

4-Pin Protector Modules

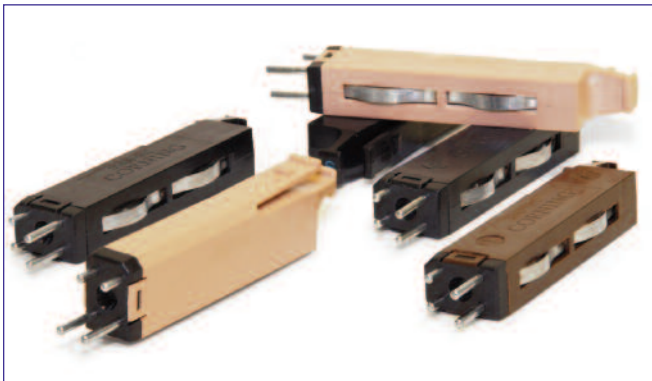
An Evolant®
Solutions Product

features and benefits |

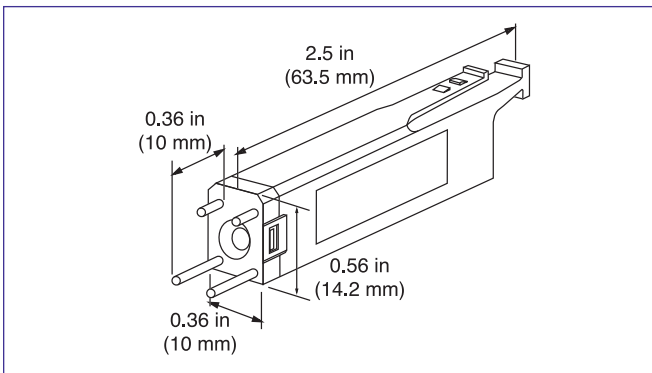
Available with solid state or gas tube over voltage protection technology	Select the protection technology to meet specific requirements
Optional heat coil or self-resetting PTC sneak current protection	Prevents costly damage to line equipment cards
Fail safe design	Protects people and equipment from surges
Polarized module with latching mechanism	Prevents incorrect and accidental insertion and removal

standards |

C-UL US listed



4-Pin Protector Module | Photo COP239



4-Pin Protector Module | Drawing ZA-2022

The Corning Cable Systems 4-Pin Protector Modules are designed for use with the MPC Central Office Connector Block (QCM486-series) and QTPET Protected Entrance Terminals. These modules are available with solid state or gas tube over voltage protection.

The 4-pin modules are designed to short to ground (also known as a “fail safe event”) when an electrical surge exceeds the capability of the SSOVP device or gas tube. This feature provides protection for personnel and equipment until the surge condition has cleared. Protector modules that “fail safe” must be replaced after the fault has been corrected.

The 4-pin modules are also available with an option for heat coil or Positive Temperature Coefficient (PTC) sneak current protection. This feature protects digital equipment line cards against overheating caused by prolonged currents – referred to as sneak currents. Sneak currents are caused by induction on telephone lines caused by fault currents, overloads or unbalanced loads on nearby power lines. They may also be caused by direct contact with low-voltage power lines. The PTC is self-resetting; the heat coil operates by permanently shorting to ground and must be replaced after the fault is cleared.

All 4-pin modules are equipped with a latching mechanism that will retain the modules when installed in the detent position or when fully inserted. In the detent position, the equipment side of the circuit is disconnected from the outside plant pair. The latch must be depressed to move the modules, thus ensuring that protector modules will not fall out (leaving the outside plant pair unprotected) or become accidentally inserted. In addition, the modules are designed so they can only be inserted in the correct orientation.

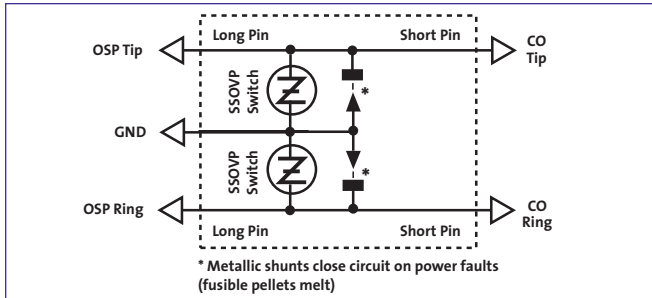
4-Pin Protector Modules

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4-Pin Solid State Protector Modules

QMP11A5

A solid state overvoltage protector (SSOVP) module to provide voltage protection to wiring and equipment. The module case is brown with a white “S” printed on the handle for visual identification.

