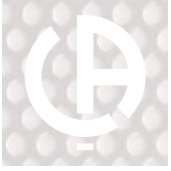


Measurement and Instrumentation

Transformers and shunts

Overview of ranges	p. 102
Selection guide	p. 104
Info & advice	p. 110
Standard industrial transformers TCR – TCRO – TC CLIP ranges	p. 112
Adaptable industrial transformers JVR – JVO – JVP ranges	p. 123
Transformers for energy metering JVS – JVO – JVP – TRI 500 – TRI 700 ranges	p. 129
Current summation JVM 15 – TCS ranges	p. 141
Transformer short-circuit switch PRTC range	p. 143
Shunts 76-2 – 77-2 – SHMI – SHEL – SHMO ranges	p. 144



Overview of product ranges

Measurement and instrumentation
Current transformers (CTs) & shunts

Standard industrial transformers

TCR
Wound primary
▶ page 113



TCR
Cable/busbar primary
▶ page 114



TCR
Busbar primary
▶ page 117



TCRO
Split core
▶ page 118



TC CLIP
Split core
▶ page 121



Adaptable industrial transformers

JVR
Wound primary
▶ page 124



JVO
Cable primary
▶ page 125



JVO
Cable/busbar primary
▶ page 126



JVP
Busbar primary
▶ page 127



Transformers for energy metering

JVS
Cable/busbar primary
▶ page 130



JVS
Busbar primary
▶ page 132



Transformers for price metering

Single-phase, single-rating

JVP 1045B
▶ page 134



JVO 40-100
▶ page 135



Single-phase, multi-rating

JVO 40-100S
▶ page 136



JVO 90-160S
▶ page 137



JVS 1145S
▶ page 138



Three-phase, single-rating

TRI 500
▶ page 139



Three-phase, multi-rating

TRI 700
▶ page 140



Current summation

JVM 15
▶ page 141



TCS
▶ page 142



Associated product

PRTC
CT short-circuiting switch
▶ page 143



Shunts

Class 0.5

76/2 – 77/2 range
▶ page 145



SHMO range
DIN rail mounting
▶ page 150



Class 1

SHMI range
▶ page 147



SHEL range
▶ page 149







Choosing your **standard industrial**

Choosing your **adaptable** industrial current transformer: page 112
 Choosing your transformer for **energy metering**: page 114

Measurement and instrumentation **Current transformers (CTs)**

		TCR Wound primary			TCR Cable/busbar primary						
		▶ page 113			▶ page 114						
											
		TCR 10	TCR 11	TCR 15	TCR 21	TCR 31	TCR 41	TCR 51	TCR 61	TCR 71	TCR 75
Wound primary (threaded rod)		aperture 25 x 25	Ø M6	wire 16 mm ²							
Cable primary (mm)					Ø 20	Ø 22	Ø 26	Ø 28	Ø 44	Ø 63	
Busbar primary (mm)					15 x 10 20 x 10 25 x 5	20 x 12 25 x 11 30 x 10	20 x 20 25 x 12 30 x 10	20 x 25 30 x 15 40 x 10	50 x 30 60 x 12	50 x 50 60 x 37 80 x 30	3 x 100 x 10
Primary	5 A										
	10 A										
	15 A										
	20 A										
	25 A										
	30 A										
	40 A										
	50 A										
	60 A										
	75 A										
	100 A										
	125 A										
	150 A										
	200 A										
	250 A										
	300 A										
	400 A										
	500 A										
	600 A										
	750 A										
	800 A										
	1000 A										
	1200 A										
	1500 A										
	2000 A										
	2500 A										
	3000 A										
	4000 A										
	5000 A										
Strengths		Combining a high level of accuracy and compact design.			Come in a wide range of primaries. Mounting accessories supplied as standard.						



5 A or 1 A secondary as standard



5 A secondary as standard
1 A on request



5 A secondary only





Choosing your adaptable industrial

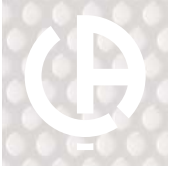
Choosing your standard industrial current transformer: page 110

Choosing your transformer for energy metering: page 114

Measurement and instrumentation Current transformers (CTs)

		JVR Wound primary			JVO Cable primary						
		▶ page 124			▶ page 125						
											
		JVR 64	JVR 75	JVR 86	JVO 12-46	JVO 18-51	JVO 21-64	JVO 21-75	JVO 32-75	JVO 36-75	J3R 80 B
Wound primary (threaded rod)		M8	M8 - M10	M8 - M10							
Cable primary (mm)					Ø 12	Ø 18	Ø 21	Ø 21	Ø 32	Ø 36	Ø 66
Busbar primary (mm)											
Primary	5 A										
	10 A										
	15 A										
	20 A										
	25 A										
	30 A										
	40 A										
	50 A										
	60 A										
	75 A										
	100 A										
	125 A										
	150 A										
	200 A										
	250 A										
	300 A										
	400 A										
	500 A										
	600 A										
	750 A										
	800 A										
	1000 A										
	1200 A										
	1250 A										
	1500 A										
	2000 A										
	2500 A										
	3000 A										
Strengths		Primary connection via threaded rod for more compact size.			A wide choice of primaries.						
		SPECIFIC PRODUCTS POSSIBLE IN THIS RANGE									

5 A secondary as standard / 1 A on request



Choosing your current transformer for

Choosing your **standard** industrial current transformer: page 104

Choosing your **adaptable** industrial current transformer: page 106

▲ Measurement and instrumentation Current transformers (CTs)

JVS Cable/busbar primary	JVS Busbar primary
------------------------------------	------------------------------

► page 130



► page 132



		JVS 25B	JVS 26B	JVS 30B	JVS 38B	JVS 39B	JVS 40	JVS 50	JVS 60
Cable primary (mm)		Ø 26	Ø 28	Ø 44	Ø 63				
Busbar primary (mm)		20 x 20 25 x 12 30 x 10	20 x 25 30 x 15 40 x 10	50 x 30 60 x 12	50 x 50 60 x 30 80 x 30	3 x 100 x 10	100 x 20	100 x 30	125 x 60
Primary	100 A								
	150 A								
	200 A								
	250 A								
	300 A								
	400 A								
	500 A								
	600 A								
	750 A								
	800 A								
	1000 A								
	1200 A								
	1500 A								
	2000 A								
2500 A									
3000 A									
4000 A									
5000 A									
Strengths		High-accuracy range with very low phase shift, ideal for electronic measurement instruments, including energy metering							








 5 A secondary as standard

 5 A secondary as standard with individual test certificate

 1 A secondary with individual test certificate on request

energy and price metering

Single-phase single-rating	Single-phase multi-rating			Three-phase single-rating	Three-phase multi-rating			
▶ pages 134-135	▶ pages 136-137-138			▶ page 139	▶ page 140			

	 JVP 1045 B	 JVO 40-100	 JVO 40-100 S bi-rating	 JVO 90-160 S tri-rating	 JVS 1145 S tri-rating	 TRI 500	 TRI 700 S 50-100/5 A	TRI 700 S 100-200/5 A	TRI 700 S 200-500/5 A	TRI 700 100-200- 500/5 A
Accuracy class (according to EN 60044-1)	0.5	0.5	0.2s	0.2s	0.2s	0.5	0.2s	0.2s	0.2s	0.5
Cable primary (diameter in mm)		Ø 42 mm	Ø 40 mm	Ø 90 mm	Ø 40 mm					
Busbar primary (mm)	100 x 40				63 x 12 100 x 12					
Cable clamp (section in mm ²)						22 to 240 mm ²	50 to 240 mm ²	50 to 240 mm ²	50 to 240 mm ²	50 to 240 mm ²
Primary (secondary 5 A)	50 A									
	100 A									
	150 A									
	200 A									
	300 A									
	500 A									
	1000 A									
	2000 A									



Info & advice

TRANSFORMERS

Function

Current transformers power low-voltage measuring instruments and isolate them from the network. They supply their secondary winding with a standard current proportional to the primary current. They are divided into four main families:

- wound primaries;
- split-core primaries;
- cable primaries;
- busbar primaries.

These transformers can be used with all types of measuring instruments: ammeters, energy meters, power monitors, etc.

How to choose a current transformer?

The choice is based on two main criteria:

- the current on the primary (transformation ratio $I_p / 5A$);
- the type of installation.

In other words, the choice **depends on the type of cable or busbar** on the installation and the **intensity of the currents flowing through them**.

Determining a CT's accuracy class

The accuracy class of a current transformer depends on the transformer's apparent power (VA) and the consumption of the entire measurement line. It is the result of the measurement errors of each element in the line and must therefore be less than or equal to the accuracy class of the measuring instrument which it supplies, particularly for energy metering where accuracy has a direct impact on billing. For a given accuracy class, the measurement line's consumption must not exceed the current transformer's apparent power (VA).

Example of measurement chain consumption at 20 °C

Copper-wire section (mm ²)	Power dissipated per metre of line (2 ways)	
	Secondary 5 A	Secondary 1 A
1.5	0.61	0.025 VA
2.5	0.37	0.015 VA
4	0.23	0.009 VA
6	0.15	0.006 VA

Enerium 50 Power Monitor	0.15 VA
5 m of double 2.5 mm ² wire	0.37 x 5 = 1.85 VA
Measurement line consumption	0.15 + 1.85 = 2 VA



The transformer's accuracy class can then be deduced from the results obtained by referring to the table opposite (provided as an example):

- Class 3 for a CT with a ratio of 150/5
- Class 1 for a CT with a ratio of 200/5
- Class 0.5 for a CT with a ratio of 250/5

Primary	Power (VA) on Class		
	0.5	1	3
100 A	-	1	1.5
125 A	-	1	1.5
150 A	1	1.75	2.5
200 A	1.5	2.75	3.75
250 A	2	3.25	3.75
300 A	2.5	3.25	4
400 A	3	3.75	5
500 A	3.5	3.75	5
600 A	3.75	5	7.5

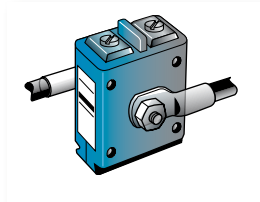
Accuracy limit tables according to the IEC 60044-1 standard

Class	Limit errors – Table 1			
	± Error (in %) depending on I _n (in %)			
	5	20	100	120
0.2	0.75	0.35	0.20	0.20
0.5	1.50	0.75	0.50	0.50
1	3.00	1.50	1.00	1.00

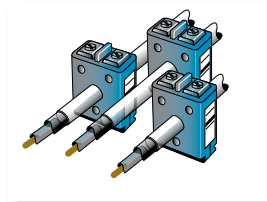
Class	Limit errors – Table 2				
	± Error (in %) depending on I _n (in %)				
	1	5	20	100	120
0.2 S	0.75	0.35	0.20	0.20	0.20
0.5 S	1.50	0.75	0.50	0.50	0.50

SELECTING A TRANSFORMER

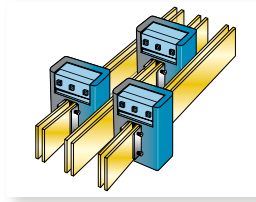
Enerdis current transformers offer 4 types of connection:



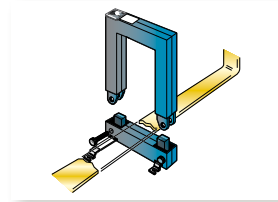
WOUND PRIMARY
for currents less than 200 A



CABLE PRIMARY
for currents between 40 and 2,500 A



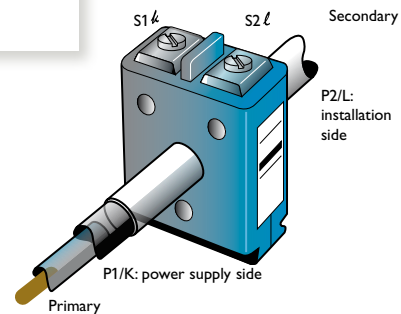
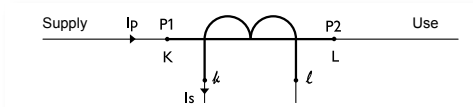
BUSBAR PRIMARY
for currents between 750 and 5,000 A



SPLIT CORE PRIMARY
for easy connection to an existing installation using a busbar or cable primary

CONNECTING YOUR CT

It is important to always install the transformer in the right direction, especially on three-phase networks, so as not to invert the phase shift between the current and the voltage on one or more of the phases.



SHUNTS



Shunts cause a standard voltage drop which can be processed by measuring instruments. Although mainly used on DC currents, they can also be used on AC currents.

Installing a shunt

Avoid overheating

A shunt emits heat that must be evacuated in order to maintain the accuracy class. Up to 100 A, heat evacuation is by natural convection.

Beyond this, natural convection must be associated with thermal dissipation in the conductors on which it is mounted. Natural convection is best achieved when the shunt is in the horizontal position, with the blades oriented vertically.

Calculation of the heat evacuated is carried out by the contractor, especially evacuation by linking bars (size, disposition, number). For use on direct currents,

it is recommended not to go beyond 80% of the rated current of the shunt and to ensure that its temperature does not exceed 150°C (heating plus ambient temperature). For high currents, forced convection is compulsory.

Limit derivation currents

It is possible to connect one or more receivers to one shunt as long as the derivation current or the sum of the derivation current is relatively small compared to the nominal rating. You must take into account the additional voltage drop introduced by the length of the derivation wires. The derivation current generally accepted to remain in the accuracy class is 5 mA.

FOCUS

Financial impact of a TC's accuracy class

For a consumption of 12,000 MWh/year and a cost of € 0.10/kWh

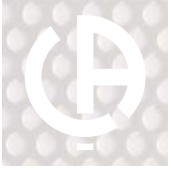
- CT class 1: $\pm 120,000$ kWh = $\pm \text{€ } 12,000$
- CT class 0.5: $\pm 60,000$ kWh = $\pm \text{€ } 6,000$
- CT class 0.2S: $\pm 2,500$ kWh = $\pm \text{€ } 2,500$

This calculation takes into account neither the class of the measuring instruments, nor loss occurring on the network cables.

CT safety rules

You must never open the secondary circuit of a CT supplied on the primary. The very high voltage created may cause bodily harm or irreparable damage to the transformer. Before working on the secondary of a CT, it must be short-circuited.

When a CT is not in use (secondary open) the secondary must be short-circuited before powering up the system.



TCR Range

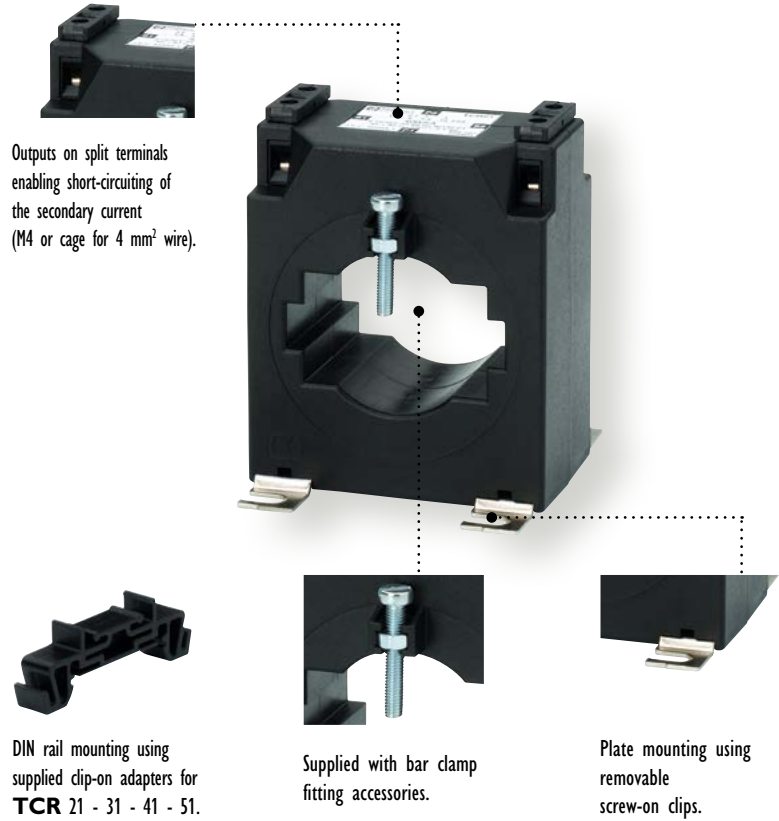
CTs designed for submetering. Accuracy class 0.5/1/3

Current transformers (CTs)

Measurement and instrumentation

PRODUCT ADVANTAGES

- + EXTENDED RANGE:**
primary currents from 5 to 5,000 A and 5 A or 1 A secondary currents
- + DIN RAIL MOUNTING:**
on plate mounting or fixed around busbars
- + COMPACT DESIGN**



General specifications

Reference standards:
EN 60044-1 (ex IEC 185)

