



An ILSCO[®] Company

SURGE PROTECTIVE DEVICES PRODUCT CATALOG

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*Designed to Protect
Built to Last*



An ILSCO® Company

ABOUT SSI



Since the beginning, SSI set a course to be in the top tier of manufacturing corporations in the Surge Protective Device Industry. Stemming from a core cluster of experienced and dedicated SPD industry professionals, our devotion to hard-work, performance, design ingenuity, and quality control has paved the way for the addition of qualified industry professionals, who have brought with them the resources to ensure continued growth in revenue and market share.

OUR PRODUCTS

By specializing only in the manufacture of Surge Protective Devices, SSI is able to fully focus its energies into creating the highest quality lines of products. Dedicating all research and development efforts into one sector of the power quality industry has enabled SSI to quickly build market share, providing quality products the market demands.

SSI manufactures multiple lines of SPDs for both AC and DC power systems as well as data and telecommunication systems from 5 to 7200 volts. With application experience across a full spectrum of industrial, commercial and government sectors; SSI has the capability to address the power quality issues arising in today's increasingly technological environments.

OUR DEDICATION

Throughout the past two decades, SSI and its affiliated companies have impacted the power quality industry on

a global scale. Our international footprint has expanded to six continents, delivering quality products and services to every client, regardless of size.

OUR SERVICES

In addition to our valued power quality product lines, SSI works hand-in-hand with its clients throughout each step of the client-vendor relationship. From carefully calibrated site surveys, intricately designed systems ensuring full-facility protection, routine system maintenance, and consulting services; properly trained and qualified service technicians ensure that our clients are provided for at every turn.

OUR MISSION

Our mission remains focused on raising the standards for the SPD industry. Our team's shared positive ethical values, honesty and integrity ensures each of our clients' needs are met with only superior products, unsurpassed service and support, and in-depth technical expertise in both SPD and power quality services.

SSI is Your Surge Protection Solution!
WORLD LEADER IN SURGE PROTECTION FOR THE
DIGITAL AGE... AND BEYOND

FREQUENCY RESPONSIVE CIRCUITRY™ (ADVANCED FILTERING)

Our Frequency Responsive Circuitry™, also referred to as Advanced Filtering, catches surges our competitors miss. This technology targets low level, repetitive ringing surges commonly found in building electrical systems, caused by electrical switching such as motors starting, electrical loads turning on and off, and other everyday operations. These frequent, oscillatory, ring wave surges have a cumulative damaging impact on sensitive electrical and electronic equipment. Most surge protectors are only activated when the voltage

exceeds a fixed voltage (or “clamping”) level. However, SSI’s surge protectors equipped with our Frequency Responsive Circuitry™, are specifically designed to react to these high frequency ringing surges, in order to provide you with additional defense. This provides your facility’s voltage system an “envelope of protection” for a more effective and complete response to surges.

Figure 1
Standard Surge
Protective Device

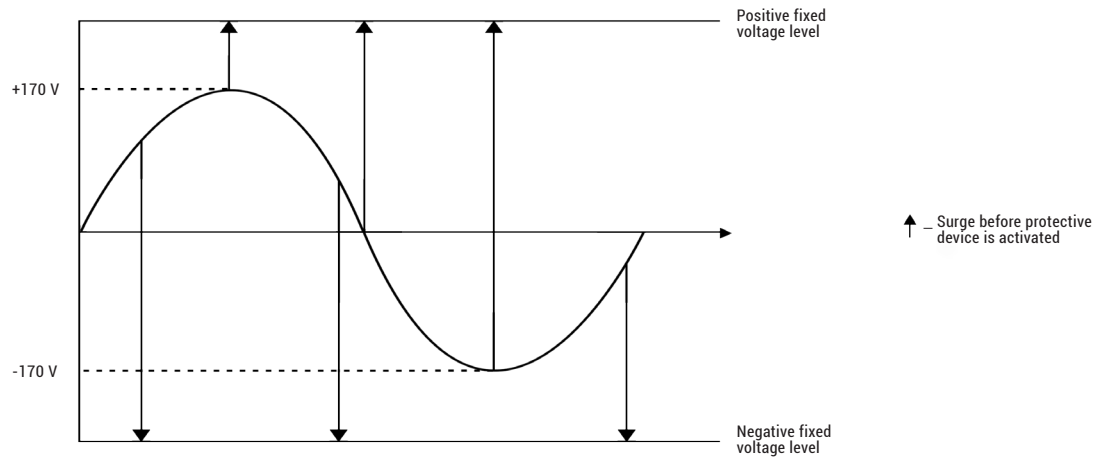
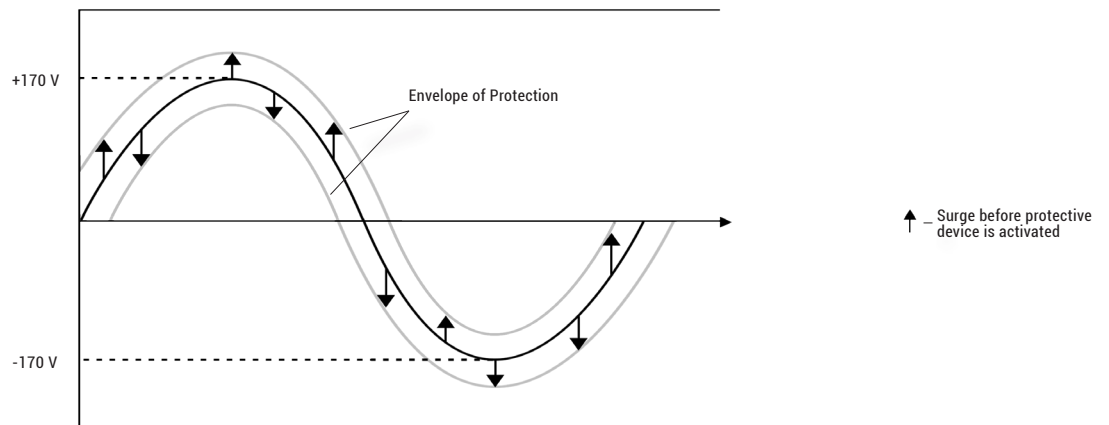


Figure 2
Surge Protective
Device with *Frequency
Responsive Circuitry™*



MODES OF PROTECTION

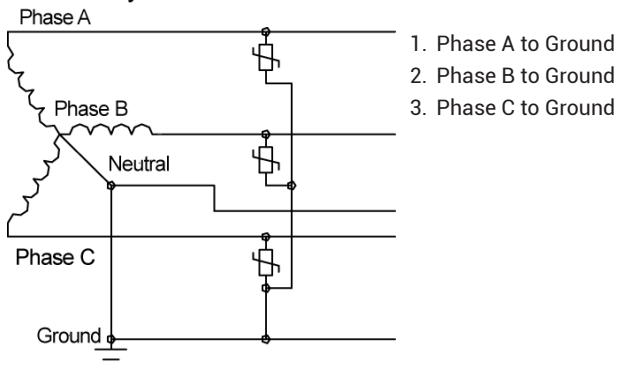
All SSI Surge Protective Devices provide true "All Mode" protection, but "All Mode" protection is not the same as "Discrete All Mode Protection". All Mode protection means that every electrical pathway passes through a protection circuit at some point along its journey. With All Mode Protection, the protection circuits can serve double duty with three protection circuits protecting up to Ten pathways in a Three Phase Wye electrical system. In contrast, with 10 Modes of Discrete All Mode Protection, all Ten electrical pathways are protected by Ten individual protection circuits. We also offer Discrete All Mode Protection for Single Phase, Split Phase, and Three Phase Delta Systems.

Do more protection circuits matter? In short, yes. The more protection circuits there are, the more surge energy

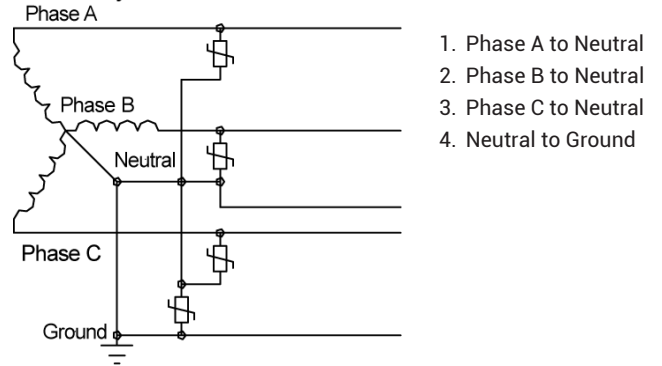
the Surge Protective Device can disperse before wearing out. An SPD with All Mode Protection and 10 Discrete Modes in a 3 Phase Wye System would last longer when subjected to the same surge events. Additionally, the more protection circuits, the better the SPD will do at reducing the rise in surge potential energy across the downstream electrical devices.

Every SSI Surge Protective Device is "All Mode." We offer Four, Seven and Ten Modes of Discrete Protection for Three Phase Wye electrical systems. Our Advantage line is the industry leader with Ten Discrete Modes of Protection for Three Phase Wye electrical systems. Our SpecPRO and Surge Tracker lines are available with your choice of either Four or Seven Modes of Discrete Protection for Three Phase Wye electrical systems.

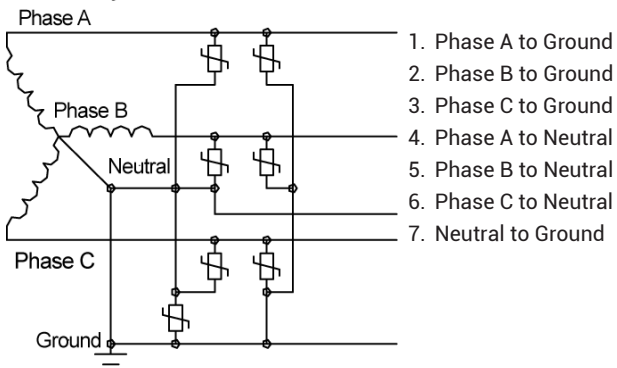
WYE SYSTEM
Only 3 Modes Protected



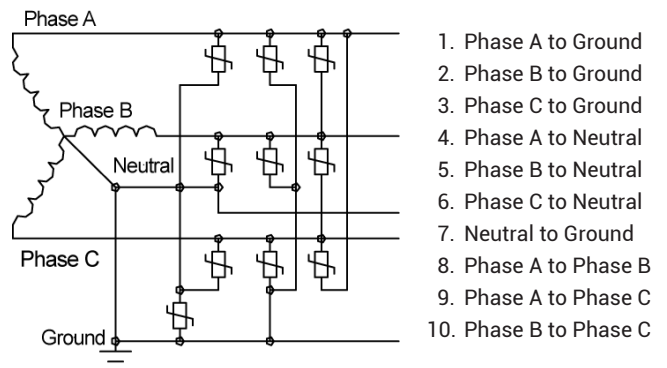
WYE SYSTEM
Only 4 Modes Protected



WYE SYSTEM
Only 7 Modes Protected



WYE SYSTEM
All 10 Modes Protected



ADVANTAGE™ Panel-Mounted Surge Protectors



Definitive Surge Protection for Commercial & Industrial Applications

SSI's Advantage™ parallel connected surge protectors (surge protective devices) are the flagship of our product line. This surge suppressor can be found protecting the mission critical systems of some of the most recognizable companies in the world. When system failure is not an option, you need the proven performance of the Advantage™ line. Designed to safeguard delicate microprocessor based electronics, our surge protective devices allow your critical systems to stay up and running, keeping your company in business while neighboring facilities (often competitors) suffer extensive damage, extended downtime and lost revenue. This is a competitive "Advantage" that is critical to your company's well-being, bottom line and future.

Industry leading let-through voltage performance Advantage™ SPDs are designed to respond fast and virtually eliminate surges, providing greater protection to downstream equipment and machinery.

Discrete All Mode Protection Advantage™ SPDs feature directly connected protection elements in "All Modes" (10 modes for 3 phase WYE circuits).

Twenty-Five Year Warranty Advantage™ SPDs are covered by a 25 year limited warranty.

ANSI/UL 1449 listed Advantage™ SPDs are designed to fit virtually any application including models that meet the Lightning Protection Standards of UL 96A and NFPA 780.

Two types of fusing Our Advantage™ SPDs incorporate two types of fusing to assure the safest, most reliable products in the industry.

Frequency Responsive Circuitry™ Our Advantage™ SPDs, when ordered with Frequency Responsive Circuitry™ filter out ringing transients, and stop mid-level, ultra-fast, nuisance surges that plague every industrial and commercial facility. These surges cause cumulative damage to printed circuit boards, frequent error codes, and downtime.

Features

- 90 kA to 900 kA Per Phase Peak Surge Current
- Standard EMI/RFI filtering
- Optional Frequency Responsive Circuitry™ removes virtually all ring wave transients
- Compact NEMA 1 enclosure is standard
- NEMA 2, 3, 3R, 4, 4X and 12 enclosures available
- 25 Year Limited Warranty
- Patented internal phase-level over-current fusing
- Component level thermal fusing
- Industry leading measured limiting voltage performance
- Circuit encapsulation provides a more rugged product with a much smaller footprint
- Nominal Discharge Current (I_n) Rating: 10 kA/20 kA
- Select 20 kA I_n for Lightning Protection Systems
- Ten Modes of Protection (3 Phase WYE Circuits)
- One Super Bright diagnostic LED per phase

CSLx \ SSLx

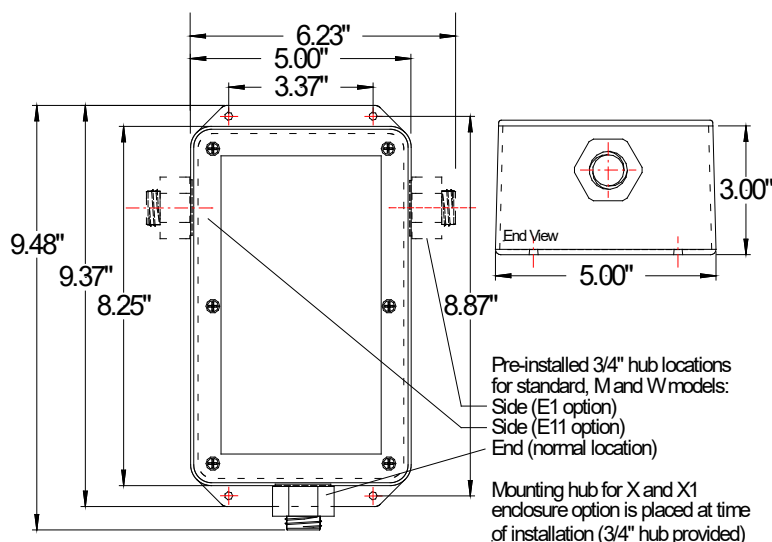
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	100 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSLx- 50-400 Hz (60 Hz nom.); CSLx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CSLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SSLx	600 V	1000 V	600 V	600 V
		CSLx	600 V	1000 V	600 V	700 V			
	120/208 V 3ØY	SSLx	600 V	1000 V	600 V	600 V			
		CSLx	600 V	1000 V	600 V	700 V			
	120/240 V High-Leg Δ	SSLx	600 V	1000 V	600 V	600 V	1000 V	1000 V	1200 V
		CSLx	600 V	1000 V	600 V	700 V	1200 V	1000 V	1200 V
	277/480 V 3ØY	SSLx	1000 V	1800 V	1200 V	1200 V			
		CSLx	1200 V	1800 V	1200 V	1200 V			
	240 V 3ØΔ	SSLx		1000 V	1200 V				
		CSLx		1000 V	1200 V				
	480 V 3ØΔ	SSLx		1800 V	1800 V				
		CSLx		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CKLx \ SKLx

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	120 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SKLx- 50-400 Hz (60 Hz nom.); CKLx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CKLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

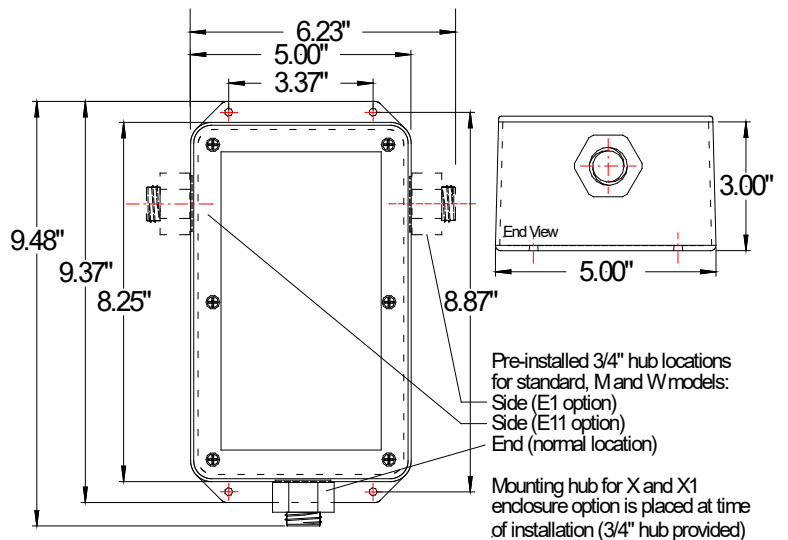
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SKLx	600 V	1000 V	600 V	600 V
CKLx	600 V	1000 V			600 V	700 V			
120/208 V 3ØY	SKLx	600 V		1000 V	600 V	600 V			
	CKLx	600 V		1000 V	600 V	700 V			
120/240 V High-Leg Δ	SKLx	600 V		1000 V	600 V	600 V	1000 V	1000 V	1200 V
	CKLx	600 V		1000 V	600 V	700 V	1200 V	1000 V	1200 V
277/480 V 3ØY	SKLx	1000 V		1800 V	1200 V	1200 V			
	CKLx	1200 V		1800 V	1200 V	1200 V			
240 V 3ØΔ	SKLx			1000 V	1200 V				
	CKLx			1000 V	1200 V				
480 V 3ØΔ	SKLx			1800 V	1800 V				
	CKLx			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CDLx \ SDLx

Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	180 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SDLx- 50-400 Hz (60 Hz nom.); CDLx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CDLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

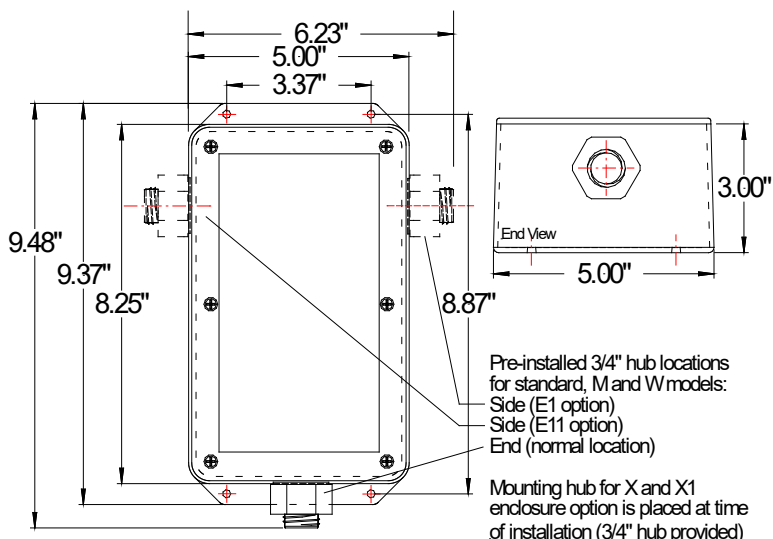
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SDLx	600 V	1000 V	600 V	600 V
CDLx	600 V	1000 V			600 V	700 V			
120/208 V 3ØY	SDLx	600 V		1000 V	600 V	600 V			
	CDLx	600 V		1000 V	600 V	700 V			
120/240 V High-Leg Δ	SDLx	600 V		1000 V	600 V	600 V	1000 V	1000 V	1200 V
	CDLx	600 V		1000 V	600 V	700 V	1200 V	1000 V	1200 V
277/480 V 3ØY	SDLx	1000 V		1800 V	1200 V	1200 V			
	CDLx	1200 V		1800 V	1200 V	1200 V			
240 V 3ØΔ	SDLx			1000 V	1200 V				
	CDLx			1000 V	1200 V				
480 V 3ØΔ	SDLx			1800 V	1800 V				
	CDLx			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSEx \ LSEx

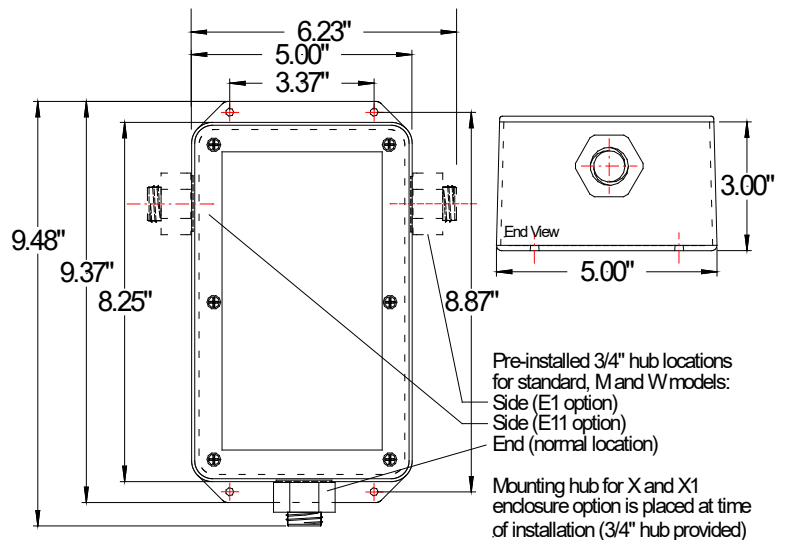
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	240 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	LSEx- 50-400 Hz (60 Hz nom.); CSEx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CSEx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	LSEx	600 V	1000 V	600 V	600 V
		CSEx	600 V	1000 V	600 V	700 V			
	120/208 V 3ØY	LSEx	600 V	1000 V	600 V	600 V			
		CSEx	600 V	1000 V	600 V	700 V			
	120/240 V High-Leg Δ	LSEx	600 V	1000 V	600 V	600 V	1000 V	1000 V	1200 V
		CSEx	600 V	1000 V	600 V	700 V	1200 V	1000 V	1200 V
	277/480 V 3ØY	LSEx	1000 V	1800 V	1200 V	1200 V			
		CSEx	1200 V	1800 V	1200 V	1200 V			
	240 V 3ØΔ	LSEx		1000 V	1200 V				
		CSEx		1000 V	1200 V				
	480 V 3ØΔ	LSEx		1800 V	1800 V				
		CSEx		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CMLx \ SMLx

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	300 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SMLx- 50-400 Hz (60 Hz nom.); CMLx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CMLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

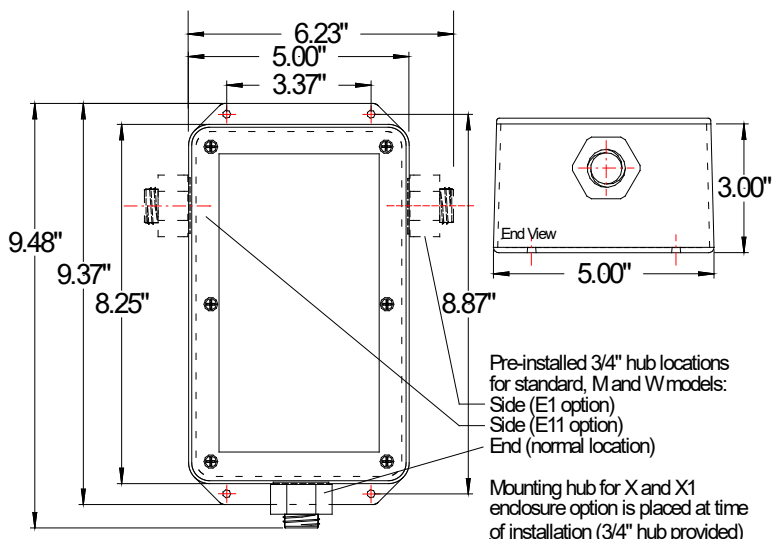
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	Voltage Protection Rating (VPR)						
			L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V			
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	Voltage Protection Rating (VPR)						
			L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split Ø	SMLx	600 V	1000 V	600 V	600 V			
		CSLx	600 V	1000 V	600 V	700 V			
	120/208 V 3ØY	SMLx	600 V	1000 V	600 V	600 V			
		CSLx	600 V	1000 V	600 V	700 V			
	120/240 V High-Leg Δ	SMLx	600 V	1000 V	600 V	600 V	1000 V	1000 V	1200 V
		CSLx	600 V	1000 V	600 V	700 V	1200 V	1000 V	1200 V
	277/480 V 3ØY	SMLx	1000 V	1800 V	1200 V	1200 V			
		CSLx	1200 V	1800 V	1200 V	1200 V			
	240 V 3ØΔ	SMLx		1000 V	1200 V				
		CSLx		1000 V	1200 V				
	480 V 3ØΔ	SMLx		1800 V	1800 V				
		CSLx		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CILx \ SILx

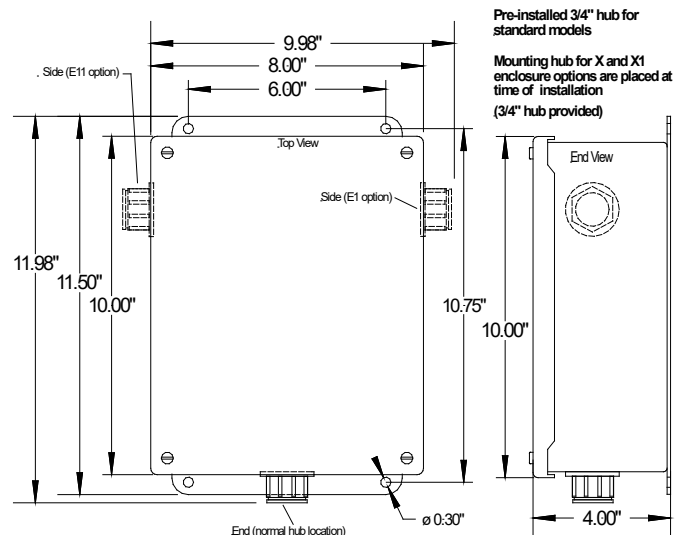
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	360 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SILxM- 50-400 Hz (60 Hz nom.); CILxM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CMLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V			
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split Ø	SILxM	600 V	1000 V	600 V	600 V			
		CILxM	600 V	1000 V	600 V	600 V			
	120/208 V 3ØY	SILxM	600 V	1000 V	600 V	600 V			
		CILxM	600 V	1000 V	600 V	600 V			
	120/240 V High-Leg Δ	SILxM	600 V	1000 V	600 V	600 V	1000 V	1000 V	1000 V
		CILxM	600 V	1000 V	600 V	600 V	1000 V	1000 V	1000 V
	277/480 V 3ØY	SILxM	900 V	1800 V	1000 V	900 V			
		CILxM	1000 V	1800 V	1000 V	1000 V			
	240 V 3ØΔ	SILxM			1000 V	1000 V			
		CILxM			1000 V	1000 V			
	480 V 3ØΔ	SILxM			1800 V	1800 V			
		CILxM			1800 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CHLx \ SHLx

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	480 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SHLx- 50-400 Hz (60 Hz nom.); CHLx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CHLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

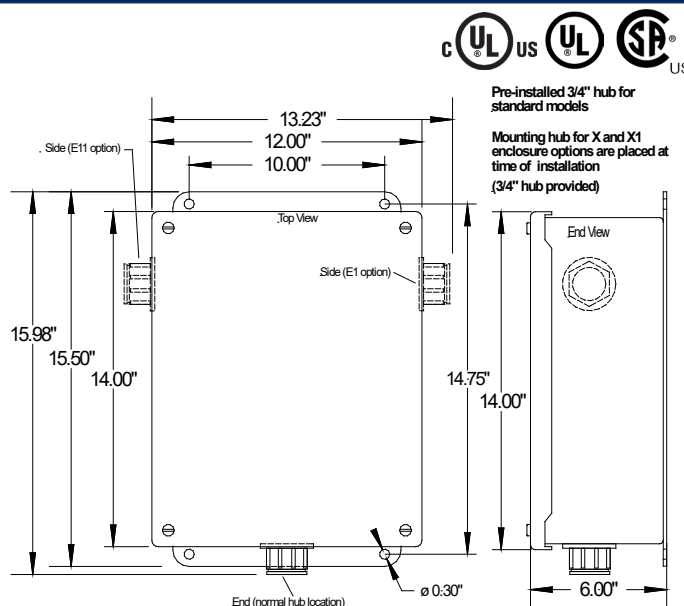
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	6	150 V	300 V	150 V	150 V			
	120/208 V 3 \emptyset Y	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	10	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SHLx	600 V	1000 V	600 V	600 V			
		CHLx	600 V	1000 V	600 V	600 V			
	120/208 V 3 \emptyset Y	SHLx	600 V	1000 V	600 V	600 V			
		CHLx	600 V	1000 V	600 V	600 V			
	120/240 V High-Leg Δ	SHLx	600 V	1000 V	600 V	600 V	900 V	1000 V	1000 V
		CHLx	600 V	1000 V	600 V	600 V	1000 V	1000 V	1000 V
	277/480 V 3 \emptyset Y	SHLx	900 V	1800 V	1000 V	900 V			
		CHLx	1000 V	1800 V	1000 V	1000 V			
	240 V 3 \emptyset Δ	SHLx		1000 V	1000 V				
		CHLx		1000 V	1000 V				
	480 V 3 \emptyset Δ	SHLx		1800 V	1800 V				
		CHLx		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CHDLx \ SHDLx

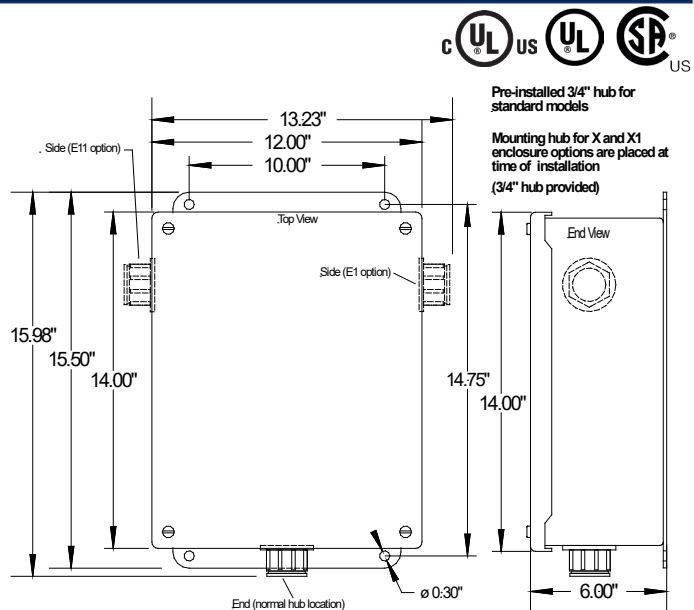
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	600 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SHDLx- 50-400 Hz (60 Hz nom.); CHDLx- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CHDLx only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	6	150 V	300 V	150 V	150 V			
	120/208 V 3 \emptyset Y	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	10	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SHDLxM	600 V	1000 V	600 V	600 V			
		CHDLxM	600 V	1000 V	600 V	700 V			
	120/208 V 3 \emptyset Y	SHDLxM	600 V	1000 V	600 V	600 V			
		CHDLxM	600 V	1000 V	600 V	700 V			
	120/240 V High-Leg Δ	SHDLxM	600 V	1000 V	600 V	600 V	900 V	1000 V	1000 V
		CHDLxM	600 V	1000 V	600 V	600 V	1000 V	1000 V	1000 V
	277/480 V 3 \emptyset Y	SHDLxM	900 V	1800 V	1000 V	900 V			
		CHDLxM	1000 V	1800 V	1000 V	1000 V			
	240 V 3 \emptyset Δ	SHDLxM			1000 V	1000 V			
		CHDLxM			1000 V	1000 V			
	480 V 3 \emptyset Δ	SHDLxM			1800 V	1800 V			
		CHDLxM			1800 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CMDLx \ SMDLx

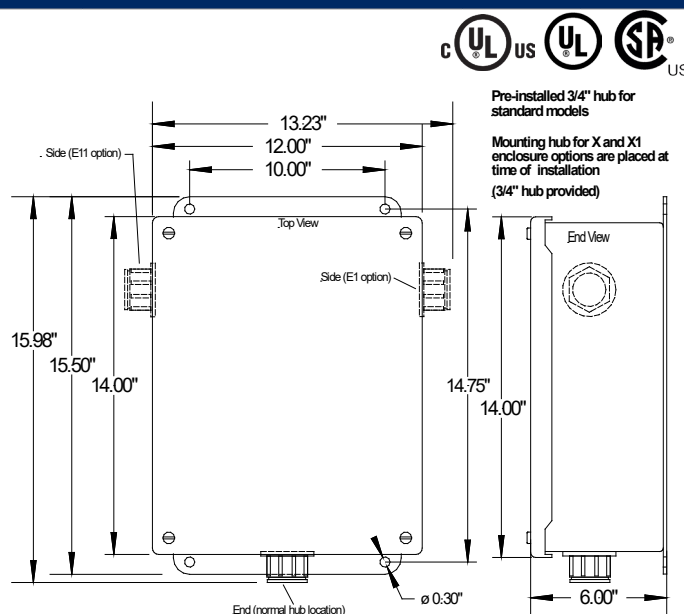
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	720 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SMDLxM- 50-400 Hz (60 Hz nom.); CMDLxM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CMDLxM only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	6	150 V	300 V	150 V	150 V
	120/208 V 3ØY	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	10	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SMDLxM	600 V	1000 V	600 V	600 V
		CMDLxM	600 V	1000 V	600 V	600 V			
	120/208 V 3ØY	SMDLxM	600 V	1000 V	600 V	600 V			
		CMDLxM	600 V	1000 V	600 V	600 V			
	120/240 V High-Leg Δ	SMDLxM	600 V	1000 V	600 V	600 V	900 V	1000 V	1000 V
		CMDLxM	600 V	1000 V	600 V	600 V	1000 V	1000 V	1000 V
	277/480 V 3ØY	SMDLxM	900 V	1800 V	1000 V	900 V			
		CMDLxM	1000 V	1800 V	1000 V	1000 V			
	240 V 3ØΔ	SMDLxM		1000 V	1000 V				
		CMDLxM		1000 V	1000 V				
	480 V 3ØΔ	SMDLxM		1800 V	1800 V				
		CMDLxM		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CXDLx \ SXDLx

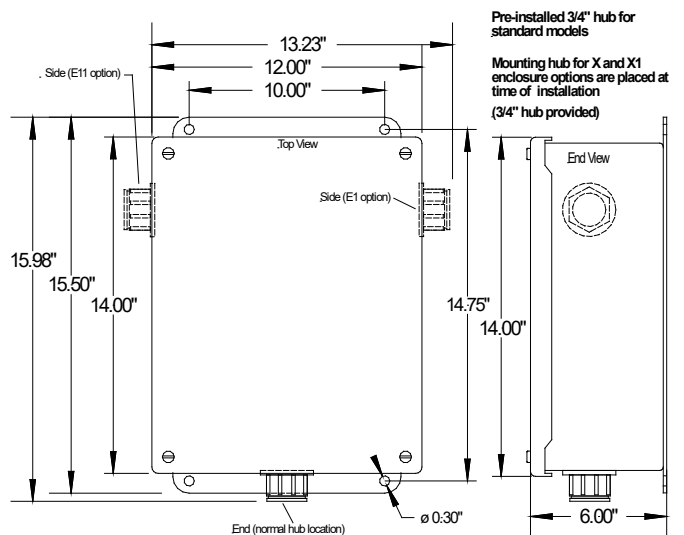
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	900 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SXDLxM- 50-400 Hz (60 Hz nom.); CXDLxM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel
Frequency Responsive Circuitry™	Standard (CXDLxM only)
EMI/RFI Filter Attenuation (Frequency Responsive Circuitry™)	Up to 55 dB from 1 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	25 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	6	150 V	300 V	150 V	150 V			
	120/208 V 3 \emptyset Y	10	150 V	300 V	150 V	150 V			
	120/240 V High-Leg Δ	10	150 V	300 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	10	320 V	550 V	320 V	320 V			
	240 V 3 $\emptyset\Delta$	6		320 V	320 V				
	480 V 3 $\emptyset\Delta$	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SXDLxM	600 V	1000 V	600 V	600 V			
		CXDLxM	600 V	1000 V	600 V	700 V			
	120/208 V 3 \emptyset Y	SXDLxM	600 V	1000 V	600 V	600 V			
		CXDLxM	600 V	1000 V	600 V	600 V			
	120/240 V High-Leg Δ	SXDLxM	600 V	1000 V	600 V	600 V	900 V	1000 V	1000 V
		CXDLxM	600 V	1000 V	600 V	600 V	1000 V	1000 V	1000 V
	277/480 V 3 \emptyset Y	SXDLxM	900 V	1800 V	1000 V	900 V			
		CXDLxM	1000 V	1800 V	1000 V	1000 V			
	240 V 3 $\emptyset\Delta$	SXDLxM		1000 V	1000 V				
		CXDLxM		1000 V	1000 V				
	480 V 3 $\emptyset\Delta$	SXDLxM		1800 V	1800 V				
		CXDLxM		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



Building an Advantage Model Number

Select Filtering
Choose Only One

Select kA per Phase
Choose Only One

Select x from Model Prefix (Nominal Discharge Current Rating)
Choose Only One

Select Voltage Code
Choose Only One

Select Desired Option Column A
Option(s) listed in alphabetical order

Select Desired Option Column B
Choose Only One

S - no filter
L - no filter (240 ka/Phase)
C - filter

A - Type 2, $I_n = 10$ kA
B - Type 2, $I_n = 20$ kA
C - Type 1, $I_n = 10$ kA
D - Type 1, $I_n = 20$ kA

SL - 90 kA/Phase
KL - 120 kA/Phase
DL - 180 kA/Phase
SE* - 240 kA/Phase
ML - 300 kA/Phase
IL - 360 kA/Phase
HL - 480 kA/Phase
HDL - 600 kA/Phase
MDL - 720 kA/Phase
XDL - 900 kA/Phase

1S1 - 120/240 V SplitØ
3Y1 - 120/208 V 3ØY
3D1 - 120/240 V High-Leg Δ
3Y2 - 277-480 V 3ØY
3N2 - 240 V 3ØΔ
3N4 - 480 V 3ØΔ
Additional Voltages Available

AC
AC10
AC10S6
AC11
AC11S6
AC12
AC12S6
AC13
AC13S6
S6
C1
D1
D3
D5
D6
D17
E1
E11
E30
E31
E32
M†
N
P
S
W
X
X2
X3
XS

-EA
-EAC
-EACS
-EACS1
-EAS
-EC
-ECS
-ES
-ES1
-LP
-LPN
-LPX

Example of Advantage Unit Model Number:

C KL A 3Y1 C1 -EA

Filter
120 kA/Phase
Type 2, $I_n = 10$ kA
120/208 V 3ØY
Dry Relay with wires
External Audible Alarm

* A 240 kA/Phase with no filter is LSE.
† Standard for units 360 kA/Phase and above



ADVANTAGE®



Commercial & Industrial Surge Protective Devices

Parallel connected Surge Protective Device designed to protect all types of loads fed from individual disconnects, sub-panels, distribution panels and service entrance locations. SpecPRO™ stops surges the competitors miss.

Industry leading let-through voltage performance Our SpecPRO™ SPDs are designed to respond fast and virtually eliminate surges, providing greater protection to downstream equipment and machinery. SpecPRO™ SPDs stop more surges than the competition.

ANSI/UL 1449 listed Our SpecPRO™ SPDs are designed to fit virtually any application including models that meet the Lightning Protection Standards of UL 96A and NFPA 780. We have a UL Listed SpecPRO™ SPD for virtually every industrial and commercial application!

Two types of fusing Our SpecPRO™ SPDs incorporate two types of fusing to assure the safest, most reliable products in the industry. SpecPRO™ SPDs are certified for safety and reliability.

Advanced Filtering Technology Our SpecPRO™ SPDs, when ordered with Advanced Filtering technology, filter out ringing transients, and stop mid-level, ultra-fast, nuisance surges that plague every industrial and commercial facility. These surges cause cumulative damage to printed circuit boards, frequent error codes, and downtime.

Features

- Standard EMI/RFI filtering
- Compact NEMA 1 enclosure is standard
- Nominal Discharge Current (I_n) Rating: 10 kA/20kA
- Patented internal phase-level over-current fusing
- One Super Bright diagnostic LED per phase
- Industry leading measured limiting voltage performance
- EMI/RFI filtering and Advanced Filtering
- NEMA 2, 3, 3S, 4, 4X and 12 enclosures available
- Circuit encapsulation
- Select 20 kA I_n for Lightning Protection Systems

CRM (4-mode)

- 30 kA to 300 kA Per Phase Peak Surge Current
- 10 Year Limited Warranty
- Four Modes of Protection - L-N (Normal Mode) and N-G (Common Mode) for WYE. L-G (Common Mode) for Delta.

CSM (7-mode)

- 60 kA to 600 kA Per Phase Peak Surge Current
- 15 Year Limited Warranty
- Seven Modes of Protection - Discrete L-N (Normal Mode) and Discrete L-G, N-G (Common Mode) for WYE. L-L (Normal Mode) and L-G (Common Mode) for Delta.

CRMx3 \ SRMx3

Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	30 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

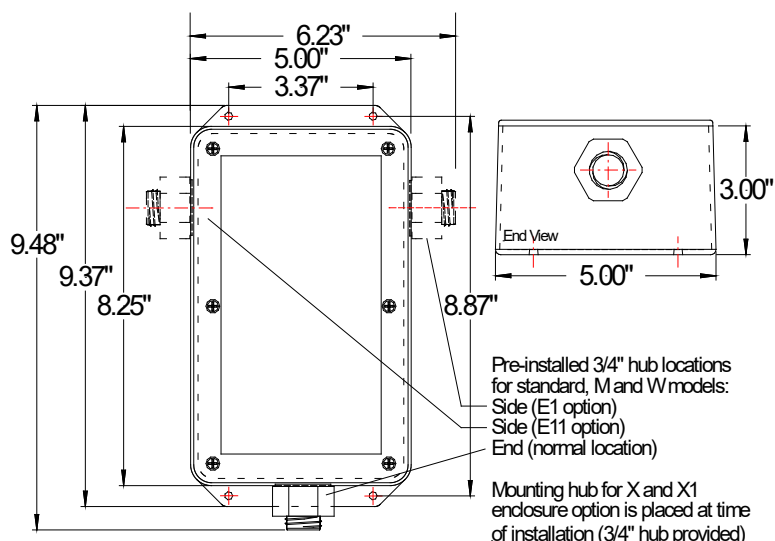
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3		320 V	320 V				
	480 V 3 \emptyset Δ	3		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1500 V	700 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1500 V	700 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	CRM	600 V		1200 V	1200 V	600 V	1200 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	1000 V		2000 V	2500 V	1200 V			
	CRM	1200 V		2500 V	2500 V	1000 V			
240 V 3 \emptyset Δ	SRM				2500 V	1200 V			
	CRM				2500 V	1200 V			
480 V 3 \emptyset Δ	SRM				4000 V	1800 V			
	CRM				4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx4 \ SRMx4

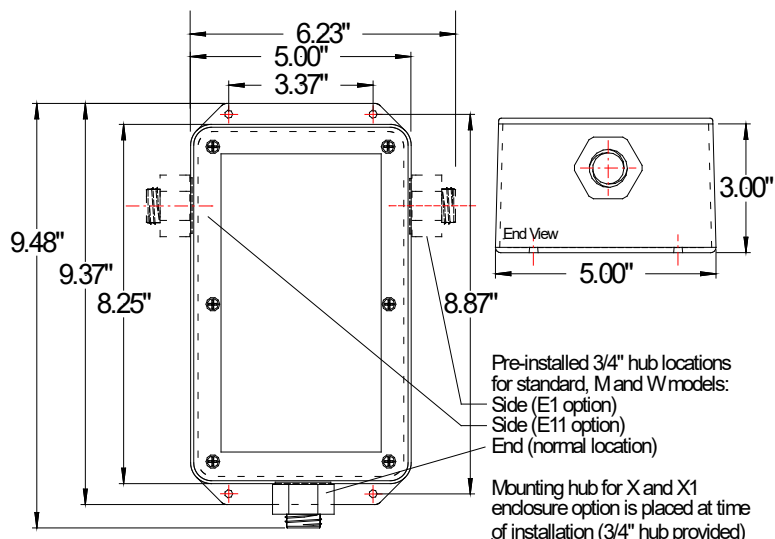
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	40 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	3	150 V			150 V
	120/208 V 3ØY	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3ØY	4	320 V			320 V			
	240 V 3ØΔ	3		320 V	320 V				
	480 V 3ØΔ	3		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SRM	600 V	1200 V	1200 V	600 V
		CRM	600 V	1200 V	1500 V	700 V			
	120/208 V 3ØY	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1500 V	700 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
		CRM	600 V	1200 V	1200 V	600 V	1200 V	1800 V	1800 V
	277/480 V 3ØY	SRM	1000 V	2000 V	2500 V	1200 V			
		CRM	1200 V	2500 V	2500 V	1200 V			
	240 V 3ØΔ	SRM		2500 V	1200 V				
		CRM		2500 V	1200 V				
	480 V 3ØΔ	SRM		4000 V	1800 V				
		CRM		4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx6 \ SRMx6

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	60 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

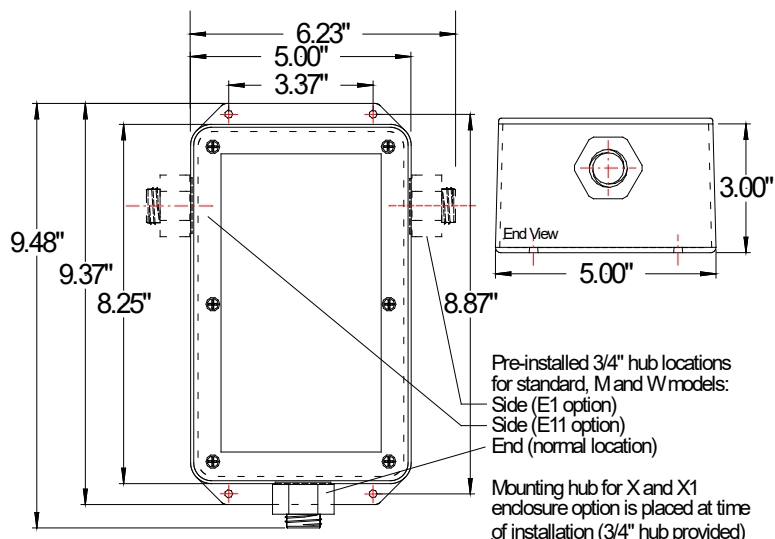
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3		320 V	320 V				
	480 V 3 \emptyset Δ	3		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1500 V	700 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1500 V	700 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	CRM	600 V		1200 V	1200 V	600 V	1200 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	1000 V		2000 V	2500 V	1200 V			
	CRM	1200 V		2500 V	2500 V	1200 V			
240 V 3 \emptyset Δ	SRM			2500 V	1200 V				
	CRM			2500 V	1200 V				
480 V 3 \emptyset Δ	SRM			4000 V	1800 V				
	CRM			4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx8 \ SRMx8

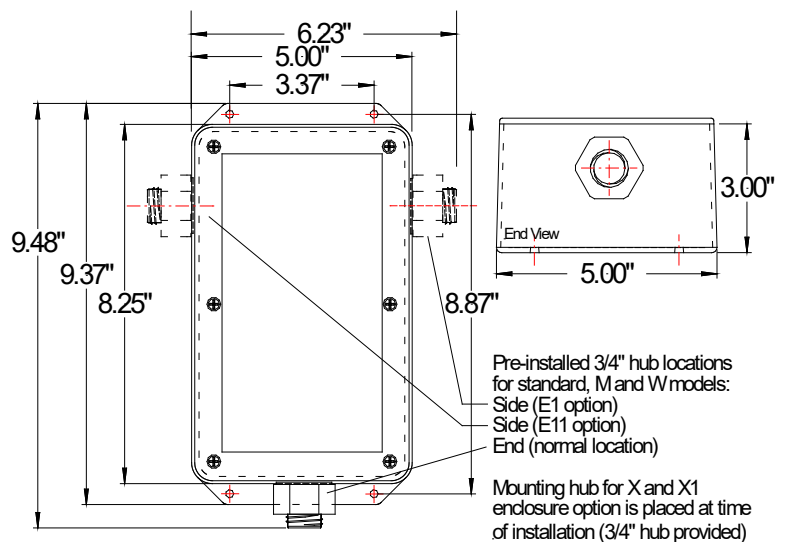
Nominal Discharge Rating (I _n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	80 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	3	150 V			150 V			
	120/208 V 3ØY	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3ØY	4	320 V			320 V			
	240 V 3ØΔ	3		320 V	320 V				
	480 V 3ØΔ	3		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split Ø	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1500 V	700 V			
	120/208 V 3ØY	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1500 V	700 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
		CRM	600 V	1200 V	1200 V	600 V	1200 V	1800 V	1800 V
	277/480 V 3ØY	SRM	1000 V	2000 V	2500 V	1200 V			
		CRM	1200 V	2500 V	2500 V	1200 V			
	240 V 3ØΔ	SRM			2500 V	1200 V			
		CRM			2500 V	1200 V			
	480 V 3ØΔ	SRM			4000 V	1800 V			
		CRM			4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx10 \ SRMx10

Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	100 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

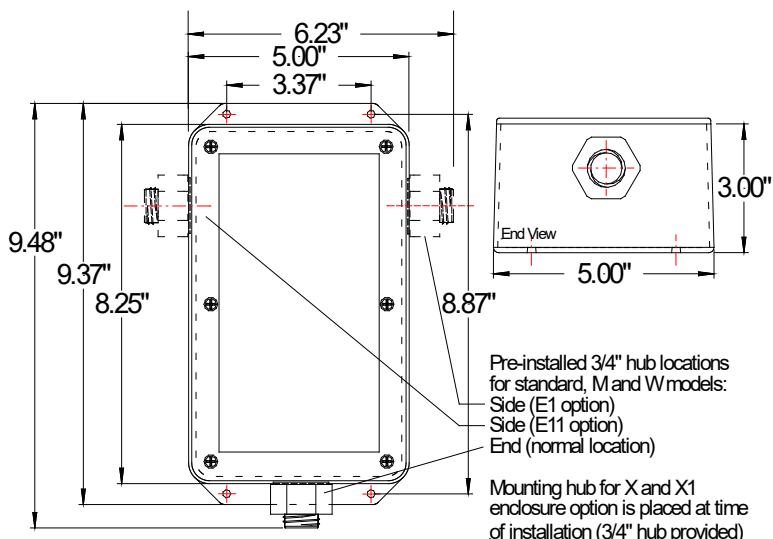
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3		320 V	320 V				
	480 V 3 \emptyset Δ	3		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1500 V	700 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1500 V	700 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	CRM	600 V		1200 V	1200 V	600 V	1200 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	1000 V		2000 V	2500 V	1200 V			
	CRM	1200 V		2500 V	2500 V	1200 V			
240 V 3 \emptyset Δ	SRM				2500 V	1200 V			
	CRM				2500 V	1200 V			
480 V 3 \emptyset Δ	SRM				4000 V	1800 V			
	CRM				4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx12 \ SRMx12

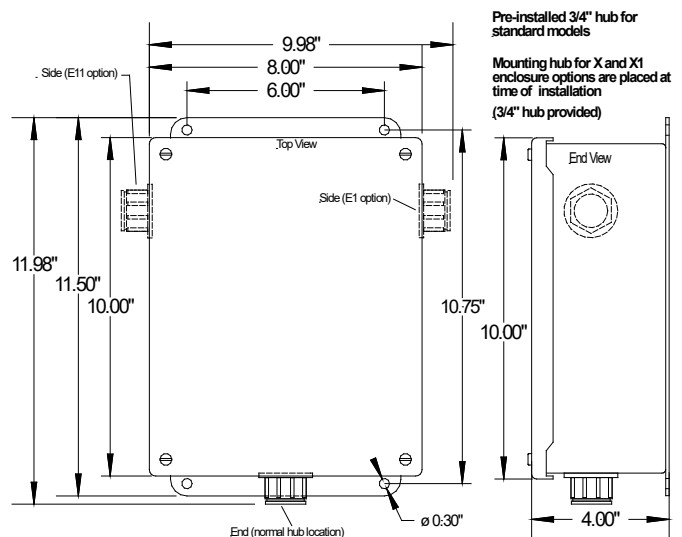
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	120 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 $\emptyset\Delta$	3			320 V				
	480 V 3 $\emptyset\Delta$	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
		CRM	600 V	1200 V	1200 V	600 V			
	120/208 V 3 \emptyset Y	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	900 V	1500 V	1500 V
		CRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	277/480 V 3 \emptyset Y	SRM	1000 V	2000 V	2500 V	1200 V			
		CRM	1000 V	2000 V	2000 V	1000 V			
	240 V 3 $\emptyset\Delta$	SRM		2000 V	1000 V				
		CRM		2000 V	1000 V				
	480 V 3 $\emptyset\Delta$	SRM		4000 V	1800 V				
		CRM		4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx14 \ SRMx14

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	140 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

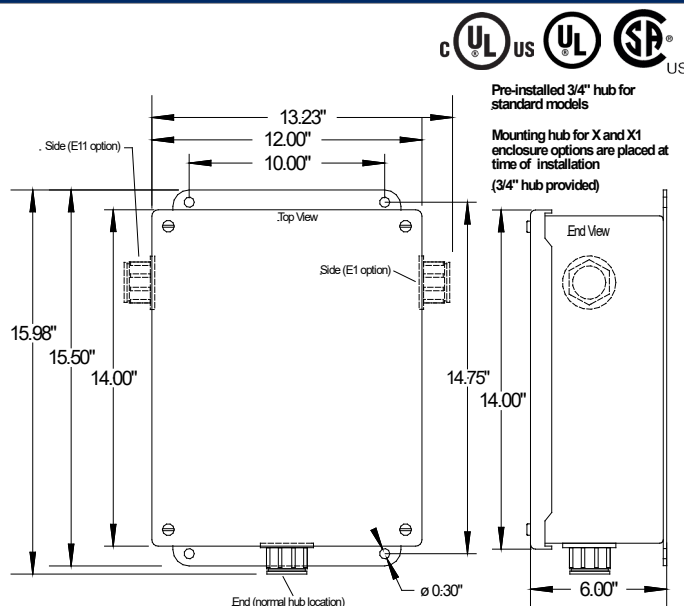
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V			
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/208 V 3 \emptyset Y	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	900 V	1500 V	1500 V
		CRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	277/480 V 3 \emptyset Y	SRM	900 V	1800 V	1800 V	900 V			
		CRM	1000 V	2000 V	2000 V	1000 V			
	240 V 3 \emptyset Δ	SRM			2000 V	1000 V			
		CRM			2000 V	1000 V			
	480 V 3 \emptyset Δ	SRM			4000 V	1800 V			
		CRM			4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx16 \ SRMx16

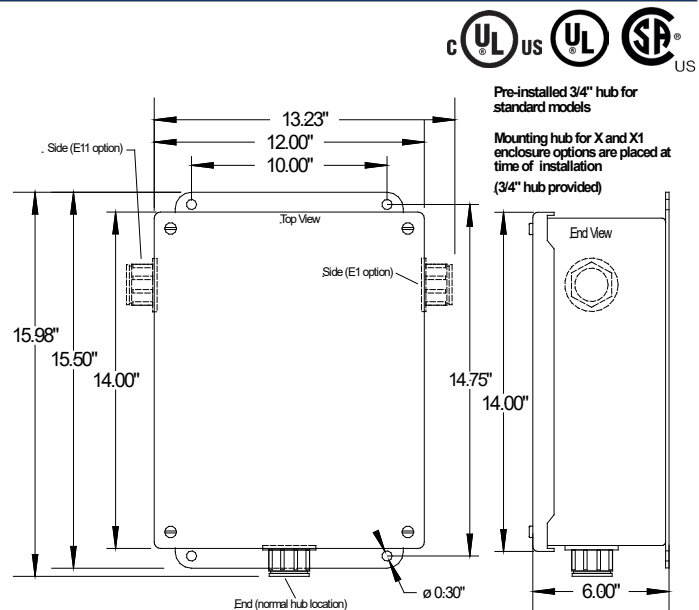
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	160 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 $\emptyset\Delta$	3			320 V				
	480 V 3 $\emptyset\Delta$	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1200 V	600 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1200 V	600 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	900 V	1500 V	1500 V
	CRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	900 V		1800 V	1800 V	900 V			
	CRM	1000 V		2000 V	2000 V	1000 V			
240 V 3 $\emptyset\Delta$	SRM			2000 V	1000 V				
	CRM			2000 V	1000 V				
480 V 3 $\emptyset\Delta$	SRM			4000 V	1800 V				
	CRM			4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx18 \ SRMx18

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	180 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

