PD DEVICES LTD
POWER DEVELOPMENT

SSI Power Supply Lightning Protection

Approvals

Network Rail Certificate of Acceptance PA05/0602 Issue 1

EN 60950

BS 5733

BS6651:1999 Annex C

Features

Protection of equipment connected to AC power supplies against the damaging effects of lightning strikes or voltage surges

Fitment to nominal 110V, 140V and 650V SSI AC power supplies in the line side equipment housings

MOV and SAD component technology

Compact design

Resilient design with long service life

Simple installation

Benefits

Protection for signals, points, level crossings etc at each, and in between, every station

Service life of protected equipment extended

Reduces failure rate of TFMs during lightning storms, improves system performance

Cost of surge protection devices far outweighs safety issues, downtime and equipment replacement

RTM Series

RTM surge protection devices provide protection of equipment connected to AC power supplies against the damaging effects of lightning strikes or voltage surges. The RTM series offers single phase devices with MOV or SAD component technology, which helps reduce the failure rate of TFMs during lightning storms, and therefore can improve SSI performance and prolong the service life of protected equipment. They are employed on the incoming power supplies or tail cables providing protection to the 110V, 140V and 650V power supplies in the SSI equipment cases and rooms. These highly innovative protection devices provide the ideal protection solution for signals, points, level crossings etc at each, and in between, every station.

Component Technology

The RTM series of surge protection devices provides protection of critical assets through carefully matched high energy absorbing elements.

SAD Surge Protection Modules

Silicon avalanche diode (SAD) models conduct maximum current without any increase in clamping voltage. They offer extremely low clamping of <500 volts and an exceptionally fast response time of less than <5 nanoseconds. The robust nature of this component technology offers long product life expectancy, ideally suited for mission critical applications.

MOV Surge Protection Modules

Metal oxide varistor (MOV) models provide excellent clamping of transients within <10 nanoseconds and are ideally suited for high/medium/low risk applications, as detailed in EN 61643-11:2002.

Specification

	RTM 12/110	RTM 12/140	RTM 150/650
Voltage Rating:	110V rms	140V rms	650V rms
Operating Voltage Range:	121V rms Max.	154V rms Max.	650-800V rms
Maximum Current Rating:	Unlimited (Parallel Connection)		
Maximum Surge Current Handling (8/20µs):	12kA		75kA
Response Time:	<5 ns		< 10 ns
Power Consumption:	Negligible		
No system impairments auto reset after surge has occurred:	✓		
Terminals:	35mm² max. 2.5mm² - Remote Signalling		
Operating Temperature:	-40° to +70°C		
Light Emitting Diodes:	Green – Full Protection. No Green– No Protection		
Case Material:	Light Grey FR ABS		
Compliant With:	BS6651:1999 Annex C Location Category C		
Dimensions:	100mm Long x 35mm Wide x 78mm Deep		
Weight:	160g		

LET THROUGH VOLTAGE	RTM 12/110	RTM 12/140	RTM 150/650
6kA 8/20µs	260V	370V	<1.9kV

MODEL	NETWORK RAIL CODE	PD DEVICES CODE
75kA Single Phase 650V MOV Module	PADS No: 086/047165	RTM150/650
12kA Single Phase 140V SAD Module	PADS No: 086/047166	RTM12/140
12kA Single Phase 110V SAD Module	PADS No: 086/047167	RTM12/110

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