



C72, C96



MLC72, MLC144



MLC96



MLC110

Model

Description

Movement Type

Accuracy

Operating Voltage

Test Voltage

Self-Consumption

Frequency Range

Construction & Design

Scale

Casing

Dimensions and Panel cutout

C72, C96

Moving Coil measuring instruments with AC rectifier; Full Scale deflection 90°
Moving-coil with central magnetic Core; spring-mounted bearing jewel suspension ± 1.5% of Full Scale

600 V RMS max.

2.5 KV for 1 minute at 50 Hz

< 1 VA

45 Hz to 1 KHz (Voltmeter & Ammeter)

1 KHz to 10KHz (Voltmeter - Optional)

According to IS 1248; EN 60051

According to DIN 43802

Size 72, 96 ABS Case with Glass Front

Refer Dimensions Page Overleaf

MLC72, MLC96, MLC144, MLC110

Moving coil measuring instruments with AC rectifier; Full Scale deflection 240°
Moving-coil with central magnetic Core; spring-mounted bearing jewel suspension ± 1.5% of Full Scale for MLC96, MLC144, MLC110 ± 2.5% of Full Scale for MLC72

600 V RMS max.

2.5 KV for 1 minute at 50 Hz

< 1 VA

45 Hz to 1 KHz (Voltmeter & Ammeter)

1 KHz to 10KHz (Voltmeter - Optional)

According to IS 1248; EN 60051

According to DIN 43802

Size 72, 96, 144 ABS Case with Glass Front

Size 110 ABS Case with Clear Polycarbonate Cover

Refer Dimensions Page Overleaf

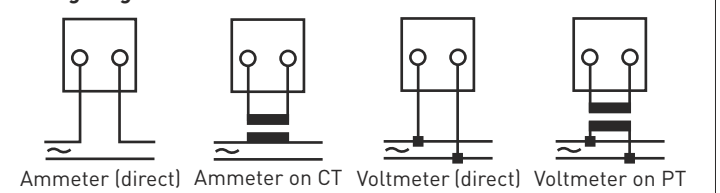
Ammeters @						Voltmeters		
1 x In (A)		2 x In (A)		6 x In (A)		Direct	On PT	
Direct	On CT	Direct	On CT	Direct	On CT		Ratio and Scale	
1A	(-)	1/2 A	(-)	1/6 A	(-)			
5A	(5A or 1A)	5/10A	(5A or 1A)	5/30 A	(5A or 1A)			
	10/-		10/20/-		10/60/-	10 V	-V/63.5 V	10 KV
	15/-		15/30/-		15/90/-	15 V	-V/110 V	15 KV
	20/-		20/40/-		20/120/-	20 V	-V/230 V	20 KV
	25/-		25/50/-		25/150/-	25 V	-V/250 V	25 KV
	30/-		30/60/-		30/180/-	30 V	-V/400 V	30 KV
	40/-		40/80/-		40/240/-	40 V	-V/440 V	40 KV
	50/-		50/100/-		50/300/-	50 V	1 KV	50 KV
	60/-		60/120/-		60/360/-	60 V	1.2 KV	60 KV
	75/-		75/150/-		75/450/-	75 V	1.5 KV	75 KV
	100/-		100/200/-		100/600/-	100 V	2 KV	100 KV
	150/-		150/300/-		150/900/-	150 V	2.5 KV	
	250/-		250/500/-		250/1500/-	250 V	3 KV	
	400/-		400/800/-		400/2400/-	400 V	3.5 KV	
	500/-		500/1000/-		500/3000/-	500 V	4 KV	
	600/-		600/1200/-		600/3600/-	600 V	5 KV	
	1000/-		1000/2000/-		1000/6000/-	750 V	6 KV	
	1500/-		1500/3000/-		1500/9000/-	800 V	7.5 KV	
	and higher		and higher		and higher	1000 V	8 KV	