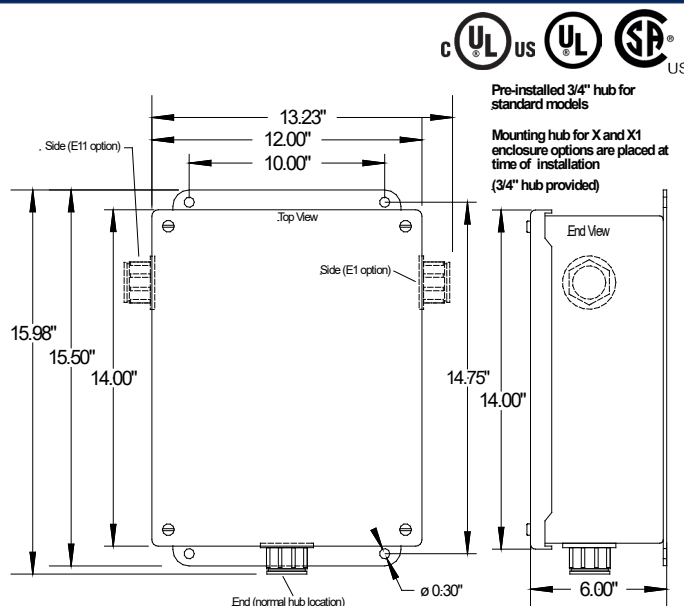
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V			
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/208 V 3 \emptyset Y	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	900 V	1500 V	1500 V
		CRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	277/480 V 3 \emptyset Y	SRM	900 V	1800 V	1800 V	900 V			
		CRM	1000 V	2000 V	2000 V	1000 V			
	240 V 3 \emptyset Δ	SRM			2000 V	1000 V			
		CRM			2000 V	1000 V			
	480 V 3 \emptyset Δ	SRM			4000 V	1800 V			
		CRM			4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx20 \ SRMx20

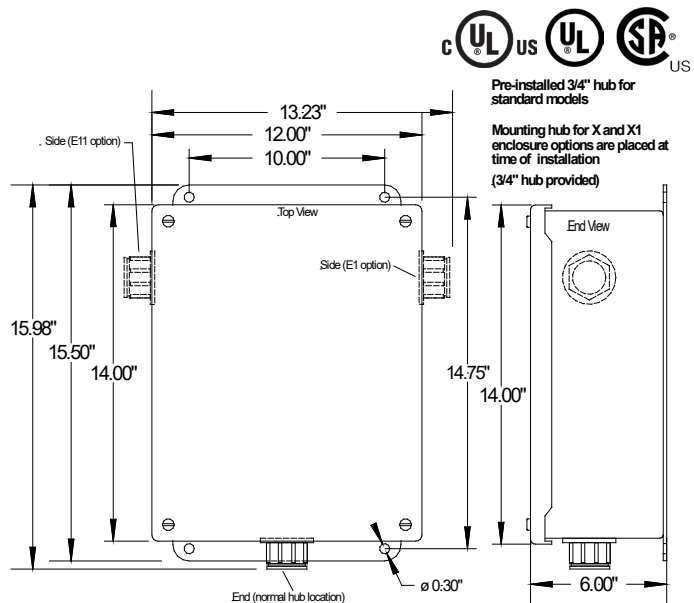
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	200 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V			
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/208 V 3 \emptyset Y	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	900 V	1500 V	1500 V
		CRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	277/480 V 3 \emptyset Y	SRM	900 V	1800 V	1800 V	900 V			
		CRM	1000 V	2000 V	2000 V	1000 V			
	240 V 3 \emptyset Δ	SRM			2000 V	1000 V			
		CRM			2000 V	1000 V			
	480 V 3 \emptyset Δ	SRM			4000 V	1800 V			
		CRM			4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx22 \ SRMx22

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	220 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

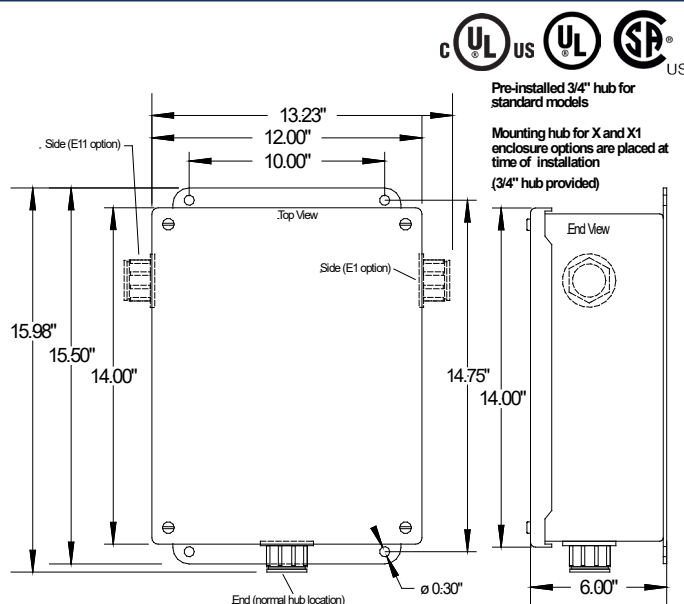
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V			
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/208 V 3 \emptyset Y	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	900 V	1500 V	1500 V
		CRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	277/480 V 3 \emptyset Y	SRM	900 V	1800 V	1800 V	900 V			
		CRM	1000 V	2000 V	2000 V	1000 V			
	240 V 3 \emptyset Δ	SRM			2000 V	1000 V			
		CRM			2000 V	1000 V			
	480 V 3 \emptyset Δ	SRM			4000 V	1800 V			
		CRM			4000 V	1800 V			

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx24 \ SRMx24

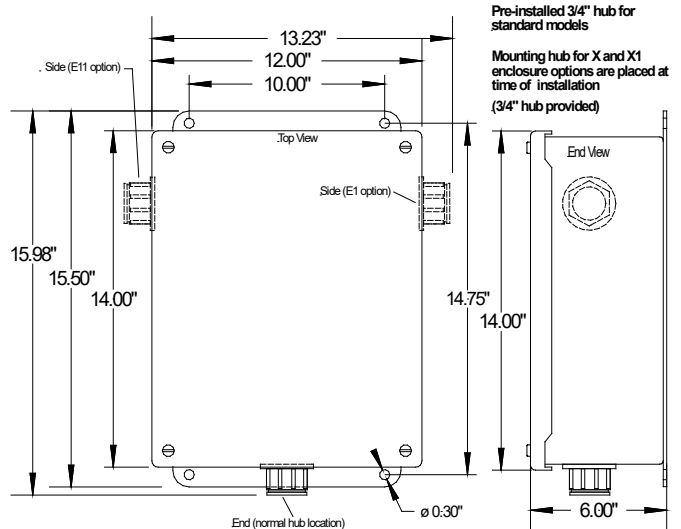
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	240 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1200 V	600 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1200 V	600 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	900 V	1500 V	1500 V
	CRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	900 V		1800 V	1800 V	900 V			
	CRM	1000 V		2000 V	2000 V	1000 V			
240 V 3 \emptyset Δ	SRM			2000 V	1000 V				
	CRM			2000 V	1000 V				
480 V 3 \emptyset Δ	SRM			4000 V	1800 V				
	CRM			4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx26 \ SRMx26

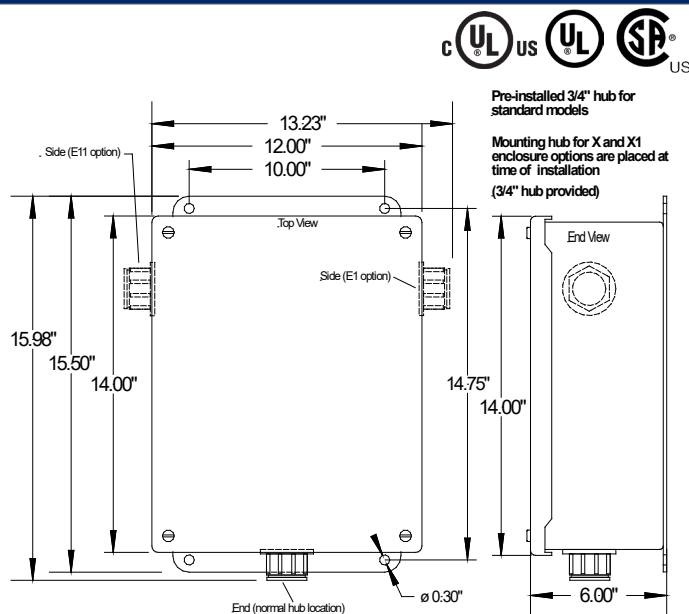
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	260 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
		CRM	600 V	1200 V	1200 V	600 V			
	120/208 V 3 \emptyset Y	SRM	600 V	1200 V	1200 V	600 V			
		CRM	600 V	1200 V	1200 V	600 V			
	120/240 V High-Leg Δ	SRM	600 V	1200 V	1200 V	600 V	900 V	1500 V	1500 V
		CRM	600 V	1200 V	1200 V	600 V	1000 V	1800 V	1800 V
	277/480 V 3 \emptyset Y	SRM	900 V	1800 V	1800 V	900 V			
		CRM	1000 V	2000 V	2000 V	1000 V			
	240 V 3 \emptyset Δ	SRM		2000 V	1000 V				
		CRM		2000 V	1000 V				
	480 V 3 \emptyset Δ	SRM		4000 V	1800 V				
		CRM		4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx28 \ SRMx28

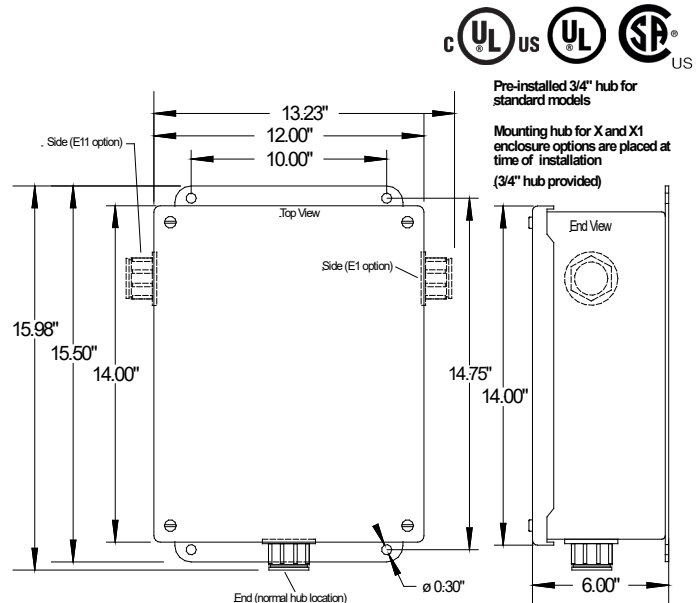
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	280 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 $\emptyset\Delta$	3			320 V				
	480 V 3 $\emptyset\Delta$	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1200 V	600 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1200 V	600 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	900 V	1500 V	1500 V
	CRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	900 V		1800 V	1800 V	900 V			
	CRM	1000 V		2000 V	2000 V	1000 V			
240 V 3 $\emptyset\Delta$	SRM			2000 V	1000 V				
	CRM			2000 V	1000 V				
480 V 3 $\emptyset\Delta$	SRM			4000 V	1800 V				
	CRM			4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CRMx30 \ SRMx30

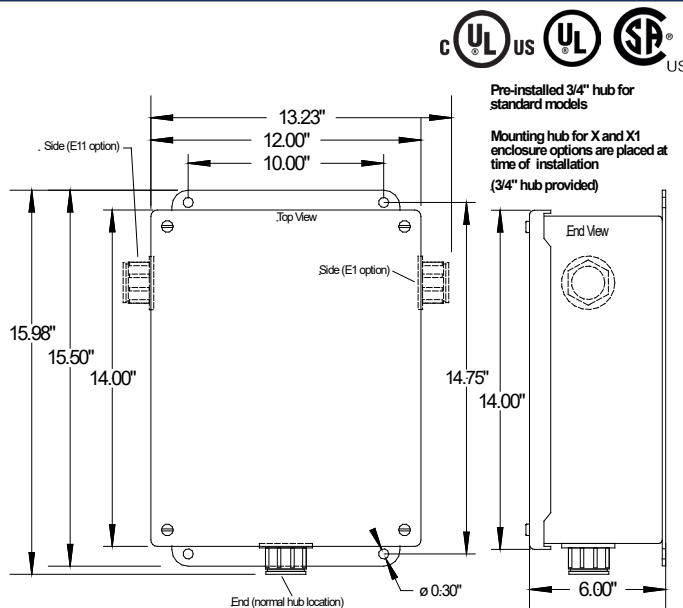
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	300 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SRM- 50-400 Hz (60 Hz nom.); CRM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CRM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	10 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	3	150 V			150 V
	120/208 V 3 \emptyset Y	4	150 V			150 V			
	120/240 V High-Leg Δ	4	150 V			150 V	320 V		
	277/480 V 3 \emptyset Y	4	320 V			320 V			
	240 V 3 \emptyset Δ	3			320 V				
	480 V 3 \emptyset Δ	3			550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SRM	600 V	1200 V	1200 V	600 V
CRM	600 V	1200 V			1200 V	600 V			
120/208 V 3 \emptyset Y	SRM	600 V		1200 V	1200 V	600 V			
	CRM	600 V		1200 V	1200 V	600 V			
120/240 V High-Leg Δ	SRM	600 V		1200 V	1200 V	600 V	900 V	1500 V	1500 V
	CRM	600 V		1200 V	1200 V	600 V	1000 V	1800 V	1800 V
277/480 V 3 \emptyset Y	SRM	900 V		1800 V	1800 V	900 V			
	CRM	1000 V		2000 V	2000 V	1000 V			
240 V 3 \emptyset Δ	SRM			2000 V	1000 V				
	CRM			2000 V	1000 V				
480 V 3 \emptyset Δ	SRM			4000 V	1800 V				
	CRM			4000 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx6 \ SSMx6

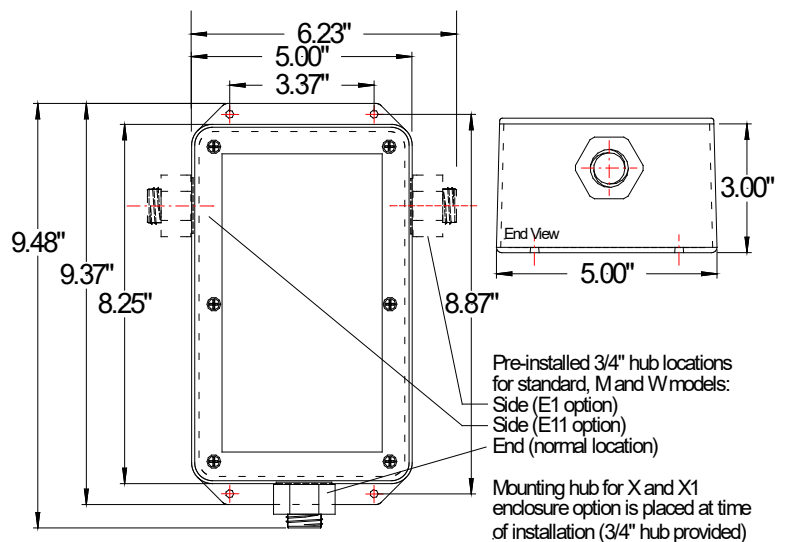
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	60 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 $\emptyset\Delta$	6		320 V	320 V				
	480 V 3 $\emptyset\Delta$	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	700 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	700 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	1200 V	1800 V	1200 V
	CSM	600 V		1200 V	600 V	700 V	1200 V	1800 V	1200 V
277/480 V 3 \emptyset Y	SSM	1000 V		2500 V	1200 V	1200 V			
	CSM	1200 V		2500 V	1200 V	1200 V			
240 V 3 $\emptyset\Delta$	SSM			1200 V	1000 V				
	CSM			1200 V	1000 V				
480 V 3 $\emptyset\Delta$	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx8 \ SSMx8

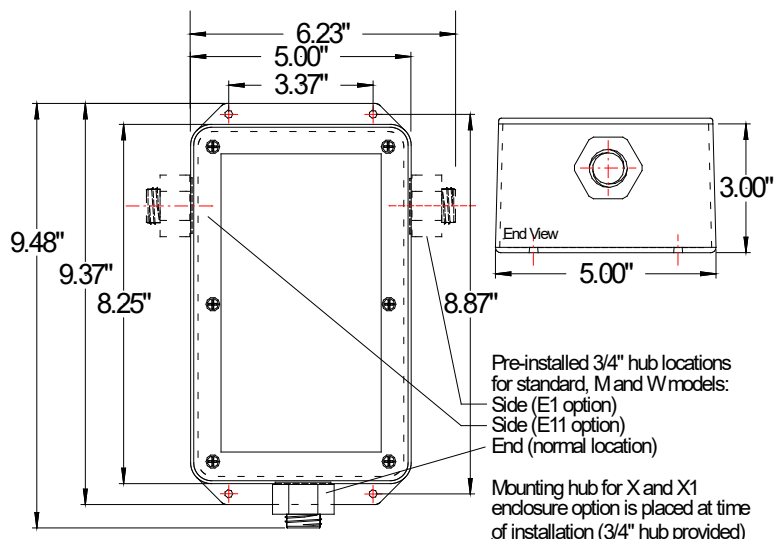
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	80 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	700 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	700 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	1200 V	1800 V	1200 V
	CSM	600 V		1200 V	600 V	700 V	1200 V	1800 V	1200 V
277/480 V 3 \emptyset Y	SSM	1000 V		2500 V	1200 V	1200 V			
	CSM	1200 V		2500 V	1200 V	1200 V			
240 V 3 \emptyset Δ	SSM			1200 V	1000 V				
	CSM			1200 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx12 \ SSMx12

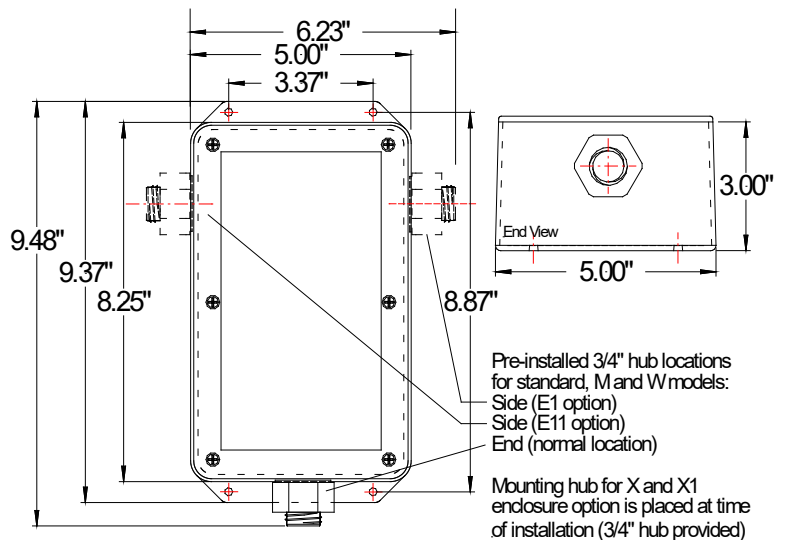
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	120 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	700 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	700 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	1200 V	1800 V	1200 V
	CSM	600 V		1200 V	600 V	700 V	1200 V	1800 V	1200 V
277/480 V 3 \emptyset Y	SSM	1000 V		2500 V	1200 V	1200 V			
	CSM	1200 V		2500 V	1200 V	1200 V			
240 V 3 \emptyset Δ	SSM			1200 V	1000 V				
	CSM			1200 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx16 \ SSMx16

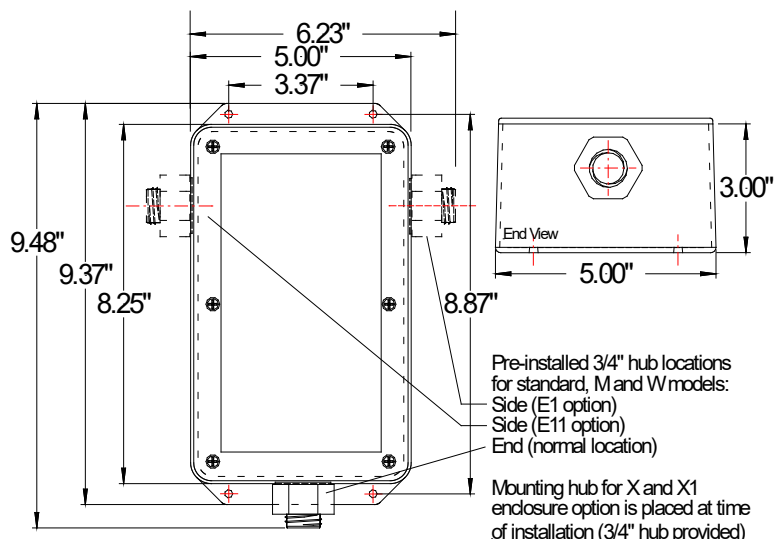
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	160 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	5	150 V	320 V	150 V	150 V
	120/208 V 3ØY	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	7	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SSM	600 V	1200 V	600 V	600 V
		CSM	600 V	1200 V	600 V	700 V			
	120/208 V 3ØY	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	700 V			
	120/240 V High-Leg Δ	SSM	600 V	1200 V	600 V	600 V	1200 V	1800 V	1200 V
		CSM	600 V	1200 V	600 V	700 V	1200 V	1800 V	1200 V
	277/480 V 3ØY	SSM	1000 V	2500 V	1200 V	1200 V			
		CSM	1200 V	2500 V	1200 V	1200 V			
	240 V 3ØΔ	SSM		1200 V	1000 V				
		CSM		1200 V	1000 V				
	480 V 3ØΔ	SSM		1800 V	1800 V				
		CSM		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx20 \ SSMx20

Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	200 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 1
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

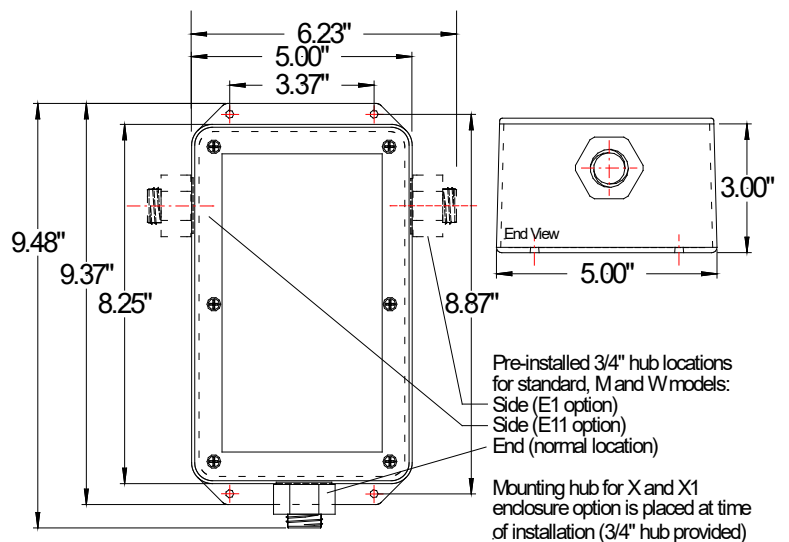
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split Ø	5	150 V	320 V	150 V	150 V
	120/208 V 3ØY	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3ØY	7	320 V	550 V	320 V	320 V			
	240 V 3ØΔ	6		320 V	320 V				
	480 V 3ØΔ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split Ø	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	700 V			
120/208 V 3ØY	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	700 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	1200 V	1800 V	1200 V
	CSM	600 V		1200 V	600 V	700 V	1200 V	1800 V	1200 V
277/480 V 3ØY	SSM	1000 V		2500 V	1200 V	1200 V			
	CSM	1200 V		2500 V	1200 V	1200 V			
240 V 3ØΔ	SSM			1200 V	1000 V				
	CSM			1200 V	1000 V				
480 V 3ØΔ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx24 \ SSMx24

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	240 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

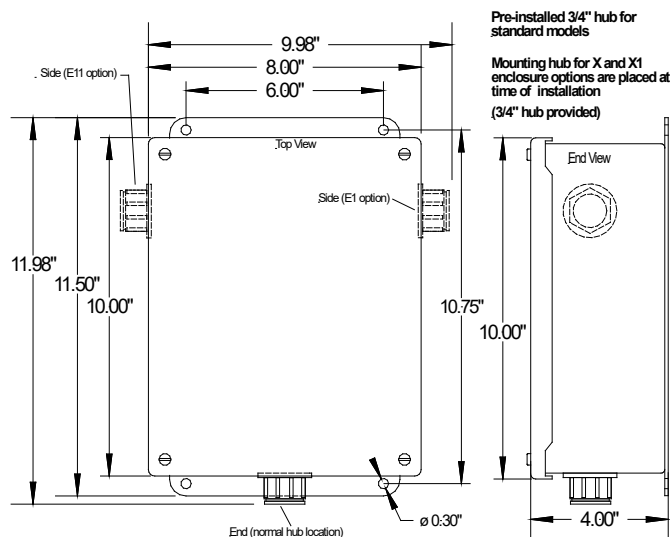
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	900 V	1800 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1200 V
277/480 V 3 \emptyset Y	SSM	1000 V		2000 V	1000 V	1000 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 \emptyset Δ	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx28 \ SSMx28

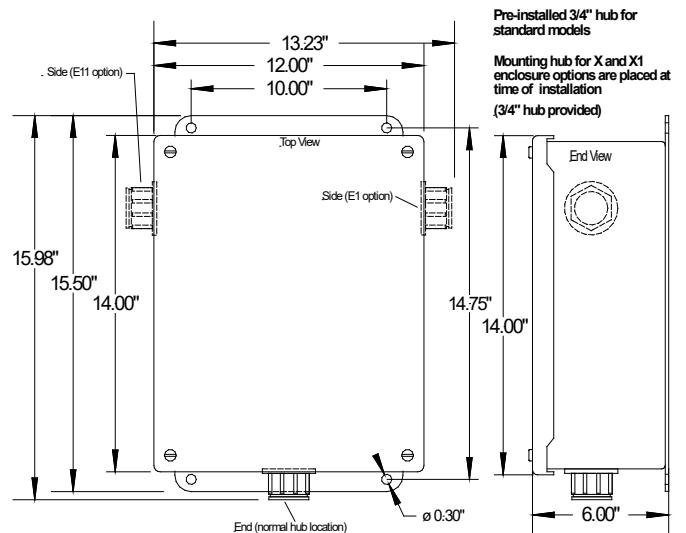
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	280 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	900 V	1800 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1000 V
277/480 V 3 \emptyset Y	SSM	900 V		2000 V	1000 V	900 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 \emptyset Δ	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx32 \ SSMx32

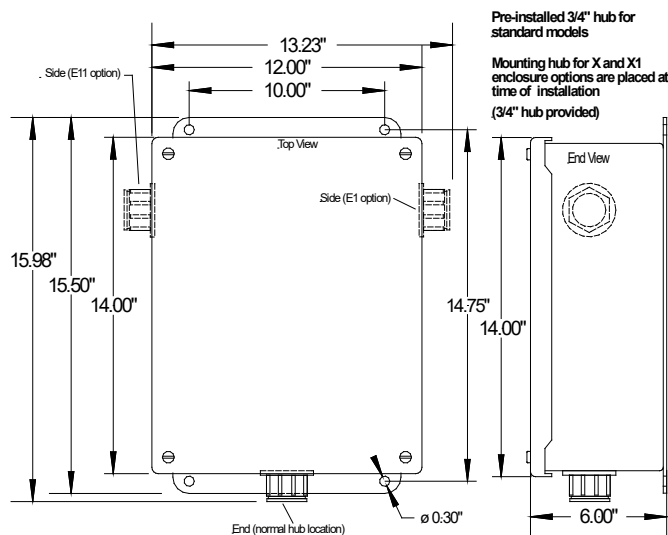
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	320 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	900 V	1500 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1000 V
277/480 V 3 \emptyset Y	SSM	900 V		2000 V	1000 V	900 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 \emptyset Δ	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx36 \ SSMx36

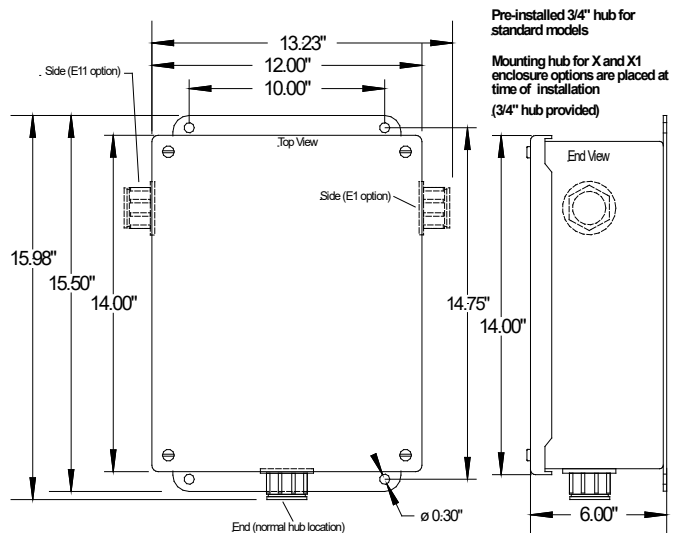
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	360 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	900 V	1800 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1000 V
277/480 V 3 \emptyset Y	SSM	900 V		2000 V	1000 V	900 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 \emptyset Δ	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx40 \ SSMx40

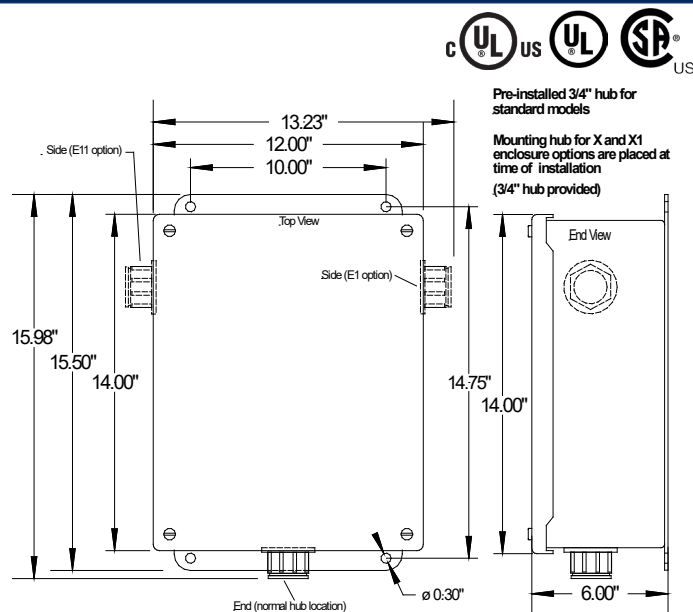
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	400 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	1200 V	600 V	900 V	1800 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1000 V
277/480 V 3 \emptyset Y	SSM	900 V		2000 V	1000 V	900 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 \emptyset Δ	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 \emptyset Δ	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx44 \ SSMx44

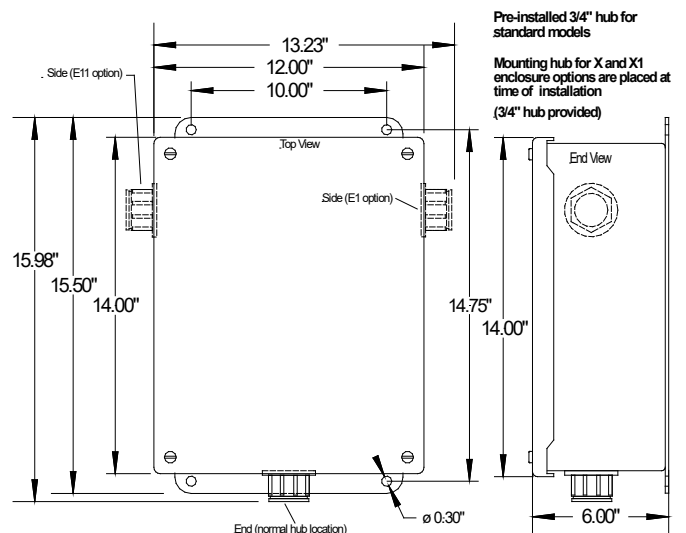
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	440 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 $\emptyset\Delta$	6		320 V	320 V				
	480 V 3 $\emptyset\Delta$	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	1200 V	600 V	900 V	1800 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1000 V
277/480 V 3 \emptyset Y	SSM	900 V		2000 V	1000 V	900 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 $\emptyset\Delta$	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 $\emptyset\Delta$	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx48 \ SSMx48

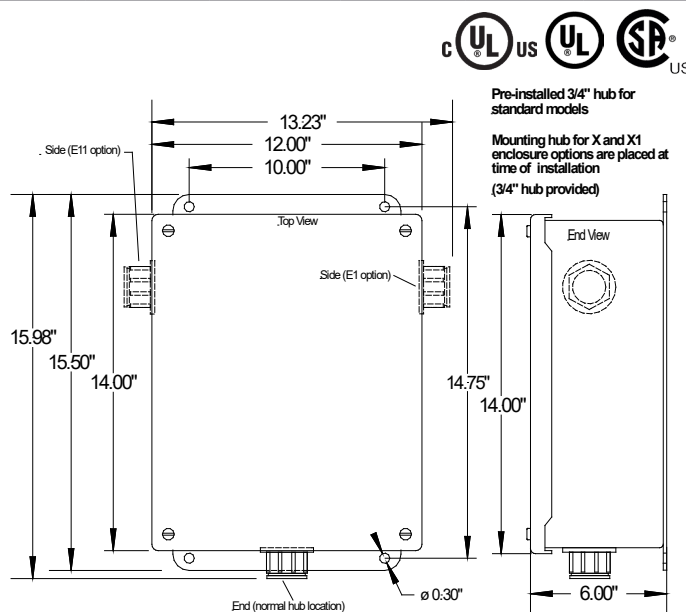
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	480 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	Protection Modes						
			L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V			
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 $\emptyset\Delta$	6		320 V	320 V				
	480 V 3 $\emptyset\Delta$	6		550 V	550 V				

	Voltage Configuration	Model Number	Voltage Protection Rating (VPR)						
			L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	600 V			
	120/208 V 3 \emptyset Y	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	600 V			
	120/240 V High-Leg Δ	SSM	600 V	600 V	1200 V	600 V	900 V	1800 V	1000 V
		CSM	600 V	1200 V	600 V	600 V	1000 V	1800 V	1000 V
	277/480 V 3 \emptyset Y	SSM	900 V	2000 V	1000 V	900 V			
		CSM	1000 V	2000 V	1000 V	1000 V			
	240 V 3 $\emptyset\Delta$	SSM		1000 V	1000 V				
		CSM		1000 V	1000 V				
	480 V 3 $\emptyset\Delta$	SSM		1800 V	1800 V				
		CSM		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx52 \ SSMx52

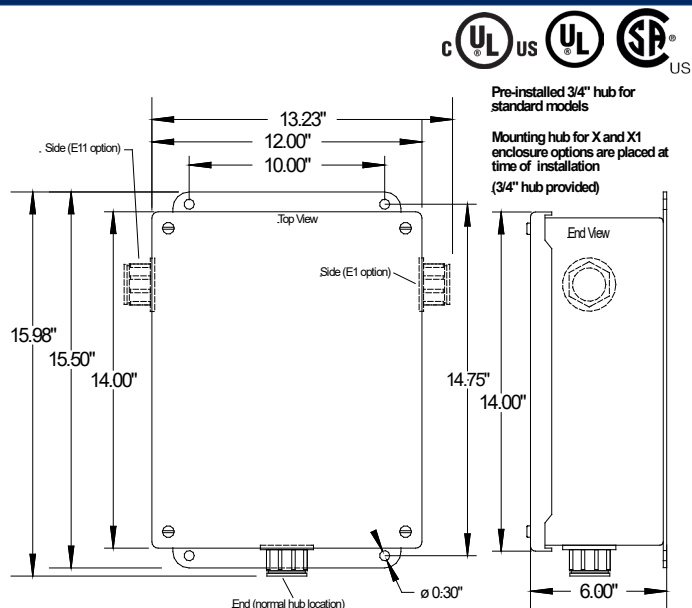
Nominal Discharge Rating (I_p)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	520 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V			
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	600 V			
	120/208 V 3 \emptyset Y	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	600 V			
	120/240 V High-Leg Δ	SSM	600 V	1200 V	600 V	600 V	900 V	1800 V	1000 V
		CSM	600 V	1200 V	600 V	600 V	1000 V	1800 V	1000 V
	277/480 V 3 \emptyset Y	SSM	900 V	2000 V	1000 V	900 V			
		CSM	1000 V	2000 V	1000 V	1000 V			
	240 V 3 \emptyset Δ	SSM		1000 V	1000 V				
		CSM		1000 V	1000 V				
	480 V 3 \emptyset Δ	SSM		1800 V	1800 V				
		CSM		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx56 \ SSMx56

Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	560 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

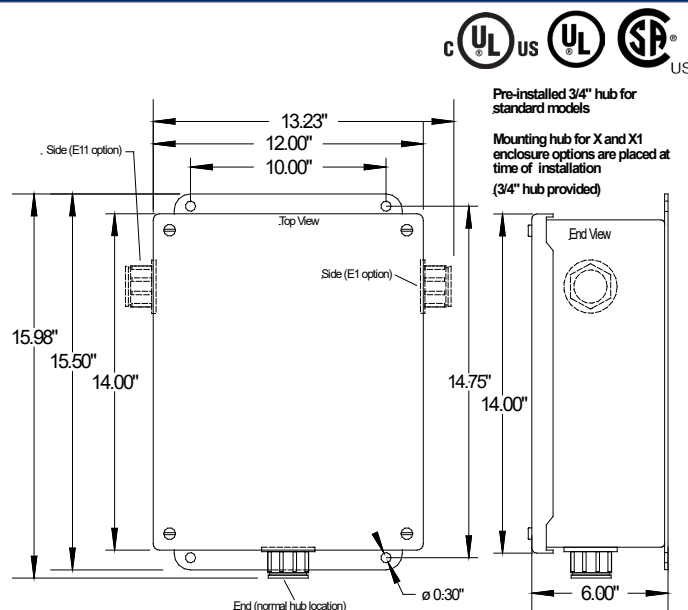
Safety Ratings/Certifications

UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

	Voltage Configuration	Discrete Modes of Protection	Protection Modes						
			L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V			
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 \emptyset Δ	6		320 V	320 V				
	480 V 3 \emptyset Δ	6		550 V	550 V				

	Voltage Configuration	Model Number	Protection Modes						
			L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	600 V			
	120/208 V 3 \emptyset Y	SSM	600 V	1200 V	600 V	600 V			
		CSM	600 V	1200 V	600 V	600 V			
	120/240 V High-Leg Δ	SSM	600 V	1200 V	600 V	600 V	900 V	1800 V	1000 V
		CSM	600 V	1200 V	600 V	600 V	1000 V	1800 V	1000 V
	277/480 V 3 \emptyset Y	SSM	900 V	2000 V	1000 V	900 V			
		CSM	1000 V	2000 V	1000 V	1000 V			
	240 V 3 \emptyset Δ	SSM		1000 V	1000 V				
		CSM		1000 V	1000 V				
	480 V 3 \emptyset Δ	SSM		1800 V	1800 V				
		CSM		1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



CSMx60 \ SSMx60

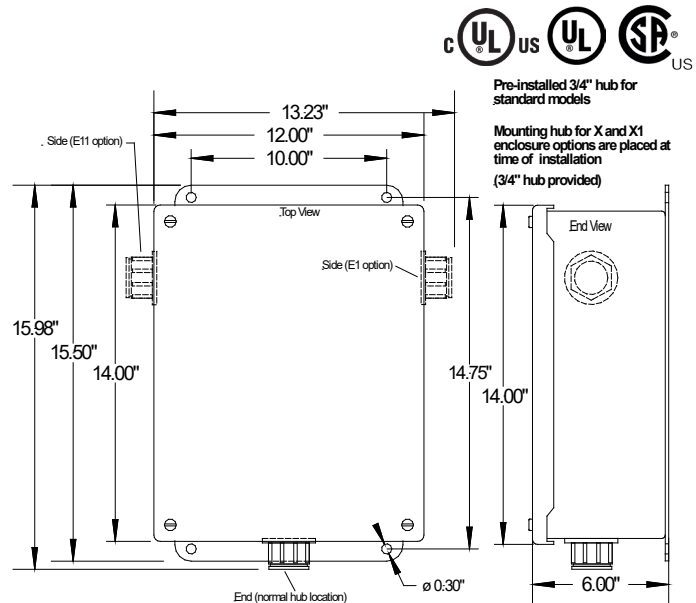
Nominal Discharge Rating (I_n)	20 kA (Compatible with UL 96A, NFPA 780 and LPI 175) or 10 kA
Peak Surge Current Rating per Phase	600 kA Per Phase
SPD Type	Type 1 or Type 2
Short Circuit Current Rating (SCCR)	200 kAIC
Temperature Rating	80° C max.
Input Power	SSM- 50-400 Hz (60 Hz nom.); CSM- 50-60 Hz (60 Hz nom.)
Standard Enclosure	NEMA 12
Connection	Parallel, 10 AWG THHN Wire
Advanced Filtering Technology	Standard (CSM only)
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 52 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)
Warranty	15 year Limited Warranty

Safety Ratings/Certifications	
UL	UL 1283
ANSI/UL	ANSI/UL 1449 by UL (E340498)
CSA	CSA (MC#241804)

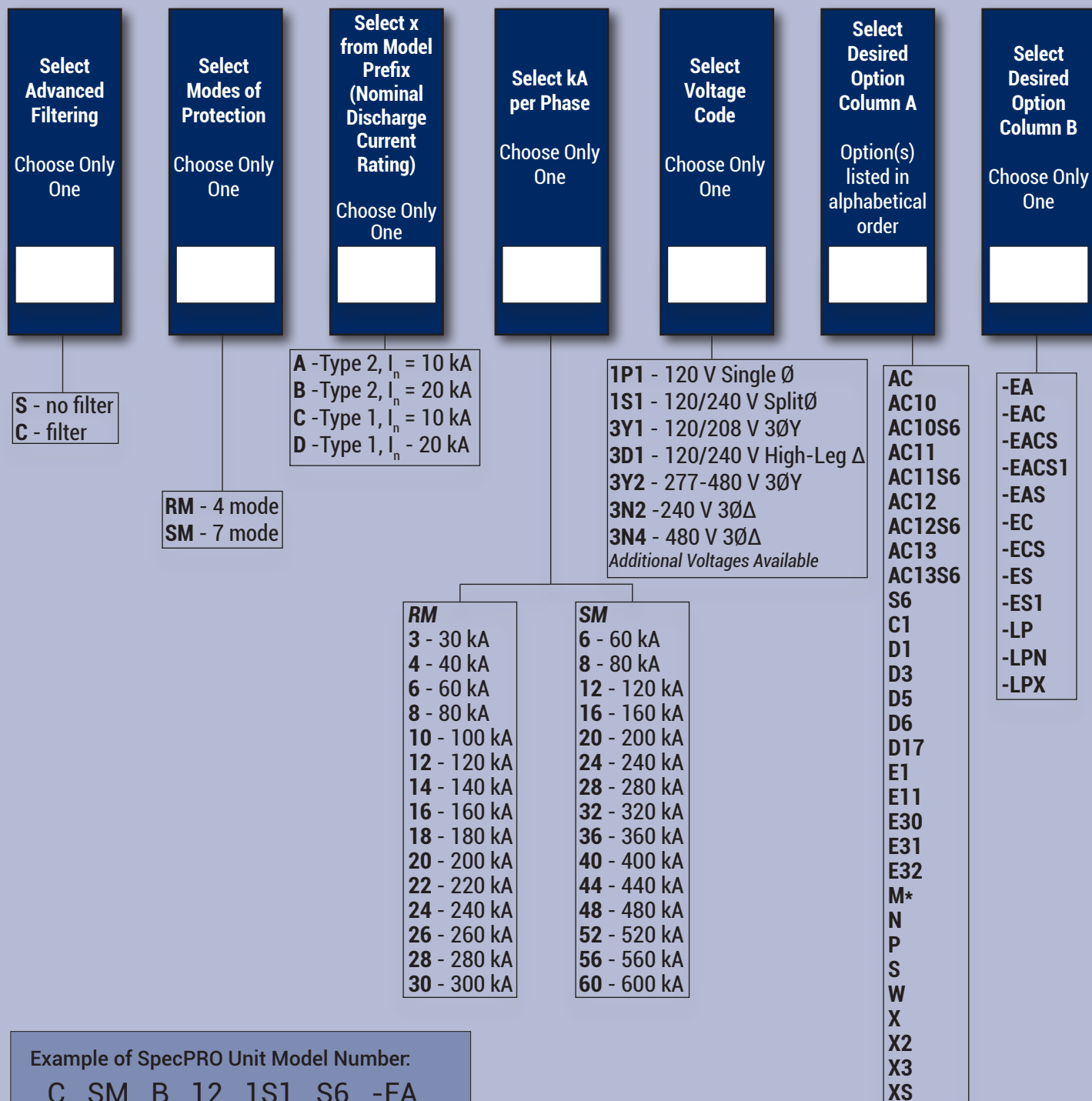
	Voltage Configuration	Discrete Modes of Protection	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Maximum Continuous Operating Voltage (MCOV)	120/240 V Split \emptyset	5	150 V	320 V	150 V	150 V
	120/208 V 3 \emptyset Y	7	150 V	320 V	150 V	150 V			
	120/240 V High-Leg Δ	7	150 V	320 V	150 V	150 V	320 V		320 V
	277/480 V 3 \emptyset Y	7	320 V	550 V	320 V	320 V			
	240 V 3 $\emptyset\Delta$	6		320 V	320 V				
	480 V 3 $\emptyset\Delta$	6		550 V	550 V				

	Voltage Configuration	Model Number	L-N	L-L	L-G	N-G	HL-N	HL-L	HL-G
			Voltage Protection Rating (VPR)	120/240 V Split \emptyset	SSM	600 V	1200 V	600 V	600 V
CSM	600 V	1200 V			600 V	600 V			
120/208 V 3 \emptyset Y	SSM	600 V		1200 V	600 V	600 V			
	CSM	600 V		1200 V	600 V	600 V			
120/240 V High-Leg Δ	SSM	600 V		1200 V	600 V	600 V	900 V	1800 V	1000 V
	CSM	600 V		1200 V	600 V	600 V	1000 V	1800 V	1000 V
277/480 V 3 \emptyset Y	SSM	900 V		2000 V	1000 V	900 V			
	CSM	1000 V		2000 V	1000 V	1000 V			
240 V 3 $\emptyset\Delta$	SSM			1000 V	1000 V				
	CSM			1000 V	1000 V				
480 V 3 $\emptyset\Delta$	SSM			1800 V	1800 V				
	CSM			1800 V	1800 V				

Options for this model found in Advantage™ and SpecPRO™ Options section.



Building a SpecPRO Model Number



Example of SpecPRO Unit Model Number:
C SM B 12 1S1 S6 -EA

Filter
 7 Mode
 Type 2, $I_n = 20$ kA
 120 kA
 120/240 V Split Ø
 Surge Counter with a LCD display
 External Audible Alarm



SpecPRO

*Standard for RM units 120 kA/Phase and above.
 Standard for SM units 240 kA/Phase and above.

SSI offers many options to fit your facility's specific surge protection needs.





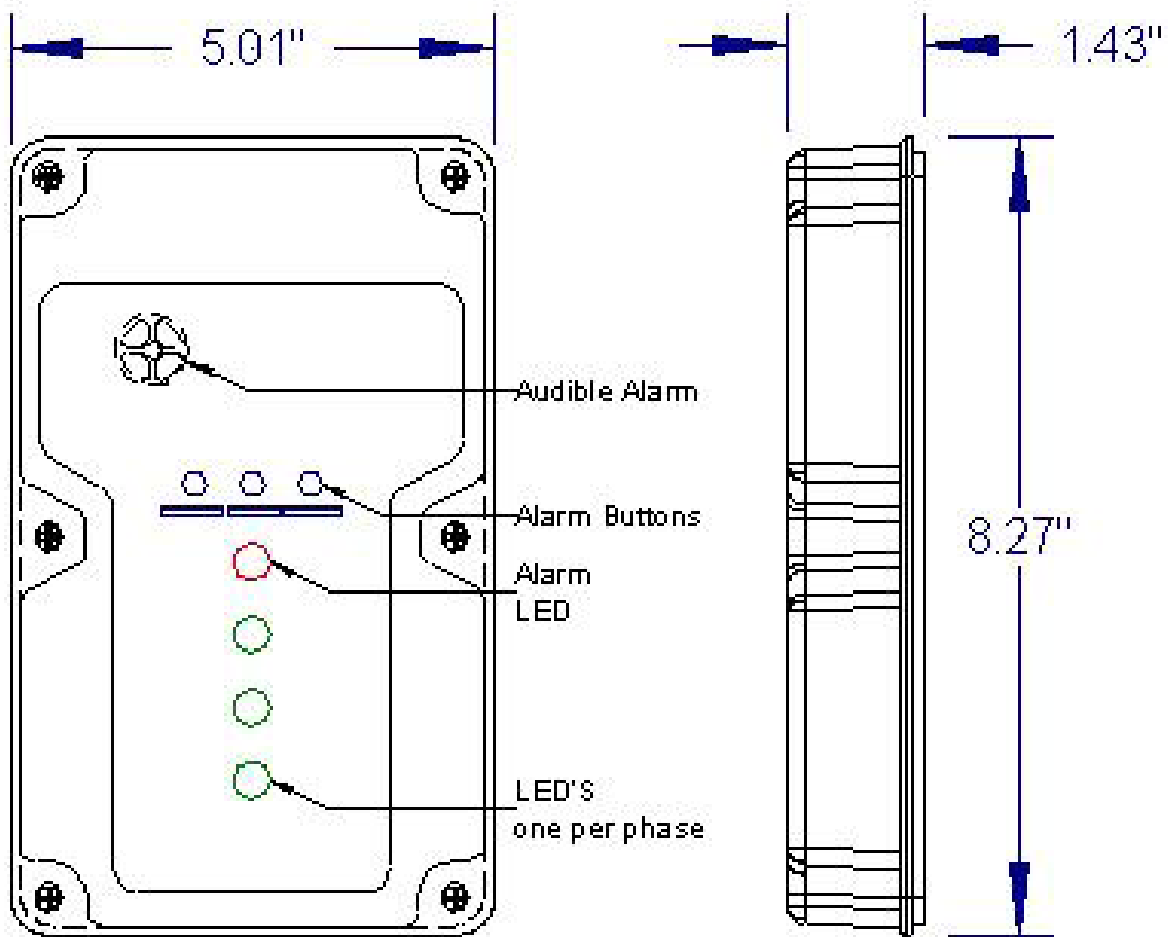
ADVANTAGE™ AND SpecPRO™ OPTIONS

*Choose from the following options for
your commercial or industrial needs.*

AC

Internal Audible Alarm, requires Dry Relay Contacts

The "AC" option is the internal audible alarm option that contains a 110 dB, pulsed siren, a red "trouble" LED, and one green LED per phase. The audible alarm and red LED are powered by a long-life lithium based 9V battery with a ten-year shelf life. The battery allows the siren to operate continuously for a minimum of 72 hours and the red, "trouble" LED to operate continuously for a minimum of 144 hours. These battery powered circuits are optimized to minimize power consumption when in an alarmed and unalarmed states. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. The normally closed contact is available for use in the installation. The audible alarm option has provisions for installations requiring NEMA 4 and NEMA 4X ratings.

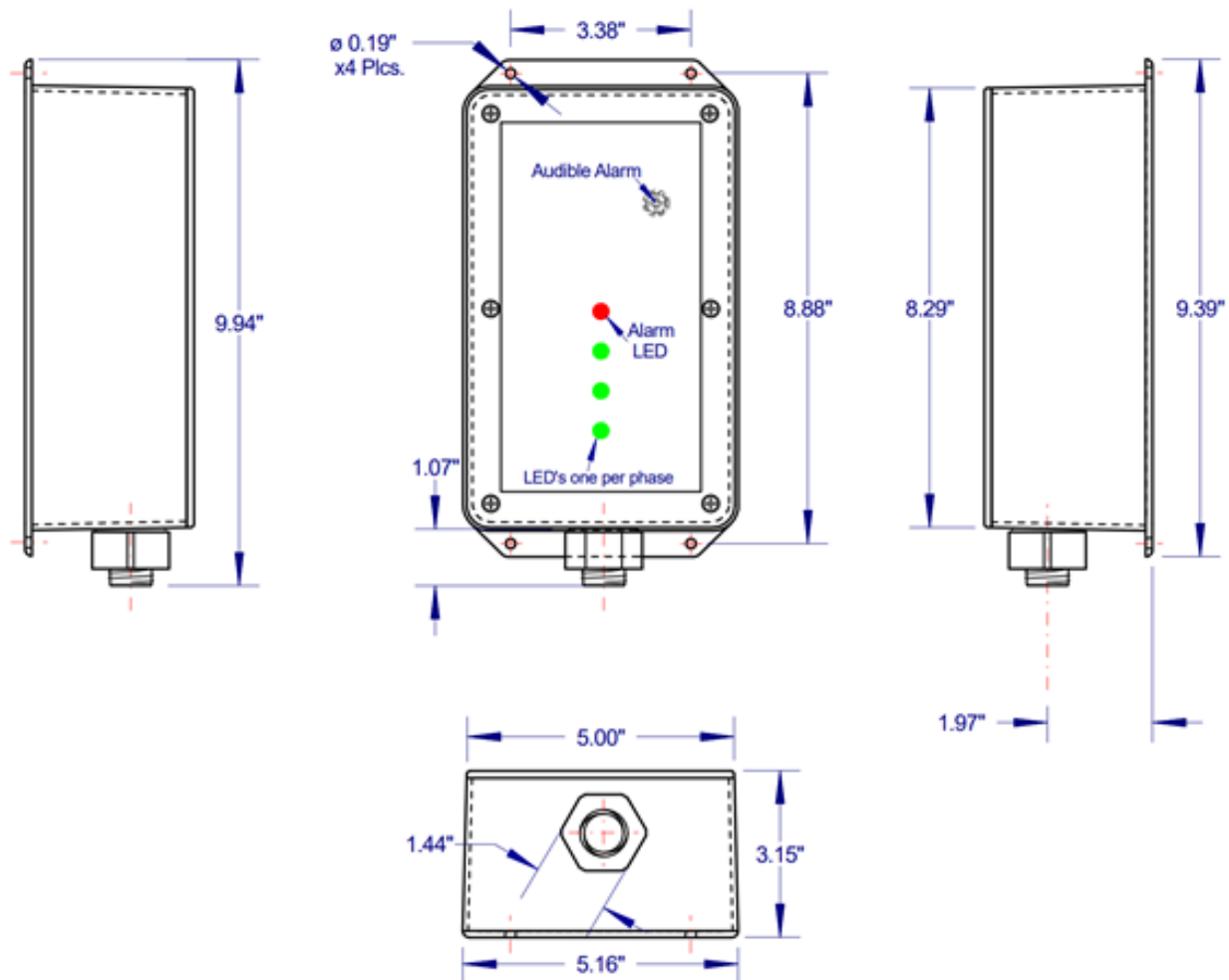


AC10

Basic Internal Audible Alarm

The "AC10" option is the internal audible alarm option that contains an 80 dB, 4 kHz continuous siren and a red trouble LED which activates if the unit fails. There is also one green LED per phase to show normal operation. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. In the case of a failure the alarm and red LED continue to operate until power is removed. The normally open and normally closed contacts are available for use in the installation. The audible alarm is available with other NEMA 4X enclosure options.

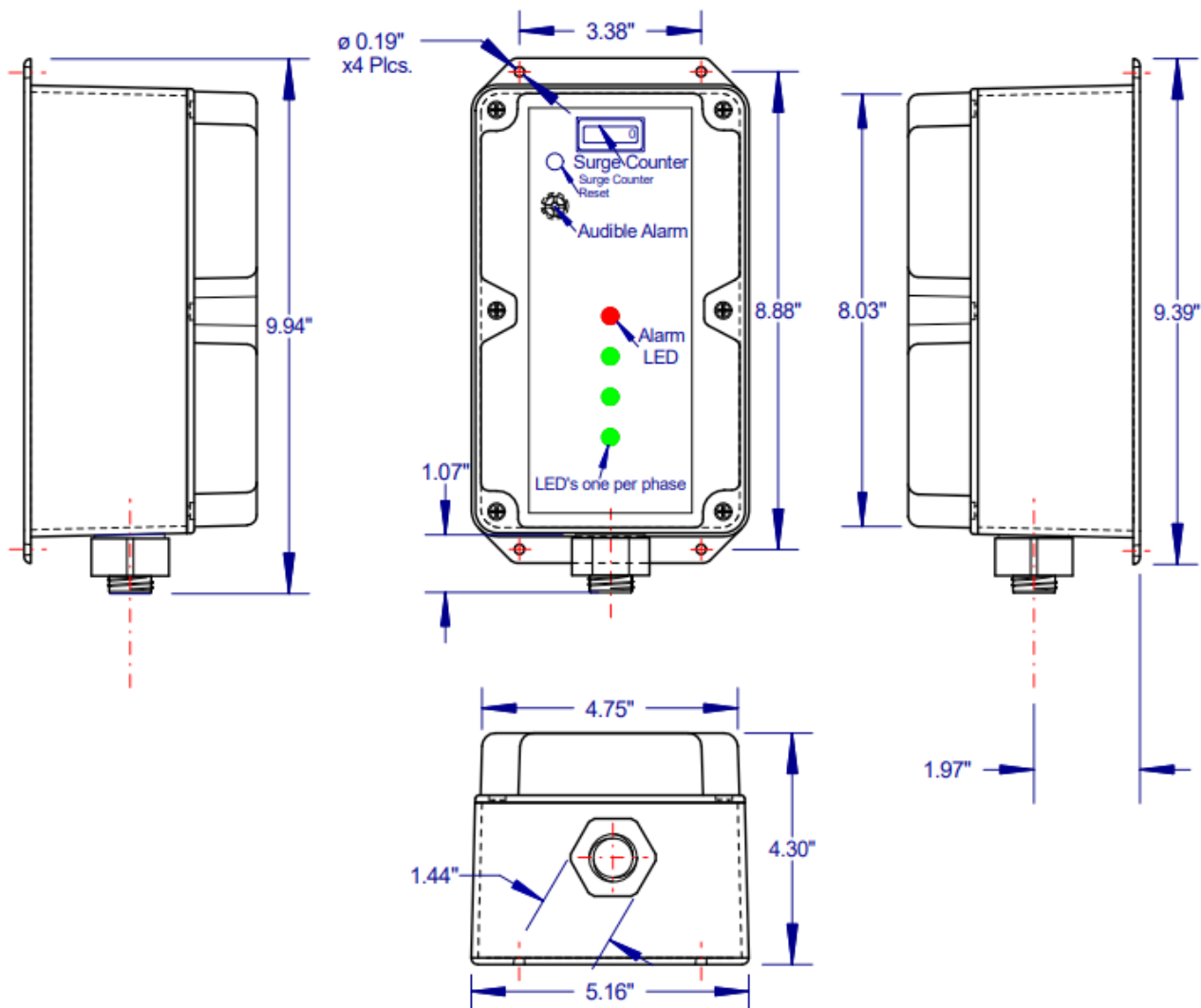
Standard enclosure shown; enclosure varies by model and options.



