EA19D

DUAL MOVING-IRON METER
AC Ammeter and Voltmeter



APPLICATION

The panel electromagnetic meter with a double measuring system is designed to measure AC current with a frequency of 15 ... 400 Hz and a voltage of 15 ... 100 Hz. The meter will be used, among others, in switchgears, control cabinets of generators and wherever there is a limited space for measuring two electrical quantities.

EA19D meters are designed for mounting into panels with thickness not exceeding 25 mm in the holes 92 x 92 mm.

TECHNICAL DATA

Accuracy class 1.5

Measuring ranges, self-consumption, front frame dimensions, length of scale, weight acc. to tab. 1, 2

Rated operating conditions:

- ambient temperature 5...23...55°C
- relative air humidity 25...85%
- frequency of measured quantity for In: 15...400Hz
  for Un: 15...100Hz

Execution of ammeters normal scale version or version with 100% overload. Other overcurrent scale, on request after agreement.

Additional errors according to EN 60051-2

Execution of ammeters with the nominal range scale according to table 1; or an extended scale with a value of 2- or 6-times overload or another agreed with the manufacturer.

Categories of meter climatic versions

If it is not written otherwise in the order, these meters are intended to use in moderate climatic conditions.
On customers' request, meters can be adapted to use in conditions of a dry or wet tropical climat.
Then, they are marked with the T III symbol.

Requirements concerning safety acc.EN 61010-1 standard:

- installation category III
- pollution degree 2
- maximal phase-earth working voltage 600 V

Electromagnetic Compatibility:

- meters meet requirements CE mark
- noise immunity acc. to EN 61000-6-2
- noise emissions acc. to EN 61000-6-4

The power consumed by the meter

- voltage circuit: < 4.5 VA
- current circuit for In<15A: < 0.5 VA
- current circuit for In>15A: < 0.8 VA

Masa

EA19D 200 g

Electrical overload:

- long-term 120% In, 120% Un
- short-time current measurement 10 times for 5s
- short-term voltage measurement 2 times for 5s (max. 1000V)

Impact resistance

- peak acceleration 15 g
- duration of impact 11 ms

Shock resistance

- range of vibration frequency 10-55-10Hz
- vibration amplitude 0.15 mm (corresponds to 1.5 g at 50 Hz)

Protection Grade acc. to EN 60529 ensureb by:

- case: standard IP 52
  custom-made **IP 65**
- terminals IP 20

Case material thermoplastic material, self-extinguishing plastic (UL 94V-O)

Meter glass material glass, plastic or anti-reflective glass (acc. to ordering code)

ACCESSORIES

Screw holders - 2 pcs.

Additional setting pointer

On customers' request EA19D meters can be equiped with an additional, setting red pointer fixed on the glass.

AC CURRENT AND AC VOLTAGE DIRECT MEASUREMENT RANGES

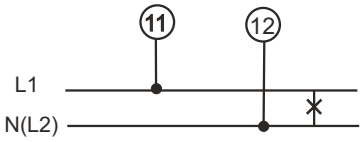
Table 1

Item	Measuring range	Code	Item	Measuring range	Code	Item	Measuring range	Code
1.	1A	01	21.	69.24V	2F	41.	143.5V	3B
2.	1.04A	02	22.	75V	2G	42.	149.85V	3C
3.	1.08A	03	23.	79.375V	2H	43.	150V	3D
4.	1.083A	04	24.	100V	2J	44.	159V	3E
5.	1.125A	05	25.	110V	2K	45.	160V	3F
6.	1.2A	06	26.	113.63V	2L	46.	165V	3G
7.	1.266A	07	27.	116.66V	2M	47.	220V	3H
8.	1.5A	08	28.	116.67V	2N	48.	230V	3J
9.	5A	09	29.	119.56V	2P	49.	239.42V	3K
10.	10A	10	30.	120V	2Q	50.	250V	3L
11.	20A	11	31.	121.21V	2R	51.	300V	3M
12.	30A	12	32.	123.75V	2S	52.	380V	3N
13.	40A	13	33.	125V	2T	53.	400V	3P
14.	50A	14	34.	130V	2U	54.	415V	3Q
15.	60A	15	35.	130.43V	2V	55.	480V	3R
16.	20V	2A	36.	132V	2W	56.	500V	3S
17.	30V	2B	37.	132.5V	2X	57.	550V	3T
18.	57.7V	2C	38.	133.33V	2Y	58.	600V	3U
19.	57.8V	2D	39.	137.5V	2Z	59.	175V	3V
20.	63.5V	2E	40.	139.68V	3A	60.	XX[1]	XX

