

Water Filtration System

Submittal for Strainer Control Panel

Prepared by:

Your Company

Your Address

Panel Job: 2013-252

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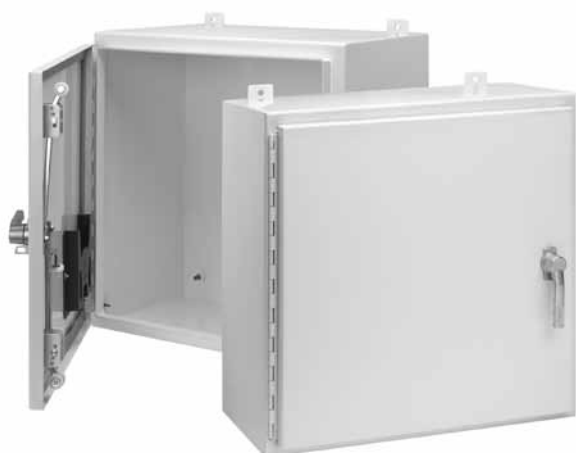
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PAINTED WHITE WITH 3-POINT LATCH, TYPE 4X



INDUSTRY STANDARDS

UL 508A Listed; Type 3R, 4, 4X, 12; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 3R, 4, 4X, 12; File No. E61997

NEMA/EMAC Type 3R, 4, 4X, 12, 13
IEC 60529, IP66
Meets NEMA Type 3RX requirements

APPLICATION

These single-door stainless steel enclosures provide industry-leading protection for housing electrical components and controls in outdoor or corrosive environments. White polyester powder reduces absorption of solar radiation, which keeps internal components cooler. Hoffman's exclusive Type 316L stainless steel small POWERGLIDE™ padlocking handle and internal 3-point latching combine ease of access with security.

SPECIFICATIONS

- 14 gauge Type 304 stainless steel bodies and doors
- Seams continuously welded and ground smooth
- Type 4-rated gasket
- 90-degree external formed flange on top of body opening
- Type 316L stainless steel padlocking POWERGLIDE Handle and 3-point latching
- Door removed by pulling stainless steel continuous hinge pin
- Data pocket is high-impact thermoplastic
- Collar studs provided for mounting optional panels

FINISH

Enclosures have white polyester powder paint finish inside and out. Handle is electropolished.

ACCESSORIES

See also *Accessories*.

PANELITE™ Enclosure Lights Overview

Panel for Type 3R, 4, 4X, 12 and 13 Enclosures

Junction Box and Wall-Mount Enclosure Swing Out Panel Kit

Steel and Stainless Steel Window Kits

H2OMIT™ Vent Drains, Type 4X

H2OMIT™ Thermoelectric Dehumidifier

MODIFICATION AND CUSTOMIZATION

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

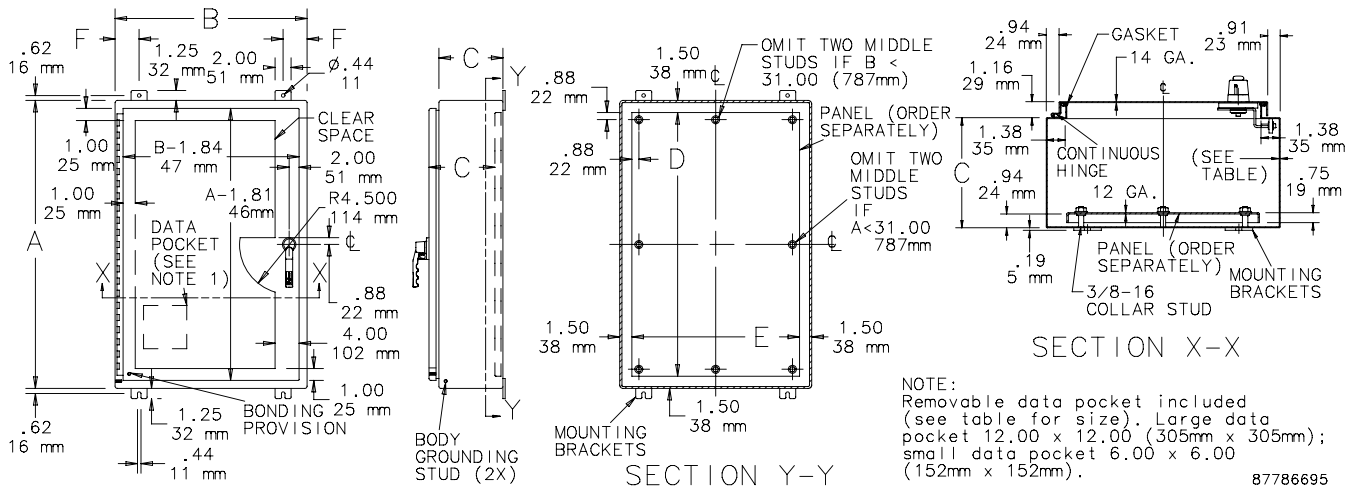
BULLETIN: A4SW3

Standard Product

Catalog Number	AxBxC in./mm	F in./mm	Steel Panel	Conductive Panel	Stainless Steel Panel	Panel Size D x E in./mm	Data Pocket
A24H2408SSLP3PTW	24.00 x 24.00 x 8.00 610 x 610 x 203	3.00 76	A24P24	A24P24G	A24P24SS6	21.00 x 21.00 533 x 533	Small
A30H2408SSLP3PTW	30.00 x 24.00 x 8.00 762 x 610 x 203	3.00 76	A30P24	A30P24G	A30P24SS6	27.00 x 21.00 686 x 533	Large
A24H2010SSLP3PTW	24.00 x 20.00 x 10.00 610 x 508 x 254	3.00 76	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small
A24H2412SSLP3PTW	24.00 x 24.00 x 12.00 610 x 610 x 305	3.00 76	A24P24	A24P24G	A24P24SS6	21.00 x 21.00 533 x 533	Small
A36H3012SSLP3PTW	36.00 x 30.00 x 12.00 914 x 762 x 305	3.00 76	A36P30	A36P30G	A36P30SS6	33.00 x 27.00 838 x 686	Large
A36H3612SSLP3PTW	36.00 x 36.00 x 12.00 914 x 914 x 305	3.00 76	A36P36	A36P36G	A36P36SS6	33.00 x 33.00 838 x 838	Large
A42H3612SSLP3PTW	42.00 x 36.00 x 12.00 1067 x 914 x 305	3.00 76	A42P36	A42P36G	A42P36SS6	39.00 x 33.00 911 x 838	Large
A48H3612SSLP3PTW	48.00 x 36.00 x 12.00 1219 x 914 x 305	3.00 76	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A60H3612SSLP3PTW	60.00 x 36.00 x 12.00 1524 x 914 x 305	3.00 76	A60P36	A60P36G	A60P36SS6	57.00 x 33.00 1448 x 838	Large
A48H3616SSLP3PTW	48.00 x 36.00 x 16.00 1219 x 914 x 406	3.00 76	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large

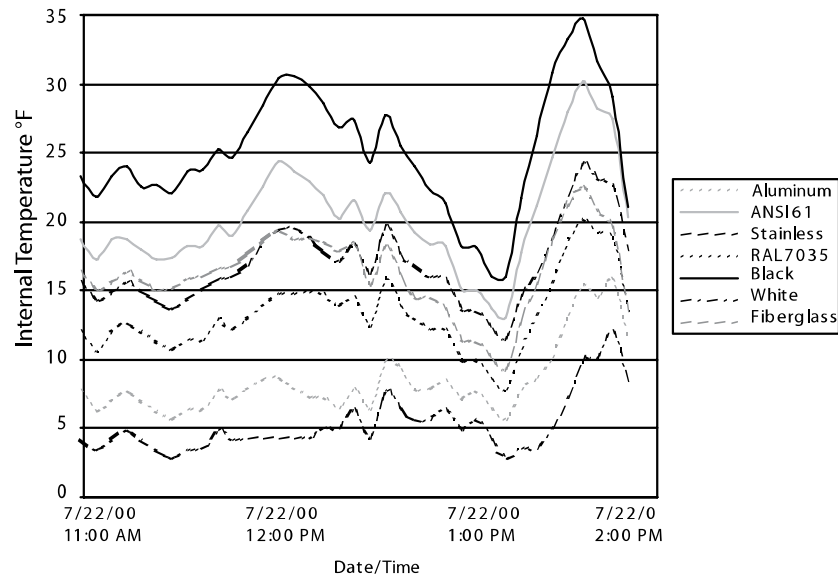
Purchase panels separately. Optional stainless steel, composite and aluminum panels are available for most sizes.

Panels have a formed flange along any side longer than 21.00 in. (533 mm). Panel A24P20 has a flange on all four sides.



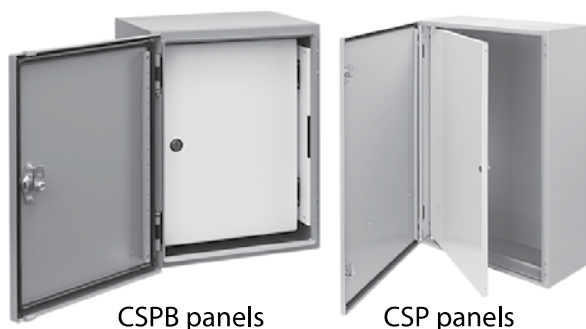
Temperature Rise Example

Internal Enclosure Temperature above Outside Ambient



CONCEPT® Accessories

CONCEPT® Swing-Out Panels



CSPB panels

CSP panels

Panels swing clear from the front of the enclosure to provide access to mounted internal equipment. For CSPB panels, maximum swing is 94 degrees. For CSP panels, maximum panel swing is 106 degrees. Distance from panel surface to door when in the latched position is 1.71 in. (43 mm) for solid doors and 1.45 in. (37 mm) for window doors. Kits include panel, brackets and hardware to mount to the front flange.

Swing-out panels also can be mounted on front-to-back adjustable rails. CSPB panels require adapter CSPBADB and front-to-back adjustable rails for front-to-back adjustment.

Bulletin: CWY

CONCEPT® Adapter Bracket

Adapter bracket for use with CONCEPT® B-style Swing-Out Panels and Adjustable-Depth Mounting Kits. Bracket enables the B-style swing-out panels to be mounted in infinite front-to-back positions within a CONCEPT enclosure.

Bulletin: CWY

Handles



CSPB Panels

Catalog Number	Fits Enclosure Size (in.)	Fits Enclosure Size (mm)	Panel Size (in.)	Panel Size (mm)
CSPB1212	12.00 x 12.00	305 x 305	9.72 x 9.75	247 x 248
CSPB1612	16.00 x 12.00	406 x 305	13.72 x 9.75	349 x 248
CSPB1616	16.00 x 16.00	406 x 406	13.72 x 13.75	349 x 349
CSPB1620	16.00 x 20.00	406 x 508	13.72 x 17.75	349 x 451
CSPB2016	20.00 x 16.00	508 x 406	17.72 x 13.75	450 x 349
CSPB2020	20.00 x 20.00	508 x 508	17.72 x 17.75	450 x 451
CSPB2024	20.00 x 24.00	508 x 610	17.72 x 21.75	450 x 553
CSPB2416	24.00 x 16.00	610 x 406	21.72 x 13.75	552 x 349
CSPB2420	24.00 x 20.00	610 x 508	21.72 x 17.75	552 x 451
CSPB2424	24.00 x 24.00	610 x 610	21.72 x 21.75	552 x 553
CSPB2430	24.00 x 30.00	610 x 762	21.72 x 27.75	552 x 705
CSPB3020	30.00 x 20.00	762 x 508	27.72 x 17.75	704 x 451
CSPB3024	30.00 x 24.00	762 x 610	27.72 x 21.75	704 x 553
CSPB3030	30.00 x 30.00	762 x 762	27.72 x 27.75	704 x 705
CSPB3624	36.00 x 24.00	914 x 610	33.72 x 21.75	857 x 553
CSPB3630	36.00 x 30.00	914 x 762	33.72 x 27.75	857 x 705
CSPB3636	36.00 x 36.00	914 x 914	33.72 x 33.75	857 x 857
CSPB4236	42.00 x 36.00	1067 x 914	39.72 x 33.75	1009 x 857
CSPB4824	48.00 x 24.00	1219 x 610	45.72 x 21.75	1161 x 553
CSPB4836	48.00 x 36.00	1219 x 914	45.72 x 33.75	1161 x 857
CSPB6036	60.00 x 36.00	1542 x 914	57.72 x 33.75	1466 x 857

CSP Panels

Catalog Number	Fits Enclosure (in.)	Fits Enclosure (mm)	Panel Size (in.)	Panel Size (mm)
CSP1212	12.00 x 12.00	305 x 305	9.78 x 9.84	248 x 250
CSP1612	16.00 x 12.00	406 x 305	13.78 x 9.84	350 x 250
CSP1616	16.00 x 16.00	406 x 406	13.78 x 13.84	350 x 352
CSP1620	16.00 x 20.00	406 x 508	13.78 x 17.84	350 x 453
CSP2016	20.00 x 16.00	508 x 406	17.78 x 13.84	452 x 352
CSP2020	20.00 x 20.00	508 x 508	17.78 x 17.84	452 x 453
CSP2024	20.00 x 24.00	508 x 610	17.78 x 21.84	452 x 555
CSP2416	24.00 x 16.00	610 x 406	21.78 x 13.84	553 x 352
CSP2420	24.00 x 20.00	610 x 508	21.78 x 17.84	553 x 453
CSP2424	24.00 x 24.00	610 x 610	21.78 x 21.84	553 x 555
CSP3020	30.00 x 20.00	762 x 508	27.78 x 17.84	706 x 453
CSP3024	30.00 x 24.00	762 x 610	27.78 x 21.84	706 x 555
CSP3030	30.00 x 30.00	762 x 762	27.78 x 27.84	706 x 707
CSP3624	36.00 x 24.00	914 x 610	33.78 x 21.84	858 x 555
CSP3630	36.00 x 30.00	914 x 762	33.78 x 27.84	858 x 707
CSP3636	36.00 x 36.00	914 x 914	33.78 x 33.84	858 x 860

Catalog Number	Material
CSPBADB	Steel

Handles can replace the standard slotted insert on all CONCEPT® wall-mount enclosures. The CONCEPT non-locking handle provides quick and easy access to the enclosure contents. Handle is black plastic. A zinc die-cast keylock handle is available for applications requiring quick access and security. A padlocking handle, also zinc die-cast, accommodates a padlock with up to a 5/16-in. locking bar. Each latch system can be converted from clockwise to counter-clockwise opening. Kit includes all hardware.

Bulletin: CWY

Catalog Number	UL Rating	Description
CWHK	Maintains UL/CSA Type 12 when properly installed	Keylock handle
CWHNL	Maintains UL Type 3, 4, 4X, 12 when properly installed	Non-locking handle
CWHPTO	Maintains UL/CSA Type 3, 4, 12 when properly installed	Padlock handle

CWHNL is not suitable for 3-point latch operation.

CONCEPT® Accessories

Door Stop Kit



Door Stop Kit secures the door in the open position. Kit can be installed at the top or bottom of a door which opens horizontally. Door opening angle can be easily adjusted by means of a wing nut. Stop arm slides neatly out of the way when the door is closed. All parts are plated. Mounting hardware included.