AC10S6

Basic Internal Audible Alarm and Surge Counter

The "AC10S6" option is an internal audible alarm and surge counter. The internal audible alarm contains an 80 dB, 4 kHz continuous siren and a red trouble LED which activates if the unit fails. There is also one green LED per phase to show normal operation. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states. The surge counter features a 6-digit LCD display, and a manual reset switch. The surge counter sensing circuit is current-based rather than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device. The AC10S6 option is available with other NEMA 4X enclosure options.

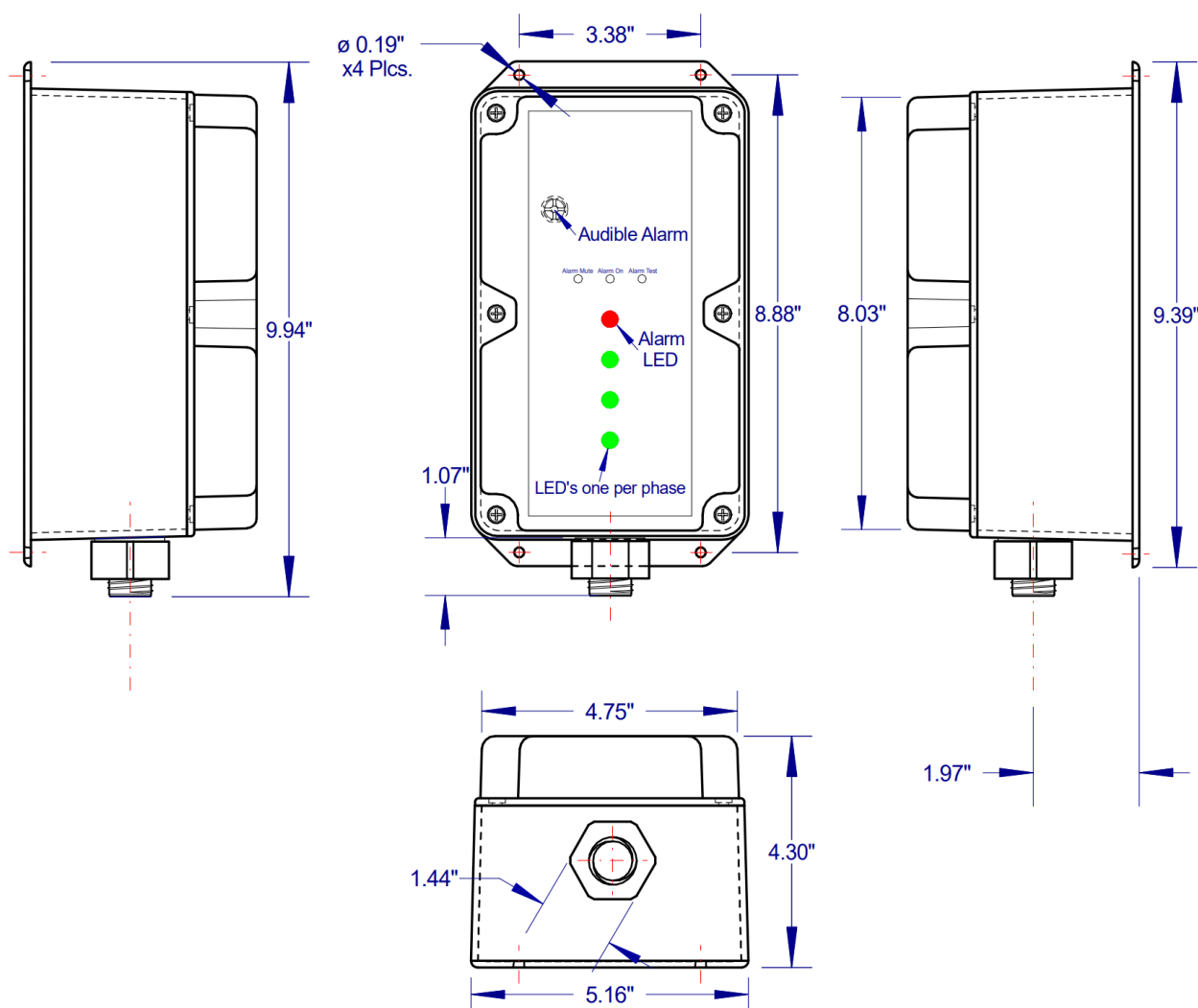


AC11

Advanced Internal Audible Alarm with Alarm Mute, On and Test buttons

The "AC11" option is the internal audible alarm option that contains an 80 dB, 4 kHz continuous siren, a red trouble LED, and one green LED per phase. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states and have on, mute and test buttons. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. The normally open and normally closed contacts are available for use in the installation. The audible alarm is available with other NEMA 4X options.

Standard enclosure shown; enclosure varies by model and options.



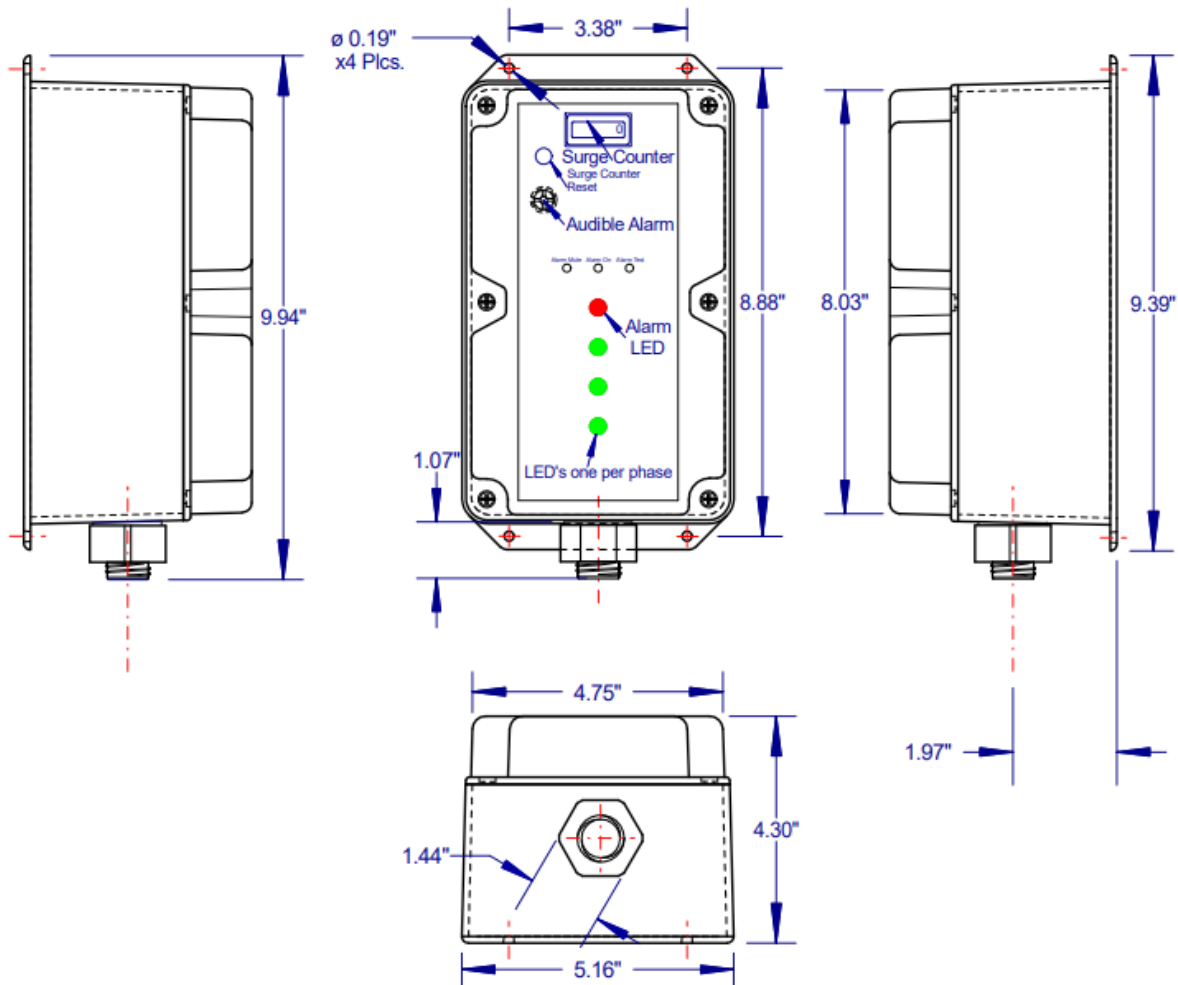
AC11S6

Advanced Internal Audible Alarm with Alarm Mute, On and Test buttons and Surge Counter

The "AC11S6" option is the combines an internal audible alarm and surge counter option that contains an 80 dB, 4 kHz continuous siren, a red trouble LED, and one green LED per phase. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states and have on, mute and test buttons. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. The surge counter features a 6-digit LCD display and a manual reset switch. The surge counter sensing circuit is current-based rather than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device. This option is available

with other NEMA 4X enclosure options.

Standard enclosure shown; enclosure varies by model and options.

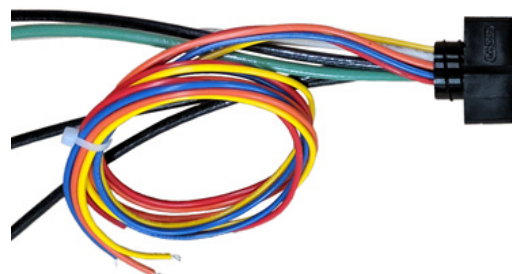
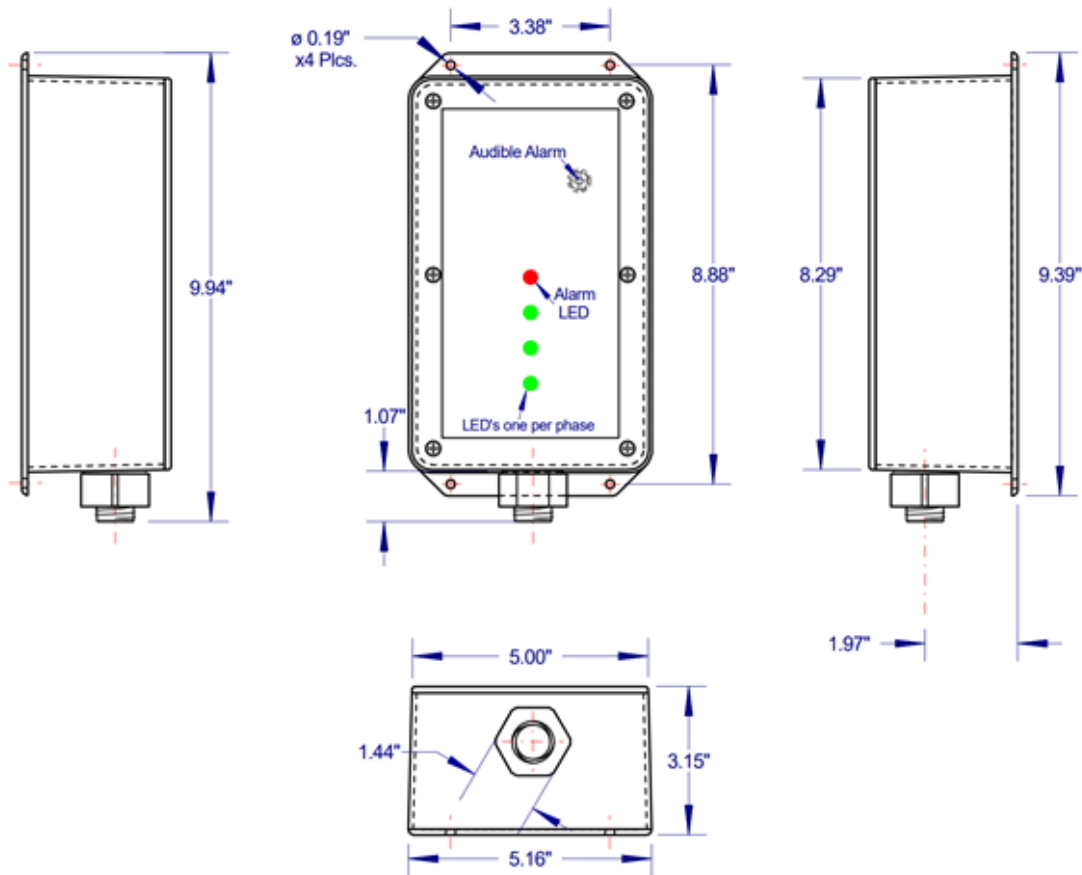


AC12

Basic Internal Audible Alarm with Dry Relay
 Contact wires extending out through the hub

The "AC12" option is the internal audible alarm option that contains an 80 dB, 4 kHz continuous siren and a red trouble LED which activates if the unit fails. There is also one green LED per phase to show normal operation. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. The dry relay contacts consist of 24 inch Yellow, Blue and Orange 22 AWG wires pre-

connected to terminals within the enclosure and extend out through the hub. Yellow + Blue = normally Open (N/O) with power applied. Orange + Blue = Normally closed (N/C) with power applied. In the case of a failure the alarm and red LED continue to operate until power is removed. The audible alarm option has provisions for installations requiring NEMA 4 and NEMA 4X ratings.



Hub with connection and dry relay contact wires shown

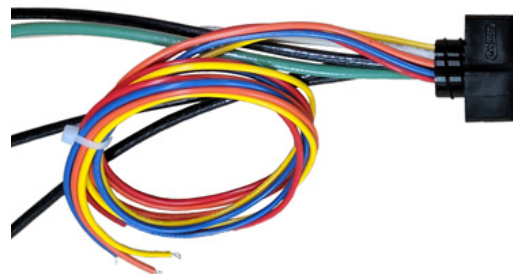
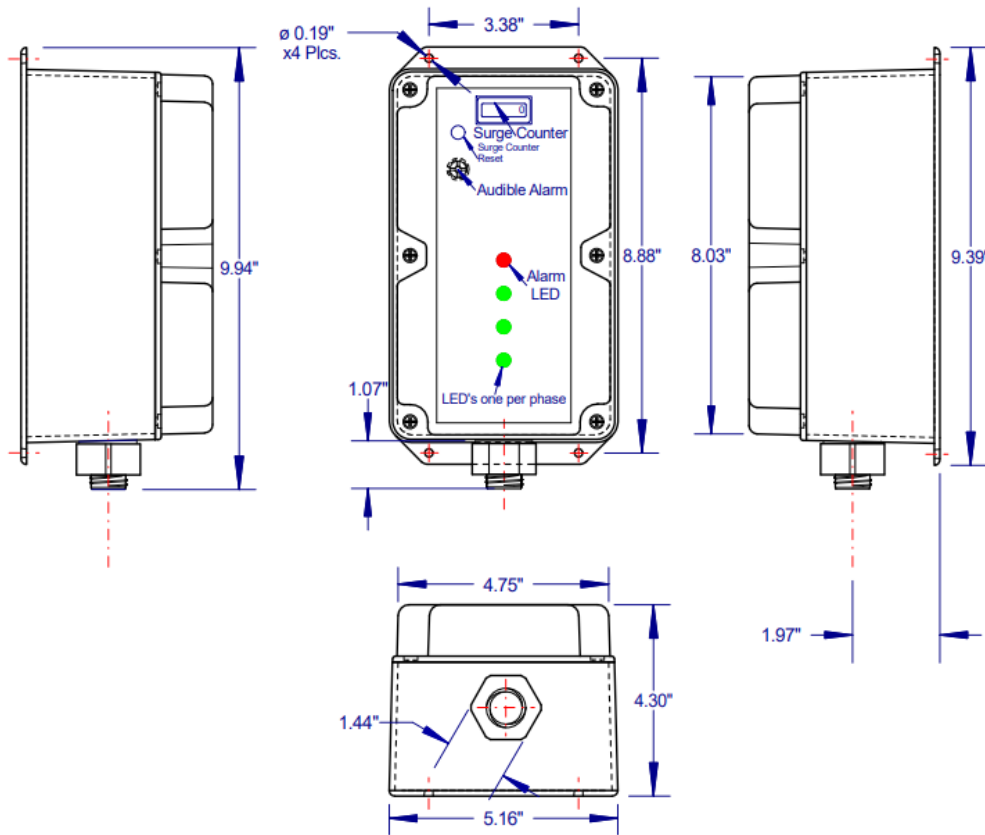
AC12S6

Basic Internal Audible Alarm with Dry Relay Contact wires extending out through the hub and Surge Counter

The "AC12S6" option is an internal audible alarm and surge counter. The internal audible alarm contains an 80 dB, 4 kHz continuous siren and a red trouble LED which activates if the unit fails. There is also one green LED per phase to show normal operation. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. The dry relay contacts consist of 24 inch Yellow, Blue and Orange 22 AWG wires pre-connected to terminals within the enclosure and extend out through the hub. Yellow + Blue = normally Open (N/O) with power applied. Orange

+ Blue = Normally closed (N/C) with power applied. In the case of a failure the alarm and red LED continue to operate until power is removed.

The surge counter features a 6-digit LCD display, and a manual reset switch. The surge counter sensing circuit is current-based rather than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device. The AC12S6 option is available with other NEMA 4X enclosure options.



Hub with connection and dry relay contact wires shown

AC13

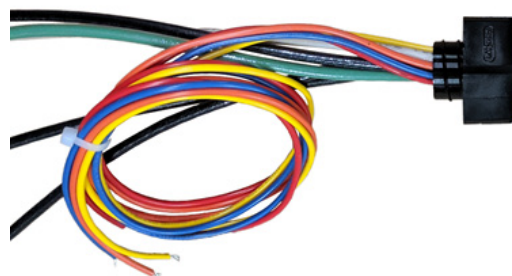
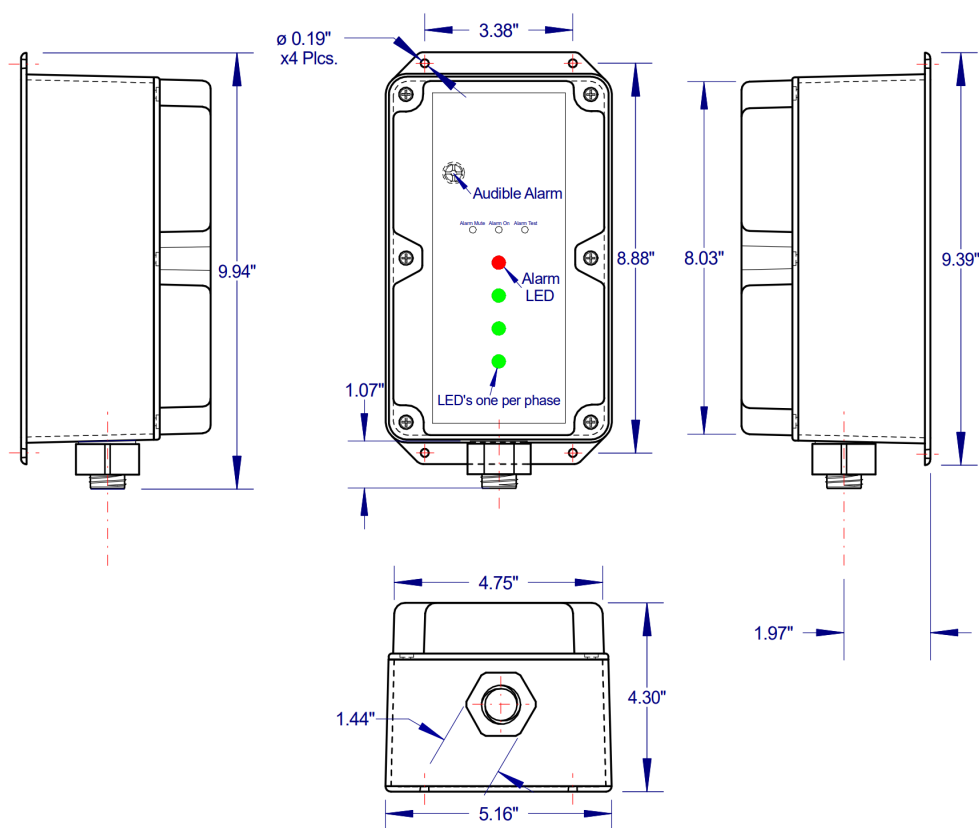
Advanced Internal Audible Alarm with Alarm Mute, On and Test buttons with Dry Relay Contact wires extending out through the hub

The "AC13" option is the internal audible alarm option that contains an 80 dB, 4 kHz continuous siren, a red trouble LED, and one green LED per phase. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states and have on, mute and test buttons. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD.

The dry relay contacts consist of 24 inch Yellow, Blue and Orange 22 AWG wires pre-connected to terminals within the enclosure and extend out through the hub. Yellow + Blue = normally Open (N/O) with power

applied. Orange + Blue = Normally closed (N/C) with power applied. In the case of a failure, the alarm and red LED continue to operate until power is removed or the module is muted. The audible is available with other NEMA 4X enclosure options.

Standard enclosure shown; enclosure varies by model and options.



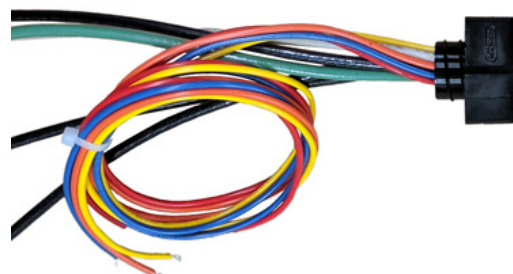
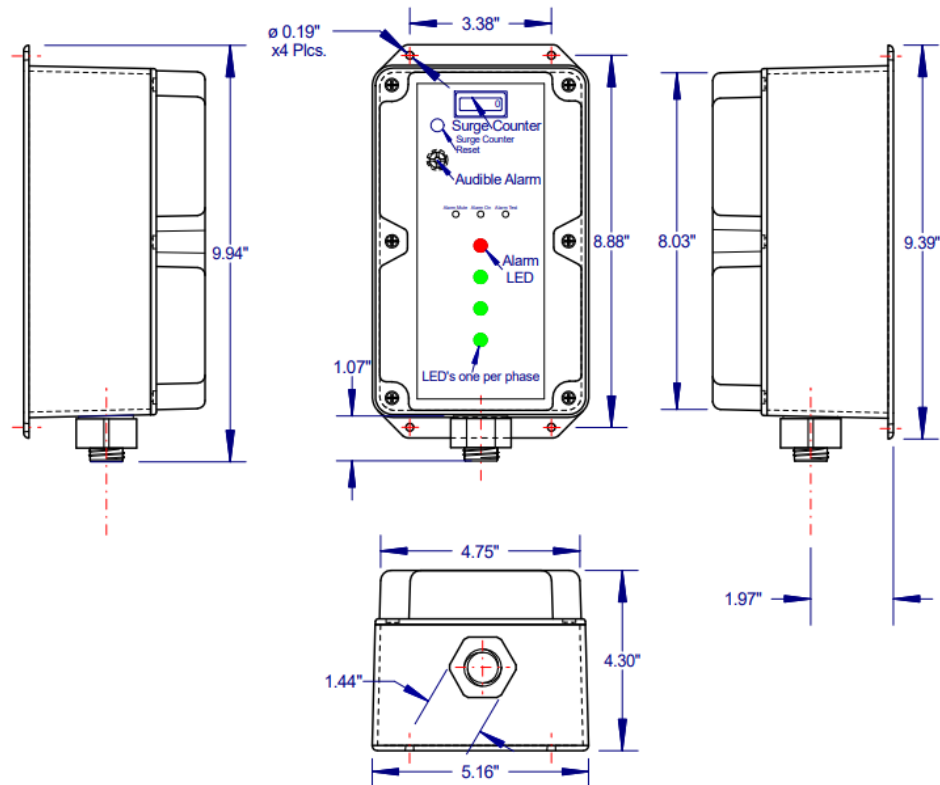
Hub with connection and dry relay contact wires shown

AC13S6

Advanced Internal Audible Alarm with Alarm Mute, On and Test buttons with Dry Relay Contact wires extending out through the hub and Surge Counter

The "AC13S6" option combines an internal audible alarm and surge counter with 24 inch wired dry relay contacts. The internal audible alarm contains an 80 dB, 4 kHz continuous siren, a red trouble LED, and one green LED per phase. These circuits are optimized to minimize power consumption when in an alarmed and unalarmed states and have on, mute and test buttons. The alarm senses the status of the normally open dry relay contact (with power applied) of the connected SPD. The surge counter features a 6-digit display, and a manual reset switch. The surge counter sensing circuit is current-based rather than voltage-based. That is,

it only counts surges that the unit has acted upon by detecting surge current flowing into the device. The dry relay contacts consist of 24 inch Yellow, Blue and Orange 22 AWG wires pre-connected to terminals within the enclosure and extend out through the hub. Yellow + Blue = normally Open (N/O) with power applied. Orange + Blue = Normally closed (N/C) with power applied. In the case of a failure, the alarm and red LED continue to operate until power is removed or the module is muted. The AC13S6 option is available with other NEMA 4X enclosure options.

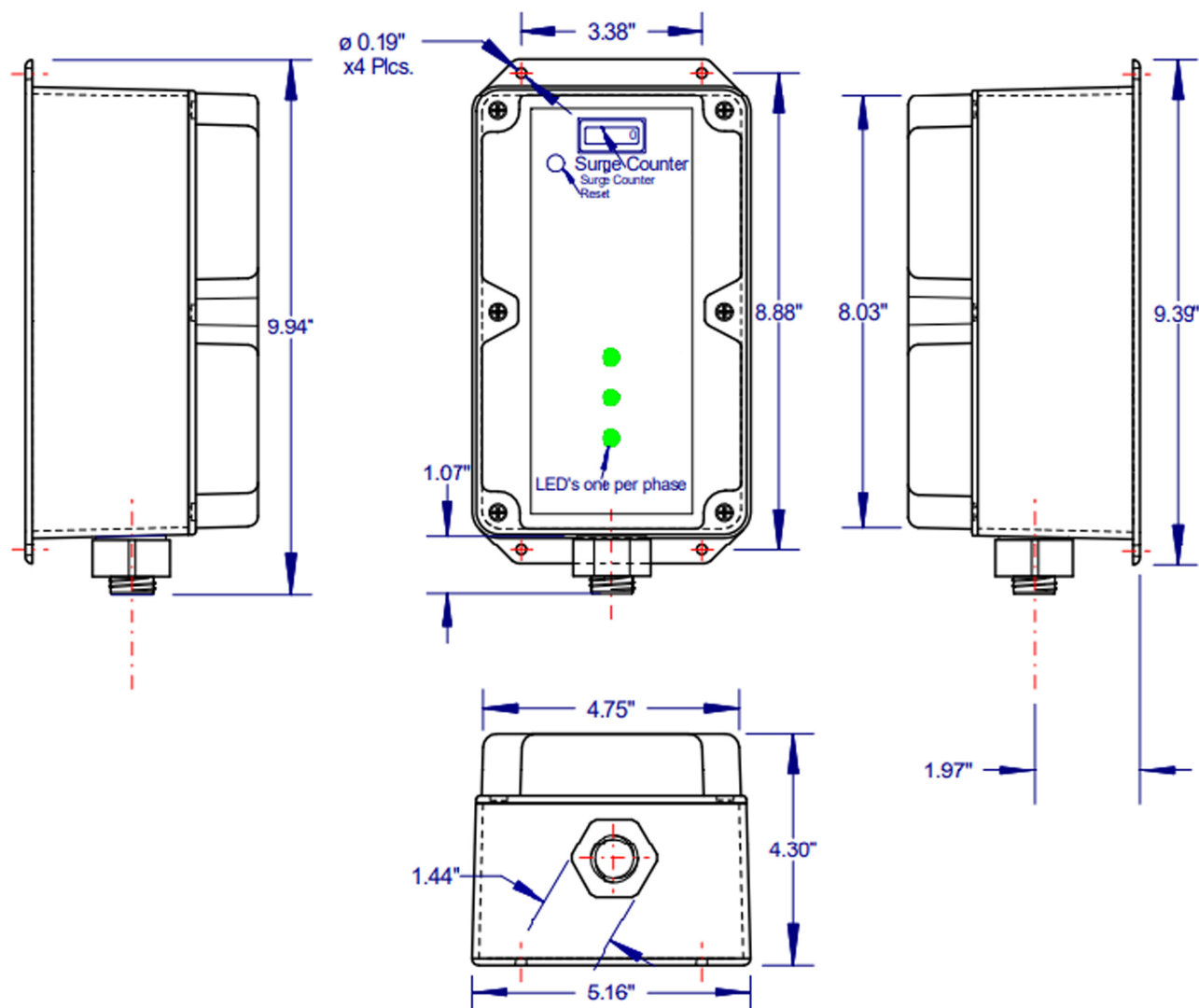


Hub with connection and dry relay contact wires shown

S6

Surge Counter with a LCD display

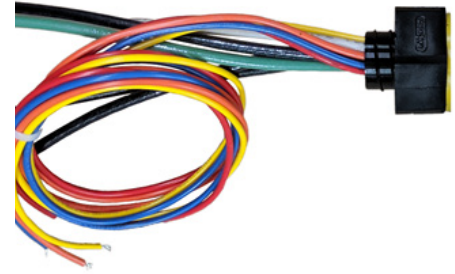
The "S6" option is the surge counter option. The surge counter features a 6-digit LCD display, and a manual reset switch. The surge counter sensing circuit is current-based rather than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device. This option is available on most models either integrated or externally mounted on a separate panel. It has provisions for use in NEMA 4 and NEMA 4X locations.



C1

Dry Relay Contacts with wires

The "C1" option is the dry relay contact (DRC) option with wires for each contact that extend outside the SPD enclosure through the conduit fitting and offers both normally open (NO) and normally closed (NC) contacts. These contacts do not share a common terminal; therefore, they can both be used, or they can be used independent of one another. Also, the contacts are truly form "C" contacts (independent NO and NC contacts). The contacts change state when either the internal or external over-current device opens or when power is lost to the suppressor. This feature can be used in combination with existing monitoring systems. There is no voltage supplied to the contacts; thus, the terminology "dry" or "volt-free".

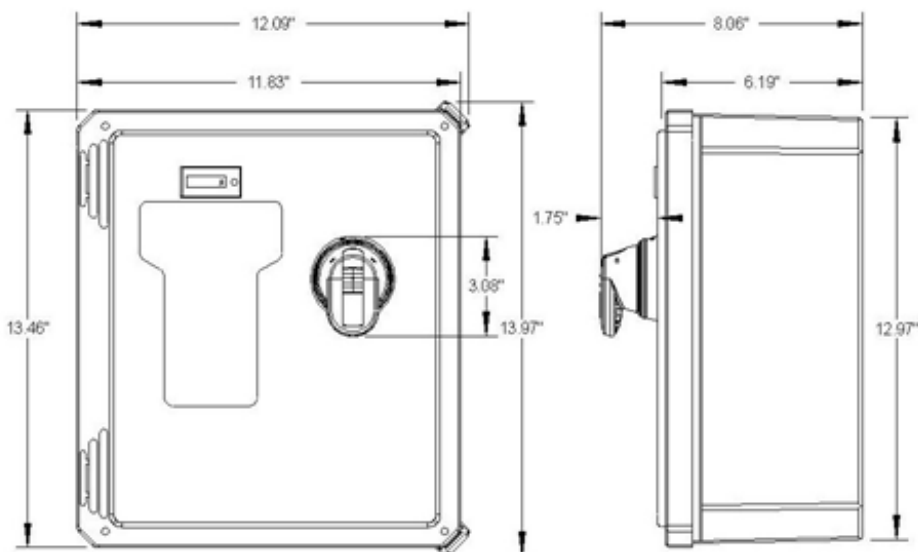


with connection and dry relay contact wires shown

D1

Integral Disconnect, base model mounted in NEMA 4X Fiberglass Composite Enclosure with Disconnect Switch Handle on the outside of the enclosure. (Models S/CKLx through S/CMLx.) Includes the Nema 4X ("X") Composite Enclosure in the cost of the option. Do not add the "X" to the part number; however, if you desire a NEMA 4X Stainless Steel type of enclosure, include the option code "XS" for the alternative enclosure in the model number.

The "D1" option is the most common disconnect option utilized. This option provides a compact enclosure size along with the convenience of being able to replace the "module" without removing power to the electrical system to which it is connected. This box-in-a-box concept is created by using a standard suppressor model and a disconnect switch mounted on a back plate inside a larger NEMA 4X Composite enclosure. The handle protrudes to the outside of the enclosure for quick and easy disconnection from the electrical system. This is like getting two options in one – that is, the disconnect option and the NEMA 4X composite enclosure option.



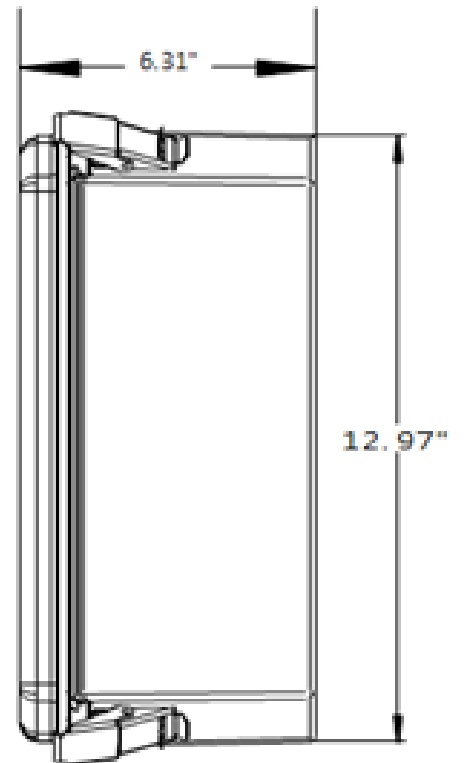
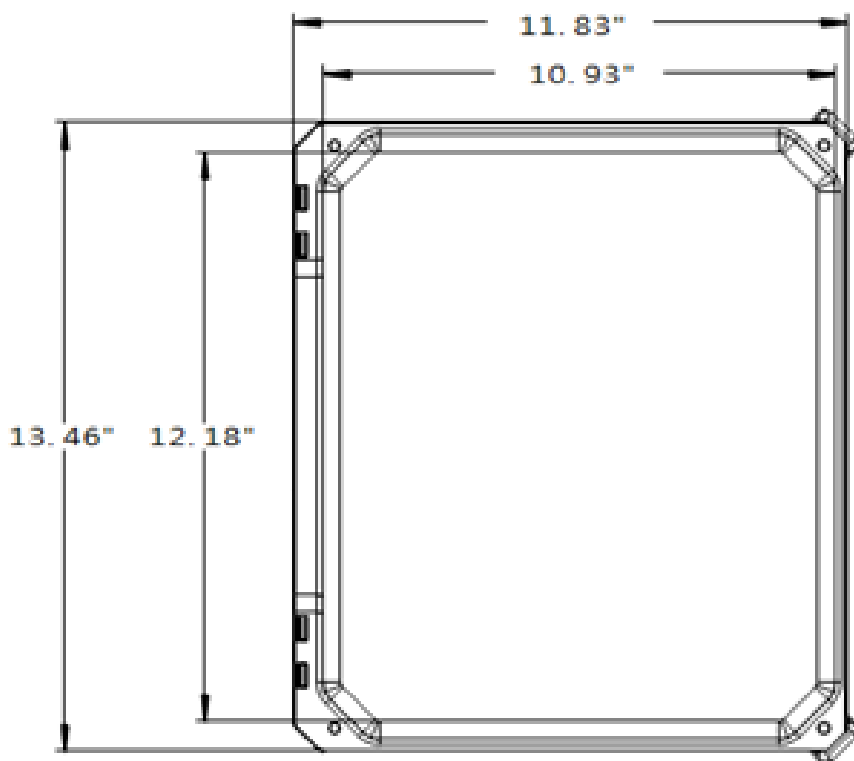
Disconnect Wire Range:
#10 - #4AWG

Shipping Weight:
The shipping weight is dependent on the module and options ordered.

D3

Integral Disconnect, base model mounted in NEMA 4X Fiberglass Composite Enclosure with Internal Handle Disconnect Switch. (Models S/CKLx through S/CMLx.) Includes the Nema 4X ("X") Composite Enclosure in the cost of the option. Do not add the "X" to the part number; however, if you desire a NEMA 4X Stainless Steel type of enclosure, include the option code "XS" for the alternative enclosure in the model number.

The "D3" Option is a disconnect option with no external handle on the outside of the enclosure. This option is used in special cases when access to the switch is intended to be minimized. The disconnect switch can be turned off only after opening the lid of the suppressor.



Disconnect Wire Range:
#10 – #4AWG

Shipping Weight:
The shipping weight is dependent on the module and options ordered.



D5

Integral Disconnect, base model mounted in NEMA 4X Fiberglass Composite Enclosure with Disconnect Switch Handle on the outside of the enclosure. (Models S/CILx through S/CXDLx.) Includes the Nema 4X ("X") Composite Enclosure in the cost of the option. Do not add the "X" to the part number; however, if you desire a NEMA 4X Stainless Steel type of enclosure, include the option code "XS" for the alternative enclosure in the model number.

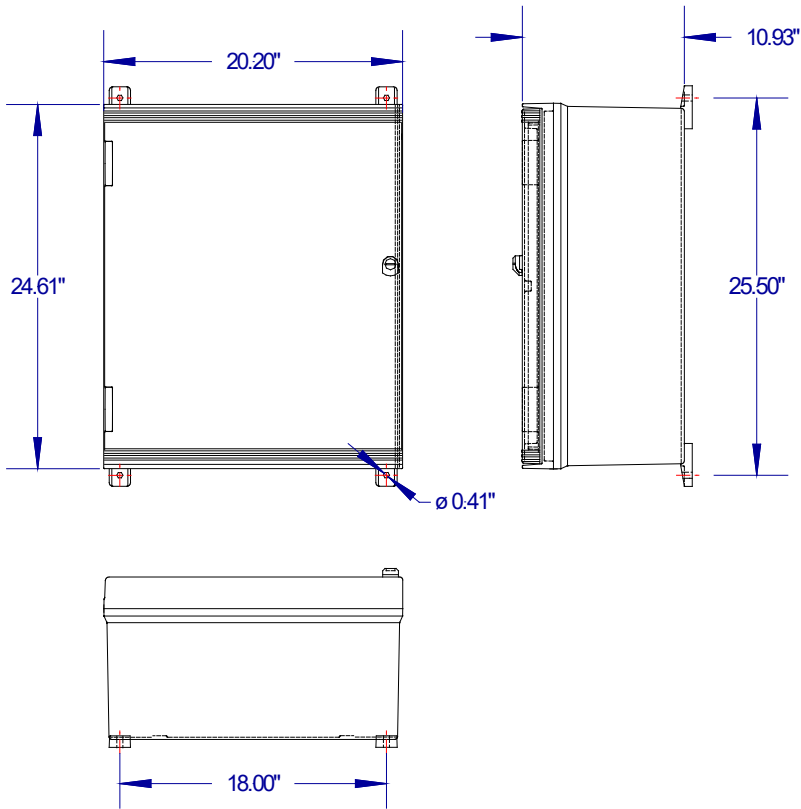
The "D5/D6" options are for Advantage™ models above 100 kA per mode. With this option we are able to provide the convenience of having the suppressor, and disconnect located inside a composite, Indoor/Outdoor, enclosure. There is either an external disconnect switch (D5) or internal disconnect switch that is accessed only by opening the door (D6).

The unique designs of these options help to make our models the most versatile SPD devices on the market with superior performance specs and a warranty that is second to none.

D6

Integral Disconnect, base model mounted in NEMA 4X Fiberglass Composite Enclosure with Internal Handle Disconnect Switch. (Models S/CILx through S/CXDLx.) Includes the Nema 4X ("X") Composite Enclosure in the cost of the option. Do not add the "X" to the part number; however, if you desire a NEMA 4X Stainless Steel type of enclosure, include the option code "XS" for the alternative enclosure in the model number.

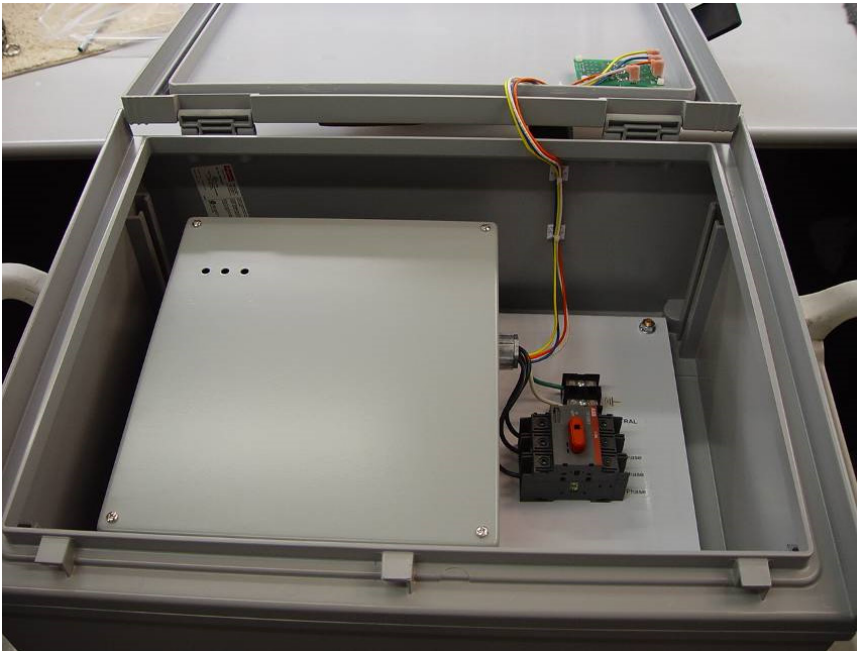
D5/D6 Enclosure



Disconnect Wire Range:
#10 – #4 AWG

Shipping Weight:
The shipping weight is dependent on the module and options ordered.

Available D5/D6 Modules	
SILA-M	CILA-M
SHLA-M	CHLA-M
SHDLA-M	CHDLA-M
SMDLA-M	CMDLA-M
SXDLA-M	CXDLA-M



Actual unit may vary from pictured



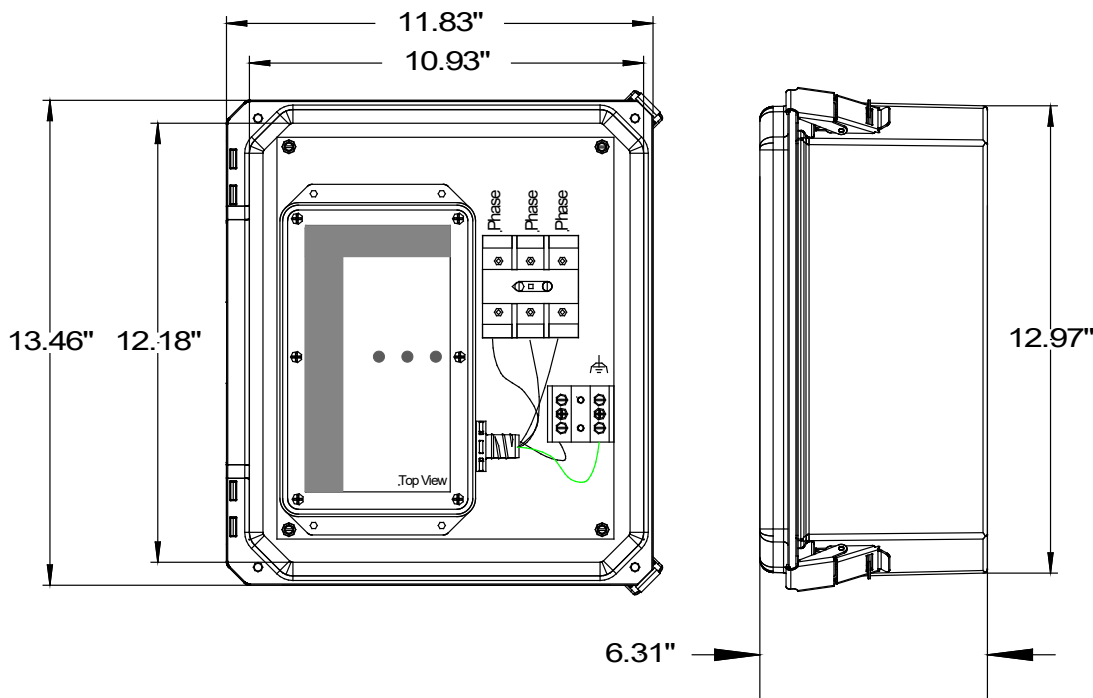
Optional Keylock not Shown

D17

A disconnect option with a clear lid, and no external handle on the outside of the enclosure. The Disconnect switch can only be opened after opening the lid.

The "D17" Option is a disconnect option with no external handle on the outside of the enclosure. This option is used in cases when access to the switch is intended to be minimized. The disconnect switch can be turned off only after opening the lid of the suppressor. The main benefit of the D17 option is that the clear lid of this enclosure allows for a visual inspection of the unit

inside without having to open the lid. This also allows the unit diagnostics to shine through the lid. This option is intended for NEMA 4X type installations and is available for units up to S/CMLx. (Note: This option is not intended for locations in full or direct sunlight. Warranty is voided if mounted so.)



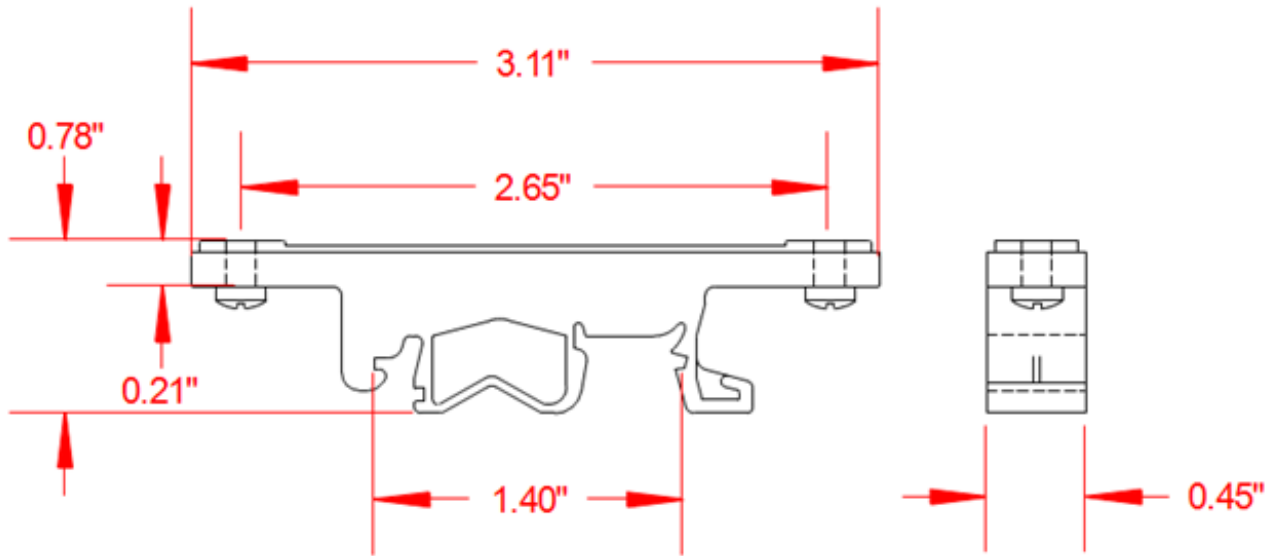
Disconnect Wire Range:
#10 – #4 AWG

Shipping Weight:
The shipping weight is dependent on the module and options ordered.

DIN

Din Rail Mounting Feet

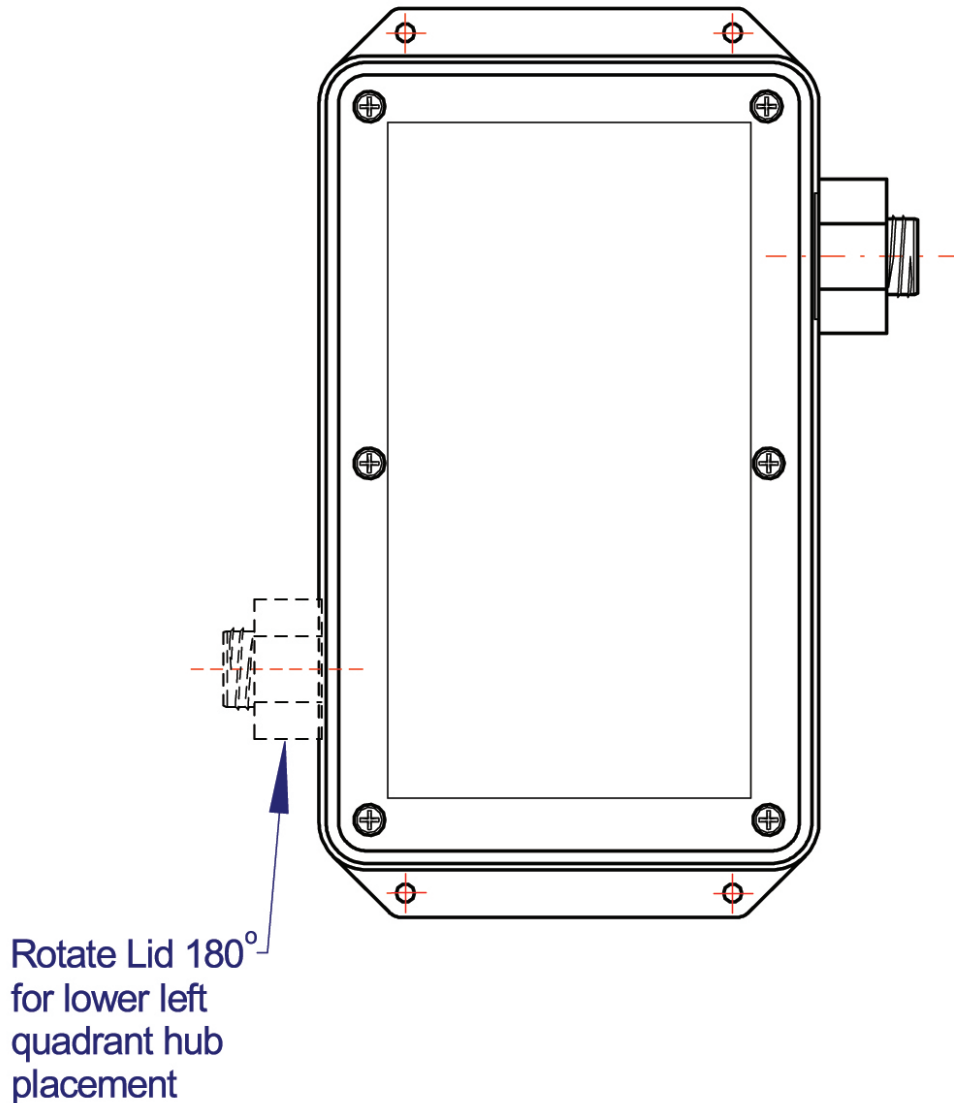
The "DIN" option is the external DIN mounting option that provides a DIN foot to the bottom of the enclosure. The DIN foot snaps onto a piece of DIN rail.



E1

Hub Mounted on the Upper Right Side of the Enclosure. Of course, this location can be moved simply by rotating the lid (puts the hub in the lower-left quadrant). This option is typically used when installing the suppressor external but adjacent to a panel so that the unit is vertically parallel with the panel.

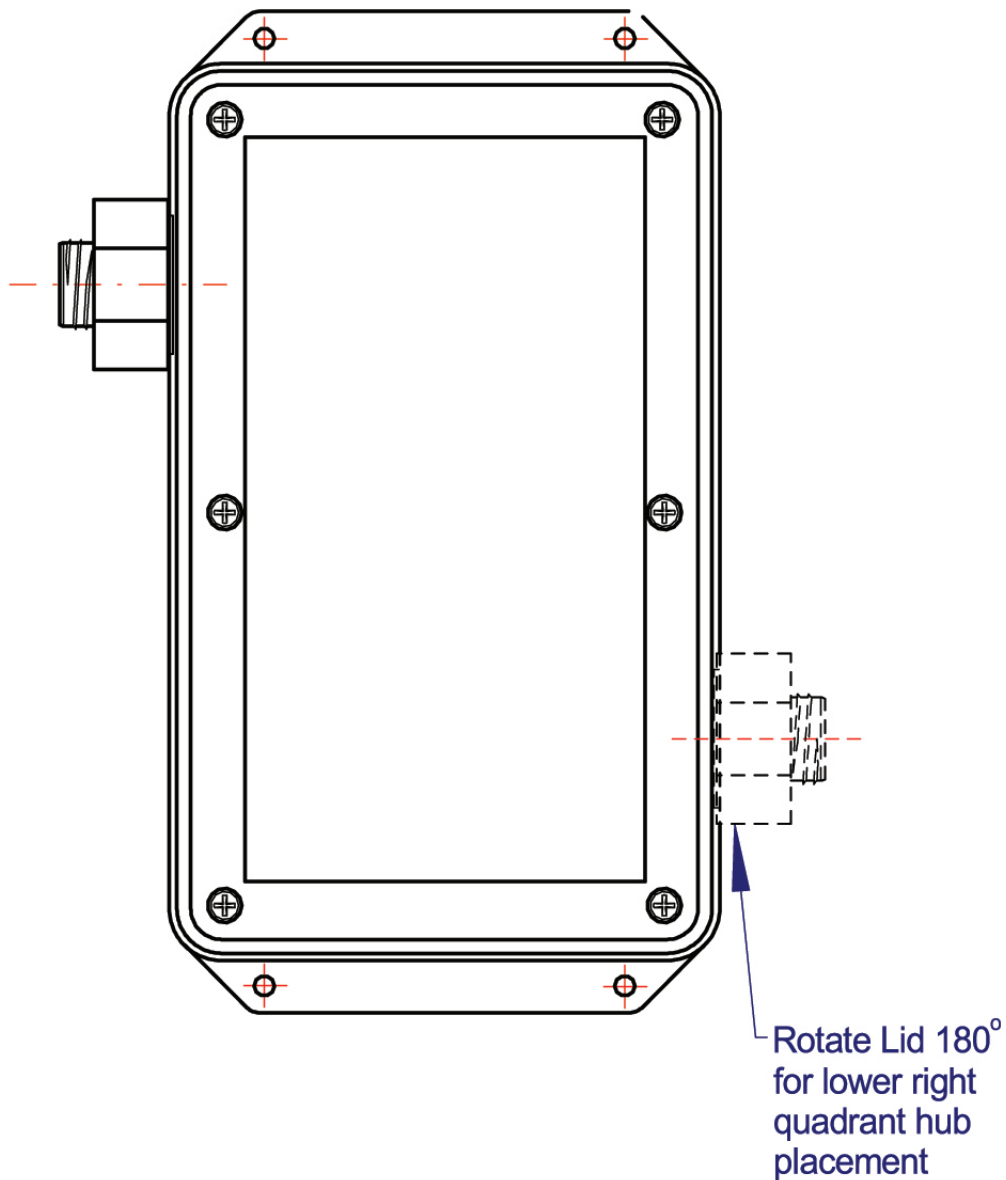
The "E1" option places the hub on the side of the enclosure. The hub is placed on the upper-left quadrant of the box. Of course, this location can be moved simply by rotating the lid (puts the hub in the lower-right quadrant). This option is typically used when installing the suppressor external but adjacent to a panel so that the unit is vertically parallel with the panel.



