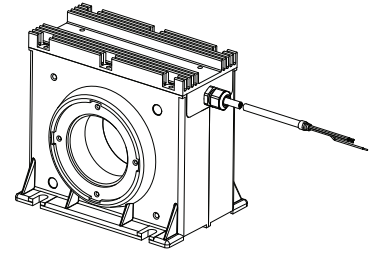


Current Transducer CD 1000-S/SP8

For the electronic measurement of leakage currents: DC, AC, with galvanic separation between the primary circuit and the secondary circuit.



$$I_{PR} = 2 \times 1200 \text{ A}$$



Electrical data

| | | | |
|------------|----------------------------------------------------------|----------|----|
| I_{PR} | Primary residual current | 2 x 1200 | A |
| I_{PRM} | Primary residual current, measuring range | 2 x 3000 | A |
| I_{PTh} | Primary current, detection threshold (-25 °C ... +70 °C) | | |
| | out 2 | 1 | A |
| | out 1 | 16 | A |
| U_C | Supply voltage (-30 %/+25 %) | 0 / -48 | V |
| I_{Cmax} | Maximum current consumption | < 90 | mA |

Accuracy - Dynamic performance data

| | | | |
|------------------|------------------------------------------------------------------------------|----------|---------------|
| ϵ_{tot} | Total error @ $T_A = -25 \text{ °C} \dots +70 \text{ °C}$ | ± 15 | % |
| t_{D90} | Delay time to 90 % of the final output value for I_{PN} step ¹⁾ | < 40 | μs |
| | @ $I_{PTh} = 1 \text{ A}$ | < 800 | ms |
| | @ $I_{PTh} = 16 \text{ A}$ | < 150 | ms |

General data

| | | | |
|-----------|-------------------------------|----------------|----|
| T_A | Ambient operating temperature | -25 ... +70 | °C |
| T_{Ast} | Ambient storage temperature | -40 ... +85 | °C |
| m | Mass | 2.5 | kg |
| | Standard | EN 50155: 2007 | |

Note: ¹⁾ Delay time is measured when the residual current moves from 0 to threshold level. If the starting value of residual current is > 0 the delay time will be reduced.

Features

- Closed loop (compensated) current transducer
- Insulating plastic case recognized according to UL 94-V0.

Special features

- $I_{PTh} = 1 \text{ A}$ (out2) and 16 A (out1)
- 2 output signals "closed (0 V)/ open" supplying 2 relays
- Connection to secondary circuit on shielded cable
- Cable shield connected on heatsink.

Advantages

- Low temperature drift
- No insertion losses
- High immunity to external interference
- Current overload capability.

Application

- Leakage current detection.

Application Domain

- Railway (fixed installations and onboard).

Current Transducer CD 1000-S/SP8

Insulation coordination

| | | | |
|----------|--------------------------------------------------|-------------------|----|
| U_d | RMS voltage for AC insulation test, 50 Hz, 1 min | 6 ¹⁾ | kV |
| | | 500 ²⁾ | V |
| d_{cp} | Creepage distance | 58.5 | mm |
| d_{ci} | Clearance distance | 49.2 | mm |
| CTI | Comparative tracking index (group III) | 290 | |

Notes: ¹⁾ Between primary and secondary + cable shield

²⁾ Between cable shield and secondary.

Safety

This transducer must be used in limited-energy secondary circuits according to IEC 61010-1.