- Door stop kits should not be installed on enclosures configured with a swing-out panel or swing-out rack frame
- Door stop kits cannot be used with CONCEPT window doors

Bulletin: A80

Catalog Number	Finish
ADSTOPK	Plated Steel

Data Pockets



Data Pockets provide convenient storage for wiring diagrams, operation manuals and other documentation inside an enclosure. Pocket mounts on studs located on the inside of a solid-door enclosure. Constructed of high-impact thermoplastic, pockets are dark gray and have cutout areas for easy access and visibility to contents. Mounting hardware included.

Bulletin: UX1Y

Catalog Number	Length x Width	
	in./mm	Fits CONCEPT Enclosure
ADP1	6.00 x 6.00 152 x 152	when A is less than or equal to 24 and B is less than or equal to 24
ADP2	12.00 x 12.00 305 x 305	when A is greater than or equal to 30 and B is greater than or equal to 20

Use ADP2 when A = 24 and B = 30

Lock Inserts



Lock inserts can be substituted for the standard 3-mm double-bit latch insert. Inserts have a chrome finish. Matching key is zinc die-cast.

Bulletin: A4GY, CWY

Catalog Number	Description
CLKTM7	Triangular 7-mm insert with key
CLKSM7	Square 7-mm insert with key
CLKDBM3	Double bit with key
CLKSLOT	Slotted Insert no key

Mounting-Bracket Kits



Mounting-Bracket Kits are field installable. Composite and stainless steel brackets are rated to Type 4X. Set of four (4) brackets can support 500 lb. maximum load. All hardware is included. Four brackets per kit.

Mounting brackets are required to maintain UL/CSA external mounting requirement.

Bulletin: A80

Catalog Number	Description
CMFK	Steel
CMFKSS	Stainless Steel
CMTGFT	Composite

IEC Style Door Mounted Disconnect Switches – Type N
Class 9421

Square D
www.squared.com
FOR CURRENT INFORMATION



Class 9421 Disconnect Switch



Auxiliary Contact



7 OPERATING MECHANISMS AND DISCONNECT SWITCHES



Handle



Terminal Shields and Fuse Covers



The 9421 Type N is an IEC-style door-mounted disconnect switch with onboard fusing for Class CC and Class J fuses. The switch is UL Listed and CSA certified, and provides service entrance spacing, 100 kA withstandability and Type 2 coordinated protection when used with Square D and Telemecanique starters in accordance with fuse selection tables.

Each installation will require a disconnect switch, handle, and shaft.

Class 9421 Disconnect Switches

Table with columns: Disconnect Switch Size, Maximum Horsepower Ratings (1 Phase AC, 3 Phase AC, DC), Fuse Selection, and Switch (Type, Price).

Handles

Table with columns: Disconnect Switch Size, Fuse Selection, Handle Color, Handle Selection NEMA Type, Handle Kit (Type, Price).

Shafts and Shorting Links

Table with columns: Disconnect Switch Size, Enclosure Depth (max.), Shaft Length, and Shaft Kit (Type, Price).

Terminal Shields and Fuse Covers

Table with columns: Disconnect Switch Size, Type, Price.

Terminal shield for line or load side.
30 A CC fuse cover and 60 A J fuse cover are also used for non-fusible applications.
2 per package

UL File E152727 CCN WJAZ
CSA File LR75721 Class 465204

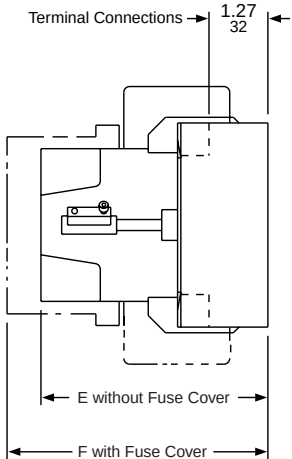
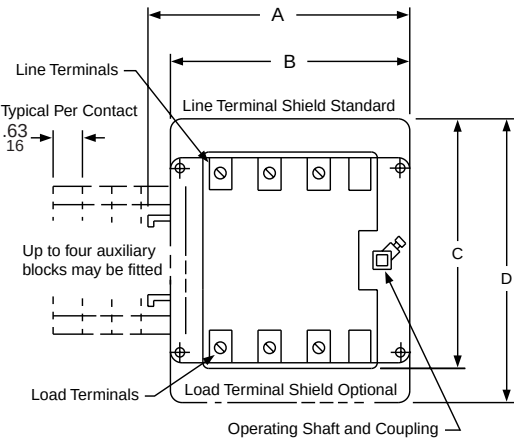
Auxiliary Contacts

Table with columns: Disconnect Switch Size, Auxiliary Contact Kit (Type, Price).

NOTE: Each installation requires a disconnect switch, handle, and shaft. Further, the first auxiliary contact block that is used must be an inner block (maximum is 1 inner and 3 outer blocks).

Outline Dimensions and General Location Information for Type N Disconnect Switches

Table with dimensions A, B, C, D, E, F for NC and ND switch types.



For additional information, reference Catalog Number 9420CT9701 or D-Fax™ Number 1500.

LOW-PEAK®

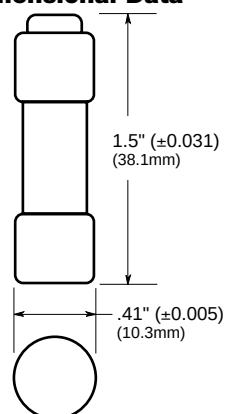
Time-Delay Fuses

Class CC – 600 Volt, ½ to 30 Amps

LP-CC



Dimensional Data



Catalog Symbol: LP-CC

Time-Delay, Current-Limiting

Ampere Rating: ½ to 30 Amperes

AC Voltage Rating: 600 Volts (or less)

Interrupting Rating: 200,000A RMS Sym.

Agency Approvals:

U.L. Listed, Std. 248-4, Class CC, Guide JDDZ, File E4273
CSA Certified, C22.2 No. 248.4, Class 1422-02, File 53787

DC Voltage Rating: 300 Volt DC (or less)

½-2¼A and 20-30A, 20,000 AIR, U.L. 198L

150 Vdc or less 3-15A, 20,000 AIR, U.L. 198L

Catalog Numbers

LP-CC-½	LP-CC-1½	LP-CC-3	LP-CC-6	LP-CC-12
LP-CC-⅙	LP-CC-1⅙	LP-CC-3⅙	LP-CC-6¼	LP-CC-15
LP-CC-⅙	LP-CC-1⅙	LP-CC-3½	LP-CC-7	LP-CC-20
LP-CC-1	LP-CC-2	LP-CC-4	LP-CC-7½	LP-CC-25
LP-CC-1⅛	LP-CC-2¼	LP-CC-4½	LP-CC-8	LP-CC-30
LP-CC-1¼	LP-CC-2½	LP-CC-5	LP-CC-9	—
LP-CC-1⅝	LP-CC-2⅝	LP-CC-5⅝	LP-CC-10	—

Carton Quantity and Weight

Ampere Ratings	Carton Qty.	Weight*	
		Lbs.	Kg.
0-30	10	.193	.088

*Weight per carton.

Fuseblock Catalog Numbers

No. of Poles	Screw Terminal	Pressure Plate	Box Terminal	Screw Quick-Connect	Pressure Quick-Connect
1	BC6031S	BC6031P	BC6031B	BC6031SQ	BC6031PQ
2	BC6032S	BC6032P	BC6032B	BC6032SQ	BC6032PQ
3	BC6033S	BC6033P	BC6033B	BC6033SQ	BC6033PQ

General Information:

LP-CC LOW-PEAK Yellow™ Fuse

- A superior all-purpose, space-saving branch circuit fuse that meets most protection requirements up to 30 amps.
- Very compact; physical size is only 1⅜" × 1½" (10.3mm × 38.1mm) with rejection tip.
- The unique yellow color makes it easy to tell that the correct fuse type is installed.
- Faster response to damaging short-circuit currents and higher interrupting rating than mechanical overcurrent protective devices.

200,000 Ampere Interrupting Rating

- Maximum interrupting rating for available fault current in today's large capacity systems.
- Helps ensure that future growth will not obsolete the system.

Dual Characteristics

- Time-delay to avoid unwanted fuse openings from surge currents.
- Fast speed of response under short-circuit conditions for a high degree of current-limitation.
- **ADVANTAGE:** The LOW-PEAK® fuse can be sized close to full load ratings for maximum overload and short-circuit protection.
- **ADVANTAGE:** Can be used where either a time-delay or a fast-acting fuse is needed, making selection easier and reducing spare fuse inventories for substantial cost reduction.

Superior Motor Protection

- For protection of small horsepower motor circuits.
- Proper sizing can provide Type "2" coordinated protection for NEMA and IEC motor controllers.
- Motors receive maximum protection against burnout from overloads and single phasing.

Current-Limiting Effects

Prospective Short-Circuit Current	*Let-Through Current (Apparent RMS Symmetrical)					
	1¼A	2⅝A	15A	20A	25A	30A
1,000	100	135	240	305	380	435
3,000	140	210	350	440	575	580
5,000	165	255	420	570	690	710
10,000	210	340	540	700	870	1,000
20,000	260	435	680	870	1,090	1,305
30,000	290	525	800	1,030	1,300	1,520
40,000	315	610	870	1,150	1,390	1,700
50,000	340	650	915	1,215	1,520	1,820
60,000	350	735	1,050	1,300	1,650	1,980
80,000	390	785	1,130	1,500	1,780	2,180
100,000	420	830	1,210	1,600	2,000	2,400
200,000	525	1,100	1,600	2,000	2,520	3,050

*RMS Symmetrical Amperes Short-Circuit

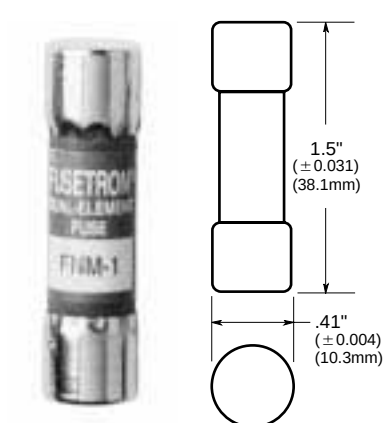
NOTE: To calculate I_p (I_{peak}) multiply I_{RMS} value × 2.3.

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000 Vac, 75-1500 Vdc). Refer to BIF document #8002 or contact Bussmann Application Engineering at 314-527-1270 for more information.

Time-Delay Ferrule Fuse

FNM

13/32" x 1-1/2"



- Fibre tube.
- For circuits with high inrush currents.
- Formerly designated 5AB.
- Fusetron® Dual-Element fuse.

Fuseblock Catalog Numbers

Poles	Terminal Type		
	Screw With Quick Connect	Pressure Plate w/Quick Connect	Box Lug
1	BM6031SQ	BM6031PQ	BM6031B
2	BM6032SQ	BM6032PQ	BM6032B
3	BM6033SQ	BM6033PQ	BM6033B

CATALOG SYMBOL: FNM

TIME-DELAY

1/10 TO 30 AMPERES

INTERRUPTING RATING - SEE CHART BELOW

UL LISTED: STD. 248-14, 0-10/250V AC; 12-15/125V AC

FILE #E19180, GUIDE #JDYX

CSA CERTIFIED: 1-10/250V AC; CLASS 1422-01,

12-15/125V AC; FILE 53787

DC RATING: 1-15A rated 125V DC and 1.6 KAIC.

Electrical Ratings (Catalog Symbol and Amperes)

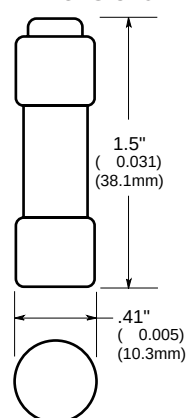
250 Volts AC	IR	250 Volts AC	IR	250 Volts AC	IR	125 Volts AC
FNM-1/10		FNM-1-1/8		FNM-4		FNM-12 10,000
FNM-1/8		FNM-1-1/4		FNM-4-1/2		FNM-15 @ 125V AC
FNM-15/100		FNM-1-4/10		FNM-5		-
FNM-2/10		FNM-1-1/2		FNM-5-6/10		-
FNM-1/4	35A @	FNM-1-6/10	100A @	FNM-6		32 Volts AC
FNM-3/10	250VAC	FNM-1-8/10	250VAC	FNM-6-1/4	200A @	FNM-20
FNM-4/10	10,000	FNM-2	10,000	FNM-7	250VAC	FNM-25
FNM-1/2	@	FNM-2-1/4	@	FNM-8	10,000 @	FNM-30
FNM-6/10	125VAC	FNM-2-1/2	125VAC	FNM-9	125VAC	-
FNM-3/4		FNM-2-8/10		FNM-10		-
FNM-8/10		FNM-3		-		-
FNM-1		FNM-3-2/10		-		-
-		FNM-3-1/2		-		-

If 250V AC is needed for 12-30 amps, use FNW series.

Carton Quantity and Weight

Ampere Ratings	Carton Qty	Weight	
		Lbs.	Kg.
0-30	10	.125	.057

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000V AC, 75-1500V DC). Refer to BIF document #8002 or contact Bussmann Application Engineering at 636-527-1270 for more information.

CC-TRON**FNQ-R****Time-Delay Fuses** **$\frac{3}{32}$ " x 1", 600 Volt, $\frac{1}{4}$ to 30 Amps****Dimensional Data****Catalog Symbol:** FNQ-R**Time-Delay****Application:** Circuit Transformer Protection**Ampere Rating:** $\frac{1}{4}$ to 30 Amperes**Voltage Rating:** 600 Volts AC (or less)†**Interrupting Rating:** 200,000A RMS Sym. (U.L.)**Agency Approvals:**

U.L. Listed, Std. 248-4, Class CC, Guide JDDZ, File E4273

CSA Certified, Class CC CSA, Class 1422-01,

File 53787-HRC-MISC

†12-30 amp is 300 Vdc and 10 KAIC.

General Information:

- The Bussmann CC-TRON® (FNQ-R) was designed to meet the needs of control circuit transformer protection.
- Current-limitation protects down stream components against damaging thermal and magnetic effects of short-circuit currents.
- **Rejection feature.** FNQ-R fuses meet the U.L. 508, paragraph 19.2.4 requirement that control circuit fuses used in equipment listed for use with more than 10,000 ampere available must have an adequate interrupting rating and must be rejection type.
- **High inrush time-delay.** Control circuit transformers can experience inrush currents up to 85 times their full-load current rating. FNQ-R fuses can be sized according to NEC and U.L. requirements and still allow the high inrush currents, with significantly more time-delay than the U.L. minimum value of 12 seconds at 200% for Class CC fuses.
- Melamine tube. Nickel-plated brass endcaps.

Maximum Acceptable Rating of Overcurrent Device*

Rated Primary Current (Amperes)	Maximum Rating of Overcurrent Protective Device Expressed As A Percent of Transformer Primary Current Rating
Less than 2A	500**
2A to less than 9A	167
9A or more	125

*U.L. 508, Table 19.3.

