ASCO Power Technologies™

400 SERIES
Model 485 (teXBL Series)
Data Sheet

Benefits:
- Directly Connected, Discrete Protection Elements Between All Possible Modes
- UL 1449 Fourth Edition Listed
- 600 & 900kA 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
- Rotary Disconnect Switch included as Standard Equipment
- Dual Redundant Replaceable Modules
- All MOV suppression elements monitored
- All Modes of Protection
- 10 Year Warranty (longer optional)

Performance Specifications

Directly Connected, Discrete Protection Elements Between All Possible Modes with True 10-Mode Protection

Surge Capacities	L-N	L-G	N-G	L-L
600kA Per Phase	200kA	200kA	200kA	200kA
900kA Per Phase	300kA	300kA	300kA	300kA

UL 1449 Fourth Edition Listed Type 1, CSA 22.2 No. 269.1

Optional UL 1449 Fourth Edition Type 2 SPD, CSA 22.2 No. 269.2

UL 1449 Fourth Edition tested Inominal (I_n): 20kA

UL 1449 Fourth Edition tested SCCR: 100kA

UL 1449 Fourth Edition Voltage Protection Ratings (VPRs):
- 208Y/120V: as low as 700V
- 480Y/277V: as low as 1200V

AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz (Type 2 option only, incl. UL 1283 Listing)

Repetitive Impulse: 5,000 hits

Less than 1 nanosecond response time

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: 52 lbs (23.6 kg)

Standard NEMA 1/12/3R/4 enclosure

Standard size: 20" x 20" x 7.5" (50.8cm x 50.8cm x 19cm)

Lug size: #6 - #1/0 AWG

Typical connection: #6 AWG and 60A breaker

Quality, Standards & Validation

Type 1: UL 1449 Fourth Edition, CSA 22.2 No. 269.1

Type 2 (Opt.): UL 1449 Fourth Edition, CSA No. 269.2, UL 1283

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

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
- UL 96A and NFPA 780 Lightning Protection
- IEC 61643, CE

High Energy Parallel Design for Category C-High applications

For external Mounting on Electrical Distribution Equipment, Switchgear, Switchboards, Motor Control Centers, Panelboards, Transfer Switches, etc.

Individually Fused & Thermally Protected MOVs

Large-Block, 34mm square, 50kA MOVs

Dual Redundant Replaceable Module Construction

Solid State Bidirectional Operation

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 & 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

Model 485 Number Configurator & Options

485 □□□□ **P** □□ **A** □ □ □ □ □

- **485** — Model 485 Product Line
- □□□□ — Voltage Codes
- **P** — Per Phase kA Rating System
- □□ — kA Rating Per Phase
- **A** — Modes of Protection (Default)
- □ — Connection Type
- □ — Monitoring Options
- □ — Enclosure
- □ — UL 1449 Type1/Type 2
- □ — 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)

Other Available Systems - Confirmation Encouraged

220Y = 380Y/220V Wye - 3Ø 4W+Grnd (Fig 2)
230Y = 400Y/230V Wye - 3Ø 4W+Grnd (Fig 2)
240Y = 415Y/240V Wye - 3Ø 4W+Grnd (Fig 2)
254Y = 440Y/250V Wye - 3Ø 4W+Grnd (Fig 2)
300Y = 520Y/300V Wye - 3Ø 4W+Grnd (Fig 2)

60 = 600kA
90 = 900kA

R = Internal Rotary Disconnect Switch (ABB)
T = Through-Door Rotary Disconnect Switch (ABB)

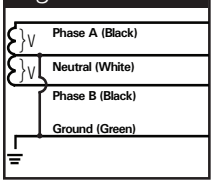
A = LEDs/Audible Alarm/Relay
C = LEDs/Audible Alarm/Relay/Surge Counter

E = NEMA 1/12/3R/4 (Standard) (Metal)
Size - 20" x 20" x 7.5"
J = NEMA 4X Non-Metallic (Fiberglass, display inside door)
Size - 24" x 24"x 8"
H = NEMA 4X Stainless Steel (Display Inside Door)
Size - 20" x 20"x 7"
M = NEMA 1 Flushmount (Metal) Wall Cavity Size - 20" x 20"x 6"
T = Pullbox NEMA 1 (Metal) Size - 20" x 20" x 6"
(Dimensions include standard rotary disconnect switch. Optional Thru-Door handle does not increase enclosure sizes.)

1 = UL 1449 Type 1
2 = UL 1449 Type 2, (Includes UL1283 Filter)

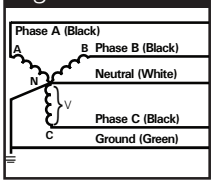
0 = No Trailing Accessory/Option
X = Yes Trailing Accessory/Option

Figure 1



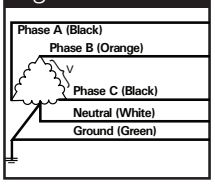
SPLIT
2 Phases, 1 Neutral, 1 Ground

Figure 2



WYE
3 Phases, 1 Neutral, 1 Ground

Figure 3



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

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	700	700	700	1000	20kA	100kA	150
120Y	=	208Y/120V 3Ø Wye	700	700	700	1000	20kA	200kA	150
240H	=	240Y/120V B High Leg Delta	800/1500	700/1200	700	1800	20kA	200kA	150 / 320
277Y	=	480Y/277V 3Ø Wye	1200	1200	1200	1800	20kA	200kA	320
Other Available Systems - Confirmation encouraged:									
240Y	=	415Y/240V 3Ø Wye	1200	1200	1200	1800	20kA	200kA	320
230Y	=	400Y/230V 3Ø Wye	1200	1200	1200	1800	20kA	200kA	320
250Y	=	440Y/250V 3Ø Wye	1200	1200	1200	1800	20kA	200kA	320
220Y	=	380Y/220V 3Ø Wye	1200	1200	1200	1800	20kA	200kA	320

ASCO Power Technologies
14550 58th St. North, Clearwater, FL 33760

surge.ascopower.com
customercare@ascopower.com • 1-800-237-4567