E11

Hub Mounted on the Upper Left Side of the Enclosure

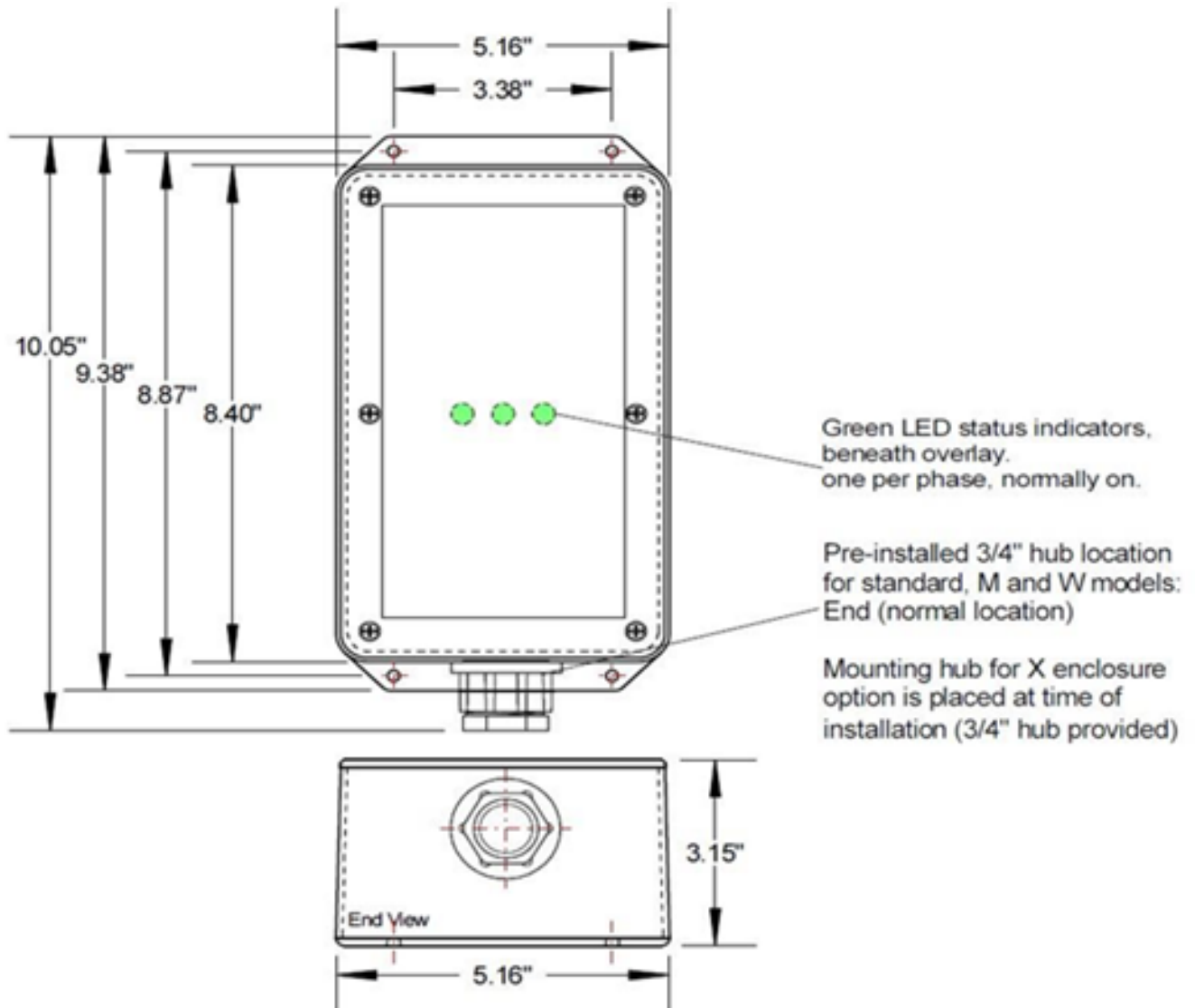
The "E11" option places the hub on the side of the enclosure. The hub is placed on the upper-right quadrant of the box. Of course, this location can be moved simply by rotating the lid (puts the hub in the lower-left quadrant). This option is typically used when installing the suppressor external but adjacent to a panel so that the unit is vertically parallel with the panel.



E30

Metallic Hub on the End of the Enclosure

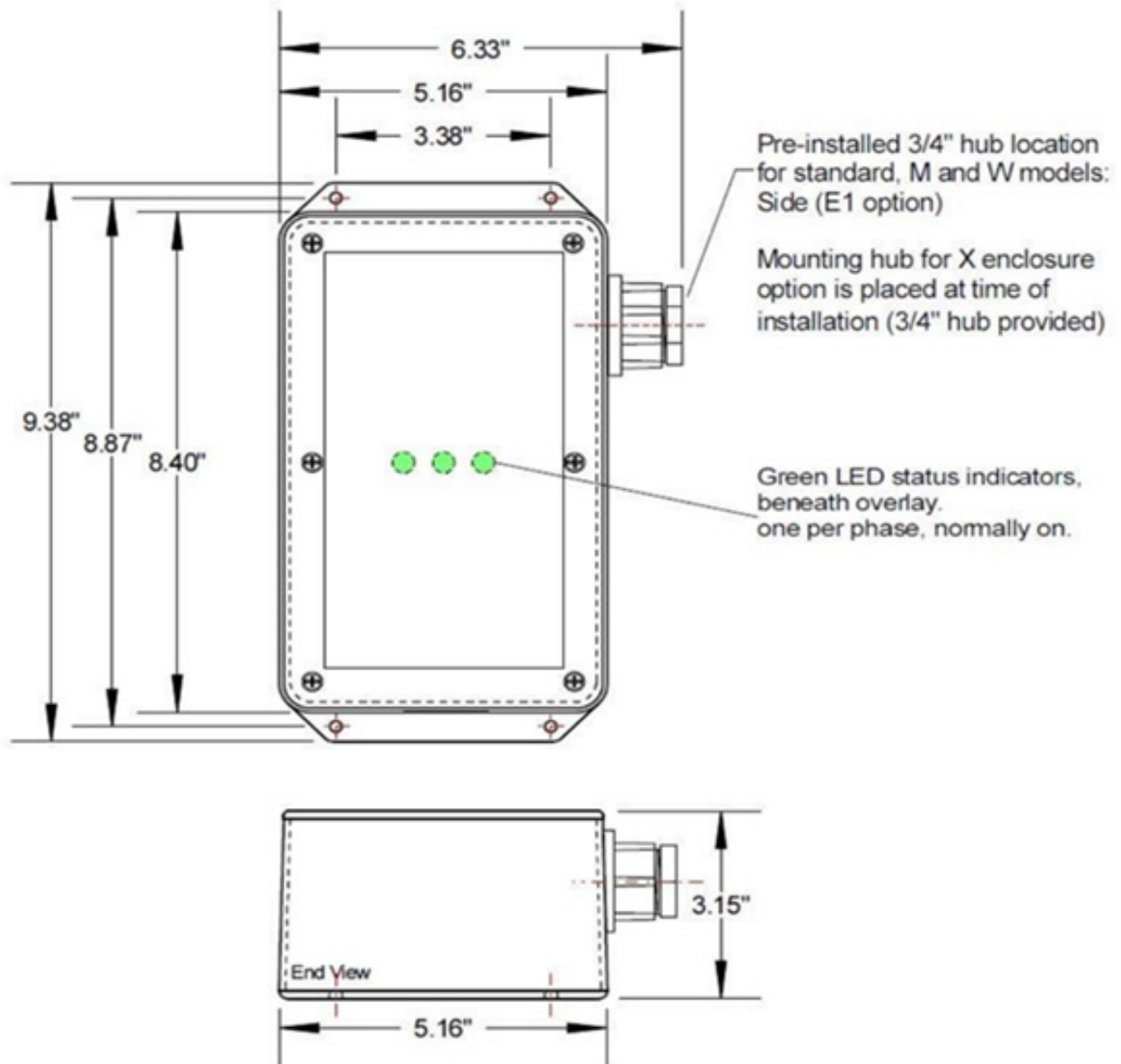
The "E30" option places the metallic hub on the bottom of the enclosure. This option is typically used when installing the suppressor externally at the top of the enclosure, or when installed externally adjacent to the enclosure using flexible conduit.



E31

Metallic Hub on the Upper Right Side of the Enclosure

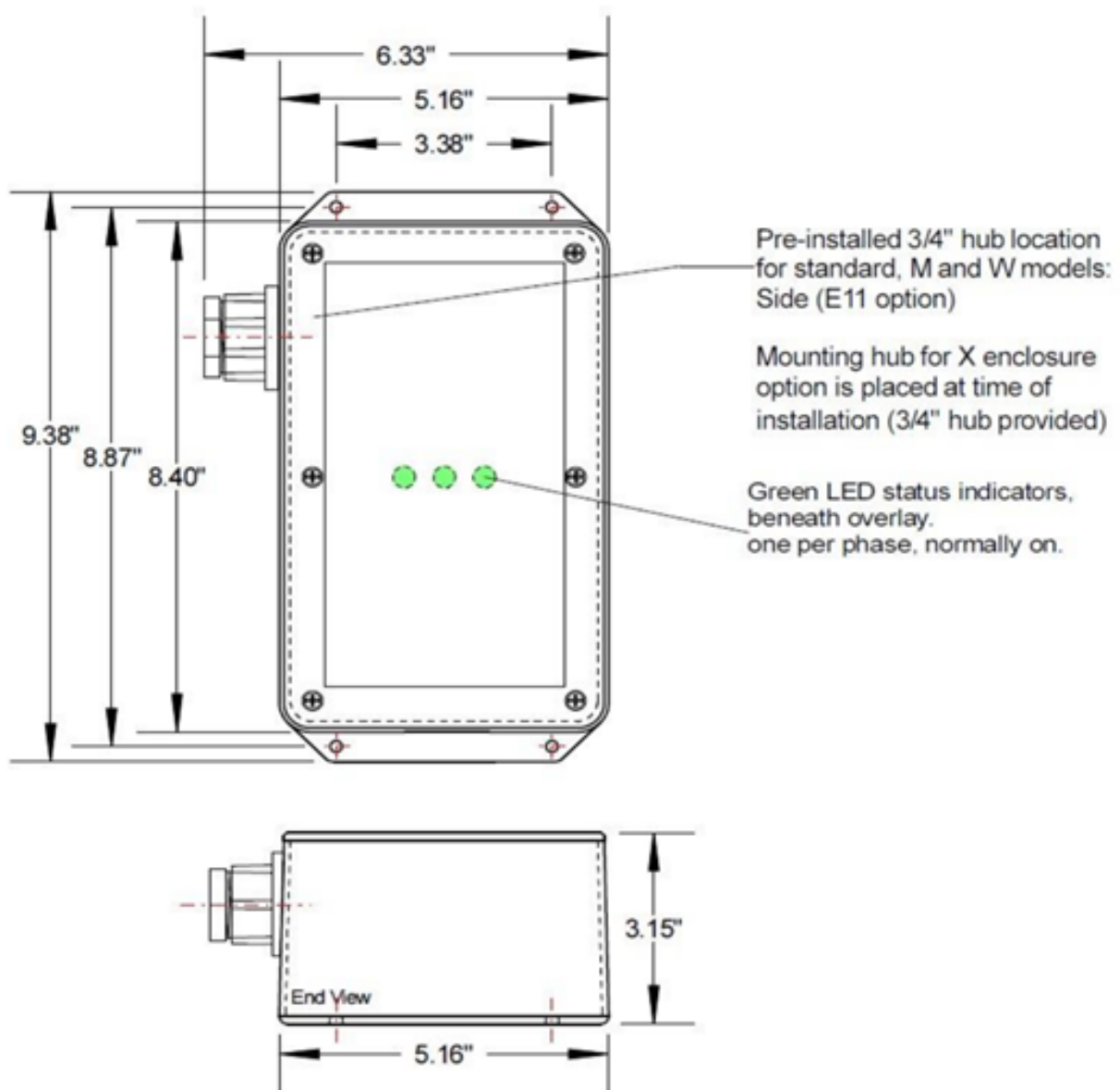
The "E31" option places the metallic hub on the upper right side of the enclosure. This option is typically used when installing the suppressor externally adjacent to the enclosure.



E32

Metallic Hub on the Upper Left Side of the Enclosure

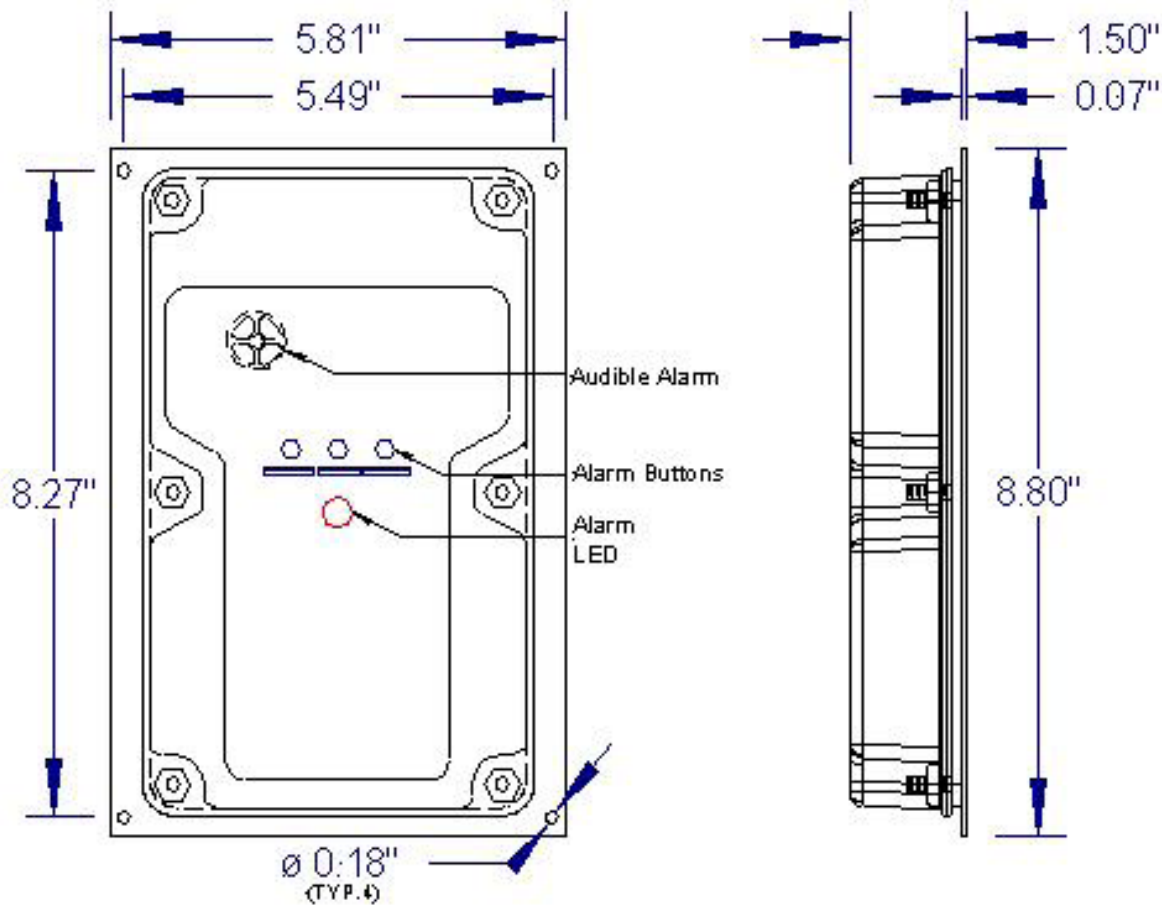
The "E32" option places the metallic hub on the upper left side of the enclosure. This option is typically used when installing the suppressor externally adjacent to the enclosure.



-EA

External Audible Alarm Module. Audible Alarm requires DRCs be opted on Base SPD

The "EA" option is the external audible alarm option that contains a 110 dB, pulsed siren, a red "trouble" LED. The audible alarm and red LED are powered by a long-life lithium based 9V battery with a ten-year shelf life. The battery allows the siren to operate continuously for a minimum of 72 hours and the red, "trouble" LED to operate continuously for a minimum of 144 hours. These battery powered circuits are optimized to minimize power consumption when in an alarmed state. The alarm senses the status of the normally open dry relay contact (with power applied).



-EAS

External Audible Alarm Module with Surge Counter. Audible Alarm requires DRCs be opted on Base SPD

The "EAS" module provides a compact, streamline packaging of the audible alarm, dry relay contact and surge counter options. For applications that require remotely connected advanced diagnostics, the EAS is the optimum solution. The EAS module has a 25 year free replacement warranty (does not include battery).

Surge Counter

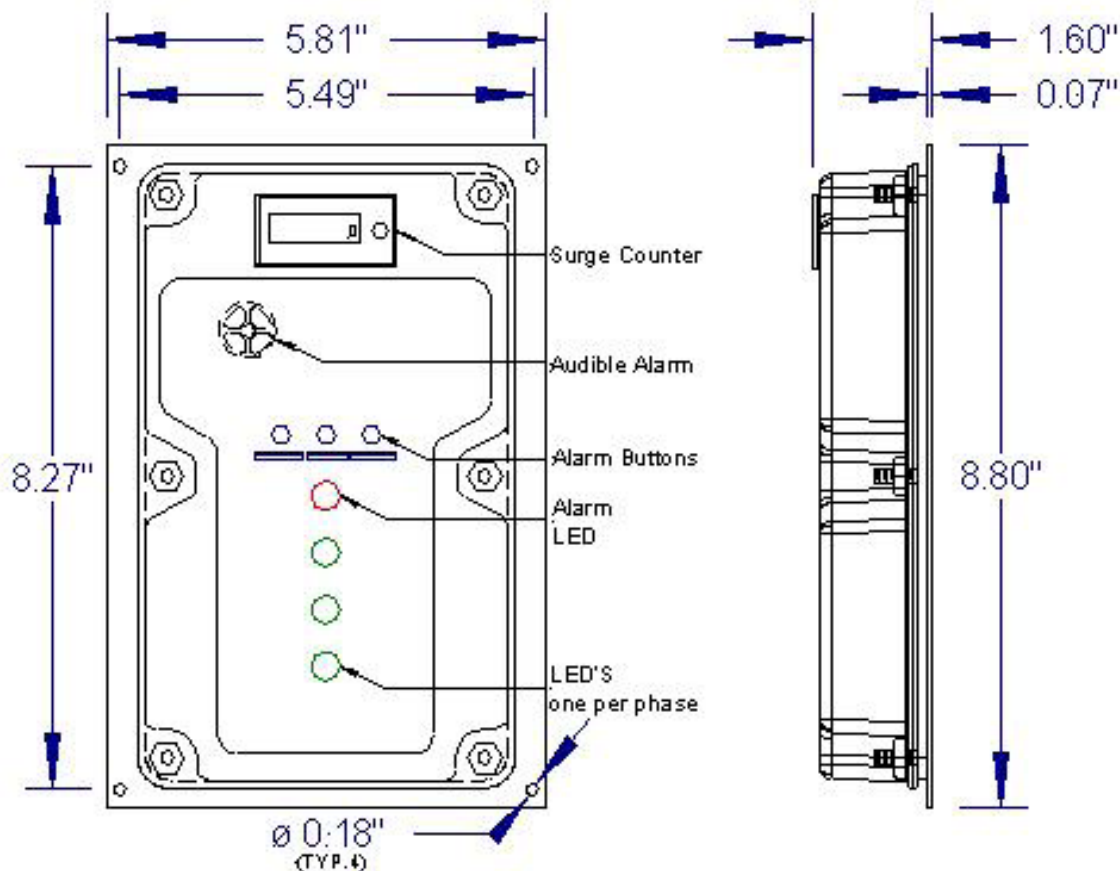
- 8 digit display - counts to 99,999,999
- Monitors all phases for surge events
- Works independent of voltage
- Counts only surges that the SPD acts upon
- Solid-state, microprocessor based counter module
- Reset button with "Disable" option
- Switchable High Surge Counter feature

Key Features

- Local and Remote Diagnostics
- 25 Year Unlimited Free Replacement Warranty (Except Battery)

Audible Alarm

- Pulsed siren that sounds with the illuminated red "trouble" LED.
- High-intensity warble siren (110dB)
- 72-hour continuous siren capability
- 144-hour continuous "trouble" LED capability

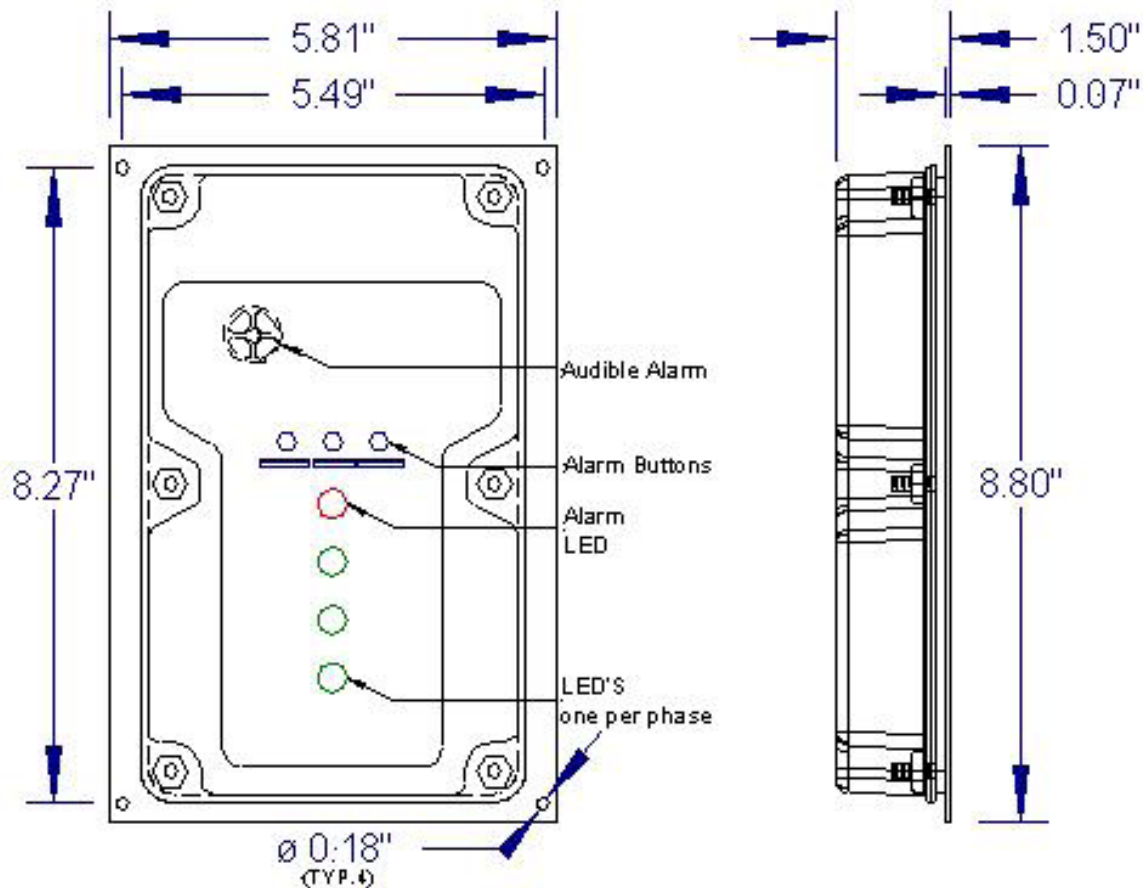


-EAC

External Audible Alarm Module with a set of DRCs. This option must be included at the time of order. This option replaces the internal diagnostics with external diagnostics. It cannot be fitted to a model with DRCs (unless the internal circuit is removed and replaced with the external circuit).

The "EAC" option is the external audible alarm option that contains a 110 dB, pulsed siren, a red "trouble" LED, and one green LED per phase. The audible alarm and red LED are powered by a long-life lithium based 9V battery with a ten-year shelf life. The battery allows the siren to operate continuously for a minimum of 72 hours and the red, "trouble" LED to operate continuously for a minimum of 144 hours. These battery powered circuits are optimized to minimize power consumption

when in an alarmed state. The alarm senses the status of the normally open dry relay contact (with power applied). The normally closed contact is available for use in the installation.



-EACS

External Audible Alarm Module with a set of DRCs, LEDs, and Surge Counter. This option must be included at the time of order. The option replaces the internal diagnostics with external diagnostics. It cannot be fitted to a model with DRCs (unless the internal circuit is removed and replaced with the external circuit).

The "EACS" module provides a compact, streamline packaging of the audible alarm, dry relay contact and surge counter options. For applications that require remotely connected advanced diagnostics, the EACS is the optimum solution. The EACS module has a 25 year free replacement warranty (does not include the battery).

Key Features

- Local and Remote Diagnostics
- 25 Year Unlimited Free Replacement Warranty (Except Battery)

Audible Alarm

- Pulsed siren that sounds with the illuminated red "trouble" LED.
- High-intensity warble siren (110dB)

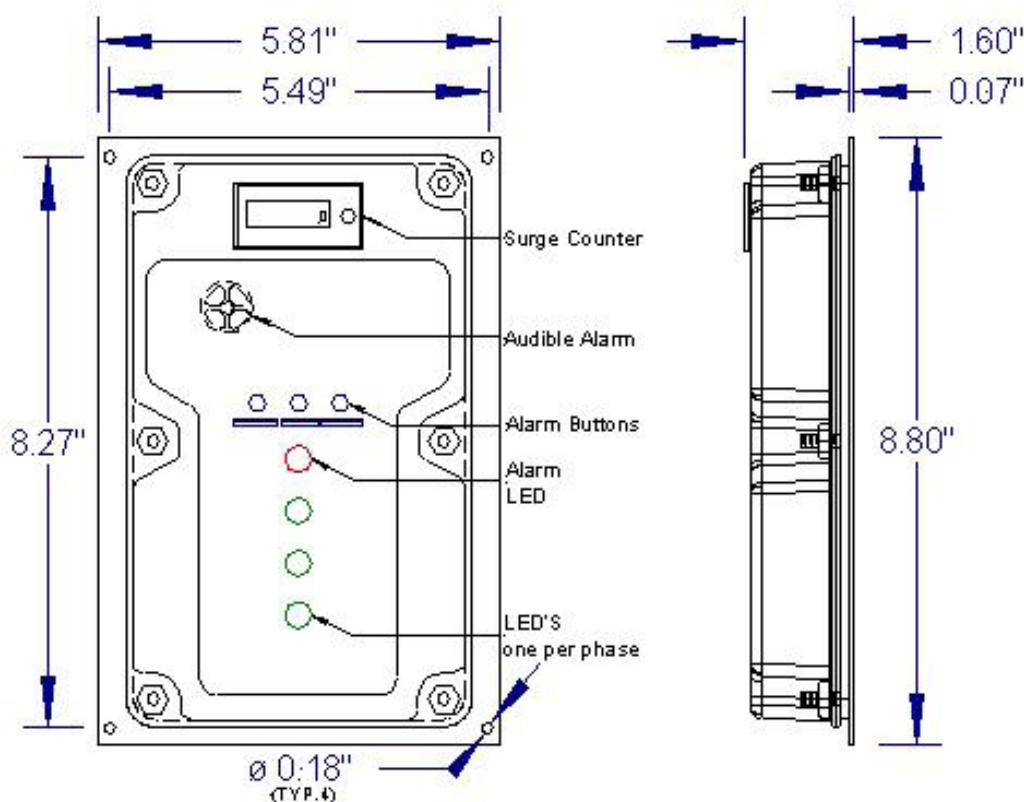
- Ten-year rated (shelf life), replaceable, lithium based 9V battery
- Circuit optimized to reduce battery power consumption when alarm condition is present
- 72-hour continuous siren capability
- 144-hour continuous "trouble" LED capability

Surge Counter

- 8 digit display - counts to 99,999,999
- Monitors all phases for surge events
- Works independent of voltage
- Counts only surges that the SPD acts upon
- Solid-state, microprocessor based counter module
- Reset button with "Disable" option
- Switchable High Surge Counter feature

Dry Relay Contact

- Normally closed contacts rated at 60W (from 30VDC @ 2 Amps to 150VDC @ 0.4 Amps) or 100 VA (from 50VAC @ 2 Amps to 220VAC @0.45 Amps) that accepts 16-22 AWG wire



-ECS

External Surge Counter with DRCs and LEDs. This option must be included at the time of order. This option replaces the internal diagnostics with external diagnostics. It cannot be fitted to a model with DRCs (unless the internal circuit is removed and replaced with the external circuit).

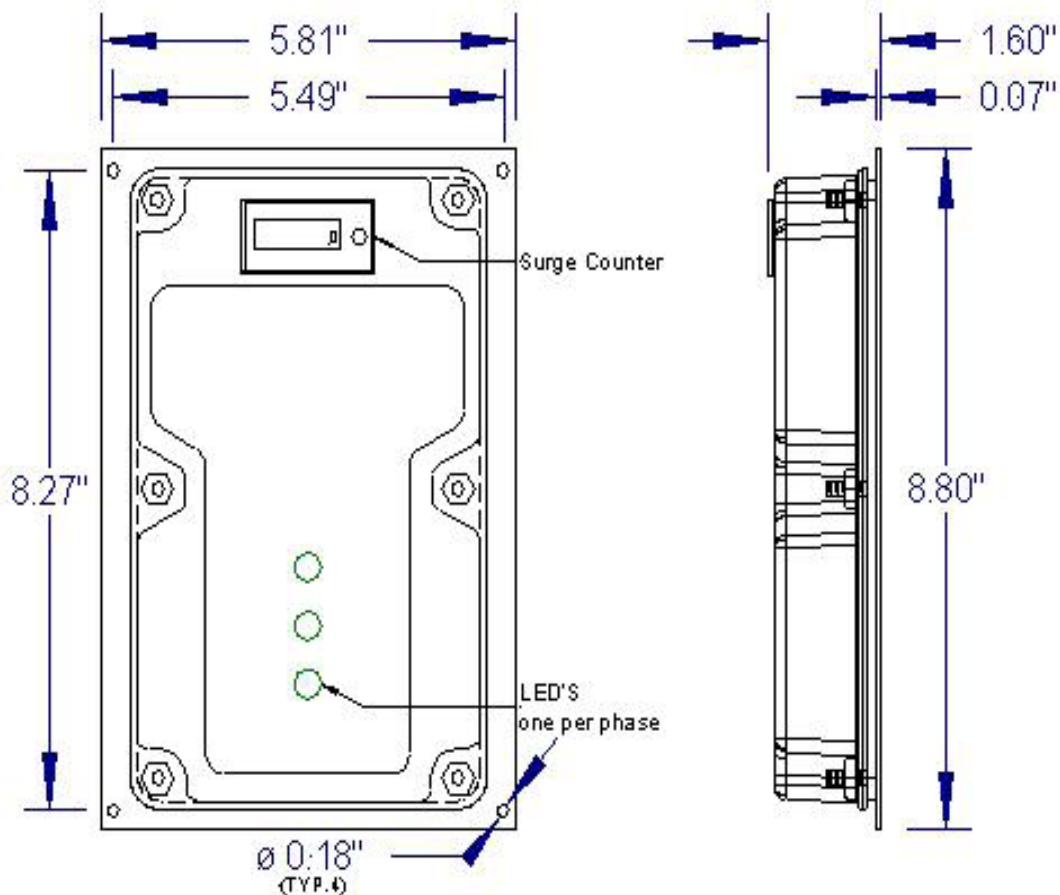
The "ECS" option is an externally mounted surge counter option. The surge counter features an 8digit LCD display, a 10 year battery, a manual reset switch, and a switchable High Surge count only feature. These models will come from the factory with a preset level (2000 V / 66 A). When the "High Surge" counter feature is enabled, the level will be user adjustable from 1000 A to 3000 A surge levels.

The ECS option has a backplate that allows for panel mounting (simply bolt it to the outside of a panel or deadfront) or it can be back-mounted with standoffs. In

the latter case, simply create a cutout in the deadfront or panel that will allow the surge counter, and LEDs to show through. In either case, connections to the ECS are made using 18-22AWG wire (LED connections come from the base unit and the surge counter sensors are provided with wire) that can enter the enclosure through the backplate or through the end of the enclosure.

The surge counter sensing circuit is current-based rather than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device.

The ECS option includes a Dry Relay Contact: - Normally closed contacts rated at 60W (from 30VDC @ 2 Amps to 150VDC @ 0.4 Amps) or 100 VA (from 50VAC @ 2 Amps to 220VAC @0.45 Amps) that accepts 16-22 AWG wire.

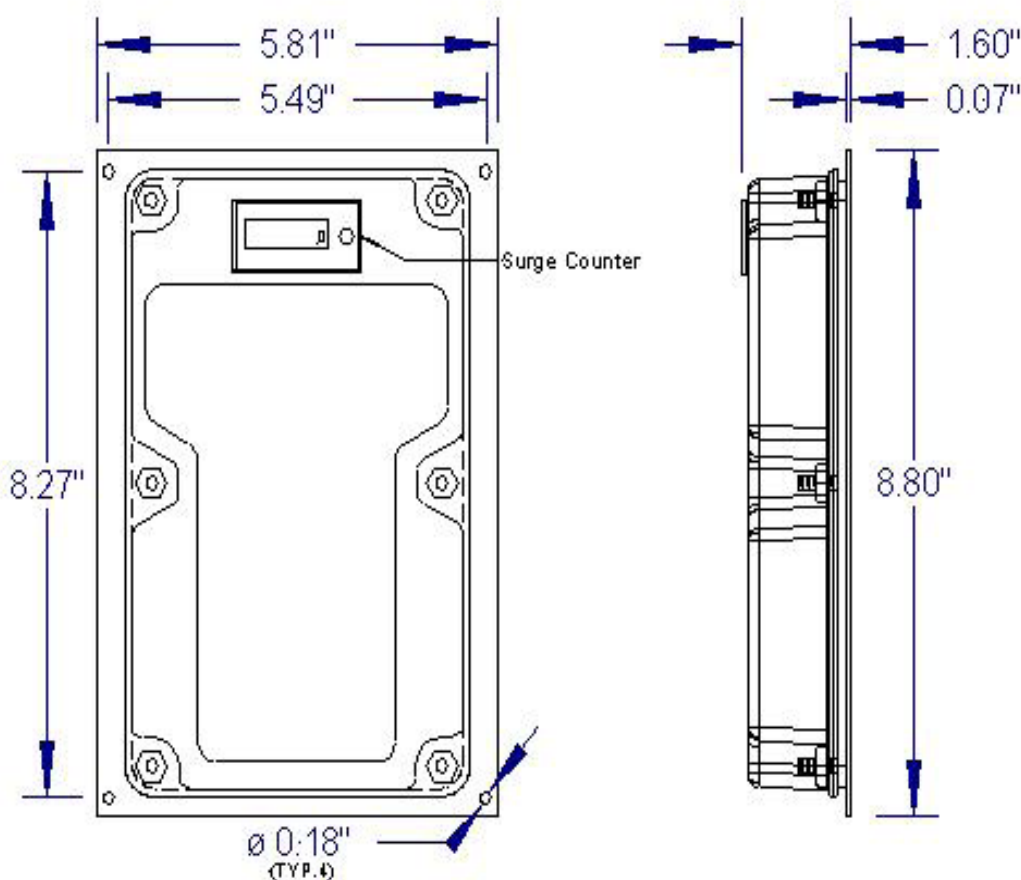


-ES

External Surge Counter

The "ES" option is an externally mounted surge counter option. The surge counter features an 8-digit LCD display, a 10 year battery, a manual reset switch, and a reset-disable switch. The ES option has a backplate that allows for panel mounting (simply bolt it to the outside of a panel or deadfront) or it can be back-mounted with standoffs. In the latter case, simply create a cut-out in the deadfront or panel that will allow the surge counter to show through. In either case, connections to the ES are made using 18-22 AWG wire that can enter the enclosure through the backplate or through the end of the enclosure.

The surge counter sensing circuit is current-based rather than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device. The surge counter not only detects high level surges, but also is sensitive enough to detect low level surges down to 50 amps.



LP

Remote Lights (Light Pole) - LED's only. Individual Remote LED's in water tight holders with no LED circuit board. If DRC's are opted with the 'LP' option, the DRC's will be internal to the Suppressor Enclosure. Overlay and drilling template included with this option.

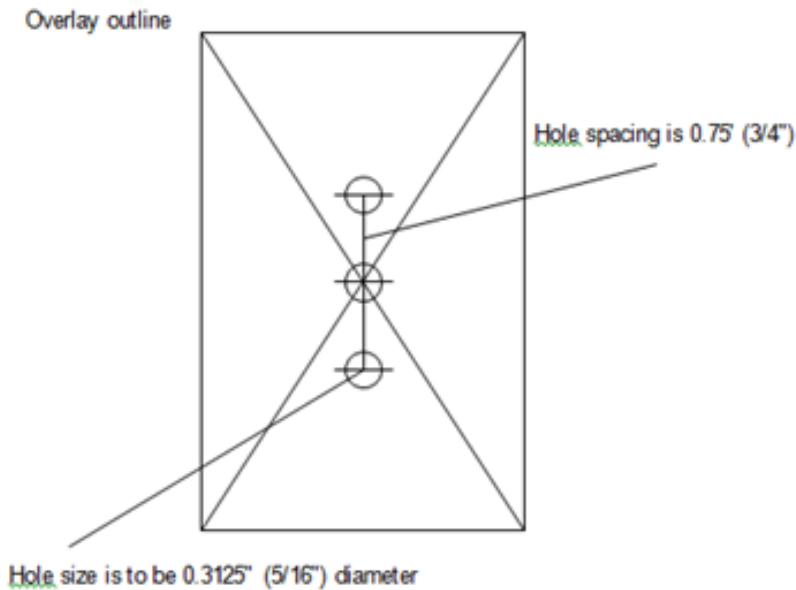
The "LP" option (also known as the "light pole" option) allows for installation in locations that require remote monitoring of the LED indicators only. The suppressor is equipped with external LEDs housed in individual NEMA 4X holders. The suppressor is mounted remote from the LEDs, and the LEDs are mounted so they can be viewed externally.

This option is designed for use in light poles so that status lights can be viewed from outside the pole, while the SPD is mounted in the base of the pole. The LEDs used for this application are "daylight" bright and can be viewed in bright sunshine.

This is also a popular option for applications where an SPD is installed inside of an enclosure. The status lights will remain visible without opening the enclosure.



LP Option Drilling Template

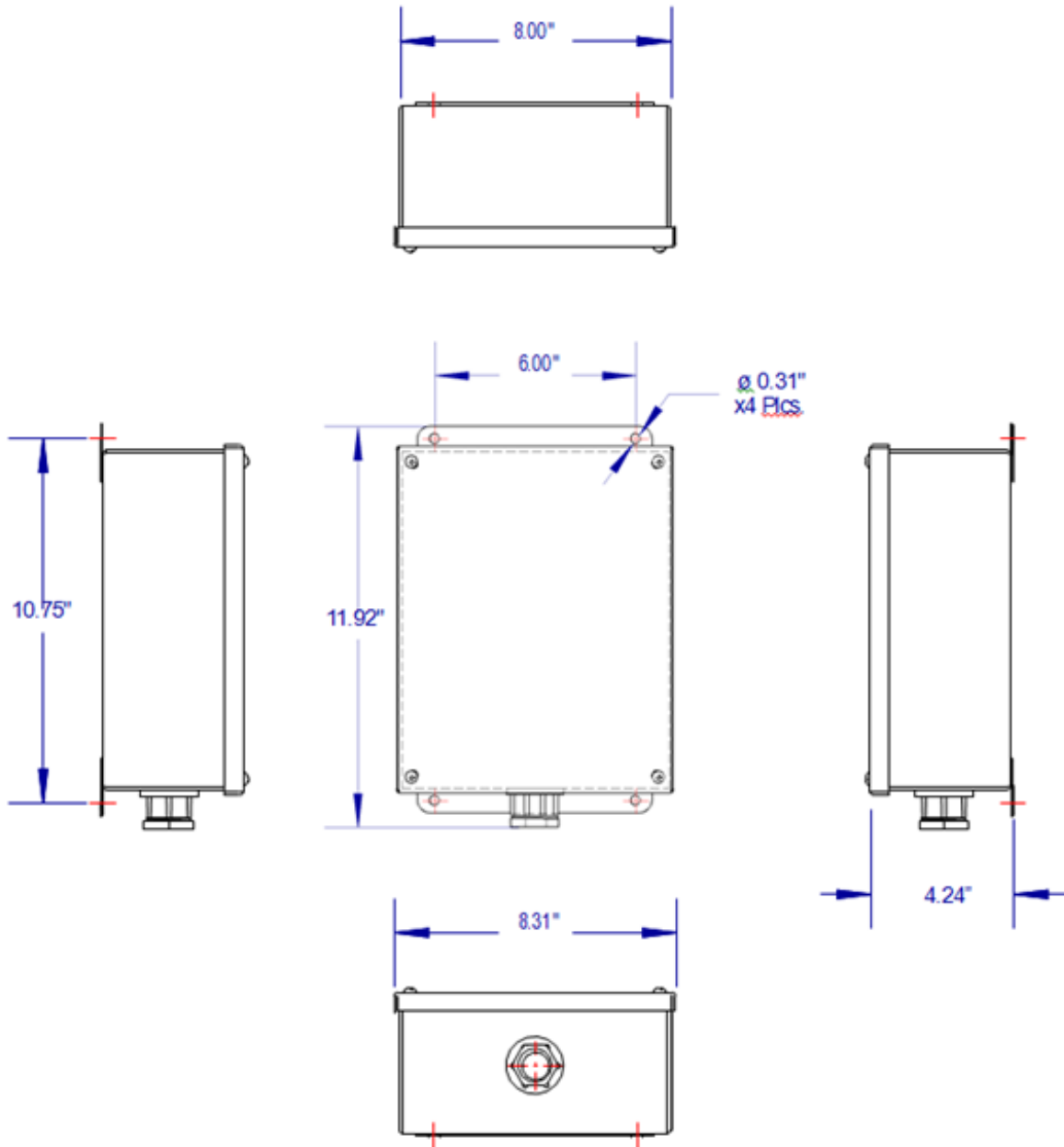


Drill one hole for each LED (one LED provided per phase of the system being protected). Typically, if the system has only one phase, the center hole will be used. If the system has two phases, the outer two holes will be used. Replace slugs for unused holes when overlay is applied.

M

NEMA 12 Rated Metal Enclosure - Size varies by Model. SILx/CILx and up standard with NEMA 12 Enclosure.

The "M" option is for Advantage models at and below 100 kA per mode. This option provides a compact enclosure size with a NEMA 12 rating.



N

Removes Neutral to Ground Sine Wave Tracking (FRC) for medical applications

The "N" option removes the sinewave tracking circuit from the neutral to ground mode (available only with sinewave tracking). This is useful in applications where leakage to ground is critical. For example, hospital settings and some circuits that use ground-fault circuit interruption devices.

P

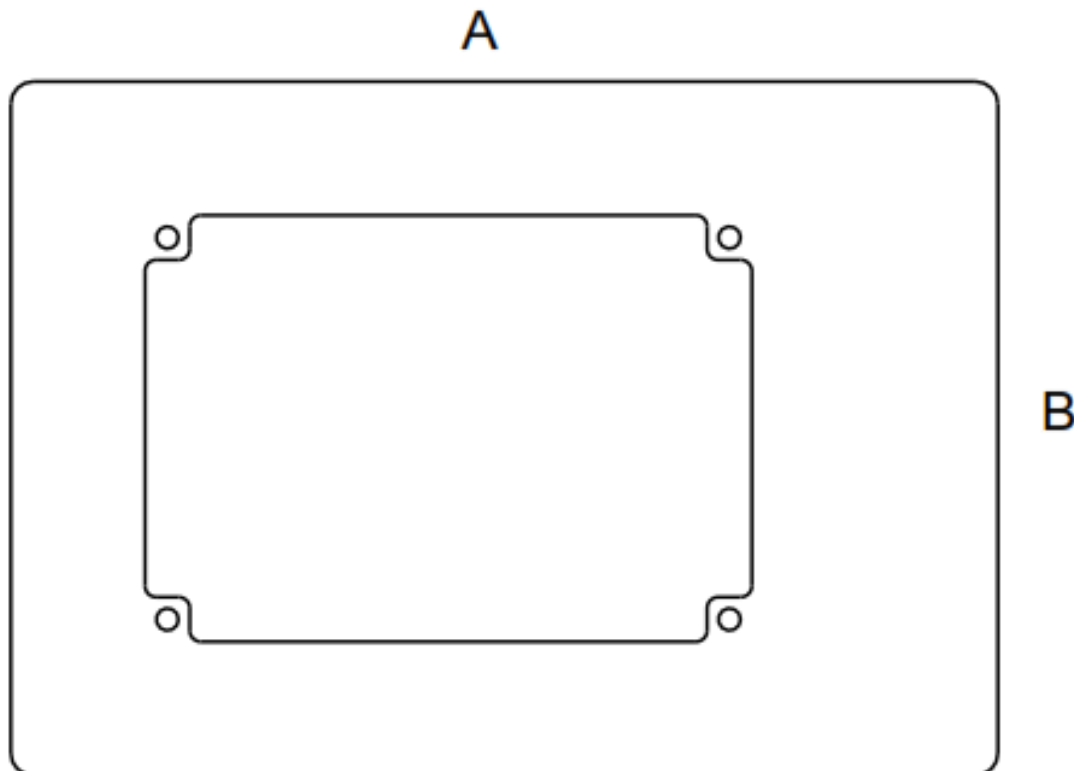
Flush Mount Trim Plate. Size varies with Model.

The "P" option indicates that a flush mount plate is necessary for the installation. The flush mount plate allows the suppressor to be installed in drywall. The plate covers the area that was cut-out to install the suppressor. The flush mount plates are currently available for the NEMA 12 steel enclosures with nominal sizes (inches) of 10x8, 8x6, 7x5, 6x4, Advantage

Plastic, and RES enclosures. Other sizes can be made as needed.

The plates are attached to the unit using the pre-existing lid hardware already included with the unit making installation a breeze.

Unit Size	Ext. Length = A	Ext. Width = B	Int. Length = A	Int. Width = B
10x8	14.50"	11.72"	9.77"	7.77"
8x6	12.54"	9.79"	7.78"	5.78"
7x5	11.03"	7.78"	6.78"	4.78"
6x4	10.00"	6.75"	5.75"	3.75"
Advantage Plastic	12.18"	7.67"	7.93"	4.67"
RES	10.00"	6.35"	5.50"	3.10"



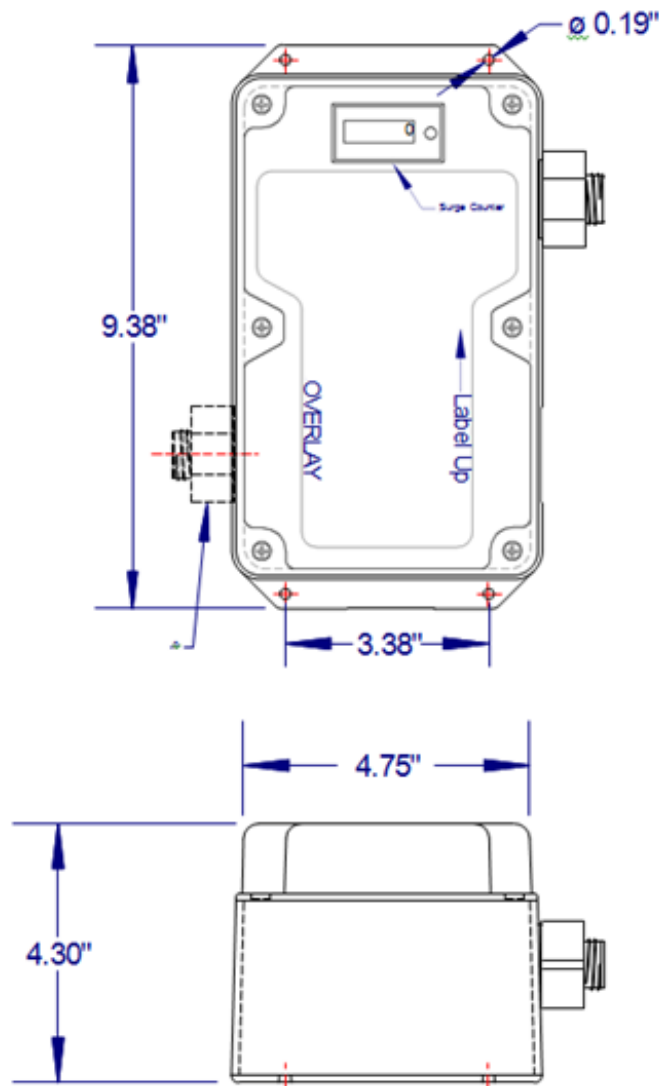
Picture is not to scale. Actual plate size is dependant upon unit specifications.

S

Internal Surge Counter. Some models require raised lid enclosure and/or increase in size of base enclosure.

The "S" option is the surge counter option. The surge counter features an 8-digit LCD display, a 10- year battery, a manual reset switch, and a switchable High Surge count only feature. These models will come from the factory with a preset level (2000 V / 66 A). When the "High Surge" counter feature is enabled, the level will be user adjustable from 1000 A to 3000 A surge levels. The surge counter sensing circuit is current-based rather

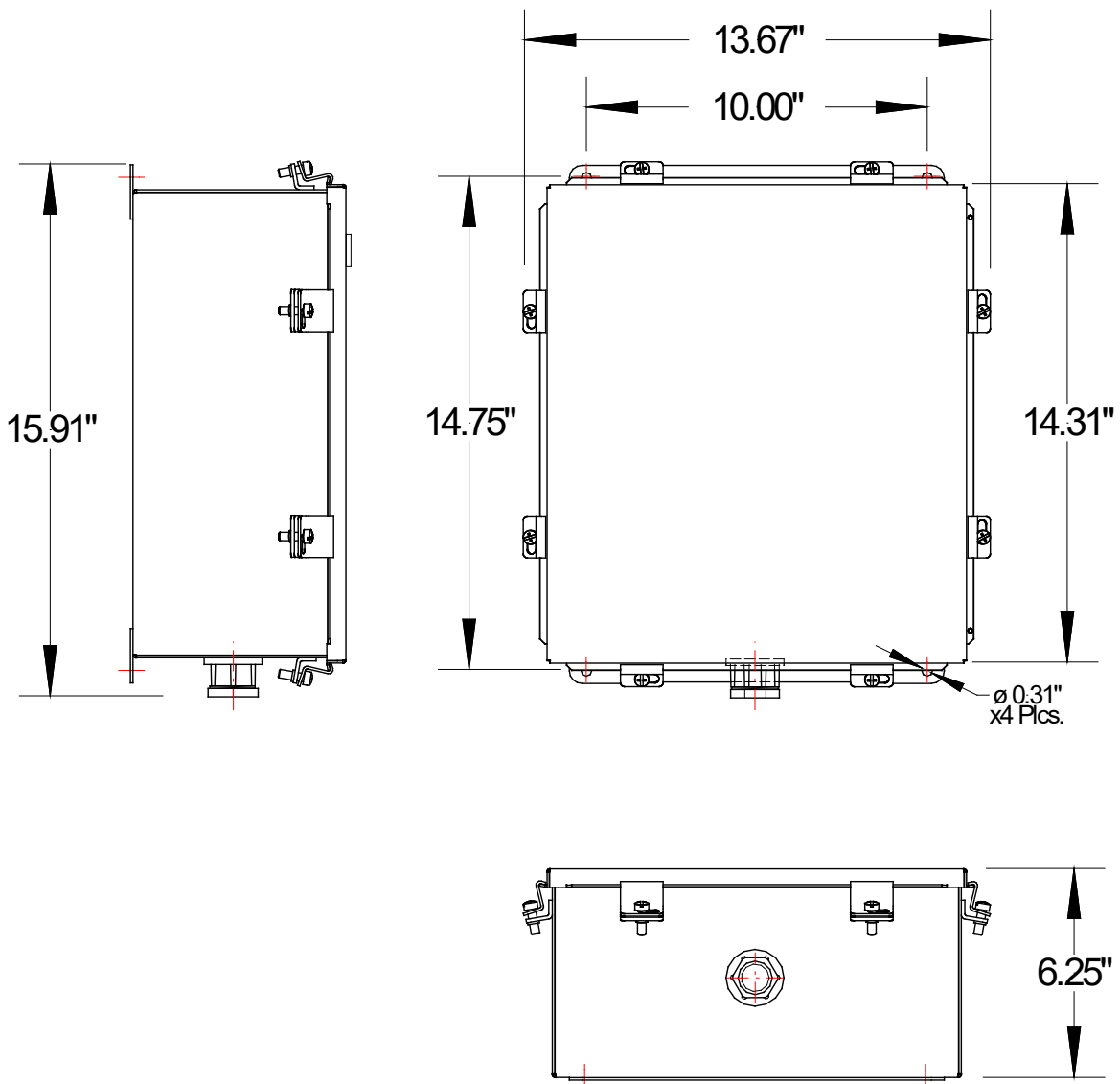
than voltage-based. That is, it only counts surges that the unit has acted upon by detecting surge current flowing into the device. This option is available on most models either integrated or externally mounted on a separate panel. It has provisions for use in NEMA 4 and NEMA 4X locations.



W

NEMA 4 Metal Enclosure - Size varies by model, check specification sheets for model sizes. Note: The reason why the adder for some of the 10"x8" is significantly higher is because the change is going from plastic to metal versus Nema 12 metal to Nema 4 metal.

The W option is for Advantage models at and below 300 kA per mode. This option provides a compact enclosure size with a NEMA 4 rating.



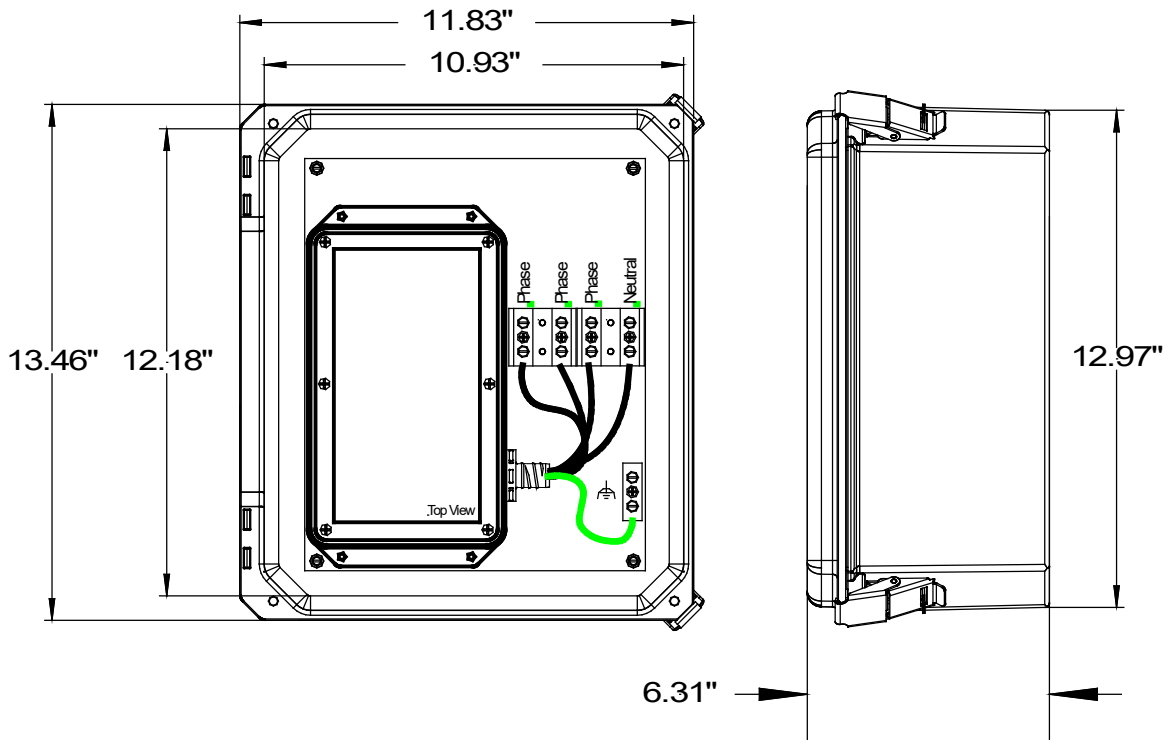
X

NEMA 4X Corrosion Resistant Enclosure made of Fiberglass Composite Material.

Box in a Box: 12" x 10" - Base Models S/CSLx through S/CMLx

Box in a Box: 24" x 20" - Base Models Base Models S/CILx through S/CXDLx

The "X" Option is a Box-in-Box type composite enclosure. This option uses the box-in-a-box method. That is, the standard suppressor is mounted on a back plate within the composite housing. This option is intended for NEMA 4X type installations and is available for units up to S/CSMB20 for seven mode products and S/CRMB10 on four mode products.



Terminal Wire Range:
#10 – #4 AWG

Shipping Weight:
The shipping weight is dependent on the module and options ordered.

