



Features:

- **UL 1449 Third Edition Listed (Sept 2009)**
- **100kA – 200kA per phase ratings**
- **Type 1 SPD –**
 - All UL required OCP & Safety Coordination included inside
 - Can be installed line-side or load-side of main disconnect
- **20kA Inominal (I_n) (most models)**
- **200kA SCCRs (most models)**
- **UL 96A Lightning Protection Master Label compliant (@20kA I_n)**
- **Voltage Specific Design – Highly configurable**
- **All MOV suppression elements monitored**

Performance Specifications

- | Surge Capacities | L-N | L-G | N-G |
|--------------------|-------|-------|-------|
| 100kA/phase | 50kA | 50kA | 50kA |
| 150kA/phase | 100kA | 50kA | 50kA |
| 200kA/phase | 100kA | 100kA | 100kA |
- UL 1449 Third Edition Listed, UL 1283 R/C and cUL
 - UL 1449-3 Type 1 SPD (cUL Type 2 optional)
 - UL 1449-3 tested Inominal (I_n): 20kA & 10kA
 - UL 1449-3 tested SCCR: 200kA & 100kA
 - UL 1449-3 Voltage Protection Ratings (VPRs):
 - 208Y/120V: as low as 600V
 - 480Y/277V: as low as 1000V (data table on back)
 - Less than 1 nanosecond response time
 - Repetitive Impulse: 5,000 hits
 - AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz

Physical Specifications

- Relative Humidity Range: 0 -95% non-condensing
- Operating Frequency: 47-63Hz
- Operating Temperature: -25°C (-15°F) to +60°C (140°F)
- Weight: 5 lbs (2.3 kg)
- NEMA 4X Polycarbonate enclosure – UL 746C(f1) & UL 94-5VA
- Dimensions: 6" x 6" x 4" (152mm x 152mm x 102mm) (excluding removable mounting feet)
- Lug size: #8 - #10 AWG
- Typical connection: #8 AWG and 40A breaker

Design Features

- Designed, Manufactured & Tested consistent with:
 - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
 - NEMA LS-1
 - NEC Article 285
 - IEC 61643, CE
- High Energy Parallel Design for Category C3 & C-High applications
- For External Mounting next to Switchgear, Motor Controls Centers or Panelboards
- Individually Fused & Thermally Protected MOVs
- Large-Block, 34mm square, 50kA MOVs
- Solid State Bidirectional Operation

Diagnostic Monitoring

- 100% monitoring – Every MOV is monitored, incl. N-G
- Green LED Status indicator per phase
- Red LED service indicator
- Phase Loss monitoring (toggles LED & dry contact)
- Electrically isolated circuitry ensures surges do not damage diagnostics
- Optional: Audible Alarm & Form C Dry Contact (Contact rated 240V, 5A)

Quality, Standards & Validation

- UL 1449 Third Edition, cUL, UL 1283 R/C
- UL file: VZCA.E321351 at www.UL.com
- RoHS-compliant
- IEC 61643, CE
- 10 year warranty (longer optional)
- Burn-In tested Prior to Shipment
- ISO 9001:2008 Quality Management System
- ISO 17025:2005 Laboratory Qualification
- Made in USA



TE  XDS  4X  ...

Voltage Code for Electrical System

Common North American Systems:
01 = 240/120V Split Phase - 1Ø 3W+Grnd (Fig 1)
02 = 208Y/120V Wye - 3Ø 4W+Grnd (Fig 2)
03 = 240/120V High Leg Delta (B High) (Fig 3)
04 = 480Y/277V Wye - 3Ø 4W+Grnd (Fig 2)
05 = 480V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye
08 = 600Y/347V Wye - 3Ø 4W+Grnd (Fig 2)

Other Available Systems - Confirmation encouraged:

