



- Input:  
pulse and elapsed-hour meter
- Display:  
2 x 7-position, 2 x 8-position
- Housing: 48 x 48 mm, black plastic
- Panel mounting
- Power supply:  
10-30 V<sub>DC</sub>; 115 V<sub>AC</sub> 60 Hz;  
230 V<sub>AC</sub> 50 Hz



KOBOLD offices exist in the following countries:

ARGENTINA, AUSTRIA, BELGIUM, BRAZIL, CANADA, CHINA,  
FRANCE, GERMANY, GREAT BRITAIN, ITALY, NETHERLANDS,  
PERU, POLAND, SWITZERLAND, USA, VENEZUELA

KOBOLD Messring GmbH  
Nordring 22-24  
D-65719 Hofheim/Ts.  
☎ (06192) 299-0  
Fax (06192) 23398  
E-mail: info.de@kobold.com  
Internet: www.kobold.com

**Model:**  
ZBS-4K



**Description**

The model ZBS-4K(L) KOBOLD timer/counter is both an elapsed-hour meter and a pulse counter. In model ZBS-4K, these two functions operate in parallel; that is, the pulse counter counts the number of times that a device is switched on, and the elapsed-hour meter monitors the overall time that the device is switched on. In model ZBS-4L, both these functions are separate but cannot be run from different sources of power.

The AC version of the elapsed-hour meter has a 7-position display and a fast-running roller with red dashes to indicate movement. It has a self-starting synchronous motor that operates on 50-60 Hz current. The DC version has an 8-position display; the 1/100 h display rotates continuously and increments by 1 number every 36 s. In this model, the display digits are moved by a quartz-crystal-controlled stepper motor. The maximum counting range is up to 9 999 999 pulses.

The meter has a 48 x 48 mm standard housing with a latch-type fastener. For model ZBS-4K, the electrical connection is made by loosening a set screw and inserting a flat connector (0.8 x 6.3 mm). The ZBS-4L is connected with two wires.

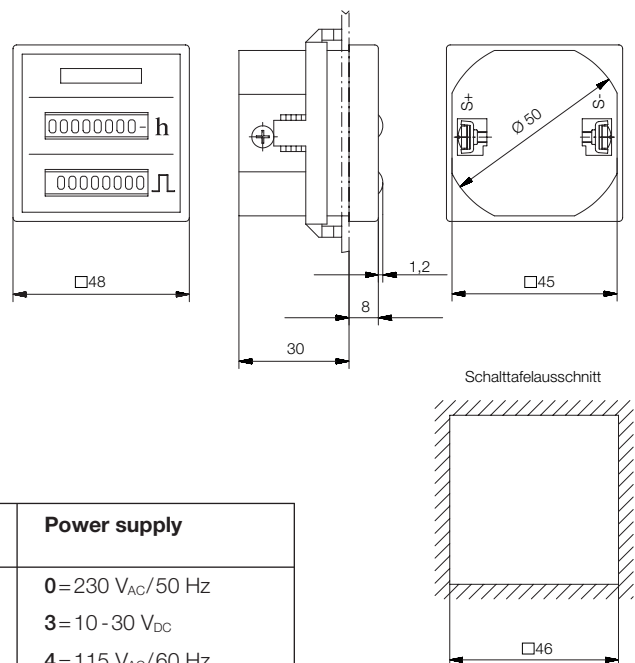
**Application examples**

- Monitoring start cycle of heating system furnaces
- Air conditioning systems

**Technical details**

Maximum display:	99 999.99 h for AC version 999 999.99 h for DC version 9 999 999 pulses
Max. pulse frequency:	10 s-1 (ZBS-4L)
Digits:	hours: white, decimal places: red, background: black
Digit size:	4 x 1.7 mm optical
Ambient temperature:	-15 to +50 °C
Mounting position:	any
Housing:	black plastic
Dimensions:	48 x 48 x 38 mm
Panel cut-out size:	45 x 45 mm
Electrical connection:	Flat connector 0.8 x 6.3 mm with screw terminals for ZBS-4K 2 x 0.5 m cable for ZBS-4L
Power supply:	10-30 V <sub>DC</sub> ; 100-130 V <sub>AC</sub> 60 Hz; 187-264 V <sub>AC</sub> 50 Hz
Max. power consumption:	Approx. 1 W at 10-30 V <sub>DC</sub> Approx. 1.43 VA at 100-130 V <sub>AC</sub> Approx. 3.0 VA at 187-264 V <sub>AC</sub>
Test voltage:	2500 V <sub>AC</sub> , 50 Hz
Weight:	approx. 65 g
Protection type:	IP 52 at front

**Dimensions**



**Ordering details** (example: ZBS-4K 0)

Model	Description	Power supply
ZBS-4K	Combination timer and pulse counter Housing 48 x 48 mm Common input	0 = 230 V <sub>AC</sub> /50 Hz 3 = 10 - 30 V <sub>DC</sub> 4 = 115 V <sub>AC</sub> /60 Hz
ZBS-4L	Combination timer and pulse counter Housing 48 x 48 mm Separate input	