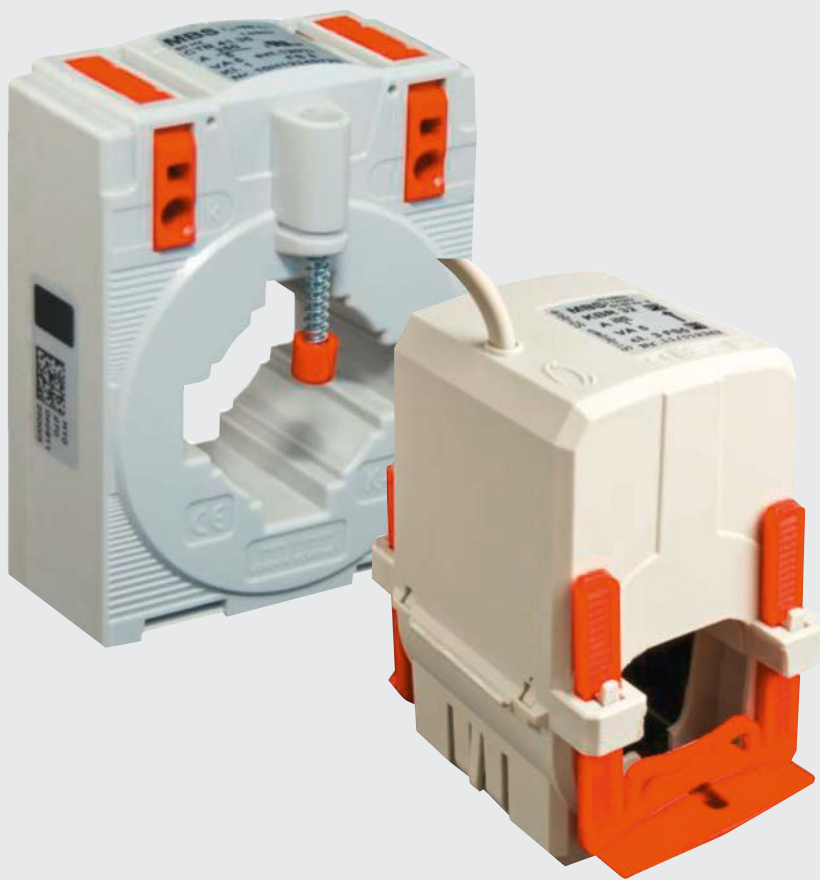


Measuring current transformer for universal measuring devices



Measuring current transformer for universal measuring devices



Window-type current transformer CTB31/CTB41/CTB51



Split-core current transformer KBR18/KBR32

Device features

CTB31/CTB41/CTB51

- Window-type current transformer
- Screwless connection technique
- Maintenance-free, gas-tight connection
- Max. operating voltages up to 1.2 kV
- Can also be used in 690 V systems
- Unbreakable plastic enclosure, self-extinguishing, UL94-V0, flame-resistant

KBR18/KBR32

- Split-core current transformer (mounting without disconnecting the primary conductor)
- Incl. connecting cable (2.5 m)
- Max. operating voltages up to 0.72 kV

Product description

All measuring devices of the PEM series can be operated with standard measuring current transformers (secondary current 1 A or 5 A). To comply with the accuracy class (e.g. 0.5 S), the measuring device and the measuring current transformers used must comply with class 0.5 S or better.

Standards

The measuring current transformers were designed in accordance with the following standards:

- IEC 61869-1
- IEC 61869-2
- IEC 61010-1

Technical data CTB31

Rated continuous thermal current I_{cth}	$1.2 \times I_N$
Rated short-time thermal current I_{th}	$60 \times I_N, 1 \text{ s}$
Max. operating voltage U_m	1.2 kV, U_{eff}
Insulation test voltage	6 kV, U_{eff} , 50 Hz, 1 min
Nominal frequency	50/60 Hz
Insulation class	E
Operating temperature	-5...50 °C

