Moving-iron measuring instruments

double voltmeters with diagonal gauges

Type:

EQX/2 96

EQX/2 144

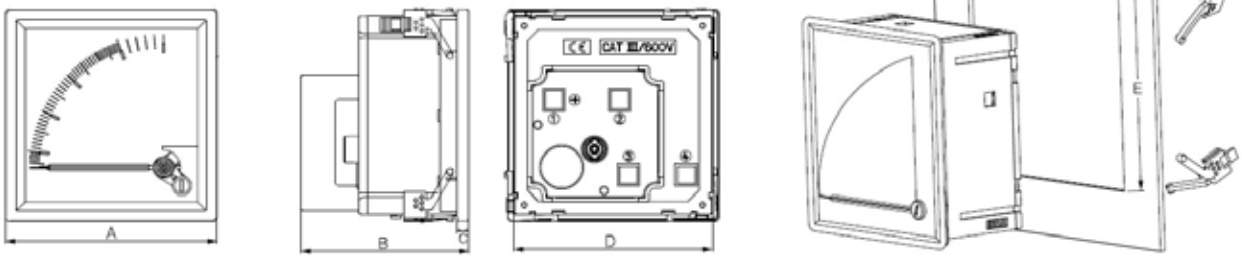
Application

EQX/2 moving iron measuring devices (double voltmeter) are used to measure two AC voltages and are used for synchronization. The built-in moving iron measuring mechanisms determine the effective values of the alternating voltages.
The devices are suitable both for direct connection up to 600 V and for the connection of voltage transformers.

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



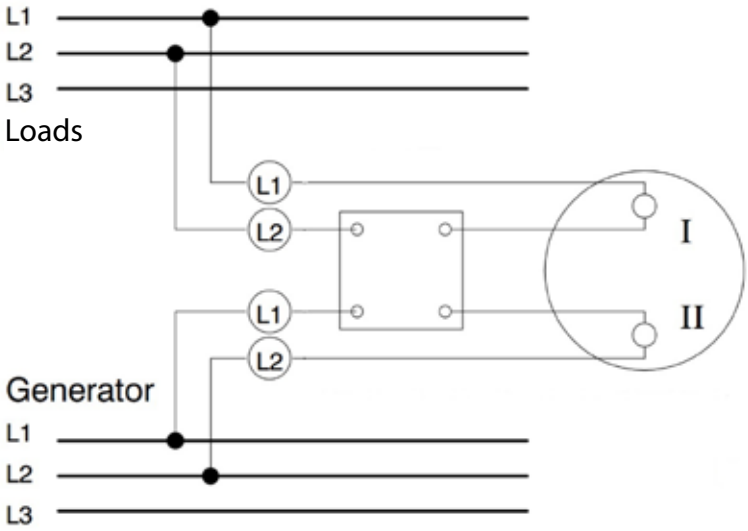
Size	„A“ mm	„B“ mm	„C“ mm	„D“ mm	„E“ mm
EQX/2 96	96	63	5,5	90,5	92
EQX/2 144	144	63	5,5	136	138

MÜLLER + ZIEGLER GmbH
Elektrische Messgeräte
Industriestr. 23 • 91710 Gunzenhausen • GERMANY
Tel.: +49 9831 5004-0 • Fax: +49 9831 5004-20
info@mueller-ziegler.de • www.mueller-ziegler.de

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 clambs
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: witout overload Bimetall meters: 1,2-fold overload continuous

Connection



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Measuring ranges

Type		EQX/2 96	EQX/2 144
Front frame		96 x 96 mm	144 x 144 mm
Cut-out		92 x 92 mm	138 x 138 mm
Length of scale		-- mm	-- mm
Pointer deflection		2 x 90 °	2 x 90 °
Accuracy class		1,5	1,5
Front glas		low-glare glas	low-glare glas
Weight		0,4 kg	0,7 kg

Alternativ voltage direct measurement				
Measuring range (without overload)				
V	2 x 100		X	X
	2 x 250 (230)		X	X
	2 x 400		X	X
	2 x 500		X	X
	2 x 600		X	X
Scales ranges acc. to measuring range				
Alternating voltage with voltage transformer				
Measuring range (1,2-fold overload)				
... kV(V)/... V	2 x .../100V(120V)		X	X
	2 x .../100V//√3(120V)√3		X	X
	2 x .../110V(132V)		X	X
	2 x .../110V//√3(132V) √3		X	X
Scale ranges to be specified with order				

Typing

EQX /2 96 2 x 500 V

- EQX — Moving-iron device
- /2 — with 2 measuring gauges
- 96 — Size
- 2 x 500 V — Measuring range and scale

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