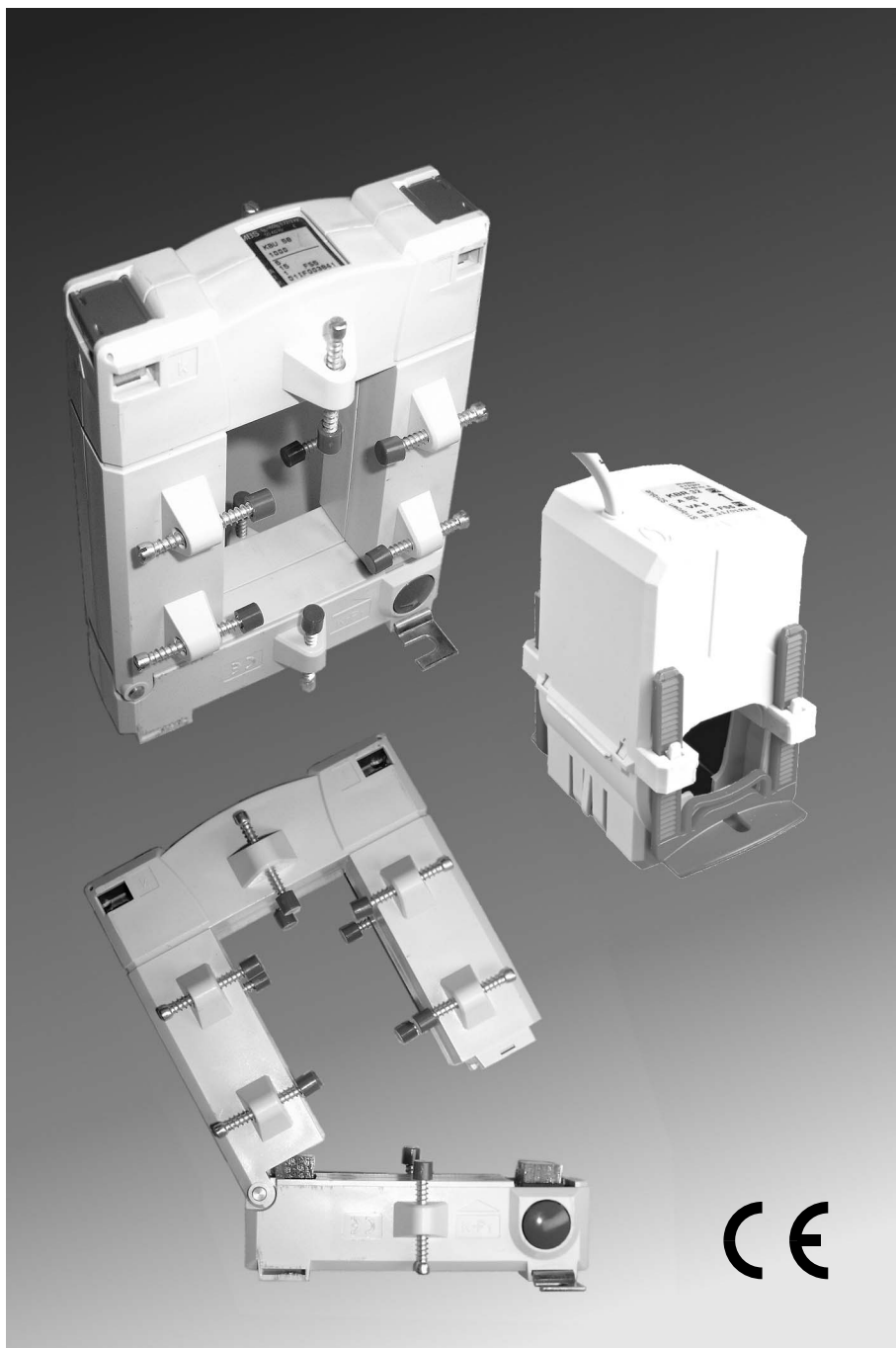


Split Core Current Transformers

KBU 23
KBU 58
KBU 812
KBU 816
KBR 18
KBR 32
KBR 44



Application

Current transformers convert higher AC currents to standardized secondary currents of 1 A or 5 A at definite accuracy classes making them accessible for measuring duties.

