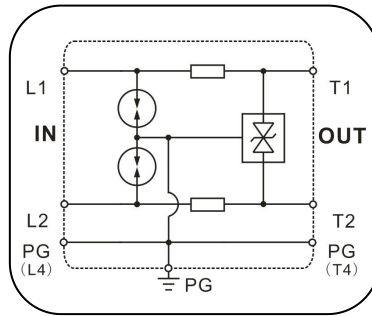
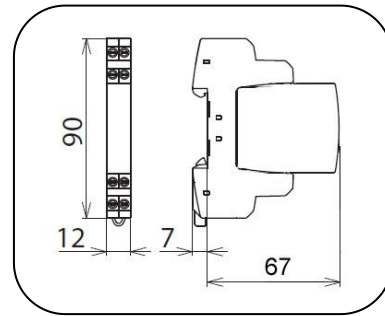


# Pluggable Dataline Protector

## DM-.../M2N1



Basic circuit diagram



Dimension drawing

**PROSURGE DM-.../M2N1** dataline protectors provide surge protection for two single lines with common reference potential in the data, signal and communication systems, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

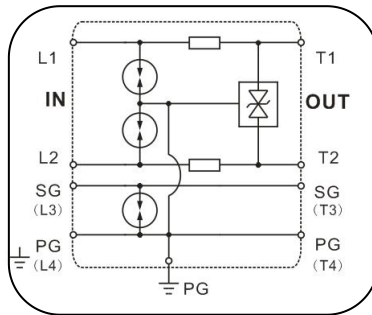
### Technical Features

- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Two-stage protection circuit, limit the transients with gas discharge tubes and transorb diodes
- Rate load current 1A
- Earth possible on DIN Rail
- Suitable to use for 0-20mA, 4-20mA current loop, TTY 4-20mA, TTY, TTL, V24 (RS232C) and high-frequency transmission system etc
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

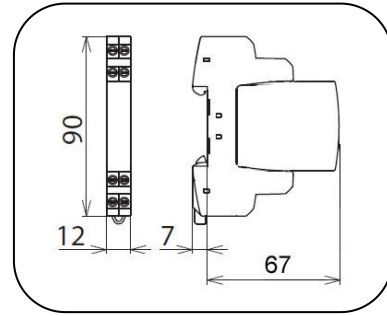
Type	DM-XX/M2N1					
	5	12	24	48	110	
In accordance with	UL497b; IEC 61643-21:2012					
Nominal voltage (Vdc)	Un	5	12	24	48	110
Max. continuous operating voltage (Vdc/Vac)	Uc	6/4.2	15/10.6	33/23.3	54/38.1	170/120
C2 Nominal discharge current(8/20µs) per line	In	10kA				
C2 Max. discharge Current (8/20µs) per line	Imax	20kA				
D1 Lightning impulse current (10/350µs) per line	Iimp	2.5kA				
Voltage protection level (V)	L-L@In,C2 (8/20µs)Up	≤30	≤45	≤55	≤100	≤300
	L-PG@In,C2 (8/20µs)Up	≤30	≤45	≤55	≤100	≤300
	L-L@C3 (1KV/µs)Up	≤24	≤38	≤48	≤75	≤250
	L-PG@C3 (1KV/µs)Up	≤24	≤38	≤48	≤75	≤250
Nominal Current (A)	IL	1 A				
Cut-off frequency (Hz)	fc	100 MHz				
Series impedance per line (Ohm)		0.68 Ohm				
Protection line		2 wires				
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3				
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				

# Pluggable Dataline Protector

## DM-.../M2N3



Basic circuit diagram



Dimension drawing

**PROSURGE DM-.../M2N3** dataline Protectors provide surge protection for two single lines with shielded and common reference potential in the data, signal and communication systems, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