15 = 254/127V Split Phase - 1Ø 3W+Grnd (Fig 1)
 18 = 480/277V 2-Pole, (480/240V Split Phase) (Fig 1)
 21 = 220Y/127V Wye - 3Ø 4W+Grnd (Fig 2)
 41 = 520Y/300V Wye - 3Ø 4W+Grnd (Fig 2)
 42 = 415Y/240V Wye - 3Ø 4W+Grnd (Fig 2)
 43 = 400Y/230V Wye - 3Ø 4W+Grnd (Fig 2)
 44 = 440Y/250V Wye - 3Ø 4W+Grnd (Fig 2)
 51 = 480V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 4)
 06 = 240V Delta - 3Ø 3W+Grnd (Fig 4)
 61 = 240V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
 07 = 380Y/220V Wye - 3Ø 4W+Grnd (Fig 2)
 09 = 600V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye
 (Available: 100kA)
 91 = 600V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
 (Available: 100kA)
 11 = 120V Single Phase (Fig 5)
 12 = 240V Single Phase (Fig 5) - Not split phase
 13 = 127V Single Phase (Fig 5)
 14 = 300V Single Phase (Fig 5)
 16 = 277V Single Phase (Fig 5)
 17 = 480V Single Phase (1 Hot, 1 Neu, 1 Grnd) (Fig 5)

Surge Current Rating

10 = 100kA/Phase
15 = 150kA/Phase
20 = 200kA/Phase

Options

A = Audible Alarm & Dry Contacts, Form C, 240V, 5A
 2 = Type 2 SPD Bearing cUL Mark

Delete Options - Consult Factory for Order Code
 Delete L-N Protection (reduces kA rating)
 Delete L-G Protection (reduces kA rating)
 Delete N-G Protection (reduces kA rating)
 Delete Noise Filtering

Available Accessory (order separately)
 KITFMXF = Flush Mount Kit
 RM = Remote Monitor

Enclosure Rating

4X = NEMA 4X Non-Metallic (size 6" x 6" x 4")

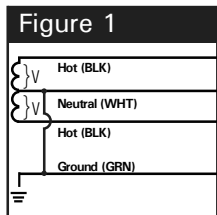


Figure 1
 SPLIT
 2 Hots, 1 Neu, 1 Grnd

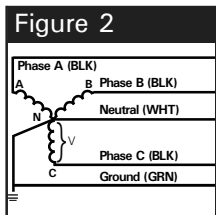


Figure 2
 WYE
 3 Hots, 1 Neu, 1 Grnd

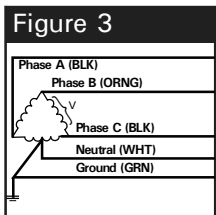


Figure 3
 HI-LEG DELTA (B High)
 3 Hots, (B HIGH),
 1 Neu, 1 Grnd

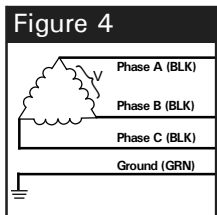


Figure 4
 DELTA & HRG Wye
 3 Hots, 1 Grnd

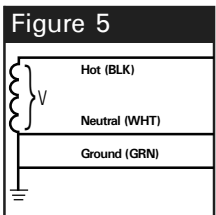


Figure 5
 SINGLE POLE
 1 Hot, 1 Neu, 1 Grnd

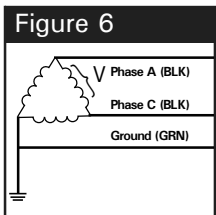


Figure 6
 CORNER GROUND
 DELTA (B grounded)
 3 Hots, 1 Grnd

Performance Data

Common North American Systems		UL 1449 THIRD Edition (Sept 2009) Test Data							
		Voltage Protection Ratings (VPR - 3kA)							
		L-N	L-G	N-G	L-L	Type	I _n	SCCR	MCOV
01	= 240/120V Split Phase	700	700	600	1000	Type 1	20kA	100kA	150
02	= 208Y/120V 3Ø Wye	700	700	600	1000	Type 1	20kA	200kA	150
03	= 240Y/120V B High Leg Delta	700/1200	700/1200	600	1000/2000	Type 1	20kA	200kA	150 / 320
04	= 480Y/277V 3Ø Wye	1200	1200	1200	2000	Type 1	20kA	200kA	320
05	= 480V 3Ø Delta	-	1800	-	2000	Type 1	10kA	200kA	550
08	= 600Y/347V 3Ø Wye	1500	1500	1500	2500	Type 1	10kA	200kA	420

Other Available Systems:

Please see supplementary data sheet, contact us at info@aptsurge.com, or confirm at www.UL.com using CCN of VZCA
 Optional disconnect switch may increase VPRs

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