

# TF sensors

## Flexible Rogowski AC current sensors

For DIRIS Digiware, DIRIS A and DIRIS B



die-L\_005.png

TF Flexible current sensors

### Function

TF flexible **Rogowski coil current sensors** are used with DIRIS Digiware I, DIRIS A, or DIRIS B Power Monitoring Devices to measure currents from 100 to 6000 A with the same guaranteed accuracy. The quick RJ12 connection, and the integrated intelligence prevent any connection or configuration errors.

TF current sensors provide a versatile solution when space is limited, wrapped around irregular-shaped conductors or busbars without disrupting the wiring and the supply, highly convenient in retrofit applications. No external power supply is needed, as the sensor is powered from the power meter through the RJ12 connection.

### Advantages

#### Plug & Play

- RJ12 concept for a quick and reliable connection to the power meter.
- Automatic detection of current sensor type and rating.
- Low-voltage mV output - No shunting blocks are needed, TF sensors can be disconnected safely under load.

#### Accurate

- Unique PreciSense technology guaranteeing system accuracy according to IEC 61557-12 standard.
- Class 0.5 system accuracy (Power Meter + TF current sensor) from 2% to 120% of rated current.
- Accuracy is guaranteed regardless of the position of the conductor in the loop.

#### Safe locking mechanism

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

#### Smart

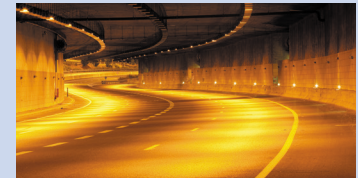
- Any wiring mishap, whether it's a phase inversion, a wrong orientation or a configuration error can be corrected via software. Save time, effort and resources, avoiding the hassle of reworking physical wiring on current sensors.

#### Simplified installation

- The Rogowski integrator is built into the RJ12 cable enabling a quick and compact integration (no DIN rail assembly required) inside electrical panels.
- The integrator is self-supplied by the power meter through the RJ12 cable and does not need an external power supply.

### The solution for

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



### Strong points

- > Plug & Play
- > Smart
- > Simplified installation

### Integrated technologies



PreciSense

For more information see our website  
[www.socomec.us](http://www.socomec.us)

### Compliance with standards

- > UL 61010-1, CSA-C22.2 No 61010-1, Guide PICQ, IEC 61557-12



- > IEC 61557-12

- > ISO 14025



### Create your project

- > Find the best DIRIS Digiware configuration:  
[www.meter-selector.com](http://www.meter-selector.com)

**METER SELECTOR**  
DIGITAL TOOL AVAILABLE

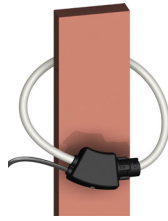
## Installation

Cable mounting



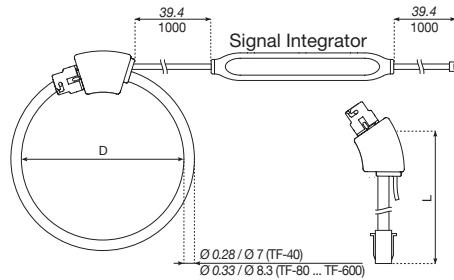
diris-L\_079\_a.png

Bar mounting



diris-L\_080\_a.png

## Dimensions (in / mm)



diris-L\_078\_c\_diris.it

Model	Nominal current range (A)	Real range covered (A)	D (in/mm)	L = Loop length (in/mm)
TF-40	100 ... 400	2 ... 480	1.57 / 40	4.96 / 126
TF-80	150 ... 600	3 ... 720	3.15 / 80	9.88 / 251
TF-120	400 ... 2000	8 ... 2400	4.72 / 120	14.84 / 377
TF-200	600 ... 4000	12 ... 4800	7.87 / 200	24.72 / 628
TF-300	1600 ... 6000	32 ... 7200	11.81 / 300	37.09 / 942
TF-600	1600 ... 6000	32 ... 7200	23.62 / 600	74.21 / 1885

Integrator dimensions (in / mm): 5.04 x 0.75 x 0.59 / 128 x 19 x 15

## Technical characteristics

Model	TF-40	TF-80	TF-120	TF-200	TF-300	TF-600
Nominal current range $I_n$ (A)	100 ... 400	150 ... 600	400 ... 2000	600 ... 4000	1600 ... 6000	1600 ... 6000
Actual range covered (A)	2 ... 480	3 ... 720	8 ... 2400	12 ... 4800	32 ... 7200	32 ... 7200
Weight (oz/g)	4/114	4.85/130	5/142	5.78/164	6.81/193	9.67/274
Max. voltage (phase/neutral)	600 VAC L-N					
Rated withstand voltage	3.6 kV					
Accuracy class	Class 0.5 system accuracy when used with DIRIS Digiware I, DIRIS A, DIRIS B					
Frequency	50 / 60 Hz					
Intermittent overload	10 x $I_n$ for 1 s					
Measurement category	CAT III					
Protection degree	IP30 / IK07					
Operating temperature	+ 14°F ... + 158°F / -10°C to +70°C					
Storage temperature	- 13°F ... +185°F / -25°C to +85°C					
Relative humidity	95% RH non-condensing					
Operating altitude	≤ 6560 ft / 2000 m					
Connection	Specific Socomec RJ12 cables					

## References

Model	Nominal current range (A)	Real range covered (A)	Window Diameter (in / mm)	Reference
TF-40	100 ... 400	2 ... 480	1.57 / 40	4829 0573
TF-80	150 ... 600	3 ... 720	3.15 / 80	4829 0574
TF-120	400 ... 2000	8 ... 2400	4.72 / 120	4829 0575
TF-200	600 ... 4000	12 ... 4800	7.87 / 200	4829 0576
TF-300	1600 ... 6000	32 ... 7200	11.81 / 300	4829 0577
TF-600	1600 ... 6000	32 ... 7200	23.62 / 600	4829 0578

### Accessories

Female/female connector for extension of the RJ12 connection between power meter and TF sensor.

### Reference

4829 0670

RJ12 sensor lead cables	Cable length (ft/m)										
	0.32/0.1	0.64/0.2	0.96/0.3	1.64/0.5	3.3/1	6.5/2	9.84/3	16.4/5	23/7	32.8/10	164/50 + 100 connectors
Number of cables	Reference	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	4829 0607	4829 0608	4829 0609	-
4	-	-	-	4829 0596	4829 0588	4829 0589	-	-	-	-	-
6	4829 0590	4829 0591	4829 0592	4829 0597	4829 0593	4829 0594	-	-	-	-	-