

→ Cross Reference RA Part Number: **PN-F001651**

→ Mfr Part Number: **450480DP20ACCN20**

400 SERIES
Model 450 (TEXRS Series)
Data Sheet

ASCO Power Technologies™



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 SCCRs (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

480D

Voltage Codes

P

Per Phase kA Rating System

200

kA Rating Per Phase

A

Modes of Protection

C

Connection Type

C

Monitoring Options

N

Enclosure (Default)

2

UL 1449 Type1/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, (Fig2)
- 480D = 480V Delta - 3Ø 3W + ground, (Fig4) & 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)

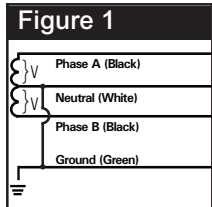
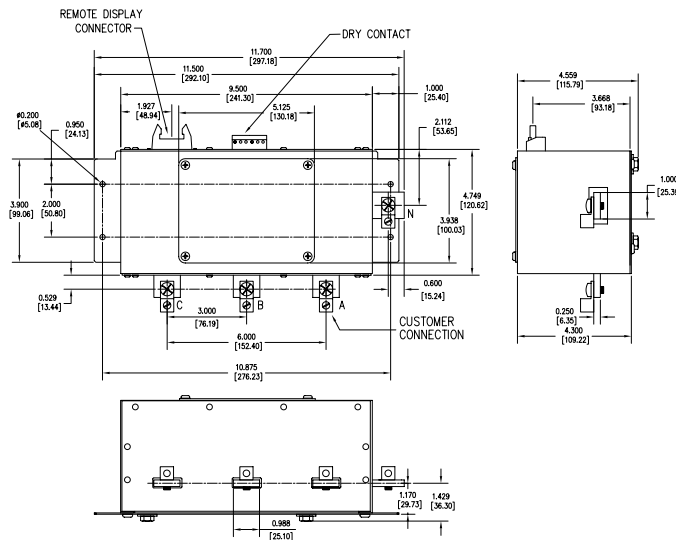


Figure 1
SPLIT
2 Phases, 1 Neutral,
1 Ground

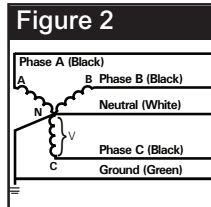


Figure 2
WYE
3 Phases, 1 Neutral,
1 Ground

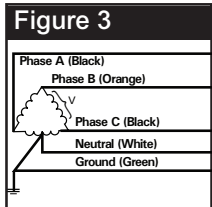


Figure 3
HIGH LEG DELTA
(B High) 3 Phases,
(B High), 1 Neutral,
1 Ground

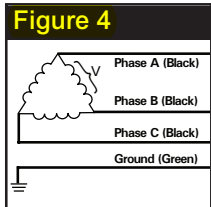


Figure 4
DELTA & HRG WYE
3 Phases, 1 Ground

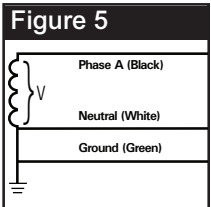


Figure 5
SINGLE POLE
1 Phase, 1 Neutral,
1 Ground

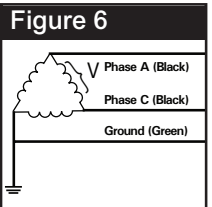


Figure 6
CORNER GROUND
DELTA (B grounded)
2 Phases, 1 Ground

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.