Technical data CTB41

Rated continuous thermal current I_{cth}	$1.2 \times I_N$
Rated short-time thermal current I_{th}	$60 \times I_N, 1 \text{ s}$
Max. operating voltage U_m	1.2 kV, U_{eff}
Insulation test voltage	6 kV, U_{eff} , 50 Hz, 1 min
Nominal frequency	50/60 Hz
Insulation class	E
Operating temperature	-5...50 °C

Technical data CTB51

Rated continuous thermal current I_{cth}	$1.2 \times I_N$
Rated short-time thermal current I_{th}	$60 \times I_N, 1 \text{ s}$
Max. operating voltage U_m	1.2 kV, U_{eff}
Insulation test voltage	6 kV, U_{eff} , 50 Hz, 1 min
Nominal frequency	50/60 Hz
Insulation class	E
Operating temperature	-5...50 °C

Technical data KBR18

Rated continuous thermal current I_{cth}	$1.2 \times I_N$
Rated short-time thermal current I_{th}	$60 \times I_N, 1 \text{ s}$
Max. operating voltage U_m	0.72 kV, U_{eff}
Insulation test voltage	3 kV, U_{eff} , 50 Hz, 1 min
Nominal frequency	50 Hz
Insulation class	E
Operating temperature	-5...50 °C

Technical data KBR32

Rated continuous thermal current I_{cth}	$1.2 \times I_N$
Rated short-time thermal current I_{th}	$60 \times I_N, 1 \text{ s}$
Max. operating voltage U_m	0.72 kV, U_{eff}
Insulation test voltage	3 kV, U_{eff} , 50 Hz, 1 min
Nominal frequency	50 Hz
Insulation class	E
Operating temperature	-5...50 °C

Ordering details window-type current transformer

Primary current	Secondary current	Accuracy	Type	Model	Art. No.
60	5	1	WL605 CL. 1	CTB31	B98086001
	1	1	WL601 CL. 1	CTB31	B98086002
75	5	1	WL755 CL. 1	CTB31	B98086003
	1	1	WL751 CL. 1	CTB31	B98086004
125	5	0.5	WL1255 CL. 0.5	CTB31	B98086005
		1	WL1255 CL. 1	CTB31	B98086007
	1	0.5	WL1251 CL. 0.5	CTB31	B98086006
		1	WL1251 CL. 1	CTB31	B98086008
150	5	0.5	WL1505 CL. 0.5	CTB31	B98086009
		1	WL1505 CL. 1	CTB31	B98086011
	1	0.5	WL1501 CL. 0.5	CTB31	B98086010
		1	WL1501 CL. 1	CTB31	B98086012
200	5	0.5	WL2005 CL. 0.5	CTB31	B98086013
		1	WL2005 CL. 1	CTB31	B98086015
	1	0.5	WL2001 CL. 0.5	CTB31	B98086014
		1	WL2001 CL. 1	CTB31	B98086016
250	5	0.5	WL2505 CL. 0.5	CTB41	B98086017
		1	WL2505 CL. 1	CTB41	B98086019
	1	0.5	WL2501 CL. 0.5	CTB41	B98086018
		1	WL2501 CL. 1	CTB41	B98086020
300	5	0.5	WL3005 CL. 0.5	CTB41	B98086021
		1	WL3005 CL. 1	CTB41	B98086023
	1	0.5	WL3001 CL. 0.5	CTB41	B98086022
		1	WL3001 CL. 1	CTB41	B98086024
400	5	1	WL4005 CL. 1	CTB41	B98086026
		0.5	WL4005 CL. 0.5	CTB41	B98086027
	1	1	WL4001 CL. 1	CTB41	B98086028
		0.5	WL4001 CL. 0.5	CTB41	B98086025
500	5	1	WL5005 CL. 1	CTB41	B98086029
		0.5	WL5005 CL. 0.5	CTB41	B98086031
	1	1	WL5001 CL. 1	CTB41	B98086032
		0.5	WL5001 CL. 0.5	CTB41	B98086033
600	5	1	WL6005 CL. 1	CTB51	B98086034
		0.5	WL6005 CL. 0.5	CTB51	B98086035
	1	1	WL6001 CL. 1	CTB51	B98086036
		0.5	WL6001 CL. 0.5	CTB51	B98086037
800	5	1	WL8005 CL. 1	CTB51	B98086038
		0.5	WL8005 CL. 0.5	CTB51	B98086039
	1	1	WL8001 CL. 1	CTB51	B98086040
		0.5	WL8001 CL. 0.5	CTB51	B98086041
1000	5	1	WL10005 CL. 1	CTB51	B98086042
		0.5	WL10005 CL. 0.5	CTB51	B98086043
	1	1	WL10001 CL. 1	CTB51	B98086044
		0.5	WL10001 CL. 0.5	CTB51	B98086045

