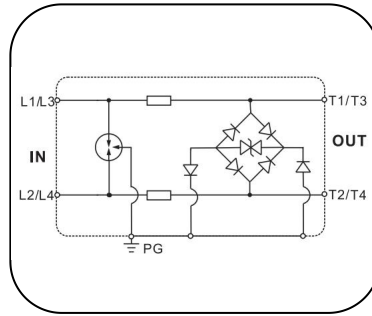
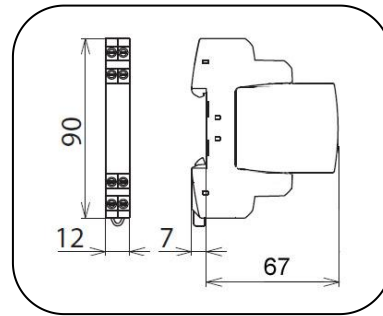


## Pluggable Dataline Protector

## DM-...-M4N1



Basic circuit diagram



Dimension drawing

**Safesurge DM-...-M4N1** dataline protectors provide surge protection for 2-pairs or 4 wires with common reference potential in the data, signal and communication systems, suitable for use directly at the upstream near the protected devices.

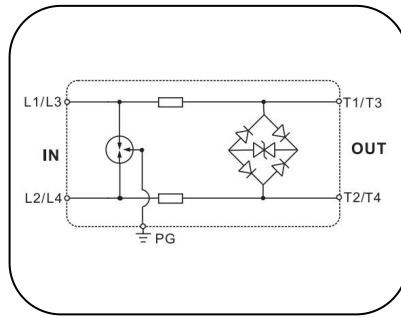
Technical Features

- Universal 4 wires dataline SPDs for measurement, control and regulation circuits, bus systems and twisted pairs.
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes.
- Signal transmission is not interrupted when exchanging module.
- Rated load current 1A.
- Pluggable surge protection for DIN Rail mounting, earth possible on DIN Rail.
- Suitable to use for Binary signals, TTY 4-20mA, TTY, TTL, Procontic C31 (RS232) and high-frequency transmission system etc.
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3.

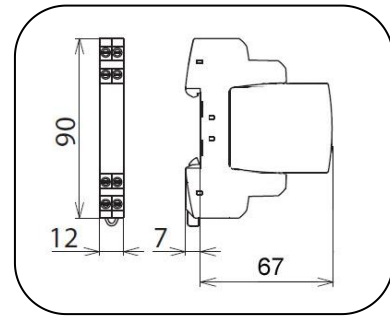
Type		DM-XX-M4N1			
		5	12	24	48
In accordance with		UL497b; IEC 61643-21:2012			
SPD category per IEC		D1/C1/C2/C3			
Nominal voltage (Vdc)	Un	5	12	24	48
Max. continuous operating voltage (Vdc/Vac)	Uc	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal discharge current(8/20μs) per line	In	10kA			
C2 Max. discharge Current (8/20μs) per line	I <sub>max</sub>	20kA			
D1 Lightning impulse current (10/350μs) per line	I <sub>imp</sub>	2.5kA			
Voltage protection level (V)	L-L@In,C2 (8/20μs) Up	≤30	≤45	≤55	≤100
	L-PG@In,C2(8/20μs) Up	≤30	≤45	≤55	≤100
	L-L@C3(1KV/μs) Up	≤24	≤38	≤48	≤75
	L-PG@C3(1KV/μs) Up	≤24	≤38	≤48	≤75
Nominal current (A)	I <sub>L</sub>	1 A			
Cut-off frequency (Hz)	f <sub>c</sub>	100 MHz			
Series impedance per line (Ohm)		0.68 Ohm			
Protected line		2 pairs or 4 wires			
Mounting		35mm DIN-rail in accordance with DIN EN 60715			
Type of Connection IN/OUT		screw/screw			
Dimensions (mm)		90 X 12 X 74			
Operating temperature range		- 40°C ~ + 85°C			
Housing Material		Thermoplastic, extinguishing degree,UL49 V-0			
Certification		CE			

## Pluggable Dataline Protector

## DM-...-M4N2



Basic circuit diagram



Dimension drawing

**Safesurge DM-...-M4N2** dataline protectors provide surge protection for 2-pair of balanced (symmetrical) interfaces or closed circuit (loops) in the data, signal or communication system, suitable for use directly at the upstream near the protected devices.