Maximum network voltage:
720 Vac

Dielectric test voltage:
3 kV/50 Hz/1 min

Frequency response: 50/60 Hz

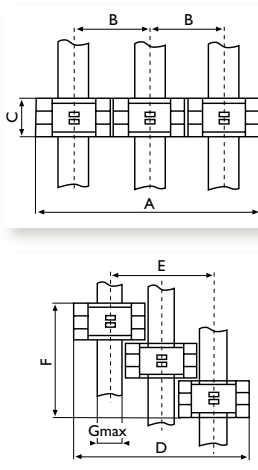
Short-circuit thermal current (I_{th}): 60 I_n - 1 second

Dynamic current (I_{dyn}): 2.5 I_{th}

Safety factor: < 5

Operating conditions
Temperature: -10°C to +50°C
Relative humidity: < 90%

Protection
Protection rating: IP 50 (terminal covers supplied)
Dry winding with self-extinguishing ABS covering (UL 94VO)



3CT Mounting

Model	Dimensions						
	A	B	C	D	E	F	G
TCR 10	-	-	-	-	-	-	-
TCR 11	-	-	-	-	-	-	-
TCR 15	-	-	-	-	-	-	-
TCR 21	176	59	32	143.6	85.6	98	25.6
TCR 31	176	59	32	148.6	90.6	98	30.6
TCR 41	194	65	44	160.6	96.6	134	30.6
TCR 51	194	65	44	170.6	106.6	134	40.6
TCR 61	255.5	85.5	50	231.6	147.1	152	60.6
TCR 71	326	109	50	298.6	190.6	152	80.6
TCR 80	287	96	59	215	120	179	23
TCR 90	347	116	44	264	149	134	32
TCR 100	374	125	44	310	186	134	60

Mounting accessories

Model	DIN rail fittings	Plate mounting fittings	Sealable terminal cover*
TCR 10	1923 0021	•	•
TCR 11	1923 0021	•	•
TCR 15	•	•	•
TCR 21	•	•	1923 0022
TCR 31	•	•	1923 0022
TCR 41	•	•	1923 0022
TCR 51	•	•	1923 0022
TCR 61	•	•	1923 0022
TCR 71	•	•	1923 0022
TCR 75	•	•	1923 0022
TCR 80	•	•	•
TCR 90	•	•	•
TCR 100	•	•	•

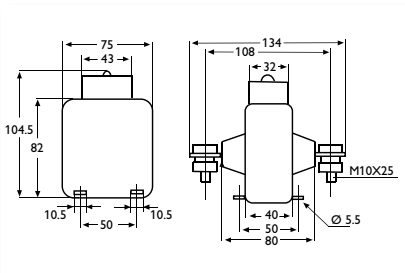
• Standard accessories

* sold in pairs

TCR Wound primary

TCR 10

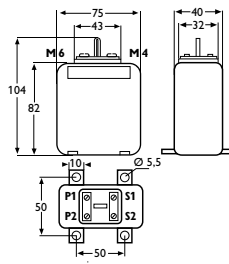
25 x 25 mm aperture



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
5 A	15	20	30	0.70
10 A	15	20	30	0.70
15 A	15	20	30	0.70
20 A	15	20	30	0.70
25 A	15	20	30	0.70
30 A	15	20	30	0.70
40 A	15	20	30	0.70
50 A	15	20	30	0.80
60 A	15	20	30	0.80
75 A	15	20	30	0.75
100 A	15	20	30	0.70
125 A	15	20	30	0.70
150 A	15	20	30	0.70

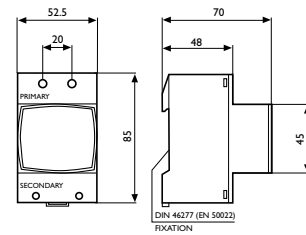
TCR 11

Ø M4 and M6



Primary	Power (VA) class		Weight (kg)
	1	5	
5 A	5	0.50	
10 A	5	0.50	
15 A	5	0.50	
20 A	5	0.50	
25 A	5	0.50	
30 A	5	0.50	
40 A	5	0.50	
50 A	5	0.50	
60 A	5	0.50	

TCR 15

Primary: 16 mm² wire
Secondary: 4 mm² wire

Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
5 A	2.5	5	7	0.28
10 A	2.5	5	7	0.28
15 A	2.5	5	7	0.28
20 A	2.5	5	7	0.28
25 A	2.5	5	7	0.28
30 A	2.5	5	7	0.28
40 A	2.5	5	7	0.28
50 A	2.5	5	7	0.28

T O O R D E R

Primary	Secondary 1 A	Secondary 5 A
5 A	1921 1507	1920 1507
10 A	1921 1512	1920 1512
15 A	1921 1514	1920 1514
20 A	1921 1515	1920 1515
25 A	1921 1516	1920 1516
30 A	1921 1517	1920 1517
40 A	1921 1518	1920 1518
50 A	1921 1519	1920 1519
60 A	1921 1521	1920 1521
75 A	1921 1523	1920 1523
100 A		1920 1525
125 A		1920 1526
150 A		1920 1528

Primary	Secondary 1 A	Secondary 5 A
5 A	1921 1607	1920 1607
10 A	1921 1612	1920 1612
15 A	1921 1614	1920 1614
20 A	1921 1615	1920 1615
25 A	1921 1616	1920 1616
30 A	1921 1617	1920 1617
40 A	1921 1618	1920 1618
50 A	1921 1619	1920 1619
60 A	1921 1621	1920 1621

Primary	Secondary 1 A	Secondary 5 A
5 A	1921 1707	1920 1707
10 A	1921 1712	1920 1712
15 A	1921 1714	1920 1714
20 A	1921 1715	1920 1715
25 A	1921 1716	1920 1716
30 A	1921 1717	1920 1717
40 A	1921 1718	1920 1718
50 A	1921 1719	1920 1719

► Associated products

PRTC
CT protection unit

► page 143

Mounting
accessories

► page 112





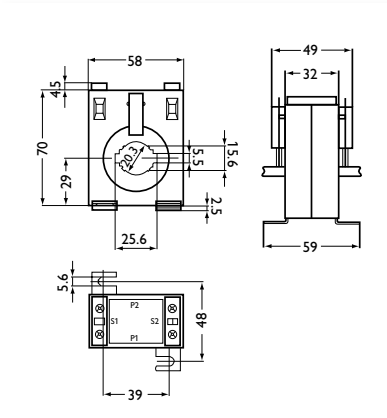
TCR Range

Cable/busbar primary

Current transformers (CTs)

TCR 21

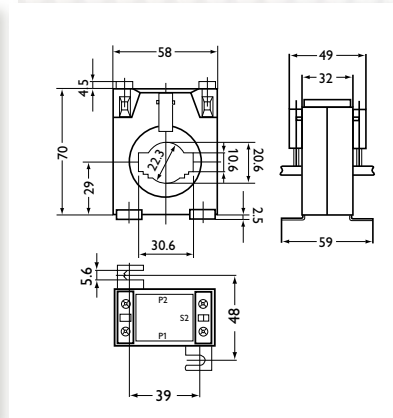
Cable Ø 20 mm
Bar: 15 x 10 mm - 20 x 10 mm
25 x 5 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
40 A	-	-	1.5	0.41
50 A	-	-	3	0.42
60 A	-	1.25	3.5	0.43
75 A	-	2	3.5	0.44
100 A	1.5	2.5	3.75	0.44
125 A	1.75	3.5	5	0.45
150 A	2.5	3.5	5	0.29
200 A	3.75	5	5	0.30
250 A	5	7.5	7.5	0.31

TCR 31

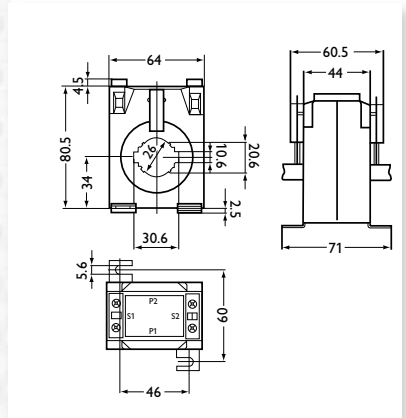
Cable Ø 22 mm
Bar: 20 x 12 mm - 25 x 11 mm
30 x 10 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	1	1.5	0.53
125 A	-	1	2	0.53
150 A	1	2	2.5	0.53
200 A	2.5	3	3.5	0.54
250 A	3.5	3.75	5	0.54
300 A	3.5	3.75	5	0.51
400 A	3.5	5	7.5	0.51
500 A	5	7.5	10	0.51
600 A	5	7.5	10	0.52

TCR 41

Cable Ø 26 mm
Bar: 20 x 20 mm - 25 x 12 mm
30 x 10 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	1.75	3.75	7.5	0.53
125 A	3.75	7.5	10	0.53
150 A	5	7.5	10	0.53
200 A	7.5	10	10	0.54
250 A	7.5	10	15	0.54
300 A	10	10	15	0.51
400 A	10	10	15	0.51
500 A	15	15	20	0.51
600 A	15	20	25	0.51

TO ORDER

Primary	Secondary 1 A	Secondary 5 A
40 A	1921 2318B	1920 2318B
50 A	1921 2319B	1920 2319B
60 A	1921 2321B	1920 2321B
75 A	1921 2323B	1920 2323B
100 A	1921 2325B	1920 2325B
125 A	1921 2326B	1920 2326B
150 A	1921 2328B	1920 2328B
200 A	1921 2330B	1920 2330B
250 A	1921 2331B	1920 2331B

Primary	Secondary 1 A	Secondary 5 A
100 A	1921 2425B	1920 2425B
125 A	1921 2426B	1920 2426B
150 A	1921 2428B	1920 2428B
200 A	1921 2430B	1920 2430B
250 A	1921 2431B	1920 2431B
300 A	1921 2433B	1920 2433B
400 A	1921 2435B	1920 2435B
500 A	1921 2436B	1920 2436B
600 A	1921 2438B	1920 2438B

Primary	Secondary 1 A	Secondary 5 A
100 A	1921 2525B	1920 2525B
125 A	1921 2526B	1920 2526B
150 A	1921 2528B	1920 2528B
200 A	1921 2530B	1920 2530B
250 A	1921 2531B	1920 2531B
300 A	1921 2533B	1920 2533B
400 A	1921 2535B	1920 2535B
500 A	1921 2536B	1920 2536B
600 A	1921 2538B	1920 2538B

Associated products

PRTC
CT protection unit

► page 143



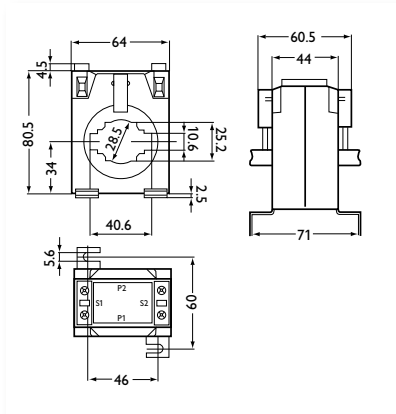
Mounting
accessories

► page 112



TCR 51

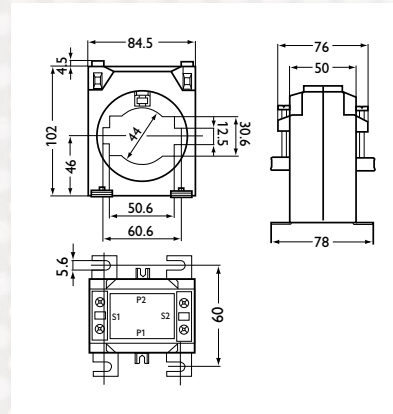
Cable Ø 28 mm
Bar: 20 x 25 mm - 30 x 15 mm
40 x 10 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	0.5	1	2.5	0.36
125 A	0.75	1.5	3.75	0.37
150 A	1	3.5	5	0.37
200 A	3.5	5	7.5	0.38
250 A	5	7.5	10	0.39
300 A	5	7.5	10	0.40
400 A	5	7.5	10	0.41
500 A	7.5	10	15	0.41
600 A	7.5	10	15	0.42
750 A	10	15	20	0.43
800 A	10	15	20	0.44

TCR 61

Cable Ø 44 mm
Bar: 50 x 30 mm - 60 x 12 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
400 A	5	7.5	10	0.5
500 A	7.5	10	15	0.52
600 A	10	15	20	0.52
750 A	15	20	25	0.59
800 A	15	20	30	0.60
1000 A	15	20	30	0.61
1200 A	15	20	30	0.63
1500 A	15	20	30	0.65

TO ORDER

Primary	Secondary 1 A	Secondary 5 A
100 A	1921 3425B	1920 3425B
125 A	1921 3426B	1920 3426B
150 A	1921 3428B	1920 3428B
200 A	1921 3430B	1920 3430B
250 A	1921 3431B	1920 3431B
300 A	1921 3433B	1920 3433B
400 A	1921 3435B	1920 3435B
500 A	1921 3436B	1920 3436B
600 A	1921 3438B	1920 3438B
750 A	1921 3440B	1920 3440B
800 A	1921 3441B	1920 3441B

Primary	Secondary 1 A	Secondary 5 A
400 A	1921 4735B	1920 4735B
500 A	1921 4736B	1920 4736B
600 A	1921 4738B	1920 4738B
750 A	1921 4740B	1920 4740B
800 A	1921 4741B	1920 4741B
1000 A	1921 4742B	1920 4742B
1200 A	1921 4751B	1920 4751B
1500 A	1921 4744B	1920 4744B

► Associated products

PRTC
CT protection unit

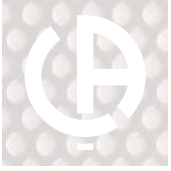
► page 143



Mounting
accessories

► page 112





TCR Range

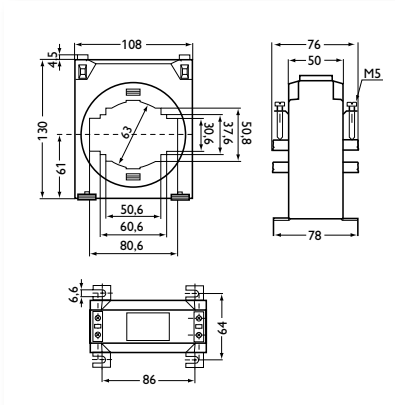
Cable/busbar primary

Current transformers (CTs)

Measurement and instrumentation

TCR 71

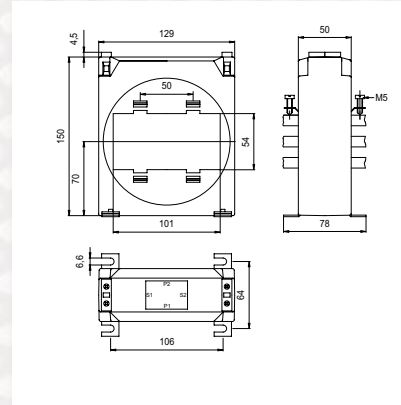
Cable \varnothing 63 mm
 Bar: 50 x 50 mm - 60 x 37 mm
 80 x 30 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
400 A	5	7.5	10	0.82
500 A	5	7.5	10	0.80
600 A	7.5	10	15	0.83
750 A	7.5	10	15	0.88
800 A	7.5	10	15	0.66
1000 A	10	15	20	0.72
1200 A	10	15	20	0.68
1500 A	15	20	25	0.84
2000 A	15	20	25	0.82
2500 A	15	20	30	0.88
3000 A	15	20	30	0.88

TCR 75

Bar: 3 x 100 mm x 10 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
1500 A	15	20	30	1.47
2000 A	15	20	30	1.55
2500 A	20	30	40	1.63
3000 A	30	40	60	1.71
4000 A	35	40	60	1.87

TO ORDER

Primary	Secondary 1 A	Secondary 5 A
400 A	1921 4635B	1920 4635B
500 A	1921 4636B	1920 4636B
600 A	1921 4638B	1920 4638B
750 A	1921 4640B	1920 4640B
800 A	1921 4641B	1920 4641B
1000 A	1921 4642B	1920 4642B
1200 A	1921 4651B	1920 4651B
1500 A	1921 4644B	1920 4644B
2000 A	1921 4645B	1920 4645B
2500 A	1921 4646B	1920 4646B
3000 A	1921 4647B	1920 4647B

Primary	Secondary 1 A	Secondary 5 A
1500 A	1921 5044B	1920 5044B
2000 A	1922 5045B	1920 5045B
2500 A	1923 5046B	1920 5046B
3000 A	1924 5047B	1920 5047B
4000 A	1925 5049B	1920 5049B