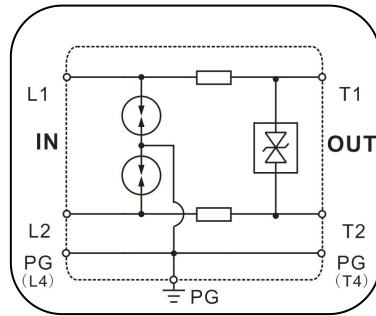
### Technical Features

- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes
- Rate load current 1A
- Earth possible on DIN Rail
- Suitable to use for 0-20mA, 4-20mA current loop, TTY 4-20mA, TTY, TTL, PLC,V24 (RS232C) and high-frequency transmission system etc
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

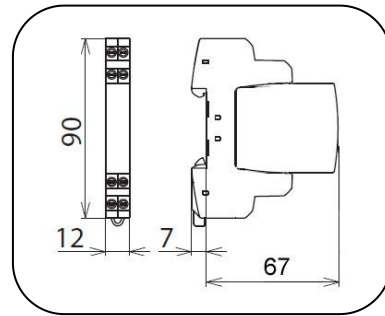
Type		DM-xxx/M2N3				
		6	12	24	48	110
In accordance with		UL497b, IEC61643-21:2012				
Nominal voltage (Vdc)	Un	6	12	24	48	110
Max. continuous operating voltage (Vdc/Vac)	Uc	8/6	15/12	28/24	54/38	170/120
C2 Nominal discharge current(8/20µs) per line	In	10kA				
C2 Max. discharge Current (8/20µs) per 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/L-PG@In,C2 (8/20µs)Up	≤30	≤45	≤55	≤100	≤300
	PG-SG@In,C2 (8/20µs)Up	≤500	≤500	≤500	≤500	≤300
	L-L/L-PG@C3 (1KV/µs)Up	≤24	≤38	≤48	≤75	≤250
	PG-SG@C3 (1KV/µs)Up	≤600	≤600	≤600	≤600	≤250
Nominal current (A)	IL	1 A				
Cut-off frequency (Hz)	fG	100 MHz				
Series impedance per line (Ohm)		0.68 Ohm				
Protection line		2 wires + Shield				
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3				
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				

## Pluggable Dataline Protector

### DM-.../M2N2



Basic circuit diagram



Dimension drawing

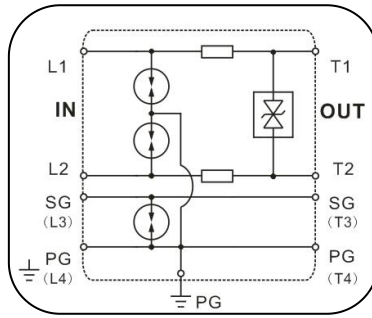
**PROSURGE DM-.../M2N2** dataline protectors provide surge protection for 1-pair balanced (symmetrical) lines in the data, signal or communication system, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

#### Technical Features

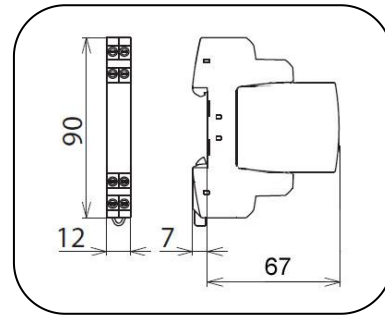
- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes
- Rate load current 1A
- Earth possible on DIN Rail
- Suitable to use for 4-20 mA current loop, analog/digital communication, RS485, RS422 (V11) interface, high-frequency bus system and two wires video transmission system, etc
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

Type		DM-XX/M2N2				
		5	12	24	48	110
In accordance with		UL497b; IEC 61643-21:2012				
Nominal voltage (Vdc)	Un	5	12	24	48	110
Max. continuous operating voltage (Vdc/Vac)	Uc	6/4.2	15/10.6	33/23.3	54/38.1	170/120
C2 Nominal discharge current(8/20µs) per line	In	10kA				
C2 Max. discharge Current (8/20µs) per line	Imax	20kA				
D1 Lightning impulse current (10/350µs) per line	Iimp	2.5kA				
Voltage protection level (V)	L-L@In,C2 (8/20µs)Up	≤30	≤45	≤55	≤100	≤300
	L-PG@In,C2 (8/20µs)Up	≤500	≤500	≤500	≤500	≤500
	L-L@C3 (1KV/µs)Up	≤24	≤38	≤48	≤75	≤250
	L-PG@C3 (1KV/µs)Up	≤600	≤600	≤600	≤600	≤600
Nominal current (A)	IL	1 A				
Cut-off frequency (Hz)	fG	100 MHz				
Series impedance per line (Ohm)		0.68 Ohm				
Protection line		1-pair				
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3				
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				

