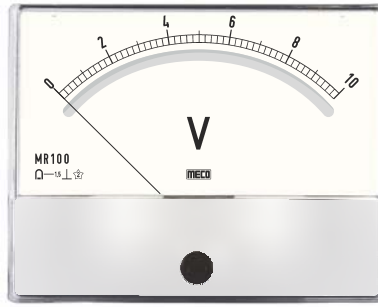




**MR60, CR60**



**MR65, CR65**



**MR100, CR100**



**MR120, CR120**

<b>Model</b>	<b>MR60, MR65, MR100, MR120</b>	<b>CR60, CR65, CR100, CR120</b>
<b>Description</b>	DC Ammeters and Voltmeters full scale deflection 90°	AC Ammeters and Voltmeters full scale deflection 90°
<b>Movement Type</b>	Moving coil, central magnetic core, spring mounted bearing jewel suspension.	Moving coil, central magnetic core, spring mounted bearing jewel suspension with rectifier circuit.
<b>Accuracy</b>	± 1% of Full Scale for MR120 ± 1.5% of Full Scale for MR100 ± 2.5% of Full Scale for MR60, MR65	± 1.5% of Full Scale for CR100, CR120 ± 2.5% of Full Scale for CR60, CR65
<b>Sensitivity</b>	1000Ω / V (Voltmeter); 200Ω / V (Ammeter)	-
<b>Operating Voltage</b>	600 V RMS max.	600 V RMS max.
<b>Test Voltage</b>	2.5 KV for 1 minute at 50 Hz	2.5 KV for 1 minute at 50 Hz
<b>Frequency</b>	----	45Hz to 1KHz (Volt), 45-100Hz (Amp)
<b>Construction &amp; Design</b>	According to IS 1248; EN 60051	According to IS 1248; EN 60051
<b>Scale</b>	According to DIN 43802	According to DIN 43802
<b>Casing</b>	ABS case with Clear Polycarbonate Cover	ABS case with Clear Polycarbonate Cover
<b>Dimensions and Panel cutout</b>	Refer Dimensions Page Overleaf	Refer Dimensions Page Overleaf

**DC Ranges : MR Series**

Ammeters*				Voltmeters				
μA	mA		A*	On Shunt		mV	V	
	1 mA	50 mA	1 A	-A/60 mV	50A/75 mV	50 mV	1 V	50 V
	1.5 mA	60 mA	1.5 A	-A/75 mV	60A/75 mV	60 mV	1.5 V	60 V
	2 mA	75 mA	2 A	-A/100 mV	75A/75 mV	75 mV	2 V	75 V
100 μA	2.5 mA	100 mA	2.5 A		100A/75 mV	100 mV	2.5 V	100 V
150 μA	4 mA	150 mA	4 A		150A/75 mV	150 mV	4 V	150 V
250 μA	5 mA	250 mA	5 A	5A/75 mV	250A/75 mV	250 mV	5 V	250 V
400 μA	6 mA	400 mA	6 A	6A/75 mV	400A/75 mV	400 mV	6 V	400 V
500 μA	10 mA	500 mA	10 A *	10A/75 mV	500A/75 mV	500 mV	10 V	500 V
600 μA	15 mA	600 mA	15 A	15A/75 mV	600A/75 mV	600 mV	15 V	600 V
	20 mA		20 A	20A/75 mV			20 V	
	25 mA		25 A	25A/75 mV			25 V	
	30 mA		30 A	30A/75 mV			30 V	
	40 mA		40 A	40A/75 mV			40 V	
			50 A					

\* MR60 direct upto 10A DC only. Above 10A use with external shunt.

**AC Ranges : CR Series**

Ammeters@						Voltmeters					
1 x In (A)		2 x In (A)		6 x In (A)		On PT					
Direct	On CT	Direct	On CT	Direct	On CT	Ratio and Scale					
	[/-] [5A or 1A]		[/-] [5A or 1A]		[/-] [5A or 1A]			-V/63.5 V			
1A	10/-	1/2 A	10/20/-	1/6 A	10/60/-	10 V	100 V	-V/110 V			2 KV
5A	150/-	5/10 A	150/300/-	5/30 A	150/900/-	15 V	150 V	-V/230 V			2.5 KV
	20/-		20/40/-		20/1200/-	20 V	250 V	-V/250 V			3 KV
	25/-		25/50/-		25/1500/-	25 V	400 V	-V/400 V			3.5 KV
	30/-		30/60/-		30/1800/-	30 V	500 V	-V/440 V			4 KV
	40/-		40/80/-		40/2400/-	40 V	600 V				5 KV
	50/-		50/100/-		50/3000/-	50 V	600 V				6 KV
	60/-		60/120/-		60/3600/-	60 V					7.5 KV
	75/-		75/150/-		75/4500/-	75 V					8 KV
	and higher		and higher		and higher						10 KV

@ From 100mA to 5A AC, use with External CT Box, supplied with the instrument.

**Ordering Information:** Model, Input range, Scale, CTR/PTR

**Notes**

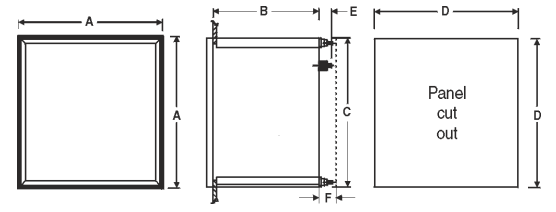
- a) Double stamping /non-standard / centre zero marking available.
- b) Zero suppressed DC ammeter for 4-20mA and voltmeter for 1-5V available.
- c) DC Voltmeters with sensitivity 10 K Ohms / V available.
- d) Other ranges available subject to technical feasibility.

