PQ PROTECTION
SURGE PROTECTION DEVICES
PQC160 & PQCF160 SERIES

PQCF160

PQC160 and PQCF160 series are high-performance, robust, surge protective devices (SPDs) with advanced features, protecting your facilities' electrical equipment from damaging electrical power surges due to lightning, utility power generation/distribution systems, and inductive load switching equipment within your facility. Intended for service entrances, distribution panels, MCCs, branch panels, lighting panels, and large equipment applications (e.g., HVAC).

The PQC160 and PQCF160 are automatic in operation, resetting after activation to provide continuous protection of electrical equipment. The PQC160 and PQCF160 series feature pre-wired remote monitoring contacts.

The PQC160 standard series is UL Type 1 listed (automatically suitable for UL Type 2) and can be installed before or after the service equipment overcurrent device, with or without a dedicated circuit breaker for the SPD.

The PQCF160 with EMI Filter option is UL Type 2 listed and can be installed after the service equipment overcurrent device. The PQCF160 EMI Filter series protects your facility equipment from internally generated transients such as oscillatory ring waveforms – typically due to switch-mode power supplies within most modern electronic equipment. The PQCF160's Ground Reference feature indicates if the potential between neutral and ground exceeds ~20 V.

ISO 9001:2014 Quality Management System, **ISO 17025:2007** Laboratory Certification (**UL® DAP**), and 100% Quality Tested prior to shipping.

PQC160

PRODUCT SPECIFICATIONS	
Status Indication	Individual LED indicators per Phase / Line / Protection Mode Audible Alarm **PQCF160** has additional Alarm LED and Ground Reference Indication
Certifications	Standard Models **UL® 1449 Edition 5** Type 1 / Type 2 EMI Filter Models **UL® 1449 Edition 5** Type 2, **UL® 1283**
Complies With	**NEC® Article 242** (**Article 285** - prior to 2020) **UL® 96A Edition 14** Installation Requirements for Lightning Protection Systems **ANSI®/IEEE® C62.41.1-2002** Category A, B, and C; **C62.41.2-2002**; and **C62.45-2002** **MIL-STD-220A** – EMI Filter Models
Short Circuit Current Rating (SCCR)	200 kA
Maximum Discharge Current (I_{max})	160 kA per phase / 80 kA per mode - 8/20 µs
Nominal Discharge Current (I_n)	20 kA
Frequency	50 Hz, 60 Hz, 400 Hz
Filtering (EMI Filter Models)	–36 dB @ 100 kHz
Operating Temperature	–40° to 185°F (-40 to 85°C), Note [1]: –35° to 185°F (-31 to 85°C)
Mounting	¾" nipple mount, optional Flush Mount kit
Enclosure Rating	**NEMA®** Type 4X, **UL® 50E** Type 4, suitable for indoor or outdoor installation
Enclosure Material	Polycarbonate
Dimensions	**PQC160** 3.25 H x 3.25 W (w/o nipple) x 2.8 D in., 2 lb **PQCF160** 6.25 H (w/o nipple) x 2.75 W x 3.1 D in., 2 lb
Connection Method	Parallel, pre-terminated 12 AWG stranded, ~18" length
Recommended Circuit Breaker	20A or 30A, multi-pole as required
Remote Monitoring - Contacts	Form C, 2 A @ 240 V, 22 AWG stranded, ~18" length, IoT, BMS, and SCADA compatible
Warranty	Ten (10) Years

