



CA32, CA36, CA37, CA39 PANEL POINTER FREQUENCY METERS



APPLICATION

CA36, CA37, CA39 and CA32 pointer frequency meters are moving-coil meters with built-in measuring transducers intended for measuring voltage frequency in AC electrical networks.

These meters can be mounted on panels of any kind of materials.

We deliver together the meters:

- two screw holders to fix the meter on the panel,
- a terminal shroud,
- a service manual.

BASIC REQUIREMENTS, USER'S SAFETY

CA series meters are destined to be installed on panels or switchboards.

They are in conformity with EN 61010-1 standard requirements.

Weight

- CA32	490 g
- CA37	210 g
- CA39	280 g
- CA36	150 g

ACCESSORIES

We deliver with the meter:

- holders fixing the meter to the plate - 2 pcs. (for CA36, CA37, CA39) or 4 pcs. (for CA32).
- terminal protection cover 1 pc

TECHNICAL DATA

Table 1

Measuring ranges	Accuracy class
45...55 Hz	0.5
45...65 Hz	0.5
48...52 Hz	0.5
55...65 Hz	0.5
360...440 Hz	0.5
380...420 Hz	0.5

Input voltages

60, 100, 110, 230, 240, 400, 415, 440, 500 V $\pm 20\%$

Rated operating conditions

- ambient temperature 5...23...40°C
- relative air humidity 25...85%

Power consumption

$\leq 7VA$

Protection Grade acc. to EN60529

- front protection grade: in standard IP 52
- on request **IP 65 - CA36, CA37, CA39**

- terminal protection (with a terminal protection cover) - IP20

Electromagnetic compatibility:

- emission acc. EN 61000-6-4 standard
- immunity acc. EN 61000-6-2 standard

Safety requirements

- installation category acc. EN 61010-1+A1 standard III
- level of pollution 2

Maximal working voltage in relation to the earth

600 V AC

Housing material

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

Glass material

glass (in standard) anti-reflective glass on request

EXTERNAL DIMENSIONS OF METER FOR IP65 PROTECTION GRADE

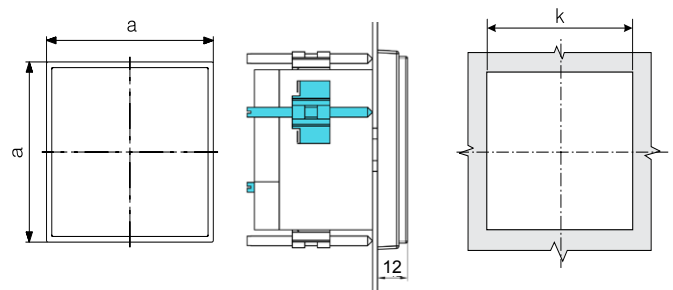


Table 2

Type	a	k
CA36	54,8	45+0,6
CA37	79,6	68+0,7
CA39	103,6	92+0,8

Included are two screw holders which should be fixed on arbitrary, opposite case corners



EXTERNAL DIMENSIONS OF CA36, CA37, CA39, CA32

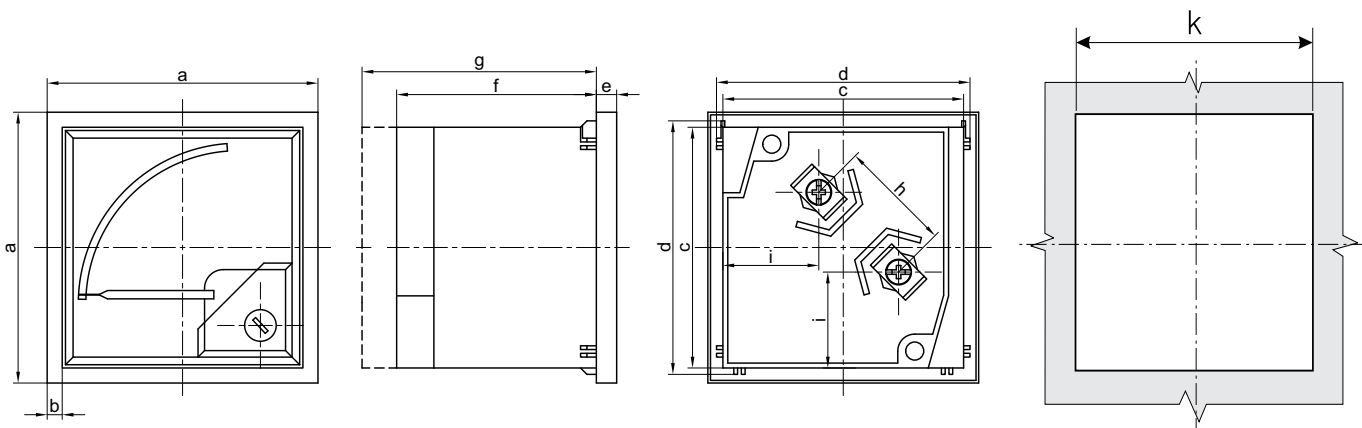


Fig. 1. External dimensions of CA36, CA37, CA39, CA32 meters.