X2

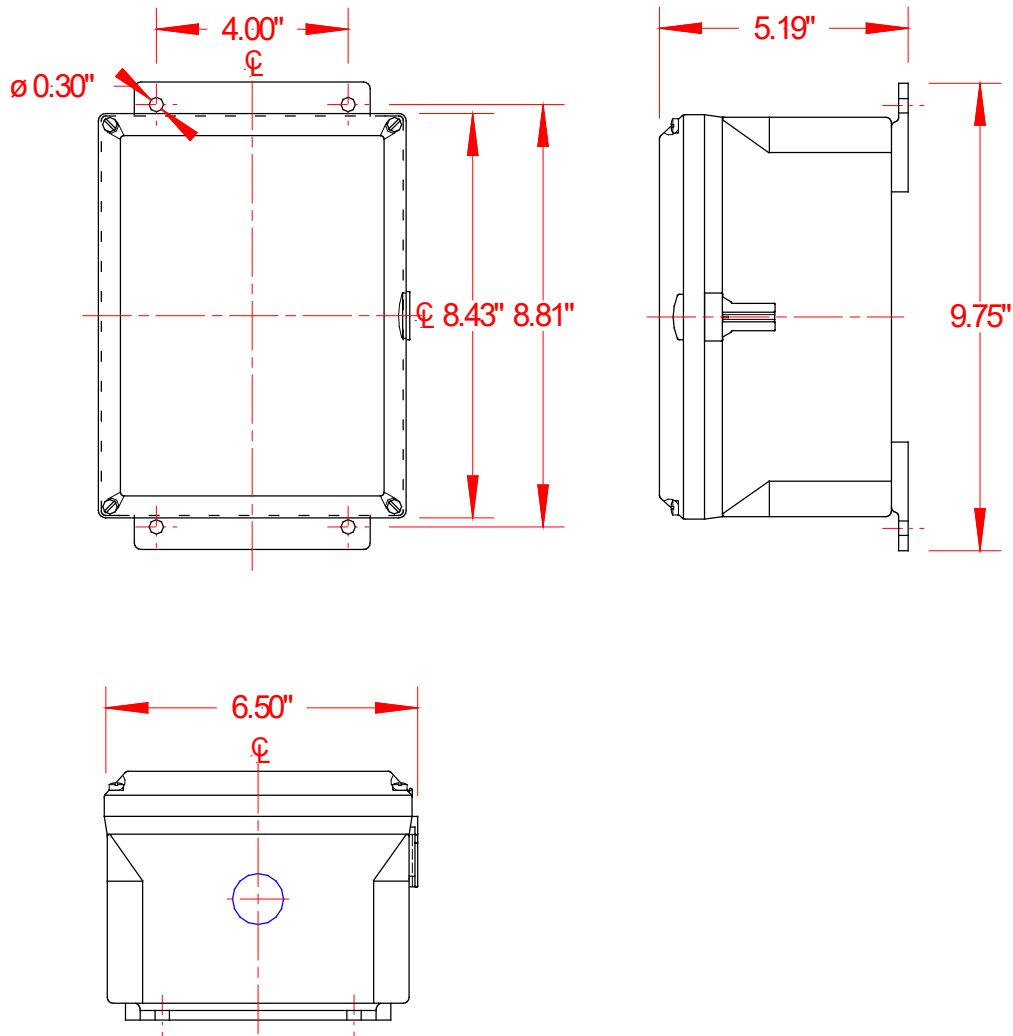
NEMA 4/4X option for direct replacement of the ABS Plastic Enclosures 8" x 6" (Base Model S/CSLx through S/CMLx)

Material: Polycarbonate

NEMA/UL ratings: 1, 2, 3, 3S, 4, 4X, and 12.

For Units, up to and included 100 kA per mode

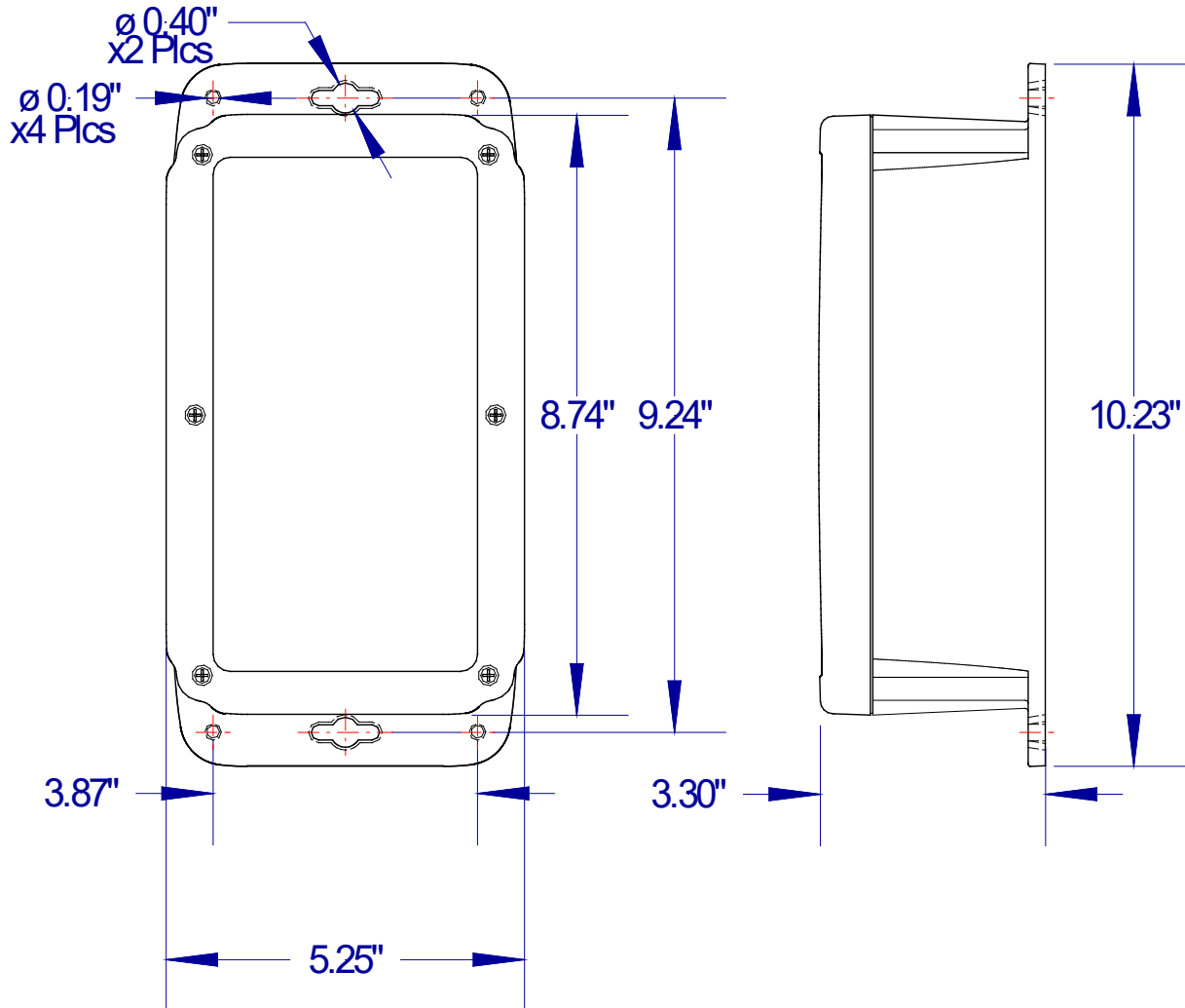
Factory installed mounting feet



X3

NEMA 1, 2, 3, 3S, 4 & 4X - Polycarbonate - For units up to and including 100 kA

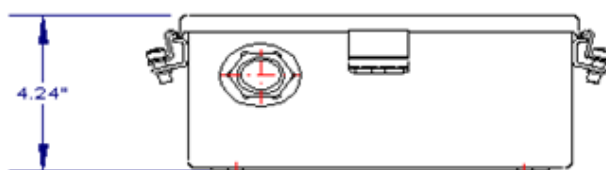
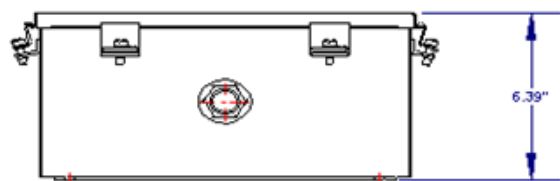
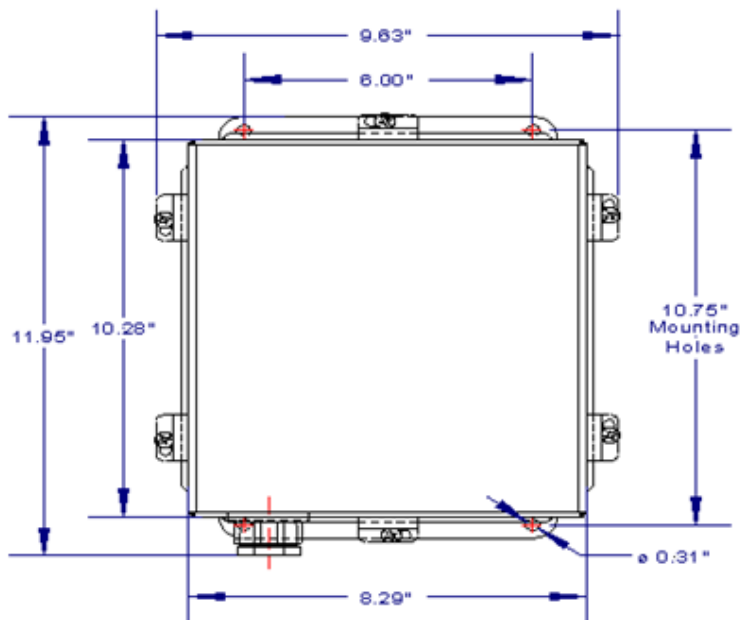
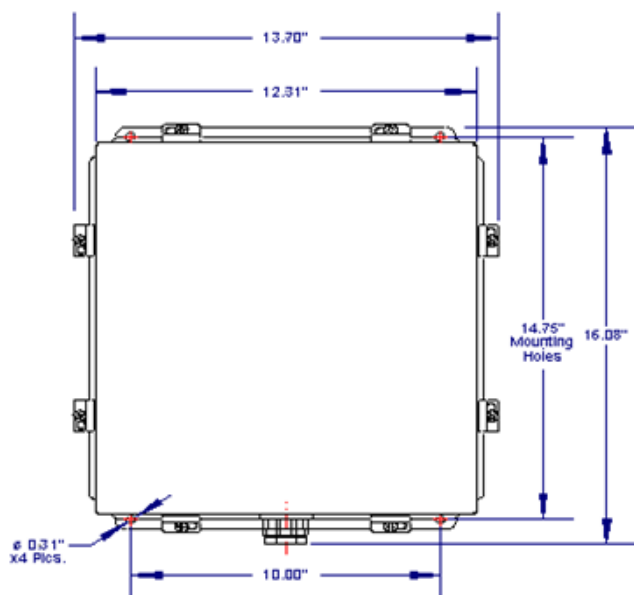
Polycarbonate for units up to and including 100 kA
NEMA ratings: 1, 2, 3, 3S, 4, 4X.



XS

NEMA 4X stainless steel enclosure

The "XS" Option is a NEMA 4X stainless steel enclosure. The lid is modified to allow the unit diagnostics to shine through the overlay. **Module shown with E1 option**



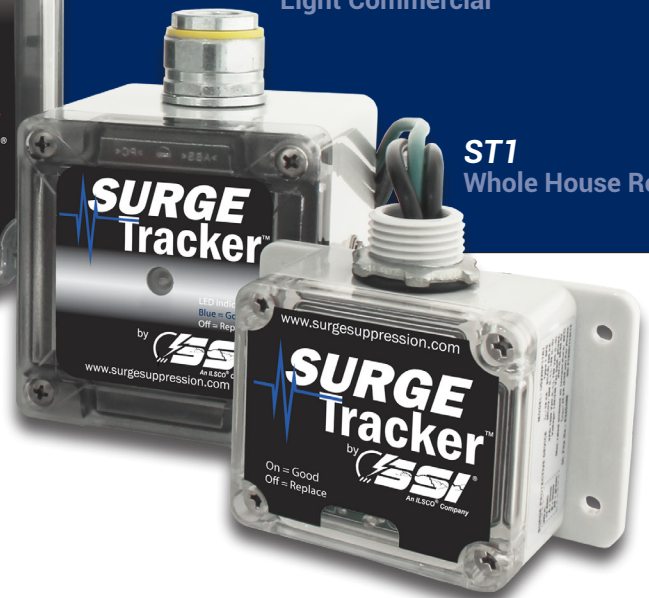
SURGE TRACKER™

ST3
Commercial/
Industrial Grade



ST4
Commercial/ Industrial Grade

ST2
Whole House Residential/
Light Commercial



ST1
Whole House Residential

Surge Protection for Residential, Commercial and Industrial Applications

Surge Tracker™ Panel Protection SPDs offer Residential, Commercial and Industrial devices with true all mode protection, and our most popular options. Surge Tracker provides quality protection for our value-driven customers.

Surge Tracker™ ST1

Value driven surge protection for residential applications provides a great balance between cost and performance

Surge Tracker™ ST2

Robust surge protection for residential light and commercial applications

Surge Tracker™ ST3

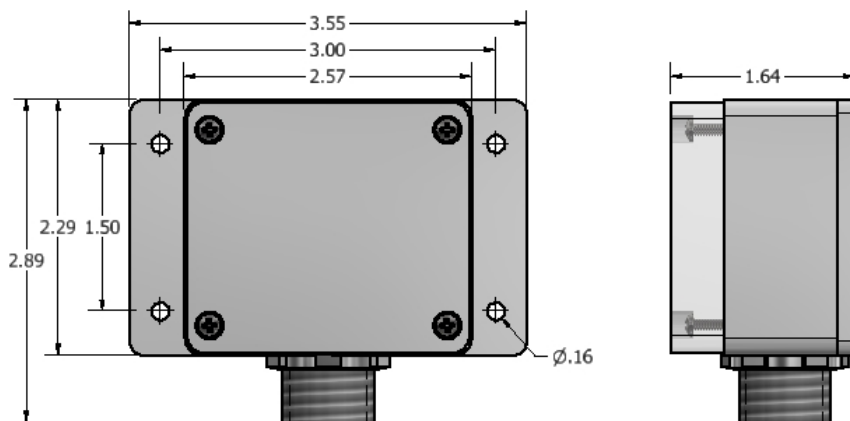
Commercial/Industrial grade surge protection for your facility's service entrance

Surge Tracker™ ST4

Commercial/Industrial grade surge protection for service entrance, sub panels and locations downstream of your service entrance

Surge Tracker™ ST1-1R1

Nominal Discharge Rating	Total Surge Current Rating	SPD Type	Short Circuit Current Rating (SCCR)
20 kA	50 kA	Type 1/Type 2	200 kAIC
Physical Specifications			
Enclosure	Conduit Size	Temperature Rating	Diagnostics
NEMA 4X Watertight	½" NPT Parallel Wired	-40°C to 75°C	LED on = Good. LED off = check power and/or replace unit
Product Certifications		Warranty	
ANSI/UL 1449, 1283* and (VZCA, VZCA7, FOKY* and FOKY7*) *Type 2 SPDs only		5 Year Limited Warranty	



Value driven surge protection for residential applications



Surge Tracker™ ST2-50xxx

Nominal Discharge Rating		Peak Surge Current Rating			SPD Type		Short Circuit Current Rating (SCCR)	
20 kA		50 kA per mode			Type 1/Type 2		200 kAIC	
Voltage Code		1R1A	1R1C	1R1D2	1P1A	1P1C	Y3WA	Y3WC
Voltage Configurations		120/240 V, Split Ø (2 wire + ground)	120/240 V, Split Ø (2 wire + ground)	120/240 V, Split Ø (2 wire + ground)	120 V, Single Ø (2 wire + ground)	120 V, Single Ø (2 wire + ground)	208Y/120 V, 3Ø WYE (3 wire + ground)	208Y/120 V, 3Ø WYE (3 wire + ground)
Discrete Modes of Protection		2	2	2	2	2	3	3
Maximum Continuous Operating Voltage (MCOV)	L-N				150 V	150 V		
	L-L	300 V	300 V	300 V			300 V	300 V
	L-G	150 V	150 V	150 V	300 V	300 V	150 V	150 V
	N-G				150 V	150 V		
Voltage Protection Rating (VPR)	L-N				700 V	600 V		
	L-L	1000 V	1200 V	1200 V			1000 V	1500 V
	L-G	700 V	600 V	600 V	700 V	600 V	600 V	700 V
	N-G				1200 V	1200 V		
EMI/RFI Filter Attenuation (Advanced Filtering)		Up to 54 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 208/120 V model, L-N)						
Options					Physical Specifications			
Option Code	SPD Type	Indicator LED	Advanced Surge Filtering	DRC	Enclosure	Conduit Size	Temperature Rating	Diagnostics
A	1	•	--	--	NEMA 4X Water-tight	½" for 1R1 & 1P1 ¾" for Y3W	-40°C to 80°C	Blue LED, normally on. When the LED is off check power and/or replace unit.
C	2	•	•	--	Product Certifications		Warranty	
D2	2	•	•	•	ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13* (VZCA, VZCA7, FOKY* and FOKY7*) *Type 2 SPDs only		5 Year Limited Warranty	



Figure 1 (1R1, 1P1)

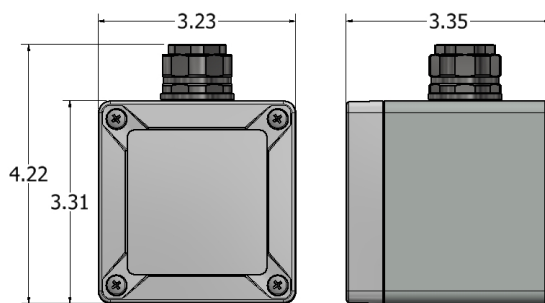
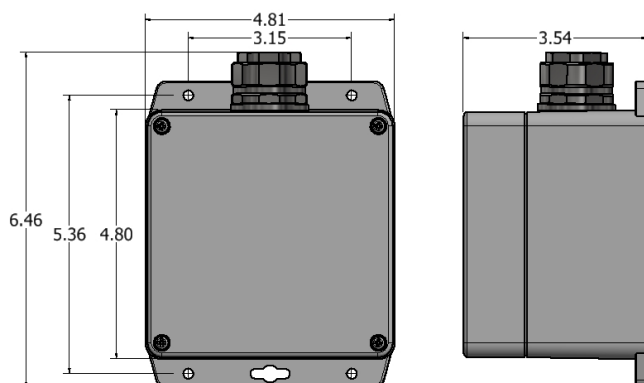


Figure 2 (Y3W)



Building an ST2 Model Number

ST2-

50

50 kA per Mode / 50 kA per Phase

Select a Voltage Code
Choose Only One

- 1R1** - 120/240 V Split Ø (2P,G - L-G protection)
 - 1P1** - 120 V Single Ø, 2W+G
 - Y3W** - 120/208 V 3ØY, 3P+G
 - Y3W2** - 277/480 V 3ØY, 3P+G
 - 1S1** - 120/240 V Split Ø (2P,N,G - L-N protection)
- Additional Voltages Available*

Select Desired Option

- A** - T1
- C** - T2, Filter
- D2** - T2, Filter, DRC

Options

- AA** - Audible Alarm
- DRC** - Dry Relay Contact
- Filter** - Advanced Filtering
- T1** - Type 1
- T2** - Type 2

Example of ST2 Model Number

ST2- 50 1P1 C

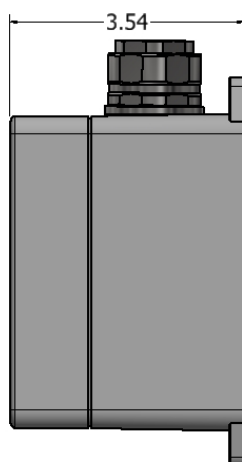
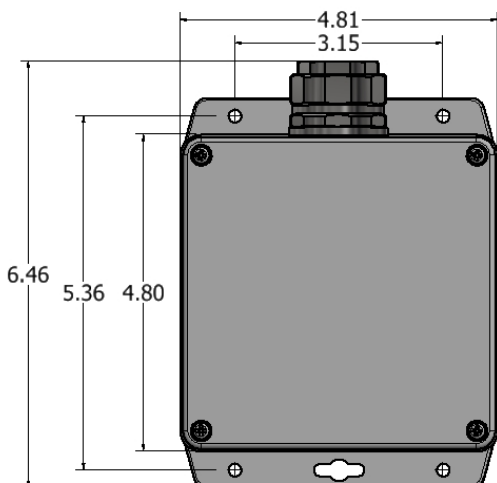
50 kA per Mode/50 kA per Phase
120 V Single Ø, 2W+G
Type 2, Advanced Filtering



Surge Tracker™ ST3-50xxx

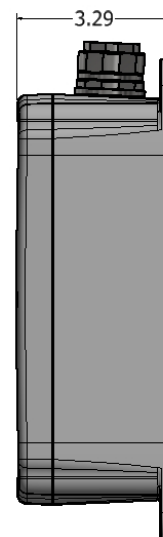
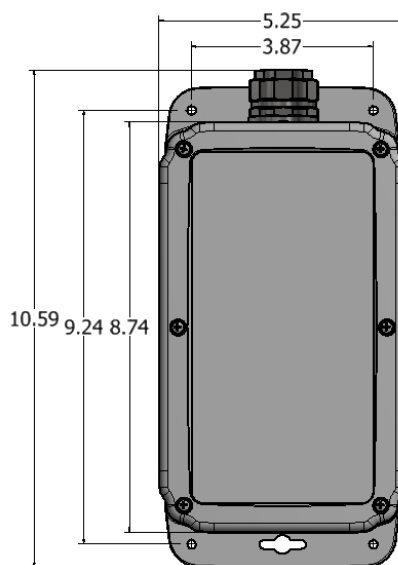
Nominal Discharge Rating		Peak Surge Current Rating				SPD Type		Short Circuit Current Rating (SCCR)							
20 kA		50 kA per mode				Type 1/Type 2		200 kAIC							
Voltage Code	1P1x	1S1x		3V1x		2N1x		3D1x		3N4x		3Y2x			
Voltage Configurations	120 V, Single Ø (2 wire + ground)	120/240 V, Split Ø (3 wire + ground)		120/208 V, 3ØY (4 wire + ground)		120 V, Two Ø (2 wire + ground)		120/240 V, 3ØΔ (4 wire + ground)		480 V, 3ÆΔ (3 wire + ground)		277/480 V, 3ØY (4 wire + ground)			
Discrete Modes of Protection	2		3		4		2		4		3		4		
Maximum Continuous Operating Voltage (MCOV)	L-N	150 V		150 V		150 V				150 V				320 V	
	L-L							150 V				552 V			
	L-G							150 V				552 V			
	N-G	150 V		150 V		150 V				150 V				320 V	
	HL-N									320 V					
Suffix	A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D	
Voltage Protection Rating (VPR)	L-N	600 V	700 V	600 V	700 V	600 V	700 V			700 V	700 V			1200 V	1200 V
	L-L			1200 V	1200 V	1200 V	1200 V	1200 V	1200 V	1200 V	1200 V	4000 V	4000 V	2500 V	2500 V
	L-G	1200 V	1200 V	1200 V	1200 V	1200 V	1200 V	600 V	700 V	1200 V	1200 V	1800 V	1800 V	2500 V	2500 V
	N-G	600 V	600 V	600 V	600 V	600 V	600 V			600 V	600 V			1200 V	1200 V
	HL-N									1200 V	1200 V				
EMI/RFI Filter Attenuation (Advanced Filtering)	Up to 54 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)														

Options						Physical Specifications				
Option Code	SPD Type	Indicator LED	Advanced Surge Filtering	DRC	Audible Alarm	Enclosure	Conduit Size	Temperature Rating	Diagnostics	
A	1	•	--	--	--	NEMA 4X Watertight	¾" Metal Hub	-40°C to 80°C	Blue LED, normally on. When the LED is off check power and/or replace unit.	
B	1	•	--	•	•					
C	2	•	•	--	--					
D	2	•	•	•	•	Product Certifications	Warranty			
						ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13* (VZCA, VZCA7, FOKY* and FOKY7*) *Type 2 SPDs only	5 Year Limited Warranty			



Surge Tracker™ ST3-100xxx

Nominal Discharge Rating		Peak Surge Current Rating				SPD Type				Short Circuit Current Rating (SCCR)							
20 kA		100 kA per mode				Type 1/Type 2				200 kAIC							
Voltage Code		1P1x		1S1x		3Y1x		2N1x		3D1x		3N4x		3Y2x			
Voltage Configurations		120 V, Single Ø (2 wire + ground)		120/240 V, Split Ø (3 wire + ground)		120/208 V, 3ØY (4 wire + ground)		120 V, Two Ø (2 wire + ground)		120/240 V, 3ØΔ (4 wire + ground)		480 V, 3ÆΔ (3 wire + ground)		277/480 V, 3ØY (4 wire + ground)			
Discrete Modes of Protection		2		3		4		2		4		3		4			
Maximum Continuous Operating Voltage (MCOV)	L-N	150 V		150 V		150 V				150 V				320 V			
	L-L							150 V				552 V					
	L-G							150 V				552 V					
	N-G	150 V		150 V		150 V				150 V				320 V			
	HL-N									300 V							
Suffix		A/B		C/D		A/B		C/D		A/B		C/D		A/B		C/D	
Voltage Protection Rating (VPR)	L-N	700 V	700 V	700 V	700 V	600 V	700 V			700 V	700 V			1200 V	1200 V		
	L-L			1000 V	1200 V	1000 V	1200 V	1000 V	1200 V	1000 V	1200 V	4000 V	4000 V	2000 V	2500 V		
	L-G	1000 V	1200 V	1000 V	1200 V	1000 V	1200 V	600 V	700 V	1000 V	1200 V	1800 V	1800 V	2000 V	2500 V		
	N-G	700 V	700 V	700 V	700 V	700 V	700 V			700 V	700 V			1200 V	1200 V		
	HL-N									1200 V	1200 V						
EMI/RFI Filter Attenuation (Advanced Filtering)		Up to 54 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)															
Options						Physical Specifications											
Option Code	SPD Type	Indicator LED	Advanced Surge Filtering	DRC	Audible Alarm	Enclosure	Conduit Size	Temperature Rating	Diagnostics								
A	1	●	--	--	--	NEMA 4X Watertight	¾" Metal Hub	-40°C to 80°C	Blue LED, normally on. When the LED is off check power and/or replace unit.								
B	1	●	--	●	●												
C	2	●	●	--	--	Product Certifications		Warranty									
D	2	●	●	●	●	ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13* (VZCA, VZCA7, FOKY* and FOKY7*) *Type 2 SPDs only		5 Year Limited Warranty									



Building an ST3 Model Number

ST3-

Select a kA per Mode
/ kA per Phase

Choose Only One

50 - 50 kA per Mode / 50 kA per Phase
100 - 100 kA per Mode / 100 kA per Phase

Select a Voltage
Code

Choose Only One

1P1 - 120 V Single Ø, 2W+G
1P2 - 220/277 V Single Ø, 2W+G
1S1 - 120/240 V Split Ø, 3W+G
2N1 - 120 V 2Ø, 2W+G
2N2 - 240 V 2Ø, 2W+G
3D1 - 120/240 V 3Ø High-Leg Δ, 4W+G
3N4 - 480 V 3ØΔ, 3W+G
3N6 - 600 V 3ØΔ, 3W+G
3Y1 - 208Y/120 V 3ØY, 4W+G
3Y2 - 480Y/277 V 3ØY, 4W+G
3Y3 - 600/347 V 3ØY, 4W+G
Additional Voltages Available

Select Desired Option

A - T1
C - T2, SWT
D2 - T2, SWT, DRC
P - Flush Mount Plate

Options

AA - Audible Alarm
DRC - Dry Relay Contact
SWT - Sine Wave Tracking
T1 - Type 1
T2 - Type 2

Example of ST3 Model Number

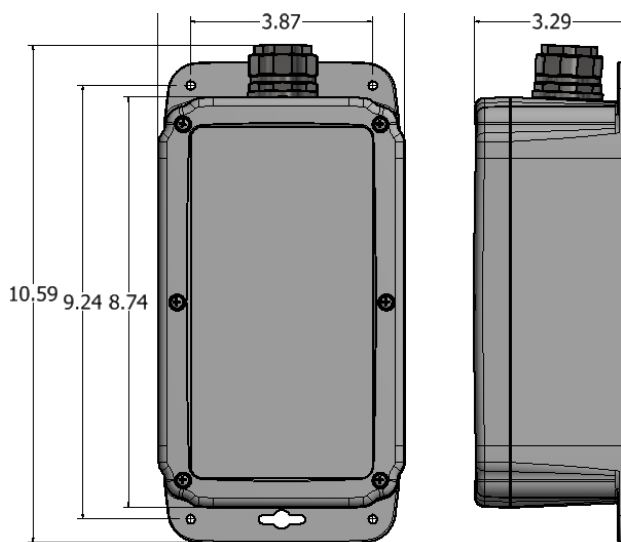
ST3- 50 1P1 C

50 kA per Mode/50 kA per Phase
120 V Single Ø, 2W+G
Type 2, Sine Wave Tracking



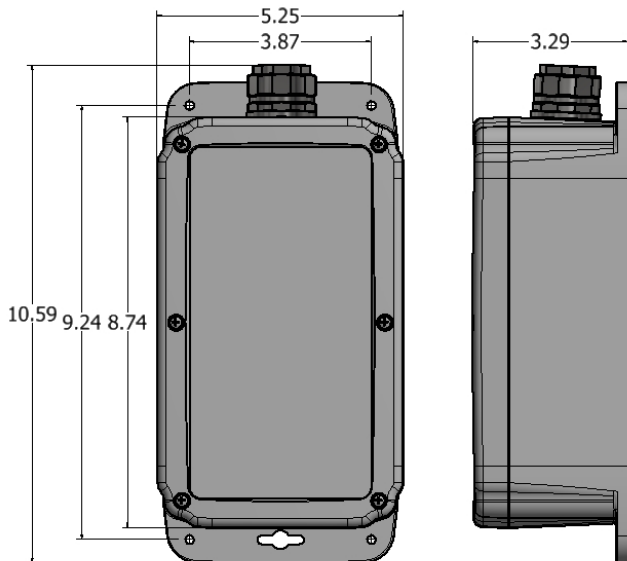
Surge Tracker™ ST4-100xxx

Nominal Discharge Rating		Peak Surge Current Rating						SPD Type				Short Circuit Current Rating (SCCR)					
20 kA		100 kA per phase/ 50 kA per mode						Type 1/Type 2				200 kAIC					
Voltage Code		1P1x		1S1x		3Y1x		2N1x		3D1x		3N4x		3Y2x			
Voltage Configurations		120 V, Single Ø (2 wire + ground)		120/240 V, Split Ø (3 wire + ground)		120/208 V, 3ØY (4 wire + ground)		120 V, Two Ø (2 wire + ground)		120/240 V, 3ØΔ (4 wire + ground)		480 V, 3ÆΔ (3 wire + ground)		277/480 V, 3ØY (4 wire + ground)			
Discrete Modes of Protection		2		3		4		2		4		3		4			
Maximum Continuous Operating Voltage (MCOV)	L-N	150 V		150 V		150 V				150 V				320 V			
	L-L			300 V		300 V		150 V		300 V		552 V		640 V			
	L-G	150 V		150 V		150 V		150 V		150 V		552 V		320 V			
	N-G	150 V		150 V		150 V				150 V				320 V			
	HL-N									300 V							
	HL-G									300 V							
Suffix		A/B		C/D		A/B		C/D		A/B		C/D		A/B		C/D	
Voltage Protection Rating (VPR)	L-N	700 V	700 V	700 V	700 V	600 V	700 V			700 V	700 V			1200 V	1200 V		
	L-L			1000 V	1200 V	1000 V	1000 V	600 V	700 V	1000 V	1200 V	1800 V	1800 V	2000 V	2500 V		
	L-G	700 V	700 V	700 V	700 V	600 V	600 V	600 V	600 V	700 V	700 V	1800 V	1800 V	1200 V	1200 V		
	N-G	700 V	700 V	700 V	700 V	700 V	700 V			700 V	700 V			1200 V	1200 V		
	HL-N									1200 V	1200 V						
	HL-G									1200 V	1200 V						
EMI/RFI Filter Attenuation (Advanced Filtering)		Up to 54 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)															
Options						Physical Specifications											
Option Code	SPD Type	Indicator LED	Advanced Surge Filtering	DRC	Audible Alarm	Enclosure	Conduit Size	Temperature Rating	Diagnostics								
A	1	●	--	--	--	NEMA 4X	¾" Metal Hub	-40°C to 80°C	Blue LED, normally on. When the LED is off check power and/or replace unit.								
B	1	●	--	●	●	Watertight											
C	2	●	●	--	--	Product Certifications										Warranty	
D	2	●	●	●	●	ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13* (VZCA, VZCA7, FOKY* and FOKY7*) *Type 2 SPDs only		10 Year Limited Warranty									



Surge Tracker™ ST4-200xxx

Nominal Discharge Rating		Peak Surge Current Rating				SPD Type		Short Circuit Current Rating (SCCR)							
20 kA		200 kA per phase/ 100 kA per mode				Type 1/Type 2		200 kAIC							
Voltage Code		1P1x	1S1x	3Y1x	2N1x	3D1x	3N4x	3Y2x							
Voltage Configurations		120 V, Single Ø (2 wire + ground)	120/240 V, Split Ø (3 wire + ground)	120/208 V, 3ØY (4 wire + ground)	120 V, Two Ø (2 wire + ground)	120/240 V, 3ØΔ (4 wire + ground)	480 V, 3ÆΔ (3 wire + ground)	277/480 V, 3ØY (4 wire + ground)							
Discrete Modes of Protection		2	3	4	2	4	3	4							
Maximum Continuous Operating Voltage (MCOV)	L-N	150 V	150 V	150 V		150 V		320 V							
	L-L		300 V	300 V	150 V	300 V	552 V	640 V							
	L-G	150 V	150 V	150 V	150 V	150 V	552 V	320 V							
	N-G	150 V	150 V	150 V		150 V		320 V							
	HL-N					300 V									
	HL-G					300 V									
Suffix		A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D	A/B	C/D		
Voltage Protection Rating (VPR)	L-N	700 V	700 V	700 V	700 V	700 V	700 V			700 V	700 V			1200 V	1200 V
	L-L			1000 V	1200 V	1000 V	1200 V	600 V	700 V	1000 V	1200 V	1800 V	2000 V	2000 V	2500 V
	L-G	700 V	700 V	700 V	700 V	700 V	700 V	600 V	600 V	700 V	700 V	1800 V	1800 V	1200 V	1200 V
	N-G	700 V	700 V	700 V	700 V	700 V	700 V			700 V	700 V			1200 V	1200 V
	HL-N									1200 V	1200 V				
	HL-G									1200 V	1200 V				
EMI/RFI Filter Attenuation (Advanced Filtering)		Up to 54 dB from 2 kHz to 100 MHz, using MIL-STD-220 Insertion Loss Test Method. (Based on a 120/208 V model, L-N)													
Options						Physical Specifications									
Option Code	SPD Type	Indicator LED	Advanced Surge Filtering	DRC	Audible Alarm	Enclosure	Conduit Size	Temperature Rating	Diagnostics						
A	1	●	--	--	--	NEMA 4X Watertight	¾" Metal Hub	-40°C to 80°C	Blue LED, normally on. When the LED is off check power and/or replace unit.						
B	1	●	--	●	●										
C	2	●	●	--	--										
D	2	●	●	●	●	Product Certifications		Warranty							
						ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13*		10 Year Limited Warranty							
						(VZCA, VZCAT, FOKY* and FOKY7*)									
						*Type 2 SPDs only									



Building an ST4 Model Number

ST4-

Select a kA per Mode / kA per Phase

Choose Only One

100 - 50 kA per Mode / 100 kA per Phase
200 - 100 kA per Mode / 200 kA per Phase

Select a Voltage Code

Choose Only One

1P1 - 120 V Single Ø, 2W+G
1P2 - 220/277 V Single Ø, 2W+G
1S1 - 120/240 V Split Ø, 3W+G
2N1 - 120 V 2Ø, 2W+G
2N2 - 240 V 2Ø, 2W+G
3D1 - 120/240 V 3Ø High-Leg Δ, 4W+G
3N4 - 480 V 3ØΔ, 3W+G
3N6 - 600 V 3ØΔ, 3W+G
3Y1 - 208Y/120 V 3ØY, 4W+G
3Y2 - 480Y/277 V 3ØY, 4W+G
3Y3 - 600/347 V 3ØY, 4W+G
Additional Voltages Available

Select Desired Option

A - T1
B - T1, DRC, AA
C - T2, SWT
D - T2, DRC, AA, SWT
P - Flush Mount Plate

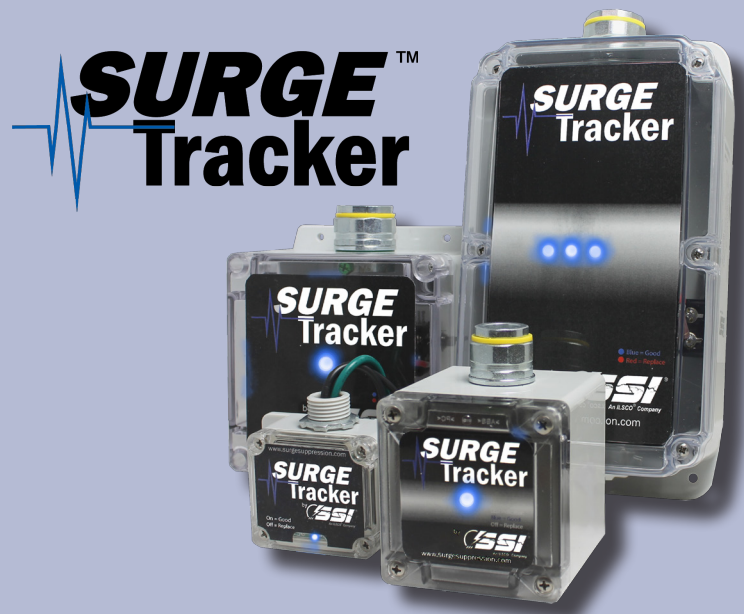
Options

- AA - Audible Alarm
- DRC - Dry Relay Contact
- SWT - Sine Wave Tracking
- T1 - Type 1
- T2 - Type 2

Example of ST4 Model Number

ST4- 100 1S1 C

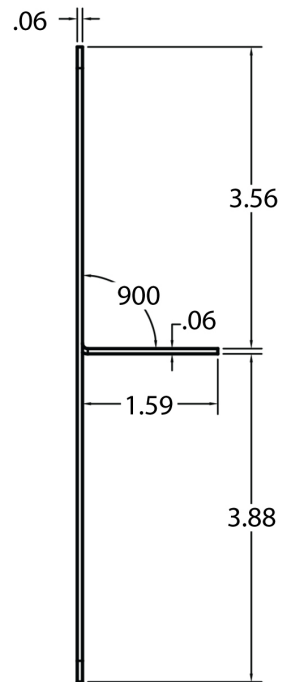
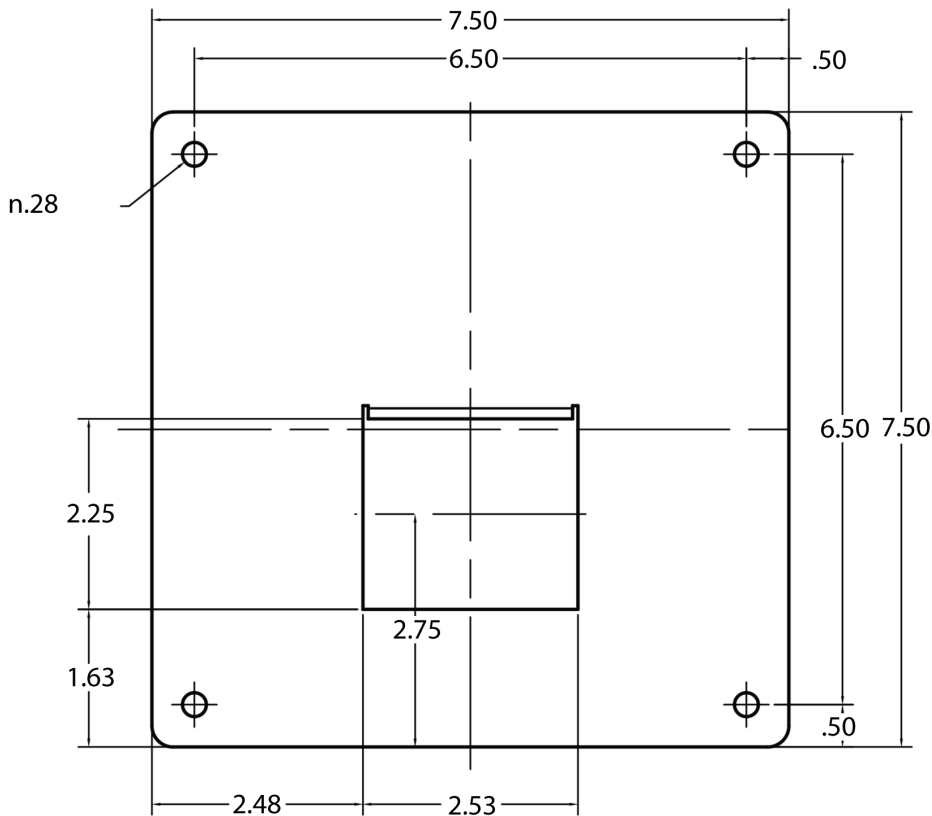
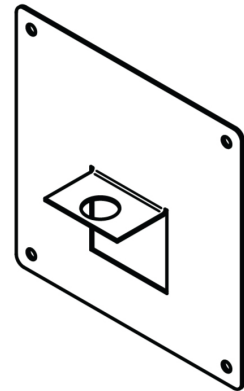
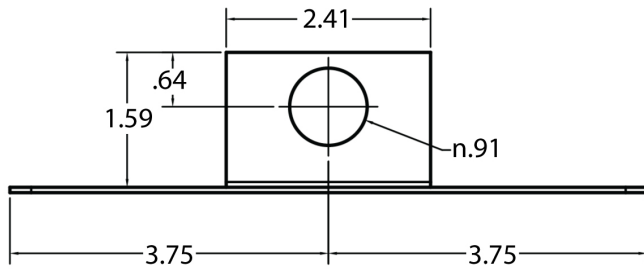
50 kA per Mode/100 kA per Phase
 120/240 V Split Ø, 3W+G
 Type 2, Sine Wave Tracking



Surge Tracker™ Flush Mount Plate (ST1)

SurgeTracker Flush mount plate. (ST1)

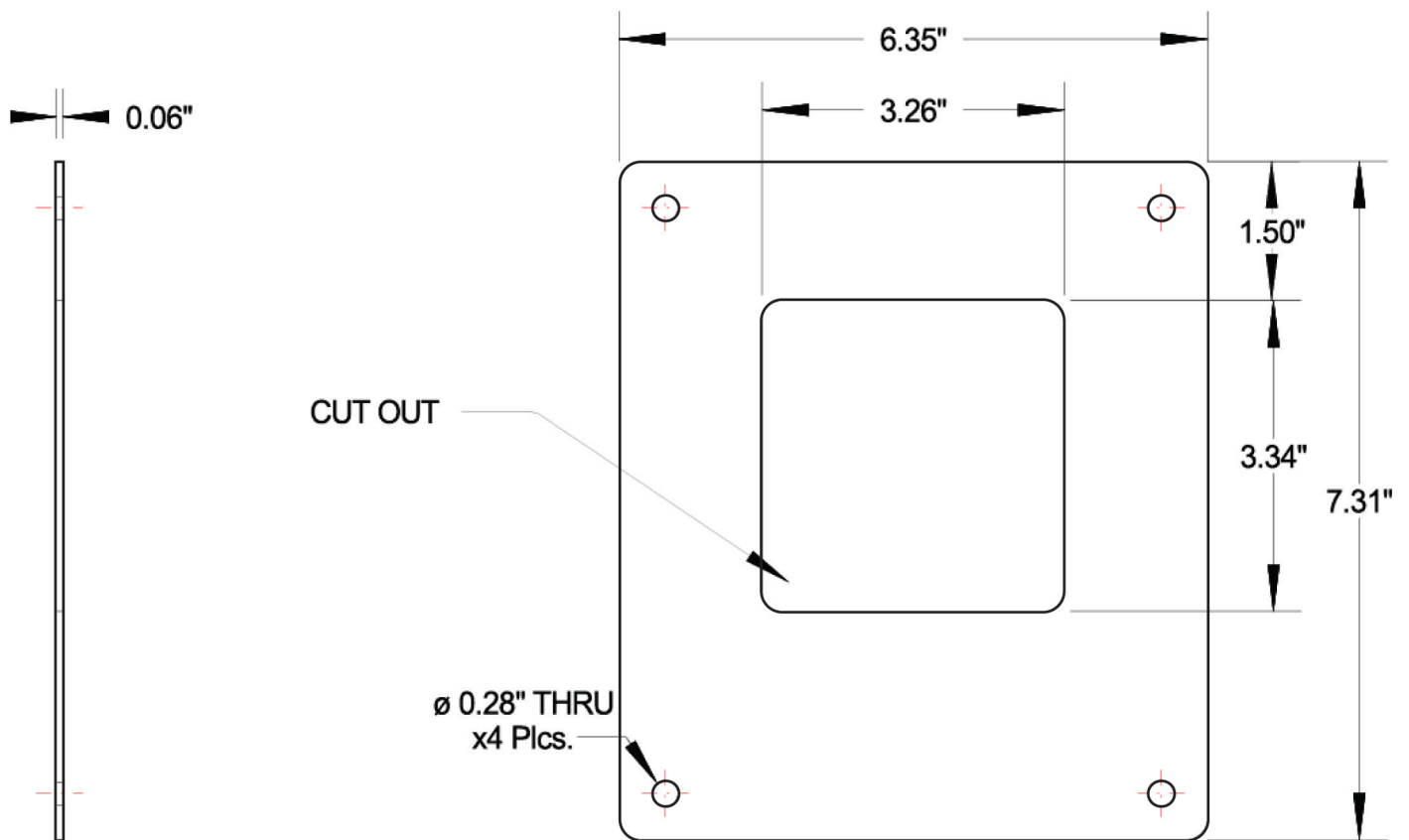
The "FMPST1KIT" allows the Surge Tracker ST1 series units to be installed flush with the drywall. Designed for installations with flush mount electrical panels, or anytime it is desired to have the SPD mounted completely level with the wall. The plate covers the area that was cut-out to install the suppressor. The FMPST1KIT includes the steel plate, 4 screws, and 4 wall anchors needed to mount the unit in drywall. The plate's bracket fits onto the hub of the unit and is secured via the locknut included with the unit.



Surge Tracker™ Flush Mount Plate (ST2-50)

SurgeTracker Flush mount plate. (ST2-50)

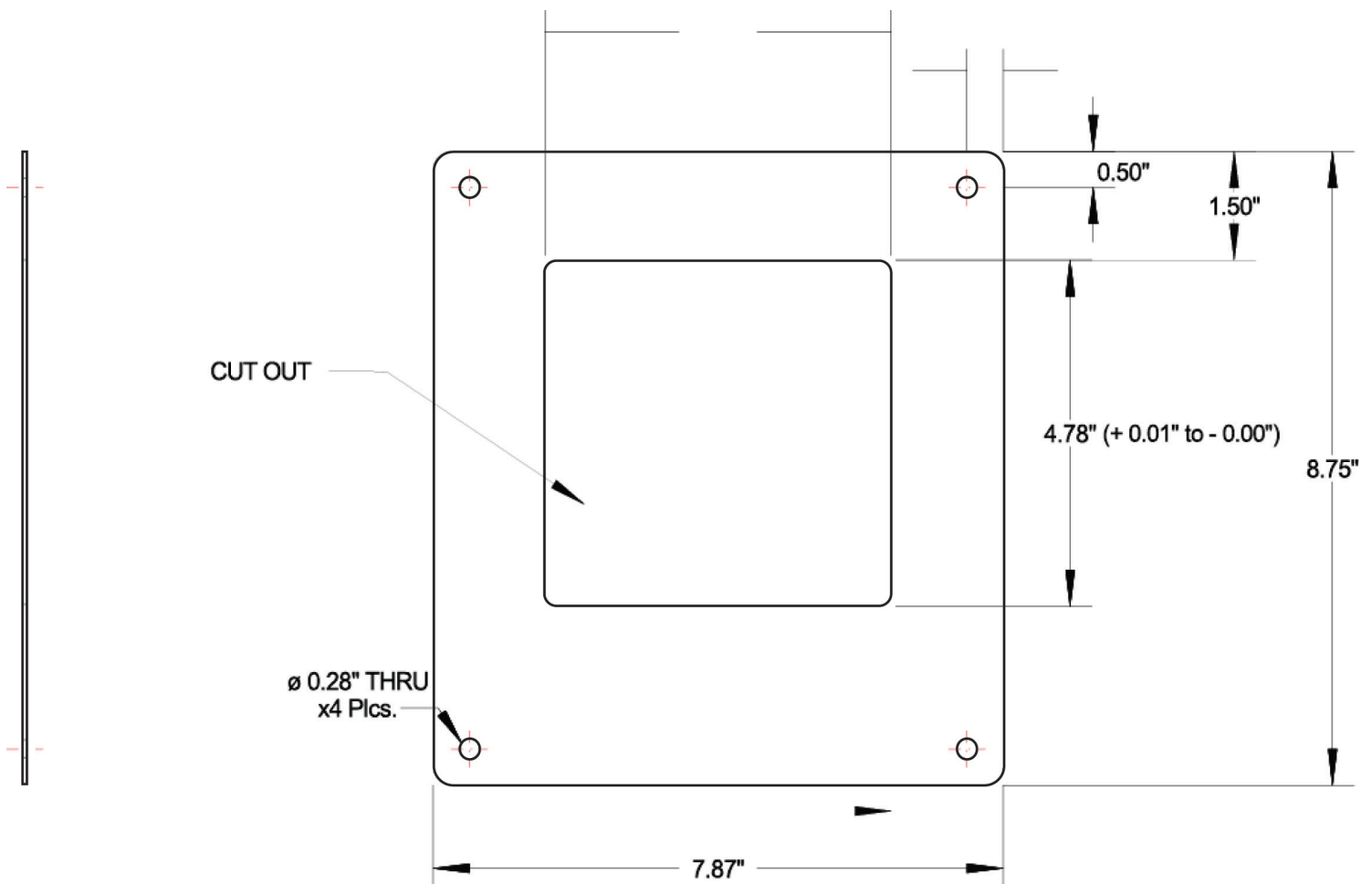
The FMP0239KIT allows the Surge Tracker ST2-50 units to be installed flush with the drywall. Designed for installations with flush mount electrical panels, or anytime it is desired to have the SPD mounted completely level with the wall. The plate covers the area that was cut-out to install the suppressor. The FMP0239KIT includes the steel plate, 4 screws, and 4 wall anchors needed to mount the unit in drywall.



Surge Tracker™ Flush Mount Plate (ST2-100/ST3-50)

SurgeTracker Flush mount plate. (ST2-100/ST3-50)

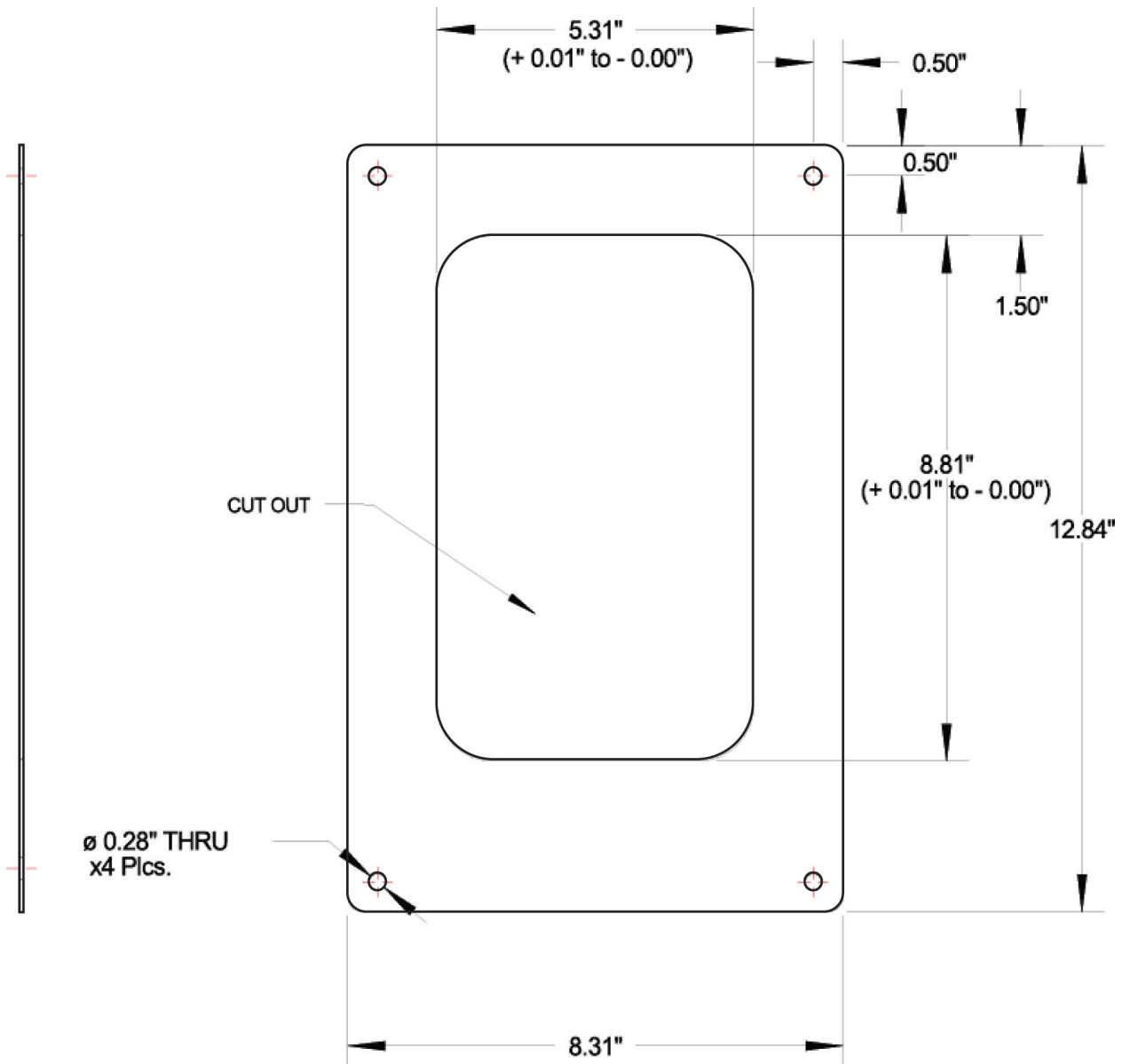
The FMP0240KIT allows the Surge Tracker ST2-100 and ST3-50 units to be installed flush with the drywall. Designed for installations with flush mount electrical panels, or anytime it is desired to have the SPD mounted completely level with the wall. The plate covers the area that was cut-out to install the suppressor. The FMP0240KIT includes the steel plate, 4 screws, and 4 wall anchors needed to mount the unit in drywall.



Surge Tracker™ Flush Mount Plate (ST3-100/ST4)

SurgeTracker Flush mount plate.
(ST3-100/ST4)

The FMP0241KIT allows the Surge Tracker ST3-100 and ST4 units to be installed flush with the drywall. Designed for installations with flush mount electrical panels, or anytime it is desired to have the SPD mounted completely level with the wall. The plate covers the area that was cut-out to install the suppressor. The FMP0241KIT includes the steel plate, 4 screws, and 4 wall anchors needed to mount the unit in drywall.



RES (S)

The RES(S) provides the absolute best ring wave transient protection available in a surge suppressor designed for AC residential or light industrial-type sub panels. It is extremely effective in virtually eliminating internally generated transients and is an absolute must on panels feeding high-tech homes, small offices or other locations with microprocessor-based, sensitive equipment and/or computer systems. In addition, the RESS and RES models feature standard clamping protection that provides excellent protection in some of the harshest environments including exposure to lightning, grid switching, pole-mounted applications and other external transient sources.

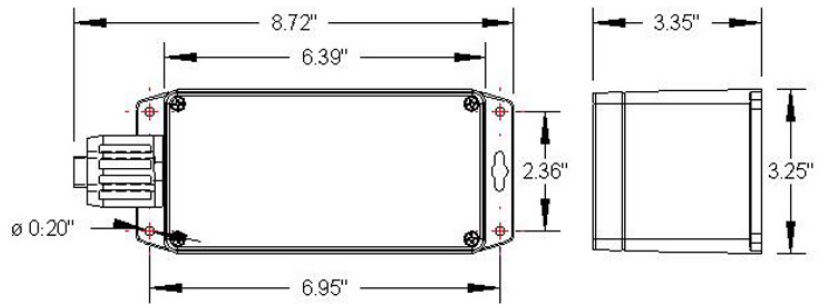
- Industry leading Measured Limiting Voltage (let-through) Performance
- Local & Remote Diagnostics
- Independent Verification of Performance and Safety
- No moving parts or springs - No mechanical or electro-mechanical thermal/over-current protection
- Type 2 SPD
- Component-Level, Thermal Fusing
- Patented, Internal, Circuit Board Mounted, Over-Current Fusing

Key Features

- Discrete "All Mode" Circuitry, Directly Connected Protection Elements in "All Modes" (10 Modes for 3 phase Wye circuits) as recommended by IEEE Std. 1100-2005

Nominal Discharge Rating		Peak Surge Current Rating			SPD Type		Short Circuit Current Rating (SCCR)	
10 kA		120 kA Per Phase			Type 2		200 kAIC	
Voltage Code	1P1x	1S1x	3Y1x	2N1x	3D1x	3N4x	3Y2x	
Voltage Configurations	120 V, Single Ø (2 wire + ground)	120/240 V, Split Ø (3 wire + ground)	120/208 V, 3ØY (4 wire + ground)	120 V, Two Ø (2 wire + ground)	120/240 V, 3ØΔ (4 wire + ground)	480 V, 3ÆΔ (3 wire + ground)	277/480 V, 3ØY (4 wire + ground)	
Discrete Modes of Protection	2	3	4	2	4	3	4	
Maximum Continuous Operating Voltage (MCOV)	L-N	150 V	150 V	150 V		150 V	320 V	
	L-L		300 V		150 V		550 V	
	L-G	150 V	150 V		150 V		550 V	
	N-G	150 V	150 V	150 V		150 V	320 V	
	HL-N					320 V		
Voltage Protection Rating (VPR)	L-N	600 V	600 V	600 V		600 V	1000 V	
	L-L		1000 V	1000 V	600 V	1000 V	1800 V	
	L-G	600 V	600 V	600 V	600 V	600 V	1800 V	
	N-G	600 V	600 V	600 V		600 V	RES 1000 V, RESS 900 V	
	HL-N					1000 V		
	HL-L					1000 V		
	HL-G					1000 V		

Options		Physical Specifications			
Option Code	Description	Enclosure	Conduit Size	Temperature Rating	Diagnostics
C	Form C dry relay contacts	NEMA 4X	¾" Plastic Hub	-40°C to 80°C	Green LED, normally on. When the LED is off check power and/or replace unit.
LP	Remote daylight bright LEDs				
N	Removes neutral to ground Frequency Responsive Circuitry (available for RESS only)				
P	Flush mount plate	Product Certifications ANSI/UL 1449, 1283* and CSA C22.2 No. 269.1-14, No. 269.2-13* and No. 8-13* (VZCA, VZCA7, FOKY* and FOKY7*) *Type 2 SPDs only		Warranty 25 Year Limited Warranty	



SURGE BARRIER™



Surge Protection for Individual Circuits

Surge Barrier™ connected Surge Protective Devices are designed to protect individual circuits ranging from 5 VDC to 480 VAC with current ranges from 5 Amps to 60 Amps.