**300% for other than motor control applications.

Electrical Ratings (Catalog Symbol and Amperes)

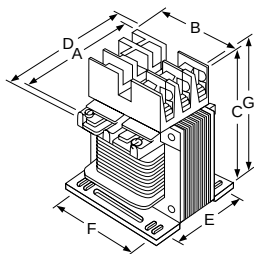
FNQ-R- $\frac{1}{4}$	FNQ-R-1 $\frac{1}{10}$	FNQ-R-3 $\frac{3}{10}$	FNQ-R-8
FNQ-R- $\frac{3}{10}$	FNQ-R-1 $\frac{1}{2}$	FNQ-R-3 $\frac{1}{2}$	FNQ-R-9
FNQ-R- $\frac{4}{10}$	FNQ-R-1 $\frac{1}{2}$	FNQ-R-4	FNQ-R-10
FNQ-R- $\frac{1}{2}$	FNQ-R-1 $\frac{1}{10}$	FNQ-R-4 $\frac{1}{2}$	FNQ-R-12
FNQ-R- $\frac{9}{10}$	FNQ-R-1 $\frac{1}{10}$	FNQ-R-5	FNQ-R-15
FNQ-R- $\frac{3}{4}$	FNQ-R-2	FNQ-R-5 $\frac{5}{10}$	FNQ-R-17 $\frac{1}{2}$
FNQ-R- $\frac{9}{10}$	FNQ-R-2 $\frac{1}{4}$	FNQ-R-6	FNQ-R-20
FNQ-R-1	FNQ-R-2 $\frac{1}{2}$	FNQ-R-6 $\frac{1}{4}$	FNQ-R-25
FNQ-R-1 $\frac{1}{8}$	FNQ-R-2 $\frac{9}{10}$	FNQ-R-7	FNQ-R-30
FNQ-R-1 $\frac{1}{4}$	FNQ-R-3	FNQ-R-7 $\frac{1}{2}$	—

Carton Quantity and Weight

Ampere Ratings	Carton Qty.	Weight*	
		Lbs.	Kg.
$\frac{1}{4}$ -30	10	.200	.091

*Weight per carton

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000 Vac, 75-1500 Vdc). Refer to BIF document #8002 or contact Bussmann Application Engineering at 636-527-1270 for more information.



Type TF: Factory Installed Primary and Secondary Fuse Blocks

UL/CSA VA	CE VA	Type	D1 ★ 240 X 480 120 I	D2 240 x 480 24 I	D3 208 120 I	D5 ★ 600 120 I	D20 208/230/460 115 II	D23 120/240 24 I
50	50	TF50	\$ 50.00	\$ 56.00	\$ 56.00	\$ 56.00	\$ 82.00	\$ 56.00
75	75	TF75	56.00	...	...	...	...	64.00
100	100	TF100	61.00	70.00	70.00	70.00	89.00	70.00
150	150	TF150	65.00	84.00	84.00	84.00	109.00	84.00
200	200	TF200	77.00	...	...	...	134.00	89.00
250	160	TF250	87.00	...	...	...	...	116.00
300	200	TF300	95.00	129.00	129.00	129.00	166.00	129.00
350	250	TF350	100.00	...	...	...	...	131.00
500	300	TF500	120.00	158.00	158.00	158.00	185.00	158.00
750	500	TF750	161.00	...	...	...	...	...
1000	630	TF1000	194.00	...	...	...	...	...
1500	1000	TF1500	269.00	...	...	...	...	...
2000	1500	TF2000	324.00	...	...	...	...	...

★ See Page 12-13 for triple ratings on this voltage code.

Dimensions—Type TF Only

VA Key			Figure	A	B	C	D▲	E	F	G♦	SLOT
I	II	III									
25 VA	...	...	3	3.09	3.00	4.00	3.84	2.00	2.50	4.20	.20 x .38
...	...	25 VA	3	4.00	3.43	4.00	4.80	2.00	2.50	4.20	.20 x .48
50 VA	25 VA	...	3	3.09	3.00	4.00	3.84	2.00	2.50	4.20	.20 x .38
...	...	50 VA	3	4.19	3.43	4.25	4.99	2.38	2.81	4.45	.20 x .48
75 VA	50 VA	...	3	3.34	3.38	4.25	4.09	2.38	2.81	4.45	.20 x .48
...	75 VA	...	3	3.59	3.75	4.55	4.34	2.88	3.13	4.75	.20 x .38
...	...	75 VA	3	4.88	3.75	4.55	5.68	2.88	3.13	4.75	.20 x .38
100 VA	...	...	3	3.34	3.38	4.25	4.09	2.38	2.81	4.45	.20 x .48
...	...	100 VA	3	4.88	3.75	4.55	5.68	2.88	3.13	4.75	.20 x .38
150 VA	100 VA	...	3	3.59	3.75	4.55	4.34	2.88	3.13	4.75	.20 x .38
200 VA	150 VA	...	3	3.59	3.75	4.55	4.34	2.88	3.13	4.75	.20 x .38
250 VA	...	150 VA	3	5.25	3.75	4.55	6.05	2.88	3.13	4.75	.20 x .38
300 VA	200 VA	...	3	4.70	4.50	5.10	5.50	2.56	3.75	5.30	.20 x .38
350 VA	250 VA	250 VA	3	5.09	4.50	5.10	5.89	3.00	3.75	5.30	.20 x .38
...	300 VA	...	3	5.09	4.50	5.10	5.89	3.00	3.75	5.30	.20 x .38
...	300 VA	300 VA	3	5.46	4.50	5.10	6.26	3.56	3.75	5.30	.20 x .38
500 VA	350 VA	...	3	5.46	4.50	5.10	6.26	3.56	3.75	5.30	.20 x .38
...	...	350 VA	3	5.46	4.50	5.10	6.26	3.56	3.75	5.30	.20 x .38
750 VA	500 VA	500 VA	3	5.66	5.25	5.73	6.46	3.43	4.38	5.93	.28 x .56
1000 VA	750 VA	750 VA	3	6.04	5.25	5.73	6.84	4.31	4.38	5.93	.28 x .56
1500 VA	1000 VA	1000 VA	3	5.81	7.06	7.46	6.61	4.13	5.81	7.66	.28 x .56
2000 VA	1500 VA	1500 VA	3	7.04	7.06	7.46	7.84	4.56	5.81	7.66	.28 x .56

▲ Dimensions with FINGERSAFE® covers installed.

♦ Dimensions with fuse pullers installed.

Field Installed Fuse Options

Primary and Secondary Fusing

Type	Type Accessory Key			Description	Price
	I	II	III, IV		
FB-3A	25-200	25-150	N/A	Three pole fuse block for primary fusing, accommodates 1-1/2" x 13/32" midjet fuse (2 rejection and 1 non-rejection)	\$26.40
FB-3B	250-2000	200-1500	25-1500	Three pole fuse block for primary and secondary fusing, accommodates 1-1/2" x 13/32" midjet fuse (2 rejection and 1 non-rejection)	26.40

Primary Fusing

Type	Type Accessory Key			Description	Price
	I	II	III, IV		
FB-2A	25-200	25-150	N/A	Two pole fuse block for primary and secondary fusing, accommodates 1-1/2" x 13/32" midjet fuse (2 rejection)	\$22.70
FB-2B	250-2000	200-1500	25-1500	Two pole fuse block for primary fusing, accommodates 1-1/2" x 13/32" midjet fuse (2 rejection)	22.70

Factory Installed Secondary Fuse Clips

D1: 240 x 480-120

UL/CSA VA	CEVA	Catalog Number	Price
50	50	9070T50D1SF41	\$ 40.30
100	100	9070T100D1SF41	52.00
150	150	9070T150D1SF41	55.00
250	160	9070T250D1SF41	79.00
500	300	9070T500D1SF41	113.00
750	500	9070T750D1SF41	154.00

Field-Installable Secondary Fuse Clips

Type	Type Accessory Key			Description	Price
	I	II	III, IV		
SF25A	25-200	25-150	N/A	Secondary fuse block accommodates 1-1/4" x 1/4" fuse	\$6.60
SF25B	250-2000	200-1500	25-1500	Secondary fuse block accommodates 1-1/4" x 1/4" fuse	6.60
SF41A■	25-200	25-150	N/A	Secondary fuse clip accommodates 1-1/2" x 13/32" midjet fuse	5.40
SF41B■	N/A	200-2000	25-2000	Secondary fuse clip accommodates 1-1/2" x 13/32" midjet fuse	5.40
FB-1A	25-200	25-150	N/A	One pole fuse block for secondary fusing, accommodates 1-1/2" x 13/32" midjet fuse (1 non-rejection)	15.80
FB-1B	250-2000	200-1500	25-1500	One pole fuse block for secondary fusing, accommodates 1-1/2" x 13/32" midjet fuse (1 non-rejection)	15.80

■ SF41 can be installed on the following voltage codes: D1, D5, D24, D3, D4, D51, D2, D23, D14, D25, D20, D95, D19.

How to Order:

To Order Specify:	Catalog Number		
● Class Number	Class	Type	Voltage Code
● Type Number	9070	TF500	D1
● Voltage Code			
● Field Fuse Option	9070	FB-3B	

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Table 18.1: 3- or 4-Pole Screw Terminal Connections

Maximum Horsepower Ratings						Maximum Current Utilization Categories		No of Poles		Instantaneous Auxiliary Contacts		Catalog Number ▲	\$ Price				
Single Phase		Three Phase				Inductive AC3 Amperes	Resistive AC1 Amperes	N.O.	N.C.	N.O.	N.C.		AC Coils	DC Coils			
115 V hp	230 V hp	200 V hp	230 V hp	460 V hp	575 V hp												
0.5	1	2	2	5	7.5	9	20	3	0	1	1	LC1D09 ♦♦	94.00	119.00			
—	—	—	—	—	—	—		4				—	LC1DT20 ♦	94.00	119.00		
—	—	—	—	—	—	—		2				2	LC1D098 ♦	94.00	119.00		
1	2	3	3	7.5	10	12	25	3	0	1	1	LC1D12 ♦♦	119.00	149.00			
—	—	—	—	—	—	—		4				—	LC1DT25 ♦	119.00	149.00		
—	—	—	—	—	—	—		2				2	LC1D128 ♦	119.00	149.00		
1	3	5	5	10	15	18	32	3	0	1	1	LC1D18 ♦♦	136.00	160.00			
—	—	—	—	—	—	—		4				—	LC1DT32 ♦	149.00	183.00		
—	—	—	—	—	—	—		2				2	LC1D188 ♦	149.00	183.00		
2	3	7.5	7.5	15	20	25	40	3	0	1	1	LC1D25 ♦♦	151.00	181.00			
—	—	—	—	—	—	—		4				—	LC1DT40 ♦	193.00	240.00		
—	—	—	—	—	—	—		2				2	LC1D258 ♦	193.00	240.00		
2	5	10	10	20	30	32	50	3	0	1	1	LC1D32 ♦♦	172.00	213.00			
3	5	10	10	30	30	40		3				0	1	1	LC1D40	296.00	275.00
—	—	—	—	—	—	—		4					0	0	0	LC1D40004 ■	296.00
—	—	—	—	—	—	—	2	2	LC1D40008 ■	296.00	353.00						
3	7.5	15	15	40	40	50	3	0	1	1	LC1D50	234.00		291.00			
5	10	20	20	50	50	65	3		0	1	1	LC1D65	322.00	379.00			
—	—	—	—	—	—	—	4			0	0	0	LC1D65004 ■	446.00	503.00		
—	—	—	—	—	—	—	2	2			0	0	LC1D65008 ■	446.00	503.00		
7.5	15	25	30	60	60	80	3	0	1		1	LC1D80	363.00	420.00			
—	—	—	—	—	—	—	4		0	0	0	LC1D80004 ■	489.00	524.00			
—	—	—	—	—	—	—	2			2	0	0	LC1D80008 ■	489.00	524.00		
—	—	30	40	75	100	115	3	0		1	1	LC1D115	479.00	479.00			
—	—	40	50	100	125	150	3		0	1	1	LC1D150	696.00	696.00			
—	—	—	—	—	—	—	4			0	0	0	LC1D115004	630.00	630.00		

- ▲ Complete catalog number with coil voltage code from table on page 18-3; example, LC1D09G7.
■ For DC version of these devices replace the 'C' with 'P' (ex LC1D40004**) becomes LP1D40004**).
♦ On LC1D09 - LC1D32 and LC1DT20 through LC1DT40, for ring tongue versions add '6' to the catalog number prior to adding the voltage code (ex, LC1D09G7 becomes LC1D096G7). No Price adder for this modification.
★ On LC1D09 - LC1D32, for spring terminals versions add '3' to the catalog number prior to adding the voltage code (ex., LC1D09G7 becomes LC1D093G7). No price adder for this modification.

Table 18.2: D-Line Overload Relays — Ambient Compensated, Bi-Metallic Direct Mount

Current Setting Range Amperes	For Direct Mounting to LC1111	Class 10 with Single Phase Sensitivity	Class 10 without Single Phase Sensitivity	Class 20 with Single Phase Sensitivity	Class 20 without Single Phase Sensitivity	\$ Price
0.10–0.16	D09–D32	LRD01	LR3D01	—	—	60.00
0.16–0.25		LRD02	LR3D02	—	—	
0.25–0.40		LRD03	LR3D03	—	—	
0.40–0.63		LRD04	LR3D04	—	—	
0.63–1		LRD05	LR3D05	—	—	
1–1.6		LRD06	LR3D06	—	—	
1.6–2.5		LRD07	LR3D07	—	—	
2.5–4		LRD08	LR3D08	LRD1508	LR3D1508A1	
4–6		LRD10	LR3D10	LRD1510	LR3D1510A1	
5.5–8	D09–D32	LRD12	LR3D12	LRD1512	LR3D1512A1	62.00
7–10	D09–D32	LRD14	LR3D14	LRD1514	LR3D1514A1	
9–13	D12–D32	LRD16	LR3D16	LRD1516	LR3D1516A1	
12–18	D18–D32	LRD21	LR3D021	LRD1521	LR3D1521A1	
16–24	D25–D32	LRD22	LR3D22	—	—	
17–25	D25–D32	—	—	—	LR3D1522A1	
23–32	D25–D32	LRD32	LR3D32	—	—	73.00
23–28	D25–D32	—	—	LRD1530	LR3D1530A1	
25–32	D25–D32	—	—	LRD1532	LR3D1532A1	
30–38	D32	LRD35	LR3D35	—	—	107.00
17–25	D40–D80	LRD3322	LR3D3322	LR2D3522	LR3D3522	
23–32	D40–D80	LRD3353	LR3D3353	LR2D3553	LR3D3553	
30–40	D40–D80	LRD3355	LR3D3355	LR2D3555	LR3D3555	
37–50	D50–D80	LRD3357	LR3D3357	LR2D3557	LR3D3557	
48–65	D50–D80	LRD3359	LR3D3359	LR2D3559	LR3D3559	
55–70	D65–D80	LRD3361	LR3D3361	LR2D3561	LR3D3561	127.00
63–80	D65–D80	LRD3363	LR3D3363	LR2D3563	LR3D3563	
80–104	D80	LRD3365	—	—	—	
80–104	D115–D150	LRD4365	—	—	—	362.00
95–120	D115–D150	LRD4367	—	—	—	
110–140	D150	LRD4369	—	—	—	

Table 18.3: D-Line Overload Relays — Solid State

Current Setting Range Amperes	For Direct Mounting Beneath Contractor LC1	Class 10	Class 20	\$ Price
60–100	D115–D150	LR9D5367	LR9D5567	298.00
90–150	D115–D150	LR9D5369	LR9D5569	298.00

D-Line contactor accessories pages 18-6 to 18-9
D-Line overload relay accessories page 18-14
D-Line replacement coils pages 18-16 to 18-18
Dimensions pages 18-40 to 18-46

