

TF sensors

Flexible TF current sensors

used with DIRIS Digiware, DIRIS A-40 and DIRIS B



TF Flexible current sensors

The solution for

- > Industry
- > Building
- > Infrastructure
- > Data centers



Strong points

- > Plug & Play
- > Accuracy according to IEC 61557-12
- > Safe locking mechanism
- > Installation
- > Simplified installation

Integrated technologies



PreciSense

For more information see our website
www.socomec.com

Compliance with standards

- > IEC 61557-12



- > ISO 14025



- > UL



Create your project

- > Find the best DIRIS Digiware configuration:
www.meter-selector.com

METER SELECTOR
DIGITAL TOOL AVAILABLE

Function

TF flexible **current sensors** measure the load currents of an electrical circuit and send the data to meters and Power Monitoring Devices or current modules via an RJ12 plug-and-play connection. Thanks to a wide measurement range, TF current sensors cover a wide current range from 100 to 6000 A, with only 7 references. TF flexible current sensors can be used with DIRIS Digiware I modules, DIRIS A-40 and DIRIS B.

Advantages

Plug & Play

- A rapid RJ12 connection makes wiring easy and reliable and prevents wiring errors. This also allows automatic detection of the sensor type and rating.
- The sensors can be installed in both directions.

Accuracy according to IEC 61557-12

- Class 0.5 for the global measuring chain (PMD + TF current sensors) from 2 to 120% of the nominal current I_n .
- Accuracy is guaranteed regardless of the position of the conductor in the loop.

Safe locking mechanism⁽¹⁾

- The locking system prevents the loop from opening, guaranteeing continuous functioning and accuracy even under harsh conditions.

Installation

- The TF flexible sensor range is specially designed for existing installations with strict integration constraints or with high-intensity currents.

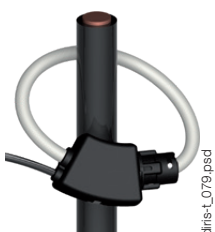
Simplified installation

- The Rogowski integrator is directly integrated to the RJ12⁽¹⁾ cable enabling a quick and compact integration (no DIN rail assembly required) inside electrical panels.
- The integrator is self supplied by the PMD through the RJ12 cable and does not need any external power supply.

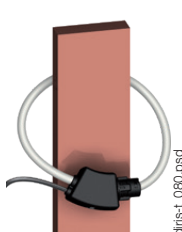
(1) Except for TF-55.

Installation

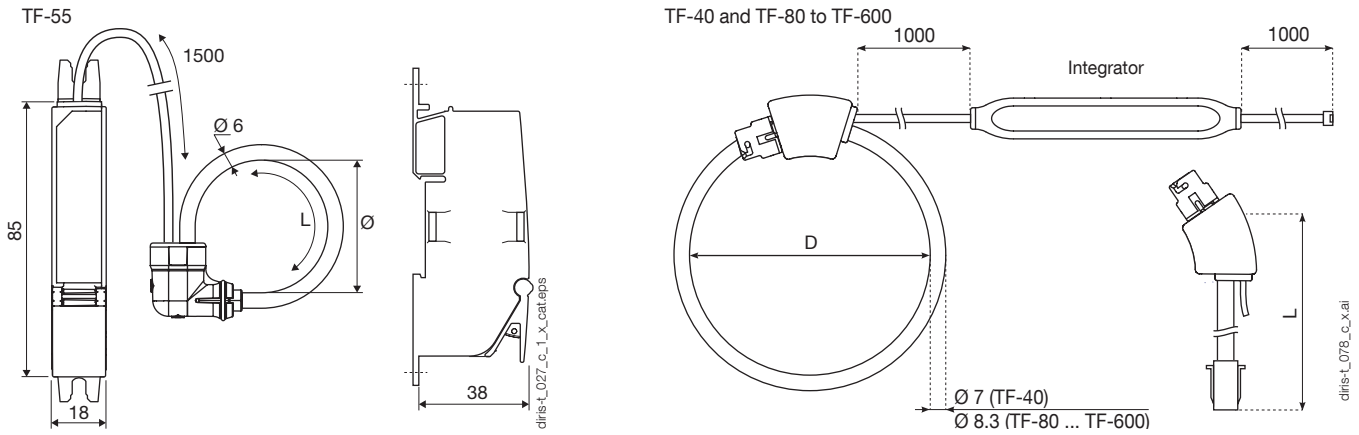
Cable mounting



Bar mounting



Dimensions (mm)