Associated products

PRTC
CT protection unit

► page 143



Mounting
accessories

► page 112

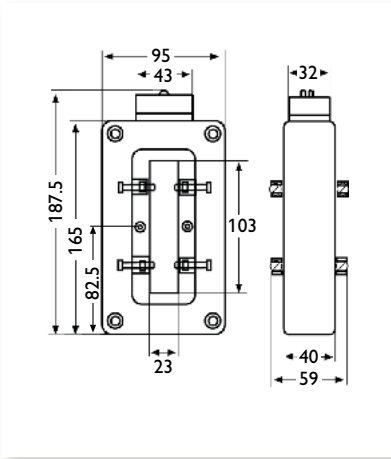


TCR Range

Busbar primary

TCR 80

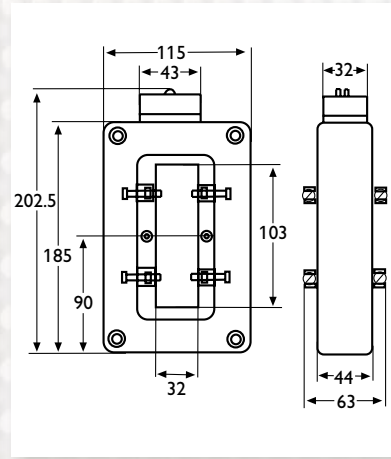
Bar: 100 x 20 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
750 A	15	20	30	0.80
800 A	15	20	30	0.80
1000 A	15	20	30	0.76
1200 A	15	20	30	0.76
1500 A	15	30	40	0.76
2000 A	20	40	50	0.76

TCR 90

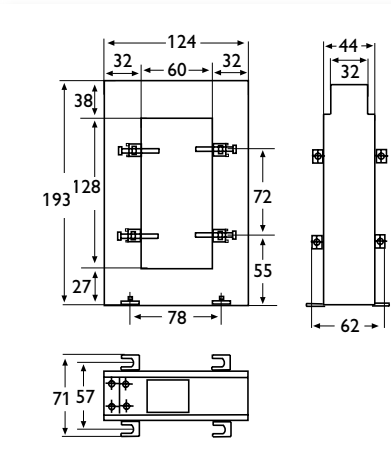
Bar: 100 x 30 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
1500 A	15	30	40	0.76
2000 A	20	40	50	0.82
2500 A	20	40	50	0.78
3000 A	20	45	60	0.90
4000 A	35	50	70	0.90

TCR 100

Bar: 125 x 60 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
1000 A	15	20	30	0.75
1200 A	15	20	30	0.80
1500 A	15	20	30	0.83
2000 A	15	20	30	0.92
2500 A	20	30	40	1.01
3000 A	30	40	60	1.09
4000 A	35	50	70	1.21
5000 A	40	60	80	1.44

TO ORDER

Primary	Secondary 1 A	Secondary 5 A
750 A	1921 5640	1920 5640
800 A	1921 5641	1920 5641
1000 A	1921 5642	1920 5642
1200 A	1921 5651	1920 5651
1500 A	1921 5644	1920 5644
2000 A	1921 5645	1920 5645

Primary	Secondary 1 A	Secondary 5 A
1500 A	1921 6644	1920 6644
2000 A	1921 6645	1920 6645
2500 A	1921 6646	1920 6646
3000 A	1921 6647	1920 6647
4000 A	1921 6649	1920 6649

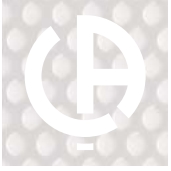
Primary	Secondary 1 A	Secondary 5 A
1000 A	1921 6842	1920 6842
1200 A	1921 6851	1920 6851
1500 A	1921 6844	1920 6844
2000 A	1921 6845	1920 6845
2500 A	1921 6846	1920 6846
3000 A	1921 6847	1920 6847
4000 A	1921 6849	1920 6849
5000 A		1920 6850

Associated products

PRTC
CT protection unit

► page 143





TCRO Range

CTs designed for insertion on electrical installations without opening the conductor.

Current transformers (CTs)

Measurement and instrumentation

PRODUCT ADVANTAGES

- +** **PRIMARY**
from 200 to 5,000 A
and wide choice of
primary options
- +** **FULLY OPENING**
primary

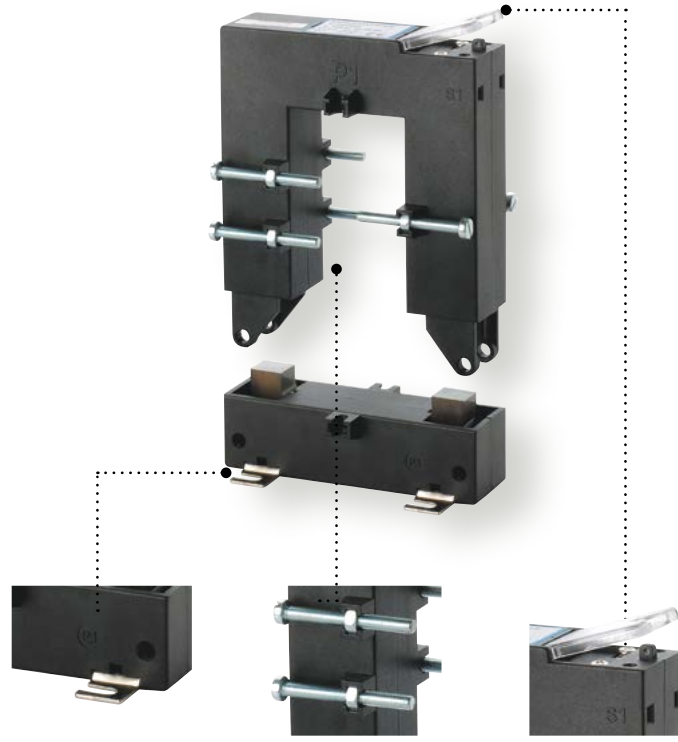


Plate mounting fitting

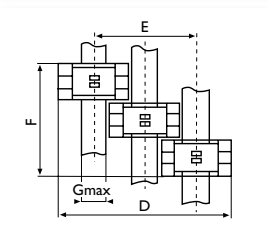
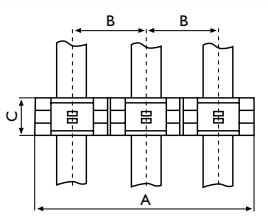
Bar clamp fitting

Captive sealable terminal covers. Split output terminals enabling risk-free short-circuiting of the secondary current (cage for 4 mm² wire)

► General specifications

Reference standard:
EN 60044-1 (ex IEC 185)
Maximum network voltage:
720 Vac
Dielectric test voltage:
3 kV/50 Hz/1 min
Frequency response: 50/60 Hz
Short-circuit thermal current (I_{th}): 60 I_n - 1 second
Dynamic current (I_{dyn}): 2.5 I_{th}
Safety factor: < 5

Operating conditions:
Temperature: -10°C to +50°C
Relative humidity: < 90%
Protection:
Protection rating: IP 50 (terminal covers supplied)
Dry winding with self-extinguishing ABS covering (UL 94 VO)



► 3CT Mounting

Model	Dimensions						
	A	B	C	D	E	F	G
TCRO 2030	269	90	40	200	111	122	20
TCRO 5080	344	115	32	280	166	98	50
TCRO 8080	434	145	32	370	226	98	80
TCRO 80120	434	145	32	370	226	98	80
TCRO 80160	554	185	52	450	266	158	80

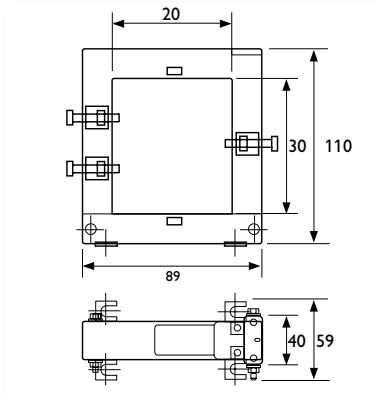
► Mounting accessories

Model	Plate mounting fittings	Busbar clamp
	TCRO 2030	•
TCRO 5080	•	•
TCRO 8080	•	•
TCRO 80120	•	•
TCRO 80160	•	•

• Standard accessories

TCRO 2030

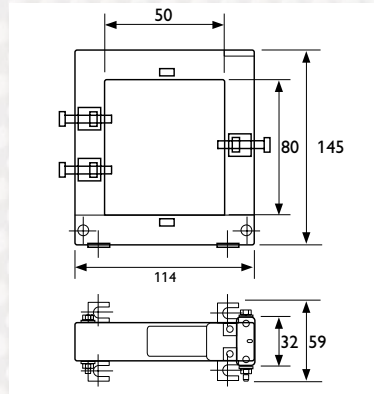
Bar: 20 x 30 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	1.5	0.75
150 A	-	-	2	0.75
200 A	-	1.5	2.5	0.75
250 A	-	2	4	0.75
300 A	1.5	4	6	0.75
400 A	2.5	6	10	0.75

TCRO 5080

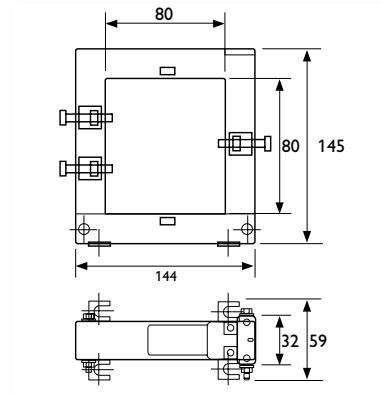
Bar: 50 x 80 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
250 A	1	2	4	0.90
300 A	1.5	3	6	0.90
400 A	1.5	3	10	0.90
500 A	2.5	5	15	0.90
600 A	2.5	5	17.5	0.90
800 A	3	7	18	0.90
1000 A	5	10	20	0.90

TCRO 8080

Bar: 80 x 80 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
250 A	1	2	4	1.00
300 A	1.5	3	6	1.00
400 A	1.5	3	10	1.00
500 A	2.5	5	15	1.00
600 A	2.5	5	17.5	1.00
800 A	3	7	18	1.00
1000 A	5	10	20	1.00

TO ORDER

Primary	Secondary 5 A
100 A	1920 8328
150 A	1920 8329
200 A	1920 8330
250 A	1920 8331
300 A	1920 8333
400 A	1920 8335

1 A on request

Primary	Secondary 5 A
250 A	1920 8431
300 A	1920 8433
400 A	1920 8435
500 A	1920 8436
600 A	1920 8438
800 A	1920 8441
1000 A	1920 8442

1 A secondary on request

Primary	Secondary 5 A
250 A	1920 8531
300 A	1920 8533
400 A	1920 8535
500 A	1920 8536
600 A	1920 8538
800 A	1920 8541
1000 A	1920 8542

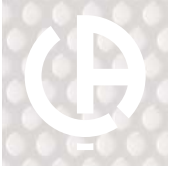
1 A secondary on request

Associated products

PRTC
CT protection unit

► page 143





TCRO Range

Split core

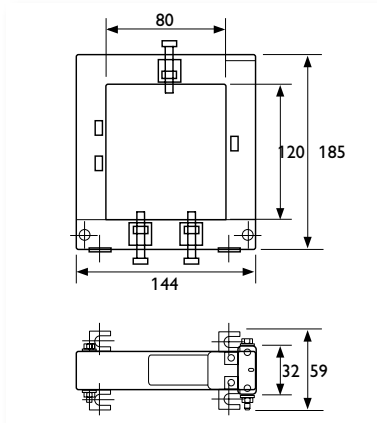
Current transformers (CTs)

Measurement and instrumentation



TCRO 80120

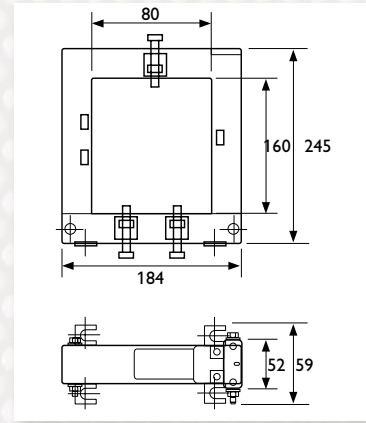
Bar: 80 x 120 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
500 A	-	4	12	1.20
600 A	-	5	14	1.20
800 A	3	7	18	1.20
1000 A	5	9	20	1.20
1200 A	6	11	28	1.20
1500 A	8	17	30	1.20

TCRO 80160

Bar: 80 x 160 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
1000 A	10	15	20	3.50
1500 A	15	20	25	3.50
2000 A	15	20	25	3.50
2500 A	15	20	25	3.50
3000 A	20	25	30	3.50
4000 A	20	25	30	3.50
5000 A	20	25	30	3.50

TO ORDER

Primary	Secondary 5 A
500 A	1920 8636
600 A	1920 8638
800 A	1920 8641
1000 A	1920 8642
1200 A	1920 8643
1500 A	1920 8644

1 A on request

Primary	Secondary 5 A
1000 A	1920 8742
1500 A	1920 8744
2000 A	1920 8745
2500 A	1920 8746
3000 A	1920 8747
4000 A	1920 8749
5000 A	1920 8750

1 A on request

► Associated products

PRTC
CT protection unit

► page 143



TC CLIP Range

Very compact current transformer for inclusion on electrical installations without disconnecting the power cables

PRODUCT ADVANTAGES

- + **QUICK AND EASY IMPLEMENTATION**
without cutting off the power
- + **VERY COMPACT**
- + **PRIMARY**
from 100 to 600 A



► General specifications

Maximum network voltage: 720 Vac
Dielectric test voltage: 3 kV 50 Hz 1 min
Secondary current: 1 A
Power: 0.5 VA
Frequency: 50/60 Hz
Operating temperature: -20°C to +50°C
Storage temperature: -30°C to 90°C
Accuracy class: 1 %

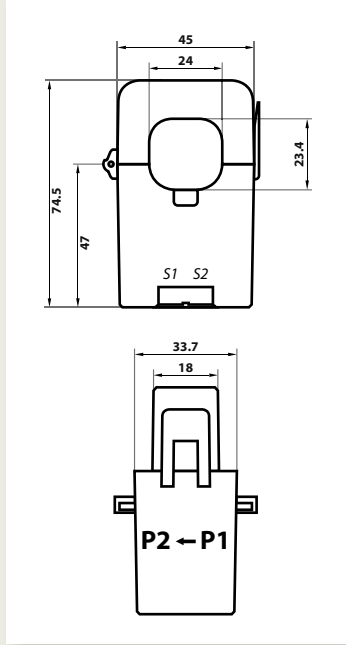


Current transformers (CTs)

Measurement and instrumentation

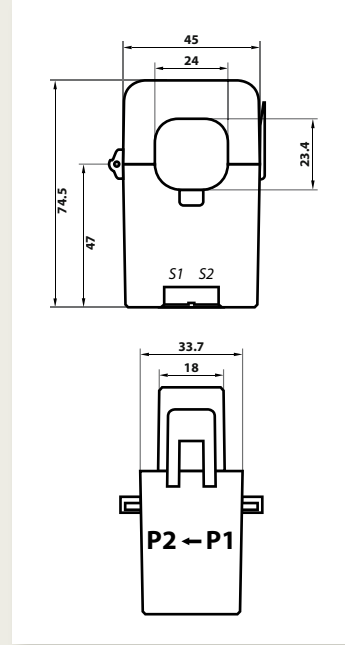
TCC241 / TCC242

Cable Ø 24 mm



TCC364 / TCC366

Cable Ø 36 mm



	Power (VA) in class	Weight
Primary	1	(g)
100 A	0.5	162
200 A	0.5	187

	Power (VA) in class	Weight
Primary	1	(g)
400 A	0.5	263
600 A	0.5	300

TO ORDER

Model	Primary	1 A secondary
TCC241	100 A	P01379601
TCC242	250 A	P01379602
TCC364	400 A	P01379603
TCC366	600 A	P01379604

Pack of 3 TC CLIP	Reference
Pack 3 TCC241	P01379605
Pack 3 TCC242	P01379606
Pack 3 TCC364	P01379607
Pack 3 TCC366	P01379608

► Related products

RENOV ENERGY
Metering solutions

► page 70



JVR-JVO-JVP Ranges

CTs designed to supply analogue or digital measurement instruments.
Accuracy class 0.5/1/3

PRODUCT ADVANTAGES

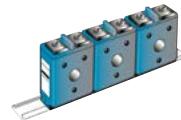
- + COMPLETE RANGE:**
primary from 1 to 3,000 A
and 5 A or 1 A secondary
- + TOTALLY ADAPTABLE RANGE**
for specific requirements
(primary, secondary,
power class, frequency)



Sealable cover
M5 terminals with
2 grooves for dual
connection on secondary



Central pipe accessory on cable
primary JVO for compact lateral
primary connection



Mounting on symmetrical
rail (except for JVP) or plate
mounting in cabinet

► General specifications

Reference standard: EN 60044-1
(ex IEC 185)

Maximum network voltage:
720 Vac

Dielectric test voltage:
3 kV/50 Hz/1 min

Frequency response: 50/60 Hz

Short-circuit thermal current (I_{th}):

JVO, JVP: 80 I_n

JVR 86: 60 I_n

JVR 64, JVR 75: 40 I_n

Dynamic current (I_{dyn}): 2.5 I_{th}

Safety factor: 5 in Class 1

Operating conditions:

