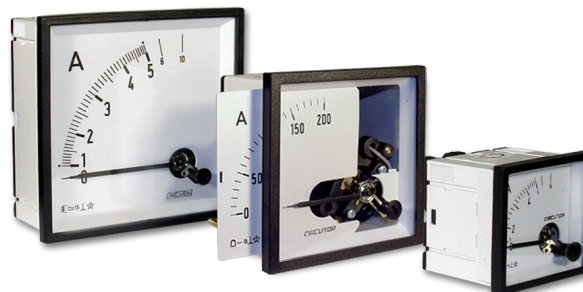


Moving iron ammeters (AC)

Moving-coil Ammeter

Analogue indicator
to measure alternating current



Description

- No need for auxiliary power supply, only the **CEC 96** type.
- DIN boxes with dimensions: 48, 72, 96 and 144.
- Precision class 1.5
- Measurement in true root mean square 100 mA ... 100 A
- Exchangeable scales for **EC48, EC72, EC96, EM 45, EC 72 FA, EC 96 FA**
- The alarm system can be fully configured for **CEC 96**

Application

In alternating current applications, to control the state of the current quickly and visually.

Features

	EC	EM	EZC	EC FA	CEC 96 with 2 relays
Auxiliary power supply					230 V ac
Consumption			-		2.5 V-A
Frequency			-		40 ... 90 Hz
Input circuit					
Consumption		0.3 ... 1.5 V-A			0.2 V-A
Frequency		20 ... 100 Hz			45 ... 65 Hz
Overloads		1.2 I_n permanent 5 I_n during 30 s 10 I_n during 5 s 40 I_n during 1 s			1.2 I_n permanent
Class	1.5 % FS		5 % FS		1.5 % FS
Ambient conditions					
Operating temperature		+10 ... +30 °C			+ 5 ... +55 °C
Limit temperature		- 25 ... +40 °C			-25 ... +70 °C
Altitude				2000 m	
Build features					
Dimensions	See the following table				
Weight	See the following table				
Type of box	panel	DIN rail	panel	panel	panel
Degree of protection:					
Front panel	IP 52				IP 52
Terminals	IP 00				IP 20
Insulation voltage	2 kV, 50 Hz, 1 min, between the mechanism and the box				3 kV , 50 Hz, 1min
Standards	BS 89, EN 60051, IEC 144, UL 94, DIN 43780, IEC 51, UNE 21318, CE				IEC 51, IEC 1010, IEC 529, IEC 255, IEC 278, IEC 414, IEC 144, LLOYD'S (TEST. ESP. No. 1)

Moving iron ammeters (AC)


Moving iron ammeter


Analogue indicator to measure alternating current



References



Ammeters, 90°						
Type	EC 48	EC 72	EC 96	EC 144	EM 45	
Class	1,5					
Scale (mm)	90°, P2					
Dimensions (mm)						
	a	48	72	96	144	85
	b	48	72	96	144	52
	c	66,2	49,2	49,2	71,8	65
Weight (g)	85	180	220	430	142	
mA						
100	M10111	M10121	M10131	M10142	M10151	
150	M10112	M10122	M10132	M10142	M10152	
250	M10114	M10124	M10134	M10144	M10154	
300	M10115	M10125	M10135	M10145	M10155	
400	M10116	M10126	M10136	M10146	M10156	
500	M10117	M10127	M10137	M10147	M10157	
600	M10118	M10128	M10138	M10148	M10158	
A						
5	M10212	M10222	M10232	M10242	M10252	
10	M10213	M10223	M10233	M10243	M10253	
15	M10214	M10224	M10234	M10244	M10254	
20	M10215	M10225	M10235	M10245	M10255	
25	M10216	M10226	M10236	M10246	M10256	
30	M10217	M10227	M10237	M10247	M10257	
40	M10218	M10228	M10238	M10248	M10258	
50	M10219	M10229	M10239	M10249	M10259	
60	M1021A	M1022A	M1023A	M1024A	M1025A	
75	-	M1022B	M1023B	M1024B	-	
100	-	M1022C	M1023C	M1024C	-	
.../5 A (*)	M10210	M10220	M10230	M10240	M10250	

	Ammeters, 240°		Ammeters with phase switch		Ammeters with 2 relays	
Type	EZC 72	EZC 96	EC 72 FA	EC 96 FA	CEC 96	
Accuracy class	5		1,5			
Scale (mm)	240°, P2		90°, P1		90°, P2	
Dimensions (mm)						
	a	72	96	72	96	96
	b	72	96	72	96	96
	c	49,2	49,2	49,2	49,2	85,3
Weight (g)	180	220	180	220	435	
mA						
.../5 A (*)	M10920	M10930	M10521	M10531	M14810	

* EZC 72 / EZC96:

Scale included, indicate the transformer ratio
 .../1 A , on demand
 Different settings, on demand

* EC 72 FA / EC96 FA:

Scale not included
 Exchangeable scales (see tables)
 .../1 A , on demand
 Different settings, on demand

* CEC 96:

Scale included, indicate the transformer ratio
 Exchangeable scales (see tables)
 .../1 A , on demand

*Scale is not included, except in EC144 (equipment + scale included, indicate transformer ratio).

