



## Moving-iron measuring instruments

with integrated selector switch for measurement of alternating voltage in three-phase power systems phase against phase as well as phase against neutral with 6 switching positions

Type:

**EQX 72/U6**

**EQX 96/U6**



### Application

Moving-iron measuring instruments are mainly used in heavy-current installation for the measurement of alternating currents and alternating voltages (direct measurement). Moving-iron measuring instruments also indicate the rms value in case of non-sinusoidal quantities within a frequency range of 50/60 Hz.

With direct current and direct voltage, additional indication errors of approx. 1 % may occur due to magnetization errors inside the iron. As compared to moving-coil measuring instruments, the energy consumption is relatively high ranging between 0.6 VA and 2 VA. They are thus not suited for measuring small currents or voltages.



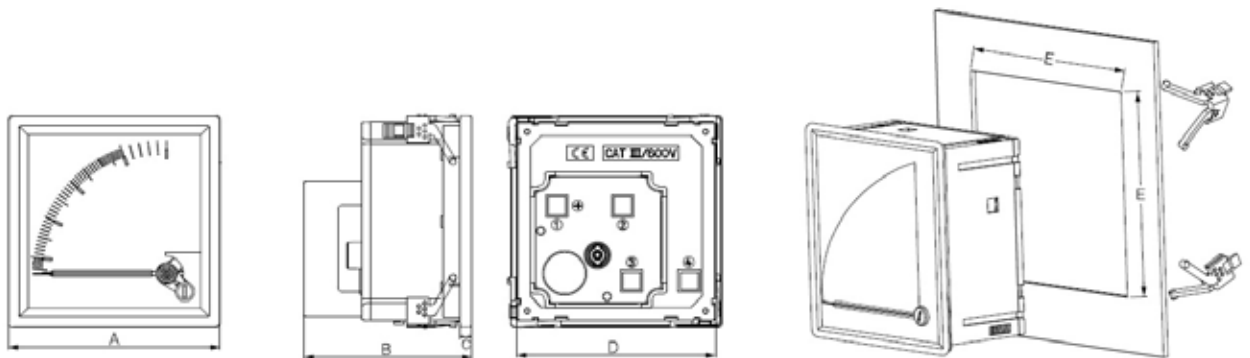
### Function / Design

The moving iron movements are robust with spring-loaded bearings.

The moving iron measuring devices are manufactured in accordance with DIN EN 60051 and the other applicable VDE and DIN regulations. The accuracy is 1.5% (size 48 accuracy 2.5%), based on the full scale value and starts at approx. 10% (with voltmeters at approx. 20%) of the full scale value. The devices can be permanently overloaded by a factor of 1.2; Ammeters can be overloaded up to 50 times for a short time; Tension meter up to 2x. For the rest, DIN EN 60051 applies.



### Dimensions



Size	„A“ mm	„B“ mm	„C“ mm	„D“ mm	„E“ mm
EQX 72	72	76	5,5	67,0	68,5
EQX 96	96	76	5,5	90,5	92,0

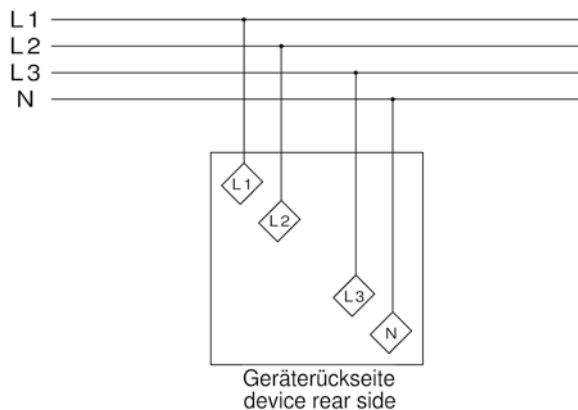


## Technical data

<b>Front frame</b>	Dimensions acc. to DIN 43 718. The front frames are delivered als light frames in black colour for all types.
<b>Scale, pointer</b>	Execution acc. to DIN 43 802. The graduation is carried out as coarse graduation, the pointers as knife bar pointers.
<b>Front glass</b>	low glare glass
<b>Zero point correction</b>	All types have a zero point correction.
<b>Connection</b>	Screw connection with clamps
<b>Accuracy</b>	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.
<b>Reference conditions</b>	Temperature 20°C ± 2K, nominal position of use ± 1°
<b>Influencing variables</b>	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.
<b>Operating temperatur</b>	All types work in a temperature range from -25 °C to + 55 °C (if not otherwise specified, trouble-free).
<b>Relative humidity</b>	75% annual mean, no condensation
<b>Installation location</b>	Interior, max. height of 2000 m above sea level
<b>IP code</b>	IP 52 on front side, IP 20 at terminals with terminal cover acc. to DIN EN 60529
<b>Internal resistance</b>	DC-voltmeters: 1000 Ω / V, higher internal resistance possible on request DC-ammeters: 0,6 to 250 Ω
<b>Test voltage</b>	5,3 kV AC for 1 min at 50 Hz acc. to IEC 61010-1
<b>Vibrating resistance</b>	1,5 g at 50 Hz
<b>Impact resistance</b>	15 g for 11 ms
<b>EMC</b>	EMC acc. to DIN EN 61 326
<b>Overload behavior</b>	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





## Measuring ranges

Type	EQX 72/U6	EQX 96/U6
Front frame	72 x 72 mm	96 x 96 mm
Cut-out	68 x 68 mm	92 x 92 mm
Length of scale	62 mm	90 mm
Pointer deflection	90 °	90 °
Accuracy class	1,5	1,5
Front glas	low-glare glas	low-glare glas
Weight	0,25 kg	0,3 kg

Alternating voltage direct measurement		
Measuring range (without overload)		
V 500	X	X

Other measuring ranges on request!

„X“ = available

„-“ = not available

## Typing