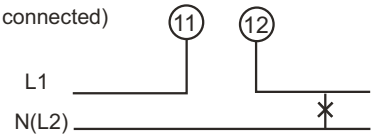
[1] after agreeing with the manufacturer

ELECTRICAL CONNECTION

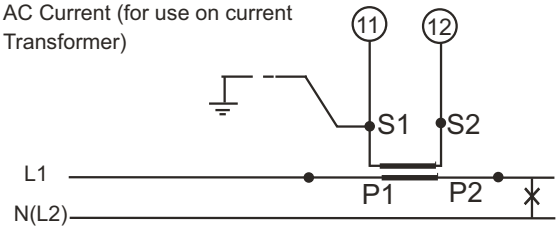
AC Voltage (Direct connected)



AC Current (Direct connected)



AC Current (for use on current Transformer)



EXTERNAL DIMENSIONS

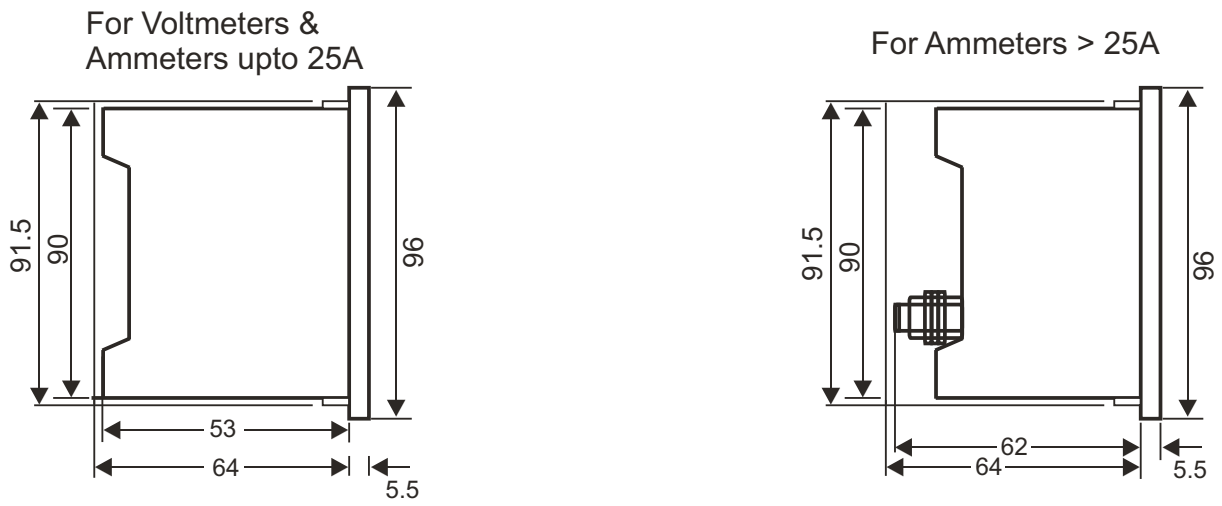


Fig. 1. External dimensions of EA19D [mm].

