

OPTICAL METER READER MTK 3

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FUNCTIONAL DESCRIPTION

The MTK 3 is an optical device for reading energy consumption meters. There is no need to set sensitivity because the MTK 3 adjusts itself automatically to each meter. It is able to read both passive optical displays (meter disks) and active optical displays (pulse LED). This means that the MTK 3 can be operated in either of two operating modes.

Sampling meter disks:
(reflected light mode)

Horizontal orientation

The notches on the left and right sides of the housing must be flush with the meter disk. The CE label can also be used for orientation.

Vertical orientation

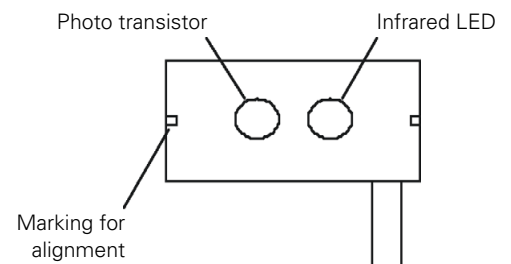
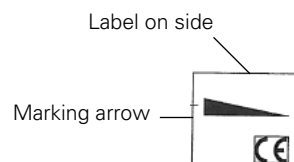
The operating state LED must be directly aligned with the middle of the disk.

To set up the MTK 3 for automatic self-adjustment, first assemble the probe, connect it to the MES and activate the MES. The start of the calibration phase is indicated by the fact that the control LED lights up (for 1 second). The calibration takes 40 seconds. During this time the probe attempts to detect a metering mark. If the control LED does not start to flash synchronously with the metering mark, the MTK 3 is not correctly positioned. In this case, the probe must be readjusted and the calibration phase must be repeated. To do this, briefly remove the MTK 3 cable from the MES (power-on reset) and then reconnect it.

Reading a meter LED:
(LED mode)

Assembly: The MTK 3 probe is able to read green, yellow, red and infrared meter LEDs.

To set the probe to LED mode, the infrared LED integrated into the MTK 3 must be masked with an adhesive label. The second opening (photo transistor) must be positioned precisely over the LED to be read.



After connection to the MES, the probe detects that its own infrared light is not reflected and switches to LED mode. A double flash indicates LED mode when the probe is activated.

Note: First assemble the probe, then connect it. This applies to both operating modes.

TECHNICAL DATA

Sensor housing dimensions:	42.5 mm x 22.5 mm x 21.5 mm (WxHxD)
Operating voltage:	DC: 5.5 to 30 V
Max. current consumption:	5 mA
Functional check:	Via LED
Signal output:	Transistor active +/- switching (390 Ω protective resistor)
Max. sampling rate:	3 pulses/s in reflected light mode 5 pulses/s in LED mode (pulse length: 50 ms)
Casing protection class:	IP 50
Temperature range:	-20 to 60°C
Connection cable:	3 m

PIN ASSIGNMENT

Green: 24 V + supply of data logger

White: WEB'log DI + pulse input from data logger

Brown: GND supply of data logger

