



TEXWS Series

Type 4 Surge Protective Device/SPD/TVSS For Use in Type 1 Applications



Features:

- **UL 1449 Third Edition Listed (Sept 2009)**
- **300kA – 500kA per phase ratings**
- **UL tested and evaluated to 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)**
- **200kA SCCRs (most models)**
- **UL 96A Lightning Protection Master Label compliant**
- **Voltage Specific Design – Highly configurable**
- **All MOV suppression elements monitored**
- **Display on 4' cable**

Performance Specifications

- | Surge Capacities | L-N | L-G | N-G |
|------------------|-------|-------|-------|
| 300kA/phase | 150kA | 150kA | 150kA |
| 400kA/phase | 200kA | 200kA | 200kA |
| 500kA/phase | 250kA | 250kA | 250kA |
- UL 1449 Third Edition Recognized, UL 1283 and cUL
 - UL 1449-3 Type 4 for use in Type 1 Applications
 - UL 1449-3 tested Inominal (I_n): 20kA
 - 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
 - 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

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 4' cable

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
- High Energy Parallel Design for Category C3 &
- C-High applications
- For Mounting Internal to Switchgear, Motor Control 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: 7 lbs (3.2 kg)
- Standard size: 9" x 11" x 5.3" (22.9cm x 28.0cm x 13.5cm)
- Lug size: #2 - #14 AWG (w/opt. disconnect: #6 - #1/0)
- Typical connection: #6 AWG and 60A breaker

Quality, Standards & Validation

- UL 1449 Third Edition, cUL, UL 1283
- UL file: VZCA2.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





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 (Available: 300kA, 450kA)
08 = 600Y/347V Wye - 3Ø 4W+Grnd (Fig 2)

20 = 200kA/Phase (Voltage Codes 09 & 91 only)
25 = 250kA/Phase (Voltage Codes 09 & 91 only)
31 = 300kA/Phase
40 = 400kA/Phase
45 = 450kA/Phase (Voltage Codes 05, 51, 06, 61 only)
50 = 500kA/Phase

X = Surge Counter, six-digit LCD counter includes maintenance-free Eprom memory backup
 F = Noise Filtering - Extended Range & Attenuation
 M = Mount Display on SPD instead of Cable
 D = Rotary Disconnect Switch, Bussman UL98, SPD & Disconnect mounted on alum. backplane (14.75" x 12.88" x 5.25")
 K = Rotary Disconnect Switch, Katko UL 508, SPD & Disconnect mounted on alum backplane (14.75" x 12.88" x 5.25")

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) (Available: 300kA, 450kA)
 06 = 240V Delta - 3Ø 3W+Grnd (Fig 4) (Available: 300kA, 450kA)
 61 = 240V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6) (Available: 300kA, 450kA)
 07 = 380Y/220V Wye - 3Ø 4W+Grnd (Fig 2)
 09 = 600V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye (Available: 200kA, 250kA)
 91 = 600V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6) (Available: 200kA, 250kA)
 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)

Extended Disc. Sw. handle hardware available—consult factory
 Display on 4' 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

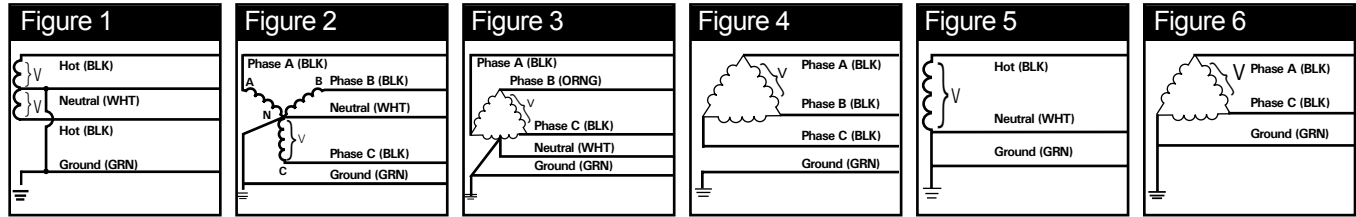


Figure 1 SPLIT 2 Hots, 1 Neu, 1 Grnd
Figure 2 WYE 3 Hots, 1 Neu, 1 Grnd
Figure 3 HI-LEG DELTA (B High) 3 Hots, (B HIGH), 1 Neu, 1 Grnd
Figure 4 DELTA & HRG Wye 3 Hots, 1 Grnd
Figure 5 SINGLE POLE 1 Hot, 1 Neu, 1 Grnd
Figure 6 CORNER GROUND DELTA (B grounded) 2 Hots, 1 Grnd

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	In	SCCR	MCOV
01	= 240/120V Split Phase	700	600	600	1000	Type 1	20kA	100kA	150
02	= 208Y/120V 3Ø Wye	700	600	600	1000	Type 1	20kA	200kA	150
03	= 240Y/120V B High Leg Delta	700/1200	600/1000	600	1500	Type 1	20kA	200kA	150 / 320
04	= 480Y/277V 3Ø Wye	1200	1000	1200	1800	Type 1	20kA	200kA	320
05	= 480V 3Ø Delta	-	1800	-	1800	Type 1	20kA	200kA	550
08	= 600Y/347V 3Ø Wye	1500	1500	1500	2500	Type 1	20kA	200kA	420

Other Available Systems:
 Please see supplementary data sheet, contact us at info@apptvss.com, or confirm at www.UL.com using CCN of VZCA
 Optional disconnect may increase VPRs

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