

# SURGYS® G100-F

## Surge arrester type 1 and 2

for installations with lightning conductor and classified sites



SURGYS G100-F 1 pole

### Function

The SURGYS G100-F surge arrester is designed to protect your low voltage distribution installations and your electrical equipment. It acts against industrial operation surges and surges due to lightning. This type of surge arrester is particularly recommended where there is a risk of direct impact of lightning strikes.

### Advantages

#### Recommended where there is a risk of direct impact from lightning strikes

With its max. impulse current  $I_{imp}$  (10/350  $\mu$ s surge) of 25 kA, it is recommended for use at the top of the installation.

#### Absence of follow current

The multi-varistor technology ensures there is no line sequence current and avoids any risk of nuisance tripping of upstream protection devices.

#### Integrated thermal disconnection device

Guarantees disconnection at surge arrester's end of life.

### General characteristics

- Single-pole surge arrester type 1 + 2.
- 2, 3 or 4 poles
- For earthed systems TNC and IT.
- $I_{imp}$ : 25 kA/pole (100kA/3Ph+N), pulses 10/350  $\mu$ s.
- $I_{max}$ : 100kA, pulses 8/20  $\mu$ s.
- Internal disconnections.
- Status indicators.
- Remote signalling.

#### End of service life indicator

Indicates varistor's end-of-life.

#### Remote signalling

The remote signalling contact provides disconnection data to a supervision station (BMS).

#### Plug-in modules for easy maintenance

These modules are quick and easy to replace, without having to uncable the device.

### The solution for

- > Data centre
- > Healthcare
- > Energy
- > Infrastructure & Transport
- > Industry
- > Building

### Strong points

- > Recommended where there is a risk of direct impact from lightning strikes
- > Absence of follow current
- > Integrated thermal disconnection device
- > End of service life indicator
- > Remote signalling
- > Plug-in modules for easy maintenance

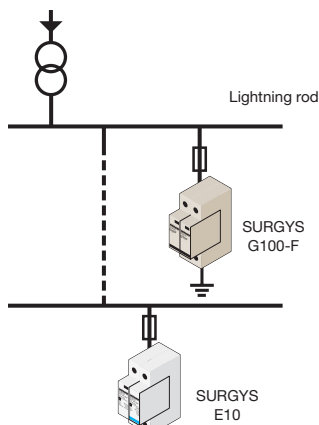
### Conformity to standards

- > NF EN 61643-11
- > IEC 61643-11

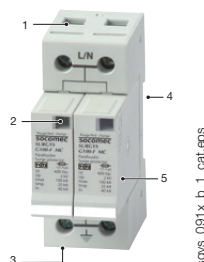


### Applications

- Located in the main switchboard, upstream of the distribution panels.
- Main electrical switchboard + building protected against lightning either:
  - through lightning conductors
  - through mesh cages.
- Main switchboard in buildings subject to a high risk of lightning strikes such as classified installations, installations located in areas prone to a high density of lightning strikes, high-rise buildings, presence of antenna towers, chimneys.
- Sites located at high altitude.
- Distribution board of a building with presence of Lightning Protection Systems.

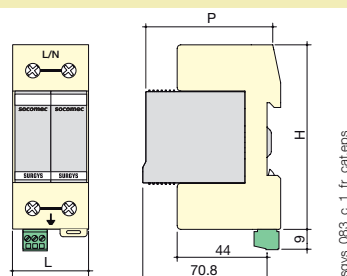


### Front panel



1. Monobloc design.
2. End of life signal
3. Remote signalling contact.
4. DIN rail mounted
5. Plug-in modules.

### Switch body



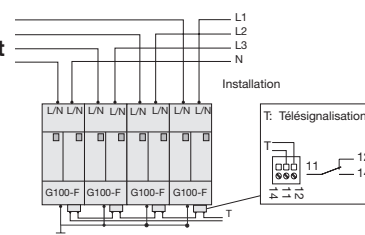
### Specifications

Mains	
Mains type	230 / 400 VAC
Neutral arrangements	As per reference
Nominal voltage $U_n$	400 VAC
Max. voltage $U_c$	440 VAC
Temporary surge (TOV) 5 s $U_T$	580 VAC withstand
Temporary surge (TOV) 120 min $U_T$	770 VAC disconnection
Protection characteristics	
Level of protection $U_p$	2 kV
Max. current discharge (1 impulse 8/20 $\mu$ s) $I_{max}$	100 kA
Nominal discharge current (15 impulses 8/20 $\mu$ s) $I_n$	25 kA
Residual voltage at $I_{mp}$	1.5 kV
Impulse current (1 shock 10/350 $\mu$ s) $I_{mp}$	25 kA
Protection mode	Common
Associated characteristics	
Residual current $I_c$	< 1 mA
Response time $t_r$	< 25 ns
Follow current $I_f$	None
Admissible short-circuit current $I_{sc}$	25 kA
Recommended disconnectors	gG 315 A fuses
Type of disconnection indicator	Mechanical
Number of disconnection indicators	1
Remote signalling contact	
Contact type	NO/NC
AC making capacity	0.5 A
DC making capacity	2 A
AC nominal voltage	250 VAC
DC nominal voltage	30 VDC
Sustained current	2 A
Connection type	Screw terminal block
Max. cross-section of connections to terminals	1.5 mm <sup>2</sup>
Operating conditions	
Operating temperature range	-40 ... +85°C
Storage temperature range	-40 ... +85°C

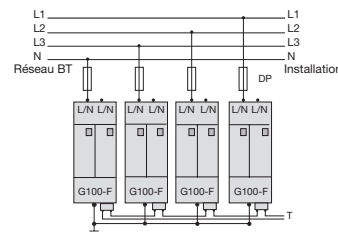
Type	modular
Dimensions W x H x D - 2 pole device	72 x 90 x 77 mm
Dimensions W x H x D - 3 pole device	108 x 90 x 77 mm
Dimensions W x H x D - 4 pole device	144 x 90 x 77 mm
Casing protection index	IP20
Terminal block degree of protection	IP20
Case material	PEI UL94-5VA thermoplastic
Mains connection cross-section	4 ... 25 mm <sup>2</sup>
Earthing connection cross-section	4 ... 25 mm <sup>2</sup>

### Connection

#### Series arrangement



#### Parallel arrangement



### References

No. of poles	No. of adjacent boxes	Neutral arrangements	I total (10/350 $\mu$ s)	SURGYs® G100-F Reference
2	4	IT	50 kA	4981 1020
3	6	TNC-IT	75 kA	4981 1030
4	8	IT	100 kA	4981 1040
<b>Description of accessories</b>				<b>Reference</b>
Spare plug-in module				4981 1019