

Lightning Surge Protectors for Electronics Equipment *M-RESTER*

LIGHTNING SURGE PROTECTOR FOR POTENTIOMETER (ultra-slim)

MODEL **MD7PM**

MODEL & SUFFIX CODE SELECTION

MODEL _____ MD7PM-□□

SHIELD TERMINAL (line / earth) _____

FF : Floating / Floating (standard)
 FG : Floating / Grounding
 GF : Grounding / Floating
 GG : Grounding / Grounding

SAFETY APPROVAL _____

0 : None
 1 : FM intrinsically safe (future plan)
 2 : CENELEC intrinsically safe (ATEX) (future plan)

ORDERING INFORMATION

Specify code number. (e.g. MD7PM-FF0)

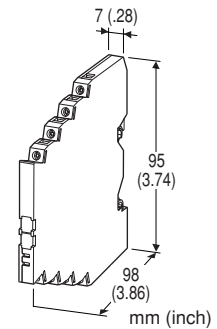
GENERAL SPECIFICATIONS

Ingress protection: IP 20
 Connection: Euro terminal block (torque 0.3 N·m)
 Applicable wire size: 0.2 – 2.5 mm²
 Housing material: Flame-resistant resin (black)
 Grounding: DIN Rail

INSTALLATION

Operating temperature: -25 to +85°C (-13 to +185°F)
 Operating humidity: 30 to 90% RH (non-condensing)
 Mounting: DIN Rail (TH35-7.5, 1-mm-thick)
 Oxide coating of an aluminum rail may lower the electric conductivity between this module and the ground. Use a steel or copper rail.

Dimensions: W7×H98×D95 mm (0.28"×3.86"×3.74")
 Weight: 70 g (2.5 oz)



Functions & Features

- High discharge current capacity 20 kA (8 / 20 μs), 1 kA (10 / 350 μs)
- Ultra-thin 7-mm-wide module can be mounted in high density
- Excellent protection employing multi-stage SPD circuits
- DIN rail mounting and grounding
- Shield terminal provided

STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)
 EMI EN61000-6-4
 EMS EN61000-6-2

Surge protection: IEC 61643-21
 (Categories C1, C2, D1)

PERFORMANCE

MODEL NO.		MD7PM-FF	MD7PM-FG	MD7PM-GF	MD7PM-GG
Max. continuous operating voltage (Uc)	Line to Line	7.5V			
	Line to Earth	±160V			±7.5V
	Line to SHLD	±160V		±7.5V	
	SHLD to Earth	±160V	short	±160V	short
Voltage protection Level (Up) @4kV (1.2 / 50 μs)	Line to Line	25V max.			
	Line to Earth	±800V max.			±25V max.
	Line to SHLD	±1200V max.	±800V max.	±25V max.	
	SHLD to Earth	±800V max.	short	±800V max.	short
Leakage current @Uc	Line to Line	≤5μA			
	Other sections	≤5μA			
Response time	Line to Line	≤4 nsec.			
	Other sections	≤20 nsec.			
Max. discharge current (Imax)	20kA (8 / 20 μs), 1.0kA (10 / 350 μs)				
Nominal current (In)	100mA				
Internal series resistance	4.7Ω ±10% per line				

SCHEMATIC CIRCUITRY			
SHIELD TERMINAL	MODEL NO.	SCHEMATIC CIRCUITRY	APPLICATIONS
<ul style="list-style-type: none"> Line to SHLD: Floating Earth to SHLD: Floating 	• MD7PM-FFx		<ul style="list-style-type: none"> Standard type To protect a device having isolation between Signal and Earth. When SHLD should be floating against the earth. (single-end grounding)
<ul style="list-style-type: none"> Line to SHLD: Floating Earth to SHLD: Grounding 	• MD7PM-FGx		<ul style="list-style-type: none"> To protect a device having isolation between Signal and Earth. When SHLD should be grounded. (single- or both-end grounding)
<ul style="list-style-type: none"> Line to SHLD: Grounding Earth to SHLD: Floating 	• MD7PM-GFx		<ul style="list-style-type: none"> To protect a device having isolation between Signal and Earth. When SHLD wire should be connected to SG terminal of the protected device. (SHLD is not grounded to the earth.)
<ul style="list-style-type: none"> Line to SHLD: Grounding Earth to SHLD: Grounding 	• MD7PM-GGx		<ul style="list-style-type: none"> To protect a device which does not have a good dielectric strength between Signal and Earth.

Sections enclosed with broken line may differ depending upon the models.

Specifications subject to change without notice.

