



TEXRS Series

Component Assembly SPDs Type 1 and Type 2

**Features:**

- **UL 1449 Fourth Edition Recognized**
- **100kA – 300kA per phase ratings**
- **All UL required OCP & Safety Coordination included inside**
 - Type 1 SPDs intended for Line or Load Side of Main Disconnect
 - Type 2 SPDs intended for 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**
- **All Modes of Protection**
- **Display on 28" cable**

Performance Specifications

Surge Capacities	L-N	L-G	N-G	L-L
100kA Per Phase	50kA	50kA	50kA	100kA
150kA Per Phase	100kA	50kA	50kA	150kA
200kA Per Phase	100kA	100kA	100kA	200kA
250kA Per Phase	150kA	100kA	100kA	250kA
300kA Per Phase	150kA	150kA	150kA	300kA

- UL 1449 4th Edition Recognized Type 1 CA, CSA 22.2 No. 269.4-1
- Optional UL 1449-4 Type 2 CA, UL 1283 Rec., CSA 22.2 No. 269.4-2
- UL 1449-4 tested Inominal (I_n): 20kA & 10kA
- UL 1449-4 tested SCCR: 200kA & 100kA
- UL 1449-4 Voltage Protection Ratings (VPRs):
 - 208Y/120V: as low as 600V
 - 480Y/277V: as low as 1000V
- 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 (Type 2 option only, incl. UL 1283 Rec.)

Diagnostic Monitoring

- 100% monitoring – Every MOV is monitored, incl. N-G
- Green LED Status indicator per phase
- Red LED service indicator
- Audible Alarm with Silence Switch
- Test Function: toggles Red Service LED, Audible Alarm & Dry Contact (if equipped)
- N-G overvoltage detection
- Phase Loss monitoring (toggles LED & Dry Contacts)
- Electrically isolated circuitry ensures surges do not damage diagnostics
- Form C Dry Contacts, 240V, 5A (two sets)
- Optional Surge Counter, six-digit LCD, with test function, reset & no-maintenance Eprom memory
- Installer-locatable display on 28" cable

Design Features

- Designed, Manufactured & Tested consistent with:
 - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002, C62.62-2010 and C62.72-2007
 - NEMA LS-1
 - NEC[®] Article 285
 - IEC 61643
- High Energy Parallel Design for Category C3 & C-High applications
- For Mounting Internal to Switchgear, Motor Controls Centers, Panelboards or Control Panels
- Individually Fused & Thermally Protected MOVs
- Large-Block 34mm square MOVs
- Replaceable Module Construction
- Solid State Bidirectional Operation

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)
- Standard size: 6.5" x 11" x 4.5" (16.5cm x 29.9cm x 11.4cm)
- Lug size: #2 - #14 AWG (w/opt. disconnect: #6 - #1/0)
- Typical connection: #6 AWG and 60A breaker

Quality, Standards & Validation

- Type 1: UL 1449 Fourth Edition, CSA 22.2 No. 269.4-1
- Type 2 (Opt.): UL 1449 Fourth Ed., CSA No. 269.4-2, UL 1283 Rec.
- 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





TE

09

XRS

10



Voltage Code for Electrical System

Surge Current Rating

Options

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)

- 10 = 100kA/Phase
- 15 = 150kA/Phase
- 20 = 200kA/Phase
- 25 = 250kA/Phase
- 30 = 300kA/Phase

- X = Surge Counter, six-digit LCD counter includes maintenance-free Eprom memory backup
- M = Mount Display on SPD instead of Cable
- D = Rotary Disconnect Switch, ABB, UL98, SPD & Disconnect mounted on alum. backplane (10.75" x 10.88" x 4.5")

Other Available Systems - Confirmation encouraged:

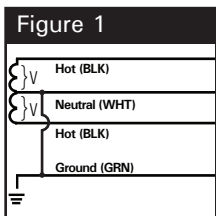
- 15 = 254/127V Split Phase - 1Ø 3W+Grnd, (Fig 1)
- 18 = 480/277V 2-Pole, (480/240V Split Phase) (Fig 1)
- 21 = 220Y/127V Wye - 3Ø 4W+Grnd (Fig 2)
- 41 = 520Y/300V Wye - 3Ø 4W+Grnd (Fig 2)
- 42 = 415Y/240V Wye - 3Ø 4W+Grnd (Fig 2)
- 43 = 400Y/230V Wye - 3Ø 4W+Grnd (Fig 2)
- 44 = 440Y/250V Wye - 3Ø 4W+Grnd (Fig 2)
- 51 = 480V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
- 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, 150kA)
- 91 = 600V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6) (Available: 100kA, 150kA)
- 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)

- K = Rotary Disconnect Switch, Katko UL 508, SPD & Disconnect mounted on alum backplane (10.75" x 10.88" x 4.5")
- 2 = Type 2 SPD, incl. UL 1283 EMI/RFI Filters

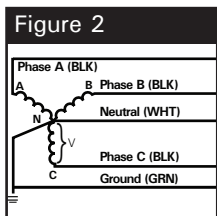
Extended Disc. Sw. handle hardware available—consult factory
 Display on 28" Cable - other lengths available—consult factory

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

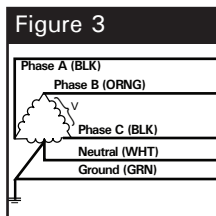
Available Accessory (order separately)
 RM = Remote Monitor



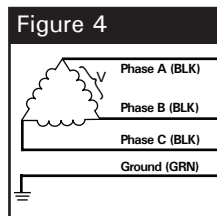
SPLIT
2 Hots, 1 Neu, 1 Grnd



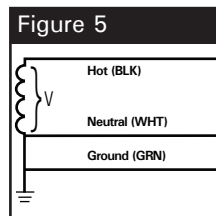
WYE
3 Hots, 1 Neu, 1 Grnd



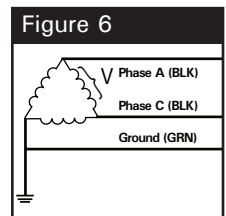
HI-LEG DELTA (B High)
3 Hots, (B HIGH),
1 Neu, 1 Grnd



DELTA & HRG Wye
3 Hots, 1 Grnd



SINGLE POLE
1 Hot, 1 Neu, 1 Grnd



CORNER GROUND DELTA (B grounded)
2 Hots, 1 Grnd

Performance Data

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