External dimensions of CA36, CA37, CA39, CA32 [mm] meters.

Table 3

Type	a	b	c	d	e	f		g		h	i	k*	
						<6A	6-25A	>6A	>6-25A				
CA36	48	3	43,5	44,5	5,5	53	68	64	75	18,7	21,6	45+0,6	
CA37	72	4	64	67,5	5,5	53	68	64		69,5	30	25,7	68+0,7
CA39	96	4	88	91,5	5,5	53	68	64		69,5	30	27,2	92+0,8
CA32	144	5,5	136	137,5	8,5	53	68	64		69,5	30	37	138+1

* panel cut-out dimensions

WORKING POSITION

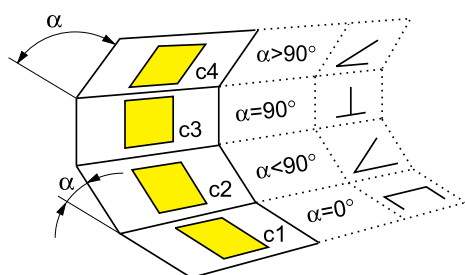


Table 4

Code	working position
0	c3
A	c1
B	c2 $\alpha = 15^\circ$
C	c2 $\alpha = 30^\circ$
D	c2 $\alpha = 45^\circ$
E	c2 $\alpha = 60^\circ$
F	c2 $\alpha = 75^\circ$
H	c4 $\alpha = 105^\circ$
I	c4 $\alpha = 120^\circ$

WAY OF THE METER FIXATION ON THE PANEL.

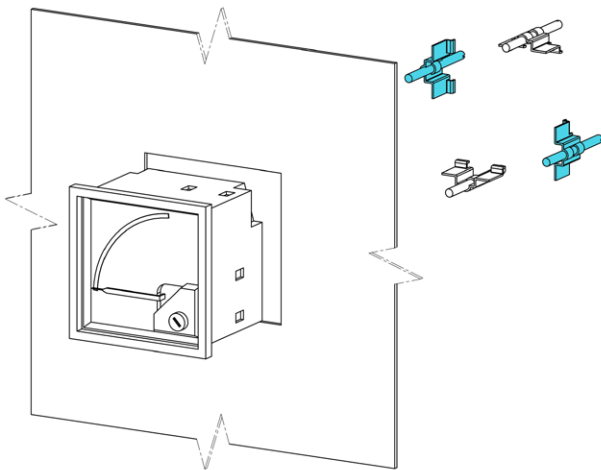


Fig. 2. Fixing of meters CA36, CA37, CA39 in the panel (version with IP52) ¹

¹ Included are two screw holders which should be fixed on arbitrary, opposite case corners

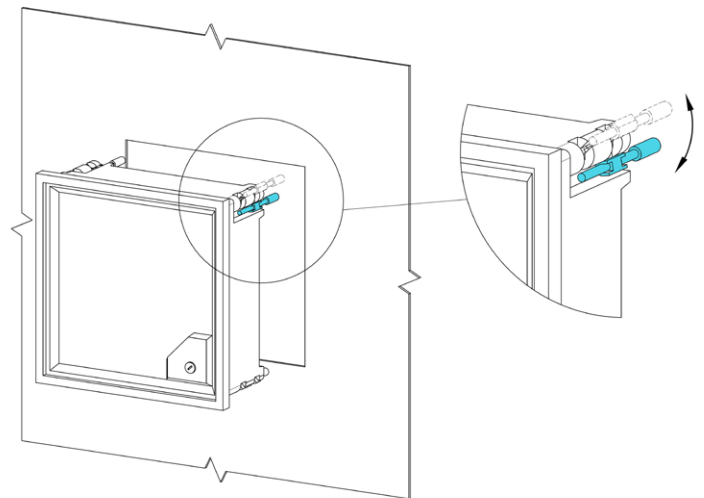


Fig. 3. Fixing of MA12 meters (version with IP52)²

²The meter is fixed to the panel by two screw holders situated on opposite corners of the case.

ORDERING PROCEDURE

PANEL FREQUENCY METERS CA37, CA39, CA32	X	X	X	XX	X
Frequency range: 45...55 Hz.....	1				
45...65 Hz.....	2				
48...52 Hz.....	3				
55...65 Hz.....	4				
360...440 Hz.....	8				
380...420 Hz.....	9				
Rated voltage: 60 V.....	1				
100 V.....	2				
110 V.....	3				
230 V.....	4				
400 V.....	5				
415 V.....	6				
440 V.....	7				
500 V.....	8				
690 V.....	9				
Working position Write in the code acc. table 2.....					X
Version: Standard					00
Custom-made*					XX
Acceptance tests: Without additional requirements					8
With a certificate delivered by the Technical Inspection Dept.					7
Other requirements.....					X

* The version number is settled by the manufacturer.

Example of order

Code: CA37-1-4-O-00-8, means:

The version of a frequency meter, CA37 type in a 72 x 72 mm case, for the frequency range: 45...55 Hz, rated voltage: 230 V, working position: c3 (90°- vertical), standard version, without additional requirements.