Contactors & Overload Relays

TeSys™ F-Line Non-reversing

Refer to Catalog 8502CT9901



LC1F115

Table 18.4: 2-, 3-, and 4-Pole Contactors

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3				Maximum Current		Number of Poles	Catalog Number ▲	\$ Price
200 V 208 V	220 V 240 V	460 V 480 V	575 V 600 V	AC-3	AC-1		Panel Mount with Screws	
HP	HP	HP	HP	A	A			
30	40	75	100	115	200	3	LC1F115	479.00
						4	LC1F1154	630.00
40	50	100	125	150	250	3	LC1F150	696.00
						4	LC1F1504	825.00
50	60	125	150	185	275	3	LC1F185	938.00
						4	LC1F1854	1439.00
Current Rated				225	315	3	LC1F225	1167.00
						4	LC1F2254	1935.00
60	75	150	175	265	350	3	LC1F265	1179.00
						4	LC1F2654	1646.00
75	100	200	250	330	400	3	LC1F330	1621.00
						4	LC1F3304	1846.00
100	125	250	300	400	500	2	LC1F4002	1521.00
						3	LC1F400	1874.00
150	200	400	500	500	700	4	LC1F4004	2133.00
						2	LC1F5002	4324.00
250	300	600	800	630	1000	3	LC1F500	4970.00
						4	LC1F5004	5617.00
—	450	800	900	800	1000	2	LC1F6302	5917.00
						3	LC1F630	6872.00
Current Rated				780	1600	4	LC1F6304	7582.00
						3	LC1F780	7788.00
—	450	800	900	800	1000	4	LC1F7804	9940.00
						3	LC1F800	6676.00

Table 18.5: 3-Phase Overload Relays — Solid State Separate Mount ■

Current Setting Range Amps	For Direct Mounting to Contactor LC1●●●●/CR1F●●●●	Class 10 Trip ♦ Catalog Number	Class 20 ♦ Catalog Number	\$ Price
30–50	F115–F185	LR9F5357	LR9F5557	298.00
48–80	F115–F185	LR9F5363	LR9F5563	298.00
60–100	F115–F185	LR9F5367	LR9F5567	298.00
90–150	F115–F185	LR9F5369	LR9F5569	298.00
132–220	F185 ★ –F265	LR9F5371	LR9F5571	298.00
200–330	F265–F500	LR9F7375■	LR9F7575■	333.00
300–500	F265–F500	LR9F7379■	LR9F7579■	737.00
380–630	F400–F630	LR9F7381■	LR9F7581■	905.00

- ▲ Complete part number by adding coil voltage code from table below. For example: LC1F115G7. All contactors (except F780) include 1 N.O. coil interlock contact.
- When mounting overload relays LR9F5●57 to LR9F5●71 directly beneath the contactor, supporting the relays with a mounting plate is recommended. With overload relays LR9F7●75 to LR9F7●81, use of a support mounting plate is mandatory.
- ♦ IEC standard 60947-4 specifies the following trip times when the overload relay senses 7.2 times the setting current:
Class 10 — between 4 and 10 seconds
Class 20 — between 6 and 20 seconds
- ★ Interconnection kit LA7F407 is required to mount an LR9F●71 to an LC1F185.

Table 18.6: Coil Voltage Codes ♦

Contactor	Hz	24 V	48 V	110 V	120 V	125 V	208 V	220 V	240 V	250 V	440 V	480 V	600 V
AC													
D09–D150	50/60	B7	E7	F7	G7	—	LE7	M7	U7	—	—	T7 ▼	X7 ▼△
LC1D40–LC1D150 only	60	B6	E6	F6	G6	—	L6	M6	U6	—	—	T6	X6 △
	50	B5	E5	F5	—	—	—	M5 ▼	U5	—	—	—	—
F115, F150, and F185	50	B5	E5	F5	—	—	—	M5	U5	—	—	—	—
	60	B6	E6	F6	G6	—	L6	M6	U6	—	—	Q5	SC
F265, and F330	40–400	B7	E7	F7	G7	—	L7	M7	U7	—	—	S7★	X7
F400–F780	40–400	—	E7	F7	G7	—	L7	M7	U7	—	—	N7	X7 □
DC													
D09–D32 Low Consumption	—	BL	EL	FL	—	—	—	ML	—	UL	—	—	—
D09–D150	—	BD	ED	FD	—	GD	—	MD	—	UD	RD	—	—
F115–F330	—	BD	ED	FD	—	GD	—	MD	—	UD	RD	—	—
F400–F780	—	—	ED	FD	—	GD	—	MD	—	UD	RD	—	—

- ▼ Not available for LC1D40 - LC1D150
- △ Not available for LC1D115 or LC1D150
- Not available for LC1F780
- The 600 V coils for the LC1F400 - LC1F630 do not include an auxiliary contact for holding circuits.
- ♦ For additional voltage codes refer to the IEC Contactor and Starter Catalog 8502CT9901.
- ★ For use with F265–F330 only.

Table 18.7: Coil Voltage Codes for AC and DC Voltages for F800 (includes built-in surge suppressor)

Volts AC/DC	24	48	110	120	127	208	220	240	277	380	415	440	480	575	600	660
50/60 HZ	—	—	FW	FW	FW	—	MW	MW	—	QW	QW	QW	—	—	—	—

F-Line contactor accessoriespage 18-9
F-Line overload relay accessoriespage 18-14
F-Line replacement coils and parts pages 18-11, 18-17, 18-19
Dimensions pages 18-42 to 18-49

Accessories

Auxiliary Contacts, Time Delay, Mechanical Latch

Telemecanique

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FOR CURRENT INFORMATION



Front Mounted
Auxiliary Blocks

Standard, instantaneous auxiliary contact blocks

Snap-On Mounting	Number of Contacts	Composition		Catalog Number	Price
		N.O.	N.C.		
To the front of LC ● D09 to D150★	4	2	2	LADN22	\$40.10
		1	3	LADN13	40.10
		4	0	LADN40	40.10
		0	4	LADN04	40.10
		3	1	LADN31	40.10
		2	2	LADC22 ▲	40.10
	2	1	1	LADN11	20.00
		2	0	LADN20	20.00
		0	2	LADN02	20.00
To the front of LC ● D25 to D150	1	1	0	LADN10 ■	12.70
		0	1	LADN01 ■	12.70
To the side of LC ● D09 to D150	2	1	1	LAD8N11 ♦	20.00
		2	0	LAD8N20 ♦	20.00

- ▲ Including 1 N.O. + 1 N.C. make before break contacts.
 ■ 1 block only can be mounted on the LC1/LP1 D25 and D32; 2 blocks can be mounted on the LC1/LP1 D40 to D80.
 ♦ 1 block may be added to each side of the contactor, see limitations below
 ★ For low consumption coils only one 2 front mounted two contact block allowed. No side mounted contact blocks allowed.

Instantaneous blocks with dusttight auxiliary contacts (IP54) NEMA Type 12

Snap-On Mounting	Standard Contacts		Dusttight Contacts		Catalog Number	Price
	N.O.	N.C.	N.O.	N.C.		
To the front of LC ● D09 to D80 LP ● D09 to D80	...	...	2	...	LA1DX20	\$63.
	2	...	2	...	LA1DZ40	79.
	1	1	2	...	LA1DZ31	79.
	...	...	2	...	LA1DY20▼	74.

▼ Device supplied with 4 grounding terminal points.

Pneumatic time delay contact blocks

Snap-On Mounting	Time Delay Contacts	Type	Range of Time Delay	Catalog Number	Price
To the front of LC●D09 to D150 LP●D09 to D150	1 1	On energization (on delay)	0.1 to 3 s Δ	LADT0	\$127.
			0.1 to 30 s	LADT2	127.
			10 to 180 s	LADT4	127.
			1 to 30 s □	LADS2	127.
	1 1	On de-energization (off-delay)	0.1 to 3 s Δ	LADR0	127.
			0.1 to 30 s	LADR2	127.
			10 to 180 s	LADR4	127.

- Δ Scale range is expanded between 0.1 and 0.6 seconds on the dial for more accurate settings at the lower end of the range.
 □ With switching time of 40 ms ± 15 ms between the opening of the N.C. contact to the closing of the N.O. contact.

Mechanical latch blocks with manual or electrical unlatch

Front snap-on mounting onto	Application	Catalog number to be completed by the code corresponding to the coil voltage	Price
LC●LP●D09 to D65	For silent operation and energy conservation	LA6DK10★ ◇	\$74.
LC1 D80 to D150 LP1 D80	For silent operation and energy conservation	LA6DK20★ ◇	74.

◇ Does not include internal coil clearing contact.

★ Coil Voltages for LA6 DK mechanical latch blocks

Volts	12	24	32/36	42/48	60/72	100	110/127	200/208	220/240	380/415	440/480	500/600
AC or DC	J	B	C	E	EN	K	F	L	M	Q	R	S

Dimensions pages 15-25-15-27

For additional information, reference Catalog #8502CT9901R2/01 or D-FAX™ #5497, 5498, 5799, 5500, 5501, 5502.





LRD22

Ambient Compensated bi-metallic overload relays

LRD overload relays are designed for direct mounting to D-line contactors. To mount these overloads separately, select separate mount kits from the table below.

D-Line overload relays

Current Setting Range Amperes	For direct mounting to LC1●●●	Class 10 with Single Phase Sensitivity	Class 10 without Single Phase Sensitivity	Class 20 with Single Phase Sensitivity	Class 20 without Single Phase Sensitivity	Price
.10-.16 .16-.25 .25-.40 .40-.63 .63-1	D09-D32 D09-D32 D09-D32 D09-D32 D09-D32	LRD01 LRD02 LRD03 LRD04 LRD05	LR3D01 LR3D02 LR3D03 LR3D04 LR3D05	...	...	\$ 60.00
1-1.6 1.6-2.5 2.5-4 4-6	D09-D32 D09-D32 D09-D32 D09-D32	LRD06 LRD07 LRD08 LRD10	LR3D06 LR3D07 LR3D08 LR3D10	...	...	
5.5-8 7-10 9-13 12-18 16-24 17-25	D09-D32 D09-D32 D12-D32 D18-D32 D25-D32 D25-D32	LRD12 LRD14 LRD16 LRD21 LRD22 ...	LR3D12 LR3D14 LR3D16 LR3D21 LR3D22 ...	LRD1512 LRD1514 LRD1516 LRD1521 ...	LR3D1512A1 LR3D1514A1 LR3D1516A1 LR3D1521A1 LR3D1522A1	
23-32 23-28 25-32 30-38	D25-D32 D25-D32 D25-D32 D32	LRD32 ...	LR3D32 ...	LRD1530 LRD1532	LR3D1530A1 LR3D1532A1	
17-25 23-32 30-40 37-50 48-65	D40-D80 D40-D80 D40-D80 D50-D80 D50-D80	LRD3322 LRD3353 LRD3355 LRD3357 LRD3359	LR3D3322 LR3D3353 LR3D3355 LR3D3357 LR3D3359	LR2D3522 LR2D3553 LR2D3555 LR2D3557 LR2D3559	LR3D3522 LR3D3553 LR3D3555 LR3D3557 LR3D3559	
55-70 63-80 80-104	D65-D80 D65-D80 D80	LRD3361 LRD3363 LRD3365	LR3D3361 LR3D3363 ...	LR2D3561 LR2D3563 ...	LR3D3561 LR3D3563 ...	127.00
80-104 95-120 110-140	D115-D150 D115-D150 D150	LRD4365 LRD4367 LRD4369	...	...	...	362.00

Mounting Kits and Plates▲

Description	For use with overload relays:	Catalog Number	Price
Separate mounting kits for mounting to 35 mm omega rail or for panel mounting with screws	LRD01-35 and LR3D01-35	LAD7B10	\$ 8.70
	LRD15●●	LAD7B105	10.40
	LR2D15●●	LA7D1064	8.70
	LR2D25●●	LA7D2064	13.10
	LRD3●●●, LR3D3●●●, LR2D35●●	LA7D3064	17.50
Mounting plates for screw mounting at 110 mm (4.3") centers	LRD01-35, LR3D01-35, LR2D15●●	DX1AP25	11.00
	LR2D25●●	DX1AP26	12.00
	LRD3●●●, LR3D3●●●, LR2D35●●	LA7D902	16.40

▲ When using mounting plates, separate mounting kits are also required.



LA7D901

Accessories

Description	For use with	Standard Packaging	Catalog Number	Price
Pre wiring kit allows direct connection of the N.C. contact of relay LRD01-D32 or LR3D01-D32 to the contactor	LC1D09 through D18	10	LAD7C1	\$ 8.70
	LC1D25, D32	10	LAD7C2	8.70
Stop button locking device	All relays except LRD01-D32, LR3D01-D32 and LR9D	10	LA7D901	2.20
Remote stop/tripping or electrical reset◆	LRD01-D32, LR3D01-32	1	LAD703■	43.70
	All relays except LRD01-D32, LR3D01-D31	1	LA7D03■	43.70
Reset by flexible cable 500 mm (19.6 in.)	LRD01-D32	1	LAD7305	100.00

■ Part number to be completed by adding coil voltage code.

Control Circuit Voltages for LA7D03 and LAD703

Volts	12	24	48	110	220/230	380/400	415/440
AC 50/60 Hz	J★	B	E	F	M	Q	N
DC	J	B	E	F	M	...	...

◆ The time that the LA7D03 can remain energized depends on its rest time; 1 s pulse with 9 s rest time; 5 s pulse with 30 s rest time; 10 s pulse with 90 s rest time; maximum pulse duration of 20 s with rest time of 300 s. Consumption on inrush and sealed : < 100 VA
★ Not available for LRD01-D32, LR3D01-D32.



LA7D03

Dimensions..... page 16-30

For additional information, reference Catalog #8502CT9901R5/03.

Price List for Spring Clamp Products

ZB5 Electrical Components—22 mm Push Buttons



ZB5AZ009



ZBE1015



ZB5AZ1015

Body/Mounting Collar

For use with	Catalog Number	\$ Price
Contact block or light module	ZB5AZ009	5.40

Contact Blocks

Spring terminal connections (1)

Contacts for standard applications

Description	Type of contact			Catalog Number	\$ Price
	Single	1	—	ZBE1015	18.00
		—	1	ZBE1025	18.00
Contact blocks	Single with body/mounting collar	1	—	ZB5AZ1015	24.00
		—	1	ZB5AZ1025	24.00
		2	—	ZB5AZ1035	42.00
		—	2	ZB5AZ1045	42.00

Light Modules

Spring terminal connections (1)

Description	Supply voltage	Color of light source	Catalog Number	\$ Price
Integral LED (to combine with heads for integral LED)	12 Vac/Vdc	White	ZBVJ15	57.00
		Green	ZBVJ35	57.00
		Red	ZBVJ45	57.00
		Orange	ZBVJ55	57.00
		Blue	ZBVJ65	57.00
	24 Vac/Vdc	White	ZBVB15	57.00
		Green	ZBVB35	57.00
		Red	ZBVB45	57.00
		Orange	ZBVB55	57.00
		Blue	ZBVB65	57.00
	110–120 Vac	White	ZBVG15	57.00
		Green	ZBVG35	57.00
		Red	ZBVG45	57.00
		Orange	ZBVG55	57.00
		Blue	ZBVG65	57.00
	230–240 Vac	White	ZBVM15	57.00
		Green	ZBVM35	57.00
		Red	ZBVM45	57.00
		Orange	ZBVM55	57.00
		Blue	ZBVM65	57.00

(1) Additional blocks **cannot** be attached to the back of these contact blocks or light modules.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Sales transactions (including those for Telemecanique® brand and other products) are subject to the latest published Conditions of Sale of the Square D Company.

Possession of this Price List by any individual or company is not to be construed as our offer to sell any of the products listed herein at the price shown.