Temperature: -5°C to +50°C

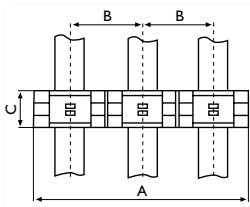
Relative humidity: 93% at 40°C

Protection:

Protection rating: IP 50

(with terminal cover supplied)

Dry winding with self-extinguishing ABS
covering (UL 94 VO)



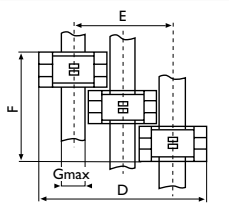
► 3 CT mounting

Dimensions

Model	A	B	C	D	E	F	G
JVO 25 CR	227	76	45	184.5	109.5	137	32.5
JVO 32 CR	260	87	58	214.5	128.5	176	40.5
JVP 624	296	99	35	220	122	107	22
JVP 1025	344	115	45	252	138	137	22
JVP 1045	404	135	45	312	178	137	42

► Mounting accessories

For model	1CT mounting rail	2CT mounting rail	3CT mounting rail
JVR	ACCE 7652	ACCE 7653	ACCE 7655
JVO 12-18	ACCE 7650	ACCE 7651	ACCE 7654
JVO 21-25-32-36	ACCE 7652	ACCE 7653	ACCE 7655
J3R 80 B	ACCE 7640		





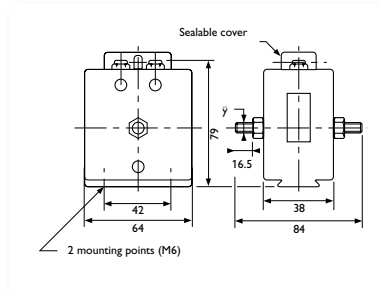
JVR-JVO-JVP Ranges

JVR – Wound primary

Measurement and instrumentation Current transformers (CTs)

JVR 64

Ø M8

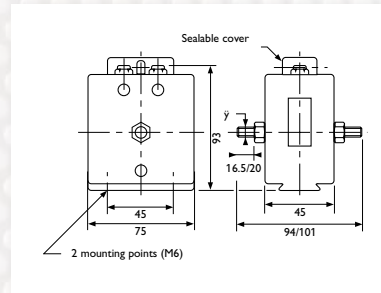


Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
5 A	*	5	5	0.45
10 A	*	5	5	0.45
15 A	*	5	5	0.45
20 A	*	5	5	0.45
25 A	*	5	5	0.45
30 A	*	5	5	0.45
40 A	*	5	5	0.45
50 A	*	5	5	0.45
60 A	*	5	5	0.45
75 A	*	5	5	0.45
100 A	*	5	5	0.45

*On request

JVR 75

Ø M8/M10 > 75 A

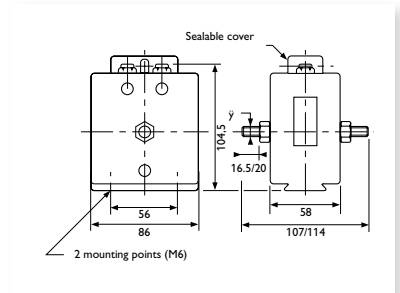


Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
5 A	*	10	10	0.6
10 A	*	10	10	0.6
15 A	*	10	10	0.6
20 A	*	10	10	0.6
25 A	*	10	10	0.6
30 A	*	10	10	0.6
40 A	*	10	10	0.6
50 A	*	10	10	0.6
60 A	*	10	10	0.6
75 A	*	10	10	0.6
100 A	*	10	10	0.6
125 A	*	10	10	0.6
150 A	*	10	10	0.6
200 A	*	10	10	0.6

*On request

JVR 86

Ø M8/M10 > 75 A



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
5 A	*	20	30	1.2
10 A	*	20	30	1.2
15 A	*	20	30	1.2
20 A	*	20	30	1.2
25 A	*	20	30	1.2
30 A	*	20	30	1.2
40 A	*	20	30	1.2
50 A	*	20	30	1.2
60 A	*	20	30	1.2
75 A	*	20	30	1.2
100 A	*	20	30	1.2
125 A	*	20	30	1.2
150 A	*	20	30	1.2
200 A	*	20	30	1.2

*On request

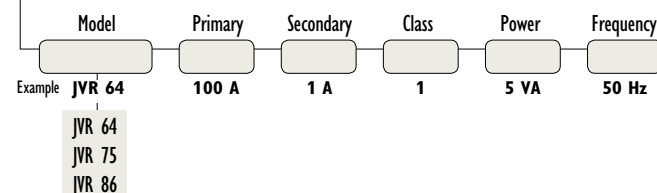
TO ORDER

Primary	Secondary 5 A
5 A	JVRA 8700
10 A	JVRA 8701
15 A	JVRA 8702
20 A	JVRA 8703
25 A	JVRA 8704
30 A	JVRA 8705
40 A	JVRA 8706
50 A	JVRA 8707
60 A	JVRA 8708
75 A	JVRA 8709
100 A	JVRA 8710
Sealable cover	ACCE 7668

Primary	Secondary 5 A
5 A	JVRB 8725
10 A	JVRB 8726
15 A	JVRB 8727
20 A	JVRB 8728
25 A	JVRB 8729
30 A	JVRB 8730
40 A	JVRB 8731
50 A	JVRB 8732
60 A	JVRB 8733
75 A	JVRB 8734
100 A	JVRB 8735
125 A	JVRB 8736
150 A	JVRB 8737
200 A	JVRB 8738
Sealable cover	ACCE 7668

Primary	Secondary 5 A
5 A	JVRC 8742
10 A	JVRC 8743
15 A	JVRC 8744
20 A	JVRC 8745
25 A	JVRC 8746
30 A	JVRC 8747
40 A	JVRC 8748
50 A	JVRC 8749
60 A	JVRC 8750
75 A	JVRC 8751
100 A	JVRC 8752
125 A	JVRC 8753
150 A	JVRC 8754
200 A	JVRC 8755
Sealable cover	ACCE 7668

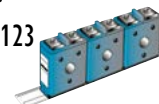
Customized product



Associated products

Mounting accessories

▶ page 123



PRTC CT protection unit

▶ page 143

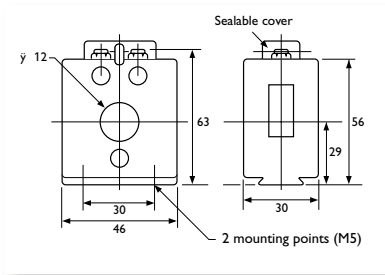


JVR-JVO-JVP Ranges

JVO – Cable primary

JVO 12-46

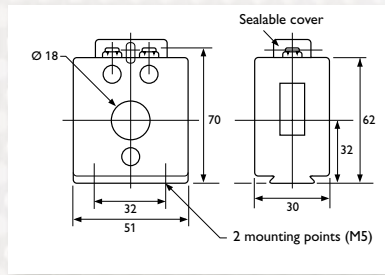
Cable Ø 12 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
40 A	-	-	1.5	0.20
50 A	-	-	2	0.20
60 A	-	-	2.5	0.20
75 A	-	-	3	0.20
100 A	-	-	4	0.20
125 A	-	-	5	0.20
150 A	-	-	5	0.20

JVO 18-51

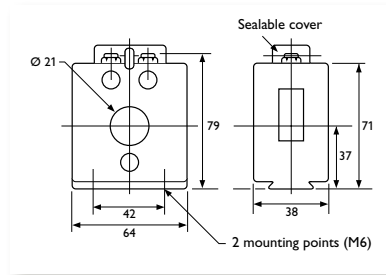
Cable Ø 18 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	2	0.25
125 A	-	2.5	3	0.25
150 A	-	3	4	0.25
200 A	-	4	6	0.25
250 A	-	5	7	0.25
300 A	-	5	8	0.25

JVO 21-64

Cable Ø 21 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	4	0.35
125 A	-	-	5	0.35
150 A	-	-	5	0.35
200 A	-	5	5	0.35
250 A	-	5	5	0.35
300 A	*	5	10	0.35
400 A	*	5	10	0.35
500 A	*	10	20	0.35
600 A	*	10	20	0.35

*On request

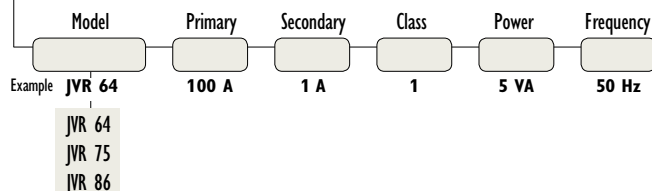
TO ORDER

Primary	Secondary 5 A
40 A	JVOA 8759
50 A	JVOA 8760
60 A	JVOA 8761
75 A	JVOA 8762
100 A	JVOA 8763
125 A	JVOA 8764
150 A	JVOA 8765
Central tube	ACCE 7660

Primary	Secondary 5 A
100 A	JVOB 8769
125 A	JVOB 8770
150 A	JVOB 8771
200 A	JVOB 8772
250 A	JVOB 8773
300 A	JVOB 8774
Central tube	ACCE 7661

Primary	Secondary 5 A
100 A	JVOC 8778
125 A	JVOC 8779
150 A	JVOC 8780
200 A	JVOC 8781
250 A	JVOC 8782
300 A	JVOC 8783
400 A	JVOC 8784
500 A	JVOC 8785
600 A	JVOC 8786
Central tube	ACCE 7662
Sealable cover	ACCE 7668

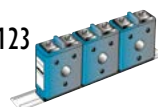
Customized product



Associated products

Mounting accessories

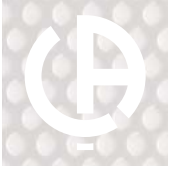
▶ page 123



PRTC CT protection unit

▶ page 143





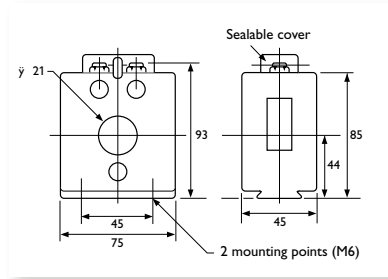
JVR-JVO-JVP Ranges

JVO – Cable primary

Measurement and instrumentation Current transformers (CTs)

JVO 21-75

Cable Ø 21 mm

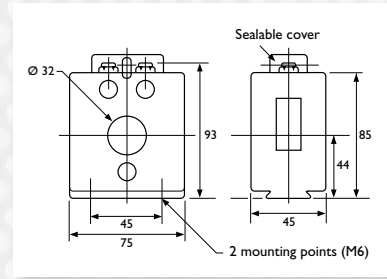


Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
50 A	-	-	5	0.65
60 A	-	-	5	0.65
75 A	-	-	10	0.65
100 A	-	4	10	0.65
125 A	-	5	10	0.65
150 A	*	10	15	0.65
200 A	*	10	15	0.65
250 A	*	15	20	0.65
300 A	*	15	20	0.65
400 A	*	20	30	0.65
500 A	*	30	30	0.65
600 A	*	30	30	0.65

*On request

JVO 32-75

Cable Ø 32 mm

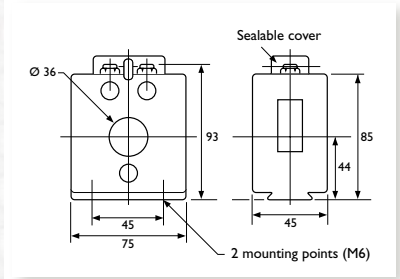


Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	5	0.65
125 A	-	-	5	0.65
150 A	-	5	10	0.65
200 A	-	5	10	0.65
250 A	*	5	15	0.65
300 A	*	10	15	0.65
400 A	*	10	15	0.65
500 A	*	10	20	0.65
600 A	*	10	20	0.65

*On request

JVO 36-75

Cable Ø 36 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	5	0.45
125 A	-	-	5	0.45
150 A	-	-	10	0.45
200 A	-	5	10	0.45
250 A	*	5	15	0.45
300 A	*	5	15	0.45
400 A	*	5	15	0.45
500 A	*	10	20	0.45
600 A	*	20	20	0.45

*On request

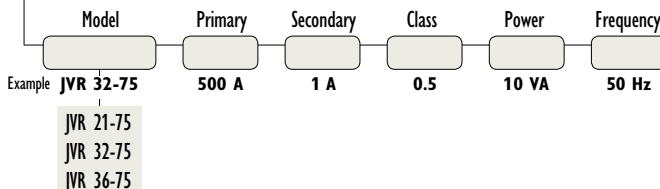
TO ORDER

Primary	Secondary 5 A
50 A	JVOE 8795
60 A	JVOE 8796
75 A	JVOE 8797
100 A	JVOE 8798
125 A	JVOE 8799
150 A	JVOE 8800
200 A	JVOE 8801
250 A	JVOE 8802
300 A	JVOE 8803
400 A	JVOE 8804
500 A	JVOE 8805
600 A	JVOE 8806
Central tube	ACCE 7663
Sealable cover	ACCE 7668

Primary	Secondary 5 A
100 A	JVOF 8814
125 A	JVOF 8815
150 A	JVOF 8816
200 A	JVOF 8817
250 A	JVOF 8818
300 A	JVOF 8819
400 A	JVOF 8820
500 A	JVOF 8821
600 A	JVOF 8822
Sealable cover	ACCE 7668

Primary	Secondary 5 A
100 A	JVOG 8829
125 A	JVOG 8830
150 A	JVOG 8831
200 A	JVOG 8832
250 A	JVOG 8833
300 A	JVOG 8834
400 A	JVOG 8835
500 A	JVOG 8836
600 A	JVOG 8837
Sealable cover	ACCE 7668

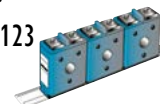
Customized product



Associated products

Mounting accessories

page 123



PRTC CT protection unit

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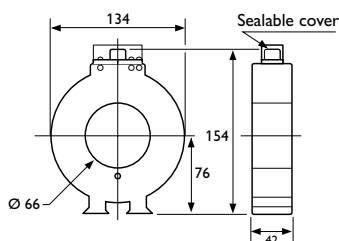


JVR-JVO-JVP Ranges

JVO – Cable primary

J3R 80 B

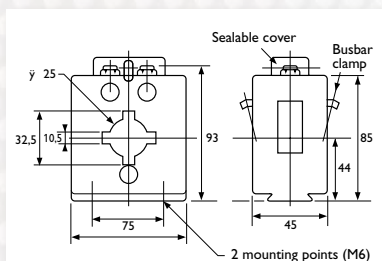
Cable Ø 66 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
200 A	-	5	10	1.6
250 A	-	5	10	1.6
300 A	5	10	15	1.6
400 A	10	20	25	1.6
500 A	15	20	25	1.6
600 A	15	20	25	1.6
750 A	15	20	25	1.6
800 A	15	20	25	1.6
1000 A	15	20	25	1.6
1250 A	15	20	25	1.6
1500 A	15	20	25	1.6

JVO 25 CR

Cable Ø 25 mm
Bar: 32 x 10 mm

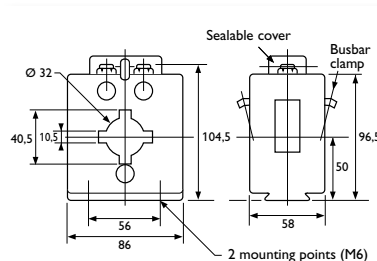


Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	5	0.6
125 A	-	-	5	0.6
150 A	-	-	5	0.6
200 A	-	5	10	0.6
250 A	*	5	15	0.6
300 A	*	5	15	0.6
400 A	*	10	15	0.6
500 A	*	20	20	0.6
600 A	*	20	20	0.6

*On request

JVO 32 CR

Cable Ø 32 mm
Bar: 40 x 10 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	5	0.9
125 A	-	-	10	0.9
150 A	-	5	15	0.9
200 A	-	5	15	0.9
250 A	*	10	20	0.9
300 A	*	10	30	0.9
400 A	*	15	30	0.9
500 A	*	15	30	0.9
600 A	*	15	30	0.9

*On request

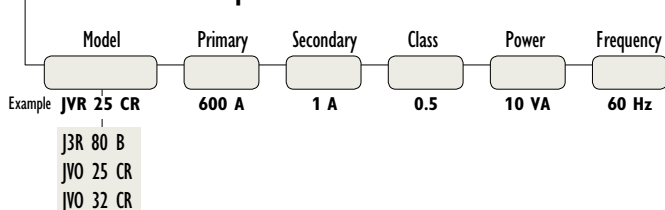
T O O R D E R

Primary	Secondary 5 A
200 A	J3RC 7514
250 A	J3RC 7524
300 A	J3RC 7525
400 A	J3RC 7528
500 A	J3RC 7527
600 A	J3RC 7529
750 A	J3RC 7526
800 A	J3RC 7531
1000 A	J3RC 7530
1250 A	J3RC 7532
1500 A	J3RC 7533
Sealable cover	ACCE 7671