| Model | Nominal current range (A) | Real range covered (A) | D = Ø loop (mm) | L = Loop length (mm) |
|--------|---------------------------|------------------------|-----------------|----------------------|
| TF-40 | 100 ... 400 | 2 ... 480 | 40 | 126 |
| TF-55 | 150 ... 600 | 3 ... 720 | 55 | 173 |
| TF-80 | 150 ... 600 | 3 ... 720 | 80 | 251 |
| TF-120 | 400 ... 2000 | 8 ... 2400 | 120 | 377 |
| TF-200 | 600 ... 4000 | 12 ... 4800 | 200 | 628 |
| TF-300 | 1600 ... 6000 | 32 ... 7200 | 300 | 942 |
| TF-600 | 1600 ... 6000 | 32 ... 7200 | 600 | 1885 |

Integrator dimensions: 128 x 19 x 15 mm

Technical characteristics

| Model | TF-40 | TF-55 | TF-80 | TF-120 | TF-200 | TF-300 | TF-600 |
|---------------------------------|--|-------------|-------------|--------------|--------------|---------------|---------------|
| Nominal current range I_n (A) | 100 ... 400 | 150 ... 600 | 150 ... 600 | 400 ... 2000 | 600 ... 4000 | 1600 ... 6000 | 1600 ... 6000 |
| Real range covered (A) | 2 ... 480 | 3 ... 720 | 3 ... 720 | 8 ... 2400 | 12 ... 4800 | 32 ... 7200 | 32 ... 7200 |
| Weight (g) | 114 | 114 | 130 | 142 | 164 | 193 | 274 |
| Max. voltage (phase/neutral) | 600 V | | | | | | |
| Rated withstand voltage | 3.6 kV | | | | | | |
| Accuracy class | 0.5 in association with DIRIS Digiware I, DIRIS A-40, DIRIS B based on IEC 61557-12 | | | | | | |
| Frequency | 50 / 60 Hz | | | | | | |
| Intermittent overload | 10 x I_n for 1 s | | | | | | |
| Measurement category | CAT III | | | | | | |
| Protection degree | IP30 / IK07 | | | | | | |
| Operating temperature | -10 to +70°C | | | | | | |
| Storage temperature | -25 to +85°C | | | | | | |
| Relative humidity | 95% RH non-condensing | | | | | | |
| Altitude | < 2000 m | | | | | | |
| Connection | Socomec cable or equivalent RJ12 straight, twisted pair, unshielded, 600 V, -10 ... +70 °C | | | | | | |

References

| Model | Nominal current range (A) | Real range covered (A) | D = Ø loop (mm) | L = Loop length (mm) | Reference |
|--------|---------------------------|------------------------|-----------------|----------------------|-----------|
| TF-40 | 100 ... 400 | 2 ... 480 | 40 | 126 | 4829 0573 |
| TF-55 | 150 ... 600 | 3 ... 720 | 55 | 173 | 4829 0570 |
| TF-80 | 150 ... 600 | 3 ... 720 | 80 | 251 | 4829 0574 |
| TF-120 | 400 ... 2000 | 8 ... 2400 | 120 | 377 | 4829 0575 |
| TF-200 | 600 ... 4000 | 12 ... 4800 | 200 | 628 | 4829 0576 |
| TF-300 | 1600 ... 6000 | 32 ... 7200 | 300 | 942 | 4829 0577 |
| TF-600 | 1600 ... 6000 | 32 ... 7200 | 600 | 1885 | 4829 0578 |

Accessories

Female/female connector for extension of the RJ12 connection between PMD and TF sensor

Reference
4829 0670

| RJ12 connection cables | Cable length (m) | | | | | | | | | |
|------------------------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------------|
| | 0.1 | 0.2 | 0.3 | 0.5 | 1 | 2 | 3 | 5 | 10 | 50 m reel + 100 connectors |
| Number of cables | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference |
| 1 | - | - | - | - | - | - | - | 4829 0602 | 4829 0603 | 4829 0601 |
| 3 | 4829 0580 | 4829 0581 | 4829 0582 | 4829 0595 | 4829 0583 | 4829 0584 | 4829 0606 | - | - | - |
| 4 | - | - | - | 4829 0596 | 4829 0588 | 4829 0589 | - | - | - | - |
| 6 | 4829 0590 | 4829 0591 | 4829 0592 | 4829 0597 | 4829 0593 | 4829 0594 | - | - | - | - |