Schneider Electric USA
8001 Knightdale Blvd.
Knightdale, NC 27545 USA
1-888 Square D
(1-888-778-2733)
www.Schneider-Electric.us

Push Buttons & Operator Interface - XB5 22 mm Double Insulated Selector Switches

Non-Illuminated Selector Switches ■ ▲



ZB5AD•



ZB5AJ3

Shape of Head	Type of Operator	Number and Type of Positions		Catalog Number
	Standard lever, black For colored lever add the following code to the end of the part number: 01 - white 03 - green 04 - red 05 - yellow 06 - blue (example ZB5AD204)	2 - maintained		ZB5AD2
		2 - momentary from right to left		ZB5AD4
		3 - maintained		ZB5AD3
		3 - momentary to center		ZB5AD5
		3 - momentary from left to center		ZB5AD7
		3 - momentary from right to center		ZB5AD8
		2 - maintained		ZB5AJ2
		2 - momentary from right to left		ZB5AJ4
	Extended lever, black	3 - maintained		ZB5AJ3
		3 - momentary to center		ZB5AJ5
		3 - momentary from left to center		ZB5AJ7
		3 - momentary from right to center		ZB5AJ8

Non-Illuminated Key Switches ■



ZB5AG•

Shape of Head	Type of Operator	Number and Type of Positions ▲		Catalog Number ●
	Key (No. 455)	2 - maintained		ZB5AG2
				ZB5AG4
		2 - momentary from right to left		ZB5AG6
		3 - maintained		ZB5AG0
				ZB5AG3
				ZB5AG5
				ZB5AG9
				ZB5AG09
		3 - momentary from left to center		ZB5AG1
		3 - momentary to center		ZB5AG7
		3 - momentary from right to center		ZB5AG8
				ZB5AG08

The symbol indicates key withdrawal position(s).

■ For actuation of outside contacts only.

▲ See selector switch sequence charts on page 91.

● Other key numbers:

- key No. 421E: add the suffix 12 to the reference.

- key No. 458A: add the suffix 10 to the reference.

- key No. 520E: add the suffix 14 to the reference.

- key No. 3131A: add the suffix 20 to the reference.

Example:

The catalog number for a head with key No. 421E for a 2 position maintained, lockable selector switch, with key withdrawal from the left-hand position, becomes: ZB5AG212.

Push Buttons & Operator Interface - XB5 22 mm Double Insulated Non-Illuminated Operators

Non-Illuminated Operators, Momentary - Unmarked



ZB5AA0



ZB5AA5



ZB5AL3



ZB5AP1



ZB5CA2



ZB5CA5

Shape of Head	Type of Push	Color of Cap	Catalog Number
	Flush, without color cap ■	—	ZB5AA0
	Flush, with set of 6 color caps ▲	6 colors ▲	ZB5AA9
	Flush	White	ZB5AA1
		Black	ZB5AA2
		Green	ZB5AA3
		Red	ZB5AA4
		Yellow	ZB5AA5
		Blue	ZB5AA6
		Grey	ZB5AA8
	Flush with transparent cap, for insertion of legend ●	White	ZB5AA18
		Green	ZB5AA38
		Red	ZB5AA48
		Yellow	ZB5AA58
		Blue	ZB5AA68
	Extended	White	ZB5AL1
		Black	ZB5AL2
		Green	ZB5AL3
		Red	ZB5AL4
		Yellow	ZB5AL5
		Blue	ZB5AL6
	Booted (clear) Color of cap unobscured	White	ZB5AP1
		Black	ZB5AP2
		Green	ZB5AP3
		Red	ZB5AP4
		Yellow	ZB5AP5
		Blue	ZB5AP6
	Booted (clear) for insertion of legend ● Color of cap unobscured	White	ZB5AP18
		Green	ZB5AP38
		Red	ZB5AP48
		Yellow	ZB5AP58
		Blue	ZB5AP68
	Flush Plunger (with high guard)	White	ZB5AA14
		Black	ZB5AA24
		Green	ZB5AA34
		Red	ZB5AA44
		Yellow	ZB5AA54
		Blue	ZB5AA64
	Flush	White	ZB5CA1
		Black	ZB5CA2
		Green	ZB5CA3
		Red	ZB5CA4
		Yellow	ZB5CA5
		Blue	ZB5CA6
	Extended	White	ZB5CL1
		Black	ZB5CL2
		Green	ZB5CL3
		Red	ZB5CL4
		Yellow	ZB5CL5
		Blue	ZB5CL6

■ Color cap to be ordered separately, see page 100.

▲ Six different color caps included with head (white, black, green, red, yellow, blue).

● For legend ordering information see page 99.

Push Buttons & Operator Interface - XB5 22 mm Double Insulated Illuminated Operators

Heads for Momentary Illuminated Push Buttons

Shape of Head	Type of Push	Color	Catalog Number
Only use with protected LED light modules			
	Flush	White	ZB5AW313
		Green	ZB5AW333
		Red	ZB5AW343
		Yellow	ZB5AW353
		Blue	ZB5AW363
	Flush with clear boot	White	ZB5AW513
		Green	ZB5AW533
		Red	ZB5AW543
		Yellow	ZB5AW553
		Blue	ZB5AW563
	Flush for insertion of legend (lens supplied (not installed))	White	ZB5AA18
		Green	ZB5AA38
		Red	ZB5AA48
		Yellow	ZB5AA58
		Blue	ZB5AA68
	Extended	White	ZB5AW113
		Green	ZB5AW133
		Red	ZB5AW143
		Yellow	ZB5AW153
		Blue	ZB5AW163
	Mushroom (40 mm)	Green	ZB5AW433
		Red	ZB5AW443
		Yellow	ZB5AW453
		Blue	ZB5AW463
		Clear	ZB5AW473
	Flush for insertion of legend	White	ZB5CW313
		Green	ZB5CW333
		Red	ZB5CW343
		Yellow	ZB5CW353
		Blue	ZB5CW363
	Extended	White	ZB5CW113
		Green	ZB5CW133
		Red	ZB5CW143
		Yellow	ZB5CW153
		Blue	ZB5CW163
Only use with light modules for a BA 9s incandescent bulb, neon or LED			
	Flush	White	ZB5AW31
		Green	ZB5AW33
		Red	ZB5AW34
		Yellow	ZB5AW35
		Blue	ZB5AW36
		Clear	ZB5AW37
	Extended	White	ZB5AW11
		Green	ZB5AW13
		Red	ZB5AW14
		Yellow	ZB5AW15
		Blue	ZB5AW16
		Clear	ZB5AW17



ZB5AW313



ZB5AW363



ZB5AW143



ZB5CW113



ZB5AW33

Zelio® IEC Style—17.9 mm wide

Table 23.119: RE11 Modular Timers—17.9 mm wide (Multi-range timers offering 7 selectable ranges)

Functions	Supply Voltages	Rated Current	Catalog Number	\$ Price
Output 1 C/O contact				
On delay	24 Vdc, 24–240 Vac	8A	RE11RAMU	51.00
Interval	24 Vdc, 24–240 Vac	8A	RE11RHMU	51.00
Asymmetrical repeat cycle	24 Vdc, 24–240 Vac	8A	RE11RLMU	63.00
Asymmetrical repeat cycle	12 Vac/Vdc	8A	RE11RLJU	89.00
One shot	24 Vdc, 24–240 Vac	8A	RE11RBMU	62.00
Off delay with control start	24 Vdc, 24–240 Vac	8A	RE11RCMU	62.00
Multi-function ▲	24 Vdc, 24–240 Vac	8A	RE11RMMU	74.00
Multi-function ▲	12–240 Vac/Vdc	8A	RE11RMMW	89.00
Multi-function ▲	12–240 Vac/Vdc	8A	RE11RMMWS	89.00
Multi-function ▲	12 Vac/Vdc	8A	RE11RMJU	89.00
Multi-function ■	24 Vdc, 24–240 Vac	8A	RE11RMEU	89.00
Multi-function ▲	24 Vdc, 24–240 Vac	8A	RE11RMXU	89.00

▲ Timing ranges: 0.1–1 s, 1–10 s, 0.1–10 min, 1–10 min, 0.1–1 hr, 1–10 hr, 10–100 hr

■ Timing ranges: 0.1–1 s, 1–10 s, 0.1–10 min, 1–10 min, 0.1–1 hr, 1–10 hr

Conforming to standards			IEC 61812-1, EN 50081-1/2, EN 50082-1/2, LV directives (73/23/EEC + 93/68/EEC (CE marking) + EMC directive (89/336/EEC + IEC 60669-2-3)		
Approvals			cULus File: E173076 CNN: NRNT		
			File: E173076 CNN: NRNT7		
			CSA File: 217698 Class 3211 07		
			CE		
			GL except RE11 RMX MU and RE11 RME MU		
Ambient air temperature around the device		Storage	°F (°C)		–22 to +140 (–30 to +60)
		Operation	°F (°C)		–4 to +140 (–20 to +60)

Table 23.120: RE11 Modular Timers—17.9 mm wide (Multi-function, dual function or single function)

Functions	Supply Voltages	Rated Current	Catalog Number	\$ Price
Solid state output				
On delay	24–240 Vac/Vdc	0.7A	RE11LAMW	54.00
Interval	24–240 Vac	0.7A	RE11LHBM	51.00
Off delay with control contact	24–240 Vac	0.7A	RE11LCBM	62.00
Asymmetrical repeat cycle	24–240 Vac	0.7A	RE11LLBM	89.00
Multi-function	24–240 Vac	0.7A	RE11LMBM	74.00

Timing ranges: 0.1–1 s, 1–10 s, 0.1–10 min, 1–10 min, 0.1–1 hr, 1–10 hr, 10–100 hr

Conforming to standards		IEC 61812-1, EN 50081-1/2, EN 50082-1/2, LV directives (73/23/EEC + 93/68/EEC (CE marking) + EMC directive (89/336/EEC + IEC 60669-2-3)		
		cULus	File: E173076 CNN: NRNT	
			File: E173076 CNN: NRNT7	
Approvals		CSA	File: 217698 Class: 3211 07	
		CE		
Ambient air temperature around the device	Storage	°F (°C)	–22 to 140 (–30 to +60)	
	Operation	°F (°C)	–4 to 140 (–20 to +60)	

Table 23.121: RE48 Panel Mount Timers (For required socket, refer to the catalog section)

Functions	Supply Voltages	Rated Current	Catalog Number	\$ Price
Single function: on delay, two relay outputs	24–240 Vac/Vdc	2 x 5 A	RE48ATM12MW	87.00
Repeat cycle: two relay outputs	24–240 Vac/Vdc	2 x 5 A	RE48ACV12MW	104.00
Multi-function: on delay, one shot, off delay, repeat cycle	24–240 Vac/Vdc	2 x 5 A	RE48AML12MW	102.00
Multi-function: on delay and interval, two relay outputs, of which one selectable and instantaneous	24–240 Vac/Vdc	2 x 5A	RE48AMH13MW	102.00

Conforming to standards			IEC 61812-1, EN 50081-1/2, EM 50082-1/2, LV directives (73/23/EEC + 93/68/EEC (CE marking) + ENC directive (89/336/EEC + IEC 60669-2-3)		
Approvals			cURus	File: E173076 CNN: NRNT2	
				File: E173076 CNN: NRNT8	
			CSA	File: 217698 Class: 3211 07	
			CE, C-Tick, GL		
			RoHS compliant as of date code 0625		
Ambient air temperature around the device			Storage	°F (°C)	–40 to 158 (–40 to +70)
			Operation	°F (°C)	–4 to 122 (–20 to +50)

Table 23.122: REXL Miniature Plug-in Timers (For required socket, refer to the catalog section)

Function	Supply Voltages	4 pole			2 pole		
		Rated Current	Catalog Number	\$ Price	Rated Current	Catalog Number	\$ Price
Single function (On-Delay)	12 Vdc	3A	REXL4TMJD	66.00	5A	REXL2TMJD	63.00
	24 Vdc ♦	3A	REXL4TMBD	66.00	5A	REXL2TMBD	63.00
	24 Vac 50/60 Hz ♦	3A	REXL4TMB7	66.00	5A	REXL2TMB7	63.00
	120 Vac 50/60 Hz	3A	REXL4TMF7	66.00	5A	REXL2TMF7	63.00
	230 Vac 50/60 Hz	3A	REXL4TMP7	66.00	5A	REXL2TMP7	63.00
Timing Ranges		0.1–1 s, 1–10 s, 0.1–1 min, 1–10 min, 0.1–1 hr, 1–10 hr, 10–100 hr					

For 48 Vac supply, additional resistor 390 ohm 4 W / 24 V

♦ For 48 Vac supply, additional resistor 560 ohm 2 W / 24 V

Approvals:


 File CCN E173076
NRNT2
File CCN E173076
NRNT8

 File Class 217698
321107


IEC 61812-1

RoHS Compliant as of date code 0625

Zelio® Plug-In Relays

Zelio RXM plug-in relays and sockets provide a comprehensive selection of relays responding to the most demanding standards ranging from 3A to 12A. Some of the features include:

- Spring return test button for testing the contacts (standard)
- Green LED indication of relay status (depending on version)

- Mechanical indication of relay status (standard)
- Plug-in protection module to protect against electrical spikes
- Plug-in jumper bars for coil terminals to avoid time-consuming wiring



RXM2AB1F7

Table 23.1: Miniature relays without LED (sold in lots of 10)

Coil Voltage	Number and type of contacts - Thermal current (Ith)					
	2 C/O - 12 A Res.		3 C/O - 10 A Res.		4 C/O - 8 A Res.	
	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.
12 Vdc	RXM2AB1JD	6.30	RXM3AB1JD	6.80	RXM4AB1JD	7.10
24 Vdc	RXM2AB1BD	6.30	RXM3AB1BD	6.80	RXM4AB1BD	7.10
48 Vdc	RXM2AB1ED	6.30	RXM3AB1ED	6.80	RXM4AB1ED	7.10
110 Vdc	RXM2AB1FD	6.30	RXM3AB1FD	6.80	RXM4AB1FD	7.10
220 Vdc	—	—	—	—	RXM4AB1MD	7.10
24 Vac	RXM2AB1B7	6.30	RXM3AB1B7	6.80	RXM4AB1B7	7.10
48 Vac	RXM2AB1E7	6.30	RXM3AB1E7	6.80	RXM4AB1E7	7.10
120 Vac	RXM2AB1F7	6.30	RXM3AB1F7	6.80	RXM4AB1F7	7.10
230 Vac	RXM2AB1P7	6.30	RXM3AB1P7	6.80	RXM4AB1P7	7.10
240 Vac	—	—	—	—	RXM4AB1U7	7.10

Table 23.2: Miniature relays with LED (sold in lots of 10)

Coil Voltage	Number and type of contacts - Thermal current (Ith)					
	2 C/O - 12 A Res.		3 C/O - 10 A Res.		4 C/O - 8 A Res.	
	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.
12 Vdc	RXM2AB2JD	7.40	RXM3AB2JD	7.80	RXM4AB2JD	8.10
24 Vdc	RXM2AB2BD	7.40	RXM3AB2BD	7.80	RXM4AB2BD	8.10
48 Vdc	RXM2AB2ED	7.40	RXM3AB2ED	7.80	RXM4AB2ED	8.10
110 Vdc	RXM2AB2FD	7.40	RXM3AB2FD	7.80	RXM4AB2FD	8.10
125 Vdc	—	—	—	—	RXM4AB2GD	8.10
24 Vac	RXM2AB2B7	7.40	RXM3AB2B7	7.80	RXM4AB2B7	8.10
48 Vac	RXM2AB2E7	7.40	RXM3AB2E7	7.80	RXM4AB2E7	8.10
120 Vac	RXM2AB2F7	7.40	RXM3AB2F7	7.80	RXM4AB2F7	8.10
230 Vac	RXM2AB2P7	7.40	RXM3AB2P7	7.80	RXM4AB2P7	8.10

