

Benefits:

- UL 1449 Fourth Edition Listed & CSA 22.2 No. 269.2
- 80kA, 120kA & 160kA 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 SCCRs
- Voltage Specific Design – Highly configurable
- MOV suppression elements monitored
- 10 Year Warranty (longer optional)

Performance Specifications

Surge Capacities	L-N	L-L	N-G
80kA Per Phase	80kA	80kA	80kA
120kA Per Phase	120kA	120kA	120kA
160kA Per Phase	160kA	160kA	160kA
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 600V			
– 480Y/277V: as low as 1000V			
AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz			
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 Switchgear, Motor Controls Centers or Panelboards
Individually Fused Suppression Modules
Large-Block 34mm square MOVs
Replaceable Phase Module Construction
Thermal Cutout in Each Mode
Busbar Construction
Solid State Bidirectional Operation

Diagnostic Monitoring

Green LED Status indicator per phase
Redundant monitoring LEDs on modules
Phase Loss monitoring (toggles LED & dry contacts)
Optional Form C Dry Contact Relay 240V, 5A (Two sets)
Electrically isolated circuitry ensures surges do not damage diagnostics

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 (11.4 kg)
Standard NEMA 1/12/3R/4 enclosure
Standard size: 12" x 12" x 7.5" (30.5cm x 30.5cm x 19cm)
Lug size: #1/0 - #14 AWG
Typical connection: #6 AWG and 60A breaker

Quality, Standards & Validation

UL 1449 Fourth Edition, UL 1283 Listed & 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

Model 455 Number Configurator & Options

455

Model 455
Product Line

□□□□

Voltage Codes

P

Per Phase
kA Rating
System

□□

kA Rating
Per Phase

A

Modes of
Protection
(Default)

C

Connec-
tion Type

□

Monitoring
Options

□

Enclosure

2

UL 1449
Type

□

Accessory/
Option(s)

Common Systems

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

Other Available Systems - Confirmation Encouraged

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

- 08 = 80kA
- 12 = 120kA
- 16 = 160kA

C = Compression
Lugs or
Terminals
(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 = NEMA 1 Flush Mount
Wall Cavity Size - 12" x 12" x 6"

S = LEDs only
R = LEDs/Relay

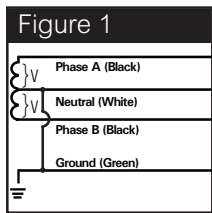
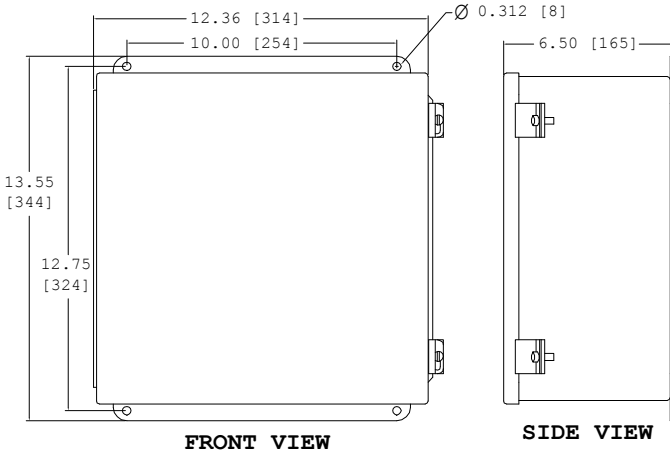


Figure 1
SPLIT
2 Phases, 1 Neutral,
1 Ground

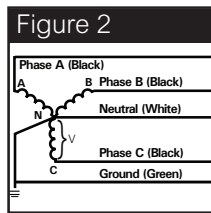


Figure 2
WYE
3 Phases, 1 Neutral,
1 Ground

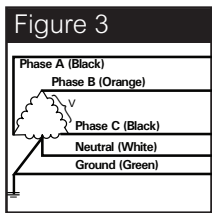


Figure 3
HIGH LEG DELTA
(B High) 3 Phases,
(B High), 1 Neutral,
1 Ground

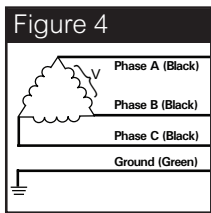


Figure 4
DELTA & HRG WYE
3 Phases, 1 Ground

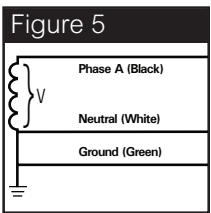


Figure 5
SINGLE POLE
1 Phase, 1 Neutral,
1 Ground

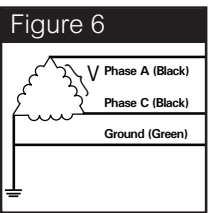


Figure 6
CORNER GROUND
DELTA (B grounded)
2 Phases, 1 Ground

Performance Data

Common Power Systems		UL 1449 Fourth Edition Test Data						
		Voltage Protection Ratings (VPR - 3kA)			Type	I _n	SCCR	MCOV
		L-N	N-G	L-L				
120S	= 240/120V Split Phase	800	600	1200	Type 2	5kA	200kA	150
120Y	= 208Y/120V 3Ø Wye	800	600	1200	Type 2	5kA	200kA	150
240H	= 240Y/120V B High Leg Delta	800/1200	600	1200	Type 2	5kA	200kA	150 / 320
277Y	= 480Y/277V 3Ø Wye	1200	1000	1800	Type 2	5kA	200kA	320
480D	= 480V 3Ø Delta	—	—	1800	Type 2	5kA	200kA	552
347Y	= 600Y/347V 3Ø Wye	1500	1200	2500	Type 2	5kA	200kA	420