Industry leading let-through voltage performance Surge Barrier™ SPDs are designed to respond fast and virtually eliminate surges, providing greater protection to downstream equipment and machinery.

Discrete All-Mode Protection Surge Barrier™ SPDs feature directly connected protection elements in "All Modes" (10 modes for 3 phase WYE circuits).

Twenty-Five Year Warranty Surge Barrier™ SPDs are covered by a 25 Year Limited Warranty.

ANSI/UL 1449 Type 2CA Recognized Component Assembly Surge Barrier™ SPDs are designed to fit virtually any application and include models with UL listings.

CSA Certified Devices For our Canadian customers, Surge Barrier™ SPDs are also available with CSA Certification.

Advanced Filtering Technology Our Surge Barrier™ SPDs, when ordered with Advanced Filtering technology, filter out ringing transients, and stop mid-level, ultra-fast, nuisance surges that plague every industrial and commercial facility. These surges cause frequent error codes, downtime and cumulative damage to all electrical equipment and electronics, including printed circuit boards.

Standard Features

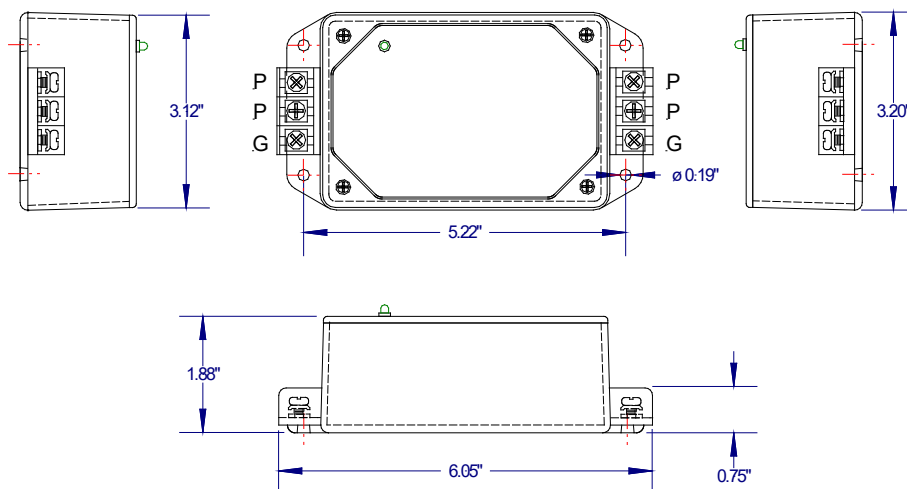
- 20 kA, 40 kA and 50 kA units available
- Optional Advanced Filtering removes virtually all ring wave transients
- Compact NEMA 1 Enclosure is standard
- NEMA 4X Enclosure available
- 25 Year Limited Warranty
- Component level thermal fusing
- Industry leading measured limiting voltage performance
- Circuit encapsulated units available for a smaller footprint and more rugged design
- Ten discrete modes of protection (3 Phase Wye Circuits)
- One diagnostic LED per phase

Applications

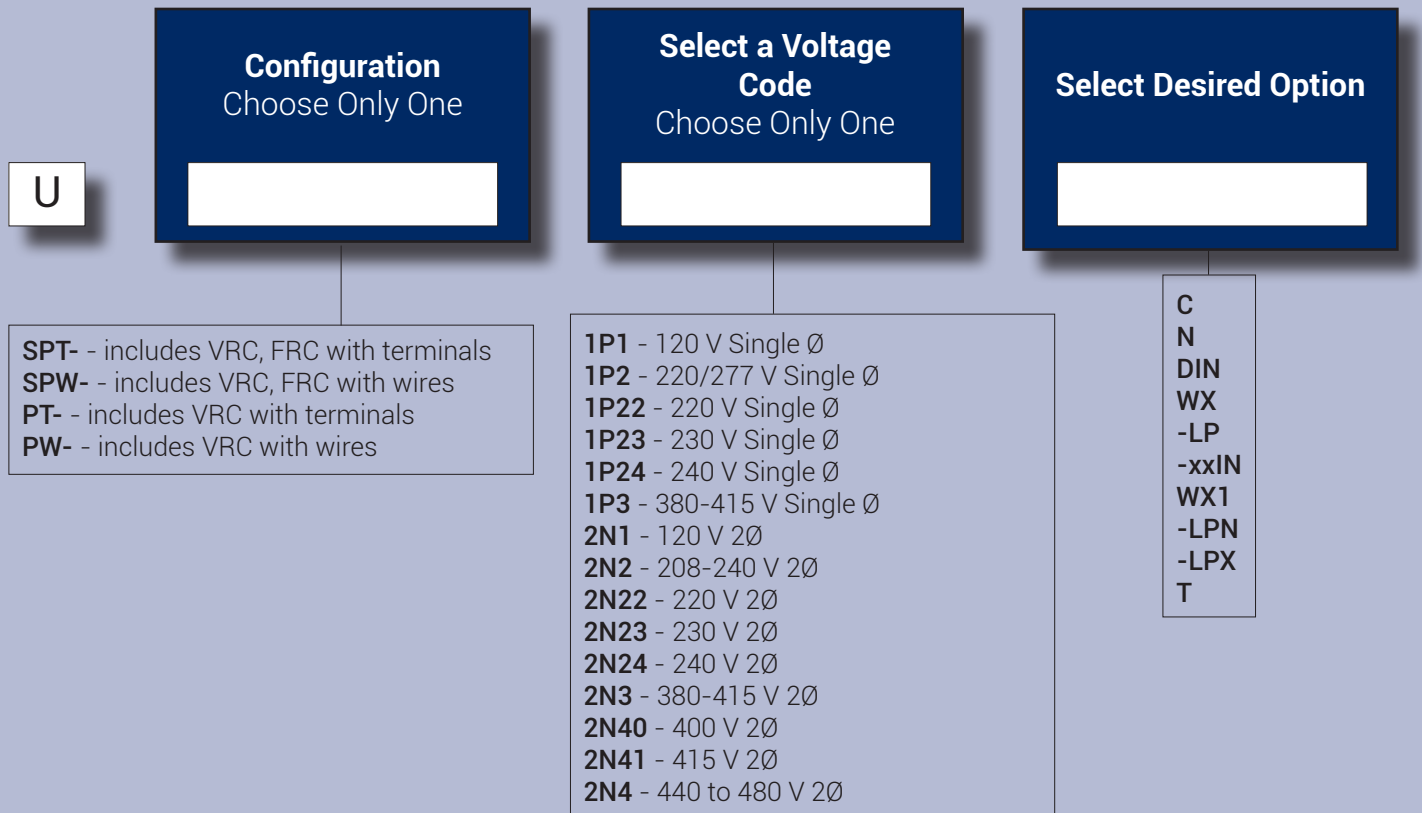
- Security and Fire Alarm Circuits
- Control Circuits
- Programmable Logic Controllers
- Individual Equipment
- Patient Monitoring Systems
- Uninterruptible Power Supplies (UPS)
- Access Control Security Systems
- Card Reader

USPT, USPW, UPT, UPW Models

Nominal Discharge Rating (I_n)		5 kA							
Peak Surge Current		40 kA per mode / 120 kA total							
SPD Type		2 CA (In-line)							
Input Power Frequency		50-60 HZ (AC)							
Load Current		Up to 30 Amps							
Enclosure		ABS Plastic, UL 94-5VA Flame Rating							
Voltage Configurations		1P1	1P2	1P3	2N1	2N2	2N3	2N4	
USPT, USPW		X	X	X	X	X	X	X	
UPT, UPW		X	X	X	X	X	X	X	
Maximum Continuous Operating Voltage (MCOV)	P-N	150 V	320 V	420 V					
	P-G	150 V	320 V	420 V	150 V	320 V	420 V	552 V	
	N-G	150 V	320 V	420 V					
	P-P				150 V	320 V	420 V	552 V	
Voltage Protection Rating (VPR)	P-N	500 V	1000 V	1800 V					
	P-G	600 V	1000 V	1800 V	600 V	1000 V	1200 V	1800 V	
	N-G	600 V	1000 V	1800 V					
	P-P				500 V	900 V	1200 V	1800 V	
Configuration		Options							
SPT includes VRC and FRC with terminals		C - Dry Relay Contact		LP - Remote LED					
SPW includes VRC and FRC with wires		N - Omits N-G FRC from SPT and SPW models T (suffix) - Touch-safe covers, for terminals only		-xxIN - Extended wire lengths for SPW and PW LPX - Remotely mounted LED housed in a NEMA 4X enclosure					
PT includes VRC with terminals		DIN - DIN rail mounting		WX1 - SPD mounted inside a NEMA 4X Opaque Composite enclosure					
PW includes VRC with wires		WX - SPD mounted inside a NEMA 4x Clear Composite enclosure		LPN - Remotely mounted LED housed in a NEMA 1 enclosure					



Building a USPT, USPW, UPT, UPW Model Number



Options

C - Dry Relay Contact

N - Omits N-G FRC from SPT and SPW models

DIN - DIN rail mounting

WX - SPD mounted inside a NEMA 4X Composite Enclosure

-LP - Remote LED

-xxIN - Extended wire lengths for SP2 and FSP2 (Standard wire length is ≈24 inches)

WX1 - SPD mounted inside a NEMA 4X Opaque Composite enclosure

-LPN - Remotely mounted LED housed in a NEMA 1 enclosure

-LPX - Remotely mounted LED housed in a NEMA 4X enclosure

T (suffix) - Touch-safe covers, for terminals only

Example of Model Number

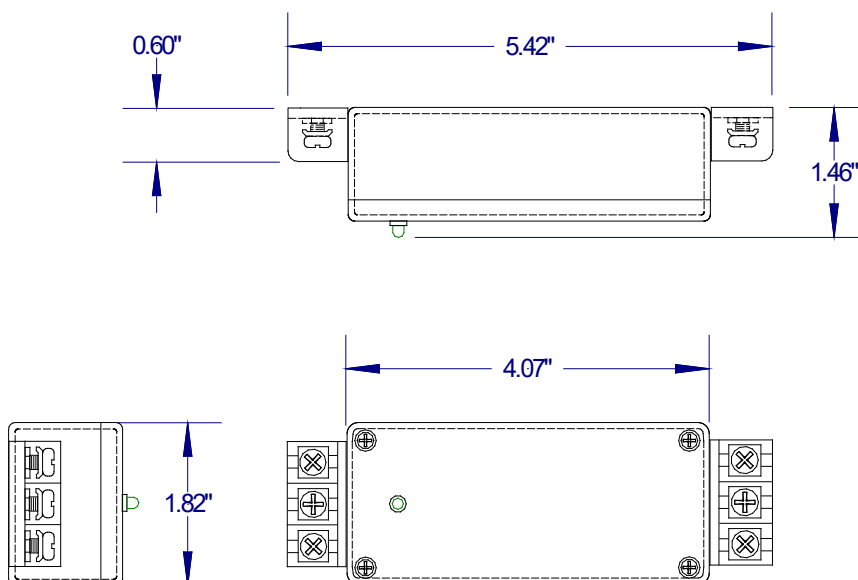
USPT- 2N1 DIN

Includes VRC, FRC with terminals
 120 V 2Ø
 DIN rail mounting



USPT2, USPW2, UPT2, UPW2 Models

Nominal Discharge Rating (I_n)	3 kA						
Peak Surge Current	20 kA per mode						
SPD Type	2CA (In-Line)						
Input Power Frequency	50-60 Hz (AC)						
Load Current	20 Amps						
Enclosure	ABS Plastic, UL 94-5VA Flame Rating						
Voltage Configurations	1P1	1P2	2N1	2N2	1P3	2N3	2N4
USPT2, USPW2	X	X	X	X			
UPT2, UPW2	X	X	X	X	X	X	X
Maximum Continuous Operating Voltage (MCOV)	P-N	150 V	320 V			420 V	
	P-G	150 V	320 V	150 V	320 V	420 V	420 V
	N-G	150 V	320 V			420 V	
	P-P			150 V	320 V		420 V
Voltage Protection Rating (VPR)	P-N	600 V	1200 V			1800 V	
	P-G	600 V	1000 V	600 V	1000 V	1800 V	1500 V
	N-G	600 V	1000 V			1800 V	
	P-P			600 V	1200 V		1800 V
Configuration		Options					
SPT2 includes VRC and FRC with terminals	DIN - DIN rail mounting						
SPW2 includes VRC and FRC with wires	WX - SPD mounted inside a NEMA 4X composite enclosure						
PT2 includes VRC with terminals	-LP - Remote LED						
PW2 includes VRC with wires	-xxIN - Extended wire lengths (SP2, FSP2) Std = 24"						



Building a USPT2, UPT2, USPW2, UPW2 Model Number

U

Configuration
Choose Only One

[]

SPT2- - includes VRC, FRC with terminals
SPW2- - includes VRC, FRC with wires
PT2- - includes VRC with terminals
PW2- - includes VRC with wires

Select a Voltage Code
Choose Only One

[]

1P1 - 120 V Single Ø
1P2 - 220/277 V Single Ø
1P22 - 220 V Single Ø
1P23 - 230 V Single Ø
1P24 - 240 V Single Ø
1P3* - 380-415 V Single Ø
2N1 - 120 V 2Ø
2N2 - 208-240 V 2Ø
2N22 - 220 V 2Ø
2N23 - 230 V 2Ø
2N24 - 240 V 2Ø
2N3* - 380-415 V 2Ø
2N40* - 400 V 2Ø
2N41* - 415 V 2Ø
2N4* - 440 to 480 V 2Ø

*Indicates that this model is only available as the UPT2- or UPW2- model (no FRC).

Select Desired Option

[]

DIN
WX
-LP
-xxIN
WX1
T
-LPN
-LPX

Options

DIN - DIN rail mounting

WX - SPD mounted inside a NEMA 4X Composite Enclosure

-LP - Remote LED

-xxIN - Extended wire lengths for SP2 and FSP2 (Standard wire length is ~24 inches)

WX1 - SPD mounted inside a NEMA 4X Opaque Composite enclosure

-LPN - Remotely mounted LED housed in a NEMA 1 enclosure

-LPX - Remotely mounted LED housed in a NEMA 4X enclosure

T (suffix) - Touch-safe covers, for terminals only

Example of Model Number

USPT2- 2N1 DIN

Includes VRC, FRC with terminals
 120 V 2Ø
 DIN rail mounting



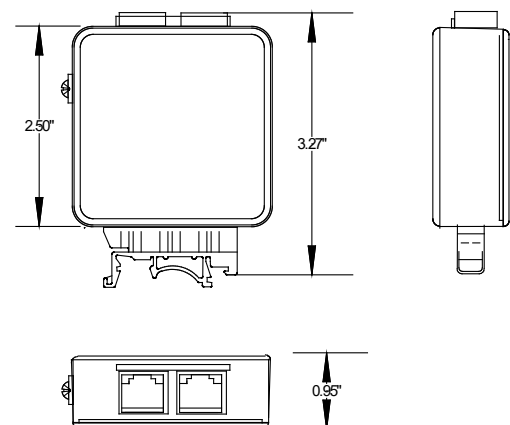
COMPACT DIN

Series wired transient voltage surge suppressor with encapsulated Optimal Response Network™ circuitry for protection of current loop and data/signal type circuits.

Units are listed to UL497B.

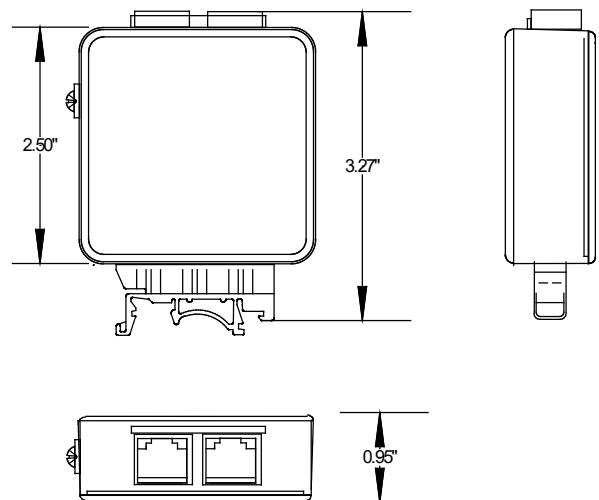
T2RJ45

Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA (100 Kbps)
T2RJ455D8DIN-B	1.5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
T2RJ4512D8DIN-B	1.5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
T2RJ4524D8DIN-B	1.5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
T2RJ4548D8DIN-B	1.5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
T2RJ45130D8DIN-B	1.5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470
T2RJ145D4DIN-B	1.5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
T2RJ1412D4DIN-B	1.5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
T2RJ1424D4DIN-B	1.5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
T2RJ1448D4DIN-B	1.5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
T2RJ14130D4DIN-B	1.5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470
T2RJ115D2DIN-B	1.5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
T2RJ1112D2DIN-B	1.5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
T2RJ1124D2DIN-B	1.5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
T2RJ1148D2DIN-B	1.5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
T2RJ11130D2DIN-B	1.5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470



D2RJ45###D8DIN-B, D2RJ14###D4DIN-B, D2RJ11###D2DIN-B

Model	Maximum Continuous Operating Current (MCOV)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA (100 Kbps)
D2RJ455D8DIN-B	1.5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
D2RJ4512D8DIN-B	1.5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
D2RJ4524D8DIN-B	1.5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
D2RJ4548D8DIN-B	1.5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
D2RJ45140D8DIN-B	1.5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470
D2RJ145D4DIN-B	1.5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
D2RJ1412D4DIN-B	1.5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
D2RJ1424D4DIN-B	1.5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
D2RJ1448D4DIN-B	1.5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
D2RJ14140D4DIN-B	1.5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470
D2RJ115D2DIN-B	1.5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
D2RJ1112D2DIN-B	1.5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
D2RJ1124D2DIN-B	1.5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
D2RJ1148D2DIN-B	1.5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
D2RJ11140D2DIN-B	1.5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470

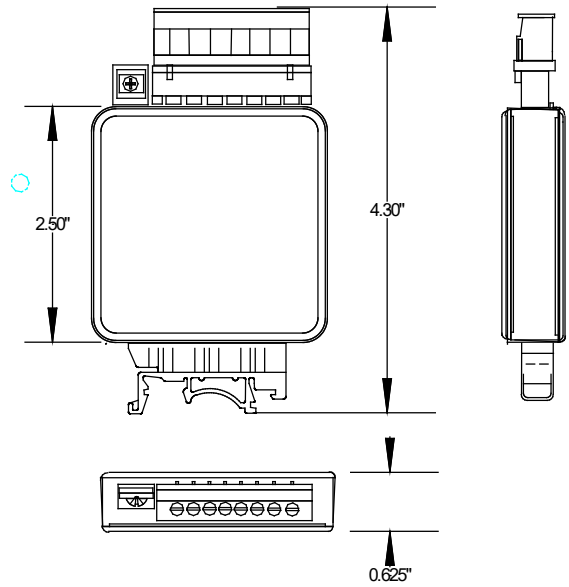


D2P###Ax, D2P###Bx

Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA (100 Kbps)
D2P5AxDINS-B	500 mA	L-G	7.5 V	2 Mbps	< 20 V
		L-L	15 V		< 40 V
		Shield-G	70 V		< 280 V
D2P12AxDINS-B	500 mA	L-G	24 V	2 Mbps	< 30 V
		L-L	48 V		< 60 V
		Shield-G	70 V		< 280 V
D2P24AxDINS-B	500 mA	L-G	36 V	2 Mbps	< 40 V
		L-L	72 V		< 80 V
		Shield-G	70 V		< 280 V
D2P48AxDINS-B	500 mA	L-G	62 V	2 Mbps	< 80 V
		L-L	124 V		< 160 V
		Shield-G	70 V		< 280 V
D2P140AxDINS-B	500 mA	L-G	200 V	2 Mbps	< 220 V
		L-L	400 V		< 440 V
		Shield-G	70 V		< 240 V
D2P5AxDIN-B	500 mA	L-G	7.5 V	2 Mbps	< 20 V
		L-L	15 V		< 40 V
D2P12AxDIN-B	500 mA	L-G	24 V	2 Mbps	< 30 V
		L-L	48 V		< 60 V
D2P24AxDIN-B	500 mA	L-G	36 V	2 Mbps	< 40 V
		L-L	72 V		< 80 V
D2P48AxDIN-B	500 mA	L-G	62 V	2 Mbps	< 80 V
		L-L	124 V		< 160 V
D2P140AxDIN-B	500 mA	L-G	200 V	2 Mbps	< 220 V
		L-L	400 V		< 440 V
D2P5BxDINS-B	500 mA	L-G	7.5 V	10 Mbps	< 20 V
		L-L	15 V		< 20 V
		Shield-G	70 V		< 280 V
D2P12BxDINS-B	500 mA	L-G	24 V	10 Mbps	< 30 V
		L-L	48 V		< 30 V
		Shield-G	70 V		< 280 V
D2P24BxDINS-B	500 mA	L-G	36 V	10 Mbps	< 50 V
		L-L	72 V		< 50 V
		Shield-G	70 V		< 280 V
D2P48BxDINS-B	500 mA	L-G	62 V	10 Mbps	< 80 V
		L-L	124 V		< 80 V
		Shield-G	70 V		< 280 V
D2P140BxDINS-B	500 mA	L-G	200 V	10 Mbps	< 220 V
		L-L	400 V		< 220 V
		Shield-G	70 V		< 240 V
D2P5BxDIN-B	500 mA	L-G	7.5 V	10 Mbps	< 20 V
		L-L	15 V		< 40 V
D2P12BxDIN-B	500 mA	L-G	24 V	10 Mbps	< 30 V
		L-L	48 V		< 60 V
D2P24BxDIN-B	500 mA	L-G	36 V	10 Mbps	< 60 V
		L-L	72 V		< 120 V

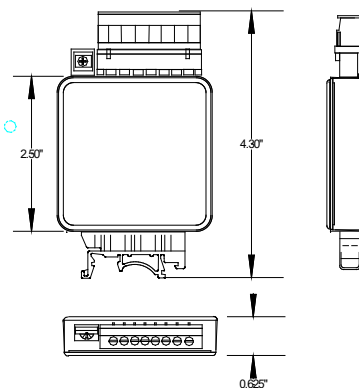
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Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA (100 Kbps)
D2P48BxDIN-B	500 mA	L-G	62 V	10 Mbps	< 90 V
		L-L	124 V		< 180 V
D2P140BxDIN-B	500 mA	L-G	200 V	10 Mbps	< 250 V
		L-L	400 V		< 500 V



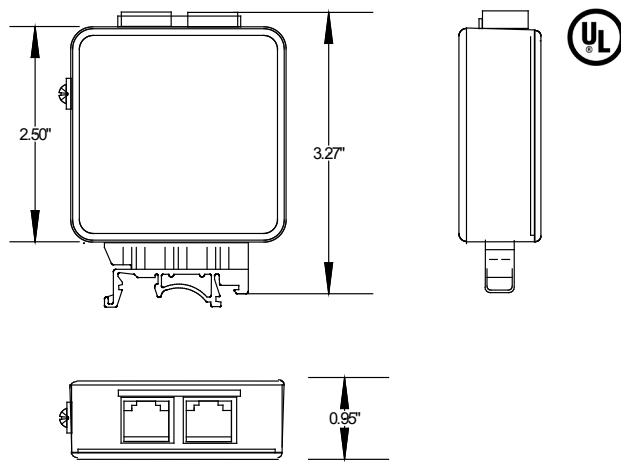
CL2P

Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA (100 Kbps)
CL2P5AxDIN-B	500 mA	L-G	7.5 V L-G	2 Mbps	< 20
		L-L	15 V L-L		< 40
CL2P12AxDIN-B	500 mA	L-G	24 V L-G	2 Mbps	< 30
		L-L	48 V L-L		< 60
CL2P24AxDIN-B	500 mA	L-G	36 V L-G	2 Mbps	< 60
		L-L	72 V L-L		< 120
CL2P48AxDIN-B	500 mA	L-G	62 V L-G	2 Mbps	< 90
		L-L	124 V L-L		< 180
CL2P140AxDIN-B	500 mA	L-G	200 V L-G	2 Mbps	< 250
		L-L	400 V L-L		< 500
CL2P5DxDIN-B	5A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
CL2P12DxDIN-B	5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
CL2P24DxDIN-B	5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
CL2P48DxDIN-B	5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
CL2P130DxDIN-B	5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470
CL2P5DxDINS-B	5 A	L-G	14 V	100 Kbps	149
		L-L	28 V		149
		S-G	70 V		
CL2P12DxDINS-B	5 A	L-G	31 V	100 Kbps	163
		L-L	62 V		163
		S-G	70 V		
CL2P24DxDINS-B	5 A	L-G	38 V	100 Kbps	220
		L-L	76 V		220
		S-G	70 V		
CL2P48DxDINS-B	5 A	L-G	102 V	100 Kbps	295
		L-L	204 V		295
		S-G	70 V		
CL2P130DxDINS-B	5 A	L-G	175 V	100 Kbps	470
		L-L	350 V		470
		S-G	70 V		



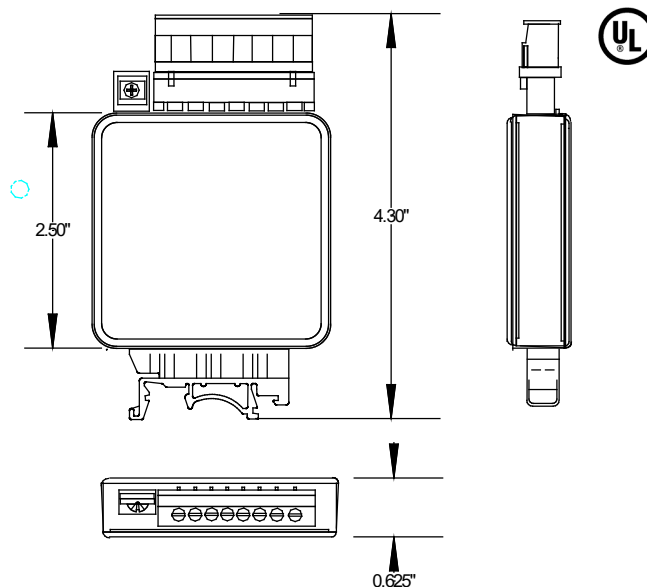
T2RJ

Model	Maximum Continuous Operating Current (MCOC)	PSC	VNOM	Mode	Maximum Continuous Operating Voltage (MCOV)	10 x 1,000 μ s, Impulse Waveform
T2RJ455C8SIDDIN-B	1.5 A	150 A	5 V	L-G	6 V	< 20 V
				L-L	12 V	< 40 V
T2RJ4512C8SIDDIN-B	1.5 A	150 A	12 V	L-G	25 V	< 30 V
				L-L	50 V	< 60 V
T2RJ4524C8SIDDIN-B	1.5 A	150 A	24 V	L-G	25 V	< 60 V
				L-L	50 V	< 120 V
T2RJ4548C8SIDDIN-B	1.5 A	150 A	48 V	L-G	58 V	< 90 V
				L-L	116 V	< 180 V
T2RJ45140C8SIDDIN-B	1.5 A	150 A	140 V	L-G	220 V	< 250 V
				L-L	440 V	< 500 V
T2RJ145C4SIDDIN-B	1.5 A	150 A	5 V	L-G	6 V	< 20 V
				L-L	12 V	< 40 V
T2RJ1412C4SIDDIN-B	1.5 A	150 A	12 V	L-G	25 V	< 30 V
				L-L	50 V	< 60 V
T2RJ1424C4SIDDIN-B	1.5 A	150 A	24 V	L-G	25 V	< 60 V
				L-L	50 V	< 120 V
T2RJ1448C4SIDDIN-B	1.5 A	150 A	48 V	L-G	58 V	< 90 V
				L-L	116 V	< 180 V
T2RJ14140C4SIDDIN-B	1.5 A	150 A	140 V	L-G	220 V	< 250 V
				L-L	440 V	< 500 V
T2RJ115C2SIDDIN-B	1.5 A	150 A	5 V	L-G	6 V	< 20 V
				L-L	12 V	< 40 V
T2RJ1112C2SIDDIN-B	1.5 A	150 A	12 V	L-G	25 V	< 30 V
				L-L	50 V	< 60 V
T2RJ1124C2SIDDIN-B	1.5 A	150 A	24 V	L-G	25 V	< 60 V
				L-L	50 V	< 120 V
T2RJ1148C2SIDDIN-B	1.5 A	150 A	48 V	L-G	58 V	< 90 V
				L-L	116 V	< 180 V
T2RJ11140C2SIDDIN-B	1.5 A	150 A	140 V	L-G	220 V	< 250 V
				L-L	440 V	< 500 V



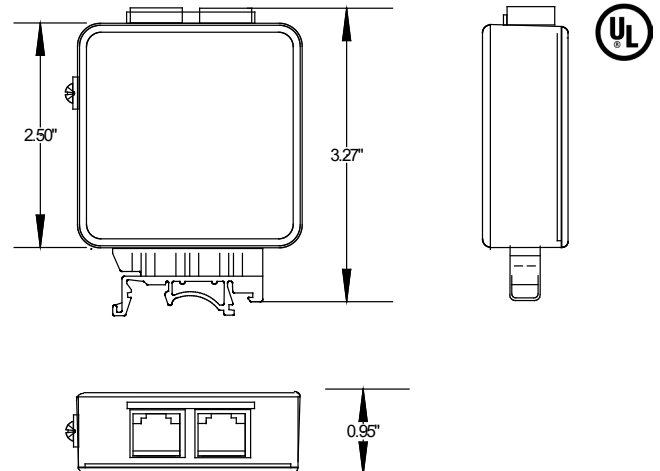
T2P

Model	Maximum Continuous Operating Current (MCOC)	PSC	VNOM	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	10 x 1,000 μ s, Impulse Waveform
T2P5CxSIDDIN-B	5 A	150 A	5 V	L-G	6 V	100 Mbps	< 20 V
				L-L	12 V		< 40 V
T2P12CxSIDDIN-B	5 A	150 A	12 V	L-G	25 V	100 Mbps	< 30 V
				L-L	50 V		< 60 V
T2P24CxSIDDIN-B	5 A	150 A	24 V	L-G	25 V	100 Mbps	< 60 V
				L-L	50 V		< 120 V
T2P48CxSIDDIN-B	5 A	150 A	48 V	L-G	58 V	100 Mbps	< 90 V
				L-L	116 V		< 180 V
T2P140CxSIDDIN-B	5 A	150 A	140 V	L-G	220 V	100 Mbps	< 250 V
				L-L	440 V		< 500 V



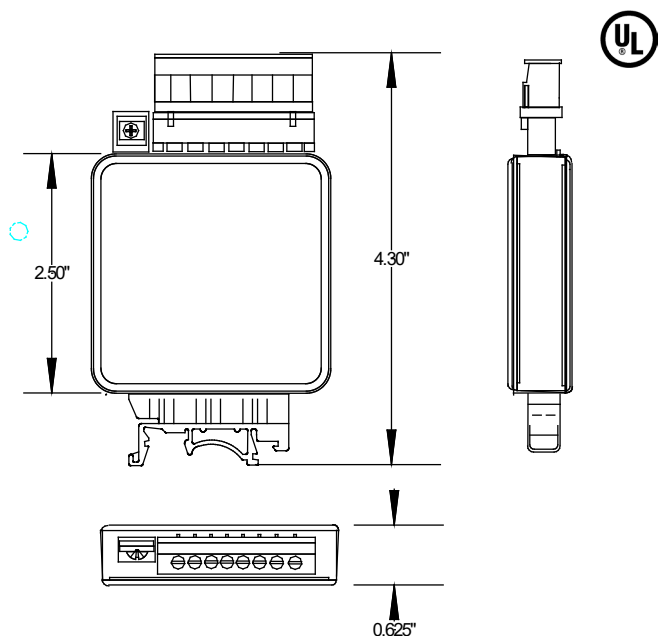
D2RJ45###C8DIN-B, D2RJ14###C4DIN-B, D2RJ11###C2DIN-B

Model	Maximum Continuous Operating Current (MCO C)	Test Mode	Maximum Continuous Operating Voltage (MCO V)	Maximum Data Rate	10 x 1,000 μ s, Impulse Waveform
D2RJ455C8DIN-B	1.5 A	L-G	7.5 V	100 Mbps	< 20
		L-L	15 V		< 40
D2RJ4512C8DIN-B	1.5 A	L-G	24 V	100 Mbps	< 30
		L-L	48 V		< 60
D2RJ4524C8DIN-B	1.5 A	L-G	36 V	100 Mbps	< 60
		L-L	72 V		< 120
D2RJ4548C8DIN-B	1.5 A	L-G	62 V	100 Mbps	< 90
		L-L	124 V		< 180
D2RJ45140C8DIN-B	1.5 A	L-G	200 V	100 Mbps	< 250
		L-L	400 V		< 500
D2RJ145C4DIN-B	5 A	L-G	7.5 V	100 Mbps	< 20
		L-L	15 V		< 40
D2RJ1412C4DIN-B	5 A	L-G	24 V	100 Mbps	< 30
		L-L	48 V		< 60
D2RJ1424C4DIN-B	5 A	L-G	36 V	100 Mbps	< 60
		L-L	72 V		< 120
D2RJ1448C4DIN-B	5 A	L-G	62 V	100 Mbps	< 90
		L-L	124 V		< 180
D2RJ14140C4DIN-B	5 A	L-G	200 V	100 Mbps	< 250
		L-L	400 V		< 500
D2RJ115C2DIN-B	5 A	L-G	7.5 V	100 Mbps	< 20
		L-L	15 V		< 40
D2RJ1112C2DIN-B	5 A	L-G	24 V	100 Mbps	< 30
		L-L	48 V		< 60
D2RJ1124C2DIN-B	5 A	L-G	36 V	100 Mbps	< 60
		L-L	72 V		< 120
D2RJ1148C2DIN-B	5 A	L-G	62 V	100 Mbps	< 90
		L-L	124 V		< 180
D2RJ11140C2DIN-B	5 A	L-G	200 V	100 Mbps	< 250
		L-L	400 V		< 500



D2P###Cx DIN-B, D2P###Cx DIN5-B

Model	Maximum Continuous Operating Current (MCOC)	Test Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Data Rate	10 x 1,000 μ s, Impulse Waveform
D2P5Cx DIN-B	5 A	L-G	7.5 V	100 Mbps	< 20 V
		L-L	15 V		< 40 V
D2P12Cx DIN-B	5 A	L-G	24 V	100 Mbps	< 30 V
		L-L	48 V		< 60 V
D2P24Cx DIN-B	5 A	L-G	36 V	100 Mbps	< 60 V
		L-L	72 V		< 120 V
D2P48Cx DIN-B	5 A	L-G	62 V	100 Mbps	< 90 V
		L-L	124 V		< 180 V
D2P140Cx DIN-B	5 A	L-G	200 V	100 Mbps	< 250 V
		L-L	400 V		< 500 V
D2P5Cx DIN5-B	5 A	L-G	7.5 V	100 Mbps	< 20 V
		L-L	15 V		< 40 V
		Shield-G	70 V		127 V
D2P12Cx DIN5-B	5 A	L-G	24 V	100 Mbps	< 30 V
		L-L	48 V		< 60 V
		Shield-G	70 V		127 V
D2P24Cx DIN5-B	5 A	L-G	36 V	100 Mbps	< 60 V
		L-L	72 V		< 120 V
		Shield-G	70 V		127 V
D2P48Cx DIN5-B	5 A	L-G	62 V	100 Mbps	< 90 V
		L-L	124 V		< 180 V
		Shield-G	70 V		127 V
D2P140Cx DIN5-B	5 A	L-G	200 V	100 Mbps	< 250 V
		L-L	400 V		< 500 V
		Shield-G	70 V		127 V



DIN RAIL-MOUNTED UNITS

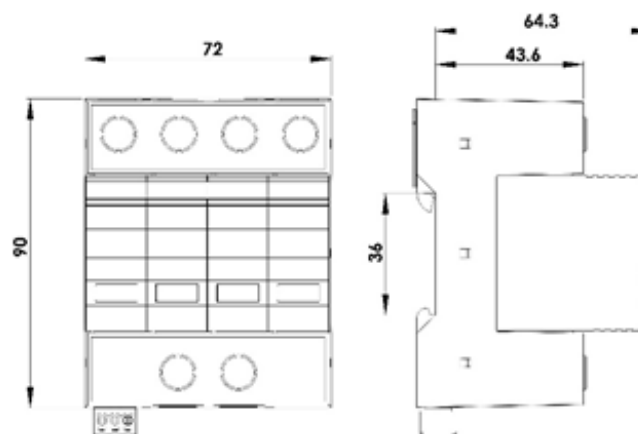
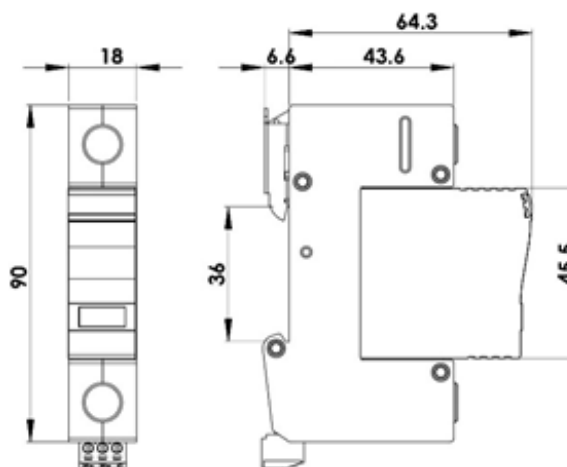
DIN Rail-Mounted SPDs are high performance surge protection solutions for most commercial and industrial environments with critical operations. These are designed to protect against the harmful effects of transient surges.

DRM50



Specifications	
Series	DRM50
SPD Category	ANSI/UL1449, Type 1ca SPD CSA-C22.2, Type 2ca SPD
Connection Type	Parallel Connected
System Voltage (50/60 Hz) Un	120~600 Vac
Surge Capacity per Phase	50 kA, (40kA for 690Vac)
Nominal Discharge Current (I_n)	20 kA
MCOV	150~690 Vac
SCCR Rating	200 kArms
External Disconnecter Requirements	125 A gL/gG maximum
Failure Indicators	Flag indicator green - normal; red - failure
Remote Alarms (Optional Equipment)	Isolated Form C AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A
Enclosure Rating	IP20, UL94 V0
Power Connecting	Single strand 35 mm ² ; multi-strand 25 mm ²
Signal Cable (Remote alarm)	Max. 1.5 mm ² (or # 16AWG)
Working Environments	Temperature -40oC+80oC, Humidity relative 5~95% (25oC) , Altitude ≤ 2 km
Storage	Temperature 0oC+45oC, Humidity relative ≤75% (25oC)

Dimensions, W x D x H		90x18x46 mm (1 pole)				
Applicable Standards		ANSI/UL1449, ANSI/IEEE C62.41,				
Approvals, Certifications		UL Recognized Component Assemblies				
Voltage Configuration	VNOM (50/60Hz)	Maximum Continuous Operating Voltage (MCOV)	Power Distribution	Test Mode	Cat A, 30 Ω 100 kHz Ring-Wave 2 kV / 67 A @ 270° Phase Angle	ANSI/UL 1449 Voltage Protection Rating (VPR)
1P120	120Vac	150Vac	Single	L-N	584	700
1P277	240Vac	320Vac	Single	L-N	1132	1200
1P480	480Vac	550Vac	Single	L-N	1874	1800
3PG480	480Vac	550Vac	Three Phase Δ	L-G	1874	1800
3PNG120/208	120/208Vac	150Vac	Three Phase Y	L-G	584	700
				N-G	796	900
3PNG220/380	220/380Vac	320Vac	Three Phase Y	L-G	1132	1200
				N-G	1212	1200
3PNG230/400	230/400Vac	320Vac	Three Phase Y	L-G	1132	1200
				N-G	1212	1200
3PNG240/415	240/415Vac	320Vac	Three Phase Y	L-G	1132	1200
				N-G	1212	1200
3PNG277/480	277/480Vac	320Vac	Three Phase Y	L-G	1132	1200
				N-G	1212	1200



DL-RJ45PoE Protector

The DL-RJ45PoE Protector is designed for protecting Gigabit Ethernet terminals such as Security Cameras, VOIP and IP Telephones, and wireless access points. It is suitable for use at the upstream near the protected devices or in a category B and C (ANSI/IEEE C62.41) location.

Technical Features

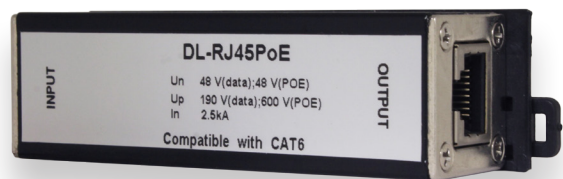
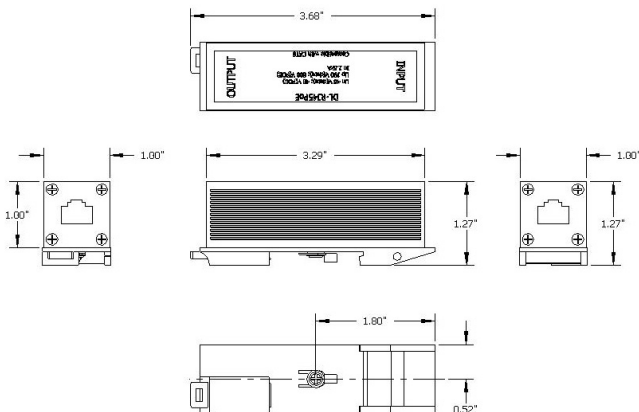
- Data network protector designed to standard IEEE802.3at/af, UL497B, and IEC61643-21
- PoE compatible, Ethernet CAT6 system protection
- High discharge capability, total nominal discharge current 10 kA 8/20

- Aluminum housing with RJ45 connectors for CAT6 network technology, 100BaseT, 1000BaseT, 1000BaseTX, 8 wires protection.

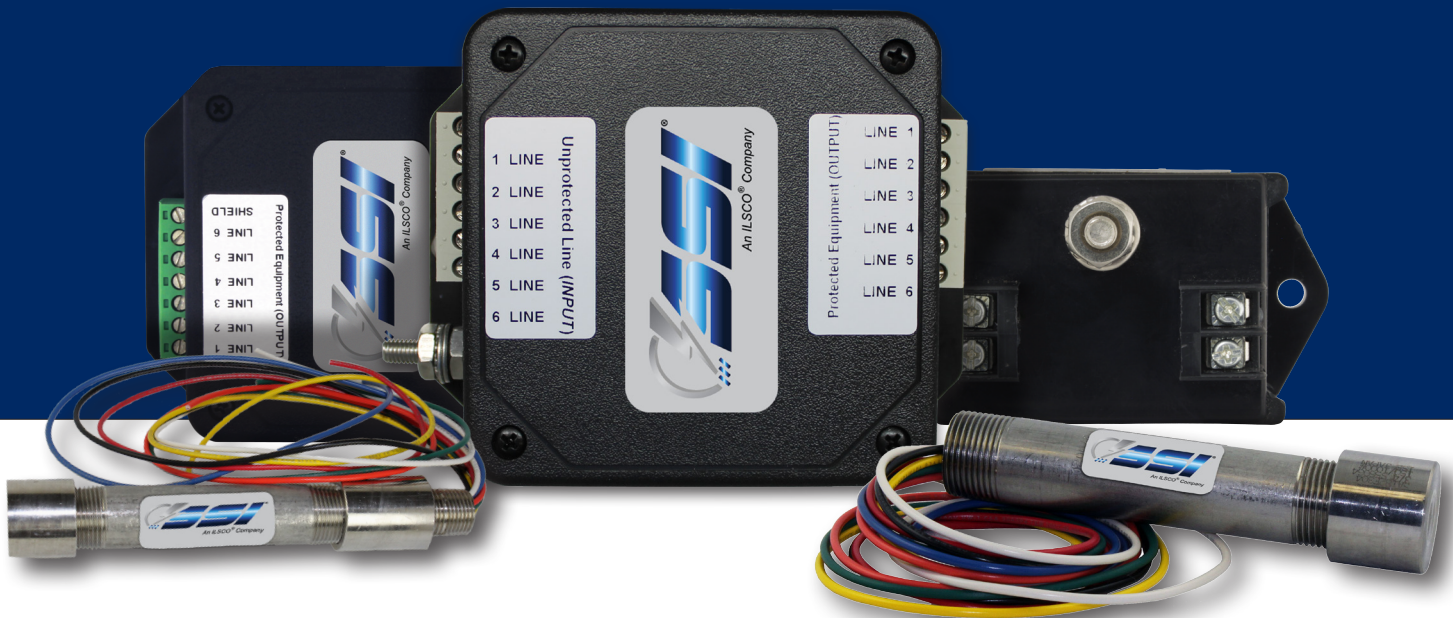
Applications

- Computer Protection
- Camera Protection
- VOIP and IP Telephone Protection
- Router Protection
- Switch Protection
- Modem Protection

Specifications	
Nominal Voltage	48 V
Maximum Continuous Operating Voltage	57 V
C2 Nominal Discharge Current (8/20us) I _n	0.15 kA (L-L)
	2.5 kA (L-G)
C2 Total Nominal Discharge Current (8/20us)	10 kA
Nominal Current	1000 mA
Transmission Speed	1 Gigabit
SPD + 100 m CAT6 Ethernet Cable Transmission Performance	CAT6 channel test
Resistance per Line	0 Ohms
Test Data (1 kV/12 Ohm)	601 (L1-G)
	588 (L2-G)
	121 (L-L)
Physical Specifications	
Pinning	1/2, 3/6, 4/5, 7/8 for data; 1&2 / 3&6, 4&5 / 7&8 for PoE
Material	Aluminum
Connection Type	RJ45 (shielded) Female/Female
Dimensions (Inches)	3.66 x 1.02 x 1.28
Operating Temperature Range	-40°C~+80°C
Standards	
Transmission Standards	10BaseT/
	100BaseT/1000BaseT/
	1000BaseTX (CAT6)/PoE
Warranty	5 Year



CURRENT LOOP



Surge Protection for Industrial, Manufacturing, and Commercial Facilities

Current loop surge protectors (surge protective devices) are used in industrial, manufacturing, and commercial facilities to measure speed, volume, weight, flow or other variables. The current loop utilizes a continuous voltage with a varying current level that changes in direct proportion to the measured variable. The vast majority of current loop units are 24 Vdc, 4-20 mA. Other, non-standard voltages are available.

The current travels from the meter or scale to the sensor (motion, load, volume, etc.) and back. As the variable increases the current changes in direct correlation. This current is then measured and the resulting change in current indicates the variable to be measured. SSI manufactures surge protectors for both standard current loop and HART digital data systems.

Each current loop is 2 wire, with or without shield, plus a ground wire. We offer both conduit type and NEMA 1 (indoor use) enclosures depending on the desired location of the current loop surge protector.

Typical applications for current loop surge protective devices include wastewater treatment facilities, truck scales, and concrete plants.

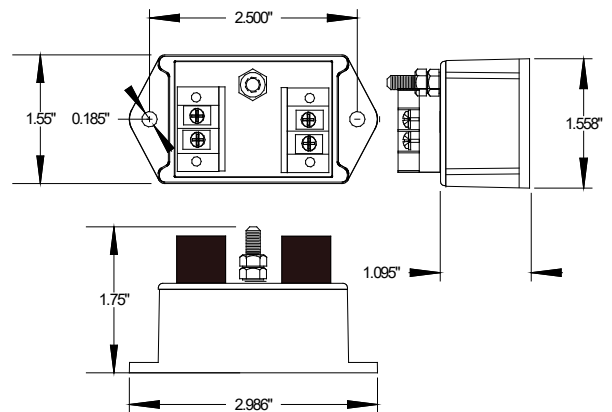
Standard Features

- Multi-stage Hybrid Design
- Data Rates to 100 Mbps
- Low Impedance/Insertion Loss
- Terminal and Hardwire
- Lowest Let-through Voltage Levels
- UL 497B

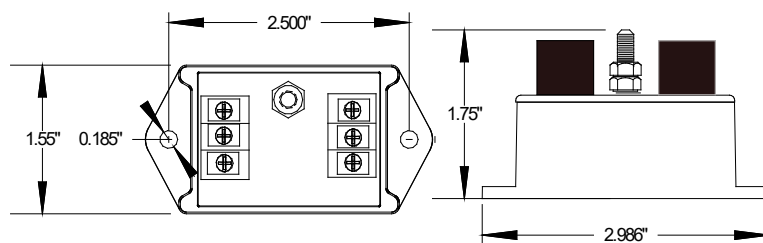
CLC-CL3

Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	Cat. B Impulse Wave 6 kV, 3 kA
CLC60C2G-B	5 A	L-G	60 VDC	251 V
		L-L		
CLC5A2-B	500 mA	L-G	7.5 V	< 20
		L-L	15 V	< 40
CLC12A2-B	500 mA	L-G	24 V	< 30
		L-L	48 V	< 60
CLC24A2-B	500 mA	L-G	36 V	< 40
		L-L	72 V	< 80
CLC48A2-B	500 mA	L-G	62 V	< 80
		L-L	124 V	< 160
CLC140A2-B	500 mA	L-G	200 V	< 220
		L-L	400 V	< 440
CLC5A2S-B	500 mA	L-G	7.5 V L-G	< 20 V
		L-L	15 V L-L	< 40 V
			70 V Shield -G	< 280 V
CLC12A2S-B	500 mA	L-G	24 V L-G	< 30 V
		L-L	48 V L-L	< 60 V
			70 V Shield -G	< 280 V
CLC24A2S-B	500 mA	L-G	36 V L-G	< 40 V
		L-L	72 V L-L	< 80 V
			70 V Shield -G	< 280 V
CLC48A2S-B	500 mA	L-G	62 V L-G	< 80 V
		L-L	124 V L-L	< 160 V
			70 V Shield -G	< 280 V
CLC140A2S-B	500 mA	L-G	200 V L-G	< 220 V
		L-L	400 V L-L	< 440 V
			70 V Shield -G	< 240 V

CLC602CGB, CLC5A2-B thru CLC140A2-B

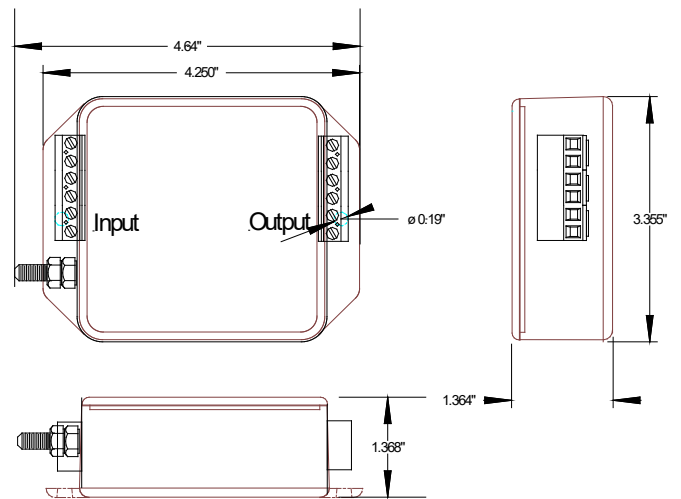


CLC5A2S-B thru CLC140A2S-B



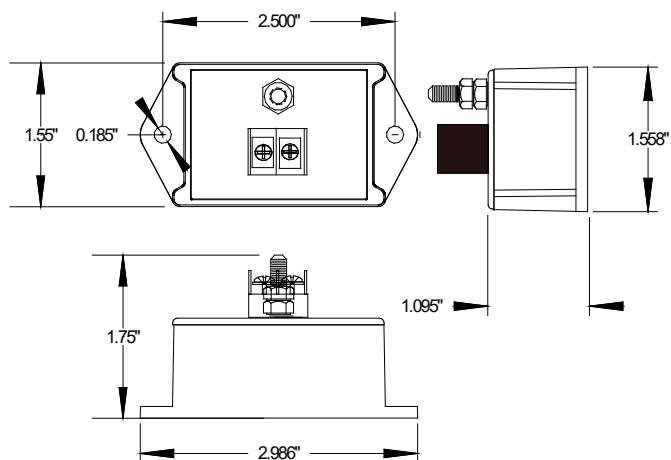
CLP###Ax-B

Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	Cat. B Impulse Wave 6 kV, 3 kA
Note: x = 2, 4, or 6				
CLP5Ax-B	500 mA	L-G	7.5 V L-G	< 20
		L-L	7.5 V L-L	< 20
CLP12Ax-B	500 mA	L-G	24 V L-G	< 30
		L-L	24 V L-L	< 30
CLP24Ax-B	500 mA	L-G	36 V L-G	< 40
		L-L	36 V L-L	< 40
CLP48Ax-B	500 mA	L-G	62 V L-G	< 80
		L-L	62 V L-L	< 80
CLP140Ax-B	500 mA	L-G	200 V L-G	< 220
		L-L	200 V L-L	< 220



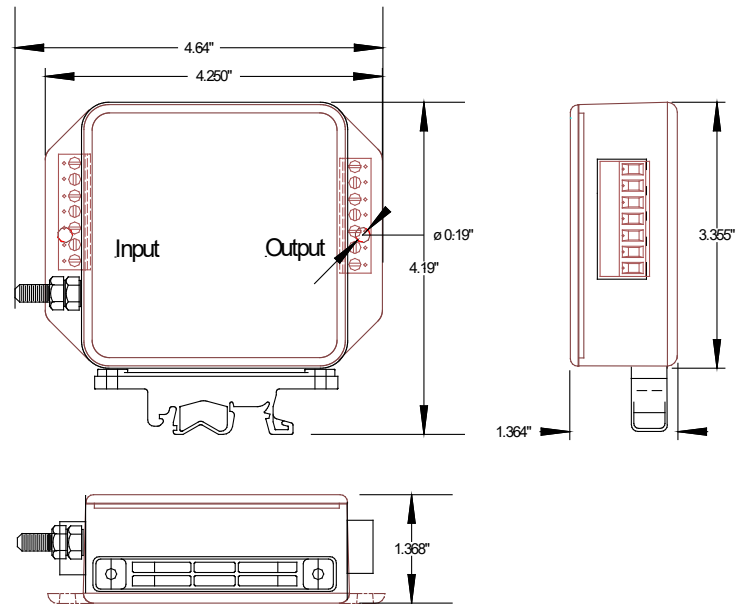
CLC###A2K-B

Model	Maximum Continuous Operating Current (MCOC)	Mode	Maximum Continuous Operating Voltage (MCOV)	10 x 1,000 μ sec, Impulse Waveform
CLC5A2K-B	500 mA	L-G	7.5 V	< 20 V
		L-L	15 V	< 40 V
CLC12A2K-B	500 mA	L-G	24 V	< 30 V
		L-L	48 V	< 60 V
CLC24A2K-B	500 mA	L-G	36 V	< 60 V
		L-L	72 V	< 120 V
CLC48A2K-B	500 mA	L-G	62 V	< 90 V
		L-L	124 V	< 180 V
CLC140A2K-B	500 mA	L-G	200 V	< 250 V
		L-L	400 V	< 500 V



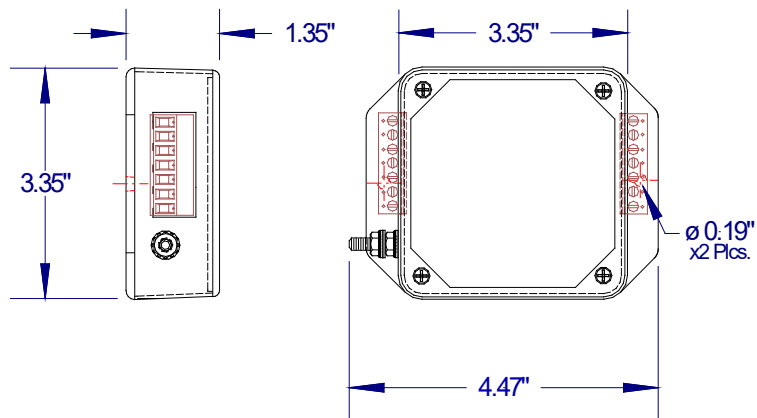
CLP###AxDINS-B

Model	Nominal System Operating Voltage (Vnom)	Test Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)
CLP5AxDINS-B	5 V	L-G	7.5 V	500 mA
		L-L	7.5 V	
		Shield-G	70 V	
CLP12AxDINS-B	12 V	L-G	24 V	500 mA
		L-L	24 V	
		Shield-G	70 V	
CLP24AxDINS-B	24 V	L-G	36 V	500 mA
		L-L	36 V	
		Shield-G	70 V	
CLP48AxDINS-B	48 V	L-G	62 V	500 mA
		L-L	62 V	
		Shield-G	70 V	
CLP140AxDINS-B	140 V	L-G	200 V	500 mA
		L-L	200 V	
		Shield-G	70 V	



