



# TE, TR and TF current sensors

## Current sensors

associated to DIRIS Digiware and DIRIS B-30

Current sensors

**new**



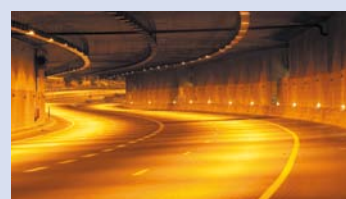
TE Solid current sensors



TR Split-core current sensors TF Flexible current sensors

### The solution for

- > Industry
- > Building
- > Infrastructure
- > Local authority



### Strong points

- > Plug & Play
- > Accuracy as per standard IEC 61557-12
- > Suitable for any installation

### Services & Technical Assistance

- > Technical site audits and solution specification, commissioning, maintenance, training... Our Services & Technical Assistance experts offer you personalised support to ensure success with all your projects.

### Conformity to standards

- > IEC 61557-12



- > ISO 14025



- > UL



## Function

TE, TR and TF current sensor ranges can be connected to DIRIS Digiware and DIRIS B-30 via a rapid RJ12 connection. Various accessories are available to allow the installation of sensors in all panel configurations.

Thanks to a wide measurement range, the TE current sensors cover the full current range from 5 to 1000 A, with only 6 models.

## 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 size/transformation ratio.
- Mounting orientation of current sensors is indifferent.

### Accuracy as per standard IEC 61557-12

- Class 0.5 from 2% to 120% of nominal current for the global measurement chain (associated with TE or TF current sensors).
- Class 1 from 2% to 120% of nominal current for the global measurement chain (associated with TR current sensors).

### Suitable for any installation

Dimensions of the range allow:

- New installation: a range of solid TE sensors adapted to the pitch of protective devices.
- Existing installations: a range of split-core TR sensors for existing sites.
- Existing space-constrained installations with high-intensity currents: a range of flexible TF current sensors (Rogowski).

## Selection guide

Current sensors	TE Solid current sensors	TR Split-core current sensors	TF Flexible current sensors
Nominal current range (A)	5 ... 1000	25 ... 600	150 ... 6000

## Functions

### TE range

- Solid current sensors.
- Plug & Play RJ12 connection.
- High accuracy over the whole operating range.
- 6 models with ratings from 5 to 1000 A that are adapted to the pitch of protective devices (18/25/35/45/55 mm).
- A 5A/RJ12 adapter for use with TC 5A current transformers in the DIRIS Digiware and DIRIS B-30 ranges.
- Accessories for back-plate, DIN-rail, cable or bar mounting.

### TR range

- Split-core current sensors.
- Plug & Play RJ12 connection.
- High accuracy over the whole operating range.
- 4 models with ratings from 25 to 600 A.
- Apertures from 10 to 36 mm.

### TF range

- Split-core current sensors.
- Plug & Play RJ12 connection.
- High accuracy over the whole operating range.
- 3 models with different ratings (from 150 to 6000 A).
- Apertures from 55 to 300 mm.

