

SURGYS® RS-3, mA-3, TEL-3

Low current surge arresters

for telecommunication and data networks



SURGYS RS-3



SURGYS mA-3x2

The solution for

- Processes
- Manufacturing
- Water treatment
- Telecom, Datacom and broadcasting
- Data centres



Strong points

- Versions 1 pair or 2 pairs (model “x2”)
- Plug-in modules
- Direct earthing
- Common mode / differential mode protection

Conformity to standards

- NF EN 61643-21
- IEC 61643-21

Function

For protection against transient overvoltages of equipment connected to telecommunication and data transmission networks the **SURGYS® range** includes 3 surge arrester models:

- **SURGYS® RS-3.**
- **SURGYS® mA-3.**
- **SURGYS® TEL-3.**

Advantages

Versions 1 pair or 2 pairs (model “x2”).
Ultra-compact design if multi-pair protection is needed.

Plug-in modules
Rapid maintenance for end of service life modules.

End of service life indicator
Indication is achieved through line interruption.

Direct earthing
Earth bonding is made using a DIN rail fixing clip.

Common mode / differential mode protection
The differential mode offers an improved protection efficiency.

Applications

SURGYS® RS-3

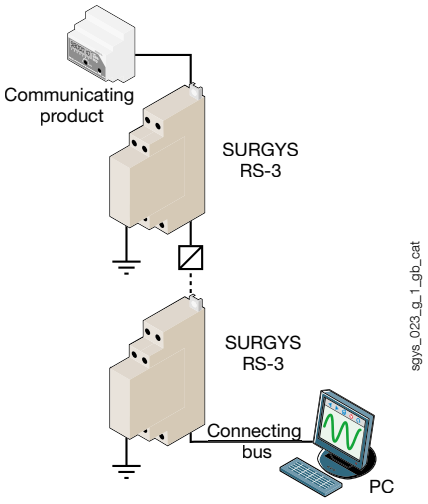
- Protection of the RS422/RS485 connections.
- Digital telephone line T2.
- ETHERNET connection (10 baseT).

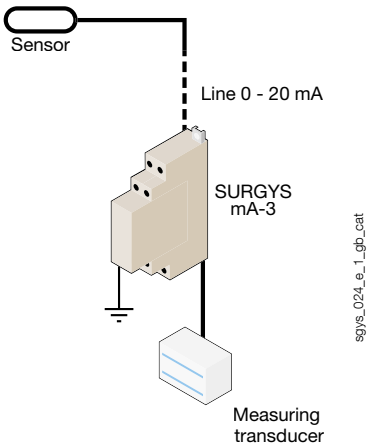
SURGYS® mA-3

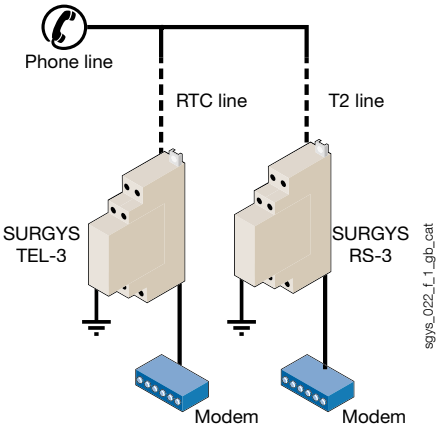
- Field bus:
  - Profibus (DP, PA, FMS…),
  - Fieldbus (H1, H2),
  - LONworks,
  - Interbus,…
- Measurement loops, measurement acquisition cards:
  - current loops 0 / 4-20 mA,
  - analog signals 0 to 10 V.
- Regulation, control loops.
- RS232 connections.
- Numeris network (RNIS-T0).
- Specialised telephone connections.

SURGYS® TEL-3

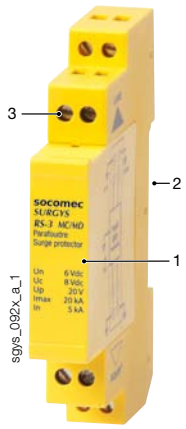
- Analogue telephone line:
  - modem,
  - automatic switch,
  - telephone alarm,
  - DSL.



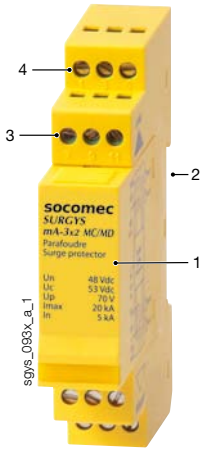




Front panel



Version 1 pair



Version 2 pairs

1. Plug-in module
2. Mounting on DIN rail ensuring earthing
3. Connection 1 pair
4. Connection 2 pairs

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Characteristics

SURGYS®	RS-3	mA-3	TEL-3
Use	RS422/RS485/Telecom T2/Ethernet 10baseT	4-20 mA, field bus	via land line
Nominal line voltage U_n	12 V	48 V	150 V
Maximum voltage U_c	15 V	53 V	170 V
Max operating frequency	20 MHz	20 MHz	2 kHz
Level of protection U_p	30 V	75 V	220 V
Line impedance	50 - 150 Ohms	50 - 150 Ohms	600 Ohms