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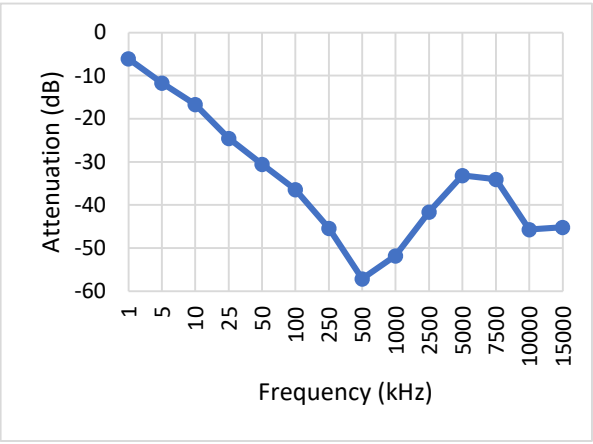
STANDARD MODELS | **PQC160**		MCOV	VPR			
Model Number	**Configuration**	**(V)**	**L-G (V)**	**L-N (V)**	**N-G (V)**	**L-L (V)**
PQC160-120/208V-3Y[1]	120/208V, 3-phase Wye, 4W+G	150/300	700	600	500	1000
PQC160-277/480V-3Y[1]	277/480V, 3-phase Wye, 4W+G	350/700	1000	1200	1000	2000
PQC160-347/600V-3Y	347/600V, 3-phase Wye, 4W+G	440/880	1500	1500	1500	2500
PQC160-240V-3D[1]	240V, 3-phase Delta, 3W+G	275	1000	–	–	1200
PQC160-480V-3D[1]	480V, 3-phase Delta, 3W+G	550	1800	–	–	1800
PQC160-120/240V-HLD	120/240V, High-leg Delta, 4W+G	180/275	700/1000	700/900	700	1200/1500
PQC160-120/240V-SP[1]	120/240V, Split-phase, 3W+G	180/360	700	700	600	1200
PQC160-120V-1P[1]	120V, Single-phase, 2W+G	180	700	700	600	–
PQC160-240V-1P[1]	240V, Single-phase, 2W+G	350	1000	1200	1000	–
Note [1]: −35° to 185°F (-31 to 85°C)						

EMI FILTER MODELS | **PQCF160**		MCOV	VPR			
Model Number	**Configuration**	**(V)**	**L-G (V)**	**L-N (V)**	**N-G (V)**	**L-L (V)**
PQCF160-120/208V-3Y	120/208V, 3-phase Wye, 4W+G	150/300	700	700	600	1200
PQCF160-277/480V-3Y	277/480V, 3-phase Wye, 4W+G	350/700	1200	1200	1200	2500
PQCF160-347/600V-3Y	347/600V, 3-phase Wye, 4W+G	440/880	1500	1500	1500	3000
PQCF160-240V-3D	240V, 3-phase Delta, 3W+G	275	1000	–	–	1200
PQCF160-480V-3D	480V, 3-phase Delta, 3W+G	550	1800	–	–	1800
PQCF160-120/240V-HLD	120/240V, High-leg Delta, 4W+G	180/275	700/1000	800/1000	700	1500/1500
PQCF160-120/240V-SP	120/240V, Split-phase, 3W+G	180/360	700	700	700	1200
PQCF160-120V-1P	120V, Single-phase, 2W+G	180	700	700	700	–
PQCF160-240V-1P	240V, Single-phase, 2W+G	350	1200	1200	1200	–

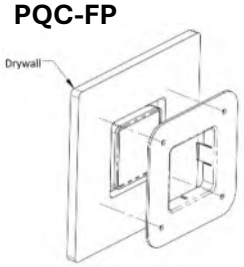
The EMI Filter option mitigates oscillatory ring waveforms – generally caused by non-linear loads inside the facility.

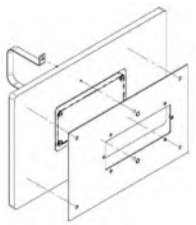
Typical oscillatory ring waveform sources include “transformer-less” switching power supplies for computers, IT equipment (network, monitors, printers), TVs, electronic ballasts for lighting, UPS, Inverter, `Rectifier systems and Variable Frequency (speed) Drives.



Flush Mount Kit Options

PQC-FP

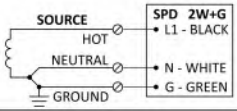




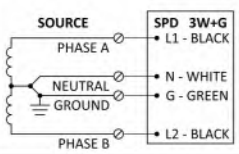
PQCF-FP

CONFIGURATIONS (Conceptual - refer to IOM for installation instructions)

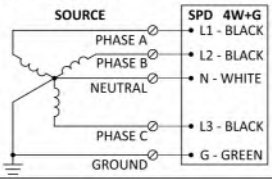
SINGLE PHASE (1P)



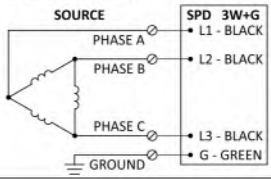
SPLIT PHASE (SP)



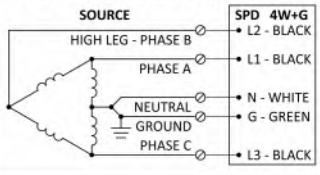
WYE (3Y)



DELTA (3D)



HIGH-LEG DELTA (HLD)



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