## Mounting

### TE range

Linear mounting (circuit breaker pitch)  
TE-25 / TE-35 / TE-45 / TE-55



### DIN-rail mounting

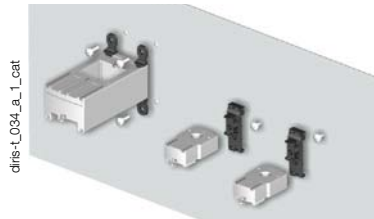


### Staggered mounting

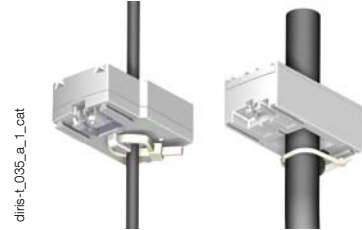
TE-18 / TE-35 / TE-45 / TE-55



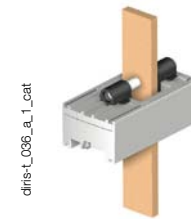
### Back-plate mounting



### Cable mounting

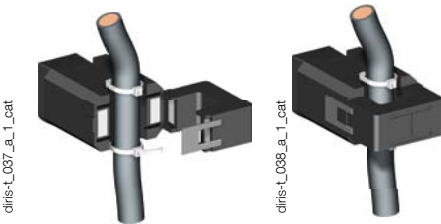


### Bar mounting



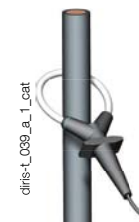
### TR range

Cable mounting

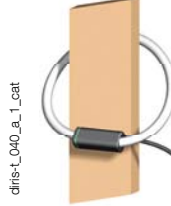


### TF range

Cable mounting



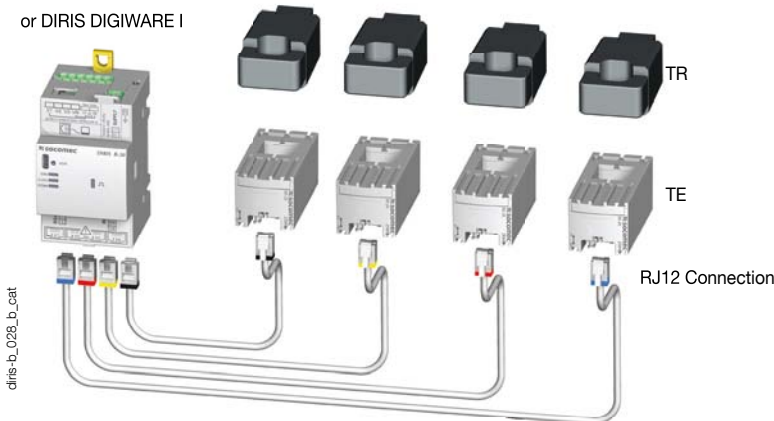
Bar mounting



## Connections

DIRIS B-30  
or DIRIS DIGIWARE I

TE / TR / TF current sensors



## Mounting accessories

Mounting accessories provided  
with TE current sensors

Fixing		TE-18	TE-25	TE-35 TE-45 TE-55
DIN-rail or back plate		1 part		
DIN-rail			2 parts	2 parts
Back plate			4 parts	4 parts
Bar				2 parts

diris-t\_042\_a - 043\_a - 044\_a - 045\_a

## Accessories

### Adapter for 5A CT

• This adapter is for use with a 5 A CT with output terminals on the DIRIS Digiware and DIRIS B-30. For use with standard 5 A current sensors for > 1000 A measurement requirements. Dimensions are identical to TE-18. See page 35.



### Coupling link

• Associated with the TE range, this accessory is for inter-connecting the sensors when linear or staggered mounted.



### Sealable cover

• Using a sealable cover guarantees the immunity of the sensor connection on TE/TR/TF current sensors.



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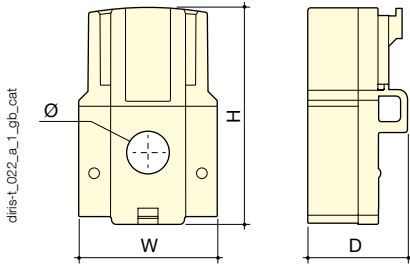
## current sensors

associated to DIRIS Digiware and DIRIS B-30

### Dimensions (mm)

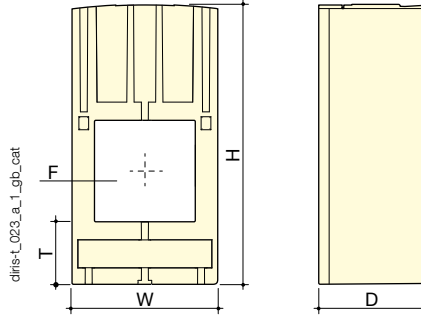
#### TE - Solid current sensors

TE-18



Model	Nominal current range (A)	Pitch (mm)	H x W x D (mm)	Ø (mm)
TE-18	5 ... 63	18	45 x 28 x 20	8,6

