images, drawings, and bitmaps down to very small dimensions.



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# Enclosures & Accessories



## Hoffman CONCEPT SERIES NEMA 4/12

Part Number	Dimensions (H" x W" x D")	Back Panel Needed
CSD16126	16" X 12" X 6"	CP1612
CSD20168	20" X 16" X 8"	CP2016
CSD24208	24" X 20" X 8"	CP2420
CSD30248	30" X 24" X 8"	CP3024
CSD30308	30" X 30" X 8"	CP3030
CSD363612	36" X 36" X 12"	CP3636
CSD42308	42" X 36" X 8"	CP4230
CSD48308	48" X 36" X 8"	CP4830

## Continuous Hinge with Clamps, Type 12

Part Number	Dimensions (H" x W" x D")	Back Panel Needed
A6044CH	6" X 4" X 4"	A6P4
A8066CH	8" X 6" X 6"	A8P6
A1008CH	10" X 8" X 4"	A10P8
A10086CH	10" X 8" X 6"	A10P8
A10106CH	10" X 10" X 6"	A10P10
A1210CH	12" X 10" X 6"	A12P10
A1212CH	12" X 12" X 6"	A12P12
A1412CH	14" X 12" X 6"	A14P12
A1614CH	16" X 14" X 6"	A16P14
A202006LP	20" X 20" X 6"	A20P20
A242408LP	24" X 24" X 8"	A24P24
A363608LP	36" X 36" X 8"	A36P36

## Accessories

Part Number	Description
A4AXFN	Compact Axial Fan 4" 120V
AFLT44	Filter Kit 4"
AVK44	Louver Kit, 4x4

### CSD Series Applications:

CSD Series Concept Enclosures are ideal for machine control applications. With streamlined styling, flush quarter-turn latches and an attractive, durable finish.

### A Series Applications:

For applications requiring a bright white interior to increase control visibility, this enclosure includes a padlocking hasp and staple for security and screw-down clamps for secure closure.



*This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.*



# 22MM Operators



## Pushbuttons

Part Number	Description
M22-DR-G	Green Flush Maintained Pushbutton (Field convertible to Momentary)
M22-DR-S	Black Flush Maintained Pushbutton (Field convertible to Momentary)
M22-DR-R	Red Flush Maintained Pushbutton (Field convertible to Momentary)
M22-DRH-R	Red Extended Momentary Pushbutton
M22-DL-G	Green Illuminated Pushbutton
M22-DL-R	Red Illuminated Pushbutton

## Pilot Lights

Part Number	Description
M22-L-R	Red Indicating Light
M22-L-G	Green Indicating Light
M22-L-Y	Yellow Indicating Light
M22-L-B	Blue Indicating Light
M22-L-W	White Indicating Light
M22-LED-G	Green Front Mounted 12-30VAC/DC LED unit
M22-LED-R	Red Front Mounted 12-30VAC/DC LED Unit
M22-LED-W	White Front Mounted 12-30VAC/DC LED Unit
M22-LED230-G	Green Front Mounted 85-264VAC LED Unit
M22-LED230-W	White Front Mounted 85-264VAC LED Unit
M22-LED230-R	Red Front Mounted 85-264VAC LED Unit

## E-Stops

Part Number	Description
M22-PV	Push-Pull E-Stop
M22-PVL	Red Illuminated E-Stop
M22-PVT	Twist-to-Release E-Stop

## Selector Switches

Part Number	Description
M22-WK	Two Position Momentary Selector Switch
M22-WK3	Three Position Momentary Selector Switch
M22-WKV	Two Position Maintained Selector Switch
M22-WRK3	Three Position Maintained Selector Switch
M22-WRS	Two Position Maintained Selector Switch, Keyed
M22-WRS3	Three Position Maintained Selector Switch, Keyed

## Contact Blocks

Part Number	Description
M22-K01	1NC Front Mounted Contact Block
M22-K10	1NO Front Mounted Contact Block
M22-KC01	1NC Base Mounted Contact Block
M22-KC10	1NO Base Mounted Contact Block

## Non-Metallic 22M Operator Enclosures by Eaton

Part Number	Description
M22-I1-PG	1 Operator, IP67, IP69K, NEMA 4X, 13
M22-I2-PG	2 Operators, IP67, IP69K, NEMA 4X, 13
M22-I3-PG	3 Operators, IP67, IP69K, NEMA 4X, 13

## Metal 22M Operator Enclosures by Hoffman

Part Number	Description
E1PBG	1 Operator, N12/13
E2PBG	2 Operator, N12/13
E3PBG	3 Operator, N12/13

## Miscellaneous Operators

Part Number	Description
M22-R4K7	Potentiometer, 4.7K
M22-R10K	Potentiometer, 10K
M22-DDLF-GR	Double Pushbutton, Green/Red Pushbuttons, Center Light