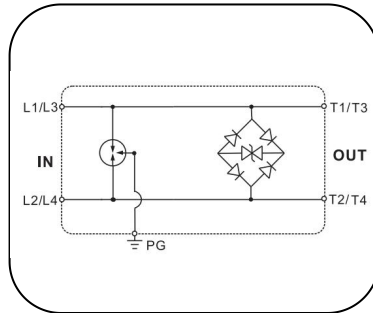
Technical Features

- Universal 4 wires dataline SPDs for measurement, control and regulation circuits, bus systems and twisted pairs. Widely used for differential signaling transmission system and one pair of balanced (symmetrical) interfaces, four wires are insulated from the ground potential for interference immunity.
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes.
- Signal transmission is not interrupted when exchanging module
- Rated load current 1A
- Pluggable surge protection for DIN Rail mounting, earth possible on DIN Rail.
- Suitable to use for 4-20 mA current loop, 0-10V analog signal, differential transmission bus system, video transmission system and analog/digital communication , etc.
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3.

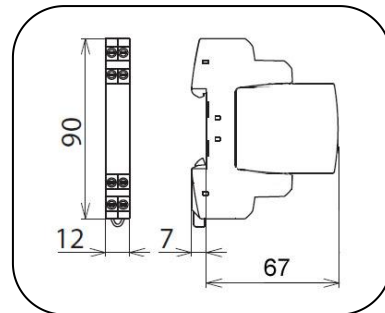
Type		DM-XX-M4N2			
		5	12	24	48
In accordance with		UL497b; IEC 61643-21:2012			
SPD category per IEC		D1/C1/C2/C3			
Nominal voltage (Vdc)	Un	5	12	24	48
Max. continuous operating voltage (Vdc/Vac)	Uc	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal discharge current(8/20μs) per line	In	10kA			
C2 Max. discharge Current (8/20μs) per line	I <sub>max</sub>	20kA			
D1 Lightning impulse current (10/350μs) per line	I <sub>imp</sub>	2.5kA			
Voltage protection level (V)	L-L@In,C2 (8/20μs) Up	≤30	≤45	≤55	≤100
	L-PG@In,C2(8/20μs) Up	≤500	≤500	≤500	≤500
	L-L@C3(1KV/μs) Up	≤24	≤38	≤48	≤75
	L-PG@C3(1KV/μs) Up	≤600	≤600	≤600	≤600
Nominal current (A)	I <sub>L</sub>	1 A			
Cut-off frequency (Hz)	f <sub>g</sub>	100 MHz			
Series impedance per line (Ohm)		0.68 Ohm			
Protected line		2 pair2 or 4 wires			
Mounting		35mm DIN-rail in accordance with DIN EN 60715			
Type of Connection IN/OUT		screw/screw			
Dimensions (mm)		90 X 12 X 74			
Operating temperature range		- 40°C ~ + 85°C			
Housing Material		Thermoplastic, extinguishing degree,UL49 V-0			
Certification		CE			

## Pluggable Dataline Protector

### DM-...-M4N6



Basic circuit diagram



Dimension drawing

**Safesurge DM-...-M2N6** dataline protectors provide surge protection for 2-pairs of balanced (symmetrical) interfaces or closed circuit (loops) in the data, signal or communication system, especially for resistance sensitive circuit, suitable for use directly at the upstream near the protected devices.

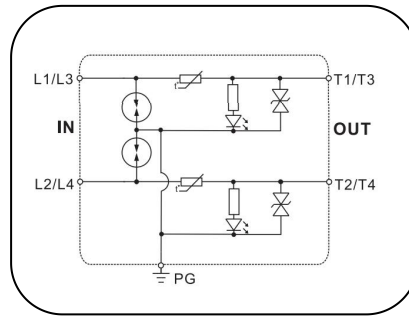
#### Technical Features

- Protector with no serial resistance (decoupling resistors), no effect on circuit protected.
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes.
- Signal transmission is not interrupted when exchanging module.
- Higher rated load current up to 2A.
- Pluggable surge protection for DIN Rail mounting, earth possible on DIN Rail.
- Suitable to use for resistance sensitive signal circuit or higher nominal currents circuit, e.g., for thermocouples (PT100 PT1000 devices) circuit and actuator circuits, also used for high frequency differential signaling transmission system.
- Comply with UL497, and IEC61643-21:2012, category D1/C1/C2/C3.