Primary	Secondary 5 A
100 A	JVOD 8850
125 A	JVOD 8851
150 A	JVOD 8852
200 A	JVOD 8853
250 A	JVOD 8854
300 A	JVOD 8855
400 A	JVOD 8856
500 A	JVOD 8857
600 A	JVOD 8858
Busbar clamp	ACCE 7665
Sealable cover	ACCE 7668

Primary	Secondary 5 A
100 A	JVOH 8866
125 A	JVOH 8867
150 A	JVOH 8868
200 A	JVOH 8869
250 A	JVOH 8870
300 A	JVOH 8871
400 A	JVOH 8872
500 A	JVOH 8873
600 A	JVOH 8874
Busbar clamp	ACCE 7666
Sealable cover	ACCE 7668

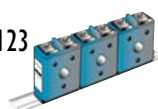
Customized product



Associated products

Mounting accessories

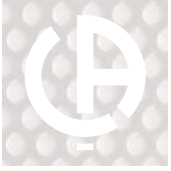
page 123



PRTC CT protection unit

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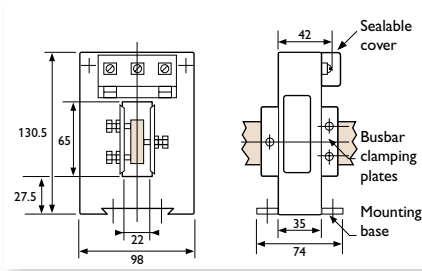
JVR-JVO-JVP Ranges

JVP – Busbar primary

Measurement and instrumentation Current transformers (CTs)

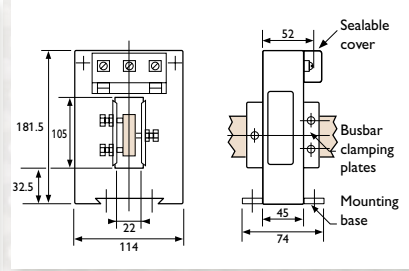
JVP 624

Bar: 63 x 20 mm



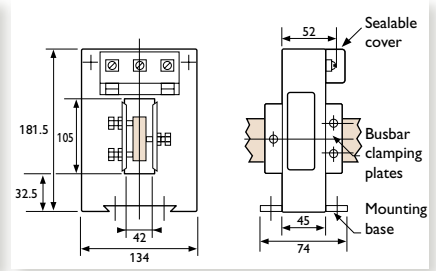
JVP 1025

Bar: 100 x 20 mm



JVP 1045

Bar: 100 x 40 mm



Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
100 A	-	-	5	1.2
125 A	-	-	5	1.2
150 A	-	-	5	1.2
200 A	-	-	5	1.2
250 A	-	5	15	1.2
300 A	-	5	15	1.2
400 A	*	10	15	1.2
500 A	*	15	20	1.2
600 A	*	20	20	1.2
750 A	*	20	20	1.2
800 A	*	20	20	1.2
1000 A	*	20	20	1.2

*On request

Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
200 A	-	-	5	2
250 A	-	-	5	2
300 A	-	10	20	2
400 A	*	5	30	2
500 A	*	15	15	2
600 A	*	15	15	2
750 A	*	20	20	2
800 A	*	20	30	2
1000 A	*	30	30	2
1250 A	*	30	30	2
1500 A	*	30	30	2
2000 A	*	30	30	2
2500 A	*	30	30	2
3000 A	*	30	30	2

*On request

Primary	Power (VA) class			Weight (kg)
	0.5	1	3	
300 A	-	5	5	2.5
400 A	*	5	10	2.5
500 A	*	10	15	2.5
600 A	*	15	15	2.5
750 A	*	20	20	2.5
800 A	*	20	20	2.5
1000 A	*	30	30	2.5
1250 A	*	30	30	2.5
1500 A	*	30	30	2.5
2000 A	*	30	30	2.5
2500 A	*	30	30	2.5
3000 A	*	30	30	2.5

*On request

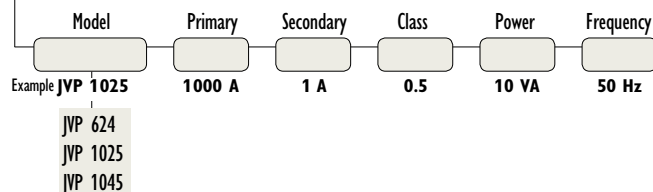
TO ORDER

Primary	Secondary 5 A
100 A	JVPR 8879
125 A	JVPR 8880
150 A	JVPR 8881
200 A	JVPR 8882
250 A	JVPR 8883
300 A	JVPR 8884
400 A	JVPR 8885
500 A	JVPR 8886
600 A	JVPR 8887
750 A	JVPR 8888
800 A	JVPR 8890
1000 A	JVPR 8889
Mounting base	ACCE 7669
Sealable cover	ACCE 7672

Primary	Secondary 5 A
200 A	JVPT 8890
250 A	JVPT 8891
300 A	JVPT 8892
400 A	JVPT 8893
500 A	JVPT 8896
600 A	JVPT 8897
750 A	JVPT 8898
800 A	JVPT 8895
1000 A	JVPT 8899
1250 A	JVPT 8900
1500 A	JVPT 8901
2000 A	JVPT 8902
2500 A	JVPT 8921
3000 A	JVPT 8922
Mounting base	ACCE 7669
Sealable cover	ACCE 7672

Primary	Secondary 5 A
300 A	JVPU 8906
400 A	JVPU 8918
500 A	JVPU 8907
600 A	JVPU 8908
750 A	JVPU 8909
800 A	JVPU 8919
1000 A	JVPU 8910
1250 A	JVPU 8911
1500 A	JVPU 8912
2000 A	JVPU 8913
2500 A	JVPU 8920
3000 A	JVPU 8914
Mounting base	ACCE 7669
Sealable cover	ACCE 7672

Customized product



Associated products

PRTC
CT protection unit

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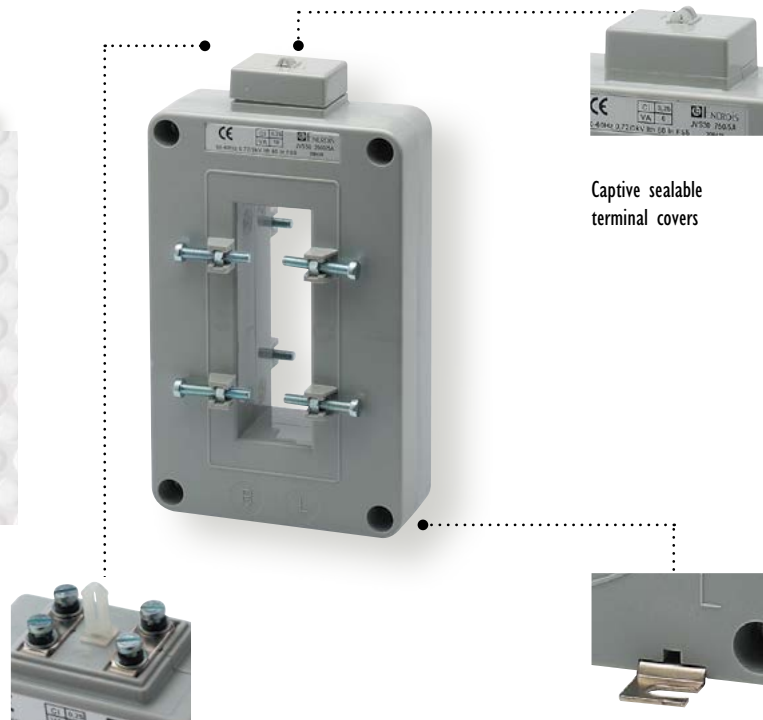


JVS Range

CTs designed to supply IEC 687 electronic measurement instruments, power monitors, digital transducers, etc.

PRODUCT ADVANTAGES

- + CHOICE OF PRIMARY**
from 100 to 5,000 A
- + ACCURACY CLASS:**
0.2 S for high-performance applications



Captive sealable terminal covers

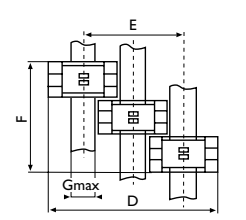
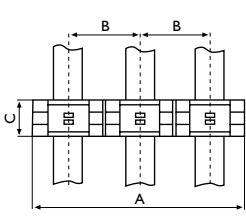
Split output terminals enabling risk-free short-circuiting of the secondary current (M4 or cage for 4 mm² wire)

Cabinet base fitting (or directly on busbar primary)

► General specifications

- Reference standard:** EN 60044-1 (ex IEC 185)
- Maximum network voltage:** 720 Vac
- Dielectric test voltage:** 3 kV/50 Hz/1 min
- Frequency response:** 50/60 Hz
- Short-circuit thermal current (I_{th}):** 60 I_n - 1 second
- Dynamic current (I_{dyn}):** 2.5 I_{th}

- Safety factor:** < 5
- Operating conditions:**
Temperature: -10°C to +50°C
Relative humidity: < 90%
- Protection:**
Protection rating: IP 50 (terminal covers supplied)
Dry winding with self-extinguishing ABS covering (UL 94 VO)



► 3CT Mounting

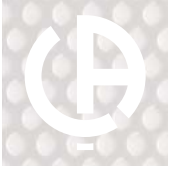
Model	Dimensions						
	A	B	C	D	E	F	G
JVS 25B	243.5	81.5	60.5	189	108.5	183.5	26
JVS 26B	243.5	81.5	60.5	191	110.5	183.5	28
JVS 30B	308	103	69	250	148	209	44
JVS 38B	392	131	69	325	195	209	63
JVS 40	287	96	40	215	120	122	23
JVS 50	347	116	44	264	149	134	32
JVS 60	374	125	44	310	186	134	60

► Mounting accessories

Model	Plate mounting fittings	Busbar clamp	Sealable terminal cover*
JVS 25B	•	•	1923 0022
JVS 26B	•	•	1923 0022
JVS 30B	•	•	1923 0022
JVS 38B	•	•	1923 0022
JVS 39B	•	•	1923 0022
JVS 40	•	•	•
JVS 50	•	•	•
JVS 60	•	•	•

• Standard accessories

* sold in pairs

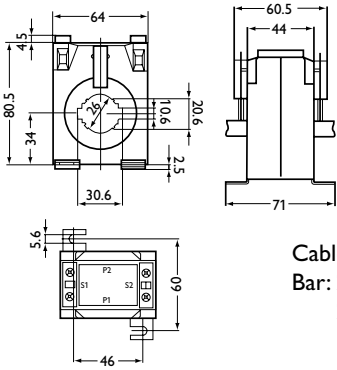


JVS Range

Cable/busbar primary

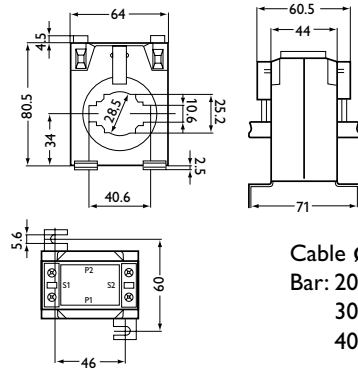
Current transformers (CTs)

JVS 25B



Cable \varnothing 26 mm
 Bar: 20 x 20 mm
 25 x 12 mm
 30 x 10 mm

JVS 26B



Cable \varnothing 28 mm
 Bar: 20 x 25 mm
 30 x 15 mm
 40 x 10 mm

Primary	Power (VA) in class 0.2 S	Weight (kg)
100 A	1	0.53
150 A	2.5	0.53
200 A	3.5	0.54
250 A	5	0.54
300 A	5	0.51
400 A	7.5	0.51

Primary	Power (VA) in class 0.2 S	Weight (kg)
150 A	1	0.37
200 A	1.25	0.38
250 A	1.5	0.39
300 A	1.75	0.4
400 A	1	0.41
500 A	5	0.41
600 A	5	0.42
750 A	7.5	0.43
800 A	7.5	0.44

TO ORDER

Primary	Secondary 5 A
100 A	JVSB25 100/5
150 A	JVSB25 150/5
200 A	JVSB25 200/5
250 A	JVSB25 250/5
300 A	JVSB25 300/5
400 A	JVSB25 400/5

Primary	Secondary 5 A
150 A	JVSB26 100/5
200 A	JVSB26 200/5
250 A	JVSB26 250/5
300 A	JVSB26 300/5
400 A	JVSB26 400/5
500 A	JVSB26 500/5
600 A	JVSB26 600/5
750 A	JVSB26 750/5
800 A	JVSB26 800/5

Associated products

Mounting accessories

▶ page 129



PRTC CT protection unit

▶ page 143

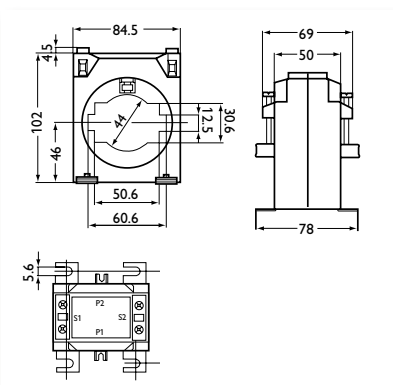


JVS Range

Cable/busbar primary

JVS 30B

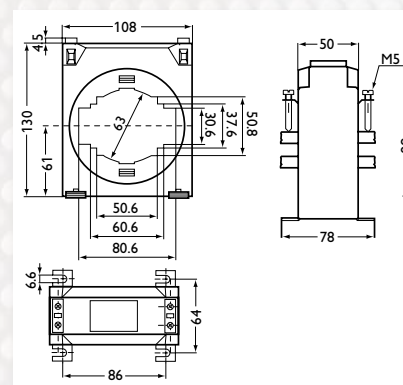
Cable Ø 44 mm
Bar: 50 x 30 mm
60 x 12 mm



Primary	Power (VA) Class 0.2 S	Weight (kg)
600 A	5	0.52
750 A	7.5	0.59
800 A	7.5	0.60
1000 A	10	0.61
1200 A	10	0.63
1500 A	10	0.65

JVS 38B

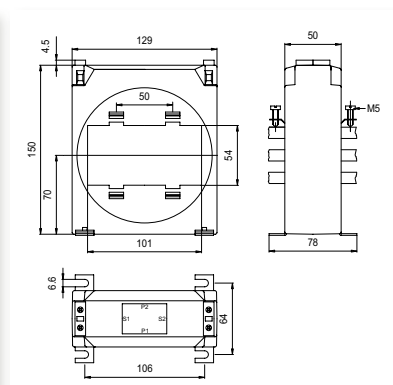
Cable Ø 63 mm
Bar: 50 x 50 mm
60 x 30 mm
80 x 30 mm



Primary	Power (VA) Class 0.2 S	Weight (kg)
1000 A	7.5	0.72
1200 A	10	0.68
1500 A	10	0.84
2000 A	10	0.82
2500 A	10	0.88
3000 A	10	0.88

JVS 39B

Bar: 3 x 100 x 10 mm



Primary	Power (VA) Class 0.2 S	Weight (kg)
1500 A	10	1.47
2000 A	10	1.55
2500 A	15	1.63
3000 A	20	1.71
4000 A	25	1.83

TO ORDER

Primary	Secondary 5 A
600 A	JVSB30 600/5
750 A	JVSB30 750/5
800 A	JVSB30 800/5
1000 A	JVSB30 1000/5
1200 A	JVSB30 1200/5
1500 A	JVSB30 1500/5

Primary	Secondary 5 A
1000 A	JVSB38 1000/5
1200 A	JVSB38 1200/5
1500 A	JVSB38 1500/5
2000 A	JVSB38 2000/5
2500 A	JVSB38 2500/5
3000 A	JVSB38 3000/5

Primary	Secondary 5 A
1500 A	JVSB39 1500/5
2000 A	JVSB39 2000/5
2500 A	JVSB39 2500/5
3000 A	JVSB39 3000/5
4000 A	JVSB39 4000/5

Associated products

Mounting accessories

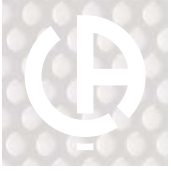
► page 129



PRTC CT protection unit

► page 143





JVS Range

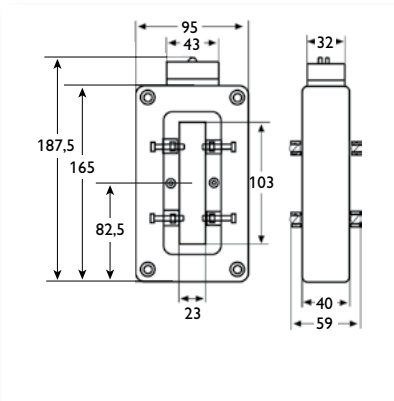
Busbar primary

Current transformers (CTs)