Table 23.3: Miniature relays with LED without Push Button (sold in lots of 10)

Coil Voltage	Number and type of contacts - Thermal current (Ith)					
	2 C/O - 12 A Res.		3 C/O - 10 A Res.		4 C/O - 8 A Res.	
	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.
12 Vdc	RXM2AB3JD	6.80	—	—	RXM4AB3JD	7.50
24 Vdc	RXM2AB3BD	6.80	—	—	RXM4AB3BD	7.50
48 Vdc	RXM2AB3ED	6.80	—	—	RXM4AB3ED	7.50
110 Vdc	RXM2AB3FD	6.80	—	—	RXM4AB3FD	7.50
125 Vdc	—	—	—	—	RXM4AB3GD	7.50
24 Vac	RXM2AB3B7	6.80	—	—	RXM4AB3B7	7.50
48 Vac	RXM2AB3E7	6.80	—	—	RXM4AB3E7	7.50
120 Vac	RXM2AB3F7	6.80	—	—	RXM4AB3F7	7.50
230 Vac	RXM2AB3P7	6.80	—	—	RXM4AB3P7	7.50

Table 23.4: Miniature relays with low level contacts, without LED (sold in lots of 10)

Number and type of contacts - Thermal current (Ith)		
4 C/O - 3 A Res.		
Coil Voltage	Catalog Number	\$ Price ea.
12 Vdc	RXM4GB1JD	7.10
24 Vdc	RXM4GB1BD	7.10
48 Vdc	RXM4GB1ED	7.10
110 Vdc	RXM4GB1FD	7.10
24 Vac	RXM4GB1B7	7.10
48 Vac	RXM4GB1E7	7.10
120 Vac	RXM4GB1F7	7.10
230 Vac	RXM4GB1P7	7.10

Table 23.6: Miniature relays with low level contacts, with LED without Push Button (sold in lots of 10)

Number and type of contacts - Thermal current (Ith)		
4 C/O - 3 A Res.		
Coil Voltage	Catalog Number	\$ Price ea.
12 Vdc	RXM4GB3JD	7.50
24 Vdc	RXM4GB3BD	7.50
48 Vdc	RXM4GB3ED	7.50
110 Vdc	RXM4GB3FD	7.50
125 Vdc	—	—
24 Vac	RXM4GB3B7	7.50
48 Vac	RXM4GB3E7	7.50
120 Vac	RXM4GB3F7	7.50
230 Vac	RXM4GB3P7	7.50

Table 23.5: Miniature relays with low level contacts, with LED (sold in lots of 10)

Number and type of contacts - Thermal current (Ith)		
4 C/O - 3 A Res.		
Coil Voltage	Catalog Number	\$ Price ea.
12 Vdc	RXM4GB2JD	8.10
24 Vdc	RXM4GB2BD	8.10
48 Vdc	RXM4GB2ED	8.10
110 Vdc	RXM4GB2FD	8.10
24 Vac	RXM4GB2B7	8.10
48 Vac	RXM4GB2E7	8.10
120 Vac	RXM4GB2F7	8.10
230 Vac	RXM4GB2P7	8.10
240 Vac	RXM4GB2U7	8.10

Approvals for Relays:



File CCN ▲ E164862 NLDX, NLDX7



File CCN E164862 NLDX2, NLDX8



File 230765 Class 3211 07



IEC 61810-1 RoHS Compliant

▲ When used with the appropriate socket.

For sockets and accessories, see page 23-3



RXM4GB2F7



RXZE2M114M with
Relay RXM4AB2P7TQ

Table 23.7: Miniature relays (sold in lots of 100)

Coil Voltage	Number and type of contacts - Thermal current (Ith)			
	2 C/O - 12 A Res.		4 C/O - 8 A Res.	
	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.
Without LED				
12 Vdc	—	—	RXM4AB1JDTQ	7.10
24 Vdc	RXM2AB1BDTQ	6.30	RXM4AB1BDTQ	7.10
48 Vdc	—	—	RXM4AB1EDTQ	7.10
110 Vdc	—	—	RXM4AB1FDTQ	7.10
220 Vdc	—	—	RXM4AB1MDTQ	7.10
24 Vac	RXM2AB1B7TQ	6.30	RXM4AB1B7TQ	7.10
48 Vac	—	—	RXM4AB1E7TQ	7.10
120 Vac	RXM2AB1F7TQ	6.30	RXM4AB1F7TQ	7.10
230 Vac	RXM2AB1P7TQ	6.30	RXM4AB1P7TQ	7.10
With LED				
24 Vdc	—	—	RXM4AB2BDTQ	8.10
24 Vac	RXM2AB2B7TQ	7.40	RXM4AB2B7TQ	8.10
230 Vac	RXM2AB2P7TQ	7.40	RXM4AB2P7TQ	8.10

Table 23.8: Miniature relays with LED without Push Button (sold in lots of 100)

Coil Voltage	Number and type of contacts - Thermal current (Ith)			
	2 C/O - 12 A Res.		4 C/O - 8 A Res.	
	Catalog Number	\$ Price ea.	Catalog Number	\$ Price ea.
24 Vdc	RXM2AB3BDTQ	6.80	RXM4AB3BDTQ	7.50
24 Vac	RXM2AB3B7TQ	6.80	RXM4AB3B7TQ	7.50
230 Vac	RXM2AB3P7TQ	6.80	RXM4AB3P7TQ	7.50

Table 23.9: Sockets (sold in lots of 10)

Contact terminal arrangement	Connection	Relay type	Catalog Number	\$ Price ea.
Mixed	Screw clamp terminals	RXM2*****▲ RXM4*****▲	RXZE2M114 ■	5.90
	Box lug connector	RXM2***** RXM4*****	RXZE2M114M ■	5.90
Separate	Box lug connector	RXM2*****	RXZE2S108M ◆	5.90
		RXM3*****	RXZE2S111M ■	5.90
		RXM4*****	RXZE2S114M ■	5.90

▲ When mounting relay RXM2***** on socket RXZE2M****, the thermal current must not exceed 10 A.

■ Thermal current Ith: 10 A

◆ Thermal current Ith: 12 A



RXZE2S114M with relay
RXM4AB2F7TQ

Table 23.10: Protection modules (sold in lots of 20)

Description	Voltage	For use with	Catalog Number	\$ Price ea.
Diode	6–250 Vdc	All sockets	RXM040W	2.30
RC circuit	24–60 Vac	All sockets	RXM041BN7	2.30
	110–240 Vac	All sockets	RXM041FU7	2.30
Varistor	6–24 Vac/Vdc	All sockets	RXM021RB	2.30
	24–60 Vac/Vdc	All sockets	RXM021BN	2.30
	110–240 Vac/Vdc	All sockets	RXM021FP	2.30

Table 23.11: Accessories (sold in lots of 10)

Description	For use with	Catalog Number	\$ Price ea.
Metal hold-down clip	All sockets	RXZ400	.57
Plastic hold-down clip	All sockets	RXZR335	.57
Bus jumper, 2-pole (Ith: 5 A)	All sockets with separate contacts	RXZS2	.84
Mounting adapter for DIN rail	All relays	RXZE2DA	.84
Mounting adapter for mounting directly to a panel	All relays	RXZE2FA	.57
Clip-in markers	All relays (sheet of 108 markers)	RXZL520	.05
	All sockets except RXZE2M114	RXZL420	.05



RXM041BN7



RXZ400

Approvals for Sockets:



File CCN E172326
SWIV2, SWIV8

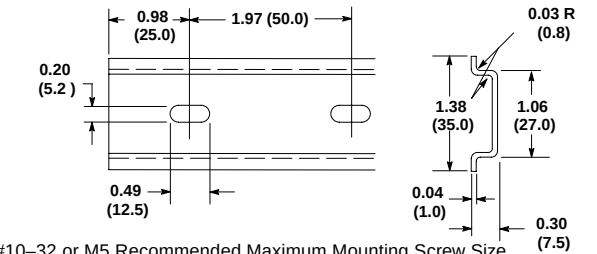
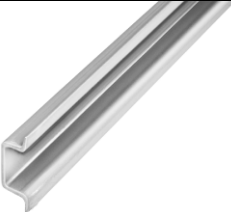
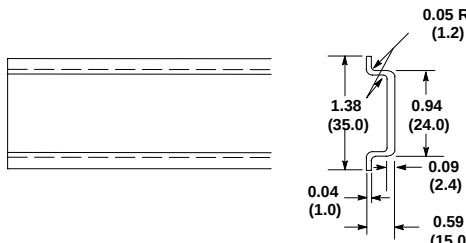
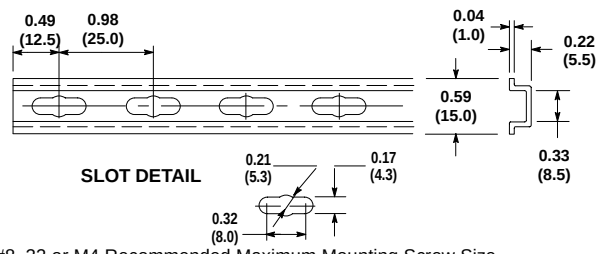
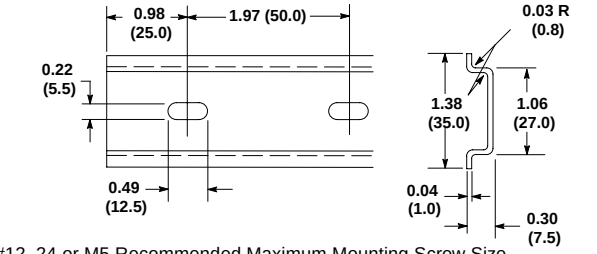
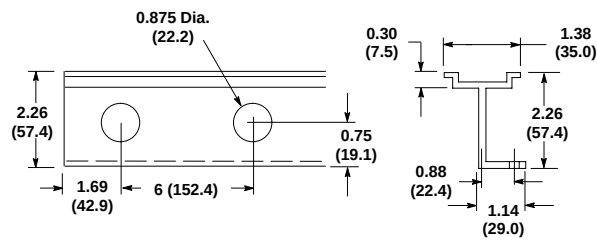
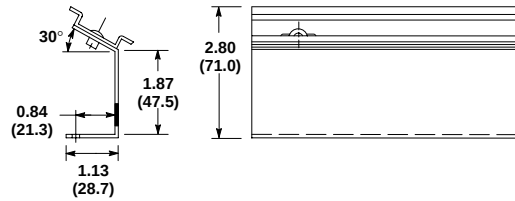


File 230765
Class 3211 07



IEC 61810-1 RoHS
Compliant

DIN Mounting Rails

Item	Description	Pcs./Pkg.	Dimensions ❶
199-DR1	 Symmetrical Rail 35 mm x 7.5 mm 3.28' (1 m) long Zinc-Plated, Yellow Chromated Steel EN50022 DIN #3	10	 #10–32 or M5 Recommended Maximum Mounting Screw Size
199-DR4	 Heavy Duty Symmetrical Rail 35 mm x 15 mm 3.28' (1 m) long Zinc-Plated, Yellow Chromated Steel EN50022 DIN #3	5	
1492-DR3	 Mini 15 mm x 5.5 mm Rail 3.28' (1 m) long Zinc-Plated, Yellow Chromated Steel EN50045 DIN #2	5	 SLOT DETAIL #8–32 or M4 Recommended Maximum Mounting Screw Size
1492-DR5	 Symmetrical Rail 35 mm x 7.5 mm 3.28' (1 m) long Copper-Free Aluminum EN50022 For 1492 Terminal Blocks Only DIN #3	10	 #12–24 or M5 Recommended Maximum Mounting Screw Size
1492-DR6 ❷	 Symmetrical Rail 35 mm x 7.5 mm 2.26" (57.4 mm) high 3.28' (1 m) long Copper-Free Aluminum For 1492 Terminal Blocks Only DIN #3	2	 Wire insulator plug for wire access through rail — use Heyco
1492-DR7 ❷	 Symmetrical Rail 35 mm x 7.5 mm 2.80" (71.0 mm) high 3.28' (1 m) long Angled 30° Zinc-Plated, Chromated Steel DIN #3	2	 For mounting rail details, see Cat. No. 199-DR1

- ❶ Dimensions shown in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.
 ❷ 0.218" (5.5 mm) x 0.50" (12.7 mm) slotted mounting holes every 3" (76.2 mm) starting 1.69" (42.9 mm) from end.

Screw Connection Terminal Blocks

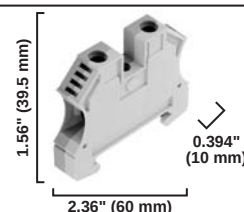
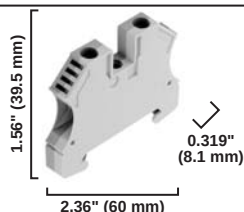
Standard Feed-Through Blocks, Continued

