



Benefits:

- UL 1449 Fourth Edition Listed and CSA 22.2 No. 269.2
- 160kA & 240kA per phase ratings
- Type 2 SPD
 - All UL required OCP & Safety Coordination included inside
 - Can be installed load-side of main disconnect
- Replaceable module construction
- 200kA SCCR's
- Voltage Specific – Highly configurable
- All MOV suppression elements monitored
- All Modes of Protection
- Optional Silicon Avalanche Diode (SAD) Hybrid System
- 10 Year Warranty (longer optional)

Performance Specifications

Surge Capacities	L-N	L-G	N-G
160kA Per Phase	80kA	80kA	120kA
240kA Per Phase	120kA	120kA	120kA
Silicon Avalanche Diode (SAD) Hybrid (120/240 & 208Y/120):			
90kA Per Phase	50kA	40kA	120kA
130kA Per Phase	50kA	80kA	120kA
170kA Per Phase	90kA	80kA	120kA
UL 1449 Fourth Edition Listed, UL 1283 Listed & CSA 22.2 No. 269.2			
UL 1449 Fourth Edition Type 2 SPD			
UL 1449 Fourth Edition tested SCCR: 200kA			
UL 1449 Fourth Edition Voltage Protection Ratings (VPRs):			
– 208Y/120V: as low as 500V			
– 480Y/277V: as low as 900V			
AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz			
200kAIR rated fusing			
Repetitive Impulse: 5,000 hits			
Less than 1 nanosecond response time			

Design Attributes

Designed, Manufactured & 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 & 708 requiring SPDs
– IEC 61643, CE
High Energy Parallel Design for Category C-High applications
For External Mounting next to Electrical Distribution Equipment, Switchgear, Motor Controls Centers, Panelboards, etc.
Individually Fused Suppression Modes
Large-Block utility grade 34mm square MOVs
Replaceable Phase Module Construction
Thermal Sensitivity in Each Mode
Busbar Construction
Solid State Bidirectional Operation
Enclosure-less version for OEM available

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: 25 lbs (11.5 kg)
Standard NEMA 4 (Other Enclosures Optional)
Standard size: 12" x 12" x 7.5" (30.5cm x 30.5cm x 19.05cm)
Lug size: #2 - #14 AWG
Typical connection: #6 AWG and 60A breaker

Quality, Standards & Validation

Type 2: UL 1449 Fourth Edition, CSA 22.2 No. 269.2
UL file: VZCA.E321351 at www.UL.com
RoHS-compliant
Burn-In tested prior to shipment
ISO 9001:2008 Quality Management System
ISO 17025:2005 Laboratory Qualification

Diagnostic Monitoring

Tri-color Green, Amber, Red LED Status indicator per phase
Red LED service indicator
Audible Alarm with Silence Switch
Test Function: toggles Red Service LED, Audible Alarm
Redundant monitoring LEDs on modules
Phase Loss monitoring (toggles LED & dry contacts)
Electrically isolated circuitry ensures surges do not damage diagnostics
Optional Form C Dry Contacts, 24V, 1A (two sets)
Optional Surge Counter, six-digit LCD, with test function, reset & no-maintenance SuperCap energy storage device

Model 457 Number Configurator & Options

457

Model 457 Product Line

□□□□

Voltage Codes

P

Per Phase kA Rating System

□□

kA Rating Per Phase

A

Modes of Protection (Default)

C

Connection Type

□

Monitoring Options

□

Enclosure

2

UL 1449 Type

□

Accessory/Option(s)

Common Systems

- 120S = 240/120V Split Phase - 1Ø, 3W+Grnd, (Fig 1)
- 120Y = 208Y/120V Wye - 3Ø 4W+Grnd, (Fig 2)
- 240H = 240/120V High Leg Delta (B High), (Fig 3)
- 277Y = 480Y/277V Wye - 3Ø 4W+Grnd, (Fig 2)
- 347Y = 600Y/347V Wye - 3Ø 4W+Grnd, (Fig2)
- 480D = 480V Delta - 3Ø 3W+Grnd, (Fig4) & HRG Wye

Other Available Systems - Confirmation Encouraged

- 120N = 120V Single Phase (Fig 5)
- 240N = 240V Single Phase (Fig 5) - Not split phase
- 220Y = 380Y/220V Wye - 3Ø 4W+Grnd (Fig 2)
- 240C = 240V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
- 240D = 240V Delta - 3Ø 3W+Grnd (Fig 4)
- 480C = 480V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
- 600C = 600V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
- 600D = 600V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye