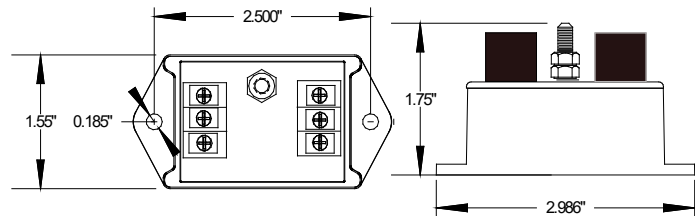
CLP###AxS-B

Model	Nominal System Operating Voltage (Vnom)	Test Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Cat. B Impulse Wave 6 kV, 3 kA
Note: x = 2, 4, or 6					
CLP5AxS-B	5 V	L-G	7.5 V L-G	500 mA	< 20 V
		L-L	7.5 V L-L		< 40 V
		Shield-G	75 V Shield -G		< 280 V
CLP12AxS-B	12 V	L-G	24 V L-G	500 mA	< 30 V
		L-L	24 V L-L		< 60 V
		Shield-G	75 V Shield -G		< 280 V
CLP24AxS-B	24 V	L-G	36 V L-G	500 mA	< 40 V
		L-L	36 V L-L		< 80 V
		Shield-G	75 V Shield -G		< 280 V
CLP48AxS-B	48 V	L-G	62 V L-G	500 mA	< 80 V
		L-L	62 V L-L		< 160 V
		Shield-G	75 V Shield -G		< 280 V
CLP140AxS-B	140 V	L-G	200 V L-G	500 mA	< 220 V
		L-L	200 V L-L		< 440 V
		Shield-G	75 V Shield -G		< 240 V



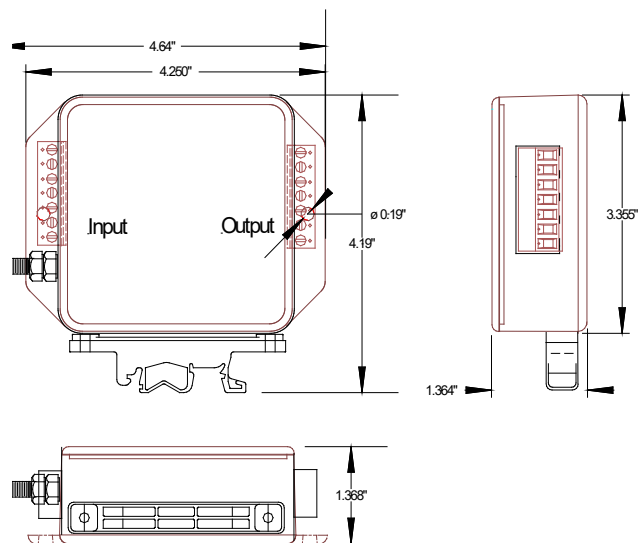
CLC###A2S-B

Model	Maximum Continuous Operating Voltage (MCOV)	Mode	Cat. B Impulse Wave 6 kV, 3 kA
CLC5A2S-B	7.5 V L-G	L-G L-L	< 20 V
	15 V L-L		< 40 V
	70 V Shield-G		< 280 V
CLC12A2S-B	24 V L-G	L-G L-L	< 30 V
	48 V L-L		< 60 V
	70 V Shield-G		< 280 V
CLC24A2S-B	36 V L-G	L-G L-L	< 40 V
	72 V L-L		< 80 V
	70 V Shield-G		< 280 V
CLC48A2S-B	62 V L-G	L-G L-L	< 80 V
	124 V L-L		< 160 V
	70 V Shield-G		< 280 V
CLC140A2S-B	200 V L-G	L-G L-L	< 220 V
	400 V L-L		< 440 V
	70 V Shield-G		< 240 V



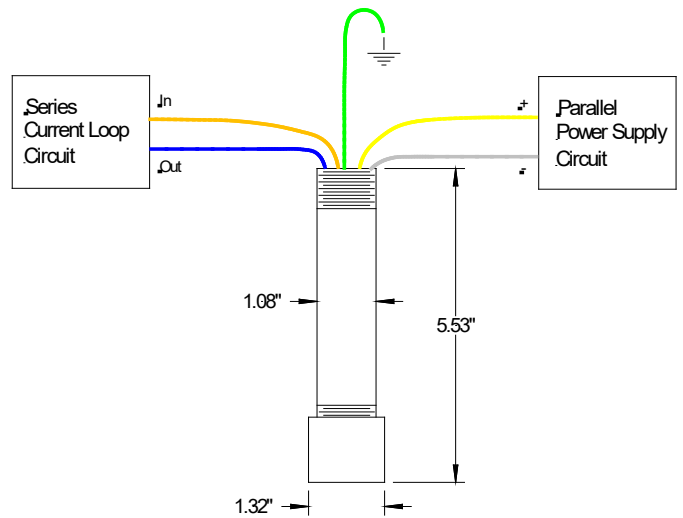
CLP###AxDIN-B

Model	Nominal System Operating Voltage (Vnom)	Test Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)
CLP5AxDIN-B	5 V	L-G	7.5 V	500 mA
		L-L	7.5 V	
		Shield-G	70 V	
CLP12AxDIN-B	12 V	L-G	24 V	500 mA
		L-L	24 V	
		Shield-G	70 V	
CLP24AxDIN-B	24 V	L-G	36 V	500 mA
		L-L	36 V	
		Shield-G	70 V	
CLP48AxDIN-B	48 V	L-G	62 V	500 mA
		L-L	62 V	
		Shield-G	70 V	
CLP140AxDIN-B	140 V	L-G	200 V	500 mA
		L-L	200 V	
		Shield-G	70 V	



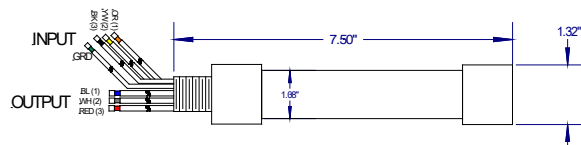
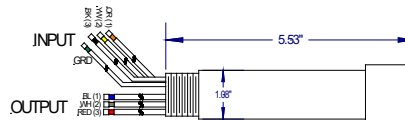
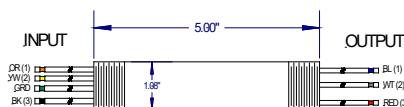
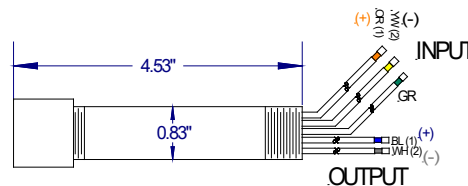
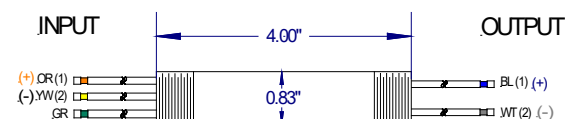
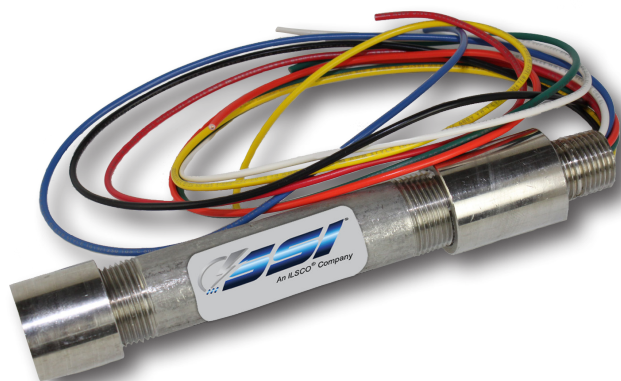
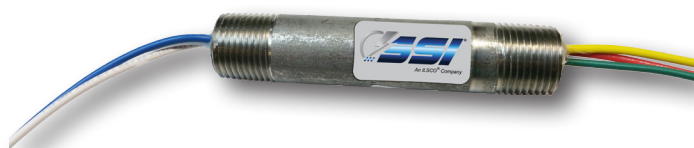
CLW###A2PS

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)		B3/C1 Impulse Wave 6 kV, 3 kA		Maximum Digital / Analog Data Rates Vs. Additional Series Resistance
		Voltage (L-L)	Voltage (L-G)	Voltage (L-L)	Voltage (L-G)	
		CLW5A2PS	5 V	± 15 Vpk	± 7.5 Vpk	< 40
CLW12A2PS	12 V	± 48 Vpk	± 24 Vpk	< 60	< 30	5 Ohms per line (10 Ohms per pair/loop)
CLW24A2PS	24 V	± 72 Vpk	± 36 Vpk	< 80	< 40	5 Ohms per line (10 Ohms per pair/loop)
CLW48A2PS	48 V	± 124 Vpk	± 62 Vpk	< 160	< 80	5 Ohms per line (10 Ohms per pair/loop)
CLW140A2PS	140 V	± 400 Vpk	± 200 Vpk	< 400	< 200	5 Ohms per line (10 Ohms per pair/loop)



CLW###A2P-B, CLW###A3Pyz-B

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)		B3/C1 Impulse Wave 6 kV, 3 kA		Maximum Digital / Analog Data Rates Vs. Additional Series Resistance
		Voltage	Voltage	Voltage	Voltage	2 Mbps / 20 MHz
		(L-L)	(L-G)	(L-L)	(L-G)	
CLW5A2P-B	5 V	± 15 Vpk	± 7.5 Vpk	< 40	< 20	5 Ohms per line (10 Ohms per pair/loop)
CLW12A2P-B	12 V	± 48 Vpk	± 24 Vpk	< 60	< 30	5 Ohms per line (10 Ohms per pair/loop)
CLW24A2P-B	24 V	± 72 Vpk	± 36 Vpk	< 80	< 40	5 Ohms per line (10 Ohms per pair/loop)
CLW48A2P-B	48 V	± 124 Vpk	± 62 Vpk	< 160	< 80	5 Ohms per line (10 Ohms per pair/loop)
CLW140A2P-B	140 V	± 400 Vpk	± 200 Vpk	< 400	< 200	5 Ohms per line (10 Ohms per pair/loop)
CLW5A3Pyz-B	5 V	± 15 Vpk	± 7.5 Vpk	< 40	< 20	5 Ohms per line (10 Ohms per pair/loop)
CLW12A3Pyz-B	12 V	± 48 Vpk	± 24 Vpk	< 60	< 30	5 Ohms per line (10 Ohms per pair/loop)
CLW24A3Pyz-B	24 V	± 72 Vpk	± 36 Vpk	< 80	< 40	5 Ohms per line (10 Ohms per pair/loop)
CLW48A3Pyz-B	48 V	± 124 Vpk	± 62 Vpk	< 160	< 80	5 Ohms per line (10 Ohms per pair/loop)
CLW140A3Pyz-B	140 V	± 400 Vpk	± 200 Vpk	< 400	< 200	5 Ohms per line (10 Ohms per pair/loop)



SECURITY SYSTEM

These devices are designed to protect security camera circuits. There are a variety of connection types and cable purposes, with combinations for almost every type of system. Their compact design makes them ideal for installation in camera housings or optional NEMA 4X enclosures.

These devices are intended for installation near the equipment to be protected and mounted as close to the equipment as possible, so as to allow for a common grounding point. A ground lug is located on the face of the unit to insure a low impedance ground discharge path.

Features

- 25 Years Unlimited Free Replacement
- UL497B
- Plastic Enclosure, UL94-5VA
- External mounting feet. DIN mounting feet (DIN option)
- Dedicated protection components and circuitry for each mode. L-G, (Common Mode)

Options

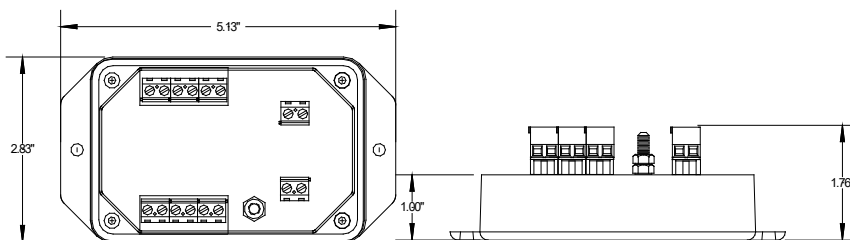
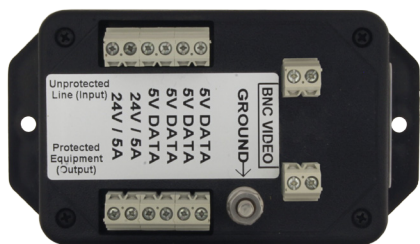
- COAX Cable in Hi-Def 1.4 GHz frequency
- COAX Connectors in Standard BNC Connectors
- Twisted-Pair Terminal Connectors
- 24 Vdc Terminals for camera power
- 24 Vdc Terminals for Tilt-Pan-Zoom controls



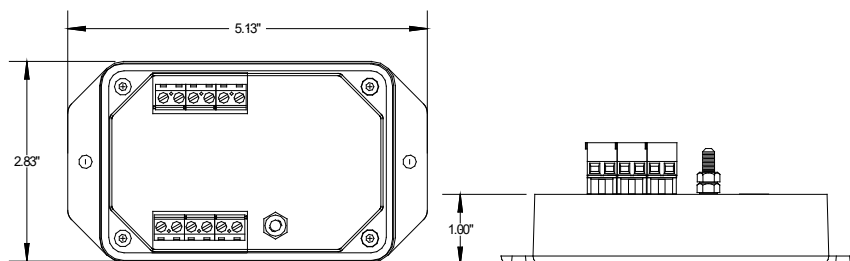
Model	Category	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Series Resistance	Maximum Data Rate	Peak Surge Current Per Data Pair	Number of Lines	Impedance
SC1T###4D###A2P-B	Power	30 VAC / 38 VDC	5 A	0 Ohms	N/A	10 kA L-G	2	N/A
	Video	60, 75, 90, 130, or 200V	500 mA	0 Ohms	1.4 GHz	10 kA L-G	1	75 Ohms
	Data	5, 12, 24, 48 or 140	500 mA	5 Ohms	2 Mbps	10 kA L-G	4	N/A
SC4D24A2P120	Power	150 VAC	5 A	0 Ohms	N/A	10 kA L-G	2	N/A
	Video	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Data	36 V	500 mA	5 Ohms	2 MHz	10 kA L-G	4	N/A
SC1T###2P-B	Power	30 VAC / 38 VDC	5 A	0 Ohms	N/A	10 kA L-G	2	N/A
	Video	60, 75, 90, 130, or 200V	500 mA	0 Ohms	1.4 GHz	10 kA L-G	1	100 Ohm Terminal
	Data	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC1B###4D2P-B	Power	30 VAC / 38 VDC	5 A	0 Ohms	N/A	10 kA L-G	2	N/A
	Video	60, 75, 90, 130, or 200V	500 mA	0 Ohms	1.4 GHz	10 kA L-G	1	75 Ohms
	Data	7.5 V	500 mA	5 Ohms	2 MHz	10 kA L-G	4	N/A
SC1B###2P-B	Power	30 VAC / 38 VDC	5 A	0 Ohms	N/A	10 kA L-G	2	N/A
	Video	60, 75, 90, 130, or 200V	500 mA	0 Ohms	1.4 GHz	10 kA L-G	1	75 Ohms
	Data	N/A	N/A	N/A	N/A	N/A	N/A	N/A



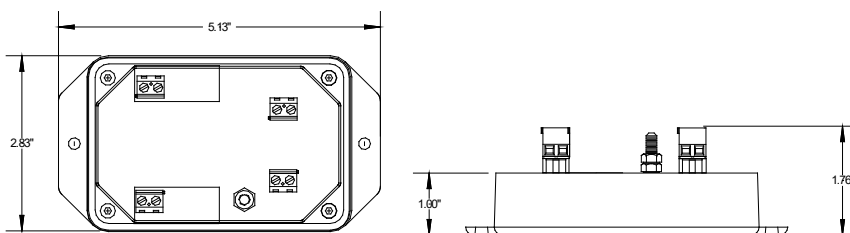
SC1T###4D###A2P-B



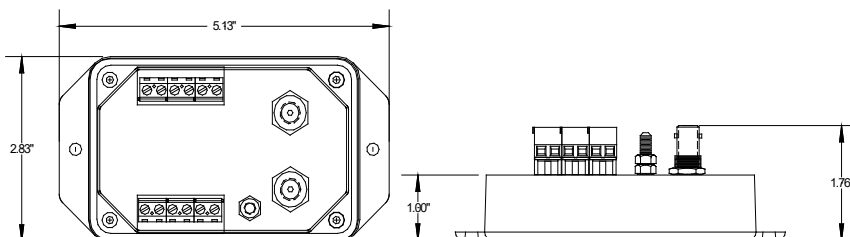
SC4D24A2P120



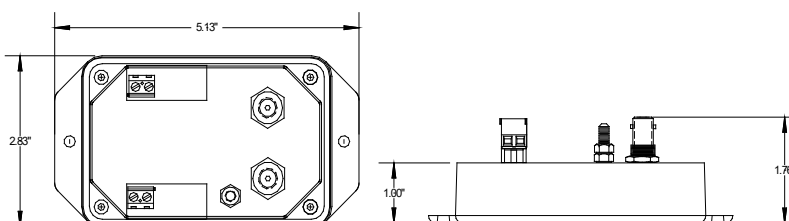
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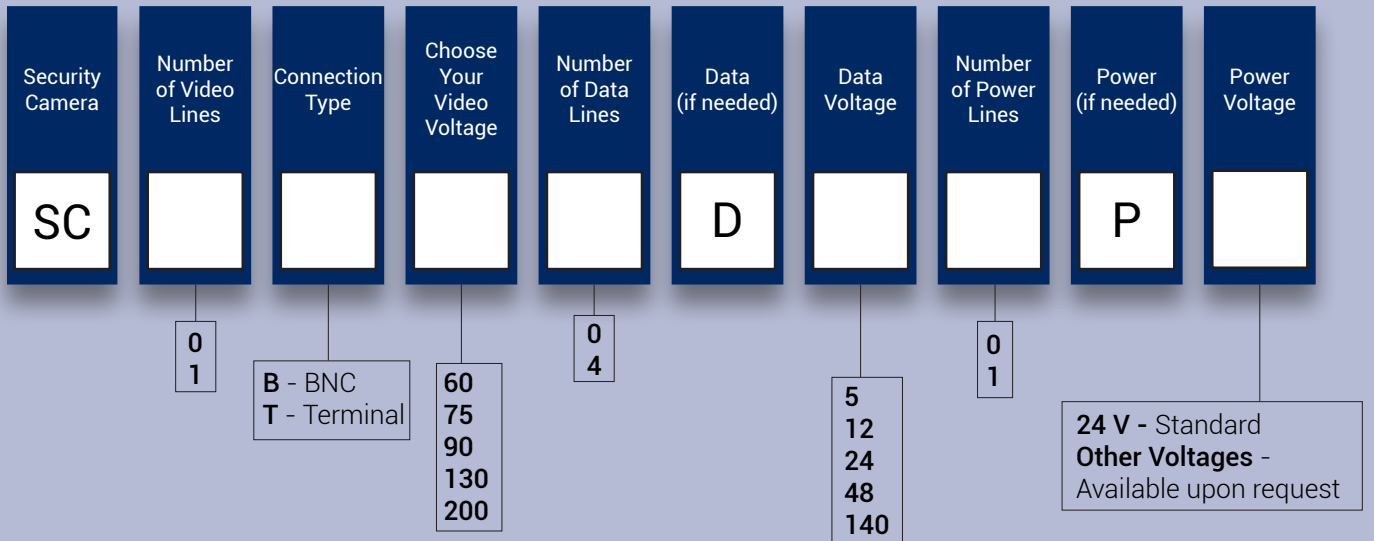
SC1B###4D2P-B



SC1B###2P-B



Building a Security Camera Model Number



Example of Model Number

SC 1 T 60 4 D 24 1 P 24

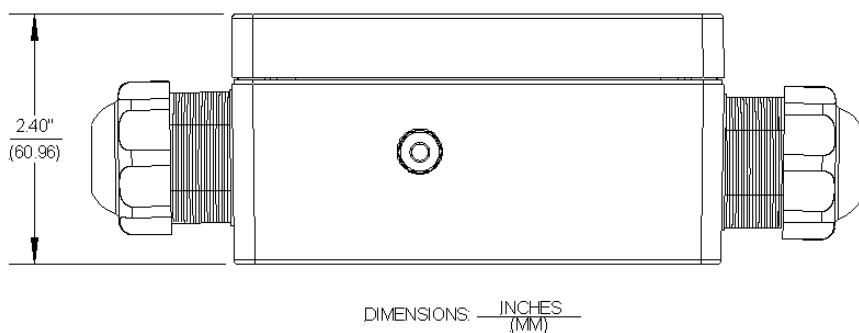
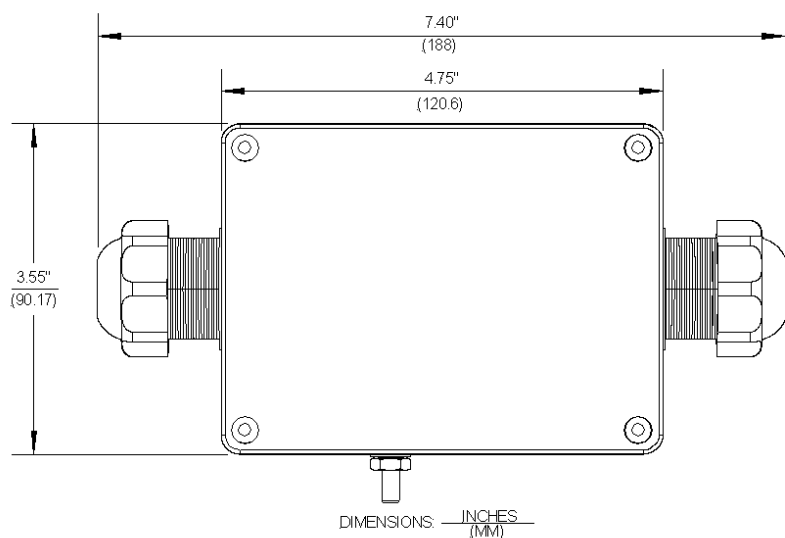
- Security Camera
- 1 Video Line
- Terminal Connection Type
- 60 V Video Voltage
- 4 Data Lines
- Data
- 24 V Data Voltage
- Power
- 24 V Power Voltage



SECURITY CAMERA

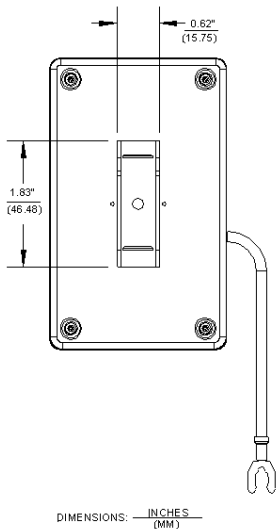
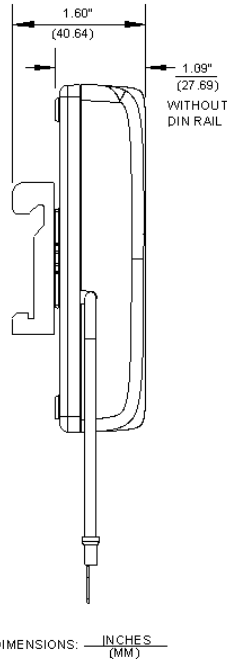
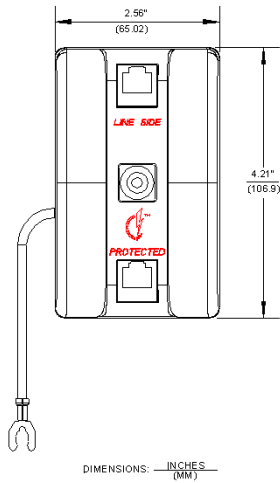
CAT6-GB-4X

Specifications	
Loop Resistance/pair	≈ 6 Ohms typ.
Connectors	RJ-45, Shielded
Operating Voltage	≤ 57 V
Bit Error Rating (BER)	10,100 Mbps
	> 100 meters
	1 GB/s
Surge Limiting - Let Through Voltage	< 60 Vpk
Surge Limiting - Let Through Current	< 1 Amp peak
Surge Current Rating (Imax)	10 kA/line
Power over Ethernet (PoE) Power Rating	35 W, Class 4
Operating & Storage	-40 to 65o
Temperature Rating	(-40 to 140oF)
Protection Modes	Dedicated protection components and circuitry for each mode. Discrete L-L (Normal Mode) and L-G (Common Mode)
Enclosure	NEMA 4X (IP67)
Unit Listing	Listed to ANSI/UL 497B
Warranty	10 Year Limited



GB-PoE-DIN

Specifications	
Loop Resistance/pair	≈ 6 Ohms typ.
Connectors	RJ-45, Shielded
Operating Voltage	≤ 57 V
Bit Error Rating (BER)	10,100 Mbps
	> 100 meters
Surge Limiting - Let Through Voltage	1 GB/s
	< 60 Vpk
Surge Limiting - Let Through Current	< 1 Amp peak
Surge Current Rating (Imax)	10 kA/line (Complies with the requirements of UL 96A Master Label for Installation Requirements for Lightning Protection Systems)
Power over Ethernet (PoE) - Power Rating	35 W, Class 4
Operating & Storage	-40 to 65o
Temperature Rating	(-40 to 140oF)
Protection Modes	Dedicated protection components and circuitry for each mode. Discrete L-L (Normal Mode) and L-G (Common Mode)
Enclosure	NEMA 1 (1P20)
Mounting	DIN rail mounting
Unit Listing	Listed to ANSI/UL 497B
Warranty	10 Year Limited



DATALINE UNITS

Data communications lines (like current loops) are the life blood of highly integrated systems and networks, which are susceptible to failure from low-level transient activity and high-level transients such as lightning. Protecting these circuits is another key element of the Optimal Protection Network.

Applications

- Network Cables
- Small Printers require POE
- Internal Security Cameras (PTZ)
- VOIP Phone Systems
- PoE LED Lighting and Industrial Process Controls
- Computer Networks

- Network Printers
- Non-POE Security Cameras
- Outdoor Security Cameras
- Cash Registers
- Street Light Controllers
- Sensors
- Gate Key Pads
- Exterior Data Entry Points
- Smart Meters
- Outdoor PoE Devices
- Wastewater Treatment Facilities
- Truck Scales
- Concrete Plants

DP2-###An-B, DP2-###Bn-B

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA (10 Mbps)
Note: n = 4 or 8 circuit conductors					
DP2-5An-B	7.5 V	500 mA	L-G	2 Mbps	< 20 V
	15 V		L-L		< 40 V
DP2-12An-B	24 V	500 mA	L-G	2 Mbps	< 30 V
	48 V		L-L		< 60 V
DP2-24An-B	36 V	500 mA	L-G	2 Mbps	< 40 V
	72 V		L-L		< 80 V
DP2-48An-B	62 V	500 mA	L-G	2 Mbps	< 80 V
	124 V		L-L		< 160 V
DP2-140An-B	200 V	500 mA	L-G	2 Mbps	< 220 V
	400 V		L-L		< 440 V
DP2-5Bn-B	7.5 V	500 mA	L-G	10 Mbps	< 20 V
	15 V		L-L		< 40 V
DP2-12Bn-B	24 V	500 mA	L-G	10 Mbps	< 30 V
	48 V		L-L		< 60 V
DP2-24Bn-B	36 V	500 mA	L-G	10 Mbps	< 40 V
	72 V		L-L		< 80 V
DP2-48Bn-B	62 V	500 mA	L-G	10 Mbps	< 80 V
	124 V		L-L		< 160 V
DP2-140Bn-B	200 V	500 mA	L-G	10 Mbps	< 220 V
	400 V		L-L		< 440 V



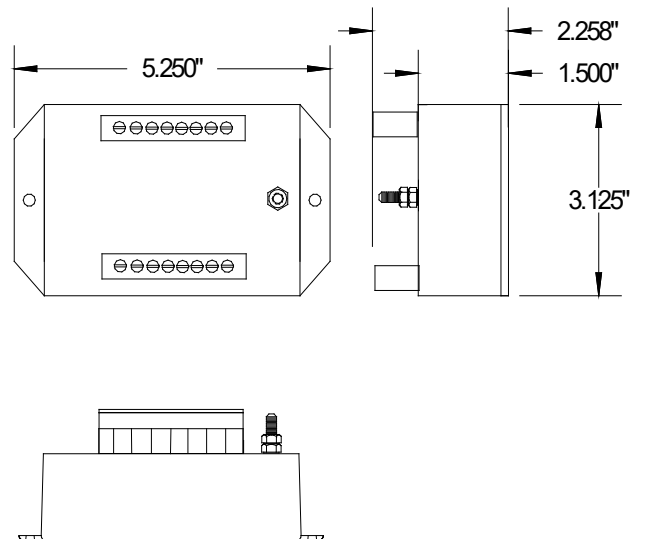
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DP2-###Cn-B

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	10 X 1000 us IMPULSE (IPP = 100 Apk)
Note: n = 4 or 8 circuit conductors						
DP2-5Cn-B	5 V	7.5 V	5 A	L-G	100 Mbps	20 V
		15 V		L-L		40 V
DP2-12Cn-B	12 V	24 V	5 A	L-G	100 Mbps	30 V
		48 V		L-L		60 V
DP2-24Cn-B	24 V	36 V	5 A	L-G	100 Mbps	60 V
		72 V		L-L		120 V
DP2-48Cn-B	48 V	62 V	5 A	L-G	100 Mbps	90 V
		124 V		L-L		180 V
DP2-140Cn-B	140 V	200 V	5 A	L-G	100 Mbps	250 V
		400 V		L-L		500 V
DP25CnSID-B	5 V	6 V	5 A	L-G	100 Mbps	< 25 V
		12 V		L-L		< 50 V
DP212CnSID-B	12 V	25 V	5 A	L-G	100 Mbps	< 40 V
		50 V		L-L		< 80 V
DP224CnSID-B	24 V	25 V	5 A	L-G	100 Mbps	< 40 V
		50 V		L-L		< 80 V
DP248CnSID-B	48 V	58 V	5 A	L-G	100 Mbps	< 77 V
		116 V		L-L		< 154 V
DP2140CnSID-B	140 V	220 V	5 A	L-G	100 Mbps	< 300 V
		440 V		L-L		< 600 V

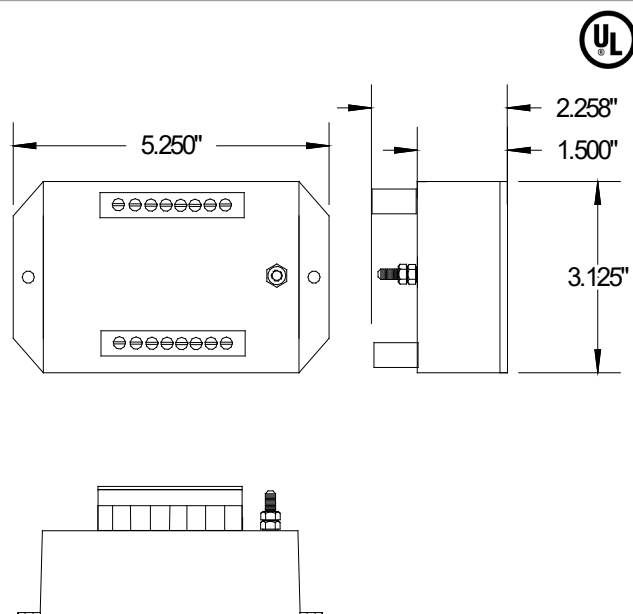


DP2-###An-B, DP2-###Bn-B, DP2-###Cn-B



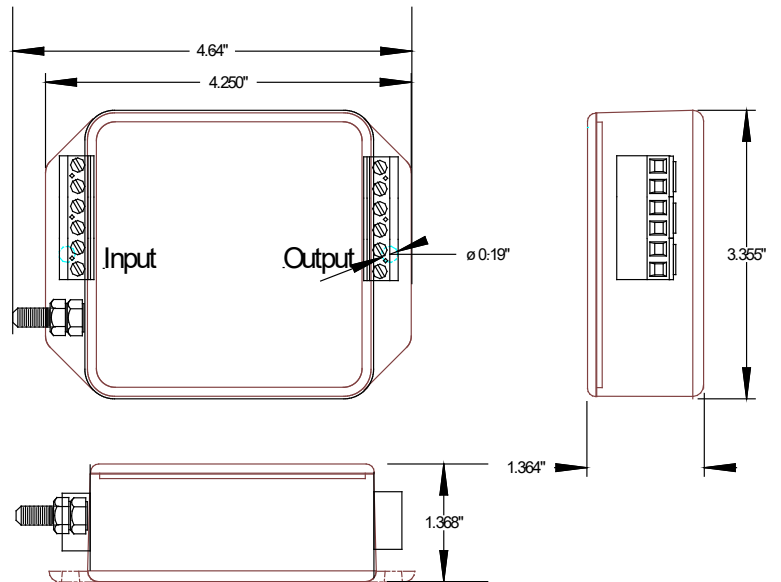
DP2-###Dn-B

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Rate Date	B3/C1 Impulse Wave 6 kV, 3 kA
Note: n = 4 or 8 circuit conductors					
DP2-5Dn-B	14 VDC L-G	5 A	L-G	100 Kbps	149
	24 VDC L-L		L-L		149
DP2-12Dn-B	31 VDC L-G	5 A	L-G	100 Kbps	163
	62 VDC L-L		L-L		163
DP2-24Dn-B	38 VDC L-G	5 A	L-G	100 Kbps	220
	76 VDC L-L		L-L		220
DP2-48Dn-B	102 VDC L-G	5 A	L-G	100 Kbps	295
	204 VDC L-L		L-L		295
DP2-130Dn-B	175 VDC L-G	5 A	L-G	100 Kbps	470
	350 VDC L-L		L-L		470



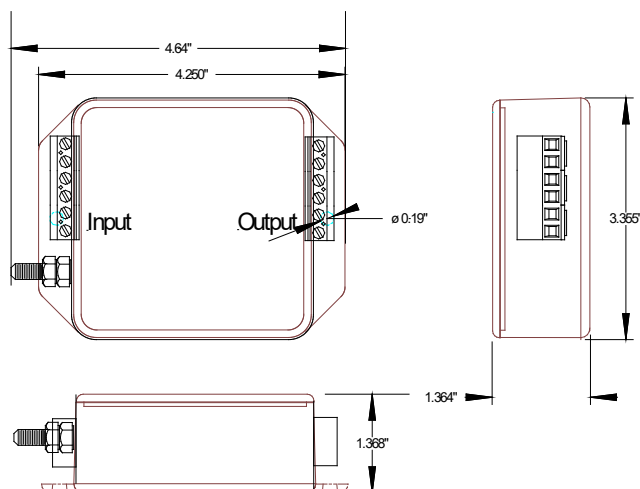
DP###Ax-B, DP###Bx-B

Model	Nominal System Operating Voltage (Vnom)	Test Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Max Data Rate	Cat. B Impulse Wave 6 kV, 3 kA
DP5Ax-B	5 V	L-G	7.5 V	500 mA	2 Mbps	< 20
		L-L	7.5 V			< 20
DP12Ax-B	12 V	L-G	24 V	500 mA	2 Mbps	< 30
		L-L	24 V			< 30
DP24Ax-B	24 V	L-G	36 V	500 mA	2 Mbps	< 40
		L-L	36 V			< 40
DP48Ax-B	48 V	L-G	62 V	500 mA	2 Mbps	< 80
		L-L	62 V			< 80
DP140Ax-B	140 V	L-G	200 V	500 mA	2 Mbps	< 220
		L-L	200 V			< 220
DP5Bx-B	5 V	L-G	7.5 V	500 mA	10 Mbps	< 20
		L-L	7.5 V			< 20
DP12Bx-B	12 V	L-G	24 V	500 mA	10 Mbps	< 30
		L-L	24 V			< 30
DP24Bx-B	24 V	L-G	36 V	500 mA	10 Mbps	< 40
		L-L	36 V			< 40
DP48Bx-B	48 V	L-G	62 V	500 mA	10 Mbps	< 80
		L-L	62 V			< 80
DP140Bx-B	140 V	L-G	200 V	500 mA	10 Mbps	< 220
		L-L	200 V			< 220



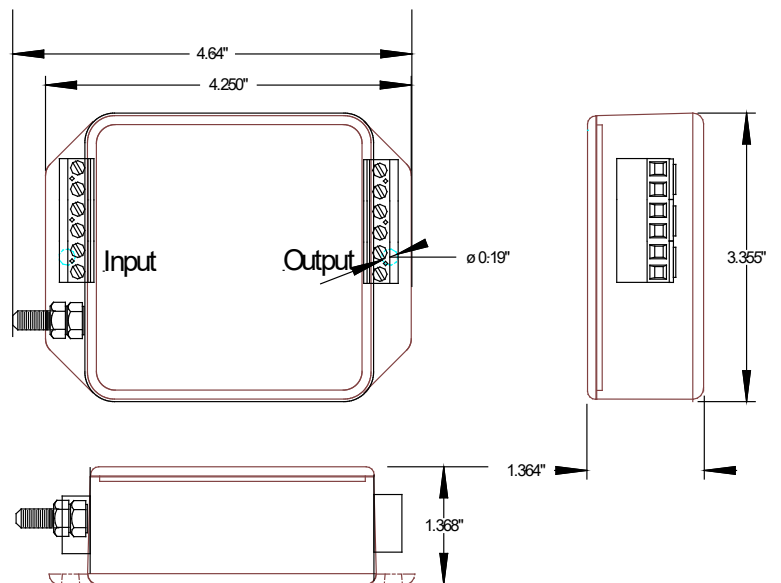
DP###AxS-B, DP###BxS-B

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	Cat. B Impulse Wave 6 kV, 3 kA
DP5AxS-B	5 V	7.5 V	500 mA	L-G	2 Mbps	< 20 V
		7.5 V		L-L		< 20 V
		70 V		Shield-G		< 280 V
DP12AxS-B	12 V	24 V	500 mA	L-G	2 Mbps	< 30 V
		24 V		L-L		< 30 V
		70 V		Shield-G		< 280 V
DP24AxS-B	24 V	36 V	500 mA	L-G	2 Mbps	< 40 V
		36 V		L-L		< 40 V
		70 V		Shield-G		< 280 V
DP48AxS-B	48 V	62 V	500 mA	L-G	2 Mbps	< 80 V
		62 V		L-L		< 80 V
		70 V		Shield-G		< 280 V
DP140AxS-B	140 V	200 V	500 mA	L-G	2 Mbps	< 220 V
		200 V		L-L		< 220 V
		70 V		Shield-G		< 240 V
DP5BxS-B	5 V	7.5 V	500 mA	L-G	10 Mbps	< 20 V
		7.5 V		L-L		< 20 V
		70 V		Shield-G		< 280 V
DP12BxS-B	12 V	24 V	500 mA	L-G	10 Mbps	< 30 V
		24 V		L-L		< 30 V
		70 V		Shield-G		< 280 V
DP24BxS-B	24 V	36 V	500 mA	L-G	10 Mbps	< 50 V
		36 V		L-L		< 50 V
		70 V		Shield-G		< 280 V
DP48BxS-B	48 V	62 V	500 mA	L-G	10 Mbps	< 80 V
		62 V		L-L		< 80 V
		70 V		Shield-G		< 280 V
DP140BxS-B	140 V	200 V	500 mA	L-G	10 Mbps	< 220 V
		200 V		L-L		< 220 V
		70 V		Shield-G		< 240 V



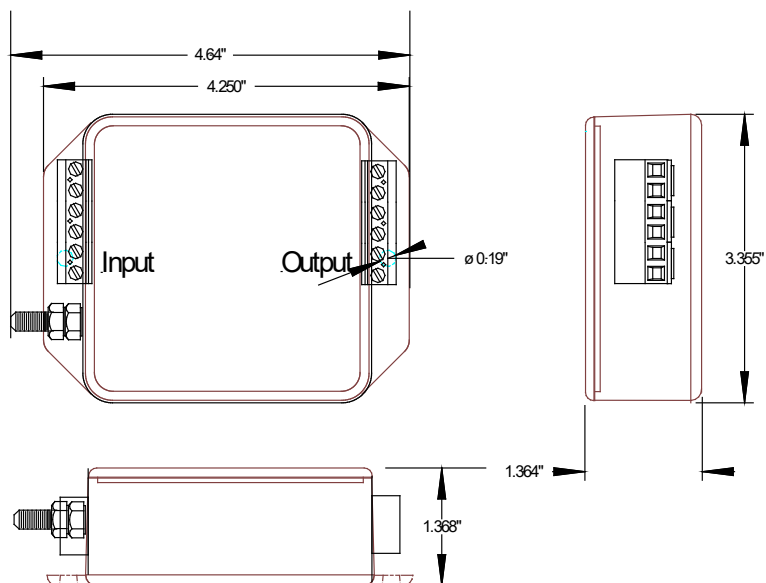
DP###Cx-B

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Dat Rate	10 x 1,000 µsec, Impulse Waveform
DP5Cx-B	5 V	7.5 V	5 A	L-G	100 Mbps	< 20 V
		15 V		L-L		< 40 V
DP12Cx-B	12 V	24 V	5 A	L-G	100 Mbps	< 30 V
		48 V		L-L		< 60 V
DP24Cx-B	24 V	36 V	5 A	L-G	100 Mbps	< 60 V
		72 V		L-L		< 120 V
DP48Cx-B	48 V	62 V	5 A	L-G	100 Mbps	< 90 V
		124 V		L-L		< 180 V
DP140Cx-B	140 V	200 V	5 A	L-G	100 Mbps	< 250 V
		400 V		L-L		< 500 V
DP5CxS-B	5 V	7.5 V	5 A	L-G	100 Mbps	< 20 V
		15 V		L-L		< 40 V
		70 V		Shield-G		127 V
DP12CxS-B	12 V	24 V	5 A	L-G	100 Mbps	< 30 V
		48 V		L-L		< 60 V
		70 V		Shield-G		127 V
DP24CxS-B	24 V	36 V	5 A	L-G	100 Mbps	< 60 V
		72 V		L-L		< 120 V
		70 V		Shield-G		127 V
DP48CxS-B	48 V	62 V	5 A	L-G	100 Mbps	< 90 V
		124 V		L-L		< 180 V
		70 V		Shield-G		127 V
DP140CxS-B	140 V	200 V	5 A	L-G	100 Mbps	< 250 V
		400 V		L-L		< 500 V
		70 V		Shield-G		127 V



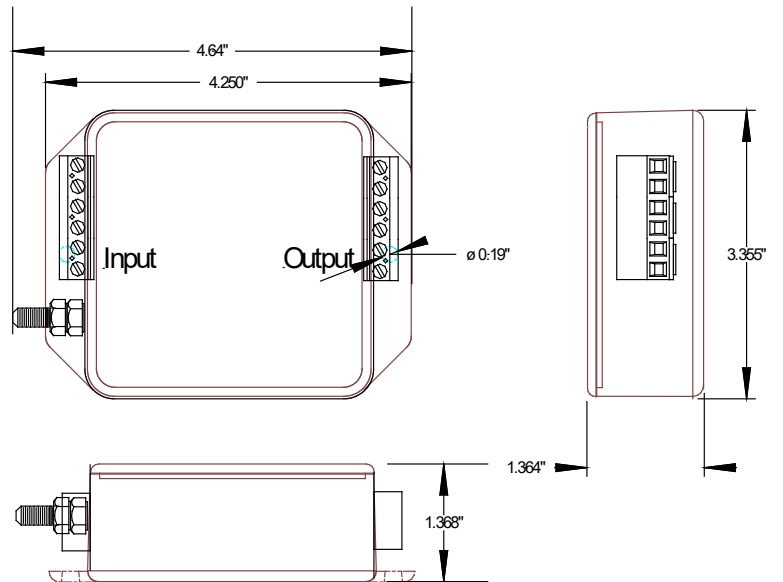
DP###CxSID-B

Model	Nominal System Operating Voltage (Vnom)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Peak Surge Current	10 x 1,000 μ sec, Impulse Waveform
DP5CnSID-B	5 V	L-G	6 V	5 A	150 A	< 25 V
		L-L	12 V			< 50 V
DP12CnSID-B	12 V	L-G	25 V	5 A	150 A	< 40 V
		L-L	50 V			< 80 V
DP24CnSID-B	24 V	L-G	25 V	5 A	150 A	< 40 V
		L-L	50 V			< 80 V
DP48CnSID-B	48 V	L-G	58 V	5 A	150 A	< 77 V
		L-L	116 V			< 154 V
DP140CnSID-B	140 V	L-G	220 V	5 A	150 A	< 300 V
		L-L	440 V			< 600 V



DP###Dx-B

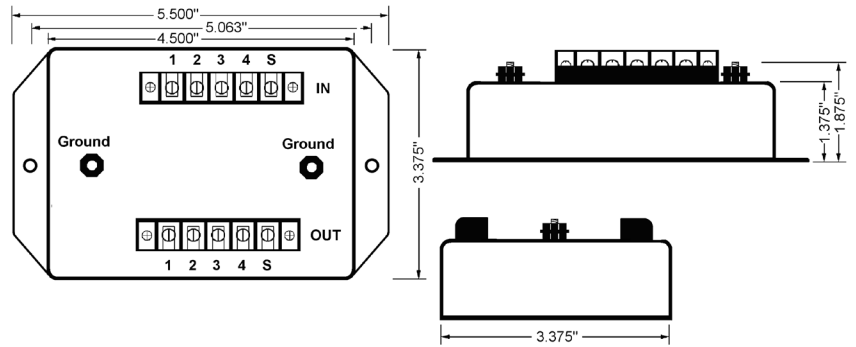
Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Mode	B3/C1 Impulse Wave 6 kV, 3 kA (100 Kbps)
DP5Dn-B	14 VDC	5 A	L-G	149
			L-L	149
DP12Dn-B	31 VDC	5 A	L-G	163
			L-L	163
DP24Dn-B	38 VDC	5 A	L-G	220
			L-L	220
DP48Dn-B	102 VDC	5 A	L-G	295
			L-L	295
DP130Dn-B	175 VDC	5 A	L-G	470
			L-L	470



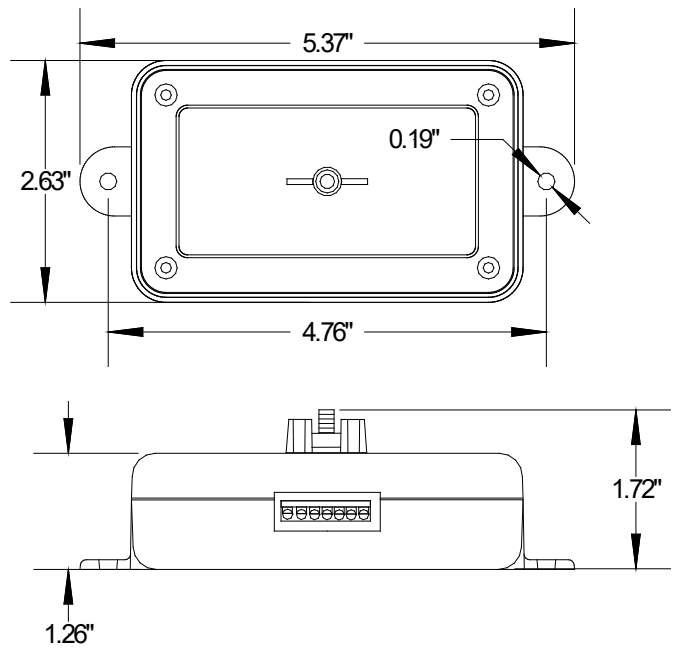
DC-DM

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	10 x 1,000 μ sec, Impulse Waveform
x = 2, 4, or 6					
DC5Cx-B	7.5 V	5 A	L-G	100 Mbps	< 20 V
	15 V		L-L		< 40 V
	70 V		Shield-G		127 V
DC12Cx-B	24 V	5 A	L-G	100 Mbps	< 30 V
	48 V		L-L		< 60 V
	70 V		Shield-G		127 V
DC24Cx-B	36 V	5 A	L-G	100 Mbps	< 60 V
	72 V		L-L		< 120 V
	70 V		Shield-G		127 V
DC48Cx-B	62 V	5 A	L-G	100 Mbps	< 90 V
	124 V		L-L		< 180 V
	70 V		Shield-G		127 V
DC140Cx-B	200 V	5 A	L-G	100 Mbps	< 250 V
	400 V		L-L		< 500 V
	70 V		Shield-G		127 V
DM5Cx-B	7.5 V	5 A	L-G	100 Mbps	< 20 V
	15 V		L-L		< 40 V
	70 V		Shield-G		127 V
DM12Cx-B	24 V	5 A	L-G	100 Mbps	< 30 V
	48 V		L-L		< 60 V
	70 V		Shield-G		127 V
DM24Cx-B	36 V	5 A	L-G	100 Mbps	< 60 V
	72 V		L-L		< 120 V
	70 V		Shield-G		127 V
DM48Cx-B	62 V	5 A	L-G	100 Mbps	< 90 V
	124 V		L-L		< 180 V
	70 V		Shield-G		127 V
DM140Cx-B	200 V	5 A	L-G	100 Mbps	< 250 V
	400 V		L-L		< 500 V
	70 V		Shield-G		127 V
x = 8 or 12					
DC5Cx-B	7.5 V	5 A	L-G	100 Mbps	< 20 V
	15 V		L-L		< 40 V
DC12Cx-B	24 V	5 A	L-G	100 Mbps	< 30 V
	48 V		L-L		< 60 V
DC24Cx-B	36 V	5 A	L-G	100 Mbps	< 60 V
	72 V		L-L		< 120 V
DC48Cx-B	62 V	5 A	L-G	100 Mbps	< 90 V
	124 V		L-L		< 180 V
DC140Cx-B	200 V	5 A	L-G	100 Mbps	< 250 V
	400 V		L-L		< 500 V

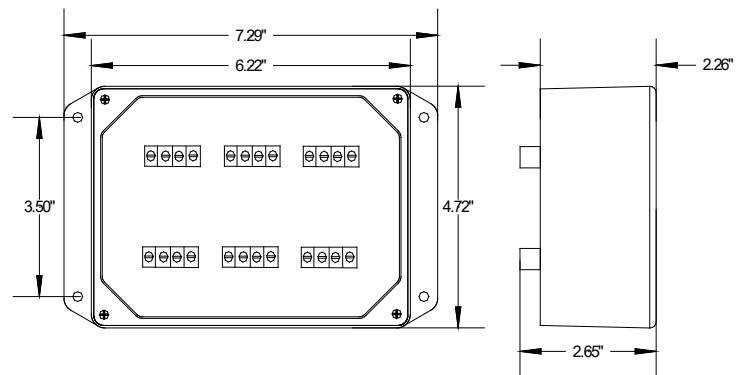
DC5Cx-B thru DC140Cx-B, x=2, 4, or 6



DM5x-B thru DM140x-B



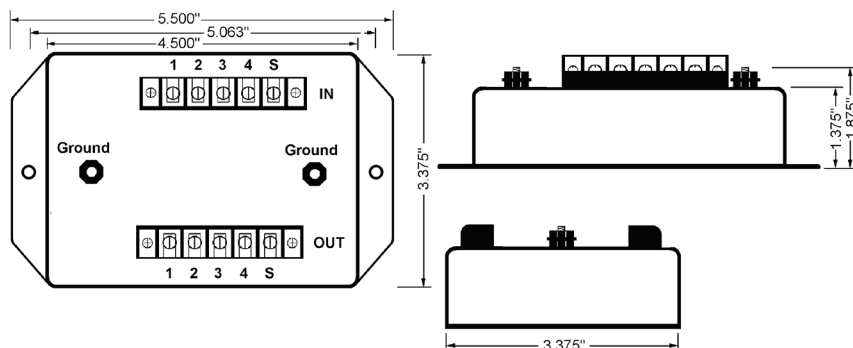
DC5Cx-B thru DC140Cx-B, x=8 or 12



DC###Ax-B, DC###Bx-B - 2, 4, or 6 Wire + Shield

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA
x = 2, 4, or 6					
DC5Bx-B	7.5 V	500 mA	L-G	10 Mbps	< 20 V
	7.5 V		L-L		< 20 V
	70 V		Shield-G		< 280 V
DC12Bx-B	24 V	500 mA	L-G	10 Mbps	< 30 V
	24 V		L-L		< 30 V
	70 V		Shield-G		< 280 V
DC24Bx-B	36 V	500 mA	L-G	10 Mbps	< 50 V
	36 V		L-L		< 50 V
	70 V		Shield-G		< 280 V
DC48Bx-B	62 V	500 mA	L-G	10 Mbps	< 80 V
	62 V		L-L		< 80 V
	70 V		Shield-G		< 280 V
DC140Bx-B	200 V	500 mA	L-G	10 Mbps	< 220 V
	200 V		L-L		< 220 V
	70 V		Shield-G		< 240 V
DC5Ax-B	7.5 V	500 mA	L-G	2 Mbps	< 20 V
	7.5 V		L-L		< 20 V
	70 V		Shield-G		< 280 V
DC12Ax-B	24 V	500 mA	L-G	2 Mbps	< 30 V
	24 V		L-L		< 30 V
	70 V		Shield-G		< 280 V
DC24Ax-B	36 V	500 mA	L-G	2 Mbps	< 40 V
	36 V		L-L		< 40 V
	70 V		Shield-G		< 280 V
DC48Ax-B	62 V	500 mA	L-G	2 Mbps	< 80 V
	62 V		L-L		< 80 V
	70 V		Shield-G		< 280 V
DC140Ax-B	200 V	500 mA	L-G	2 Mbps	< 220 V
	200 V		L-L		< 220 V
	70 V		Shield-G		< 240 V

DC5Bx-B thru DC140Bx-B and DC5Ax-B thru DC140Ax-B, x=2, 4, or 6

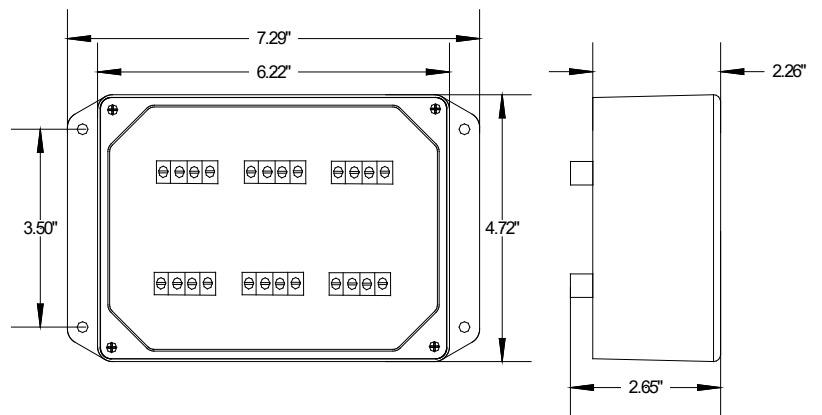


DC###Ax-B, DC###Bx-B - 8 or 12 Wire

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA
x = 8 or 12					
DC5Bx-B	7.5 V	500 mA	L-G	10 Mbps	< 20 V
	7.5 V		L-L		< 20 V
DC12Bx-B	24 V	500 mA	L-G	10 Mbps	< 30 V
	24 V		L-L		< 30 V
DC24Bx-B	36 V	500 mA	L-G	10 Mbps	< 50 V
	36 V		L-L		< 50 V
DC48Bx-B	62 V	500 mA	L-G	10 Mbps	< 80 V
	62 V		L-L		< 80 V
DC140Bx-B	200 V	500 mA	L-G	10 Mbps	< 220 V
	200 V		L-L		< 220 V
DC5Ax-B	7.5 V	500 mA	L-G	2 Mbps	< 20 V
	7.5 V		L-L		< 20 V
DC12Ax-B	24 V	500 mA	L-G	2 Mbps	< 30 V
	24 V		L-L		< 30 V
DC24Ax-B	36 V	500 mA	L-G	2 Mbps	< 40 V
	36 V		L-L		< 40 V
DC48Ax-B	62 V	500 mA	L-G	2 Mbps	< 80 V
	62 V		L-L		< 80 V
DC140Ax-B	200 V	500 mA	L-G	2 Mbps	< 220 V
	200 V		L-L		< 220 V