1492-J10					1492-J16					1492-J35				
Dimensions are not intended to be used for manufacturing purposes. Note: Height dimension is measured from top of rail to top of terminal block.														
Specifications	Feed-Through Terminal Block				Feed-Through Terminal Block				Feed-Through Terminal Block					
Certifications		CSA	IEC	ATEX		CSA	IEC	ATEX		CSA	IEC	ATEX		
Voltage Rating	600V AC/DC		1000V AC/DC	550V AC/DC	600V AC/DC		1000V AC/DC	690V AC/DC	1000V AC/DC	600V AC/DC	1000V AC/DC	690V AC/DC		
Maximum Current	65 A	50 A	57 A	50 A	85 A		76 A	66 A	150 A	120 A	125 A	109 A		
Wire Range (Rated Cross Section)	#18...6 AWG		10 mm ²	10 mm ² (#16... 8 AWG)	#18... 6 AWG	#18... 4 AWG	16 mm ²	16 mm ² (#16... 6 AWG)	#12... 1/0 AWG	#12... 2 AWG	35 mm ²	35 mm ² (#14... 2 AWG)		
Wire Strip Length	0.47 in. (12 mm)				0.63 in. (16 mm)				0.70 in. (18 mm)					
Recommended Tightening Torque	20.4 lb•in. (2.3 N•m)				35.0 lb•in. (4.0 N•m)				51.0 lb•in. (5.8 N•m)					
Density	30 pcs/ft (100 pcs/m)				25 pcs/ft (83 pcs/m)				19 pcs/ft (62 pcs/m)					
Housing Temperature Range	-58...+248 °F (-50...+120 °C)				-58...+248 °F (-50...+120 °C)				-58...+248 °F (-50...+120 °C)					
Short-Circuit Current Rating	See page 12-43													
Terminal Blocks	Cat. No.			Pkg Qty.	Cat. No.			Pkg Qty.	Cat. No.			Pkg Qty.		
Color:	Grey	1492-J10		50	1492-J16			50	1492-J35			40		
	Red	1492-J10-RE		50	1492-J16-RE			50	—			—		
	Blue	1492-J10-B		50	1492-J16-B			50	1492-J35-B			40		
	Black	1492-J10-BL		50	1492-J16-BL			50	—			—		
	Green	1492-J10-G		50	1492-J16-G			50	—			—		
	Yellow	1492-J10-Y		50	1492-J16-Y			50	1492-J35-Y			40		
	Orange	1492-J10-OR		50	1492-J16-OR			50	—			—		
	Brown	1492-J10-BR		50	1492-J16-BR			50	—			—		
	White	1492-J10-W		50	1492-J16-W			50	—			—		
Accessories	Cat. No.			Pkg Qty.	Cat. No.			Pkg Qty.	Cat. No.			Pkg Qty.		
Mounting Rails:														
1 m Symmetrical DIN (Steel)	199-DR1			10	199-DR1			10	199-DR1			10		
1 m Symmetrical Heavy Duty DIN (Steel, unslotted)	199-DR4			5	199-DR4			5	199-DR4			5		
1 m Symmetrical DIN (Aluminum)	1492-DR5			10	1492-DR5			10	1492-DR5			10		
1 m Hi-Rise Sym. DIN (Aluminum)	1492-DR6			2	1492-DR6			2	1492-DR6			2		
1 m Angled Hi-Rise Sym. DIN (Steel)	1492-DR7			2	1492-DR7			2	1492-DR7			2		
1 m Symmetrical Heavy Duty DIN (Copper, unslotted)	1492-DR8			5	1492-DR8			5	1492-DR8			5		
1 m Symmetrical Heavy Duty DIN (Steel)	1492-DR9			5	1492-DR9			5	1492-DR9			5		
End Barriers	Grey	1492-EBJ3		50	1492-EBJ16			20	1492-EBJ16			20		
	Blue	1492-EBJ3-B		50	1492-EBJ16-B			20	1492-EBJ16-B			20		
	Yellow	1492-EBJ3-Y		50	1492-EBJ16-Y			20	1492-EBJ16-Y			20		
End Anchors and Retainers:														
Screwless End Retainer	1492-ERL35			20	—			—	—			—		
DIN Rail — Normal Duty	1492-EAJ35			100	—			—	—			—		
DIN Rail — Heavy Duty	1492-EAHJ35			50	1492-EAHJ35			50	1492-EAHJ35			50		
Jumpers:														
Screw Center Jumper — 10-pole	1492-CJJ10-10			20	1492-CJJ12-10			10	1492-CJJ16-10			10		
Screw Center Jumper — 4-pole	1492-CJJ10-4			50	1492-CJJ12-4			20	1492-CJJ16-4			20		
Screw Center Jumper — 3-pole	1492-CJJ10-3			50	1492-CJJ12-3			20	1492-CJJ16-3			20		
Screw Center Jumper — 2-pole	1492-CJJ10-2			50	1492-CJJ12-2			20	1492-CJJ16-2			20		
Screw Type Jumper Notching Tool	1492-T1			1	1492-T1			1	1492-T1			1		
Other Accessories:														
Partition Plate	1492-EBJ16			20	1492-PPJD3			20	1492-PPJD3			20		
Test Plug Socket	1492-TPS23L			50	1492-TPS4L			50	1492-TPS4L			50		
Test Plug	1492-TP23			20	1492-TP40			20	1492-TP40			20		
Electrical Warning Plate	1492-EWPJ8			50	1492-EWPJ12			50	1492-EWPJ12			50		
Group Marking Carrier	1492-GM35			25	1492-GM35			25	1492-GM35			25		
Marking Systems:														
Snap-in marker cards	1492-M7X12 (108/card)			5	1492-M7X12 (108/card)			5	1492-M7X12 (108/card)			5		
Snap-in marker cards	1492-M5X5 (200/card)			5	1492-M5X5 (200 card)			5	1492-M5X5 (200/card)			5		

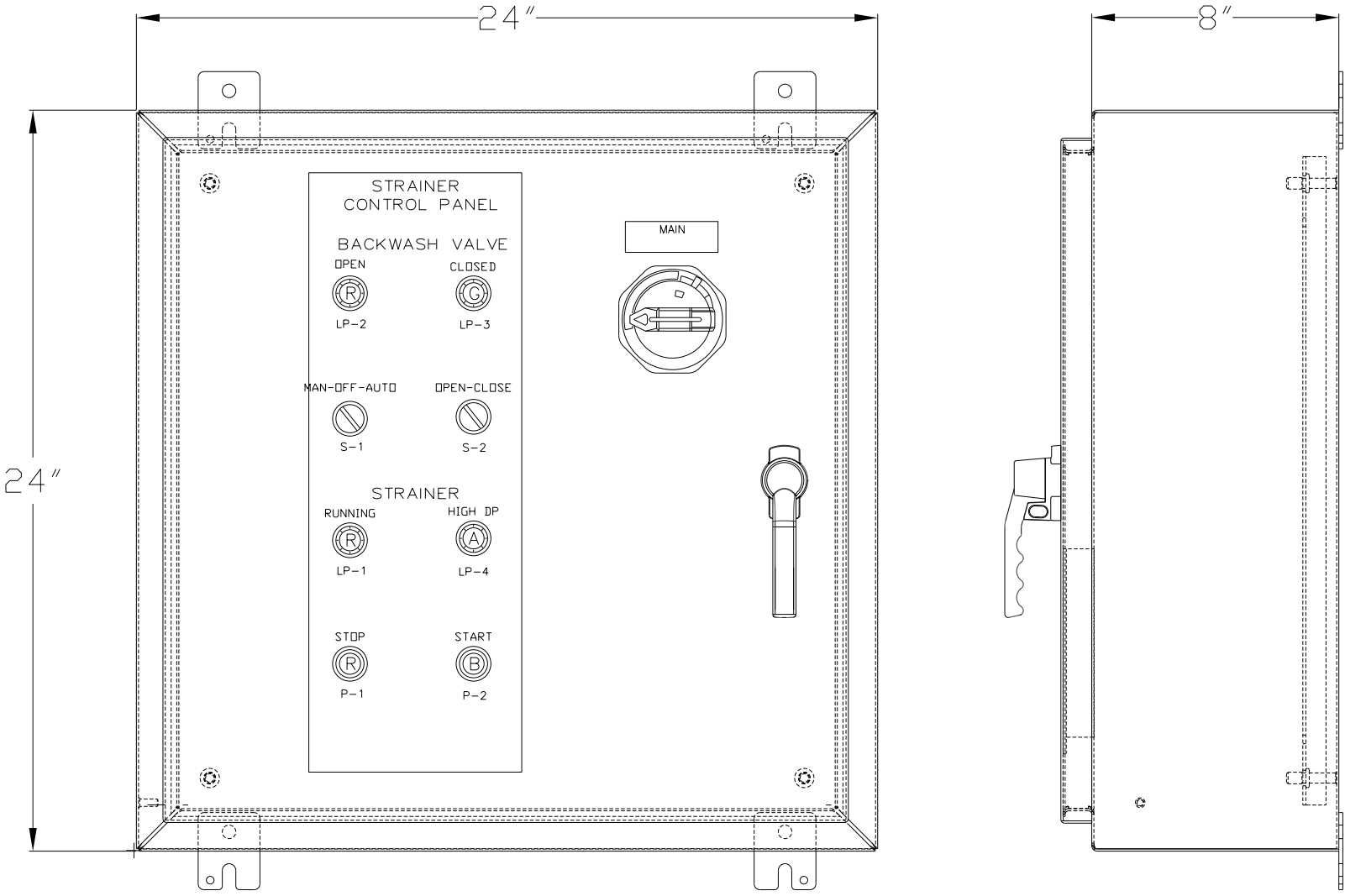
1492-JG6

1492-JG10

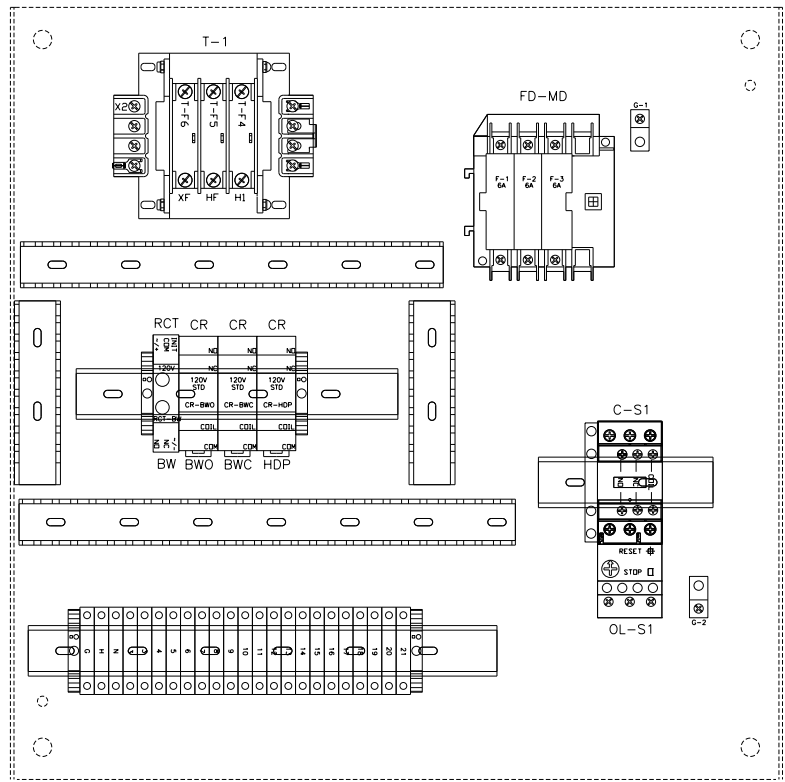
Dimensions are not intended to be used for manufacturing purposes.
Note: Height dimension is measured from top of rail to top of terminal block.



Specifications	Feed-Through Ground Block				Feed-Through Ground Block			
Certifications		CSA	IEC	ATEX		CSA	IEC	ATEX
Voltage Rating	—	—	—	—	—	—	—	—
Maximum Current	Grounding				Grounding			
Wire Range (Rated Cross Section)	#22...8 AWG	6 mm ²	6 mm ² (#20...10 AWG)		#16...6 AWG	10 mm ²	10 mm ² (#16...8 AWG)	
Wire Strip Length	0.47 in. (12 mm)				0.47 in. (12 mm)			
Recommended Tightening Torque	14.2 lb•in. (1.6 N•m)				20.4 lb•in. (2.3 N•m)			
Mounting Torque — Center Screw	4.4...8.9 lb•in. (0.5...1.0 N•m)				4.4...8.9 lb•in. (0.5...1.0 N•m)			
Density	37 pcs/ft (123 pcs/m)				30 pcs/ft (100 pcs/m)			
Housing Temperature Range	-58...+248 °F (-50...+120 °C)				-58...+248 °F (-50...+120 °C)			
Short-Circuit Current Rating	See page 12-43							
Terminal Blocks	Cat. No.			Pkg Qty.	Cat. No.			Pkg Qty.
Color: Green/Yellow	1492-JG6			50	1492-JG10			50
Accessories	Cat. No.			Pkg Qty.	Cat. No.			Pkg Qty.
Mounting Rails:								
1 m Symmetrical DIN (Steel)	199-DR1			10	199-DR1			10
1 m Symmetrical DIN (Aluminum)	1492-DR5			10	1492-DR5			10
1 m Hi-Rise Sym. DIN (Aluminum)	1492-DR6			2	1492-DR6			2
1 m Angled Hi-Rise Sym. DIN (Steel)	1492-DR7			2	1492-DR7			2
End Anchors and End Retainers:								
Screwless End Retainer	1492-ERL35			20	1492-ERL35			20
DIN Rail — Normal Duty	1492-EAJ35			100	1492-EAJ35			100
DIN Rail — Heavy Duty	1492-EAHJ35			50	1492-EAHJ35			50
Other Accessories:								
Group Marking Carrier	1492-GM35			25	1492-GM35			25
Marking Systems:								
Snap-in marker cards	1492-MR8X12 (84/card)			5	1492-M7X12 (108/card)			5
Snap-in marker cards	1492-M8X5 (160/card)			5	1492-M8X5 (160/card)			5



