

SIRAX BM500

Analog Bimetallic Ammeters with maximal Current Indicator

Description

The analog bimetallic ammeters with maximal current indicator SIRAX BM500 in a polycarbonate housing and 90° scale are intended for thermal monitoring of transformers, cables and other electrical devices which have a slow reaction to current changes.

They indicate the mean rms current value during the measuring period of the meter over 8 min, 15 min or 20 min and deflects a resettable red slave pointer which shows the maximum value reached. These meters do not react to short current pulses essentially.

Bimetallic instruments have a specific inertia due to their thermal time lag making these instruments especially suitable to indicate maximum demands or control long-lasting peak loads.

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

- 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
- 90° scale
- User accessible reset knob
- Easy replacement of the glass window and the front bezel

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 ±5°
Mounting	stackable next to each other
Panel thickness	≤25mm
Panel fixing	Swivel screw

Connections

Ammeter M4 screws and wire clamps form E3

Scaling

Pointer knife-edge pointer
 Pointer deflection 0 ... 90°



Scale division

Coarse–fine

Scale length

□72	□96
63mm	97mm

Electrical Data

Measuring unit	AC Current
Frequency	40 ... 65 Hz
Thermal time delay	8, 15, 20, 30 minutes
Power consumption	
1 A rated current	<1.6 VA
5 A rated current	<2.5 VA
Overload capacity	acc. to DIN EN 60 051
Continuously	1.2 times rated current
Short duration	10 x for 0.5 sec: 9 overloads 10 x for 5 sec: 1 overload)

External magnetic field

0.4 kA/m

Reference conditions

Accuracy class	3% acc. to DIN EN 60 051
Reference temperature	23 °C / ± 2 °C
Position of use	Nominal position ±1°
Input variable	Rated measuring value
Wave form	Sinusoidal, distortion factor <5%
Frequency	45 ... 65 Hz
Other conditions	DIN EN 60 051-1

Environmental conditions

Climatic suitability	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)

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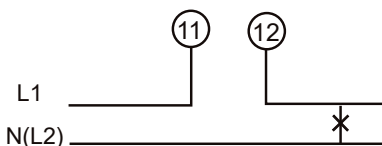
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Safety

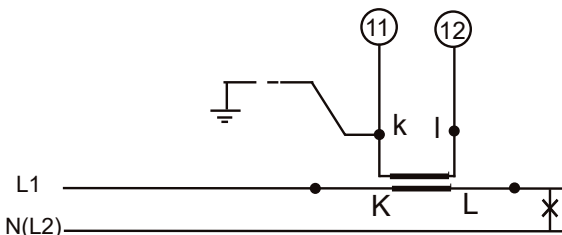
EMC resistance	acc. to EN 61 000-6-2
EMC emission	acc. to EN 61 000-6-4
Safety	acc. to EN 60 010-1
Installation category	300 V CATIII
Pollution degree	2
Rated insulation voltage	660 V
Insulation resistance	> 50 MΩ at 500 V DC
Insulation class	A (acc. to VDE 0110)
Insulation test voltage	3 kV
Housing 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

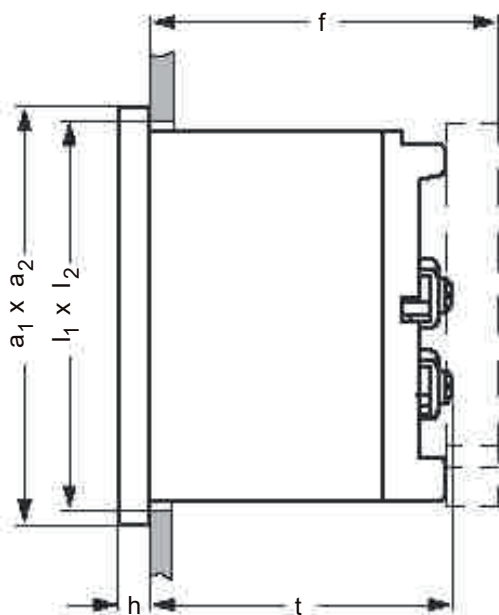
AC Current (directly connected)