## Accessories

Part Number	Description
M22S-R30	30mm to 22mm hole adapters
M22-B	Plug to Close Mounting Holes
M22-XD-SWRGYB	Flush Button Plate Pack (Black Red Green, Yellow, White, Blue)
M22-USB-SA	Bulkhead Interface, USB Port
M22-RJ45-SA	Bulkhead Interface, RJ45 Port

**Pushing the Boundaries  
of What's Possible...**

## Modular Design and Functionality

- Modular and flexible
- Plastic construction with silver, black and metal bezel options
- Stackable contact blocks
- Spring-cage terminal blocks
- Traditional contact elements (M22-K) and indicating lights (M22-LED) with 45mm depth



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This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.

## 30MM Operators



### Pushbuttons

Part Number	Description
10250T30G	Green Flush Momentary Pushbutton W/1NO 1 N/C
10250T31R	Red Extended Head Momentary Pushbutton W 1N/C 1N/O
10250T30B	Black Flush Momentary Pushbutton W 1 N/O 1 N/C
10250T33	Red Mushroom Emergency Stop with 1N/O 1N/C

### Pilot Lights

Part Number	Description
10250T197LRP2A	Red Indicating Light 120V
10250T197LGP2A	Green Indicating Light 120V
10250T197LRP24	Red Indicating Light 24VDC
10250T197LGP24	Green Indicating Light 24VDC

### E-Stops

Part Number	Description
10250T5B62-1X	Push-Pull E-Stop

### Selector Switches

Part Number	Description
10250T20KB	Two Position MAINT Selector Switch
10250T21KB	Three Position MAINT Selector Switch

### Contact Blocks

Part Number	Description
10250T51	1NC Contact Block
10250T53	1NO Contact Block
10250T1	1NO/1NC Contact Block
10250T2	2NO Contact Block
10250T3	2NC Contact Block

### Enclosures

Part Number	Description
E1PB	Hoffman 1 Hole Enclosure 30MM, N12/13
E2PB	Hoffman 2 Hole Enclosure 30MM, N12/13
E3PB	Hoffman 3 Hole Enclosure 30MM, N12/13

### Miscellaneous Operators

Part Number	Description
10250T338	Potentiometer, 5K
10250T333	Potentiometer, 10K

**Largest breadth of functionality and only one piece metal housing operator in the industry.**

Eaton's 10250T line of heavy-duty, water and oil-tight 30.5mm pushbuttons are an excellent choice for applications where reliability and durability are required.

The pushbuttons feature a heavy-duty zinc die-cast construction, and reliability nibs improve contact reliability even under dry circuit and fine dust conditions.

- 30.5mm
- NEMA Class 1 Division 2
- NEMA 4X Rated

This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.





# Notification Products



## Eaton SL7-70MM Stack Lights

### Continuous Light

Part Number	Voltage	Color
SL7-L24-R	24V AC/DC	Red
SL7-L24-G	24V AC/DC	Green
SL7-L24-A	24V AC/DC	Amber
SL7-L24-B	24V AC/DC	Blue
SL7-L120-R	110/120V AC	Red
SL7-L120-G	110/120V AC	Green
SL7-L120-A	110/120V AC	Amber
SL7-L120-B	110/120V AC	Blue

### Flashing Light

Part Number	Voltage	Color
SL7-BL24-R	24V AC/DC	Red
SL7-BL24-G	24V AC/DC	Green
SL7-BL120-R	110/120V AC	Red
SL7-BL120-G	110/120V AC	Green

### Acoustic Modules

Part Number	Voltage	Color
SL7-AP24	24V AC/DC	Black
SL7-AP120	110/120V AC	Black

### Bases

Part Number	Description	
SL7-CB-100	100MM Black With Aluminum Tube And Black Base	
SL7-CB-T-100	100MM Black With M20 Threaded Base	



## Horns

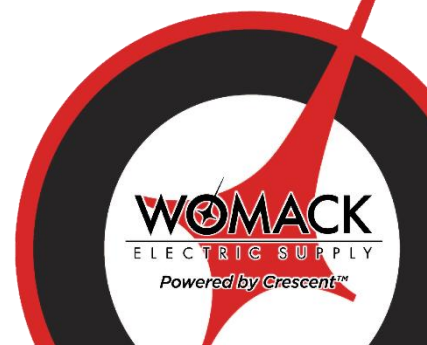
Part Number	Description
450E-024	24v Electronic Horn, 4 X 4 Inches
WB	Weatherproof Backing Box For 450, 350 Horns
350-120-30	120V Mechanical Horn, 4 X 4 Inches

This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.