Ordering details split-core current transformer

Primary current	Secondary current	Accuracy	Type	Model	Art. No.
50	1	3F55	WLS501 CL. 3F55	KBR18	B98086046
100	1	3F55	WLS1001 CL. 3F55	KBR18	B98086047
150	1	3F55	WLS1501 CL. 3F55	KBR18	B98086048
250	1	3F55	WLS2501 CL. 3F55	KBR32	B98086049
500	1	3F55	WLS5001 CL. 1F55	KBR32	B98086050

Selection guide current transformer/PEM
Design specifications of the measuring ranges current transformer/PEM

The secondary current of the current transformer has to be adjusted to the current input of the measuring device. The following table will help you to select the device type.

Current transformer secondary current	PEM353(-x) (5 A)	PEMxxx(-xx5) (5 A)	PEMxxx-xx1 (1 A)
5 A	■	■	–
1 A	– ¹⁾	– ¹⁾	■

¹⁾ Note: In principle, measuring current transformers can also be operated with 1 A secondary current on measuring devices with 5 A current input. In this case, the accuracy class is expected to be reduced by one class (e.g. 0.5 to 1).

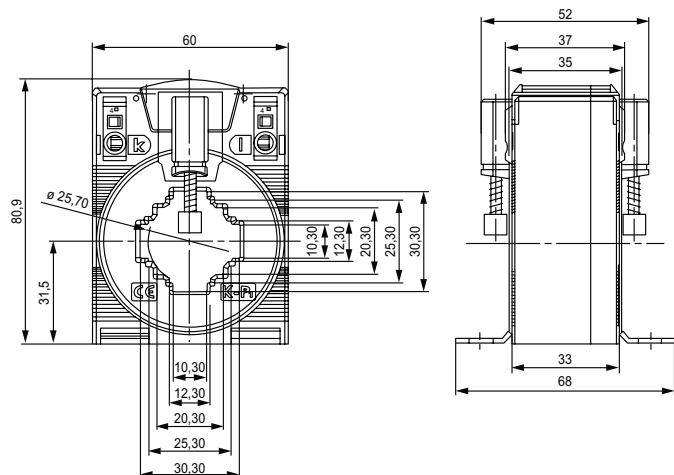
The measurement accuracy classes of the system

The measurement accuracy class of the system is influenced by both the accuracy classes of the measuring current transformers and the measuring device. Refer to DIN EN 61557-12, Annex E.2.

Accuracy classes of measuring current transformers	PEM3xx (0.5 S)	PEM5xx (0.5 S)	PEM735 (0.2 S)
1	1	1	1
0.5	1	1	0.5

