



Bimetal measuring instruments

for alternating current for connection to CT's
with red slave pointer (maximum current ammeter)

Type:

MQX 48

MQX 72

MQX 96



Application

Bimetal measuring devices are used to monitor the load conditions of electrical supply systems. Due to their thermal inertia, a display results that corresponds to the effective mean value of the current. A slave pointer is used to display the maximum. The maximum indicator (slave pointer) can be reset to the measuring mechanism pointer using the reset button. In another version, bimetal measuring mechanisms are combined with moving iron measuring mechanisms (class 1.5) in one housing. This means that the maximum value, mean value and instantaneous value of the current can be displayed simultaneously on one scale.

The setting time of the drag pointer can be selected between 8 and 15 minutes (standard 15 minutes).



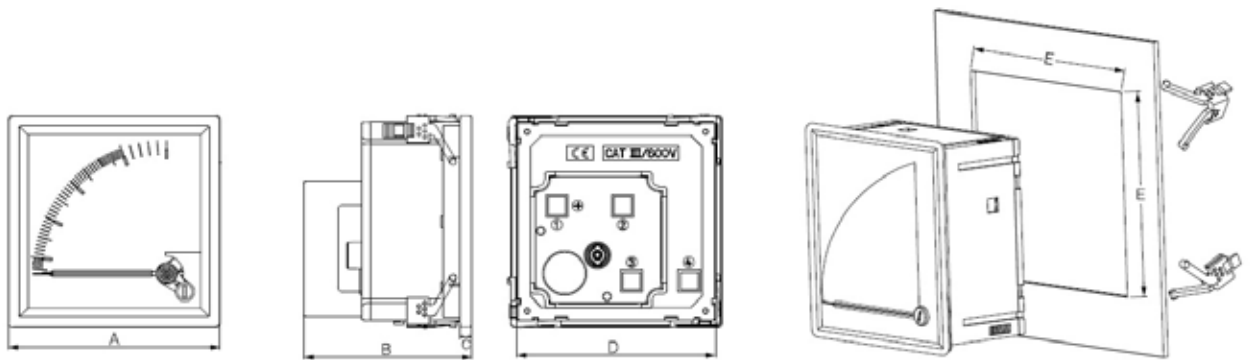
Function / Design

The bimetallic measuring mechanisms are robustly constructed with spring-loaded bearings. The bimetallic measuring devices are manufactured in accordance with DIN EN 60051 and the other applicable VDE and DIN regulations. The accuracy is 3% in relation to the full scale value and starts at approx. 15% of the full scale value. The devices can be permanently overloaded by a factor of 1.2; Ammeters can be temporarily overloaded up to 50 times. For the rest, DIN EN 60051 applies.

The internal consumption of bimetallic measuring mechanisms is 1.9 VA at 5 A and 0.9 VA at 1 A; combined with moving iron measuring mechanism 2.5 VA at 5 A or 1.5 VA at 1 A.



Dimensions



Size	„A“ mm	„B“ mm	„C“ mm	„D“ mm	„E“ mm
MQX 48	48	71	5,5	44,2	45,0
MQX 72	72	76	5,5	67,0	68,5
MQX 96	96	76	5,5	90,5	92,0



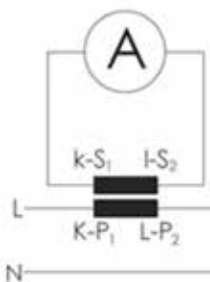
Technical data

Front frame	Dimensions acc. to DIN 43 718. The front frames are delivered als light frames in black colour for all types.
Scale, pointer	Execution acc. to DIN 43 802. The graduation is carried out as coarse graduation, the pointers as knife bar pointers.
Front glass	low glare glass
Zero point correction	All types have a zero point correction.
Connection	Screw connection with clamps
Accuracy	Acc. to DIN EN 60 051. It is defined under reference conditions, based on the measuring range end value. If the zero point is offset, the sum of the two full-scale values applies. In the case of power factor measuring devices and resistance measuring devices (scale curve strongly non-linear), the measurement error is related to the scale length.
Reference conditions	Temperature 20°C ± 2K, nominal position of use ± 1°
Influencing variables	Usage position normal vertical ± 5°, if the usage position deviates, the angle from the horizontal must be indicated. Influence of temperature, unless otherwise stated, the additional error is ≤ 1.5% at 20 °C ± 10 K ambient temperature. Ferromagnetic switchboards have no influence on the measurement accuracy.
Operating temperatur	All types work in a temperature range from -25 °C to + 55 °C (if not otherwise specified, trouble-free).
Relative humidity	75% annual mean, no condensation
Installation location	Interior, max. height of 2000 m above sea level
IP code	IP 52 on front side, IP 20 at terminals with terminal cover acc. to DIN EN 60529
Internal resistance	DC-voltmeters: 1000 Ω / V, higher internal resistance possible on request DC-ammeters: 0,6 to 250 Ω
Test voltage	5,3 kV AC for 1 min at 50 Hz acc. to IEC 61010-1
Vibrating resistance	1,5 g at 50 Hz
Impact resistance	15 g for 11 ms
EMC	EMC acc. to DIN EN 61 326
Overload behavior	Moving-iron meters: 2-, 5-, 6-fold overload (depending on type) continuous 10-fold overload for 2 seconds only once in lifetime Moving-coil meters: without overload Bimetal meters: 1,2-fold overload continuous






Connection

Connection with current transformer





Measuring ranges

			
Type	MQX 48	MQX 72	MQX 96
Front frame	48 x 48 mm	72 x 72 mm	96 x 96 mm
Cut-out	45 x 45 mm	68 x 68 mm	92 x 92 mm
Length of scale	42 mm	62 mm	90 mm
Pointer deflection	90°	90°	90°
Accuracy class	3	3	3
Front glas	low-glare glas	low-glare glas	low-glare glas
Weight	0,1 kg	0,2 kg	0,25 kg

Alternating current - for use with current transformer					
Measuring range .../5 A					
.../5 A	50/5	0 - 50/60 A	X	X	X
	60/5	0 - 60/72 A	X	X	X
	100/5	0 - 100/120 A	X	X	X
	150/5	0 - 150/180 A	X	X	X
	200/5	0 - 200/240 A	X	X	X
	250/5	0 - 250/300 A	X	X	X
	300/5	0 - 300/360 A	X	X	X
	400/5	0 - 400/480 A	X	X	X
	500/5	0 - 500/600 A	X	X	X
	600/5	0 - 600/720 A	X	X	X
	1000/5	0 - 1000/1200 A	X	X	X
	1500/5	0 - 1500/1800 A	X	X	X
Measuring range .../1 A					
.../1 A	50/1	0 - 50/60 A	X	X	X
	60/1	0 - 60/72 A	X	X	X
	100/1	0 - 100/120 A	X	X	X
	150/1	0 - 150/180 A	X	X	X
	200/1	0 - 200/240 A	X	X	X
	250/1	0 - 250/300 A	X	X	X
	300/1	0 - 300/360 A	X	X	X
	400/1	0 - 400/480 A	X	X	X
	500/1	0 - 500/600 A	X	X	X
	600/1	0 - 600/720 A	X	X	X
	1000/1	0 - 1000/1200 A	X	X	X
	1500/1	0 - 1500/1800 A	X	X	X

Other scale values to be specified with order!

Typing