NEMA 4X 304SS WHITE
POWDER COATED ENCLOSURE



PANEL TO BE UL LISTED (usUL, cUL)
INDUSTRIAL CONTROL PANEL
UL508A FILE NO E109698

NOTES:
1) CONTROL PANEL
TO BE UL LISTED

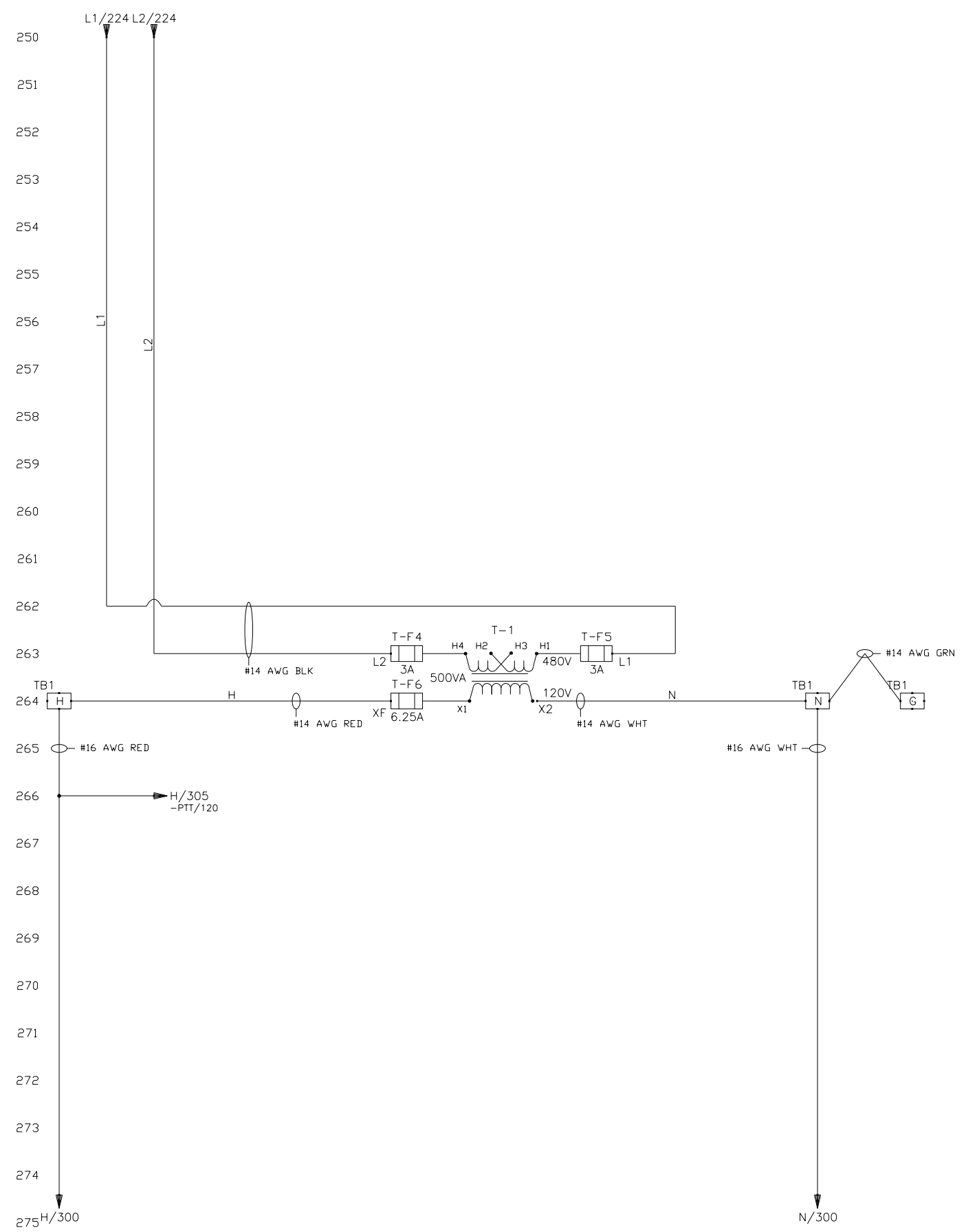
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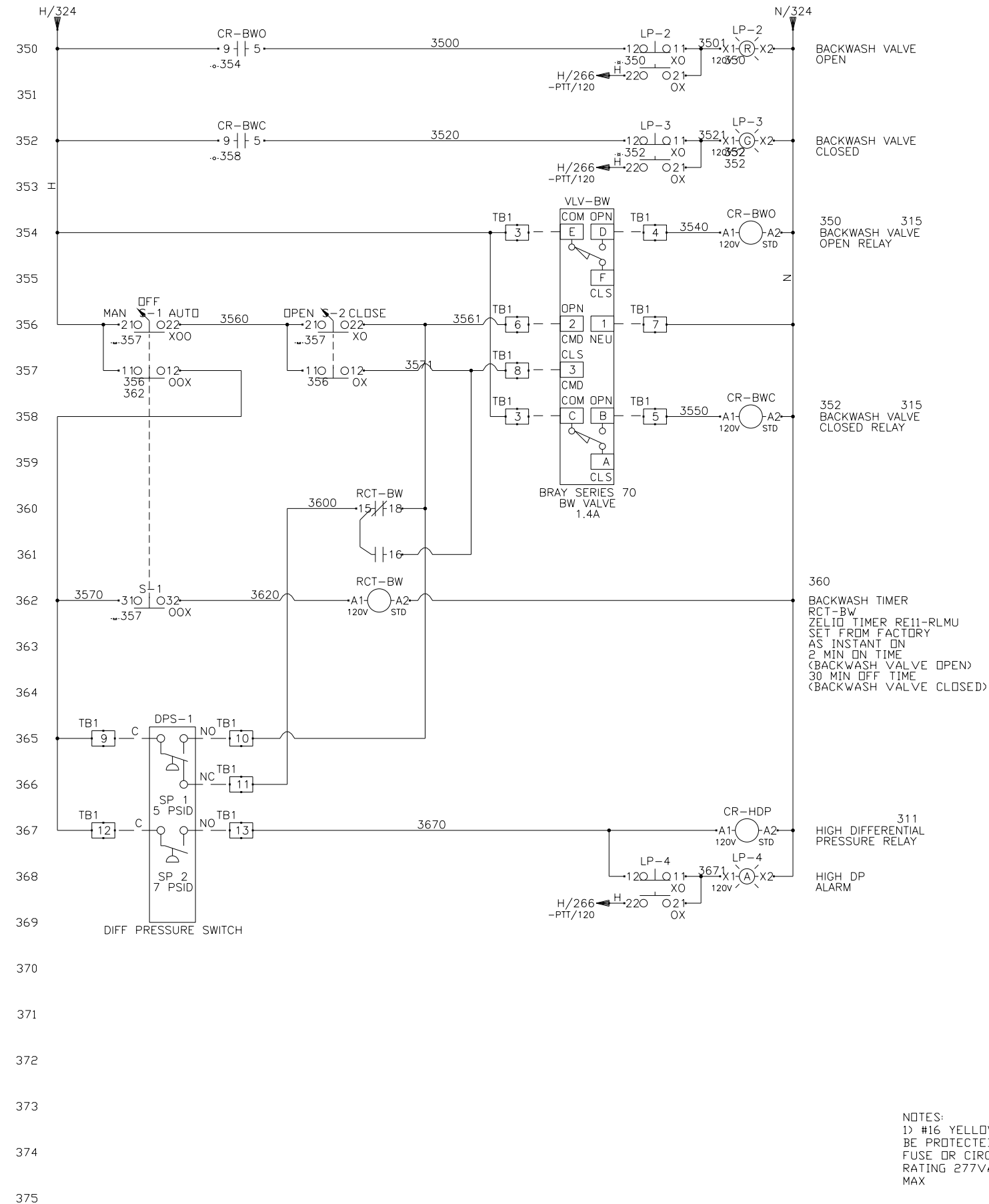
YOUR COMPANY
YOUR ADDRESS
YOUR PHONE NO.
YOUR WEBSITE

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CHECKED CK	DATE 2/13	

ENCLOSURE LAYOUT WATER FILTRATION SYSTEM STRAINER CONTROL PANEL	SHEET: 1 OF 4
DRAWING SET: 2013-252 STRAINER PANEL	



 YOUR COMPANY YOUR ADDRESS YOUR PHONE NO. YOUR WEBSITE	DESIGNED JW	DATE 2/13	FOR: YOUR CUSTOMER	POWER SCHEMATIC WATER FILTRATION SYSTEM STRAINER CONTROL PANEL	
	DRAWN JW	DATE 2/13	THIS DRAWING, AND ALL REPRESENTED DATA, ARE THE PROPERTY OF THE NAMED COMPANY IN THE TITLE BLOCK. THIS DRAWING SHALL NOT BE REPRODUCED, COPIED, OR DISCLOSED EXCEPT FOR MAINTENANCE PURPOSES BY THE USING CUSTOMER.	DRAWING SET: 2013-252 STRAINER PANEL	
	CHECKED CK	DATE 2/13		SHEET: 2 OF 4	

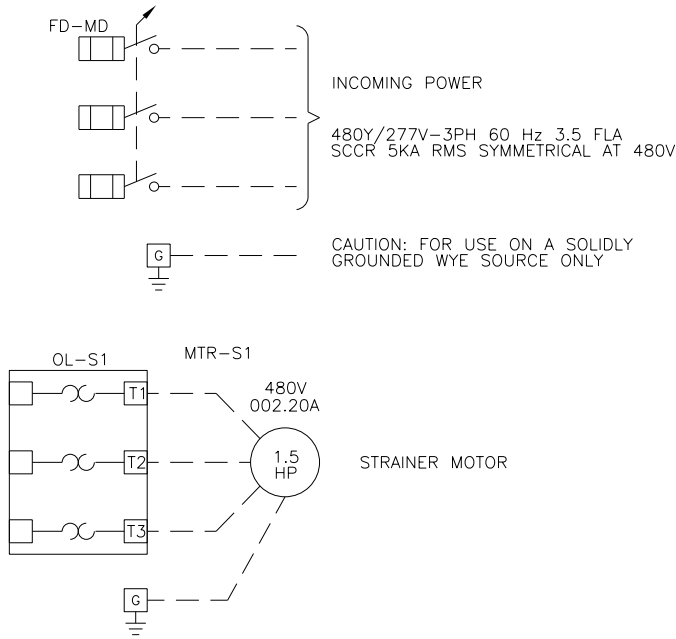


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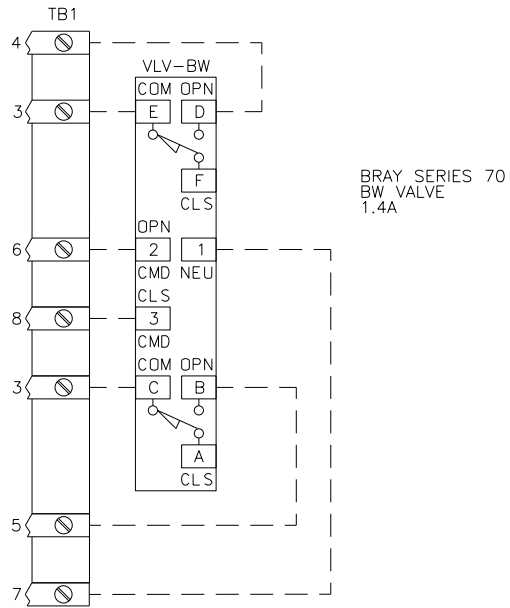
 YOUR COMPANY YOUR ADDRESS YOUR PHONE NO. YOUR WEBSITE	DESIGNED JW	DATE 2/13	FOR: YOUR CUSTOMER	CONTROL SCHEMATIC WATER FILTRATION SYSTEM STRAINER CONTROL PANEL	
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	CHECKED CK	DATE 2/13		SHEET: 3 OF 4	

FIELD CONNECTIONS

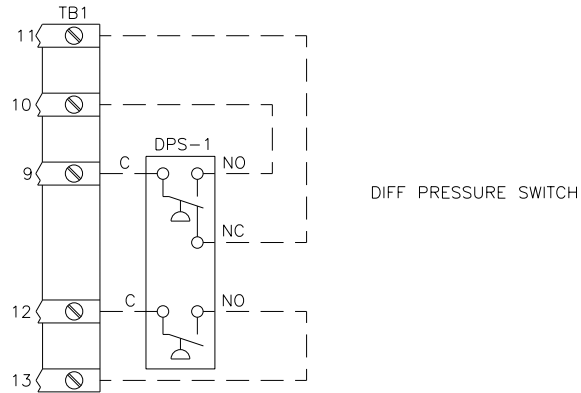
POWER CONNECTIONS



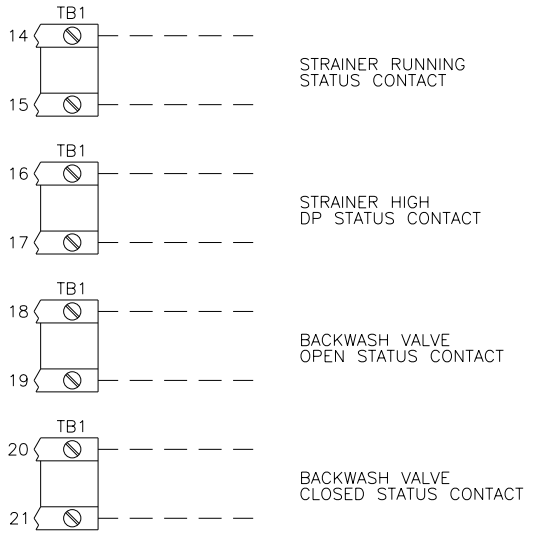
VALVE CONNECTIONS



DP SWITCH CONNECTIONS



SCADA CONNECTIONS



REV	DATE	PURPOSE:	BY	CHKD



YOUR COMPANY
YOUR ADDRESS
YOUR PHONE NO.
YOUR WEBSITE

DESIGNED JW	DATE 2/13	FOR: YOUR CUSTOMER	FIELD CONNECTIONS WATER FILTRATION SYSTEM STRAINER CONTROL PANEL	
DRAWN JW	DATE 2/13	THIS DRAWING, AND ALL REPRESENTED DATA, ARE THE PROPERTY OF THE NAMED COMPANY IN THE TITLE BLOCK. THIS DRAWING SHALL NOT BE REPRODUCED, COPIED, OR DISCLOSED EXCEPT FOR MAINTENANCE PURPOSES BY THE USING CUSTOMER.	DRAWING SET: 2013-252 STRAINER PANEL	
CHECKED CK	DATE 2/13		SHEET: 4 OF 4	

Your Company

Project Name: Water Filtration System

Job No: 2013-252

Bill of Material

Panel Name: Model A Strainer Control Panel

Typical of 1

Panel(s)

Device ID	Qty	Mfg	Part No	Description
ENCL-1	1	HO	A-24H2408-SS-LP3PTW	ENCL,NEMA 4X,304SS,24X24X08,3 PT LATCH,(WHITE)
BP-1	1	HO	A-24P24	BACKPANEL,24X24
MNT-1	1	HO	C-MFK	MOUNTING KIT,CONCEPT,(4) B-STEEL/ZINC FEET
FD-1	1	SD	9421-NC2	DISC,SWITCH,IEC,FUSED,CC STYLE,480V,030A
FD-1	1	SD	9421-NW2	DISC,SWITCH,IEC,OPER HNDL,THRU DOOR
FD-1	1	SD	9421-NS16	DISC,SWITCH,IEC,SHAFT,THRU DOOR,10IN
F-1	3	BUSS	LP-CC-6	FUSE,600V,200KAIC,06A,13/32X1-1/2,TD
T-1	1	SD	9070TF-500-D1	XFMR,OPEN,1 PH,WITH FB,240/480V-120V,0500VA
T-1	2	BUSS	FNQ-R3	FUSE,600V,200KAIC,03.0A,13/32X1-1/2,TD
T-1	1	BUSS	FNM-6-1/4	FUSE,250V,10KAIC,06.25A,13/32X1-1/2,TD
C-S1	1	SD	LC1-D09-G7	CONTACTOR,IEC,D LINE,600V,009A,1NO,1NC,120V
AUX-S1	1	SD	LAD-8N20	AUX CONT,SIDE,2 NO,IEC,D09-D150
OL-S1	1	SD	LRD-06	OL RELAY,IEC,D LINE,001.0-1.6A,1NO,1NC,D09-D32
S-2	1	SD	ZB5-AJ2	OPER,SEL,2 POS,MAINT
LP-1, LP-2, LP-3, LP-4, P-2, S-1, S-2	8	SD	ZBE-1015	CONTACT,1 NO,SPRING CLAMP
LP-1, LP-2, LP-3, LP-4, P-1, S-2	6	SD	ZBE-1025	CONTACT,1 NC,SPRING CLAMP
LP-1, LP-2, LP-3, LP-4, P-1, P-2, S-1, S-2	8	SD	ZB5-AZ009	MNTG COLLAR ONLY
S-1	1	SD	ZB5-AJ3	OPER,SEL,3 POS,MAINT
P-1	1	SD	ZB5-AL4	OPER,PB,EXT,RED
P-2	1	SD	ZB5-AA2	OPER,PB,FLUSH,BLK
LP-1, LP-2	2	SD	ZB5-AW343	OPER,PB,ILLUM,LED TYPE,FLUSH,RED
LP-1, LP-2	2	SD	ZBV-G45	LIGHT MODULE,LED,RED,120V,SPRING CLAMP
LP-3	1	SD	ZBV-G35	LIGHT MODULE,LED,GRN,120V,SPRING CLAMP
LP-3	1	SD	ZB5-AW333	OPER,PB,ILLUM,LED TYPE,FLUSH,GRN
LP-4	1	SD	ZBV-G55	LIGHT MODULE,LED,AMB,120V,SPRING CLAMP
LP-4	1	SD	ZB5-AW353	OPER,PB,ILLUM,LED TYPE,FLUSH,AMB
RCT-RCT	1	SD	RE11-RLMU	TIMER,RPT CYC,ASYN,0.1S-100H.1PDT,08A,DIN MNT,24-240V
CR-BWC, CR-HDP, Unassigned	3	SD	RXZ-E2M114-M	SOCKET,RX,4PDT,240V,06A,14 BL,DIN MNT
CR-BWC, CR-HDP, Unassigned	3	SD	RXM-4AB2-F7	RELAY,RXM,4PDT,240V,06A,W/IND,MAN OP,120V,14 BL
TB-	1	AB	199-DR1	ACC,DIN RAIL,3FT

Your Company

Project Name: RWater Filtration System

Job No: 2013-252

Bill of Material

TB-	20	AB	1492-J10	J 1 TIER,TERMINAL,0.39 IN
TB-	2	AB	1492-JG10	J 1 TIER,TERMINAL,0.39 IN,GROUND
TB-	1	AB	1492-EBJ3	J 1 TIER,END BARRIER,FOR J3/J4/J10
TB-	4	AB	1492-EAJ35	ACC,END ANCHOR