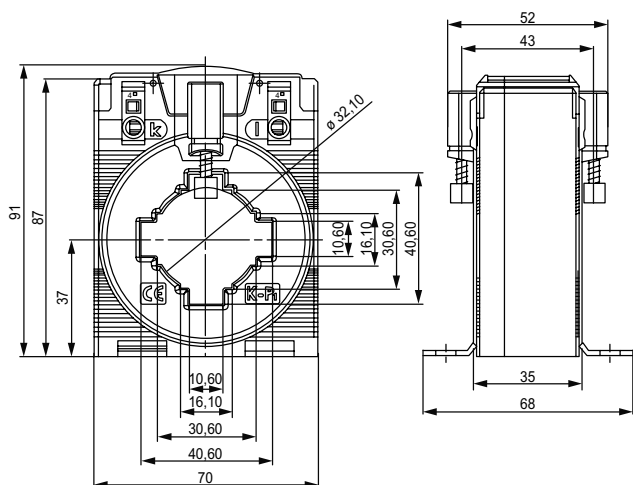
Dimension diagrams

CTB31



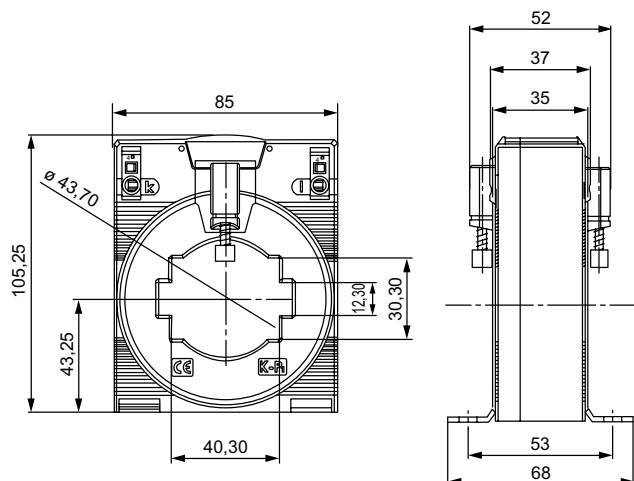
Dimensions (mm)	
Busbar 1	30 x 10
Busbar 2	25 x 12
Busbar 3	20 x 20
Circular conductor	25,7
Installation width	60
Installation height	80,9
Overall depth	52

CTB41



Dimensions (mm)	
Busbar 1	40 x 10
Busbar 2	30 x 15
Circular conductor	32
Installation width	70
Installation height	91
Overall depth	52

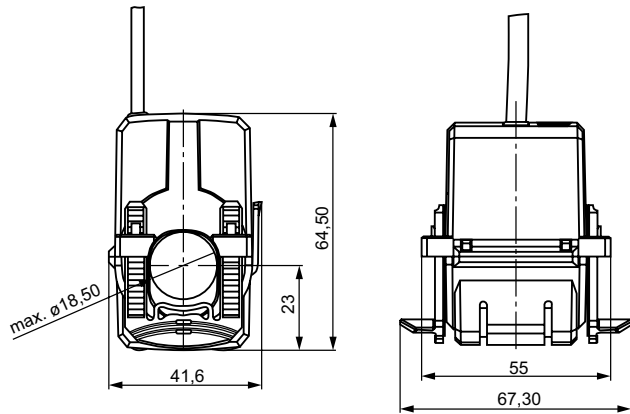
CTB51



Dimensions (mm)	
Busbar 1	50 x 12
Busbar 2	40 x 30
Circular conductor	44
Installation width	85
Installation height	105,25
Overall depth	52

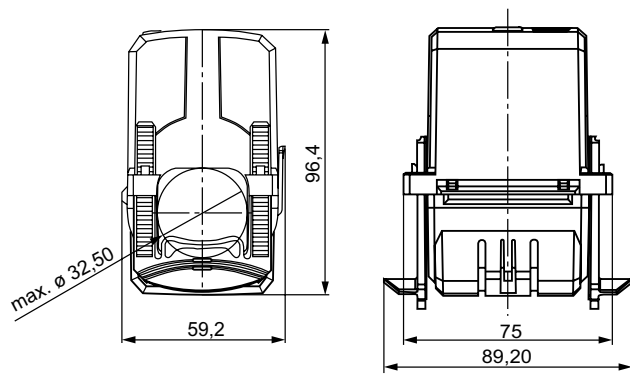
Dimension diagrams

KBR18



Dimensions (mm)	
Circular conductor	18
Installation width	41.6
Installation height	64.5
Installation depth incl. fixation clips	67.3

KBR32



Dimensions (mm)	
Circular conductor	32.5
Installation width	59.2
Installation height	96.4
Installation depth incl. fixation clips	89.2



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