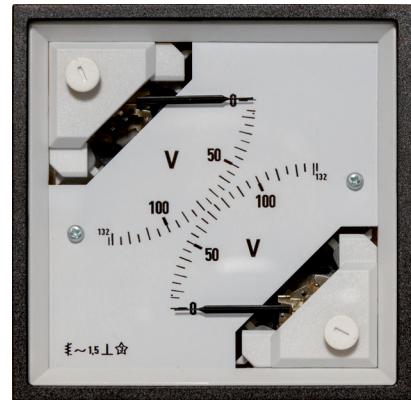


SIRAX BM910

Analog 2 in 1 Moving Iron Movement Meter

Description

The analog 2 in 1 moving iron movement meter SIRAX BM300 in a polycarbonate housing and 90° scale are suitable for measuring AC currents for frequency range of 15 ... 400 Hz and AC voltages for frequency range of 15 ... 100 Hz. Moving iron meters indicate rms-values practically independent of waveform even of high harmonics. Error of indication may occur for extreme waveforms (e.g. phase gating controls) & for frequencies above 100Hz. Moving iron movement has pivots of very high hardness. Movement suspended between spring loaded sapphire jewel and silicon jewel. Movement is critically damped by use of silicon oil. The measuring devices are designed for installation in control panels, machine consoles or mosaic grids up to a panel thickness of no more than 25mm. The bezel, the glass window and the dial can be easily exchanged on site.



Features

- Two different meters in one case
- Robust polycarbonate housing with high flammability class UL94-V0
- Simple assembly using swivel screw
- Quick and easy connection using screws and clamps
- Full-surface rear wall cover as protection against accidental contact
- Near linear scale
- Easy replacement of the glass window, the front bezel and the scale

Technical Data

Mechanical Data

Case details	Moulded square case suitable to be mounted in control / switchgear panels, machine tool consoles or mosaic panels				
Material of case	Polycarbonate				
Flammability class	UL94 V-0, self-extinguishing, non-dripping, halogen-free				
Material of window	Glass				
Front frame (bezel)	Polycarbonate black				
Position of use	Vertical $\pm 5^\circ$				
Mounting	stackable next to each other				
Panel thickness	$\leq 25\text{mm}$				
Panel fixing	Swivel screw				
Weight	<table border="1" style="display: inline-table;"> <tr> <td>□96</td> <td>□144</td> </tr> <tr> <td>0.2 kg</td> <td>0.4 kg</td> </tr> </table>	□96	□144	0.2 kg	0.4 kg
□96	□144				
0.2 kg	0.4 kg				

Connections

Voltmeter or Ammeter <30A M4 screws and wire clamps form E3
 Ammeter >30A Threaded studs M6 with nuts

Scaling

Pointer	knife-edge pointer
Pointer deflection	0 ... 90°
Scale characteristics	Near linear above 10% of nominal full scale value
Scale division	Coarse-fine
Scale length	54 mm

Electrical Data

Measuring unit	AC Voltage and AC Current
Power consumption	
Voltmeter	< 4.5 VA
Ammeter <15A	< 0.5 VA
Ammeter >15A	< 0.8 VA
Over range	
Voltmeter	1.2 times nominal voltage
Ammeter	2 times nominal current
Overload capacity	acc. to DIN EN 60 051
Continuously	1.2 times rated voltage/current
Short time voltage measurement	2 x for 0.5s: 9 overloads 2 x for 5s: 1 overload
Short time current measurement	10 x for 0.5s: 9 overloads 10 x for 5s: 1 overload
External magnetic field	0.4 kA/m

Reference conditions

Accuracy class	1.5% acc. to DIN EN 60 051
Reference temperature	23 °C / $\pm 2^\circ\text{C}$
Position of use	Nominal position $\pm 1^\circ$
Input Waveform	Rated value of measured quantity sine wave, distortion factor $\leq 5\%$
Frequency	45 ... 65 Hz
Other conditions	DIN EN 60 051-1

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Environmental conditions

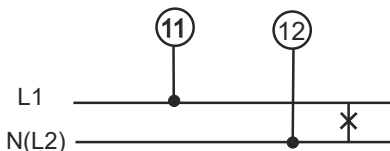
Climatic suitability	Climate category 2 acc. to DIN EN 60 051 Climate category 3 acc. to VDE/VDI 3540
Operating temperature	-10 ... +55 °C
Storage temperature	-25 ... +65 °C
Relative humidity	≤75% annual average, non condensation
Shock	150 m/s ² (15g) / 11 ms
Vibration	10 ... 55 ... 10 Hz, 0.15 mm amplitude (correspond to 1.5g at 50 Hz)

