# SURGYS® G140-F

## Surge arrester - Types 1 and 2

for installations with lightning conductor and classified sites


*SURGYS G140-F 2 poles*

### The solution for

- Industry
- All types of building (critical, non-critical)

### Strong points

- Remote signalling

### Approvals and certifications

- IEC 61643-11
- NF EN 61643-11

## Function

The **SURGYS® G140-F** surge arrester is designed to ensure the protection of your low voltage distribution installations and your electrical equipment. It acts against industrial operation surges and surges owing to lightning.

This type of surge arrester is particularly recommended where there is a risk of direct impact of lightning strikes.

**NEW:** Impulse current ($I_{imp}$) of 25 kA per pole and special products for TT arrangements.

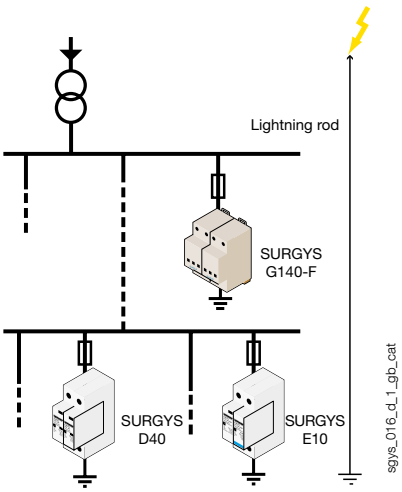
## Advantages

**Remote signalling**

With the remote signalling contact (plug-in) you can upload the alert to a supervisory device.

### 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.



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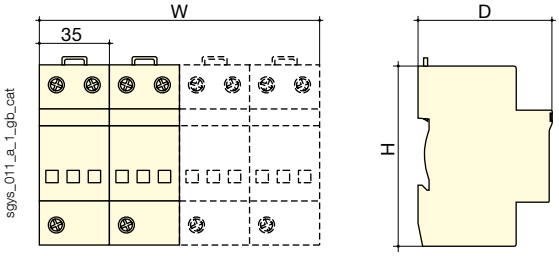
## General characteristics

- Surge arrester - Type 1 and 2.
- Designed to withstand discharge currents linked to direct lightning strikes.
- Max. discharge current 140 kA.
- Guaranteed protection in common and differential modes according to reference.
- Thermal disconnection device.
- End of service life indicator.
- Remote signalling contact.
- Absence of follow current.
- Install in parallel or series arrangement.
- Recommended fuse combination switch FUSERBLOC (see page 254).

## Front panel


1. End of life signal.
2. Earthing comb bridging connection.
3. Remote signalling contact.
4. DIN rail mounting.

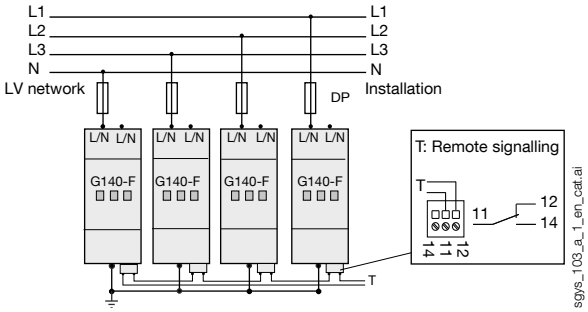
## Switch body




| | |
|---|---|
| Type | monobloc module |
| Dimensions W x H x D - 2 pole device | 72 x 90 x 67 mm |
| Dimensions W x H x D - 3 pole device | 108 x 90 x 67 mm |
| Dimensions W x H x D - 4 pole device | 144 x 90 x 67 mm |
| Case degree of protection IP20 | IP20 |
| Terminal block degree of protection IP20 | IP20 |
| Case material | thermoplastic UL94-V0 |
| Mains connection cross-section | 6 … 35 mm² |
| Earthing connection cross-section | 6 … 35 mm² |

## Connection

**Parallel arrangement**




## Specifications

| | | |
|---|---|---|
| **Mains** | | |
| Network type | 230 / 400 VAC | |
| Neutral arrangement (see table) | TT, TN, IT | |
| Connection mode | MC (1) | MC (1)/MD (2) |
| Nominal voltage $U_n$ | 400 VAC | 230 VAC |
| Max. voltage $U_c$ | 440 VAC | 255 VAC |
| **Protection characteristics** | | |
| Temporary overvoltage withstand @ 5 sec ($U_T$) | 580 VAC withstand | 335 VAC withstand |
| Temporary overvoltage withstand @ 120 sec ($U_T$) | 770 VAC disconnection | 440 VAC disconnection |
| Temporary overvoltage from a HV mains, between N & PE in a TT arrangement | | 1200 V / 30 A/ 200 ms withstand |
| Level of protection $U_P$ | 1.5 kV | 1.5/1.5 kV |
| Max. current discharge (1 impulse 8/20 µs) Imax | 140 kA | 140 kA |
| Nominal discharge current (15 impulses 8/20 µs) $I_n$ | 25 kA | 25 kA |
| Impulse current (1 shock 10/350 µs) $I_{imp}$ | 25 kA (15 kA*) | 25 kA (15 kA*) |
| **Associated characteristics** | | |
| Residual current Ipe | < 3 mA | |
| Response time tr | < 5 ns | |
| Follow current If | None | |
| Admissible short-circuit current $I_{sccr}$ | 50 kA (100 kA*) | |
| Recommended disconnector | gG 315 A (125 A*) fuses | |
| Type of mechanical disconnection indicator | Mechanical | |
| Number of disconnection indicators | 3 | |
| **Remote signalling contact** | | |
| Number of contacts per pole | 1 | |
| Contact type | Changeover switch | |
| AC making capacity | 0.5 A | |
| DC making capacity | 3 A | |
| AC nominal voltage | 250 VAC | |
| DC nominal voltage | 30 VDC | |
| Sustained current | 2 A | |
| Connection type | Screw terminal block | |
| Max. cross-section of terminal connections | 1.5 mm² | |
| **Operating conditions** | | |
| Operating temperature range | -40 … +85°C | |
| Storage temperature range | -40 … +85°C | |

*(1) MC: Common mode.*
*(2) MD: Differential mode.*
*(*) used in association with gG 125 A fuse*

## References

| No. of poles | No. of adjacent boxes | Neutral arrangements | Protection mode | I total (10/350 µs) | SURGYS® G140-F Reference |
|---|---|---|---|---|---|
| 2 | 2 | IT | MC (1) | 50 kA | 4981 **1521** |
| 3 | 3 | TNC-IT | MC (1) | 75 kA | 4981 **1531** |
| 4 | 4 | IT | MC (1) | 100 kA | 4981 **1541** |
| 4 | 4 | TT-TNS | MC (1) / MD (2) | 100 kA | 4981 **1542** |

*(1) MC: Common mode.*
*(2) MD: Differential mode.*