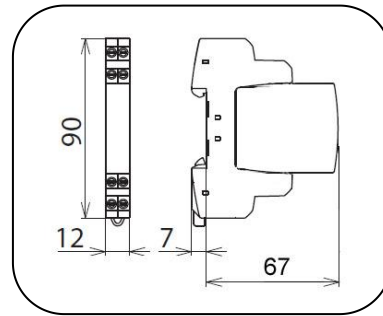
Type		DM-XX-M4N6			
		5	12	24	48
In accordance with		UL497b; IEC 61643-21:2012			
SPD category per IEC		D1/C1/C2/C3			
Nominal voltage (Vdc)	Un	5	12	24	48
Max. continuous operating voltage (Vdc/Vac)	Uc	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal discharge current(8/20μs) per line	In	L-L:300A, L-G:10kA			
C2 Max. discharge Current (8/20μs) per line	I <sub>max</sub>	L-L:500A, L-G:20kA			
D1 Lightning impulse current (10/350μs) per line	I <sub>imp</sub>	2.5kA			
Voltage protection level (V)	L-L@In,C2 (8/20μs) Up	≤30	≤45	≤55	≤100
	L-PG@In,C2(8/20μs) Up	≤500	≤500	≤500	≤500
	L-L@C3(1kV/μs) Up	≤24	≤38	≤48	≤75
	L-PG@C3(1kV/μs) Up	≤600	≤600	≤600	≤600
Nominal current (A)	I <sub>L</sub>	2 A			
Cut-off frequency (Hz)	f <sub>G</sub>	100 MHz			
Series impedance per line (Ohm)		0 Ohm			
Protected line		2 pair or 4 wires			
Mounting		35mm DIN-rail in accordance with DIN EN 60715			
Type of Connection IN/OUT		screw/screw			
Dimensions (mm)		90 X 12 X 74			
Operating temperature range		- 40°C ~ + 85°C			
Housing Material		Thermoplastic, extinguishing degree,UL49 V-0			
Certification		CE			

## Pluggable Dataline Protector

## DM-...-M4N7



Basic circuit diagram



Dimension drawing

**Safesurge DM-...-M4N7** dataline protectors provide surge protection for 2-pairs or 4 wires with common reference potential in the the low-bandwidth or low-datarate data, signal and communication systems, suitable for use directly at the upstream near the protected devices.

Technical Features

- 4 wires dataline SPDs for low-bandwidth or low-datarate measurement, control and regulation circuits, bus systems and twisted pairs.
- Comprising a PTC for over-current fault and short-circuit fault protection, LED failure indication to replace timely.
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes.
- Signal transmission is not interrupted when exchanging module.
- Rated load current 1A.
- Pluggable surge protection for DIN Rail mounting, earth possible on DIN Rail.
- Suitable to use for switching value signal, digital I/O, actuator, low-datarate bus system etc .
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3.

Type		DM-XX-M4N7			
		5	12	24	48
In accordance with		UL497b; IEC 61643-21:2012			
SPD category per IEC		D1/C1/C2/C3			
Nominal voltage (Vdc)	Un	5	12	24	48
Max. continuous operating voltage (Vdc/Vac)	Uc	6/4.2	15/10.6	33/23.3	54/38.1
C2 Nominal discharge current(8/20μs) per line	In	L-L:300A, L-G:10kA			
C2 Max. discharge Current (8/20μs) per line	I <sub>max</sub>	L-L:500A, L-G:20kA			
D1 Lightning impulse current (10/350μs) per line	I <sub>imp</sub>	2.5kA			
Voltage protection level (V)	L-L@In,C2 (8/20μs) Up	≤30	≤45	≤55	≤100
	L-PG@In,C2(8/20μs) Up	≤500	≤500	≤500	≤500
	L-L@C3(1KV/μs) Up	≤24	≤38	≤48	≤75
	L-PG@C3(1KV/μs) Up	≤600	≤600	≤600	≤600
Nominal current (A)	I <sub>L</sub>	1 A			
Cut-off frequency (Hz)	f <sub>G</sub>	1 MHz			
Series impedance per line (Ohm)		PTC			
Protected line		2 pair or 4 wires			
Mounting		35mm DIN-rail in accordance with DIN EN 60715			
Type of Connection IN/OUT		screw/screw			
Dimensions (mm)		90 X 12 X 74			
Operating temperature range		- 40°C ~ + 85°C			
Housing Material		Thermoplastic, extinguishing degree,UL49 V-0			
Certification		CE			