# Pluggable Dataline Protector DM-.../M2N4



Basic circuit diagram



Dimension drawing

**PROSURGE DM-.../M2N4** dataline protectors provide surge protection for 1-pair balanced (symmetrical) lines with shielded in the data, signal or communication system, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

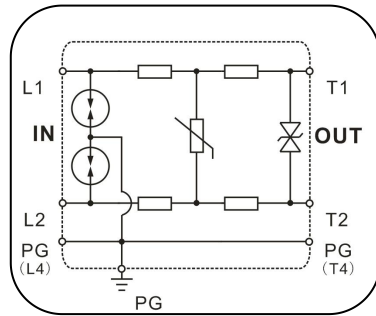
### Technical Features

- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Two-stage protection circuit, limit the transients with gas discharge tubes and transzorb diodes
- Rate load current 1A
- Earth possible on DIN Rail
- Suitable to use for 4-20 mA current loop, analog/digital communication, RS485, RS422 (V11) interface, high-frequency bus system and two wires video transmission system, etc
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

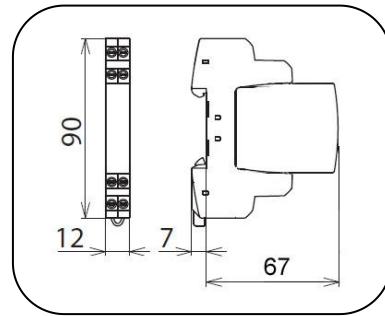
Type	DM-xxx/M2N4					
	6	12	24	48	110	
In accordance with	UL497b; IEC 61643-21:2005					
Nominal voltage (Vdc)	Un	6	12	24	48	110
Max. continuous operating voltage (Vdc/Vac)	Uc	8/6	15/12	28/24	54/38	170/120
C2 Nominal discharge current(8/20µs) per line	In	10kA				
C2 Max. discharge Current (8/20µs) per 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	≤300
	L-PG/ PG-SG @In, C2 (8/20µs)Up	≤500	≤500	≤500	≤500	≤500
	L-L @C3 (1KV/µs)Up	≤24	≤38	≤48	≤75	≤250
	L-PG /PG-SG@C3 (1KV/µs)Up	≤600	≤600	≤600	≤600	≤600
Nominal current (A)	IL	1 A				
Cut-off frequency (Hz)	f <sub>G</sub>	100 MHz				
Series impedance per line (Ohm)		0.68 Ohm				
Protection line		1-pair + Shield				
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3				
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				

# Pluggable Dataline Protector

## DM-.../M2N5



Basic circuit diagram



Dimension drawing

**PROSURGE DM-.../M2N5** dataline protectors provide fine protection for 1-pair balanced (symmetrical) and unearthed signal lines in the measuring and controlling system, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

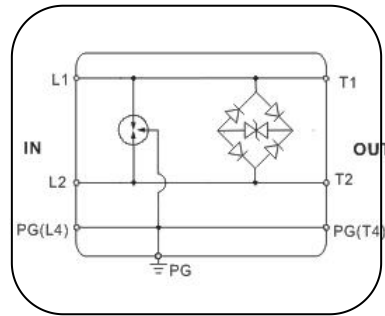
### Technical Features

- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Three-stage protection circuit, limit the transients with gas discharge tubes, MOV and transzorb diodes
- Rate load current 1A
- Earth possible on DIN Rail
- Suitable to use for 4-20mA current loop, analog communication, TTL, PLC and measuring and controlling system etc
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

