

Performance Specifications

Surge capacities	L-N	L-G	N-G
100kA per phase	50kA	50kA	50kA
200kA per phase	100kA	100kA	100kA
300kA per phase	150kA	150kA	150kA
UL 1449 Fourth Edition listed type 1, cUL			
Optional UL 1449 Fourth Edition type 2 SPD, cUL, UL 1283			
UL 1449 Fourth Edition tested Inominal (I _n): 20kA			
UL 1449 Fourth Edition tested SCCR: 200kA			
UL 1283 (Type 2 option) includes AC sinewave tracking filter with EMI/RFI filtering up to -50dB from 10kHz to 100MHz			
Repetitive impulse: 10,000 hits			
Less than 1 nanosecond response time			

Diagnostic Monitoring

100% monitoring – every MOV is monitored, including N-G
Green LED status indicator per phase
Red LED service indicator
Audible alarm with silence button
Test function: toggles red service LED, audible alarm and dry contact
N-G overvoltage detection
Phase monitoring (toggles LED and dry contacts)
Form C dry contacts, 24V, 2A
Surge counter, six-digit LCD, with test function, reset and no-maintenance eeprom memory
Available Active Surge Monitor (ASM), see pub. DS-70137 & SL-70109

Features:

- UL 1449 Fourth Edition listed
- 100kA – 300kA per phase ratings
- Type 1: UL 1449 4th Edition, CSA 22.2 No. 269.1
- Type 2 (Opt.): UL 1449 4th Edition, CSA 22.2 No. 269.2, UL 1283
- 20kA Inominal (I_n)
- 200kA SCCRs
- Complies with UL 96A 12th Edition Master Label requirements for lightning protection systems
- Voltage specific design – highly configurable
- All MOV suppression elements monitored
- All modes of protection
- 10-year limited warranty

Design Attributes

- Designed, manufactured and tested consistent with:
- ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002, C62.62-2010, C62.72-2016, IEEE SA 1100-2005 (Emerald Book)
 - NEC® Article 285
 - NEC® Articles 620.51(E), 645.18, 670.6, 695.15, 700.8 and 708 requiring SPDs
 - UL 96A and NFPA 780 lightning protection

- High energy parallel design rated for service entrance applications
- For external mounting on electrical distribution equipment, switchgear, switchboards, motor control centers, panelboards, transfer switches
- Individually fused and thermally protected MOVs
- Solid state bidirectional operation

Physical Specifications

- Relative humidity range: 0 - 95% non-condensing
- Operating frequency: 47 - 63Hz
- Operating temperature: -35° C (-31° F) to +85° C (185° F)
- Weight: 4.5 lbs (2.1 kg)
- NEMA 4X polycarbonate enclosure
- “X” monitoring option: NEMA 1 polycarbonate enclosure
- Standard size: 9.6” x 4.9” x 4” (244mm x 124mm x 102mm)
- Lug size: #12 - #10 AWG
- Includes 12 in. long ½ in. flexible conduit and connector
- Typical connection: #10 AWG and 30A breaker

Quality, Standards and Validation

- Type 1: UL 1449 Fourth Edition , CSA C22.2 No. 269.1
- Type 2 (Opt.): UL 1449 Fourth Edition, CSA C22.2 No. 269.2, UL 1283
- UL file: VZCA.E324279 at www.UL.com
- RoHS-compliant
- Operational test performed before shipment
- ISO 9001:2008 quality management system
- ISO 17025:2005 laboratory qualification

Model 440 Ordering Options

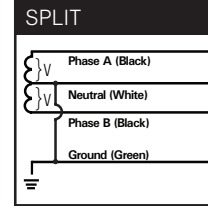
Connection	Monitoring	Surge Current Per Phase	Base Catalog Number
Lugs	Counter, Lights, Alarm, Contacts	100kA	440□□□□P10ACCJ□0
		200kA	440□□□□P20ACCJ□0
		300kA	440□□□□P30ACCJ□0
Wire Leads	Active Surge Monitor (ASM) External Ethernet Connection	100kA	440□□□□P10AWXC□0
		200kA	440□□□□P20AWXC□0
		300kA	440□□□□P30AWXC□0
	Active Surge Monitor (ASM) Internal Ethernet Connection	100kA	440□□□□P10AWTJ□0
		200kA	440□□□□P20AWTJ□0
		300kA	440□□□□P30AWTJ□0