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

Notes

- a) Double stamping / non-standard marking available.
 - b) Rectifier type meters calibrated for AC sine wave.
 - c) Rubber gaskets for vibration proof available.
 - d) AC instruments normally calibrated at 50 Hz.
 - e) Other ranges available subject to technical feasibility.
 - f) Terminal Protection Cover (Optional) on request for all Models except MLC144
- @ From 1mA to 750mA (50Hz) are also available

Wiring Diagram

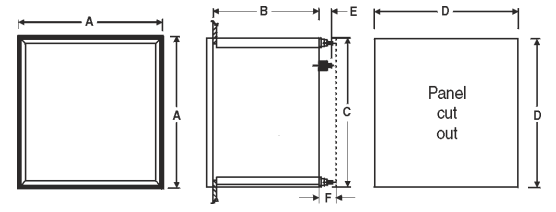


MODELS	SCALE LENGTH (mm)	REFER DRAWING	A	B	C	D	E	F	EXT. BOX # DRAWING
SQ72 (VOLTMETER & AMMETER UPTO 20A)	64	1	72	51.5	67	68	17	19	-
SQ72 (AMMETER ABOVE 20A)	64	1	72	51.5	67	68	23	19	-
M72,F72,C72, (72QF11,31)	60	1	72	37	66	68	13	19.5	5
72QW11,31,32,33, (72QV11,31,32,33)	60	1	72	37	66	68	13	19.5	4
72LW11,31,32,33, (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)

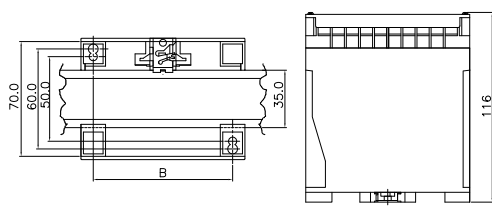
Dimensions (mm)

1

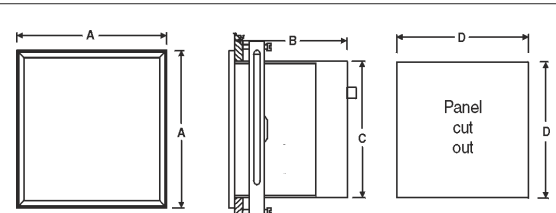


4 Dimension of DIN Series Power Line Transducers

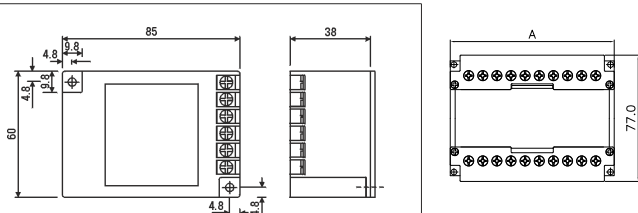
Case Size	A	B
I	75	60
II	100	85
III	150	135



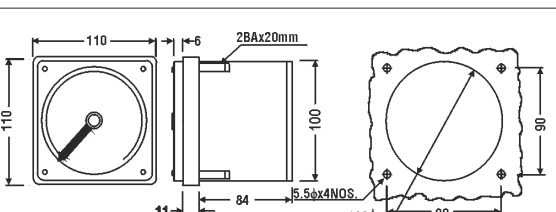
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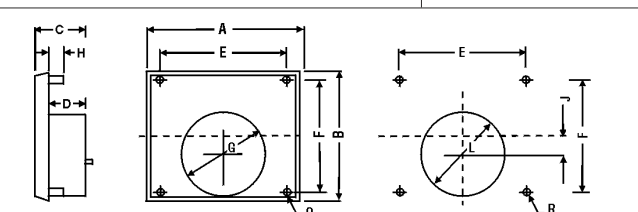
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Note : # For ranges greater than 100 mA & upto 5A AC use Models CR60, CR65, CR100, CR120, 72LF11,72LF31,FL72 & C72 with External CT Box supplied with the instruments (Drawing 5).