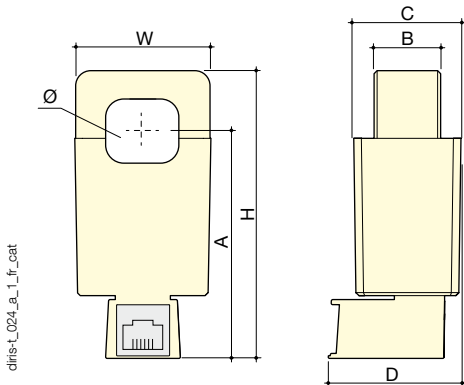
TE-25 / TE-35 / TE-45 / TE-55



Model	Nominal current range (A)	Pitch (mm)	H x W x D (mm)	F (mm)	T
TE-25	40 ... 160	25	65 x 25 x 32.5	13.5 x 13.5	17,5
TE-35	63 ... 250	35	71 x 35 x 32.5	21 x 21	17,5
TE-45	160 ... 630	45	86 x 45 x 32.5	31 x 31	19,5
TE-55	400 ... 1000	55	100 x 55 x 32.5	41 x 41	21,5

#### TR - Split-core current sensors

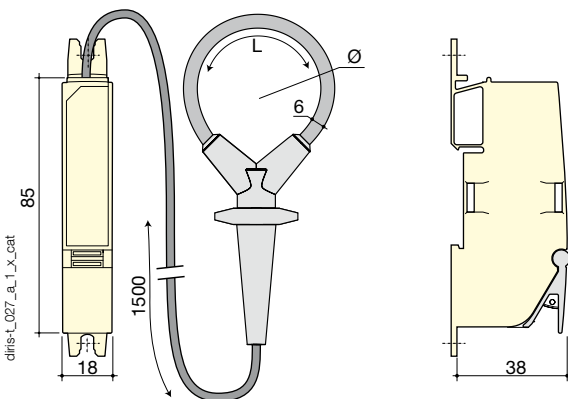
TR-10 / TR-16 / TR-24 / TR-36



Model	Nominal current range (A)	H x W x D (mm)	Ø (mm)	A	W	C
TR-10	25 ... 75	71 x 25 x 39	10	58	14,5	26
TR-16	32 ... 100	74 x 30 x 42	16	61	19	31
TR-24	63 ... 200	95 x 45 x 44	24	72	22	34
TR-36	200 ... 600	111 x 57 x 42	36	82	34	40,5

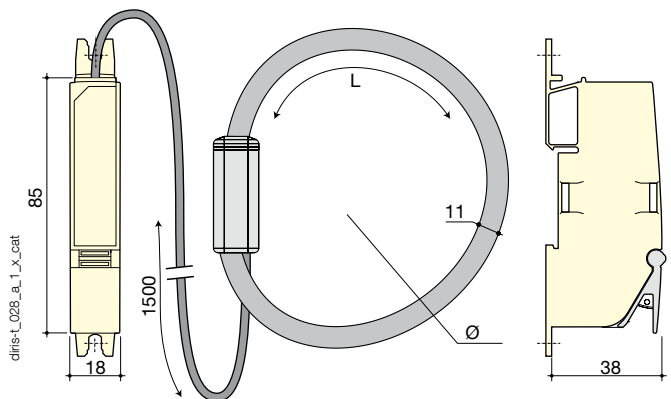
#### TF - Flexible current sensors

TF-55



Model	Nominal current range (A)	Ø loop	L = loop length
TF-55	150 ... 600	55	172

TF-120 / TF-300



Model	Nominal current range (A)	Ø loop	L = loop length
TF-120	500 ... 2000	120	376
TF-300	1600 ... 6000	300	942