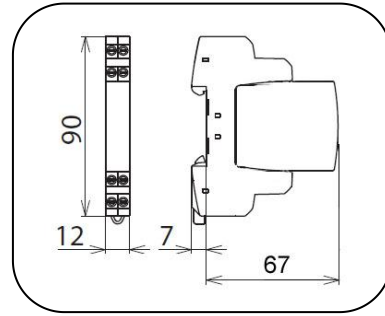
Type		DM-XX/M2N5			
		12	24	48	110
In accordance with		UL497b; IEC 61643-21:2012			
Nominal voltage (Vdc)	Un	12	24	48	110
Max. continuous operating voltage (Vdc/Vac)	Uc	15/10.6	33/23.3	54/38.1	170/120
C2 Nominal discharge current(8/20µs) per line	In	10kA			
C2 Max. discharge Current (8/20µs) per line	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	≤25V	≤50V	≤100V	≤260V
	L-PG@In,C2 (8/20µs)Up	≤750V	≤750V	≤750V	≤750V
	L-L@C3 (1KV/µs)Up	≤19V	≤45V	≤70V	≤230V
	L-PG@C3 (1KV/µs)Up	≤650V	≤650V	≤650V	≤650V
Nominal current (A)	I <sub>L</sub>	1 A			
Cut-off frequency (Hz)	f <sub>c</sub>	2 MHz			
Series impedance per line (Ohm)		1.36 Ohm			
Protection line		1-pair			
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3			
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			

## Pluggable Dataline Protector

### DM-.../M2N6



Basic circuit diagram



Dimension drawing

**PROSURGE DM-.../M2N6** dataline protectors provide surge protection for balanced 1-pair balanced (symmetrical) and unearthed signal lines in the measuring and controlling system, especially for resistance sensitive circuit, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

#### Technical Features

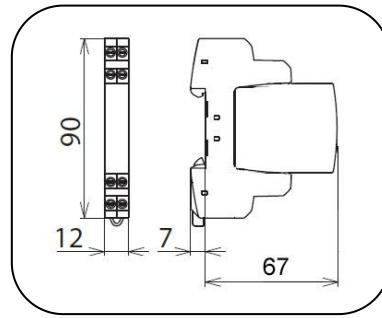
- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Two-stage protection circuit, limit the transients with gas discharge tubes and transorb diodes
- Rated load current up to 2A
- No serial resistance
- Earth possible on DIN Rail
- Suitable to use for measuring and controlling system, thermocouples (PT100, PT1000 devices), low voltage alarm circuits such as fire or security, or d.c. power supply, etc.
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

Type	DM-XX/M2N6				
	5	12	24	48	
In accordance with	UL497b; IEC 61643-21:2012				
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	Imax	L-L:500A, L-G:20kA			
D1 Lightning impulse current (10/350µs) per line	Iimp	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)	IL	2 A			
Cut-off frequency (Hz)	fG	100 MHz			
Series impedance per line (Ohm)		0 Ohm			
Protection line		1-pair			
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3			
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			



## Pluggable Dataline Protector

### DM-.../M2N7



Dimension drawing

**PROSURGE DM-.../M2N7** dataline protectors provide surge protection for two single lines with common reference potential in the low-bandwidth or low-datarate signal/data transmission system, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

#### Technical Features

- UL listed dataline protector per UL 497B standard (File No. E504171)
- Pluggable surge protection for DIN Rail mounting
- Signal transmission is not interrupted when exchanging module
- Comprising a PTC for over-current fault and short-circuit fault protection
- Rate load current 1A
- Two-stage protection circuit ,limit the transients with gas discharge tubes and tranzorb diodes
- LED failure indication to replace timely (Patent circuit design)
- Earth possible on DIN Rail.
- Suitable to use for switching value signal, sensor, digital I/O, actuator, TTL,PLC and low-datarate bus system, etc.
- Comply with UL497, and IEC61643-21:2012,category D1/C1/C2/C3

Type		DM-XX/M2N7			
		5	12	24	48
In accordance with		UL497b; IEC 61643-21:2012			
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	Imax	20kA			
D1 Lightning impulse current (10/350µs) per line	Iimp	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)	IL	1 A			
Cut-off frequency (Hz)	fG	1 MHz			
Series impedance per line (Ohm)		PTC			
Protection line		2 wires			
Mounting		35mm DIN-rail in accordance with EN 50022/DIN46277-3			
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			