- 16 = 160kA
- 24 = 240kA
- 09 = 90kA (SAD)
- 13 = 130kA (SAD)
- 17 = 170kA (SAD)

(SAD available in 120S & 120Y)

C = Compression Lugs (No Wires Included)

2 = UL 1449 Type 2, (Includes UL1283 Filter)

0 = No Trailing Accessory/Option
X = Yes Trailing Accessory/Option

E = NEMA 1/12/3R/4 (Standard) (Metal)
Size - 12" x 12" x 7.5"

J = NEMA 4X Non-Metallic (Polycarbonate, Display Inside Clear Door)
Size - 14" x 12" x 6"

H = NEMA 4X Stainless Steel (Stainless, Display Inside Door)
Size - 12" x 12" x 6"

Q = Flushmount
Wall Cavity Size - 12" x 12" x 6"

N = No enclosure, on backplane

U = LEDs/Audible Alarm
A = LEDs/Audible Alarm/Relay
C = LEDs/Audible Alarm/Relay/
Surge Counter

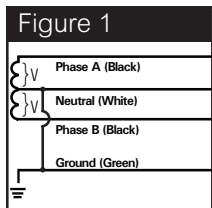
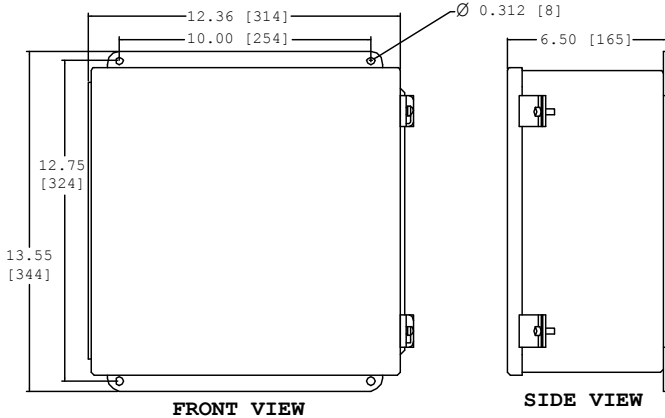


Figure 1
SPLIT
2 Phases, 1 Neutral,
1 Ground

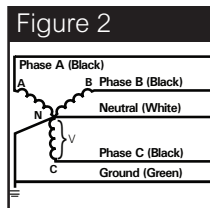


Figure 2
WYE
3 Phases, 1 Neutral,
1 Ground

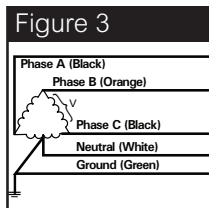


Figure 3
HIGH LEG DELTA
(B High) 3 Phases,
(B High), 1 Neutral,
1 Ground

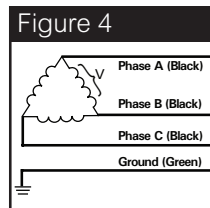


Figure 4
DELTA & HRG WYE
3 Phases, 1
Ground

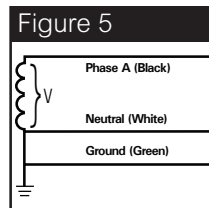


Figure 5
SINGLE POLE
1 Phase, 1 Neutral,
1 Ground

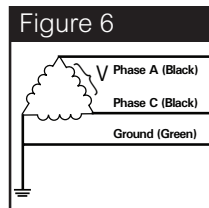


Figure 6
CORNER GROUND
DELTA (B grounded)
2 Phases, 1 Ground

Performance Data

Common Power Systems		UL 1449 Fourth Edition Test Data							
		Voltage Protection Ratings (VPR - 3kA)				Type	I _n	SCCR	MCOV
		L-N	L-G	N-G	L-L				
120S =	240/120V Split Phase	600	600	600	900	Type 2	5kA	200kA	150
120Y =	208Y/120V 3Ø Wye	600	600	600	900	Type 2	5kA	200kA	150
240H =	240/120V B High Leg Delta	600/900	600/900	600	900/1500	Type 2	5kA	200kA	150 / 320
277Y =	480Y/277V 3Ø Wye	900	900	800	1500	Type 2	5kA	200kA	320
480D =	480V 3Ø Delta	-	1500	-	1800	Type 2	5kA	200kA	552
347Y =	600Y/347V 3Ø Wye	1200	1500	1200	2500	Type 2	5kA	200kA	420
SAD Models									
120S =	240/120V Split Phase	500	600	600	800	Type 2	5kA	200kA	138
127Y =	220Y/127V 3Ø Wye	500	600	600	800	Type 2	5kA	200kA	138