Measurement and instrumentation

JVS 40

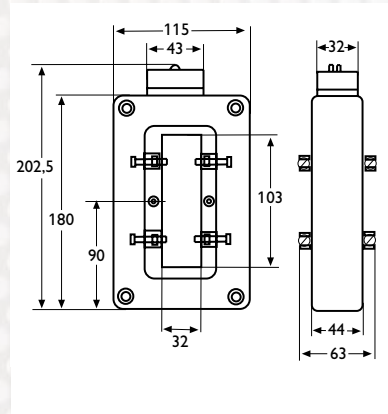
Bar: 100 x 20 mm



Primary	Power (VA) Class 0.2 S	Weight (kg)
1000 A	1.5	0,76
1200 A	4	0,76
1500 A	10	0,76
2000 A	10	0,76

JVS 50

Bar: 100 x 30 mm



Primary	Power (VA) Class 0.2 S	Weight (kg)
1500 A	10	0,76
2000 A	10	0,82
2500 A	10	0,78
3000 A	10	0,90
4000 A	10	0,90

TO ORDER

Primary	Secondary 5 A
1000 A	JVS40-1000/5
1200 A	JVS40-1200/5
1500 A	JVS40-1500/5
2000 A	JVS40-2000/5

Primary	Secondary 5 A
1500 A	JVSS0-1500/5
2000 A	JVSS0-2000/5
2500 A	JVSS0-2500/5
3000 A	JVSS0-3000/5
4000 A	JVSS0-4000/5

Associated products

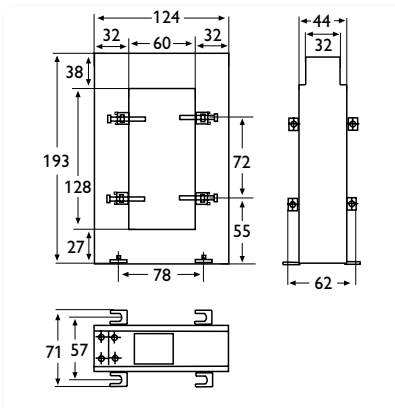
PRTC
CT protection unit

▶ page 143



JVS 60

Bar: 125 x 60 mm



Primary	Power (VA) Class 0.2 S	Weight (kg)
1000 A	1.5	0.75
1500 A	7.5	0.83
2000 A	10	0.92
2500 A	10	1.01
3000 A	10	1.09
4000 A	10	1.21
5000 A	10	1.44

TO ORDER

Primary	Secondary 5 A
1000 A	JVS60-1000/5
1500 A	JVS60-1500/5
2000 A	JVS60-2000/5
2500 A	JVS60-2500/5
3000 A	JVS60-3000/5
4000 A	JVS60-4000/5
5000 A	JVS60-5000/5

► Associated products

PRTC
CT protection unit

► page 143





Single-phase, single-rating: JVP1045 B

Transformers for tariff metering

Current transformers (CTs)

Measurement and instrumentation

JVP1045 B

Busbar primary

PRODUCT ADVANTAGES

- + DELIVERED WITH SEALABLE PROTECTIVE COVER** for the secondary. Simple M5 terminals
- + DIRECT MOUNTING** on primary busbar by means of plate and tightening screw or panel mounting with mounting plate



► General specifications

Reference standard:
EN 60044-1 (ex-IEC 185)
and NFC 42-502

Maximum network voltage:
720 Vac

Dielectric test voltage:
3 kV/50 Hz/1 min

Frequency response:
50/60 Hz

Thermal short-circuit current
(I_{th}) : 80 In

Dynamic current (I_{dyn}):
2.5 I_{th}

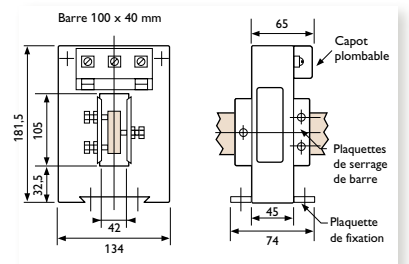
Safety factor:
10 in class 0.5
Except * SF = 6.4/10.5
and **SF = 4.7/8.2

Operating conditions:
Temperature: -20°C to +60°C
Relative humidity: 93% to 40°C

Protection:
Protection rating: IP 50
Dry winding in self-extinguishing ABS envelope (UL 94 VO)

TO ORDER

	Power (VA) in class 0.5		Weight (kg)
	7.5	15	
Primary	Secondary 5 A		
500 A	JVPA 7569		2.50
1000 A	JVPA 7573		2.50
2000 A	JVPA 7576		2.50
500-1000 A*	JVPA 7589	JVPA 7585	2.50
1000-2000 A**	JVPA 7590	JVPA 7588	2.50



Single-phase, single-rating: JVO 40-100

Transformers for tariff metering

JVO 40-100

Cable primary

PRODUCT ADVANTAGES

- + DELIVERED WITH SEALABLE TERMINAL COVER** for the secondary. Simple M5 terminals with two grooves for double connection
- + MOUNTING ON SYMMETRICAL MOUNTING RAIL** or panel mounting



► General specifications

Reference standard:
EN 60044-1 (ex-IEC185) and NFC 42-502

Maximum network voltage:
720 Vac

Dielectric test voltage:
3 kV/50 Hz/1 min

Frequency response:
50/60 Hz

Thermal short-circuit current (I_{th}): 80 In

Dynamic current (I_{dyn}): 2.5 I_{th}

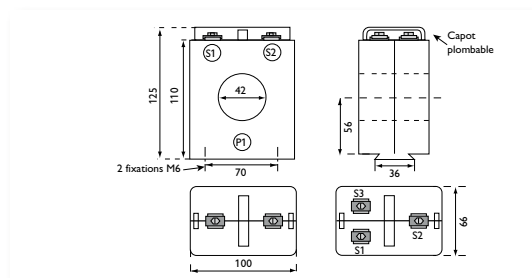
Safety factor:
10 in class 0.5
Except * SF = 6.4/10.5
and **SF = 4.7/8.2

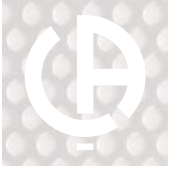
Operating conditions:
Temperature: -5 °C to +50 °C
Relative humidity: 93 % to 40 °C

Protection:
Protection rating: IP 50
Dry winding in self-extinguishing ABS envelope (UL 94 VO)

TO ORDER

	Primary	Secondary	Power (VA) in class 0.5			Weight (kg)
			2.5 A	5 A	5 A	
200 A		JVON 7103		JVON 7100	0.97	
500 A				JVON 7101	0.97	
200-500			JVON 7104	JVON 7102	0.97	
1-CT mounting rail			ACCE 7679			
2-CT mounting rail			ACCE 7680			
3-CT mounting rail			ACCE 7681			





Single-phase, multi-rating: JVO 40-100 S

Transformers for tariff metering – ERDF application

Measurement and instrumentation **Current transformers (CTs)**

JVO 40-100 S

Cable primary Ø 40 mm

PRODUCT ADVANTAGES

- ➕ **CLASS 0.2s ACCORDING TO IEC 60044-1**
Particularly **SUITABLE FOR ERDF-QUALIFIED BI-RATING AND TRI-RATING ELECTRONIC METERS**



► General specifications

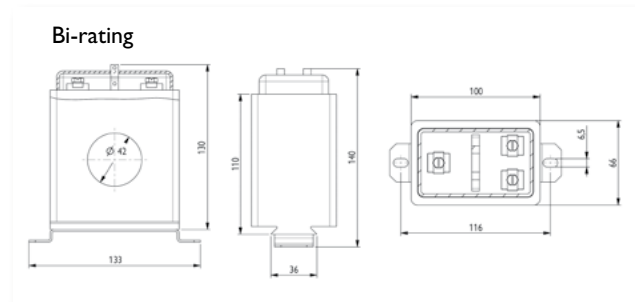
Cable primary: Ø 40 mm
Transformation ratio: 200 - 500 / 5 A
Accuracy class: 0.2s
Precision power: 7.5 VA
Highest network voltage: 720 Vac
Rated frequency: 50/60 Hz
Rated short-circuit thermal current (I_{th}): 20 kA for 1 s
Rated dynamic current (I_{dyn}): 2.5 I_{th}
Safety factor: SF = 3 (200/5 A); SF = 6 (500/5 A)
Rated thermal current: 1.2 I_{pn}
Operating temperature: -25°C to +40°C

Type of casing: Self-extinguishing thermoplastic (UL94V0)
Protection: IP30
Mechanical shock resistance: IK7
Rated withstand voltage: 3 kV (RMS value) at 50 Hz for 1 minute
Rated lightning impulse withstand voltage: 8 kV (peak value) – Wave 1.2/50 µs
Insulation class: E (heating limit: 75 K)
Weight: 1.1 kg

TO ORDER

Model	Reference
JVO 40-100 S bi-rating	P01379512

► Dimensions



Single-phase, multi-rating: JVO 90-160 S

Transformers for tariff metering – ERDF application

JVO 90-160 S

Cable primary Ø 90 mm

PRODUCT ADVANTAGES

+ CLASS 0.2s
ACCORDING TO
IEC 60044-1
Particularly **SUITABLE**
FOR ERDF-QUALIFIED
TRI-RATING
ELECTRONIC METERS



► General specifications

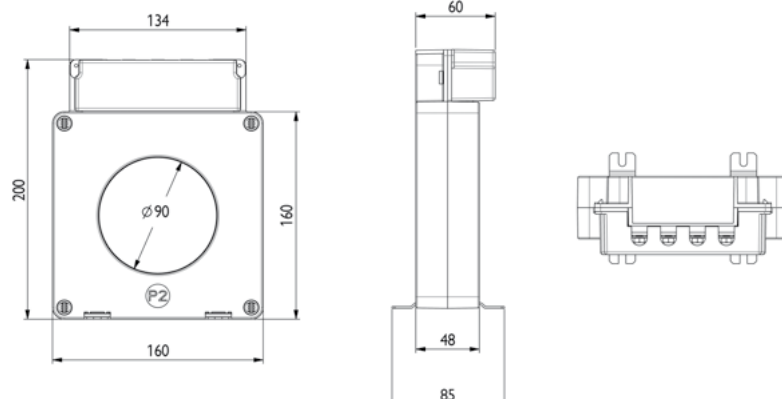
Cable primary: Ø 90 mm
Transformation ratio:
500-1,000-2,000/5 A
Accuracy class: 0.2s
Precision power: 7.5 VA
Highest network voltage: 720 Vac
Rated frequency: 50/60 Hz
Rated short-circuit thermal current (I_{th}): 30 kA for 1 s
Rated dynamic current (I_{dyn}): 2.5 I_{th}
Safety factor:
SF = 4 (500/5 A); SF = 6 (1 000/5 A) ;
SF = 9 (2 000/5 A)
Rated thermal current: 1.2 I_{pn}
Operating temperature:
-25°C to +40°C

Type of casing:
Self-extinguishing thermoplastic (UL94V0)
Protection: IP30
Mechanical shock resistance: IK7
Rated withstand voltage:
3 kV (RMS value) at 50 Hz for 1 minute
Rated lightning impulse withstand voltage:
8 kV (peak value) – Wave 1.2/50 µs
Insulation class: E(heating limit: 75 K)
Weight: 1.9 kg

TO ORDER

Model	Reference
JVO 90-160 S tri-rating	P01379513

► Dimensions





Single-phase, multi-rating: JVP 1145 S

Transformers for tariff metering – ERDF application

Measurement and instrumentation Current transformers (CTs)

JVP 1145 S

Cable primary

PRODUCT ADVANTAGES

+ CLASS 0.2s
ACCORDING TO IEC 60044-1
 Particularly **SUITABLE FOR ERDF-QUALIFIED TRI-RATING ELECTRONIC METERS**



► General specifications

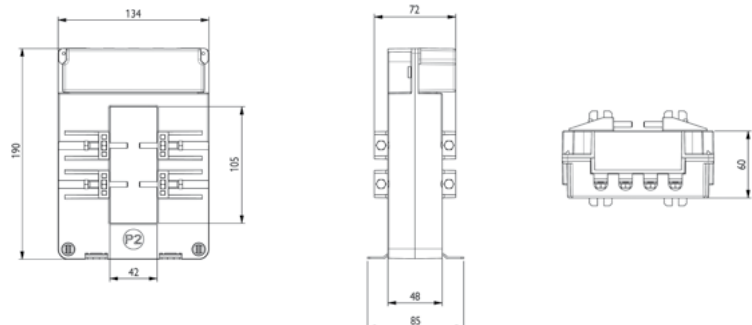
Cable primary:
 Busbar: 63 x 12 mm or 100 x 12 mm
 Cable: Ø 40 mm
Transformation ratio:
 500 – 1,000 – 2,000 / 5 A
Accuracy class: 0.2s
Precision power: 7.5 VA
Highest network voltage: 720 Vac
Rated frequency: 50/60 Hz
Rated short-circuit thermal current (I_{th}): 30 kA for 1 s
Rated dynamic current (I_{dyn}): 2.5 I_{th}
Safety factor:
 SF = 3 (500/5 A); SF = 4 (1000/5 A);
 SF = 6 (2000/5 A)
Rated thermal current: 1.2 I_{pn}

Operating temperature:
 -25°C to +40°C
Type of casing:
 Self-extinguishing thermoplastic (UL94V0)
Protection: IP30
Mechanical shock resistance: IK7
Rated withstand voltage:
 3 kV (RMS value) at 50 Hz for 1 minute
Rated lightning impulse withstand voltage:
 8 kV (peak value) – Wave 1.2/50 µs
Insulation class: E (heating limit: 75 K)
Weight: 1.7 kg

TO ORDER

Model	Reference
JVP 1145 S tri-rating	P01379510

► Dimensions



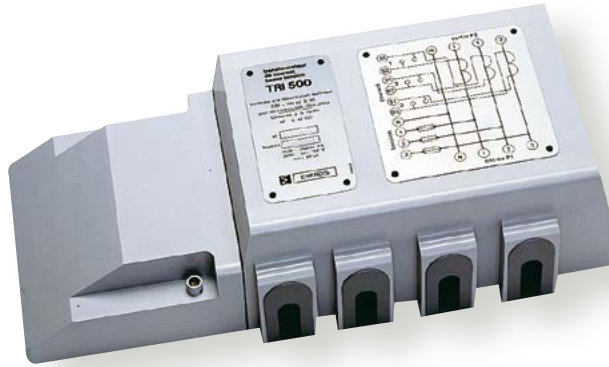
Single-phase, multi-rating: TRI 500

Transformers for tariff metering

TRI 500

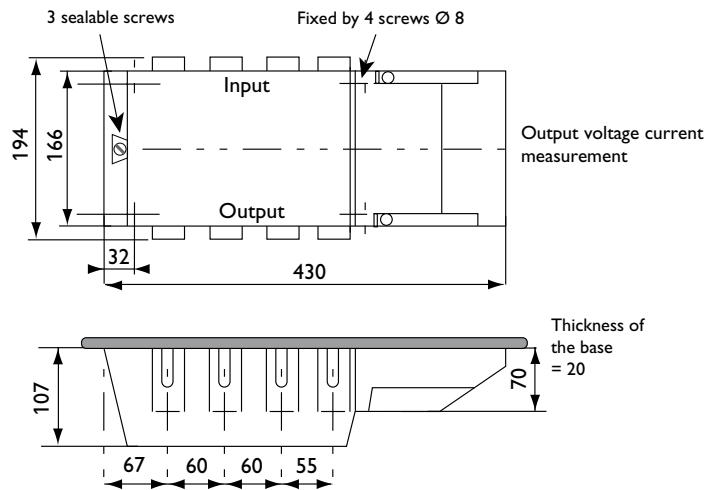
PRODUCT ADVANTAGES

- + COMPLIANT**
with **NF-C-42-502**
standard
- + DESIGNED FOR**
THREE-PHASE LV
METERING



► General specifications

- Maximum network voltage:** 500 Vac
- Dielectric test voltage:** 2 kV - 50 Hz - 1 min
- Rated withstand voltage:** 8 kV
- Frequency response:** 50 Hz
- Primary via cable clamp:** conductors from 50 to 240 mm²



TO ORDER

Primary	Power (VA) Class 0.5	Weight (kg)
50 A	15	7.50
100 A	15	7.50
150 A	15	7.50
200 A	15	7.50
300 A	15	7.50
500 A	15	7.50

Primary	5 A Secondary
50 A	TRIS 7823
100 A	TRIS 7825
150 A	TRIS 7826
200 A	TRIS 7827
300 A	TRIS 7828
500 A	TRIS 7831



Three-phase, multi-rating: TRI 700

Transformers for tariff metering – ERDF application

Measurement and instrumentation Current transformers (CTs)

PRODUCT ADVANTAGES

- **CLASS 0.2S ACCORDING TO IEC 60044-1**
- **CHOICE OF PRIMARY CONDUCTOR** type: copper or aluminium
- **Built-in short-circuiting switch**



► General specifications

Primary via cable clamp:

Conductor cross-section from 50 mm² to 240 mm²

Transformation ratio:

