**SURGYS® E10**

Surge arrester - Types 2 and 3
for terminal receivers and sensitive loads

**Function**

SURGYS® E10 surge arresters are designed to ensure protection of installations connected to single-phase, three phase or DC networks against industrial operation surges. They act against transient surges owing to lightning.

**Advantages**

- **Monobloc design**
  Easy to install.

- **Plug-in module**
  Quick maintenance on end-of-life modules.

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

**Applications**

- AC or DC distribution board (downstream of a main switchboard).
- Protection of electrotechnical equipment such as motors, switching devices, control devices...

**The solution for**

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

**Strong points**

- Monobloc design
- Plug-in module
- Remote signalling

**Compliance with standards**

- NF EN 61643-11
- IEC 61643-11

**Specifications**

- **Max. current discharge (1 impulse 8/20 µs)** Imax 10 kA
- **Operating conditions**
  - Response time tr < 5 ns
  - Residual current Ipe < 1 mA
  - Associated characteristics
  - Max. voltage Uc 440 VAC
  - Nominal voltage Un 400 VAC
  - Earthing connection cross-section 2.5 … 25 mm²
  - Mains connection cross-section 2.5 … 25 mm²
  - Dimensions W x H x D - 4 pole device 72 x 90 x 67 mm
  - Dimensions W x H x D - 3 pole device 54 x 90 x 67 mm
  - Dimensions W x H x D - 2 pole device 36 x 90 x 67 mm
  - Dimensions W x H x D - DC version device 17.5 x 90 x 67 mm

- **Number of poles**
  - **Network voltage**
    - 48 VDC
    - 24 VDC
    - 12 VDC

- **Protection**
  - LV network DP
  - IT MC(1) 20 kA

- **Connections**
  - Through terminal block
  - Sustained current 2 A
  - DC nominal voltage 30 VDC
  - AC nominal voltage 250 VAC
  - DC making capacity 3 A
  - AC making capacity 0.5 A

- **Contact type**
  - NO/NC
  - Number of contacts per pole 1

- **Type of mechanical disconnection indicator**
  - Mechanical

- **Number of disconnection indicators**
  - 1

- **Admissible short-circuit current** Isccr 25 kA

- **Recommended disconnector** gG 20 A fuses

- **Associated characteristics**
  - Nominal discharge current (15 impulses 8/20 µs) In 5 kA
  - Residual current Ipe < 1 mA
  - Temporary overvoltage withstand @ 120 sec (UT) 770 VAC
  - Temporary overvoltage withstand @ 5 sec (UT) 580 VAC
  - Level of protection UP 1.3 kV
  - Associated characteristics
  - Residual current Ipe < 1 mA
  - Temporary overvoltage withstand @ 120 sec (UT) 770 VAC
  - Temporary overvoltage withstand @ 5 sec (UT) 580 VAC
  - Level of protection UP 1.3 kV

- **Earthing connection**
  - PE
  - Earthing connection cross-section 2.5 … 25 mm²

- **Connection type**
  - Through terminal block

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  - PE
  - Earthing connection cross-section 2.5 … 25 mm²
**Front panel**

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

**Connection**

AC version - Common mode (MC) and differential mode (MC/MD) protection

- LV network
- DP
- Installation
- 1: Remote signalling contact
- DP : Protection device
- T : Remote signalling

DC version

- LV network
- DP
- Installation
- 1: Remote signalling contact
- DP : Protection device
- T : Remote signalling

**Specifications**

**Mains**

- Mains type: 230 / 400 VAC
- Neutral arrangement (see table): TT, TN, IT
- Connection mode: MC(1) / MD(2)
- Nominal voltage U_n: 400 VAC / 230 VAC
- Max. voltage U_L: 440 VAC / 255 VAC

**Protection characteristics**

- Temporary overvoltage withstand @ 5 sec (U_tr): 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_{tr}: 1.3 kV / 1.5 / 0.9 kV
- Max. current discharge (1 impulse 8/20 μs) I_{max}: 10 kA / 10 kA
- Nominal discharge current (15 impulses 8/20 μs) I_{n}: 5 kA / 5 kA

**Associated characteristics**

- Residual current I_{res}: < 1 mA
- Response time t_{r}: < 5 ns
- Follow current I_{f}: None
- Admissible short-circuit current I_{sp}: 25 kA
- Recommended disconnector: gG 20 A fuses
- Type of mechanical disconnection indicator: Mechanical
- Number of disconnection indicators: 1

**Remote signalling contact**

- Number of contacts per pole: 1
- Contact type: NO/NC
- 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: Through 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

**References**

**Applications DC**

<table>
<thead>
<tr>
<th>No. of poles</th>
<th>No. of adjacent boxes</th>
<th>Neutral arrangements</th>
<th>Protection mode</th>
<th>I_{total} (B/20μs)</th>
<th>SURGYS E10-AC</th>
<th>Reference</th>
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<tbody>
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<td>2</td>
<td>2</td>
<td>IT</td>
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<td>TNS-TI</td>
<td>MC(1)</td>
<td>40 kA</td>
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<td>MC(1)</td>
<td>40 kA</td>
<td>49830198</td>
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</tbody>
</table>

**Spare plug-in module for AC application**

- MC(1) / MD(2)
- Mode of protection: SURGYS E10-AC
- Reference: 49830198

**Spare plug-in module for DC application**

- MC(1)
- Mode of protection: SURGYS E10-AC
- Reference: 49830198

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- AC or DC distribution board (downstream of a main switchboard).
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- They act against transient surges owing to lightning.

**General Catalogue 2017-2018**

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