*For exchangeable scales, see Tables.

* .../1 A on demand

* Different settings, on demand.

Moving iron ammeters (AC)

Moving iron ammeter

Analogue indicator to measure alternating current



References

Exchangeable scales, Moving Iron Ammeters

Type	SEC 48	SEC 72	SEC 96	SEM 45	SEC 72 FA	SEC 96 FA
Equipment	EC 48	EC 72	EC 96	EM 45	EC 72 FA	EC 96 FA
A						
5/5	M102Z2	M102Y2	M102X2	-	-	-
10/5	M102Z3	M102Y3	M102X3	-	-	-
15/5	M102Z4	M102Y4	M102X4	-	-	-
20/5	M102Z5	M102Y5	M102X5	-	-	-
25/5	M102Z6	M102Y6	M102X6	-	-	-
30/5	M102Z7	M102Y7	M102X7	-	-	-
40/5	M102Z8	M102Y8	M102X8	-	-	-
50/5	M102Z9	M102Y9	M102X9	M105X9	M105Y9	M105X9
60/5	M102ZA	M102YA	M102XA	M105XA	M105YA	M105XA
75/5	M102ZB	M102YB	M102XB	M102VB	M105YB	M105XB
100/5	M102ZC	M102YC	M102XC	M102VC	M105YC	M105XC
125/5	M102ZD	M102YD	M102XD	M102VD	M105YD	M105XD
150/5	M102ZE	M102YE	M102XE	M102VE	M105YE	M105XE
200/5	M102ZF	M102YF	M102XF	M102VF	M105YF	M105XF
250/5	M102ZG	M102YG	M102XG	M102VG	M105YG	M105XG
300/5	M102ZH	M102YH	M102XH	M102VH	M105YH	M105XH
400/5	M102ZJ	M102YJ	M102XJ	M102VJ	M105YJ	M105XJ
500/5	M102ZK	M102YK	M102XK	M102VK	M105YK	M105XK
600/5	M102ZL	M102YL	M102XL	M102VL	M105YL	M105XL
750/5	M102ZM	M102YM	M102XM	M102VM	M105YM	M105XM
800/5	M102ZN	M102YN	M102XN	M102VN	M105YN	M105XN
1 000/5	M102ZP	M102YP	M102XP	M102VP	M105YP	M105XP
1 200/5	M102ZQ	M102YQ	M102XQ	M102VQ	M105YQ	M105XQ
1 500/5	M102ZR	M102YR	M102XR	M102VR	M105YR	M105XR
2 000/5	M102ZS	M102YS	M102XS	M102VS	M105YS	M105XS
2 500/5	M102ZT	M102YT	M102XT	M102VT	M105YT	M105XT
3 000/5	M102ZU	M102YU	M102XU	M102VU	M105YU	M105XU
4 000/5	M102ZV	M102YV	M102XV	M102VV	M105YV	M105XV
5 000/5	M102ZW	M102YW	M102XW	M102VW	M105YW	M105XW

Moving iron ammeters (AC)

Moving iron ammeter

Analogue indicator to measure alternating current



Coding table

CODIFICATION TABLE

EC, EZC

Code		Internal code			Delivery time
M	1	X	X	X	
				0 0 X X X	
				↑ ↑ ↑	
Adjustment		Standard 2P	0		-
		1P	1		2
		5P	6		2
Current input		Standard (.../5 A)	0		-
		... / 1 A	1		1
Scales(*)		1	1		2
		5	2		2
		10	3		2
		15	4		2
		20	5		2
		25	6		2
		30	7		2
		40	8		2
		50	9		2
		60	A		2
		75	B		2
		100	C		2
		125	D		2
		150	E		2
		200	F		2
		250	G		2
		300	H		2
	400	J		2	
	500	K		2	
	600	L		2	
	750	M		2	
	800	N		2	
	1000	P		2	
	1200	Q		2	
	1500	R		2	
	2000	S		2	
	2500	T		2	
	3000	U		2	
	4000	V		2	
	5000	W		2	

EC (mA), EM (mA)

Code		Internal code			Delivery time
M	1	X	X	X	
				0 0 X	
				↑	
Adjustment		Standard 2P	0		-
		1P	1		2
		5P	6		2

SEC, SEM, EM

Code		Internal code			Delivery time
M	1	X	X	X	
				0 0 X X	
				↑ ↑	
Adjustment		Standard 2P	0		-
		1P	1		2
		5P	6		2
Current input		Standard (.../5 A)	0		-
		... / 1 A	1		1

EC FA

Code		Internal code			Delivery time
M	1	X	X	X	
				0 0 X X	
				↑ ↑	
Adjustment		Standard 1P	0		-
		5P	6		2
Current input		Standard (.../5 A)	0		-
		... / 1 A	1		1

