

Cross Reference RA Part Number PN-F001992

MFR Part Number 450120YP10ACCN20



400 SERIES

Model 450 (TEXRS Series)

Data Sheet



Benefits:

- UL 1449 Fourth Edition recognized
- 100kA – 300kA per phase ratings
- Type 1: UL 1449 4th Edition, CSA 22.2 No. 269.1
- Type 2 (optional): UL 1449 4th Edition, CSA No. 269.2, UL 1283
- 20kA Inominal (I_n)
- 200kA SCCR's (most models)
- Complies with UL 96A 12th Edition master label requirements for lighting protection systems
- Voltage specific design – highly configurable
- All MOV suppression elements monitored
- All modes of protection
- Display on 28" cable
- 10-year limited warranty

Performance Specifications

Surge capacities	L-N	L-G	N-G
100kA Per Phase	50kA	50kA	50kA
200kA Per Phase	100kA	100kA	100kA
300kA Per Phase	150kA	150kA	150kA
UL 1449 4th Edition recognized type 1 CA, CSA 22.2 No. 269.4-1			
Optional UL 1449 4th Edition type 2 CA, UL 1283 recognized, CSA 22.2 No. 269.4-2			
UL 1449 Fourth Edition tested Inominal (I_n): 20kA			
UL 1449 Fourth Edition tested SCCR: 200kA and 100kA			
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 (Type 2 option only, including UL 1283 recognized)			
Repetitive impulse: 5,000 hits			
Less than 1 nanosecond response time			

Diagnostic Monitoring

100% monitoring – every MOV is monitored, including 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 and dry contact
N-G overvoltage detection
Phase loss monitoring (toggles LED and dry contacts)
Form C dry contacts, 240V, 5A (two sets)
Surge counter, six-digit LCD, with test function, reset and no-maintenance Eprom memory
Installer-locatable display on 28" cable

Design Attributes

- Designed, manufactured and 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 and 708 requiring SPDs
 - Complies with UL 96A 12th Edition master label requirements for lighting protection systems and NFPA 780 Lightning Protection IEC 61643, CE

High energy parallel design for category C-high applications

For mounting internal to switchgear, motor controls centers, panelboards or control panels

Individually fused and thermally protected 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 (with optional disconnect switch: #6 - #1/0)
Typical connection: #6 AWG and 60A breaker

Quality, Standards and Validation

Type 1: UL 1449 4th Edition, CSA 22.2 No. 269.4-1
Type 2 (Opt.): UL 1449 4th Edition, CSA No. 269.4-2, UL 1283 recognized
UL file: VZCA.E321351 at www.UL.com
RoHS-compliant
Operational test performed before shipment
ISO 9001:2008 quality management system
ISO 17025:2005 laboratory qualification

Model 450 Number Configurator and Options

450
Model 450
Product Line

1 2 0 Y
Voltage Codes

P
Per Phase
kA Rating
System

1 0 0
kA Rating
Per Phase

A
Modes of
Protection

C
Connection
Type

C
Monitoring
Options

N
Enclosure
(Default)

2
UL 1449
Type 1/Type 2

0
Accessory/
Option(s)

Common Systems

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

Other Available Systems - Confirmation Encouraged

- 120N = 120V Single Phase (Fig 5)
- 127N = 127V Single Phase (Fig 5)
- 127S = 254/127V Split Phase - 1Ø 3W + ground, (Fig 1)
- 127Y = 220Y/127V Wye - 3Ø 4W + ground (Fig 2)
- 220Y = 380Y/220V Wye - 3Ø 4W + ground (Fig 2)
- 230Y = 400Y/230V Wye - 3Ø 4W + ground (Fig 2)
- 240N = 240V Single Phase (Fig 5) - Not split phase
- 240S = 480/240V Split Phase, or Two legs of Wye, (Call)
- 240Y = 415Y/240V Wye - 3Ø 4W + ground (Fig 2)
- 240C = 240V B Corner Grnd Delta, 3Ø 3W + ground (Fig 6)
- 240D = 240V Delta - 3Ø 3W + ground (Fig 4)
- 254Y = 440Y/250V Wye - 3Ø 4W + ground (Fig 2)
- 277N = 277V Single Phase (Fig 5)
- 277S = 480/240V Split Phase, or Two legs of Wye, (Call)
- 300N = 300V Single Phase (Fig 5)
- 300Y = 520Y/300V Wye - 3Ø 4W + ground (Fig 2)
- 480N = 480V Single Phase (1 Hot, 1 Neu, 1 Grnd) (Fig 5)
- 480C = 480V B Corner Grnd Delta, 3Ø 3W + ground (Fig 6)
- 600C = 600V B Corner Grnd Delta, 3Ø 3W + ground (Fig 6)
(Available: 100kA, 150kA)
- 600D = 600V Delta - 3Ø 3W + ground (Fig 4) & HRG Wye
(Available: 100kA, 150kA)