Safety

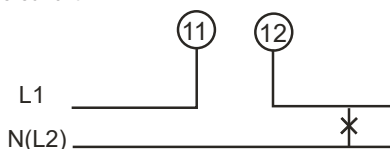
EMC resistance	acc. to EN 61 000-6-2
EMC emission	acc. to EN 61 000-6-4
Safety	acc. to EN 60 010-1
Installation category	600 V CATIII
Pollution degree	2
Rated insulation voltage	1000 V
Insulation resistance	> 50 MΩ at 500 V DC
Insulation class	A (acc. to VDE 0110)
Insulation test voltage	3 kV
Housing protection class	IP52 Housing on the front IP00 Connections without contact protection IP20 Connections with contact protection
Safety terminal protection	Full sized polycarbonate back cover to provide protection against accidental contact (hand and fingers) acc. to VDE 0410

Electrical connections

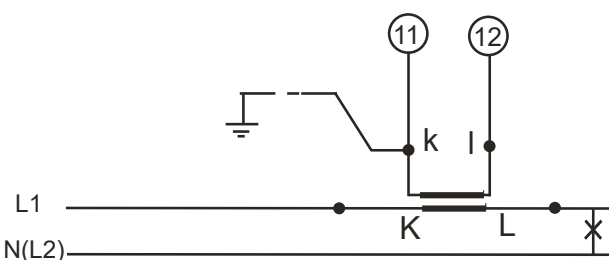
AC Voltage



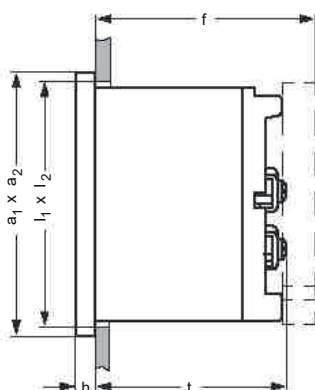
AC Current



AC Current for use on current transformer

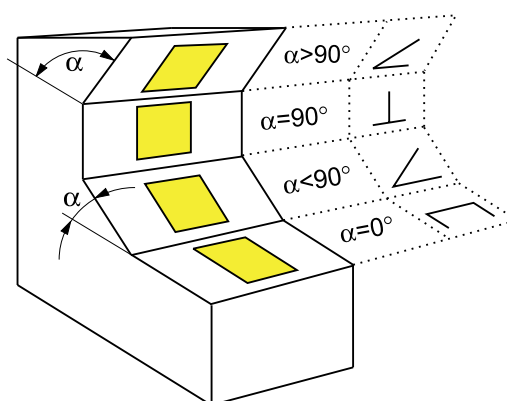


Dimensions



Front [mm]	Nominal Dimensions [mm]		Cutout [mm] l ₁ x l ₂	Installation depth (t) including terminal [mm]	Installation depth (f) including back cover [mm]
	a ₁ x a ₂	h			
□96	96 x 96	5.5	92 ^{+0.8} x 92 ^{+0.8}	53	64
□144	144 x 144	5.5	138 ⁺¹ x 138 ⁺¹		

Working position



Code	Working position	Code	Working position	Code	Working position
A	α = 0°	D	α = 45°	G	α = 90° (vertical)
B	α = 15°	E	α = 60°	H	α = 105°
C	α = 30°	F	α = 75°	I	α = 120°

SIRAX BM910

Analog 2 in 1 Moving Iron Movement Meter

Order details

Description	Blockingcode	No-go with blockingcode	Article No. / Feature
SIRAX BM910, Analog 2 in 1 Moving Iron Movement Meter			BM910-
Merkmal			
01 Features, Selection			
<input type="checkbox"/> 96 (96 x 96 mm)			1
<input type="checkbox"/> 144 (144 x 144 mm)			2
02 Measuring input 1			
AC Current	A		1
AC Current for transformer connection	B		2
AC Voltage	C		3
AC Voltage for transformer connection	D		4
03 Measuring input 2			
AC Current	E		1
AC Current for transformer connection	F		2
AC Voltage	G		3
AC Voltage for transformer connection	H		4
04 Measuring range input 1			
AC Current			
100 mA		B,C,D,F,G,H	01
150 mA		B,C,D,F,G,H	02
250 mA		B,C,D,F,G,H	03
400 mA		B,C,D,F,G,H	04
600 mA		B,C,D,F,G,H	05
1 A		B,C,D,F,G,H	06
1.5 A		B,C,D,F,G,H	07
2.5 A		B,C,D,F,G,H	08
3 A		B,C,D,F,G,H	09
4 A		B,C,D,F,G,H	10
5 A		B,C,D,F,G,H	11
6 A		B,C,D,F,G,H	12
10 A		B,C,D,F,G,H	13
15 A		B,C,D,F,G,H	14
20 A		B,C,D,F,G,H	15
25 A		B,C,D,F,G,H	16
30 A		B,C,D,F,G,H	17
40 A		B,C,D,F,G,H	18