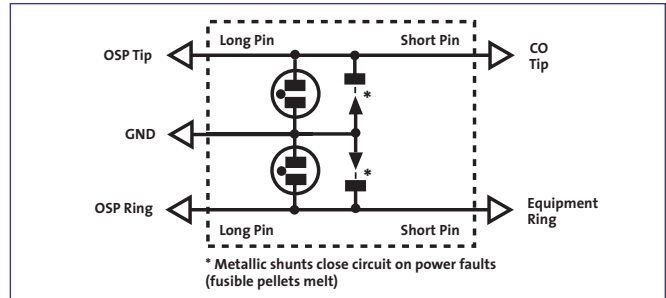


QMP11-Type Protector Module | Drawing ZA-959

4-Pin Gas Tube Protector Modules

QMP6A5

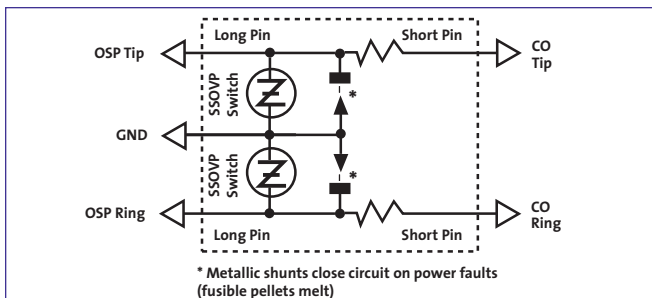
A gas tube overvoltage protector module to provide voltage protection to wiring and equipment. The module case is beige with no marking on the handle.



QMP6A5-Type Protector Module | Drawing ZA-2634

QMP12A4P (PTC)

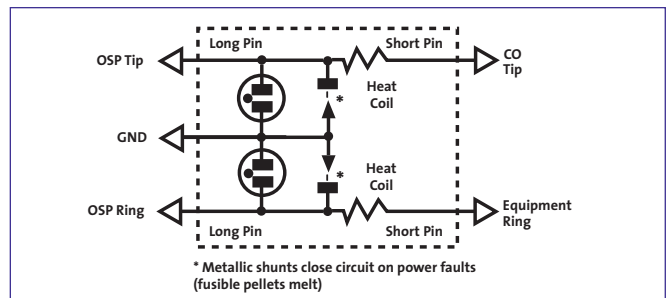
An SSOVP module with a self-resetting Positive Temperature Coefficient (PTC) to provide voltage and sneak current protection to wiring and equipment. The module case is black with a blue “S” printed on the handle for visual identification.



QMP12-Type Protector Module | Drawing ZA-960

QMP6A4 (Heat Coil)

A gas tube overvoltage protector module with heat coil to provide voltage and sneak current protection to wiring and equipment. The module case is beige with a black stripe on the handle for visual identification.



QMP6A4-Type Protector Module | Drawing ZA-2634

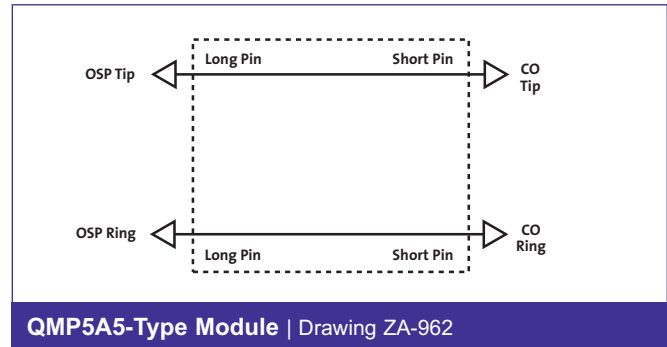
4-Pin Protector Modules

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4-Pin Unprotected Module

QMP5A5

A module to provide a direct feed/disconnect option between an outside plant and equipment pair. The module case is gray with no marking on the handle.