## Eaton's SL Series Stack Lights





















### Attention-Grabbing Performance

- Tool Free Assembly
- Customizable Configurations
- Compliant with global performance standards
- Reliable audible and visual signaling



# Sensor Solutions



				
<b>SR31</b> SR31 sensors fork with slot of 30mm width and 42 mm depth is...	<b>SRF</b> SRF line includes 30, 50, 80 and 120mm fork sensors for...	<b>TL50</b> TL50 contrast sensor is recommended where a cost reduction...	<b>TLM</b> TLM contrast sensors offer high resolution. White LED...	<b>TL46</b> TL46 contrast sensor widest line with RGB LED from basic up...
				
<b>LD46</b> LD46 is equipped with 5 UV high power LED emission and high...	<b>S65-V</b> S65-V sensor offers space saving in a standard compact...	<b>S65-W</b> S65-W sensor offers space saving in a standard compact...	<b>DS3</b> DS3 light arrays are used to detect and/or measure objects...	<b>DS2</b> DS2 light array is suggested for height or width...
				
<b>SMART-VS™</b> The Smart Vision Sensor (VS) is a unique and very...	<b>SSN</b> SSN is the Datalogic new generation M18 sensor line with...	<b>S51</b> S51 sensors offer best cost saving and the widest choice of...	<b>S5</b> S5 standard M18 sensors with axial or radial optics...	<b>S15</b> S15 tubular sensors with short barrel, in plastic or...
				
<b>SL5</b> SL5 photoelectric sensor line offers through beam...	<b>SMALL</b> SM-all LINE offers the smallest photoelectric sensor with...	<b>SM123 SERIES</b> SM1 subminiature fixed focus, SM2 ultra-flat diffuse...	<b>S100</b> The S100 Sensor basic line offers the most competitive...	<b>S45</b> S45 line offers LED and Laser sensors in standard miniature...



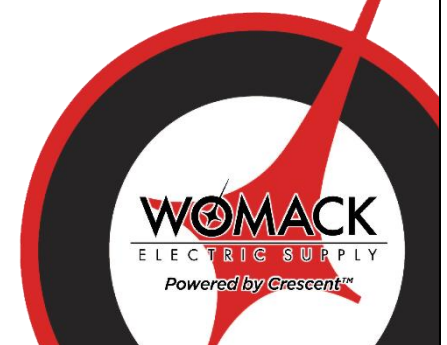
## Sensors to Solve the Toughest Applications

- Limit Switches
- Inductive Sensors
- Proximity Switches
- Photo-Electric
- Ultra-Sonic
- Color Registration
- Flag Sensors
- Contrast Sensors
- Time-Of Flight
- Level
- Encoders
- Smart Sensors
- Arrays
- Fiber Optic



Contrinex is a global technology leader for Smart Sensors for complex automation and smart factory applications using real-time sensor data for IIoT and remote asset management.

*This Control Quick Selection Guide shows commonly used, in-stock items. Additional configurations for all items shown are available.*



# Safety Solutions

*Optimum Safety Solutions for Every Application!*

*... from the Best Names in the Business*



**IDEM SAFETY**  
Making Industry Safer



Powering Business Worldwide



**Safety Relays**

**Light Curtains**

**Safety Sensors**

**Safety Switches**

**Safety Scanners**

**Safety Gate Systems**

**Safety Controllers**

**Safety PLCs**

*... and More*

This Control Quick Selection Guide shows commonly used, in-stock items.  
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## Technical Support Center

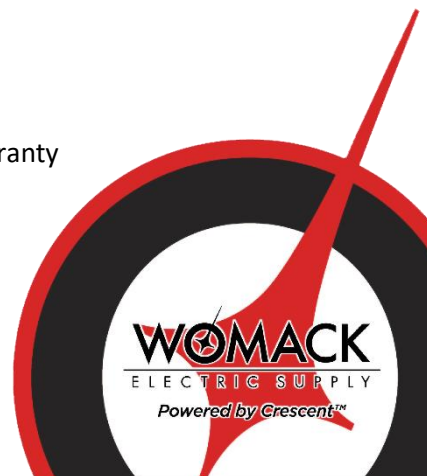
Our Technical Support Center has experienced engineers who can assist you with your industrial automation and electrical control needs. Our Technical Support Team offers real-time customer assistance in finding the 'right' product or an alternative to your current manufacturer, pre-sale application support, post-sale product support and troubleshooting.

- Product Research and Selection • Product Application Support • Proof-of-Concept
- Wireless Site Surveys • Training • Automation and Control Troubleshooting
- Cross Referencing and BOM Conversations • VFD Start-up Service and Extended Warranty

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**DATA SENSING**  
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Safety and Security Systems



**Appleton**<sup>®</sup>



**Century**<sup>®</sup> **marathon**<sup>®</sup>  
Motors



**Altech Corp.**<sup>®</sup>



**EMERSON**<sup>™</sup>



**Bussmann**<sup>®</sup>



**IDEM SAFETY**  
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