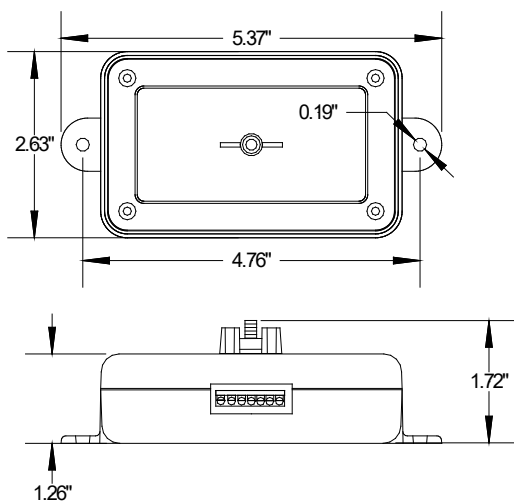


DC5Bx-B thru DC140Bx-B and DC5Ax-B thru DC140Ax-B, x=8 or 12



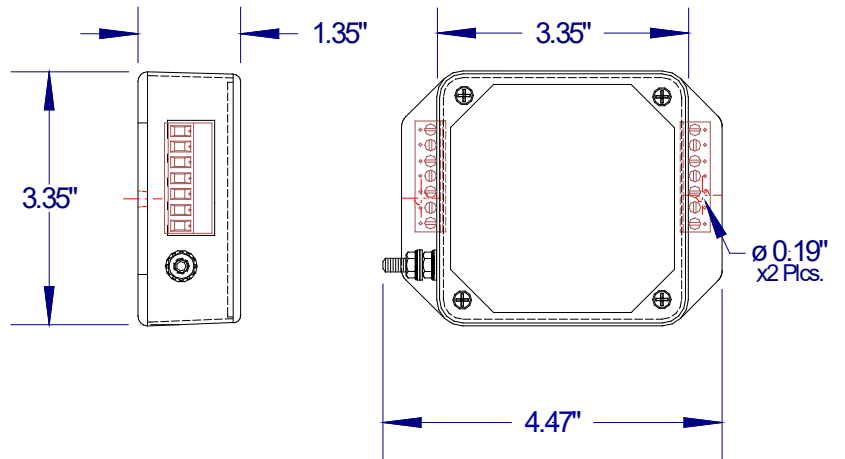
DM###Ax-B, DM###Bx-B - 2, 4, or 6 Wire + Shield

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA
x = 2, 4, or 6					
DM5Ax-B	7.5 V	500 mA	L-G	2 Mbps	< 20 V
	7.5 V		L-L		< 20 V
	70 V		Shield-G		< 280 V
DM12Ax-B	24 V	500 mA	L-G	2 Mbps	< 30 V
	24 V		L-L		< 30 V
	70 V		Shield-G		< 280 V
DM24Ax-B	36 V	500 mA	L-G	2 Mbps	< 40 V
	36 V		L-L		< 40 V
	70 V		Shield-G		< 280 V
DM48Ax-B	62 V	500 mA	L-G	2 Mbps	< 80 V
	62 V		L-L		< 80 V
	70 V		Shield-G		< 280 V
DM140Ax-B	200 V	500 mA	L-G	2 Mbps	< 220 V
	200 V		L-L		< 220 V
	70 V		Shield-G		< 280 V
DM5Bx-B	7.5 V	500 mA	L-G	10 Mbps	< 20 V
	7.5 V		L-L		< 20 V
	70 V		Shield-G		< 280 V
DM12Bx-B	24 V	500 mA	L-G	10 Mbps	< 30 V
	24 V		L-L		< 30 V
	70 V		Shield-G		< 280 V
DM24Bx-B	36 V	500 mA	L-G	10 Mbps	< 50 V
	36 V		L-L		< 50 V
	70 V		Shield-G		< 280 V
DM48Bx-B	62 V	500 mA	L-G	10 Mbps	< 60 V
	62 V		L-L		< 60 V
	70 V		Shield-G		< 280 V
DM140Bx-B	200 V	500 mA	L-G	10 Mbps	< 220 V
	200 V		L-L		< 220 V
	70 V		Shield-G		< 280 V



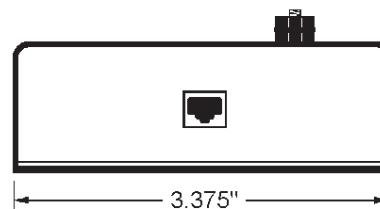
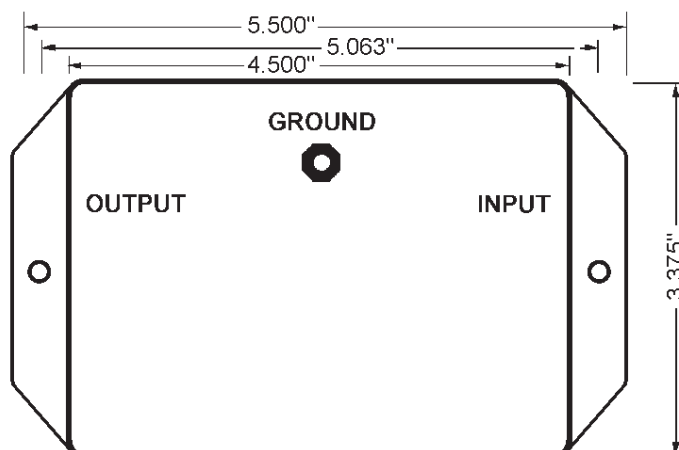
DP###CxSIDS-B

Model	Nominal System Operating Voltage (Vnom)	Test Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Peak Surge Current	Max Data Rate	10 x 1,000 μ s, Impulse Waveform
DP5CnSIDS-B	5 V	L-G	6 V	5 A	150 A	100 Mbps	< 25 V
		L-L	12 V				< 50 V
		Shield-G	70 V				127 V
DP12CnSIDS-B	12 V	L-G	25 V	5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
		Shield-G	70 V				127 V
DP24CnSIDS-B	24 V	L-G	25 V	5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
		Shield-G	70 V				127 V
DP48CnSIDS-B	48 V	L-G	58 V	5 A	150 A	100 Mbps	< 77 V
		L-L	116 V				< 154 V
		Shield-G	70 V				127 V
DP140CnSIDS-B	140 V	L-G	220 V	5 A	150 A	100 Mbps	< 300 V
		L-L	440 V				< 600 V
		Shield-G	70 V				127 V



DRJ14140B4-B

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	10 x 1,000 μ sec Impulse Waveform IPP = 100 Apk
DRJ14140B4-B	200 Vrms	500 mA	L-G	10 Mbps	< 250
	200 Vrms		L-L		< 250

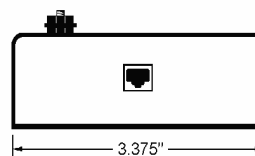
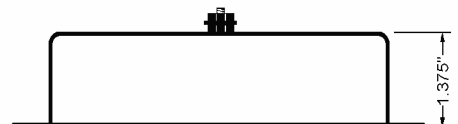
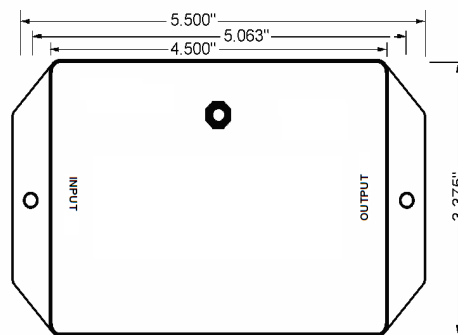


Modular RJ-45 Connection

DRJ45###C8SID-B, DRJ45###C8-B, DRJ45###C8G-B, DRJ45###C#PORTSID-B

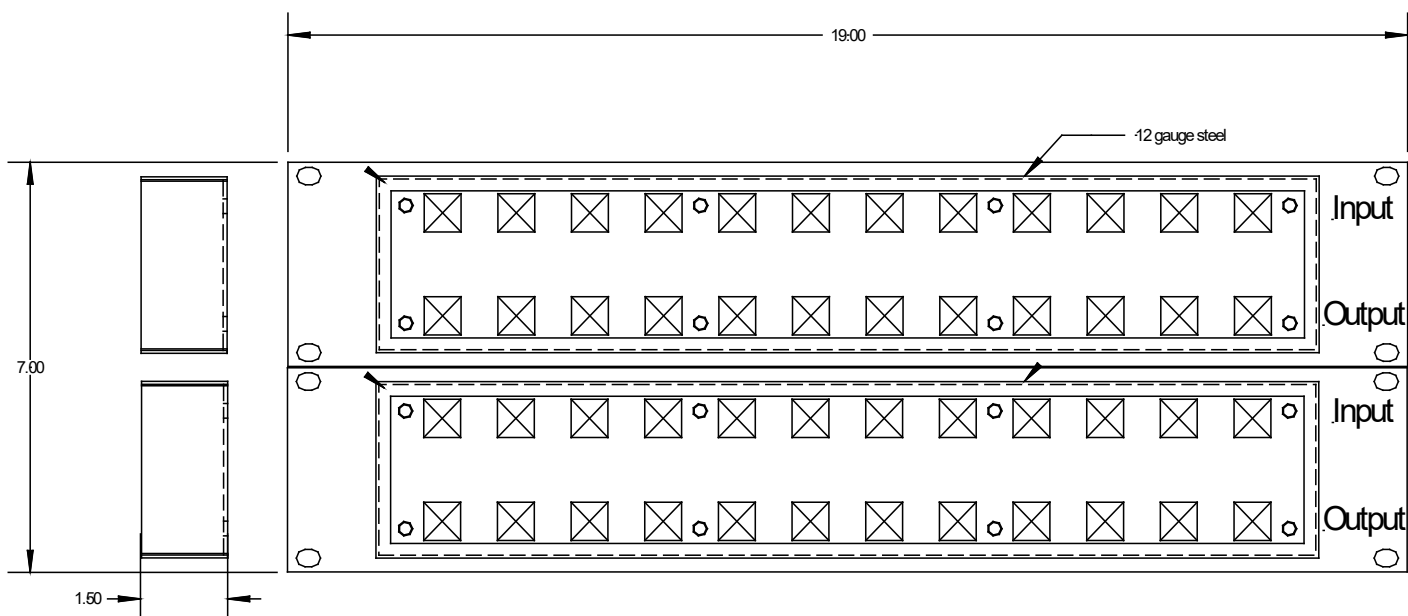
Model	Nominal System Operating Voltage (Vnom)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Peak Surge Current	Max Data Rate	10 x 1,000 μ s, Impulse Waveform
DRJ455C8SID-B	5 V	L-G	6 V	1.5 A	150 A	100 Mbps	< 25 V
		L-L	12 V				< 50 V
DRJ4512C8SID-B	12 V	L-G	25 V	1.5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
DRJ4524C8SID-B	24 V	L-G	25 V	1.5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
DRJ4548C8SID-B	48 V	L-G	58 V	1.5 A	150 A	100 Mbps	< 77 V
		L-L	116 V				< 154 V
DRJ45140C8SID-B	140 V	L-G	220 V	1.5 A	150 A	100 Mbps	< 300 V
		L-L	440 V				< 600 V
DRJ455C8-B	5 V	L-G	7.5 V	1.5 A	150 A	100 Mbps	< 20
		L-L	15 V				< 40
DRJ4512C8-B	12 V	L-G	24 V	1.5 A	150 A	100 Mbps	< 30
		L-L	48 V				< 60
DRJ4524C8-B	24 V	L-G	36 V	1.5 A	150 A	100 Mbps	< 60
		L-L	72 V				< 120
DRJ4548C8-B	48 V	L-G	62 V	1.5 A	150 A	100 Mbps	< 90
		L-L	124 V				< 180
DRJ45140C8-B	140 V	L-G	200 V	1.5 A	150 A	100 Mbps	< 250
		L-L	400 V				< 500
DRJ4560C8G-B	N/A	L-G	75 V	1.5 A	10 kA	100 Mbps	N/A
		L-L	150 V				N/A
DRJ4575C8G-B	N/A	L-G	90 V	1.5 A	10 kA	100 Mbps	N/A
		L-L	180 V				N/A
DRJ4590C8G-B	N/A	L-G	110 V	1.5 A	10 kA	100 Mbps	N/A
		L-L	220 V				N/A
DRJ45130C8G-B	N/A	L-G	145 V	1.5 A	10 kA	100 Mbps	N/A
		L-L	290 V				N/A
DRJ45200C8G-B	N/A	L-G	230 V	1.5 A	10 kA	100 Mbps	N/A
		L-L	460 V				N/A
DRJ455CxPORTSID-B	5 V	L-G	6 V	1.5 A	150 A	100 Mbps	< 25 V
		L-L	12 V				< 50 V
DRJ4512CxPORTSID-B	12 V	L-G	25 V	1.5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
DRJ4524CxPORTSID-B	24 V	L-G	25 V	1.5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
DRJ4548CxPORTSID-B	48 V	L-G	58 V	1.5 A	150 A	100 Mbps	< 77 V
		L-L	116 V				< 154 V
DRJ45140CxPORTSID-B	140 V	L-G	220 V	1.5 A	150 A	100 Mbps	< 300 V
		L-L	440 V				< 600 V

DRJ45###C8-B, DRJ45###C8G-B, DRJ45###C8SID-B



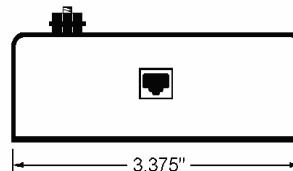
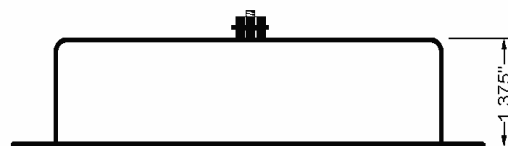
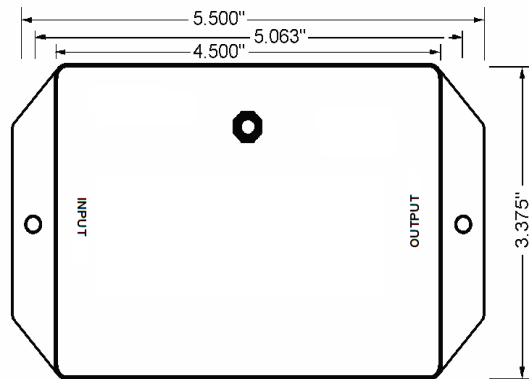
Modular RJ45 Connection

DRJ45###CxPORTSID-B



DRJ45###A8-B, DRJ45###B8-B

Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	B3/C1 Impulse Wave 6 kV, 3 kA	Max Data Rate
DRJ455A8-B	7.5 V	500 mA	L-G	< 20 V	2 Mbps
	15 V		L-L	< 40 V	
DRJ4512A8-B	24 V	500 mA	L-G	< 30 V	2 Mbps
	48 V		L-L	< 60 V	
DRJ4524A8-B	36 V	500 mA	L-G	< 40 V	2 Mbps
	72 V		L-L	< 80 V	
DRJ4548A8-B	62 V	500 mA	L-G	< 80 V	2 Mbps
	124 V		L-L	< 160 V	
DRJ45140A8-B	200 V	500 mA	L-G	< 220 V	2 Mbps
	400 V		L-L	< 440 V	
DRJ455B8-B	7.5 V	500 mA	L-G	< 20 V	10 Mbps
	15 V		L-L	< 40 V	
DRJ4512B8-B	24 V	500 mA	L-G	< 30 V	10 Mbps
	48 V		L-L	< 60 V	
DRJ4524B8-B	36 V	500 mA	L-G	< 50 V	10 Mbps
	72 V		L-L	< 100 V	
DRJ4548B8-B	62 V	500 mA	L-G	< 60 V	10 Mbps
	124 V		L-L	< 120 V	
DRJ45140B8-B	200 V	500 mA	L-G	< 220 V	10 Mbps
	400 V		L-L	< 440 V	



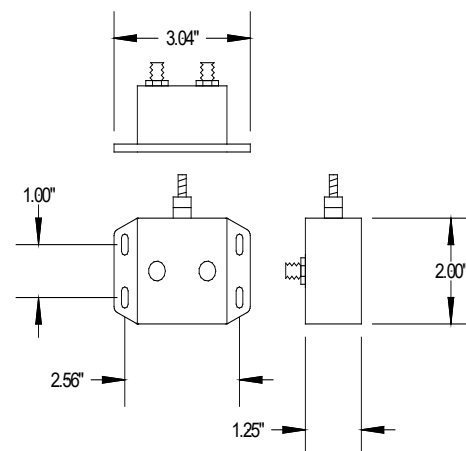
Modular RJ45 Connection

CXF, CXN

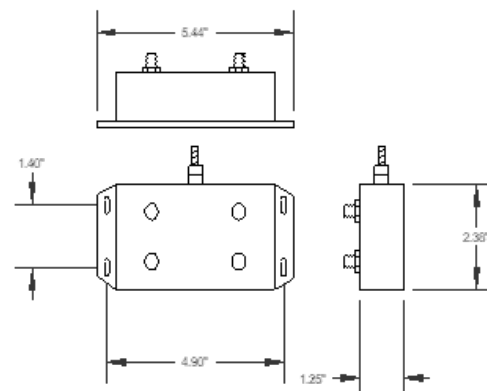
Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Maximum Data Transmission Rate	Frequency Range
CXF5Ex-B	7.5 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF12Ex-B	24 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF24Ex-B	36 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF48Ex-B	62 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF140Ex-B	200 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF60Fx-B	75 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF75Fx-B	90 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF90Fx-B	110 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF140Fx-B	145 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXF200Fx-B	230 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXN60Fx-B	75 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXN75Fx-B	90 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXN90Fx-B	110 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXN130Fx-B	145 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXN200Fx-B	230 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz



Single Port Coax Model - E1



Dual Port Coax Models - E2

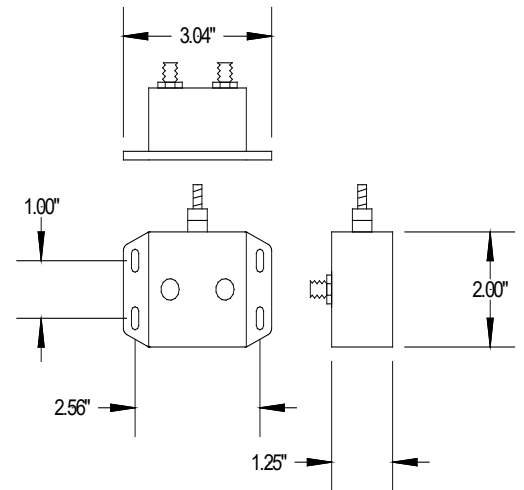


CXBNC

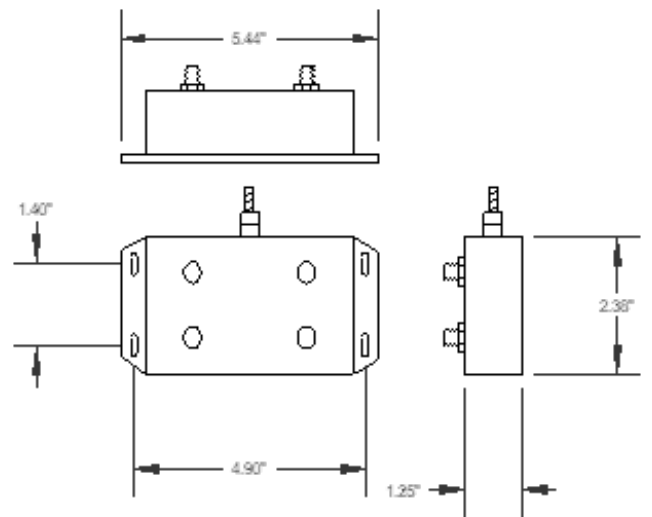
Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Maximum Data Transmission Rate	Frequency Range
CXBNC5Ex-B	7.5 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXBNC12Ex-B	24 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXBNC24Ex-B	36 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXBNC48Ex-B	62 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXBNC140Ex-B	200 V	500 mA	≤ 150 Mbps	≤ 1.5 GHz
CXBNC60Fx-B	75 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXBNC75Fx-B	90 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXBNC90Fx-B	110 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXBNC130Fx-B	145 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz
CXBNC200Fx-B	230 V	500 mA	≤ 150 Mbps	≤ 1.0 GHz



Single Port Coax Model - E1

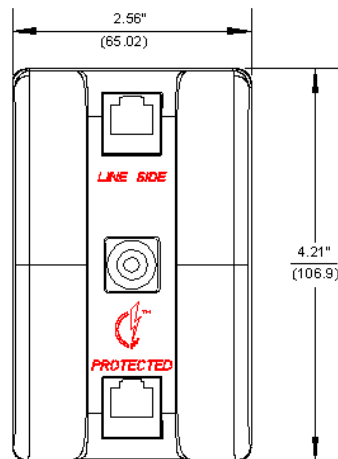


Dual Port Coax Models - E2

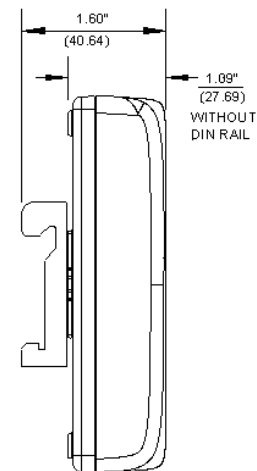


GB-ISO-DIN

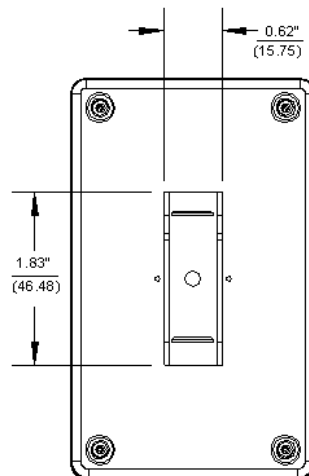
Specifications	
Loop Resistance/pair	≈ 12 Ohms typ.
Connectors	RJ-45, Shielded
Maximum Continuous Operating Voltage	6 V
Bit Error Rating (BER)	10, 100 Mbps > 100 meters 1 GB/s ≤ 100 meters
Surge Limiting - Let Through Voltage	< 7 Vpk
Surge Limiting - Let Through Current	< 1 Amp peak
Surge Current Rating (Imax)	10 kA/pair
Operating & Storage	-40 to 65o
Temperature Rating	(-40 to 140oF)
Protection Modes	Dedicated protection components and circuitry for each mode. Discrete L-L (Normal Mode) and L-G (Common Mode)
Enclosure	NEMA 1 (1P20)
Mounting	DIN rail mounting
Unit Listing	Listed to ANSI/UL 497B, E329525
Warranty	10 Year Limited



DIMENSIONS: — INCHES —
(MM)



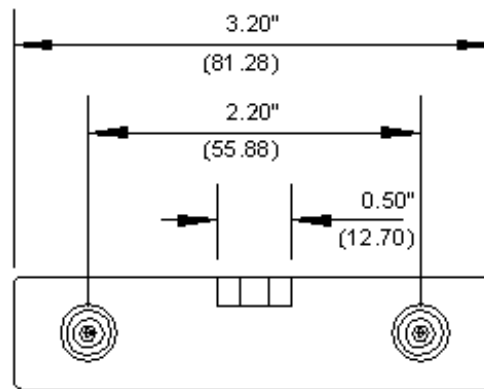
DIMENSIONS: — INCHES —
(MM)



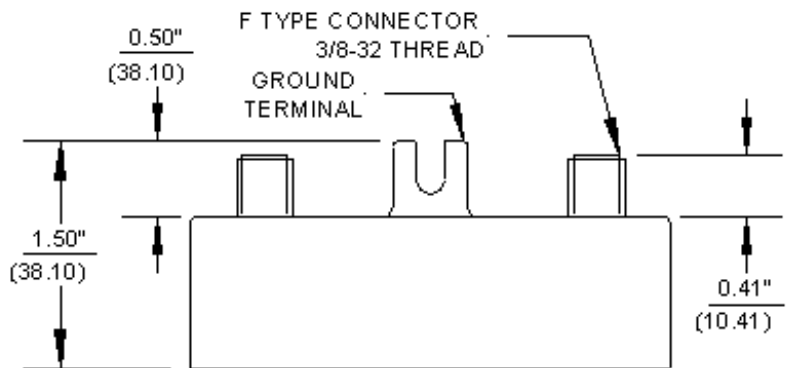
DIMENSIONS: — INCHES —
(MM)

CSAT-F1

Specifications	
Impedance	75 Ohms
Connectors	F-Type (female)
Frequency Range	DC to 1.5 GHz
Insertion Loss	-3 dB @ 1.5 GHz
Return Loss	13 dB
Surge Current Rating (Imax)	20 kA
Storage Temperature Rating	-55 to 80 oC (-67 to 185 oF)
Operating Temperature Rating	-40 to 65 oC (-40 to 140 oF)
Enclosure	NEMA 4X (IP67) in installed stated
Connection Method	F-Type Connectors
Unit Listing	Listed to ANSI
Warranty	10 Year Limited



DIMENSIONS: $\frac{\text{INCHES}}{\text{(MM)}}$



DIMENSIONS: $\frac{\text{INCHES}}{\text{(MM)}}$

DL-DRMDTxxH4

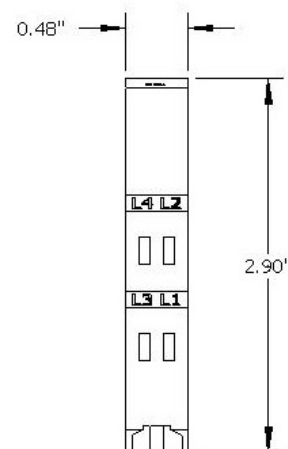
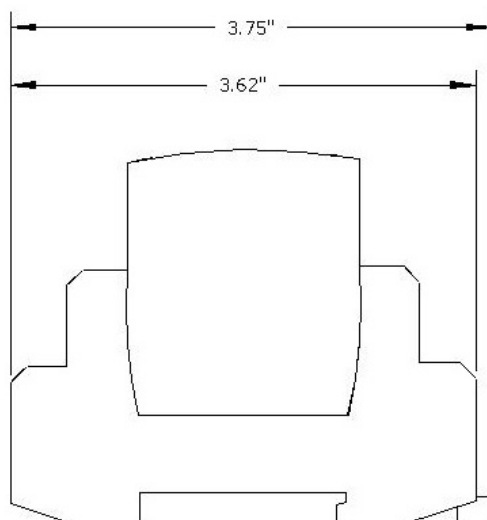
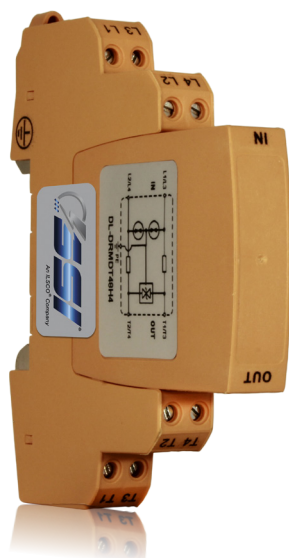
The DL-DRMDTxxH4 data network SPD protects two-pairs/four lines with common reference potential in the high-frequency data transmissions or bus systems, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Two-stage protection circuit
- Earth/ground connection achieved through DIN Rail mounting
- Suitable to use for universal high-frequency bus and transmission systems, RS-485, RS422(V11), Field-Bus and more

Technical Features

- Data network protector designed to UL497B and IEC61643-21 standards

Specifications		
Type	24	48
Nominal Voltage (VDC)	24	48
Maximum Continuous Operating Voltage (VDC/AC)	33/23.3	54/38.1
Voltage Protection Level		
L-L @ B3/C1 (6 kV, 3 kA)	105	135
L-G @ B3/C1 (6 kV, 3 kA)	125	158
C2 Nominal Discharge Current (8/20us)	10 kA	
C2 Total Nominal Discharge Current (8/20us)	20 kA	
Nominal Current	0.5 Amp	
Bandwidth	> 100 MHz	
Series Impedance per Line (Ohm)	0.68 Ohm	
Protection Line	2 Pair	
Physical Specifications		
Mounting	35 mm DIN-rail in accordance with EN/DIN46277-3	
Insertion Loss	≤0.5 dB	
Connection Type IN/OUT	Screw/Screw	
Dimension (Inches)	3.5 x 0.472 x 2.9	
Operating Temperature Range	-40°C~+85°C	
Standards		
Warranty	5 Year	



TELECOM UNITS



Surge Protection for Telecommunication lines

Telecom surge protective devices are utilized to protect incoming telephone lines. They are also used to protect internal station lines running between buildings on the same system. There are a variety of "phone" lines. These include the Plain Old Telephone Service (POTS) line, Integrated Services Digital Network (ISDN) line, Digital Subscriber Line (DSL), T-1 line and T-3 line. The small size and variety of connection options make the telecom SPDs an easy solution for achieving protection across all of the line types.

POTS

The Plain Old Telephone Service (POTS) line is a standard, voice-grade telephone line with a dial tone. It is a two wire (tip & ring) circuit. Tip and Ring are telephony slang for the two wires which make up the electrical circuit used for telephone wiring. Tip is the nickname for the electrically positive wire and Ring is the nickname for the electrically negative wire. Tip is the ground side, which is positively charged, and Ring is the battery side, which is negatively charged, of a telephone circuit. The tip is synchronized with the office of the telephone company.

ISDN

Integrated Services for Digital Network (ISDN) is a set of communication standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits of the public switched telephone network. It was first defined in 1988 in the CCITT red book. Prior to ISDN, the telephone system was viewed as a way to transport voice, with some special services available for data. The key feature of ISDN is that it integrates speech and data on the

same lines, adding features that were not available in the classic telephone system. There are several kinds of access interfaces to ISDN defined as Basic Rate Interface (BRI), Primary Rate Interface (PRI), Narrowband ISDN (N-ISDN), and Broadband ISDN (B-ISDN).

DSL

Digital subscriber line (DSL; originally digital subscriber loop) is a family of technologies that are used to transmit digital data over telephone lines. In telecommunications marketing, the term DSL is widely understood to mean asymmetric digital subscriber line (ADSL), the most commonly installed DSL technology, for internet access. DSL service can be delivered simultaneously with wired telephone service on the same telephone line. This is possible because DSL uses higher frequency bands for data. On the customer premises, a DSL filter on each non-DSL outlet blocks any high-frequency interference to enable simultaneous use of the voice and DSL services.

T-1

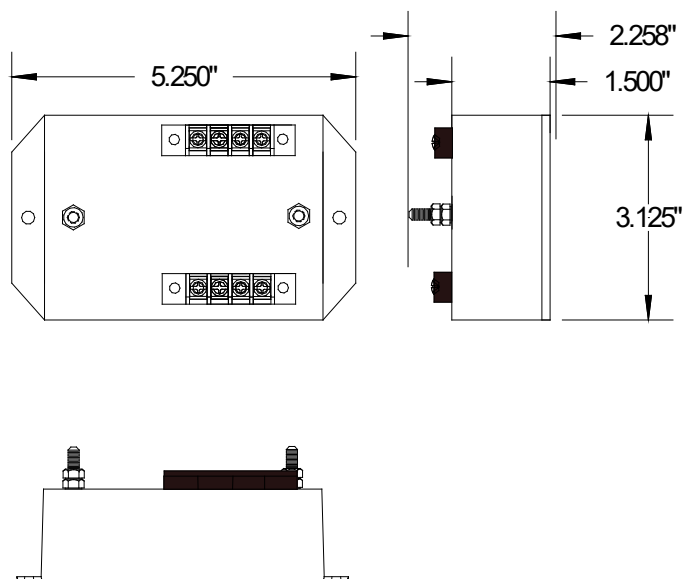
T-1 is a hardware specification for telecommunications trunking. A trunk is a single transmission channel between two points on the network: each point is either a switching center or a node (such as a telephone). T-1 lines are a method of combining multiple telephone lines onto a single line consisting of one, or two pairs of wires. A T-1 line typically has 24 telephone lines available at the same time.

T-2 & T-3

The T2 and T3 circuit channels carry multiple T1 channels multiplexed, resulting in transmission rates of 6.312 and 44.736 Mbit/s, respectively. A T3 line comprises 28 T1 lines, each operating at a total signaling rate of 1.544 Mbit/s. It is possible to get a fractional T3 line, meaning a T3 line with some of the 28 lines turned off, resulting in a slower transfer rate but typically at reduced cost.

TC###Dx-B

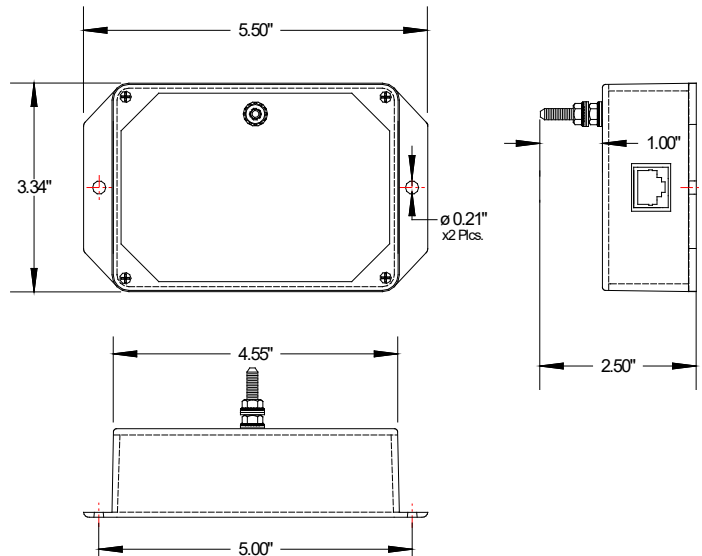
Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA
x = 2,4,6,8, or 12						
TC5Dx-B	5 V	14 VDC	5 A	T/R-G	100 Kbps	149
				T-R		149
TC12Dx-B	12 V	31 VDC	5 A	T/R-G	100 Kbps	163
				T-R		163
TC24Dx-B	24 V	38 VDC	5 A	T/R-G	100 Kbps	220
				T-R		220
TC48Dx-B	48 V	102 VDC	5 A	T/R-G	100 Kbps	295
				T-R		295
TC130Dx-B	130 V	175 VDC	5 A	T/R-G	100 Kbps	470
				T-R		470



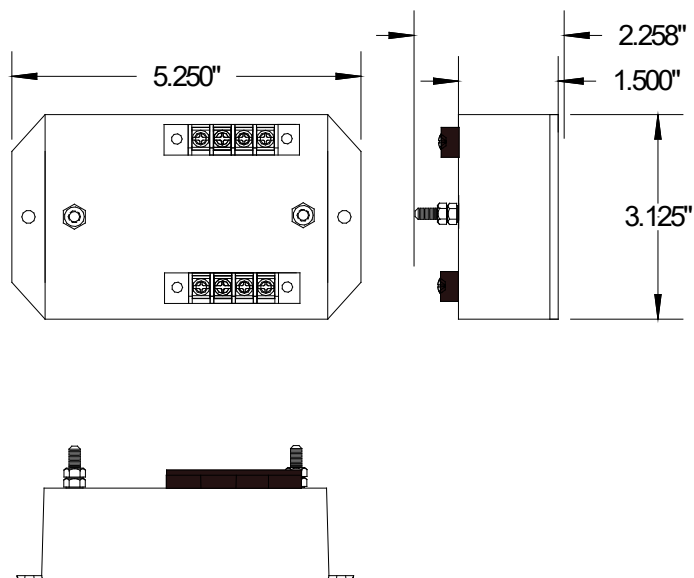
TRJ14###C4SID-B, TC###CnSID-B

Model	Nominal System Operating Voltage (Vnom)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Peak Surge Current	Max Data Rate	10 x 1,000 μ s, Impulse waveform
n = 2, 4, or 6							
TRJ145C4SID-B	5 V	T/R-G	6 V	5 A	150 A	100 Mbps	< 25 V
		T-R	12 V				< 50 V
TRJ1412C4SID-B	12 V	T/R-G	25 V	5 A	150 A	100 Mbps	< 40 V
		T-R	50 V				< 80 V
TRJ1424C4SID-B	24 V	T/R-G	25 V	5 A	150 A	100 Mbps	< 40 V
		T-R	50 V				< 80 V
TRJ1448C4SID-B	48 V	T/R-G	58 V	5 A	150 A	100 Mbps	< 77 V
		T-R	116 V				< 154 V
TRJ14140C4SID-B	140 V	T/R-G	220 V	5 A	150 A	100 Mbps	< 300 V
		T-R	440 V				< 600 V
TC5CnSID-B	5 V	L-G	6 V	5 A	150 A	100 Mbps	< 25 V
		L-L	12 V				< 50 V
TC12CnSID-B	12 V	L-G	25 V	5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
TC24CnSID-B	24 V	L-G	25 V	5 A	150 A	100 Mbps	< 40 V
		L-L	50 V				< 80 V
TC48CnSID-B	48 V	L-G	58 V	5 A	150 A	100 Mbps	< 77 V
		L-L	116 V				< 154 V
TC140CnSID-B	140 V	L-G	220 V	5 A	150 A	100 Mbps	< 300 V
		L-L	440 V				< 600 V

TRJ14###C4SID-B

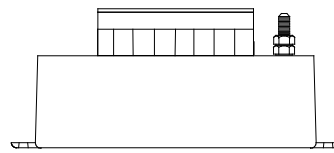
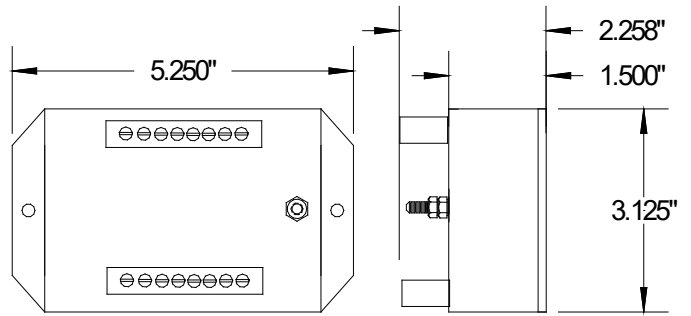


TC###CnSID-B



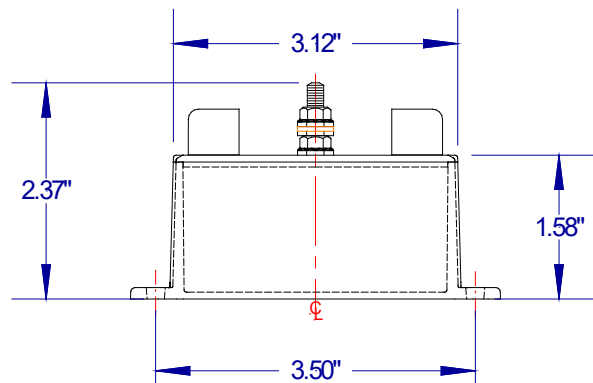
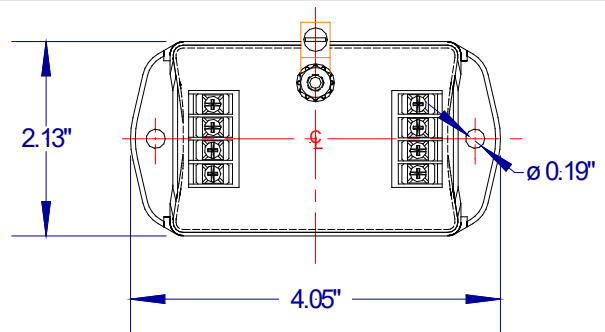
TP2-130Dn-A

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	8 x 20 μ s, 100 A
x = 4 or 8 lines						
TP2-130Dn-A	130 VAC	130 VAC 175 VDC	150 mA	T/R-G	100 Kb	< 340 V
				T-R		< 340 V



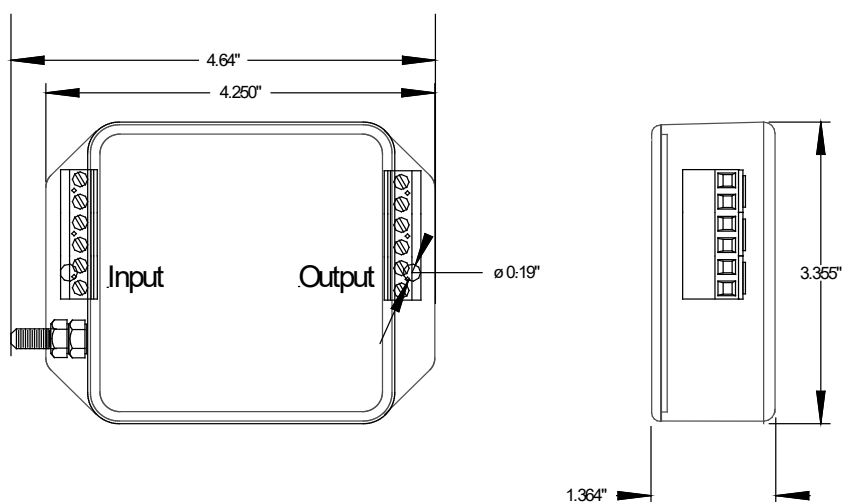
TC4-ISDN

Model	Maximum Continuous Operating Voltage (MCOV) (L-G)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	8 x 20 μ s, 100 A
x = 4 or 8 lines					
TC4-ISDN	130 Vrms/ \pm 175 Vpk	3 A	T/R-G	100 Kb	< 340 V
			T-R		< 340 V



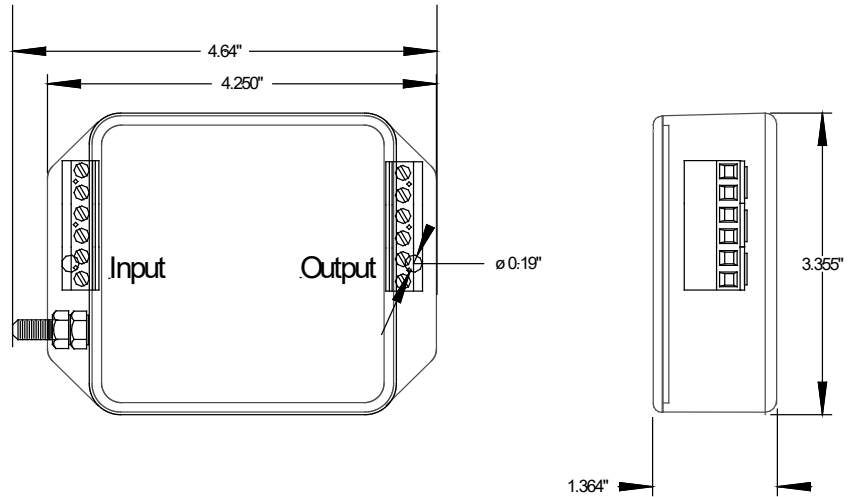
TP###CxSID-B

Model	Nominal System Operating Voltage (Vnom)	Mode	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Peak Surge Current	Max Data Rate	10 x 1,000 μ s, Impulse Waveform
TP5CnSID-B	5 V	T/R-G	6 V	5 A	150 A	100 Mbps	< 25 V
		T-R	12 V				< 50 V
TP12CnSID-B	12 V	T/R-G	25 V	5 A	150 A	100 Mbps	< 40 V
		T-R	50 V				< 80 V
TP24CnSID-B	24 V	T/R-G	25 V	5 A	150 A	100 Mbps	< 40 V
		T-R	50 V				< 80 V
TP48CnSID-B	48 V	T/R-G	58 V	5 A	150 A	100 Mbps	< 77 V
		T-R	116 V				< 154 V
TP140CnSID-B	140 V	T/R-G	220 V	5 A	150 A	100 Mbps	< 300 V
		T-R	440 V				< 600 V



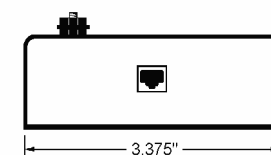
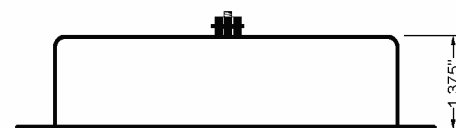
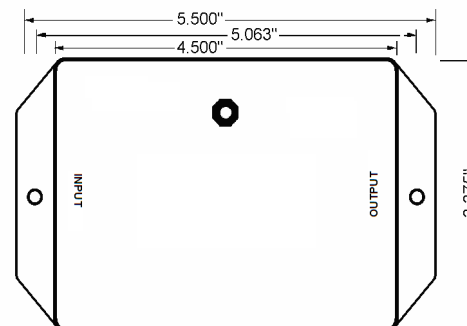
TP###Dx-B

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	B3/C1 Impulse Wave 6 kV, 3 kA
TP5Dx-B	5 V	14 VDC	5 A	T/R-G	100 Kbps	149
				T-R		149
TP12Dx-B	12 V	31 VDC	5 A	T/R-G	100 Kbps	163
				T-R		163
TP24Dx-B	24 V	38 VDC	5 A	T/R-G	100 Kbps	220
				T-R		220
TP48Dx-B	48 V	102 VDC	5 A	T/R-G	100 Kbps	295
				T-R		295
TP130Dx-B	130 V	175 VDC	5 A	T/R-G	100 Kbps	470
				T-R		470



TRJ14130D4-A

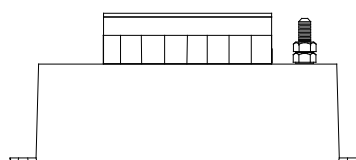
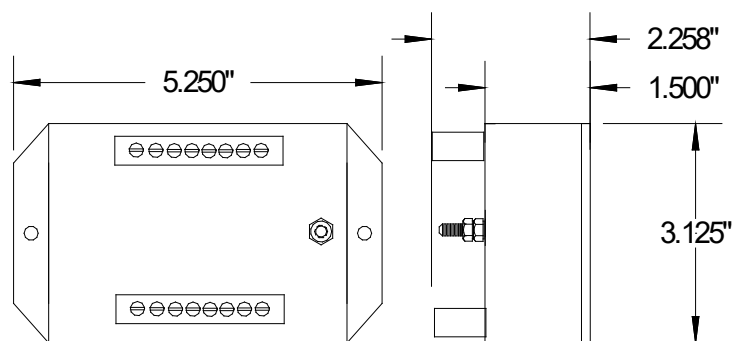
Model	Maximum Continuous Operating Voltage (MCOV)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	8 x 20 μ s, 100 A
TRJ14130D4-A	130 Vrms	150 mA	T/R-G	100 Kb	< 340 V
			T-R		< 340 V



Modular RJ45 Connection

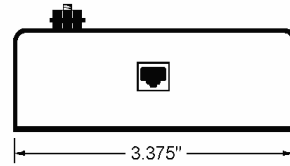
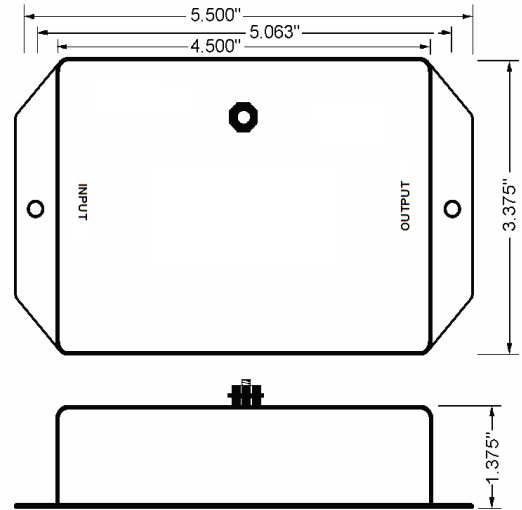
TP2-140CxSIDn-A

Model	Maximum Continuous Operating Voltage (MCOV) (L-G)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	8 x 20 μ s, 100 A
x = 4 or 8 lines					
TP2-140CxSIDn-A	220 V	150 mA	T/R-G	100 Mb	< 250 V



TRJ14140C4SID-A

Model	Maximum Continuous Operating Voltage (MCOV) (L-G)	Maximum Continuous Operating Current (MCOC)	Test Mode	Max Data Rate	8 x 20 μ s, 100 A
x = 4 or 8 lines					
TRJ14140C4SID-A	220 V	150 mA	T/R-G	100 Mb	< 250 V



Modular RJ45 Connection

PUNCH DOWN

Series wired SPD with encapsulated Voltage Responsive Circuitry™ (VRC) for protection of telecommunications circuits.

Applications

Designed for use on Standard 3002-C2 unconditioned voice grade lines, fax lines, modem lines, ISDN lines or T1 lines (2 pair) to protect all telecommunication system equipment from damaging transients generated outside that facility on the Central Office cable.

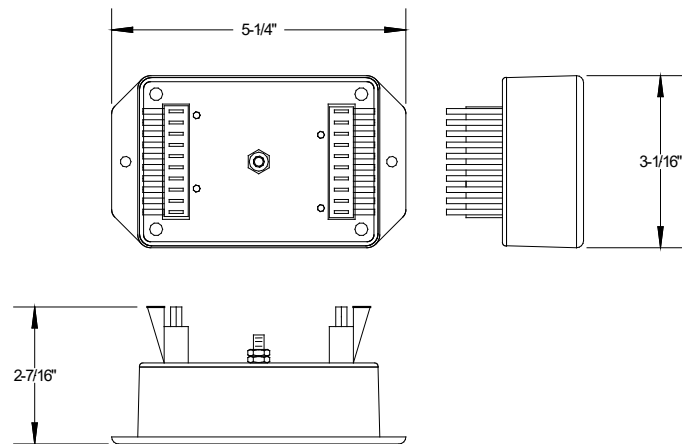


T66

Model	Nominal System Operating Voltage (Vnom)	Mode	Maximum Continuous Operating Voltage (MCOV)	Max. Data Rate	PSC	Connection	Maximum Continuous Operating Current (MCOC)	Safety Rating	Limited Warranty
T665D10T1-B	5 V	L-G	14 V / 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	14 V / 200 V (T1)						
T6612D10T1-B	12 V	L-G	31 V / 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	31 V / 200 V (T1)						
T6624D10T1-B	24 V	L-G	38 V / 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	38 V / 200 V (T1)						
T6648D10T1-B	48 V	L-G	102 V/200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	102 V/200 V (T1)						
T66130D10T1-B	130 V	L-G	175 V/ 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	175 V/ 200 V (T1)						
T665D10T15-B	5 V	L-G	14 V / 7.5 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	14 V / 7.5 V (T1)						
T6612D10T15-B	12 V	L-G	31 V / 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	31 V / 200 V (T1)						
T6624D10T15-B	24 V	L-G	38 V / 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	38 V / 200 V (T1)						
T6648D10T15-B	48 V	L-G	102 V/200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	102 V/200 V (T1)						
T66130D10T15-B	130 V	L-G	175 V/ 200 V (T1)	100 kbps / 2Mbps (T1)	30 kA/pair / 10 kA/wire	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	175 V/ 200 V (T1)						
T665A10-B	5 V	L-G	7.5 V	2 Mbps	L-G / 10 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	15 V						
T6612A10-B	12 V	L-G	24 V	2 Mbps	L-G / 10 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	48 V						
T6624A10-B	24 V	L-G	36 V	2 Mbps	L-G / 10 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	72 V						
T6648A10-B	48 V	L-G	62 V	2 Mbps	L-G / 10 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	124 V						
T66140A10-B	140 V	L-G	200 V	2 Mbps	L-G / 10 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	400 V						

Continued on next page

Model	Nominal System Operating Voltage (Vnom)	Mode	Maximum Continuous Operating Voltage (MCOV)	Max. Data Rate	PSC	Connection	Maximum Continuous Operating Current (MCOC)	Safety Rating	Limited Warranty
T665B10-B	5 V	L-G	7.5 VDC	10 Mbps	L-G 10 kA	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	15 VDC						
T6612B10-B	12 V	L-G	24 VDC	10 Mbps	L-G 10 kA	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	48 VDC						
T6648B10-B	48 V	L-G	62 VDC	10 Mbps	L-G 10 kA	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	124 VDC						
T66140B10-B	140 V	L-G	200 VDC	10 Mbps	L-G 10 kA	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	400 VDC						
T665C10-B	5 V	L-G	7.5 V	100 Mbps	1500 W per mode	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	15 V						
T6612C10-B	12 V	L-G	24 VDC	100 Mbps	1500 W per mode	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	48 VDC						
T6624C10-B	24 V	L-G	36 VDC	100 Mbps	1500 W per mode	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	72 VDC						
T6648C10-B	48 V	L-G	62 VDC	100 Mbps	1500 W per mode	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	124 VDC						
T66140C10-B	140 V	L-G	200 VDC	100 Mbps	1500 W per mode	Punch Down Block	500 mA	UL 497B	25 Year
		L-L	400 VDC						
T665D10-B	5 V	T/R-G	14 VDC	100 kbps	30 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		T-R							
T6612D10-B	12 V	T/R-G	31 VDC	100 kbps	30 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		T-R							
T6624D10-B	24 V	T/R-G	38 VDC	100 kbps	30 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		T-R							
T6648D10-B	48 V	T/R-G	102 VDC	100 kbps	30 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		T-R							
T66130D10-B	130 V	T/R-G	175 VDC	100 kbps	30 kA/pair	Punch Down Block	500 mA	UL 497B	25 Year
		T-R							



MEDIUM VOLTAGE



Definitive Surge Protection for Heavy Duty Applications

SSI's parallel connected medium voltage surge protective devices (1 kVRMS to 7.2 kVRMS) are engineered to protect mission critical systems during lightning strikes and transients that result from severe power system faults. Our surge protective devices allow your critical systems to stay up and running, keeping your electrical system from suffering extensive damage, extended downtime and lost revenue. This is critical to your company's well-being, bottom line and future.

Standard Features

- 7 Year Limited Warranty
- Industry Leading Let-Through Voltage Performance
- Circuit Encapsulation
- Voltage Responsive Circuitry
- Discrete "All Mode" Circuitry
- Component Level Thermal Fusing
- Peak Surge Current Levels From 80 kA to 160 kA per mode

Optional Features

- Integral Fused Manual Disconnect Switch
- Integral Fused Option
- NEMA 12, 4 and 4X Enclosures
- Application Specific Design Modifications

Delta and Wye Configurations For:

1000, 1500, 2000, 2500, 3000, 3500, 4160, 6900, 7200 Vrms

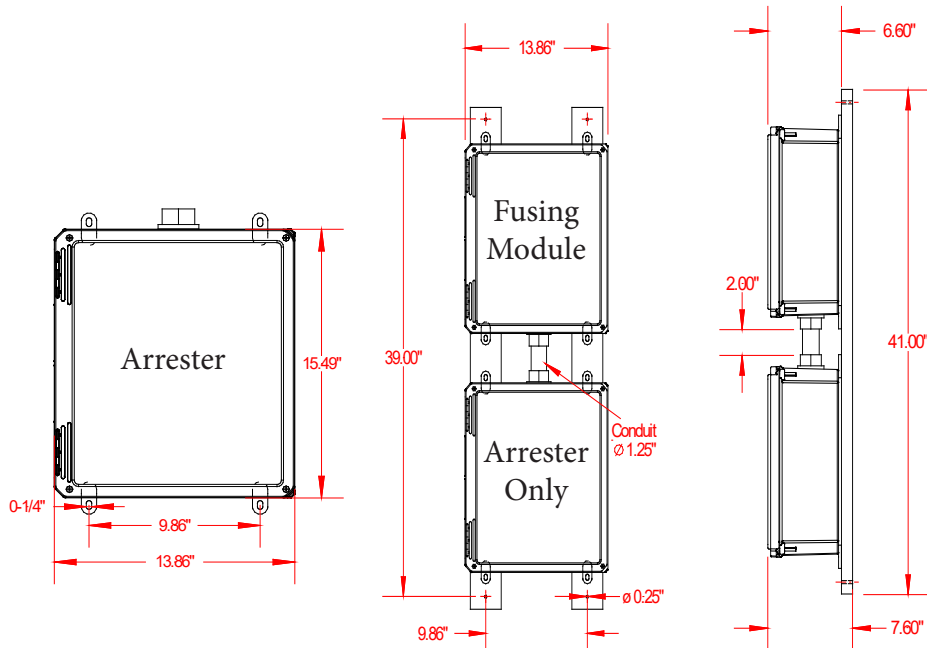
Applications

- Chemical Plants
- Power Plants
- Production Lines
- Chillers
- Waste Water Treatment
- Blowers
- Mining
- Oil Refineries

CMV

The SSI Industrial Grade, Medium Voltage Secondary Arrester SPD models are specifically designed for heavy duty applications including: Chemical & Pharmaceutical Plants, Waste Water Treatment Facilities, Water Treatment Facilities, Mining, Oil Refineries, Large Scale, Automated, Heavy Commercial or Industrial Manufacturing Production Lines.

Model	Nominal System Operating Voltage (Vnom)	Maximum Continuous Operating Voltage (MCOV)		
Compact Medium Voltage Model Number x = 40/80/160 kA Per Mode				
CMVx3Y600/1000	L-N, L-G, N-G	Up to 600 Vrms	L-N, L-G, N-G	840 Vrms
	L-L	Up to 1000 Vrms	L-L	1,680 Vrms
CMVx3Y2400/4160	L-N, L-G, N-G	Up to 2,500 Vrms	L-N, L-G, N-G	2,750 Vrms
	L-L	Up to 4,500 Vrms	L-L	5,500 Vrms
CMVx3Y4160/7200	L-N, L-G, N-G	Up to 4,300 Vrms	L-N, L-G, N-G	4,400 Vrms
	L-L	Up to 7,300 Vrms	L-L	8,800 Vrms
CMVx3N1000	Up to 1,000 Vrms	1,300 Vrms		
CMVx3N1500	Up to 1,500 Vrms	1,850 Vrms		
CMVx3N2000	Up to 2,000 Vrms	2,550 Vrms		
CMVx3N2500	Up to 2,500 Vrms	3,000 Vrms		
CMVx3N3000	Up to 3,000 Vrms	3,750 Vrms		
CMVx3N3500	Up to 3,500 Vrms	4,550 Vrms		
CMVx3N4160	Up to 4,160 Vrms	5,200 Vrms		
CMVx3N7200	Up to 7,200 Vrms	9,520 Vrms		



Options

E26 = Mounting Assembly for Fused unit

FX = Fused Module

FX1 = Fused Module with Clear Lid

FXL = CMV Fusing Module and LED indicators (2000 - 7200 V only)

CMV Option

Fused Module with Clear Lid

The "FXL" Option is an indicator option for the compact medium voltage line. The indicators wire directly into the lugs of the fused option.