Choose Voltage Code

Indicate UL Type 1 or 2

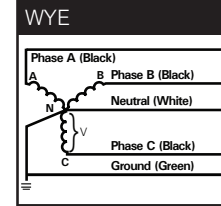
Voltage Code	
120/240V Split Phase (Fig. 1)	120S
208Y/120V Wye (Fig. 2)	120Y
380Y/220V, 400Y/230V, 415Y/240V (Fig. 2)	230Y
240/120V Delta High Leg (Fig. 3)	240H
240V Delta (Fig. 4)	240D
480Y/277V Wye (Fig. 2)	277Y
600Y/347V Wye (Fig. 2)	347Y
480V Delta (Fig. 4)	480D
600V Delta (Fig. 4)	600D

Figure 1



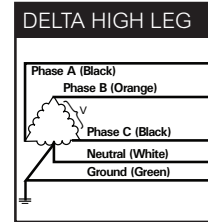
2 Phases, 1 Neutral, 1 Ground

Figure 2



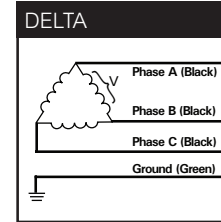
3 Phases, 1 Neutral, 1 Ground

Figure 3



(B High) 3 Phases, (B High) 1 Neutral, 1 Ground

Figure 4

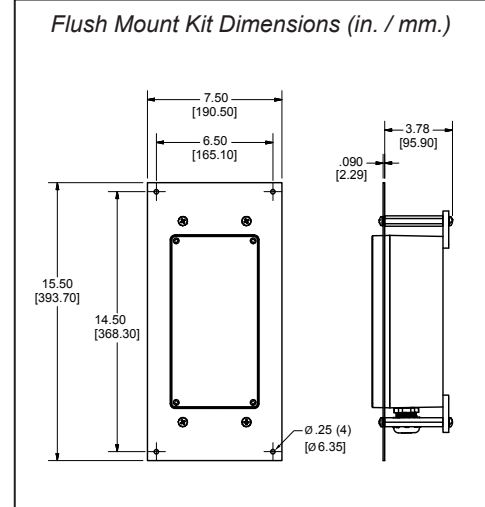
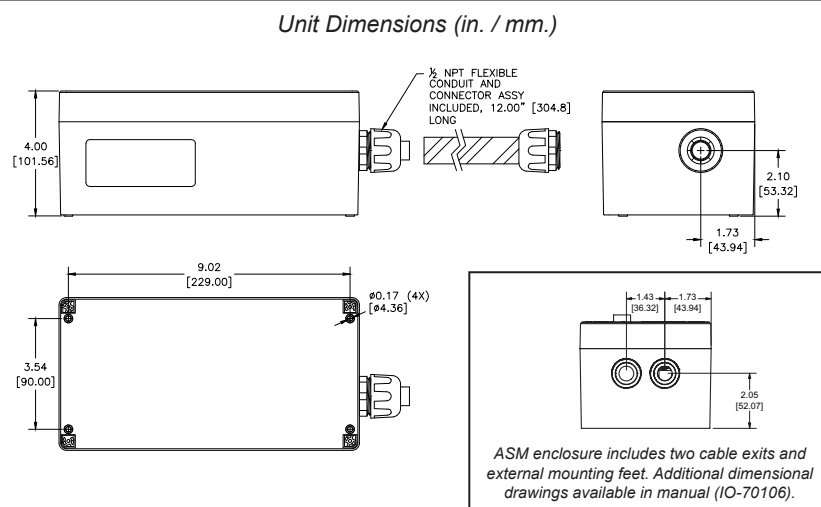
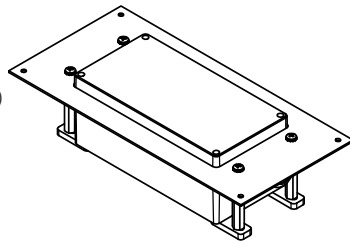


3 Phases, 1 Ground

Optional Kit

440FMKITCW

Model 440 flush mount kit (ordered separately)



Performance Data

Common Power Systems	UL 1449 Fourth Edition Test Data							
	Voltage Protection Ratings (VPR - 3kA)				I _n	SCCR	MCOV	
	L-N	L-G	N-G	L-L				
120S = 120/240V Split Phase	800	800	800	1200	20kA	200kA	180	
120Y = 208Y/120V 3Ø Wye	800	800	800	1200	20kA	200kA	180	
230Y = 380Y/220V, 400Y/230V, 415Y/240V 3Ø Wye	1200	1200	1200	2000	20kA	200kA	320	
240H = 240/120V B High Leg Delta	800/1200	800/1200	800	1200/2000	20kA	200kA	180 / 360	
277Y = 480Y/277V 3Ø Wye	1200	1200	1200	2000	20kA	200kA	320	
347Y = 600Y/347V 3Ø Wye	1500	1500	1500	2500	20kA	200kA	420	
480D = 480V 3Ø Delta	-	1800	-	2000	20kA	200kA	550	