10 = 100kA
20 = 200kA
30 = 300kA

C = Compression lugs
R = Internal rotary
disconnect switch

**A = All standard modes for that
voltage code (default)**

L = Delete L-N protection
G = Delete L-G protection
N = Delete N-G protection

1 = UL 1449 type 1
**2 = UL 1449 type 2,
(Includes UL1283
filter)**

**0 = No trailing accessory/
option**

**C = LEDs/audible alarm/relay/
surge counter**

Dimensions (in. / mm)

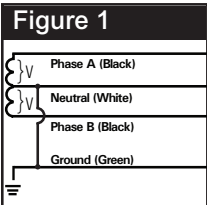
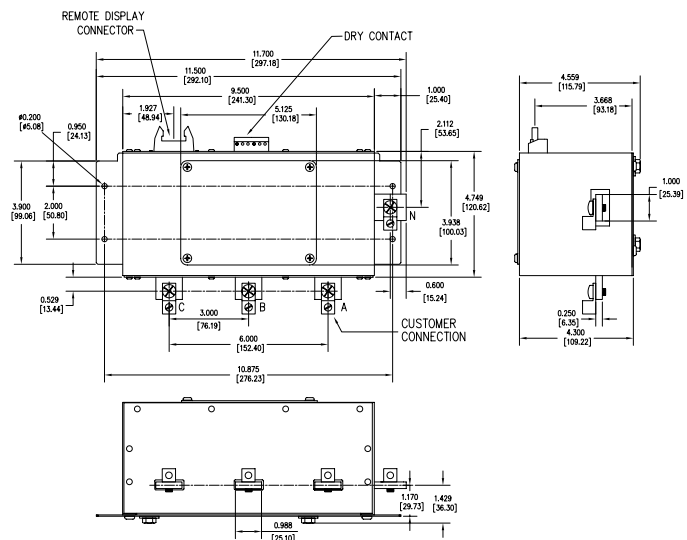


Figure 1
SPLIT
2 Phases, 1 Neutral,
1 Ground

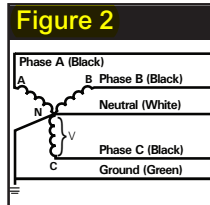


Figure 2
WYE
3 Phases, 1 Neutral,
1 Ground

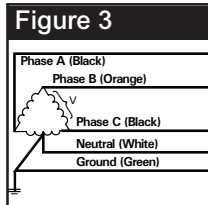


Figure 3
HIGH LEG DELTA
(B High) 3 Phases,
(B High), 1 Neutral,
1 Ground

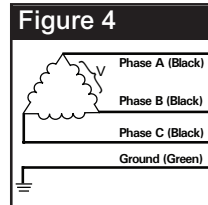


Figure 4
DELTA & HRG WYE
3 Phases, 1 Ground

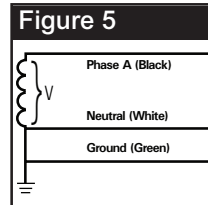


Figure 5
SINGLE POLE
1 Phase, 1 Neutral,
1 Ground

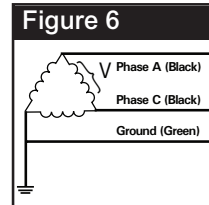


Figure 6
CORNER GROUND
DELTA (B grounded)
2 Phases, 1 Ground

Performance Data

Common Power Systems		UL 1449 Fourth Edition Test Data						
		Voltage Protection Ratings (VPR - 3kA)				I _n	SCCR	MCOV
		L-N	L-G	N-G	L-L			
120S = 240/120V Split Phase		800	700	700	1200	20kA	100kA	150
120Y = 208Y/120V 3Ø Wye		800	700	700	1200	20kA	200kA	150
240H = 240Y/120V B High Leg Delta		700/1200	700/1200	700	1800/1800	20kA	200kA	150 / 320
277Y = 480Y/277V 3Ø Wye		1200	1200	1200	2000	20kA	200kA	320
480D = 480V 3Ø Delta		-	1800	-	1800	20kA	200kA	552
347Y = 600Y/347V 3Ø Wye		1500	1500	1500	2500	20kA	200kA	420

*VPRs with disconnect switch option could vary. Contact the factory for details.