The **KBU/KBR** split core current transformers can be attached subsequently to live wires. The wires need not be interrupted or disconnected. In most cases, the system needs not be switched off. Therefore, a faster installation is possible saving costs.

The convenient locking system allows simple mounting of the KBU/KBR. Installation is done via snap-in. In a similar way, the KBU/KBR can be removed easily.

In order to measure a part of the power supply, it is possible to install a provisorial counting circuit without intervening the existing grid.

Seven different housings are available for primary ratings of 50 A to 5,000 A and for secondary ratings of 1 A or 5 A.

The KBU/KBR split core current transformers comply to the relevant standards.

Functional Principle

C.T.'s are transformers of lower output. A current-carrying conductor induces a current in the C.T.'s secondary winding. This current can be measured by a meter connected in parallel.

Using the **KBU/KBR** split core current transformers, the wire needs not to be thread through the CT but the split core CT can be attached over the wire.

The C.T.'s ratio is chosen that way to make a secondary current of 1 A or 5 A flow from a defined rated primary current.

General Technical Data

| | |
|---------------------|--|
| case details | high impact ultrasonically welded case with closing mechanism, flame retardant |
| material of case | KBU: polycarbonate KBR: polyamide |
| terminals | KBU: nickel-plated brass secondary terminals, each with 2 plus/minus combination screws KBR: connection wires (2x 0.75 mm ²) 2.5 m with open ends, colour-coded: k (s1) = brown, l (s2) = blue |
| mounting | snap-in mounting KBU: clamp screws KBR: "click" system with 2 clamps |
| dielectric test | 3 kV U _{rms} , 1 min. |
| operating voltage | ≤0.72 kV |
| operating frequency | 50/60 Hz (sinusoidal AC current) |

| Dimensions/weights Type (see "Dimensions") | dimensions in mm | | | busbar window | | weight in kg ca. |
|---|------------------|------------------|-----------------------------|---------------|-----|------------------|
| | width A | height B | depth C/C1 | D | E | |
| KBU 23 | 93 | 106 | 34/58 | 20 | 30 | 0.85 |
| KBU 58 | 125 | 158 | 34/58 | 50 | 80 | 1.08 |
| KBU 812 | 155 | 198 | 34/58 | 80 | 120 | 1.32 |
| KBU 816 | 195 | 243 | 64/79 | 80 | 160 | 3.78 |
| KBR 18 | 41.6 | 64.5 | 55/67.3 | max. 18.5 Ø | | 0.25 |
| KBR 32 | 59.2 | 101.2 | 75/89.2 | max. 32.5 Ø | | 0.40 |
| KBR 44 | 72.2 | 120.6 | 85/98.1 | max. 44 Ø | | 0.53 |
| Delivery content Type | fixing feet | plastite screws* | secondary covers | | | |
| KBU 23 | 2 | 8 | 2 | | | |
| KBU 58 | 4 | 12 | 2 | | | |
| KBU 812 | 4 | 16 | 2 | | | |
| KBU 816 | 4 | 20 | 2 | | | |
| | | | *4X32 mm with isolating cap | | | |
| KBR 18 | 2 clamps 67.3 mm | | | | | |
| KBR 32 | 2 clamps 89.2 mm | | | | | |
| KBR 44 | 2 clamps 98.1 mm | | | | | |

Safety Notes

The contact areas of the split core must be free of dirt and must not be touched!

The CT must be powered only in closed condition!