QMP5A5-Type Module | Drawing ZA-962

specifications |

	Solid State Module	Gas Tube Module
DC Limiting Voltage	345 V max at 2000 V/sec	300 – 475 V at 2000 V/sec
Impulse Breakdown (V_{imp})	390 V max at 100 V/ μ sec 400 V max at 1000 V/ μ sec	540 V max at 100 V/ μ sec 630 V max at 1000 V/ μ sec
Insulation Resistance (IR) 50 to 200 VDC	100 Mohms min	1,000 Mohms min
DC Holdover/Impulse Reset (-20° C to +65° C)		
± 52.5 VDC and 260 mA	20 msec max	20 msec max
± 135 VDC and 200 mA	20 msec max	20 msec max
Impulse Life (-20°C to +65°C)		
Insulation Resistance	100 Mohms min at 50 VDC	1,000 Mohms at 50 VDC
Limiting Voltage during Surge	< 400 V	< 1,000 V
Impulse Reset/DC Holdover	< 30 ms	< 30 ms
± 10 A, 10/1000 μ sec	Unlimited	1500 surges
± 100 A, 10/1000 μ sec	Unlimited	100 surges
± 300 A, 10/1000 μ sec	Fail-safe	50 surges
± 2,000 A, 10/250 μ sec	Fail-safe	5 surges
AC Life, 60 Hz		
10 A_{rms} for 1 sec	5 surges, no fail	5 surges, no fail
1 A_{rms} for 1 sec	60 surges, no fail	60 surges, no fail
0.5 A_{rms} for 30 sec	1 surge, no fail	1 surge, no fail
End-of-Life		
100 V/μs; Breakdown < 1000 V		
± 10 A, 10/1000 μ sec	3000 Surges	3000 Surges
± 100 A, 10/1000 μ sec	300 Surges	300 Surges
± 300 A, 10/1000 μ sec	100 Surges	100 Surges
± 10,000 A, 8/20 μ sec	Fail-safe	1 Surge

Note: All values at 20°C except where noted. Nominal voltages provided, except where noted.

4-Pin Protector Modules

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specifications | (continued)

	Solid State Module	Gas Tube Module
Capacitance	75 pF max	7 pF max
Sneak Current Protection:	PTC, 9.5 Ohm	Heat Coil, 4 Ohm
Non-Operate	3 hr min @ 150 mA	3 hr min @ 350 mA
Operate	210 sec max @ 355 mA	210 sec max @ 540 mA
Resistance	9.5 Ohms max	4 Ohms max
Resistance Imbalance	0.5 Ohms max	0.5 Ohms max
Safety		
4 A_{rms}, 15 min	Fail-safe	Fail-safe
10 A_{rms}, 15 min	Fail-safe	Fail-safe
30 A_{rms}, 15 min	Fail-safe	Fail-safe
60 A_{rms}, 3 sec	Fail-safe	Fail-safe
120 A_{rms}, 0.6 sec	Fail-safe	Does not cause a fire hazard
350 A_{rms}, 0.4 sec	Fail-safe	Does not cause a fire hazard
Storage Temperature	-40° to +65°C	

Note: All values at 20°C except where noted. Nominal voltages provided, except where noted.

Shipping Package

	Dimensions (H x W x D) cm (in)	Weight kg (lb)
	10 x 11 x 28 (3.75 x 4.5 x 11)	1.6 (3.5) 1.1 (2.5) (QMP5A5 only)
Standard Package	100	

ordering information |

Product Code	Reference Number	Ordering Number	Description	Module Color	Handle Marking
QMP11A5	A0335424	400347	Solid State, 300V	Brown	White "S"
QMP12A4P	QMP12A4P	400350	Solid State, 300V, PTC	Black	Blue "S"
QMP6A5	A0260462	400354	Gas Tube, 400V	Beige	None
QMP6A4	A0264184	400353	Gas Tube, 400V, Heat Coil	Beige	Black Stripe
QMP5A5	A0260461	400352	Unprotected	Gray	None

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