



# SURGYS® RS-3, mA-3, TEL-3

## Low current surge arresters

### for telecommunication and data networks

Electronic protection



sgys\_092\_a

SURGYS RS-3

sgys\_092\_a

SURGYS mA-3x2

### 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.

### 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



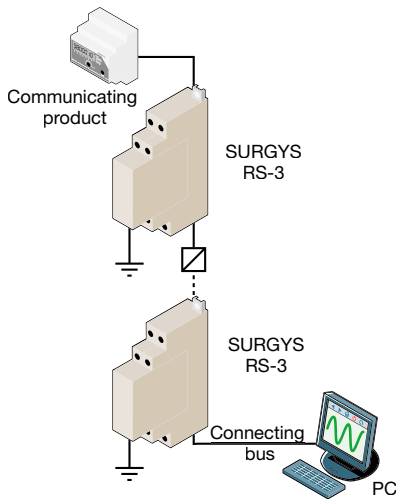
# SURGYS® RS-3, mA-3, TEL-3

Low current surge arresters  
for telecommunication and data networks

## Applications

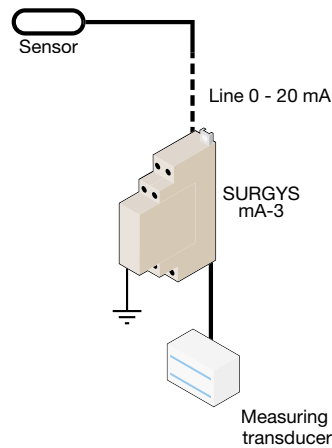
### SURGYS® RS-3

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



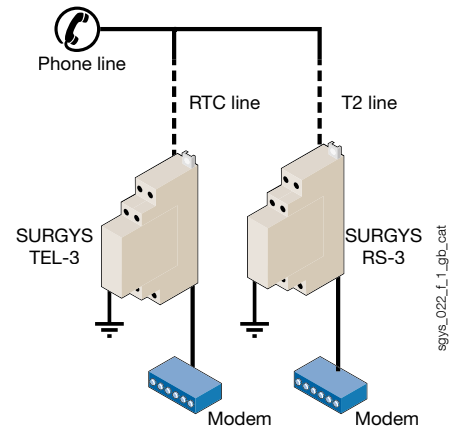
### SURGYS® mA-3

- 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.

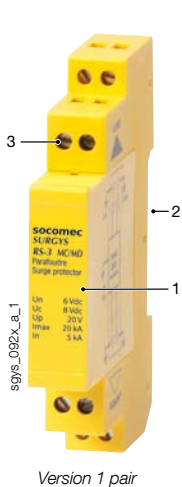


### SURGYS® TEL-3

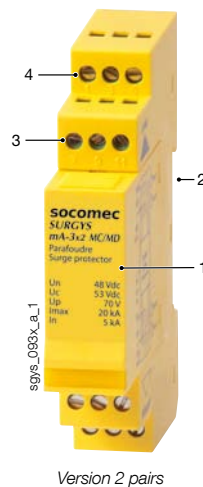
- Analogue telephone line:
  - modem,
  - automatic switch,
  - telephone alarm,
  - DSL.



## 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

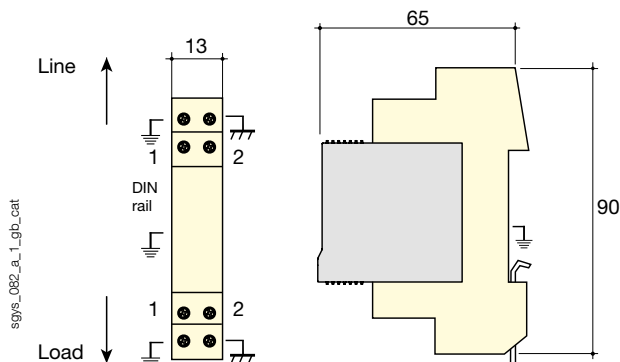
Characteristics	
Protected configuration	2-wire or 4-wire ("x2" version)
Maximum line intensity	300 mA <sup>(1)</sup>
Maximum discharge current (1 shock 8/20 $\mu$ s) $I_{max}$	20 kA
Nominal discharge current (20 shocks 8/20 $\mu$ s) $I_n$	5 kA
Type of protection	spark-gaps / clamping diode
End of life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

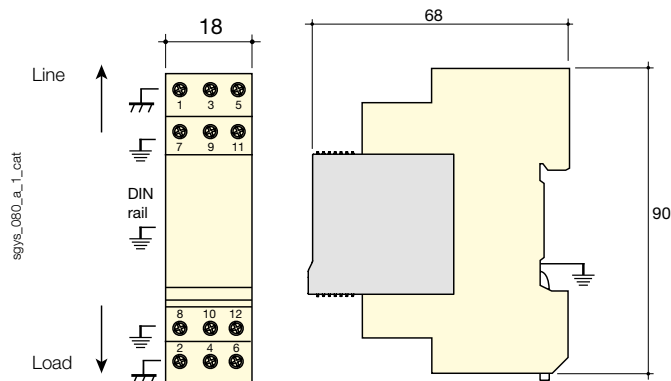
## Case

### 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 mm <sup>2</sup>
Earth connection cross-section	0.4 ... 1.5 mm <sup>2</sup>

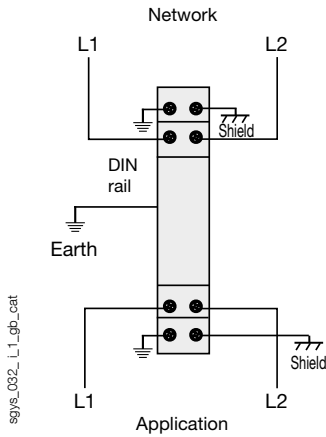
### Version 2 pairs



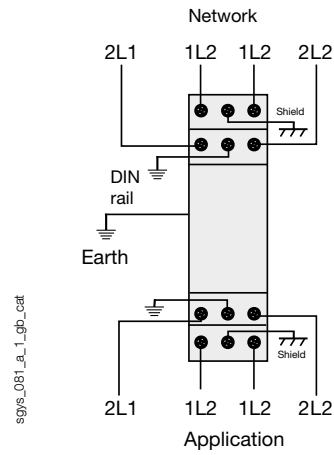
Type	modular
Dimensions W x H x D	18 x 90 x 68 mm
Case degree of protection	IP20
Terminal block degree of protection	IP20
Case material	UL94-V0 thermoplastic
Connection cross-section	0.4 ... 1.5 mm <sup>2</sup>
Earth connection cross-section	0.4 ... 1.5 mm <sup>2</sup>

## 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