Primary Ratings

| Type | rated primary current I _N |
|----------------------------------|---|
| KBU 23 | 100; 150; 200; 250; 300; 400 A |
| KBU 58 | 250; 300; 400; 500; 600; 750; 800; 1000 A |
| KBU 812 | 250; 300; 400; 500; 600; 750; 800; 1000; 1200; 1250; 1500 A |
| KBU 816 | 1000; 1200; 1500; 1600; 2000; 2500; 3000; 4000; 5000 A |
| KBR 18 | 50; 75; 100; 125; 150; 200; 250 A |
| KBR 32 | 100; 125; 150; 200; 250; 300; 400; 500; 600 A |
| KBR 44 | 250; 300; 400; 500; 600; 750; 800; 1000 A |
| rated thermic permanent current | KBU: I _{cth} = 1.0 · I _N KBR: I _{cth} = 1.2 · I _N |
| rated thermic short-time current | I _{th} = 60 · I _N (max. 1 s) |
| rated overcurrent factor | KBU: FS 5 up to 1500 A prim. rated current FS 10 as of 1600 A prim. rated current KBR: FS 5 all types |

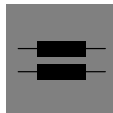
Secondary Ratings

rated secondary current 1 A or 5 A (not KBR 18)

rated power 1; 1.25; 1.5; 2.5; 3.75; 5; 7.5; 10; 15; 30 VA (depends on type)

In order to obtain an advantageous location in the error curve of the CT, the rated power should not exceed considerably the real power consumption of the devices including the wires that shall be connected.

KBR 32/44 optionally with output 4 ... 20 mA (passive)



Split Core Current Transformers

Accuracy at Reference Conditions

accuracy class 0.5, 1, or 3 (depends on type)

reference conditions

ambient temperature 23°C ± 1K
 primary current 1.0 I_N
 frequency 50 Hz
 wave form sinusoidal, distortion factor < 5%

Environmental

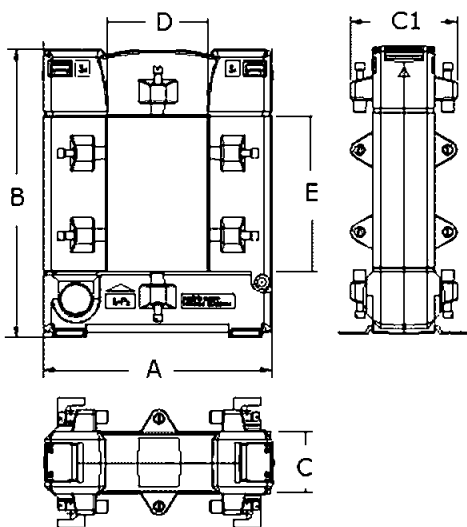
operation conditions for indoor use, non-condensing
 operation temperature -5 ... +40°C
 storage temperature -25 ... +70°C

Rules and Standards

DIN EN 61869-1 Instrument transformers – Part 1: General requirements
 DIN EN 61869-2 Instrument transformers – Part 2: Additional requirements for current transformers