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Analog 2 in 1 Moving Iron Movement Meter

50 A		B,C,D,F,G,H	19
60 A		B,C,D,F,G,H	20
Special range AC Current			
0 ... <60 A		B,C,D,F,G,H	21
AC Current for transformer connection			
... / 1 A		A,C,D,E,G,H	22
... / 5 A		A,C,D,E,G,H	23
AC Voltage			
6 V		A,B,D,E,F,H	24
10 V		A,B,D,E,F,H	25
15 V		A,B,D,E,F,H	26
25 V		A,B,D,E,F,H	27
40 V		A,B,D,E,F,H	28
60 V		A,B,D,E,F,H	29
100 V		A,B,D,E,F,H	30
120 V		A,B,D,E,F,H	31
132 V		A,B,D,E,F,H	32
150 V		A,B,D,E,F,H	33
250 V		A,B,D,E,F,H	34
300 V		A,B,D,E,F,H	35
400 V		A,B,D,E,F,H	36
500 V		A,B,D,E,F,H	37
600 V		A,B,D,E,F,H	38
Special range AC Voltage			
0 ... <600 V		A,B,D,E,F,H	39
AC Voltage for transformer connection			
... / 100 V		A,B,C,E,F,G	40
... / 110 V		A,B,C,E,F,G	41
05 Measuring range input 2			
AC Current			
100 mA		B,C,D,F,G,H	01
150 mA		B,C,D,F,G,H	02
250 mA		B,C,D,F,G,H	03
400 mA		B,C,D,F,G,H	04
600 mA		B,C,D,F,G,H	05
1 A		B,C,D,F,G,H	06
1.5 A		B,C,D,F,G,H	07
2.5 A		B,C,D,F,G,H	08

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Analog 2 in 1 Moving Iron Movement Meter

3 A		B,C,D,F,G,H	09
4 A		B,C,D,F,G,H	10
5 A		B,C,D,F,G,H	11
6 A		B,C,D,F,G,H	12
10 A		B,C,D,F,G,H	13
15 A		B,C,D,F,G,H	14
20 A		B,C,D,F,G,H	15
25 A		B,C,D,F,G,H	16
30 A		B,C,D,F,G,H	17
40 A		B,C,D,F,G,H	18
50 A		B,C,D,F,G,H	19
60 A		B,C,D,F,G,H	20
Special range AC Current			
0 ... <60 A		B,C,D,F,G,H	21
AC Current for transformer connection			
... / 1 A		A,C,D,E,G,H	22
... / 5 A		A,C,D,E,G,H	23
AC Voltage			
6 V		A,B,D,E,F,H	24
10 V		A,B,D,E,F,H	25
15 V		A,B,D,E,F,H	26
25 V		A,B,D,E,F,H	27
40 V		A,B,D,E,F,H	28
60 V		A,B,D,E,F,H	29
100 V		A,B,D,E,F,H	30
120 V		A,B,D,E,F,H	31
132 V		A,B,D,E,F,H	32
150 V		A,B,D,E,F,H	33
250 V		A,B,D,E,F,H	34
300 V		A,B,D,E,F,H	35
400 V		A,B,D,E,F,H	36
500 V		A,B,D,E,F,H	37
600 V		A,B,D,E,F,H	38
Special range AC Voltage			
0 ... <600 V		A,B,D,E,F,H	39
AC Voltage for transformer connection			
... / 100 V		A,B,C,E,F,G	40
... / 110 V		A,B,C,E,F,G	41

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Analog 2 in 1 Moving Iron Movement Meter

06 Working position	$\alpha = 0^\circ$			A
	$\alpha = 15^\circ$			B
	$\alpha = 30^\circ$			C
	$\alpha = 45^\circ$			D
	$\alpha = 60^\circ$			E
	$\alpha = 75^\circ$			F
	$\alpha = 90^\circ$ (vertical)			G
	$\alpha = 105^\circ$			H
	$\alpha = 120^\circ$			I
07 Front window				
Glass				1
08 Scalefactor				
Standard				1
Non Standard (Customized)				2
09 Contact protection				
without back cover				1
with back cover				2
10 Color of Dial, pointer and letters				
Standard (dial white / pointer black / letters black)				1
Non Standard (dial / pointer / letters customized)				2
11 Red pointer kit for input 1				
Without red pointer kit				1
With red pointer kit				2
12 Red pointer kit for input 2				
Without red pointer kit				1
With red pointer kit				2

In case of Ammeter / Ammeter 1st meter could be upto 60A but 2nd one will be only upto 10A



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