TRI700S bi-rating model 50 A - 100 A / 5 A
 TRI700S bi-rating model 100 A - 200 A / 5 A
 TRI700S bi-rating model 200 A - 500 A / 5 A
 TRI700 tri-rating model 100 A - 200 A - 500 A / 5 A

Accuracy class:

Bi-rating model 0.2s; tri-rating model: 0.5

Precision power:

Bi-rating model: 7.5 VA; tri-rating model: 3.75 VA

Maximum network voltage:

Bi-rating / tri-rating model: 720 Vac

Rated frequency:

Bi-rating / tri-rating model: 50/60 Hz

Rated thermal short-circuit current (I_{th}):

Bi-rating / tri-rating model:
 80 I_{pn} with a maximum of 20 kA for 1 s

Rated dynamic current (I_{dyn}):

Bi-rating / tri-rating model: 2.5 I_{th}

Safety factor:

TRI700S 50 - 100 / 5 A:
 FS = 2.3 (50 A); FS = 4.2 (100 A)
 TRI700S 100-200/5 A:
 FS = 2.3 (100 A); FS = 4.2 (200 A)
 TRI700S 200 - 500 / 5 A:
 FS = 2,3 (200 A); FS = 5 (500 A)
 TRI700 100 - 200 - 500 / 5 A:
 FS = 3 (100 A); FS = 4 (200 A); FS = 6 (500 A)

Rated thermal current:

Bi-rating / tri-rating model: 1.2 I_{pn}

Operating temperature:

Bi-rating / tri-rating model: -25°C to +40°C

Type of casing:

Bi-rating / tri-rating model:
 Self-extinguishing thermoplastic (UL94V0)

Protection rating:

With additional cover: IP40

Mechanical shock resistance:

Bi-rating / tri-rating model: (IK7)

Rated withstand voltage:

Bi-rating / tri-rating model: 3 kV
 (RMS value) at 50 Hz for 1 minute

Lightning impulse withstand voltage:

Bi-rating / tri-rating model:
 (8 kV) (peak value) – Wave 1.2/50 μs

Insulation class:

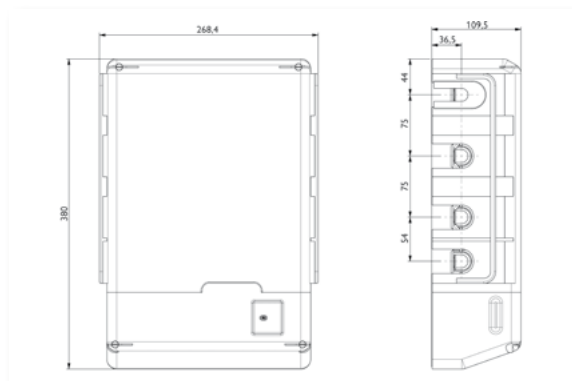
Bi-rating / tri-rating model:
 E (heating limit: 75 K)

Weight: Bi-rating / tri-rating model: 7 Kg

TO ORDER

Model	Reference
TRI 700 tri-rating	P01379514
TRI 700 S bi-rating 50 - 100 / 5 A	P01379515
TRI 700 S bi-rating 100 - 200 / 5 A	P01379516
TRI 700 S bi-rating 200 - 500 / 5 A	P01379517

► Dimensions



Current summation: JVM 15

CT designed for adding or subtracting instantaneous values from the secondaries of 2 or 3 current transformers. Used to supply measuring or metering instruments on installations with several feeder and feed points.

PRODUCT ADVANTAGES

- + COMPACT DESIGN
- + Mounting on plate or rail



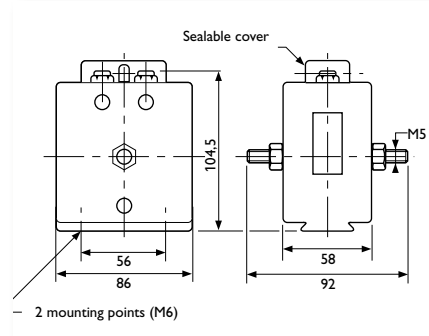
Sealable cover.
Terminal connections:
M5; 2 secondary slots
for double connections;
primary side connections.



Mounting on plate or
symmetrical rail

► General specifications

Reference standard:
EN 60044-1 (Ex IEC 185)
Maximum network voltage: 720 Vac
Dielectric test voltage:
3 kV/50 Hz/1 min
Frequency response: 50/60 Hz
Short-circuit thermal current
(I_{th}): 80 I_n - 1 second
Dynamic current (I_{dyn}): 2.5 I_{th}
Safety factor: < 5
Internal power: 4 VA
Operating conditions:
Temperature: -5°C to +60°C
Relative humidity: 93% at 40°C
Protection:
Protection rating:
IP 40 (module casing) and IP 10 (terminals)
Dry winding with self-extinguishing ABS
covering (UL 94 VO)



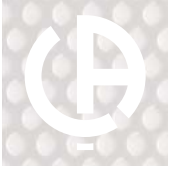
	Power (VA)	class		Weight
Primary	0.5	1	3	(kg)
5+5 A	15	20	30	1.20
5+5+5 A	15	20	30	1.20

TO ORDER

Primary	Secondary 5 A
5+5 A	JVMA 7523
5+5+5 A	JVMA 7524
Sealable cover	ACCE 7668

► Cabinet accessories

Model	1 CT slide rail mounting	2 CT slide rail mounting	3 CT slide rail mounting
JVM 15	ACCE 7652	ACCE 7653	ACCE 7655



Current summation: TCS

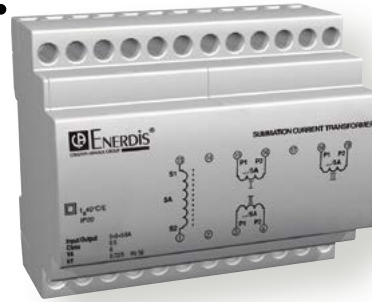
Current transformers (CTs)

Measurement and instrumentation

CT designed to add together the instantaneous current values from the secondaries of 2 to 4 current transformers. In this way, it provides data for the measurement or metering equipment on installations with several feeders or feeds.

PRODUCT ADVANTAGES

+ **MADE-TO-MEASURE PRODUCT**
with different totalized CT ratios



Primary and secondary connection by cages for 2.5 mm² wire



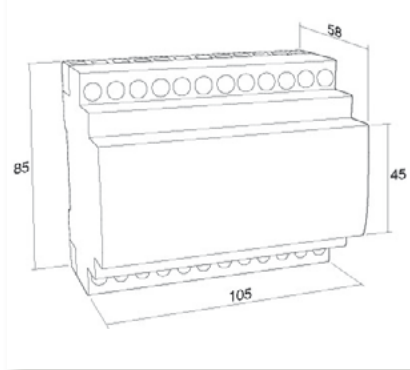
Mounting on DIN rail or plate

General specifications

Reference standard:
EN 60044-1 (Ex IEC 185)
Maximum network voltage: 720 Vac
Dielectric test voltage: 3 kV/50 Hz/1 min
Frequency response: 50/60 Hz
Short-circuit thermal current (I_{th}):
40 In - 1 second

Dynamic current (I_{dyn}): 2.5 I_{th}
Safety factor: ≤ 5
Operating conditions:
Temperature: -20°C to +50°C
Relative humidity: < 80%
Protection:
Casing protection rating: IP 20

Dimensions

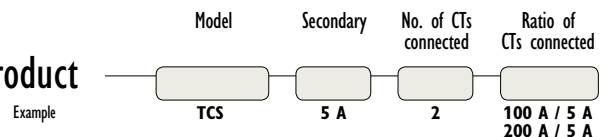


Power (VA) in class 0.5	Weight
6	0.9 kg

TO ORDER

Primary	5 A Secondary
5+5 A	TCS 02N
5+5+5 A	TCS 03N
5+5+5+5 A	TCS 04N
Different primary	
5+5 A	TCS 02C
5+5+5 A	TCS 03C
5+5+5+5 A	TCS 04C

Customized product

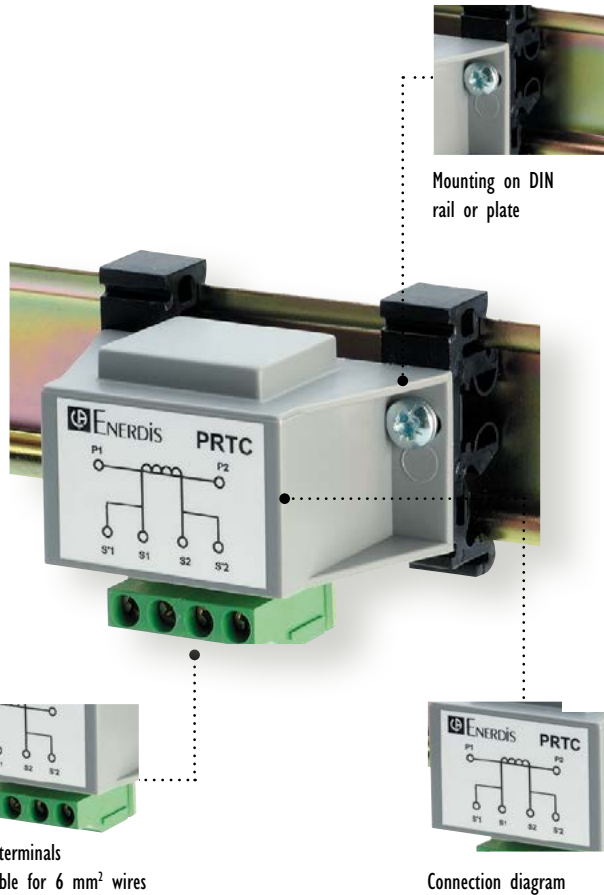


Transformer short-circuit switch

Protection against the dangers caused by opening the secondary circuit on low-voltage measurement CTs

PRODUCT ADVANTAGES

- + PROTECTS USERS AND EQUIPMENT AGAINST OVERVOLTAGES**
caused by opening the CT 5 A or 1 A secondary
- + AUTOMATIC SHORT-CIRCUITING**
of CT secondary to which it is permanently connected
- + Equipment connected on CT secondary side can be operated by user without supply interruption**



► General specifications

Reference standards:

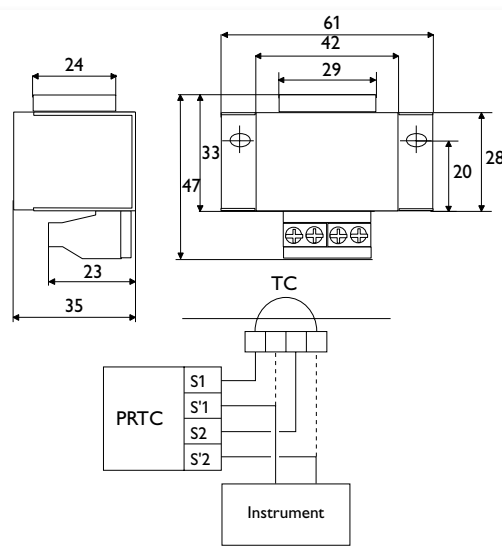
NFC 15100 art 411-1)
Connections: double terminals capable of receiving 6 mm² cables. DIN rail mounting (supplied with fittings) or plate mounting using clamp bolts.
Weight: 90 g

Operating conditions:

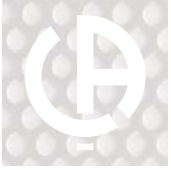
Temperature: -10°C to +50°C
Relative humidity: < 95%

Protection:

Protection rating: IP 20
Self-extinguishing polyamide casing (UL 94VO)
Measurement current: 5 A/50 Hz or 1 A/50 Hz
Maximum permitted current: 25 Aac
Peak voltage: 22 Vac

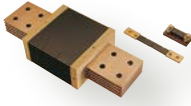





TO ORDER	
Reference	PRTC 1001



Choosing your shunt

▲ Measurement and instrumentation **Shunts**

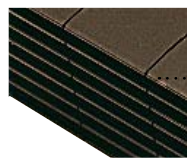
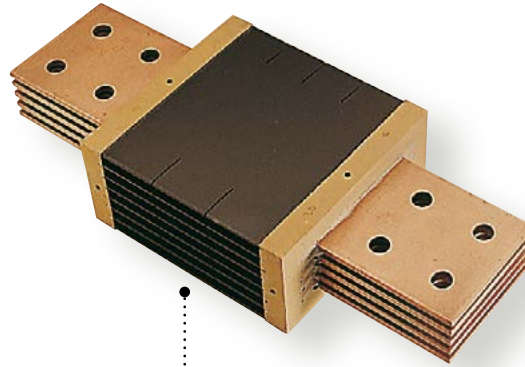
	76-2 and 77-2			SHMI			SHEL	SHMO
	▶ page 145			▶ page 147			▶ page 149	▶ page 150
								
Type	76-2	76-2	77-2	SHMI	SHMI	SHMI	SHEL	SHMO
	Eye connection on base	Eye connection	Plate connection for busbar	Screw connection	Eye connection	Connection to block for busbar	Direct connection to measuring component	Modular casing
Voltage drop	100 mV							
Accuracy class	0.2 and 0.5			0.5 and 1			1	
1 A								
1.25 A								
1.5 A								
2 A								
2.5 A								
3 A								
4 A								
5 A								
6 A								
7.5 A								
10 A								
15 A								
20 A								
25 A								
30 A								
40 A								
50 A								
60 A								
75 A								
100 A								
125 A								
150 A								
200 A								
250 A								
300 A								
400 A								
500 A								
600 A								
750 A								
1000 A								
1250 A								
1500 A								
2000 A								
2500 A								
3000 A								
4000 A								
5000 A								
6000 A								
Strengths	High-performance range. High overload capacity. Treated against corrosion.			Range with a good performance/price trade-off. Large choice of voltage drop ratings (on request).			The most economical range.	Range for mounting on DIN 46277 rail.
SPECIFIC PRODUCTS POSSIBLE IN THIS RANGE								

76-2 and 77-2 Ranges (Shunts)

A reference for measurements on demanding applications

PRODUCT ADVANTAGES

- + HIGH-PERFORMANCE RANGE**
- + HIGH OVERLOAD CAPACITY**



Protection against corrosion with epoxy-modified acrylic paint



Large-area fittings to facilitate heat dissipation

► General specifications

Accuracy class defined in the following domain:
 Over the whole measurement range, for an ambient temperature of:

- -10°C to +35°C (Class 0.2)
- -25°C to +40°C (Class 0.5 and 1)

For a blade temperature of 80°C
 For a shunt current ≤ 5 mA

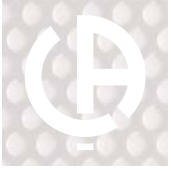
Permitted rated calibres:
 $I_n = 1\text{ A} - 1.25\text{ A} - 1.5\text{ A} - 2\text{ A} - 2.5\text{ A} - 3\text{ A} - 4\text{ A} - 5\text{ A} - 6\text{ A} - 7.5\text{ A}$;
 their multiples or sub-multiples

Voltage drops:
 50 mV - 60 mV - 100 mV - 150 mV - 200 mV - 300 mV - 1 V

Permitted overloads:
 On average and in normal operating conditions

I rated (In)	2 h	5 s	5 s
		Class 0.2	Class 0.5 and 1
< 250 A	1.2 In	2 In	10 In
250 to 2,000 A	1.2 In	2 In	5 In
> 2,000 A	1.2 In	2 In	2 In

Compliance with standards:
 Accuracy and influence factor:
 IEC 60051-1 to 9
 Preferred calibres and dimensions for 100 mV shunts:
 NFC 42-151/152/153z
 Lead-free range: RoHS directive (2002/95/CE)



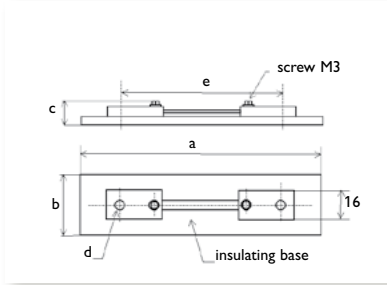
76-2 and 77-2 Ranges

Measurement and instrumentation Shunts

76-2

Eye connection on base

Voltage drop: 100 mV
Class 0.2 and 0.5

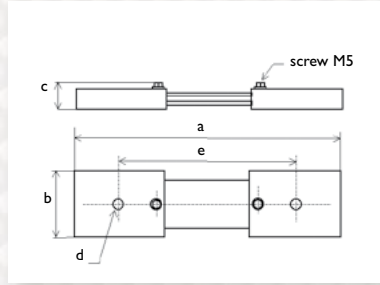


Current	Dimensions (mm)				
	a	b	c	d	e
1 A	150	20	13	6	130
1.25 A	150	20	13	6	130
1.5 A	150	20	13	6	130
2 A	150	20	13	6	130
2.5 A	150	20	13	6	130
3 A	150	20	13	6	130
4 A	150	20	13	6	130
5 A	150	20	13	6	130
6 A	150	20	13	6	130
7.5 A	150	20	13	6	130

