

Shown with optional disconnect switch

Features:

- **UL 1449 Fourth Edition Recognized**
- **300kA – 500kA 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)**
- **200kA SCCRs (most models)**
- **UL 96A Lightning Protection Master Label compliant**
- **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
300kA Per Phase	150kA	150kA	150kA	300kA
400kA Per Phase	200kA	200kA	200kA	400kA
500kA Per Phase	250kA	250kA	250kA	500kA

- 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
- 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 C62.411-2002, C62.412-2002, 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 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

- 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: 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



XWS Model Number Configurator & Options

TE 02 XWS 40 DX - M

Voltage Code for Electrical System

Common Voltages:

- 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)

Other Available Systems - Confirmation encouraged:

- 21 = 220Y/127V Wye - 3Ø 4W+Grnd (Fig 2)
- 17 = 480V Single Phase (1 Hot, 1 Neu, 1 Grnd) (Fig 5)

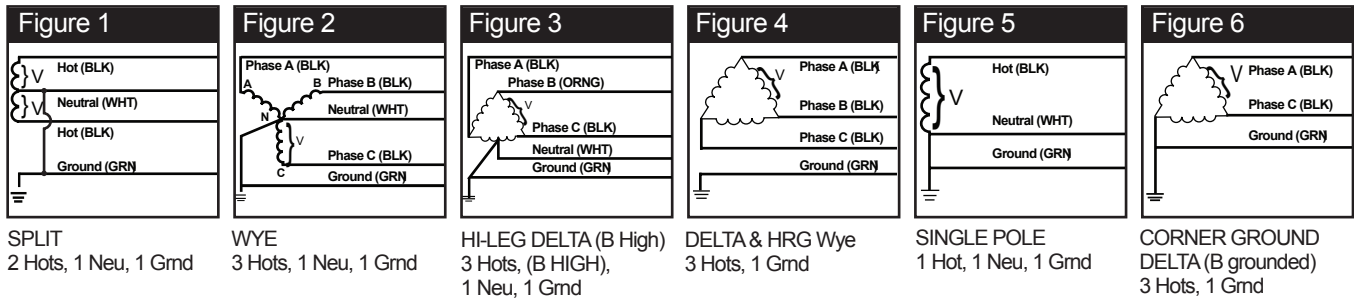
Surge Current Rating

- 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

Options

- 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")
- 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



Performance Data

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