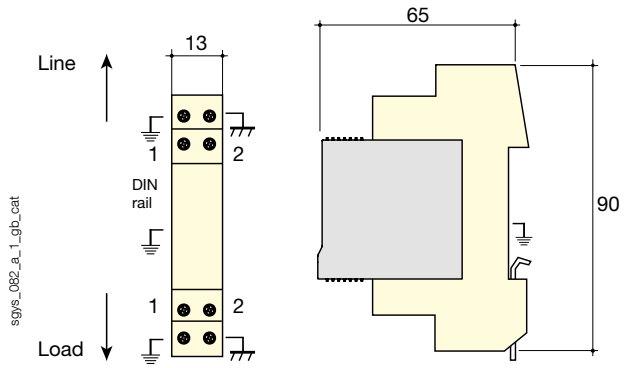
Characteristics	
Protected configuration	2-wire or 4-wire ("x2" version)
Maximum line intensity	300 mA(1)
Maximum discharge current (1 shock 8/20 µs) I_{max}	20 kA
Nominal discharge current (20 shocks 8/20 µs) I_n	5 kA
Type of protection	spark-gaps / clamping diode
End of life	earth leakage current

Operating conditions	
Operating temperature	-40 … +85 °C
Storage temperature	-40 … +85 °C

(1) Line current of equipment to be protected greater than 200 mA or other direct current application: please consult us

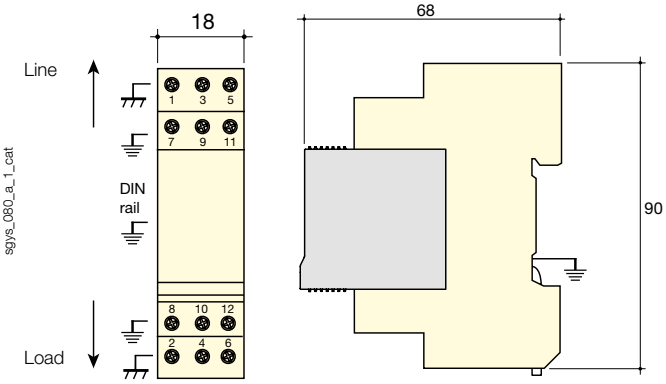
Case

Version 1 pair



Type	modular
Dimensions W x H x D	13 x 90 x 65 mm
Case degree of protection	IP20
Terminal block degree of protection	IP20
Case material	UL94-V0 thermoplastic
Connection cross-section	0.4 … 1.5 mm²
Earth connection cross-section	0.4 … 1.5 mm²

Version 2 pairs



Type	modular
Dimensions W x H x D	18 x 90 x 68 mm
Case degree of protection	IP20
Terminal block degree of protection	IP20
Case material	UL94-V0 thermoplastic
Connection cross-section	0.4 … 1.5 mm²
Earth connection cross-section	0.4 … 1.5 mm²

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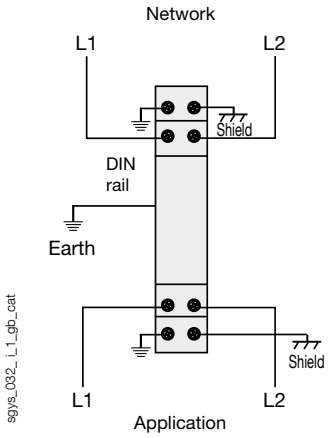
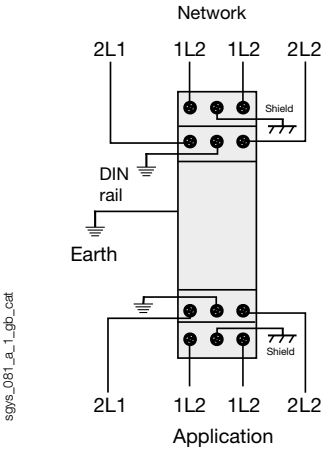
Connections

Version 1 pair



Version 2 pairs



References

SURGYS	Versions 1 pair			Versions 2 pairs		
	RS-3 Reference	mA-3 Reference	TEL-3 Reference	RS-3x2 Reference	mA-3x2 Reference	TEL-3x2 Reference
Protection of high speed data and telephone networks	4986 **3020**			4986 **3021**		
Protection of measurement-control-regulation circuits and field bus		4987 **3420**			4987 **3421**	
Protection of telephone networks			4985 **3170**			4985 **3171**

Description of accessories	RS-3 Reference	mA-3 Reference	TEL-3 Reference	RS-3x2 Reference	mA-3x2 Reference	TEL-3x2 Reference
Spare plug-in module m-RS-3	4986 **3029**					
Spare plug-in module m-mA-3		4987 **3429**				
Spare plug-in module m-TEL-3			4985 **3179**			
Spare plug-in module m-RS-3x2				4986 **3028**		
Spare plug-in module m-mA-3x2					4987 **3428**	
Spare plug-in module m-TEL-3x2						4985 **3178**