76-2

Eye connection

Voltage drop: 100 mV
Class 0.2 and 0.5

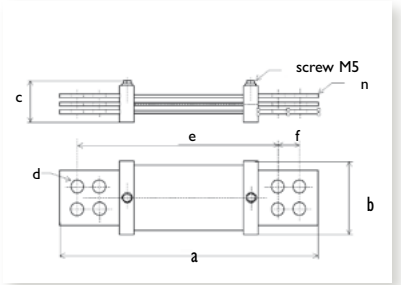


Current	Dimensions (mm)				
	a	b	c	d	e
10 A	160	16	11	6	130
15 A	160	16	11	6	130
20 A	160	16	11	6	130
25 A	160	16	11	6	130
30 A	190	25	11	10	160
40 A	190	25	11	10	160
50 A	190	25	11	10	160
60 A	190	25	11	10	160
75 A	190	25	11	10	160
100 A	190	32	11	10	160
125 A	220	32	13	14	180
150 A	220	32	13	14	180
200 A	220	32	13	14	180
250 A	220	50	13	14	180
300 A	220	50	13	14	180
400 A	240	60	17	18	200
500 A	240	60	17	18	200

77-2

Blade connection for bar

Voltage drop: 100 mV
Class 0.2 and 0.5



Current	Dimensions (mm)						
	a	b	c	d	e	f	n
600 A	280	80	35	11	220	25	1
750 A	280	80	35	11	220	25	1
1000 A	380	115	35	14	280	50	1
1250 A	380	115	35	14	280	50	1
1500 A	380	115	55	14	280	50	2
2000 A	380	115	55	14	280	50	2
2500 A	400	168	55	14	300	50	3
3000 A	400	168	65	14	300	50	4
4000 A	400	168	85	14	300	50	5

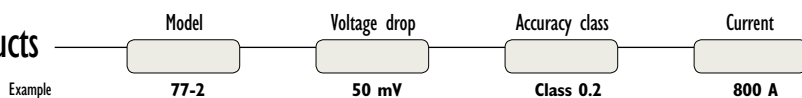
TO ORDER

Current	Reference for 100 mV	
	Class 0.2	Class 0.5
1 A	SHUN 1200	SHUN 1300
1.25 A	SHUN 1201	SHUN 1301
1.5 A	SHUN 1202	SHUN 1302
2 A	SHUN 1203	SHUN 1303
2.5 A	SHUN 1204	SHUN 1304
3 A	SHUN 1205	SHUN 1305
4 A	SHUN 1206	SHUN 1306
5 A	SHUN 1207	P01 3042 11
6 A	SHUN 1208	SHUN 1308
7.5 A	SHUN 1209	SHUN 1309

Current	Reference for 100 mV	
	Class 0.2	Class 0.5
10 A	SHUN 1210	P01 3042 01
15 A	SHUN 1211	P01 3042 08
20 A	SHUN 1212	P01 3042 02
25 A	SHUN 1213	P01 3042 09
30 A	SHUN 1214	P01 3042 03
40 A	SHUN 1215	P01 3042 10
50 A	SHUN 1216	P01 3042 04
60 A	SHUN 1217	P01 3042 12
75 A	SHUN 1218	P01 3042 13
100 A	SHUN 1219	P01 3042 05
125 A	SHUN 1220	P01 3042 15
150 A	SHUN 1221	P01 3042 16
200 A	SHUN 1222	P01 3042 06
250 A	SHUN 1223	P01 3042 17
300 A	SHUN 1224	P01 3042 07
400 A	SHUN 1225	P01 3042 18
500 A	SHUN 1226	P01 3042 14

Current	Reference for 100 mV	
	Class 0.2	Class 0.5
600 A	SHUN 1227	P01 3042 48
750 A	SHUN 1228	P01 3042 41
1000 A	SHUN 1229	P01 3042 42
1250 A	SHUN 1230	P01 3042 49
1500 A	SHUN 1231	P01 3042 43
2000 A	SHUN 1232	P01 3042 44
2500 A	SHUN 1233	P01 3042 45
3000 A	SHUN 1234	P01 3042 46
4000 A	SHUN 1235	P01 3042 47

Customized products

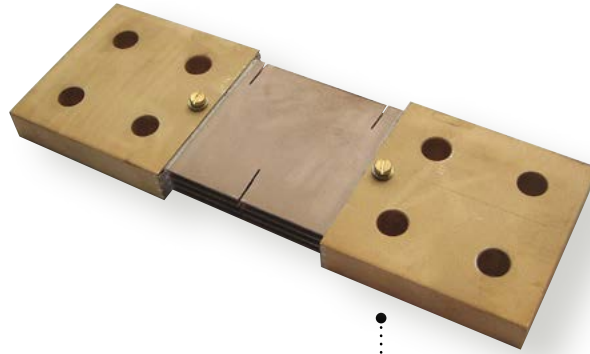


SHMI Range

Offering a vast range of industrial applications

PRODUCT ADVANTAGES

- + Range with excellent **PERFORMANCE/PRICE** trade-off
- + **A WIDE CHOICE** of voltage drops
- + **COMPACT DESIGN** that respects accepted thermal dissipation requirements



Easy-to-connect brass plates

► General specifications

Accuracy class defined in the following domain:

Over the entire measurement range
 For an ambient temperature of:
 -10°C to +35°C (class 0.2)
 -25°C to +40°C (class 0.5 and 1)
 For a blade temperature of 80°C
 For a shunt current ≤ 5 mA

Permitted rated calibres:

$I_n = 1$ A - 1.25 A - 1.5 A - 2 A - 2.5 A - 3 A - 4 A - 5 A - 6 A - 7.5 A
 and their multiples or sub-multiples

Permitted overloads:

On average and in normal operating conditions

I nominal (I _n)	2 h	5 s class 0.2	5 s class 0.5 and 1
< 250 A	1.2 I _n	2 I _n	10 I _n
250 to 2000 A	1.2 I _n	2 I _n	5 I _n
> 2000 A	1.2 I _n	2 I _n	2 I _n

Voltage drops:

50 mV - 60 mV - 100 mV - 150 mV - 200 mV - 300 mV - 1 V

Compliance with standards:

Accuracy and influence factor:
 IEC 60051-1 to 9
 Preferred ratings and dimensions for 100 mV shunts:
 NFC 42-151/152/153
 Lead-free range: RoHS directive (2002/95/CE)

► Mounting accessories

Kit of screw connectors + lead for shunt	Reference
1 to 25 A range	2919 9901
30 to 75 A range	2919 9902
100 A range	2919 9903
125 to 200 A range	2919 9904
250 to 500 A range	2919 9905
600 A and 750 A range	2919 9906



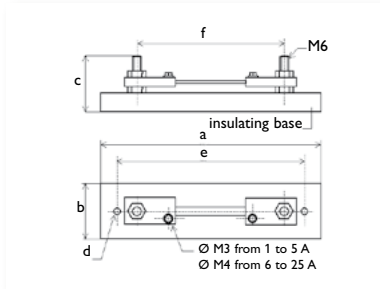
SHMI Range

Measurement and instrumentation Shunts

SHMI

SHMI 1 A to 25 A
screw connection

Voltage drop: 100 mV
Class 0.5 and 1

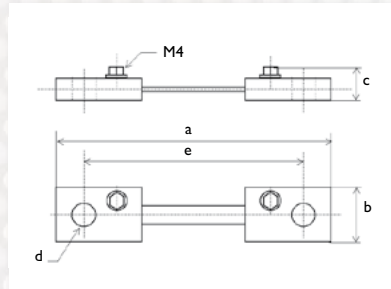


Current	Dimensions (mm)					
	a	b	c	d	e	f
1 A	162	25	40	3.5	152	110
2 A	162	25	40	3.5	152	110
2.5 A	162	25	40	3.5	152	110
3 A	162	25	40	3.5	152	110
4 A	162	25	40	3.5	152	110
5 A	162	25	40	3.5	152	110
6 A	162	25	40	3.5	152	110
7.5 A	162	25	40	3.5	152	110
10 A	162	25	40	3.5	152	110
15 A	162	25	40	3.5	152	110
20 A	162	25	40	3.5	152	110
25 A	162	25	40	3.5	152	110

SHMI

SHMI 30 A to 750 A
eye connection

Voltage drop: 100 mV
Class 0.5 and 1

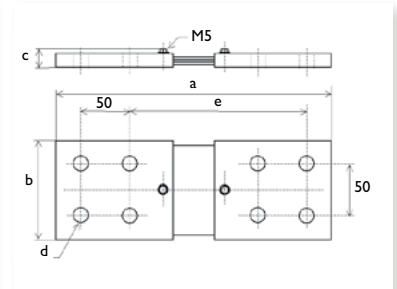


Current	Dimensions (mm)				
	a	b	c	d	e
30 A	150	16	10	8.5	130
40 A	150	16	10	8.5	130
50 A	150	16	10	8.5	130
60 A	150	16	10	8.5	130
75 A	150	16	10	8.5	130
100 A	150	21	10	8.5	130
125 A	150	32	10	8.5	130
150 A	150	32	10	8.5	130
200 A	150	32	14	8.5	130
250 A	210	52	13	14.5	180
300 A	210	52	13	14.5	180
400 A	210	52	17	14.5	180
500 A	210	52	17	14.5	180
600 A	210	52	22	14.5	180
750 A	210	52	22	14.5	180

SHMI

SHMI 1,000 A to 6,000 A
busbar connection block

Voltage drop: 100 mV
Class 0.5 and 1



Current	Dimensions (mm)				
	a	b	c	d	e
1000 A	290	100	20	14.5	190
1250 A	290	100	25	14.5	190
1500 A	290	100	25	14.5	190
2000 A	290	100	35	14.5	190
2500 A	290	100	45	14.5	190
3000 A	290	100	45	14.5	190
4000 A	330	150	45	16.5	230
5000 A	330	150	45	16.5	230
6000 A	330	150	45	16.5	230

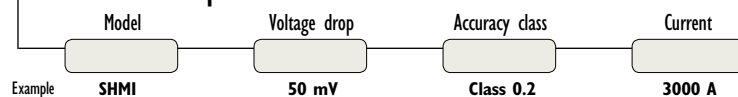
TO ORDER

Current	Reference for 100 mV	
	Class 0.5	Class 1
1 A	2901 0301	2901 0101
2 A	2901 0303	2901 0103
2.5 A	2901 0304	2901 0104
3 A	2901 0305	2901 0105
4 A	2901 0306	2901 0106
5 A	2901 0307	2901 0107
6 A	2901 0308	2901 0108
7.5 A	2901 0310	2901 0110
10 A	2901 0312	2901 0112
15 A	2901 0314	2901 0114
20 A	2901 0315	2901 0115
25 A	2901 0316	2901 0116

Current	Reference for 100 mV	
	Class 0.5	Class 1
30 A	2901 0317	2901 0117
40 A	2901 0318	2901 0118
50 A	2901 0319	2901 0119
60 A	2901 0321	2901 0121
75 A	2901 0323	2901 0123
100 A	2901 0325	2901 0125
125 A	2901 0326	2901 0126
150 A	2901 0328	2901 0128
200 A	2901 0330	2901 0130
250 A	2901 0331	2901 0131
300 A	2901 0333	2901 0133
400 A	2901 0335	2901 0135
500 A	2901 0336	2901 0136
600 A	2901 0338	2901 0138
750 A	2901 0340	2901 0140

Current	Reference for 100 mV	
	Class 0.5	Class 1
1000 A	2901 0361	2901 0161
1250 A	2901 0362	2901 0162
1500 A	2901 0363	2901 0163
2000 A	2901 0364	2901 0164
2500 A	2901 0365	2901 0165
3000 A	2901 0366	2901 0166
4000 A	2901 0368	2901 0168
5000 A	2901 0369	2901 0169
6000 A	2901 0370	2901 0170

Customized products



Associated products

Mounting accessories

page 147

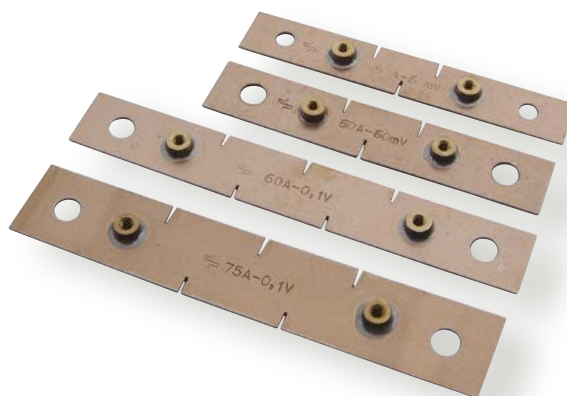


SHEL and SHMO Ranges

For simplified installation on low-power networks

PRODUCT ADVANTAGES

- + ECONOMY RANGE**
for construction (SHEL)
and for simplified
installation (SHMO)
- + DIRECT CONNECTION**
to measuring component
(SHEL)
- + MODULAR CASING**
for quick and easy
mounting (SHMO)
- + COMPACT DESIGN**
(SHEL)



► General specifications

Accuracy class 1 defined in the following domain:

Over the entire measurement range
For an ambient temperature of
-25°C to +40°C
For a blade temperature of 80°C
For a shunt current ≤ 5 mA

Permitted rated calibres:

$I_n = 1$ A - 1.25 A - 1.5 A - 2 A - 2.5 A -
3 A - 4 A - 5 A - 6 A - 7.5 A and their
multiples or sub-multiples
Max. 300 A for SHEL and 60 A for SHMO

Permitted rated calibres:

50 mV - 60 mV - 100 mV

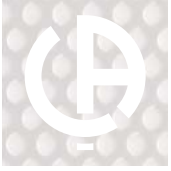
Permitted overloads:

On average and in normal operating
conditions

$I_{\text{nominal}} (I_n)$	2 h	5 s
< 250 A	1.2 I_n	10 I_n
≥ 250 A	1.2 I_n	5 I_n

Compliance with standards:

Accuracy and influence factor:
IEC 60051-1 to 9
Lead-free range: RoHS directive
(2002/95/CE)



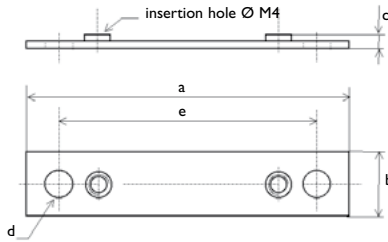
SHEL and SHMO Ranges

Measurement and instrumentation Shunts

SHEL



Voltage drop: 100 mV Class 1

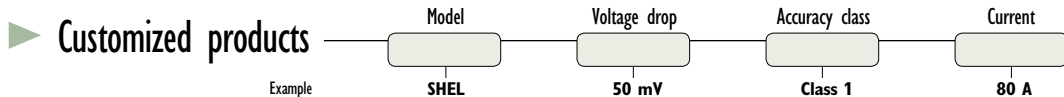


Dimensions (mm)

Current	a	b	c	d	e
10 A	150	10	5	6.5	122
15 A	150	12	5	6.5	122
20 A	150	12	5	6.5	122
25 A	150	15	5	6.5	122
30 A	150	15	5	6.5	122
40 A	150	15	5	6.5	122
50 A	150	20	5	6.5	122
60 A	150	25	5	8.5	122
75 A	150	30	5	8.5	122
100 A	150	20	6	8.5	122
125 A	150	25	6	8.5	122
150 A	150	30	6	8.5	122
200 A	150	40	6	10.5	122
250 A	150	50	6	10.5	122
300 A	150	60	6	10.5	122

TO ORDER

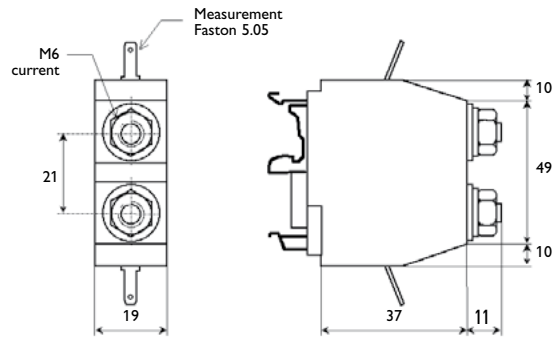
Current	Reference for 100 mV Class 1
10 A	2901 0246
15 A	2901 0247
20 A	2901 0227
25 A	2901 0228
30 A	2901 0229
40 A	2901 0230
50 A	2901 0231
60 A	2901 0232
75 A	2901 0233
100 A	2901 0235
125 A	2901 0236
150 A	2901 0237
200 A	2901 0238
250 A	2901 0239
300 A	2901 0248



SHMO



Voltage drop: 100 mV Class 1



TO ORDER

Current	Reference for 100 mV Class 1
1 A	2925 0101
5 A	2925 0107
10 A	2925 0112
15 A	2925 0114
20 A	2925 0115
25 A	2925 0116
30 A	2925 0117
40 A	2925 0118
50 A	2925 0119
60 A	2925 0121