MODELS	SCALE LENGTH (mm)	REFER DRAWING	A	B	C	D	E	F	EXT. BOX # DRAWING
SQ72 (VOLTMETER & AMMETER UPTO 20A)	64	1	72	51.5	67	68	17	19	-
SQ72 (AMMETER ABOVE 20A)	64	1	72	51.5	67	68	23	19	-
M72,F72,C72, (72QF11,31)	60	1	72	37	66	68	13	19.5	5
72QW11,31,32,33, (72QV11,31,32,33)	60	1	72	37	66	68	13	19.5	4
72LW11,31,32,33, (72LV11,31,32,33)	110	1	72	37	66	68	13	22	4
ML72,MLC72 (Voltmeter),72LF11(#),72LF31(#),FL72(#)	110	1	72	37	66	68	13	22	-
MLC72 (Ammeter)	110	1	72	62	66	68	16	18	-
SQ96 (VOLTMETER & AMMETER UPTO 20A)	97	1	96	51.5	90	92	17	19	-
SQ96 (AMMETER ABOVE 20A)	97	1	96	51.5	90	92	23	19	-
M96 (Above 10A, E=18)	90	1	96	30	90	92	13	19.5	-
96QW11,31,32,33, (96QV11,31,32,33)	90	1	96	102	90	92	16	12	-
96LW11,31,32,33, (96LV11,31,32,33), 96LF11,31,FL96	155		-						
C96,96QF11,31,F96,M96 (4-20mA DC)	90	1	96	48	90	92	13	19.5	-
ML144,MLC144,144LF11,31,FL144	230	1	144	54	136	138	4	19	-
144QF11,31,F144	140	1	144	66	136	138	16	14	-
144QW11,31,32,33 (144QV11,31,32,33)	140	2	144	116	136	138	-	-	-
144LW11,31,32,33 (144LV11,31,32,33)	230	2	144	103	136	138	-	-	-
ML110,MLC110,110LF11,31,FL110	175	3	----As Per Drawing----						-
110LW,11,31,32,33, (110LV11,31,32,33)	175	3	----As Per Drawing----						4
ML96/MLC96 (Above 10A, E=18)	155	1	96	48	90	92	13	22	-

MODELS	SCALE LENGTH (mm)	REFER DRAWING	A	B	C	D	E	F	G	H	I	J	L	O	R	EXT. BOX # DRAWING
MR60,CR60	57	6	60	60	33	24	48	48	51.5	12	-	-	54	4BA	4.5	5 (CR60)
MR65,CR65	68	6	81	81	33	22	64	64	64	12	-	-	67	4BA	4.5	5 (CR65)
MR100,CR100	80	6	100	80	34	21	84	64	63	12	-	7	67	4BA	4.5	5 (CR100)
MR120,CR120	96	6	120	100	38	25	100	80	65	12	-	16	67	4BA	4.5	5 (CR120)

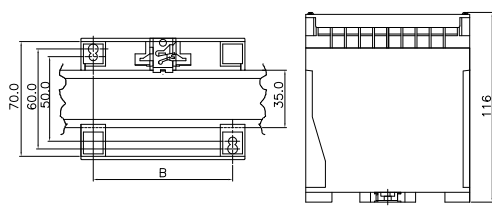
### Dimensions (mm)

**1**

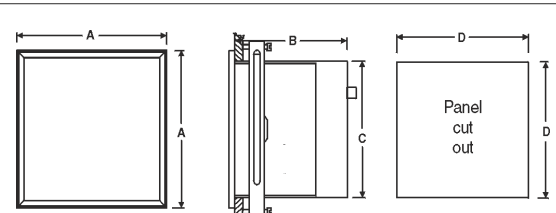


**4** Dimension of DIN Series Power Line Transducers

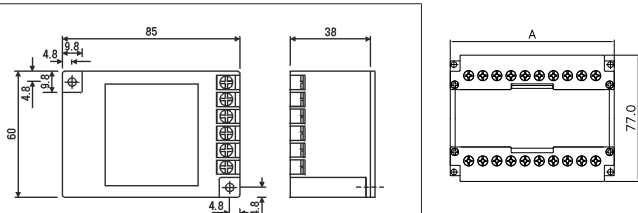
Case Size	A	B
I	75	60
II	100	85
III	150	135



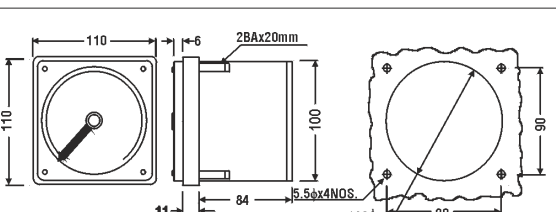
**2**



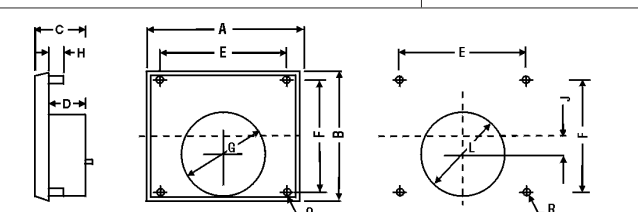
**5**



**3**



**6**



**Note :** # For ranges greater than 100 mA & upto 5A AC use Models CR60, CR65, CR100, CR120, 72LF11,72LF31,FL72 & C72 with External CT Box supplied with the instruments (Drawing 5).