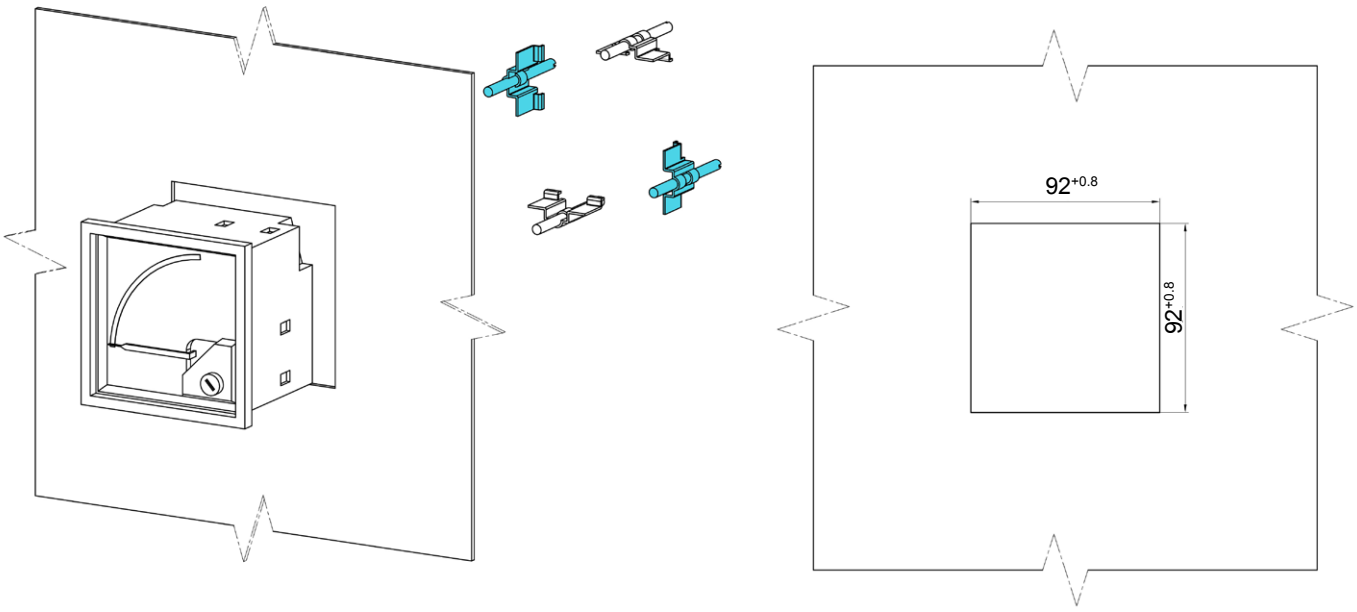


*Fig. 2. Panel mounting way of EA19D (version IP52)**

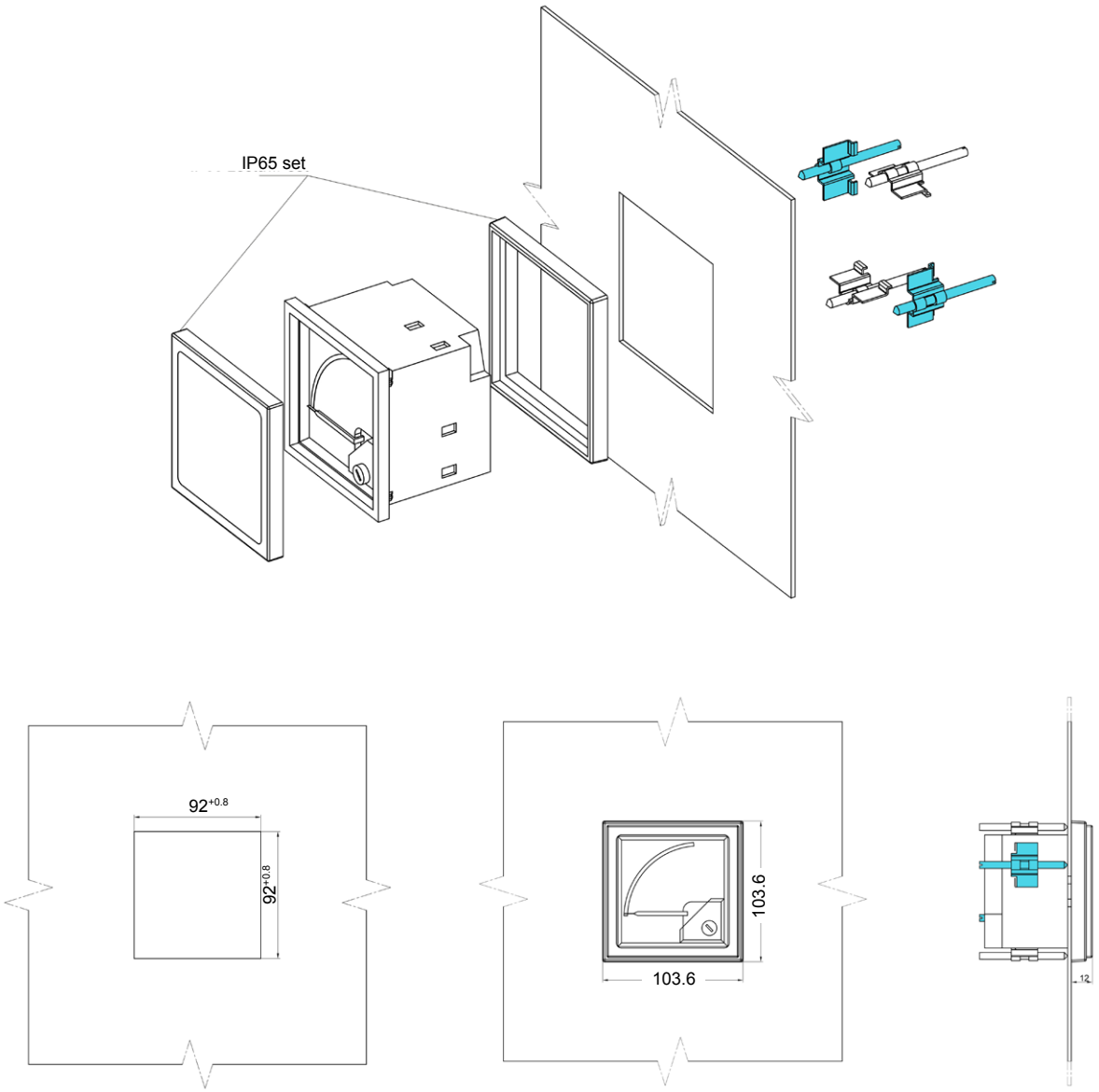


*Fig. 3. Panel mounting way of EA19D (version IP65) **

** Included are 2 screwdrivers. Use them on two opposite sides of the meter.*

ORDERING CODE

	Dual Moving Iron Movement Meter EA19D	X	XX	XX	X	X	X	X	A	B	X	X
Input Type	Current Meter	I										
	Voltage Meter	V										
	Current -Voltage Meter	B										
Measuring Range 1	write in the range code from the table 1 [1]		XX									
Measuring Range 2	write in the range code from the table 1 [1]			XX								
Suppression	x1 [2]				1							
	x2 [2]				2							
	x6 [2, 4]				6							
	not applicable [3]				X							
Accuracy Class	1.5					1						
	1 [3]					2						
Front Facia	Normal Glass						A					
	Plastic Front facia [4]						P					
	Antiglare Glass [4]						N					
Back Cover	With Back cover							C				
	Without Back cover [4]							B				
Type of dial	Standard Aluminum								A			
Screw holders	included									B		
Language	Polish-English										M	
Acceptance tests	without additional quality requirements											0
	with an extra quality inspection certifi cate											1
	with a calibration certificate											2

[1] In the case of a measurement from a current or voltage transformer, the transformer ratio must additionally be specified in the order and the range corresponding to the secondary side of the transformer should be selected in the code.
[2] only in the meter execution EA19DI and EA19DB
[3] only in the meter execution EA19DV
[4] limited availability, needs to be agreed with the manufacturer

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