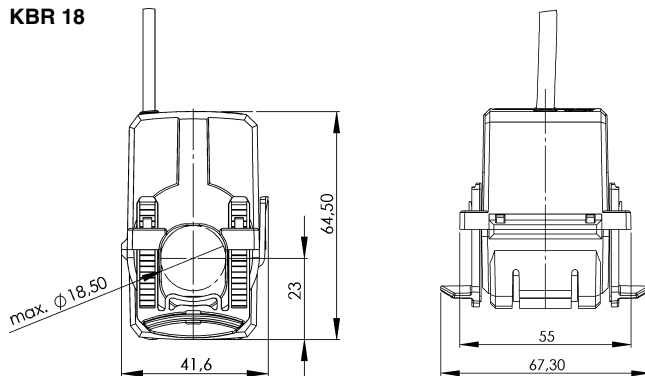
Dimensions

KBU 23/58/812/816

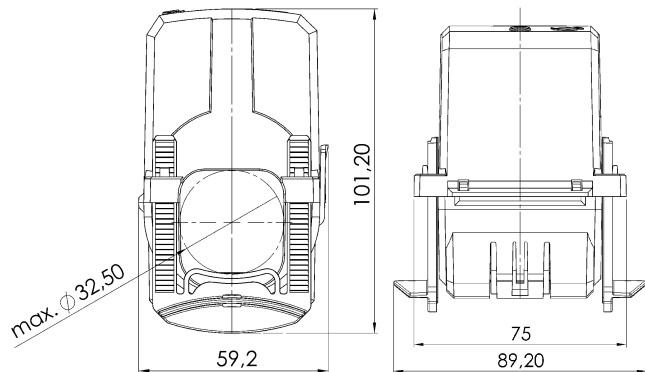


| Dimensions/weights Type (see drawing) | dimensions in mm | | | busbar window | | weight in kg ca. |
|---|------------------|-------------|---------------|---------------|-----|------------------------|
| | width A | height B | depth C/C1 | D | E | |
| KBU 23 | 93 | 106 | 34/58 | 20 | 30 | 0.85 |
| KBU 58 | 125 | 158 | 34/58 | 50 | 80 | 1.08 |
| KBU 812 | 155 | 198 | 34/58 | 80 | 120 | 1.32 |
| KBU 816 | 195 | 243 | 64/79 | 80 | 160 | 3.78 |

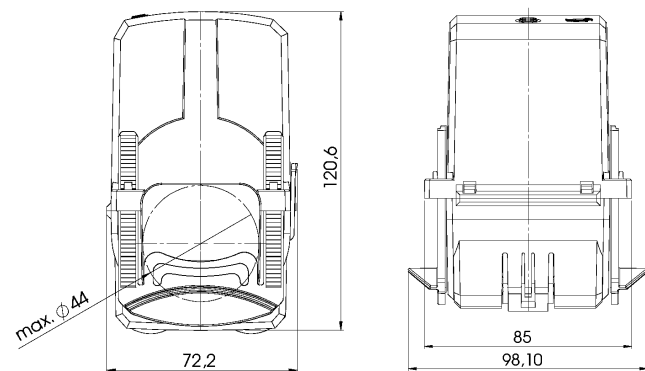
KBR 18



KBR 32



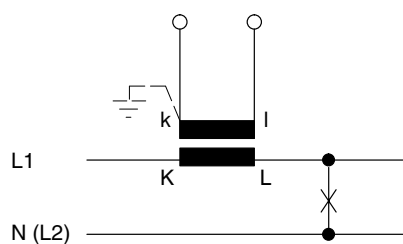
KBR 44



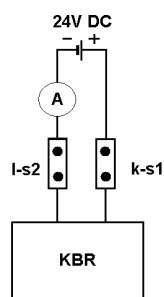
(dimensions in mm)

| Type | weight |
|--------|--|
| KBR 18 | approx. 0.25 kg depends on rated current |
| KBR 32 | approx. 0.40 kg depends on rated current |
| KBR 44 | approx. 0.53 kg depends on rated current |

Connections



KBR 32/44 optionally with output 4 ... 20 mA (passive)



Ordering Information

| | |
|--------------------------------------|--|
| Type | |
| KBU 23 | split core CT 100 to 400 A |
| KBU 58 | split core CT 250 to 1000 A |
| KBU 812 | split core CT 250 to 1500 A |
| KBU 816 | split core CT 1000 to 5000 A |
| KBR 18 | split core CT 50 to 250 A |
| KBR 32 | split core CT 100 to 600 A |
| KBR 44 | split core CT 250 to 1000 A |
| Rated primary current | refer to price sheet ²⁾ |
| Rated secondary current | 1 A 5 A (not KBR 18) KBR 32/44: output 4 ... 20 mA |
| Rated power | refer to price sheet ²⁾ |
| Accuracy (depends on type) | class 0.5 class 1 ¹⁾ class 3 |

¹⁾ standard

²⁾ Please clearly add the desired specifications.

Ordering example

split core CT KBU 58, 500/5 A,
rated power 2.5 VA, class 0.5

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– specifications subject to change without notice; date of issue 10/14 –