AC Current (for use on current transformer)



Dimensions



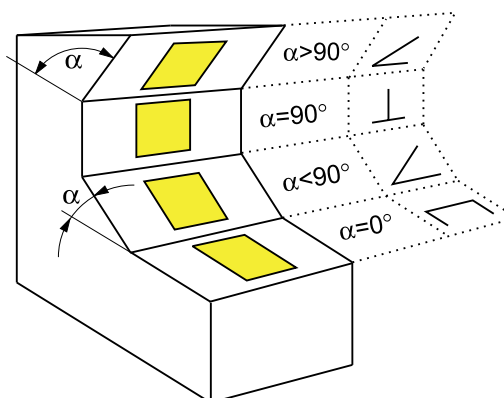
Front [mm]	Nominal Dimensions [mm]		Cutout [mm] l ₁ x l ₂	Installation depth (t) including terminal [mm]	Installation depth (f) including back cover [mm]
	a ₁ x a ₂	h			
□72	72 x 72	5.5	68 ^{+0.7} x 68 ^{+0.7}	54	62.5
□96	96 x 96	5.5	92 ^{+0.8} x 92 ^{+0.8}	54	62.5

Measurement ranges

Frontframe dimensions [mm]	72 x 72	96 x 96
Scale length [mm]	63	97
Weight [kg]	0.22	0.26
Type	□72	□96
Measuring range AC current	1 A	
	5 A	
Measuring range for transformer connection	.. x/1 A	
	.. x/5 A	

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°



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Order details

Description	Blockingcode	No-go with blockingcode	Article No. / Feature
SIRAX BM500, Analog Bimetallic Ammeters with maximal Current Indicator			BM500-
Features, Selection			
01 Dimensions Frontframe			
□72 (72 x 72 mm)			1
□96 (96 x 96 mm)			2
02 Measuring range			
AC Current			
1 A			01
5 A			02
Connection to current transformer			
1 A / 1 A			03
5 A / 1 A			04
6 A / 1 A			05
10 A / 1 A			06
15 A / 1 A			07
20 A / 1 A			08
30 A / 1 A			09
40 A / 1 A			10
50 A / 1 A			11
60 A / 1 A			12
80 A / 1 A			13
100 A / 1 A			14
150 A / 1 A			15
200 A / 1 A			16
300 A / 1 A			17
400 A / 1 A			18
500 A / 1 A			19
600 A / 1 A			20
800 A / 1 A			21
1000 A / 1 A			22
1200 A / 1 A			23
1500 A / 1 A			24
1600 A / 1 A			25
2000 A / 1 A			26
3000 A / 1 A			27
4000 A / 1 A			28
5000 A / 1 A			29
6000 A / 1 A			30
10000 A / 1 A			31
1 A / 5 A			32
5 A / 5 A			33
6 A / 5 A			34

SIRAX BM500

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10 A / 5 A			35
15 A / 5 A			36
20 A / 5 A			37
30 A / 5 A			38
40 A / 5 A			39
50 A / 5 A			40
60 A / 5 A			41
80 A / 5 A			42
100 A / 5 A			43
150 A / 5 A			44
200 A / 5 A			45
300 A / 5 A			46
400 A / 5 A			47
500 A / 5 A			48
600 A / 5 A			49
800 A / 5 A			50
1000 A / 5 A			51
1200 A / 5 A			52
1500 A / 5 A			53
1600 A / 5 A			54
2000 A / 5 A			55
3000 A / 5 A			56
4000 A / 5 A			57
5000 A / 5 A			58
6000 A / 5 A			59
10000 A / 5 A			60
Special range AC current 0 ... >1 A ... <10000 A			61
03 Calibration delay time			
8 min			1
15 min			2
20 min			3
30 min			4
04 Working position			
$\alpha = 0^\circ$			A
$\alpha = 15^\circ$			B
$\alpha = 35^\circ$			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
05 Front window			
Glass			1

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06	Scalefactor			
	Standard			1
	Non Standard (Customized)			2
07	Contact protection			
	without back cover			1
	with back cover			2



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