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



Caution, risk of electrical shock

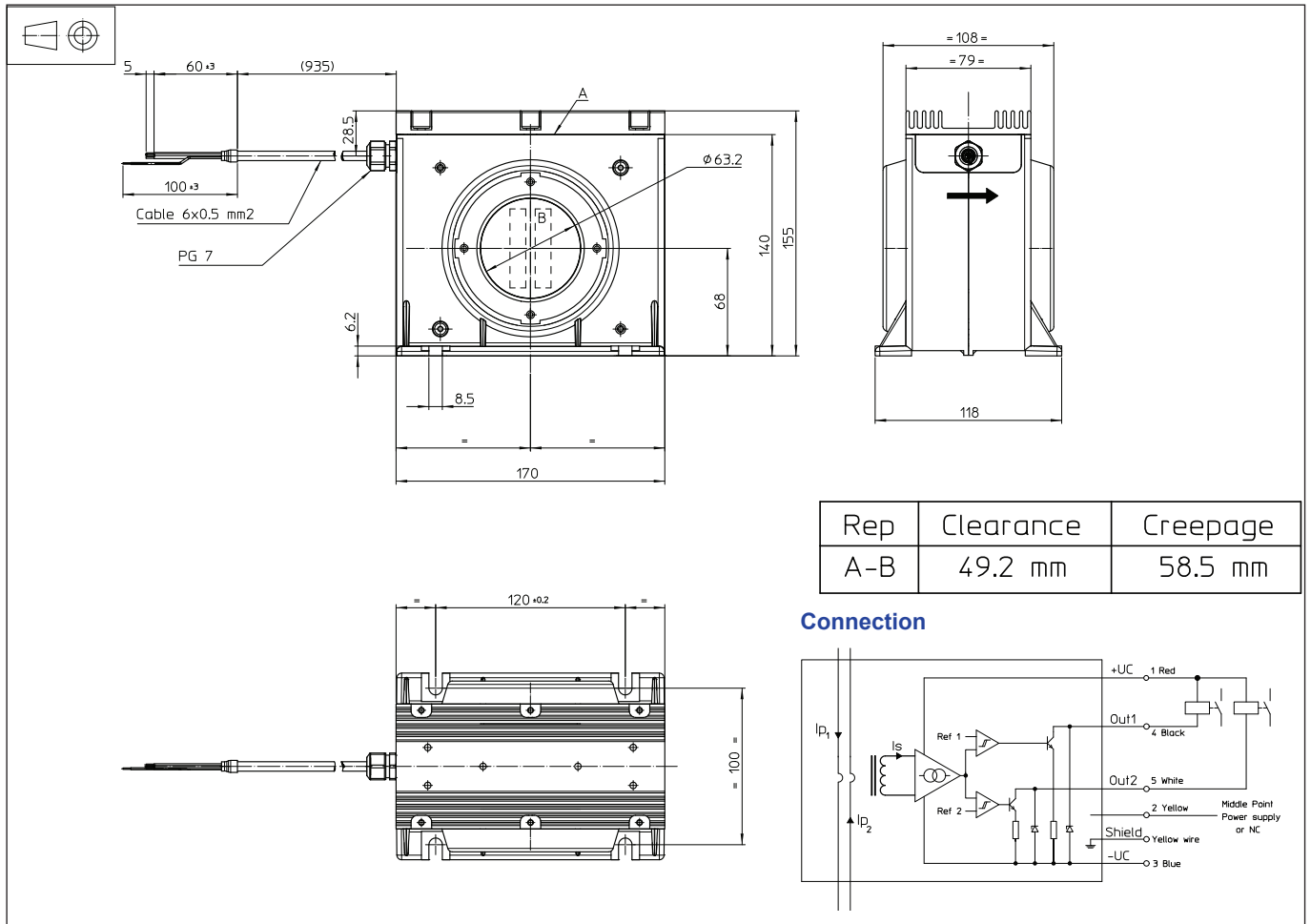
When operating the transducer, certain parts of the module can carry hazardous voltage (e.g. primary busbar, power supply).

Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a build-in device, whose conducting parts must be inaccessible after installation. A protective housing or additional shield could be used.

Main supply must be able to be disconnected.

Dimensions CD 1000-S/SP8 (in mm)



Mechanical characteristics

- General tolerance ± 0.5 mm
- Transducer fastening or Recommended fastening torque 4 holes $\phi 8.5$ mm 4 M8 steel screws 10 N·m
- Primary through-hole $\phi 63.2$ mm
- Connection of secondary Shielded cable
- Connection of heatsink Cable shield connected at yellow wire

Remarks

- U_{out} is positive when I_p flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100 °C.
- Installation of the transducer must be done unless otherwise specified on the datasheet, according to LEM Transducer Generic Mounting Rules. Please refer to LEM document N°ANE120504 available on our Web site: <https://www.lem.com/en/file/3137/download/>.