### Technical characteristics

#### TE - Solid current sensors

Model	TE-18	TE-18	TE-25	TE-35	TE-45	TE-55
Nominal current range (A)	5 ... 20	25 ... 63	40 ... 160	63 ... 250	160 ... 630	400 ... 1000 <sup>(1)</sup>
Max. current (A)	24	75.6	192	300	756	1200
Weight (g)	24	24	69	89	140	187
Max. voltage	300 V			600 V		
Rated withstand voltage	3 kV			3,6 kV		
Frequency	50/60 Hz					
Intermittent overload	10 x I <sub>n</sub> during 1sec					
Measurement category	CAT III					
Degree of protection	IP30 / IK06					
Operating temperature	-10 ... +70 °C					
Storage temperature	-25 ... +85 °C					
Relative humidity	95 % non-condensing					
Altitude	2000 m					
Connection	SOCOMECC cable or equivalent RJ12 straight, twisted pair, unshielded 300 V cat. III cable. -40 / +85 °C					

(1) > 1000 A with 5A CT adapter.

#### TR - Split-core current sensors

Model	TR-10	TR-16	TR-24	TR-36
Nominal current range (A)	25 ... 75	32 ... 100	63 ... 200	200 ... 600
Max. current (A)	90	120	240	720
Weight (g)	74	117	211	311
Max. voltage	300 V			
Rated withstand voltage	3 kV			
Frequency	50/60 Hz			
Intermittent overload	10 I <sub>n</sub> for 1 s			
Measurement category	CAT III			
Degree of protection	IP20 / IK06			
Operating temperature	-10 ... +70 °C			
Storage temperature	-25 ... +85 °C			
Relative humidity	95 % non-condensing			
Altitude	2000 m			
Connection	SOCOMECC cable or equivalent RJ12 straight, twisted pair, unshielded 300 V cat. III cable. -40 / +85 °C			

#### TF - Flexible current sensors

Model	TF -55	TF -120	TF -300
Nominal current range (A)	150 ... 600	500 ... 2000	1600 ... 6000
Weight (g)	114	142	220
Max. voltage	600 V		
Rated withstand voltage	3,6 kV		
Frequency	50 / 60 Hz		
Intermittent overload	10 I <sub>n</sub> for 1 s		
Measurement category	CAT III		
Degree of protection	IP30 / IK07		
Operating temperature	-10 ... +70 °C		
Storage temperature	-25 ... +75 °C		
Relative humidity	95 % non-condensing		
Altitude	2000 m		
Connection	SOCOMECC cable or equivalent RJ12 straight, twisted pair, unshielded 300 V cat. III cable. -40 / +85 °C		

### References

#### TE - Solid current sensors

Model	Nominal current range (A)	Pitch (mm)	Reference
TE-18	5 ... 20	18	4829 0500
TE-18	25 ... 63	18	4829 0501
TE-25	40 ... 160	25	4829 0502
TE-35	63 ... 250	35	4829 0503
TE-45	160 ... 630	45	4829 0504
TE-55	400 ... 1000	55	4829 0505

#### TF - Flexible current sensors

Model	Nominal current range (A)	Ø (mm)	Reference
TF -55	150 ... 600	55	4829 0570
TF -120	500 ... 2000	120	4829 0571
TF -300	1600 ... 6000	300	4829 0572

Accessories	Reference
Coupling links (20 parts for linear mounting and 10 parts for staggered mounting)	4829 0598
5A/CT adapter (measurement >1000 A)	4829 0599
Sealable covers (20 parts)	4829 0600

#### TR - Split-core current sensors

Model	Nominal current range (A)	Ø (mm)	Reference
TR-10	25 ... 75	10	4829 0551
TR-16	32 ... 100	16	4829 0552
TR-24	63 ... 200	24	4829 0553
TR-36	200 ... 600	36	4829 0554

RJ12 connection cables	Cable length (m)								
	0,1	0,2	0,3	0,5	1	2	5	10	50 m + 50 connectors
N° of cables	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	-	-	-
4	4829 0585	4829 0586	4829 0587	4829 0596	4829 0588	4829 0589	-	-	-
6	4829 0590	4829 0591	4829 0592	4829 0597	4829 0593	4829 0594	-	-	-