CEC

Code		Internal code			Delivery time
M	1	6	4	1	
				X 0 0 X X X	
				↑ ↑ ↑ ↑	
Current input		/5 A	0		
		/ 1 A	1		
		/0,1 A	2		
Scale		60	A		-
		75	B		-
		100	C		-
		125	D		-
		150	E		-
		200	F		-
		250	G		-
		300	H		-
		400	J		-
		500	K		-
		600	L		-
		750	M		-
		800	N		-
Adjustment + relay		1 P (max+min)	1		
		1,2 P (max+min)	2		
		2 P (max+min)	3		
Supply		230 V _{ac}	4		
		400 V _{ac}	6		
		110 V _{dc}	M		

Consult for others configurations

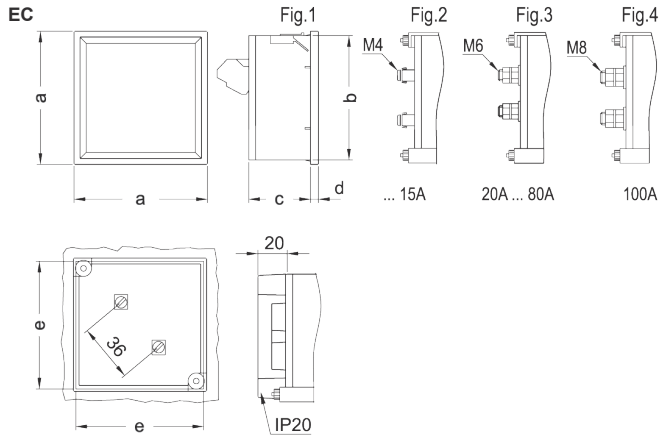
Moving iron ammeters (AC)

Moving iron ammeter

Analogue indicator to measure alternating current

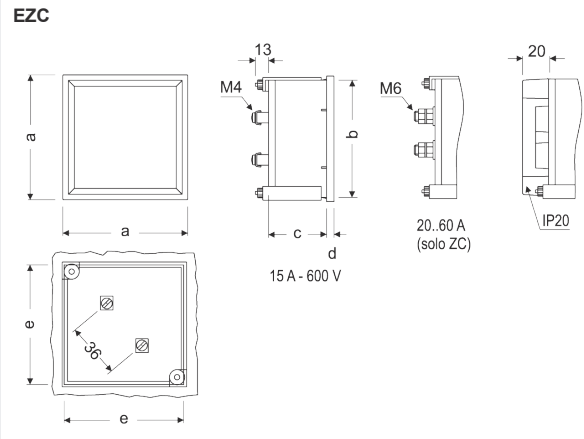


Dimensions



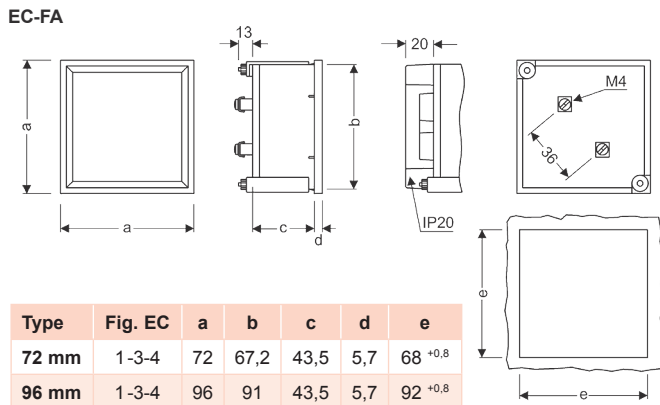
Type	Fig. EC	a	b	c	d	e
48 mm	1-3	48	44,7	61	5,2	45
72 mm	1-3-4	72	67,2	43,5	5,7	68
96 mm	1-3-4	96	91	43,5	5,7	92
144 mm	2-3-4	144	137	64,5	7,3	138

Dimensions (mm)



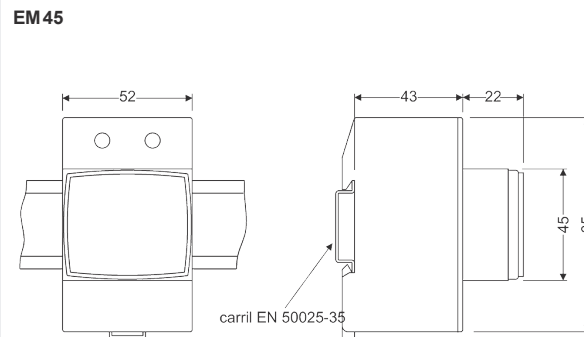
Type	Fig. EZC	a	b	c	d	e
72 mm	1	72	67,2	43,5	5,7	68
96 mm	1	96	91	43,5	5,7	92

Dimensions (mm)



Type	Fig. EC	a	b	c	d	e
72 mm	1-3-4	72	67,2	43,5	5,7	68 ^{+0,8}
96 mm	1-3-4	96	91	43,5	5,7	92 ^{+0,8}

Dimensions (mm)



Connections

