

1. VOLTMETERS AND AMMETERS 90°

SHAPE	SQUIRE FLUSH				ROUND FLUSH		ROUND	
	BEZEL	PANEL CUT.	DEPTH IN PANEL	SCALE LENGTH. (APPROX)	PROJECTING	PEDESTAL		
	48 x 48	45X45 ^{+0.6}	45	40	83 DIA	135 DIA	75 DIA	113 DIA
	72 x 72	68X68 ^{+0.7}	50	60	67 DIA	113DIA.	-	-
	96 x 96	92X92 ^{+0.8}	50	90	50	50	50	-
	144 x 144	138X138 ⁺¹	60	145	60	90	90	90

A) D.C. VOLTMETERS [MOVING COIL.]

ACC. CL.		2.5	1.5	1.5	1	2	1.5	1.5	1
RANGE MIN.	RANGE MAX.	MODEL							
		SMC - 48	SMC - 72	SMC - 96	SMC - 144	2DFM	4DFM	4DPM	--
0 - 10mV.	0 - 40mV.	--	495/-	525/-	920/-	485/-	710/-	700/-	--
0 - 50mV.	0 - 30V.	610/-	495/-	580/-	920/-	485/-	710/-	700/-	--
0 - 40V.	0 - 300V.	610/-	565/-	615/-	935/-	505/-	750/-	710/-	--
0 - 400V.	0 - 600V.	610/-**	615/-	660/-	985/-	615/-	775/-	750/-	--
0 - 750V.	0 - 1000V.	1040/-**	925/-*	975/-*	1295/-	--	--	--	--

B) D.C. AMMETERS [MOVING COIL.]

ACC. CL.		2.5	1.5	1.5	1	2	1.5	1.5	1
RANGE MIN.	RANGE MAX.	MODEL							
		SMC - 48	SMC - 72	SMC - 96	SMC - 144	2DFM	4DFM	4DPM	--
0 - 250μA.	0 - 400μA.	--	580/-	615/-	985/-	615/-	800/-	755/-	--
0 - 500μA.	0 - 800μA.	575/-	580/-	615/-	985/-	615/-	800/-	755/-	--
0 - 1mA.	0 - 8A.	575/-	495/-	525/-	920/-	435/-	710/-	700/-	--
0 - 10A.#	0 - 30A. #	575/-	495/-	525/-	920/-	485/-	710/-	700/-	--
0 - 40A. #.#	0 - 12KA. #.#	530/-	495/-	525/-	920/-	485/-	710/-	700/-	--

C) A.C. VOLTMETERS. [MOVING COIL- RECTIFIER TYPE.]

ACC. CL.		--	2.5	2.5	1.5	--	1.5	1.5	1.5
RANGE MIN.	RANGE MAX.	MODEL							
		SMR - 48	SMR - 72	SMR - 96	SMR - 144	2DFRM	4DFRM	4DPRM	--
0 - 6V.	0 - 30V.	905/-	--	975/-	1190/-	--	1130/-	1110/-	--
0 - 40V.	0 - 300V.	905/-	--	1045/-	1380/-	--	1195/-	1170/-	--
0 - 400V.	0 - 600V.	1360/-**	--	1045/-	1380/-	--	1195/-	1170/-	--
0 - 750V.	0 - 1000V.	1360/-**	--	1355/-*	1685/-*	--	--	--	--

D) AC. AMMETERS. [MOVING COIL - RECTIFIER TYPE.]

ACC. CL.		--	2.5	2.5	1.5	--	1.5	1.5	1.5
RANGE MIN.	RANGE MAX.	MODEL							
		SMR - 48	SMR - 72	SMR - 96	SMR - 144	2DFRM	4DFRM	4DPRM	--
0 - 10mA.	0 - 50mA.	--	--	835/-	1190/-	--	925/-	975/-	--
0 - 75mA.	0 - 750mA.	--	--	975/-	1325/-	--	1130/-	1110/-	--
0-1A	0-8A	--	--	1035/-	1465/-	--	1195/-	1170/-	--
0 - 10A.	0 - 30A.	1025/-**	--	1035/-	1465/-	--	1195/-	1170/-	--

E) A.C. VOLTMETERS. [MOVING IRON.]

ACC. CL.		2.5	1.5	1.5	1	2	1	1	1
RANGE MIN.	RANGE MAX.	MODEL							
		SMI - 48	SMI - 72	SMI - 96	SMI - 144	2DFI	4DFI	4DPI	PU4
0 - 15 V.	0 - 120V.	-	330/-	380/-	555/-	315/-	380/-	380/-	450/-
0 - 150V.	0 - 300V.	410/-	330/-	380/-	555/-	315/-	380/-	380/-	450/-
0 - 400V.	0 - 600V.	-	375/-	400/-	590/-	325/-	390/-	390/-	460/-
0 - 750V.	0 - 1000V.	-	685/-*	705/-*	895/-*	--	--	--	--

*With Built-in Resistance ** With External Resistance Box # With Internal Shunt ## With External Shunt (Shunt Price Extra)



F) A.C. AMMETERS. [MOVING IRON.]

ACC. CL.		2.5	1.5	1.5	1	2	1	1	1
RANGE MIN.	RANGE MAX.	MODEL							
		SMI - 43	SMI - 72	SMI - 96	SMI - 144	2DFI	4DFI	4DPI	PU4
0 - 500mA.	0 - 8A.	410/-	310/-	340/-	485/-	270/-	400/-	400/-	435/-
0 - 10A.	0 - 30A.	410/-	310/-	340/-	485/-	270/-	400/-	430/-	435/-
0 - 40A.	0 - 100A.	--	380/-	400/-	565/-	330/-	435/-	435/-	515/-
0 - 120A.	0 - 200A.	--	--	480/-	665/-	--	515/-	515/-	575/-

SPECIAL A.C. VOLTMETERS [MOVING IRON. ACC. CL 1.5%]

A. C. VOLTMETERS WITH SELECTOR SWITCH			
RANGE		VSS-72A.	VSS-96A.
0 - 120V.	L1 - L2, L2 - L3, L3 - L1,	575/-	680/-
0 - 500V.	L1 - N, L2 - N, L3 - N.	575/-	680/-

A. C. DOUBLE SCALE VOLTMETERS.			
RANGE[m]	RANGE[M]	SIF - 96.	SIF - 144.
0 - 120V.	0 - 400V.	810/-	960/-
0 - 500V.	0 - 600V.	835/-	985/-

BIMETALIC A. C. DEMAND METERS [ACC. CL3%] & MOVING IRON A.C. AMMETERS [ACC. CL1.5%]

CT SEC. [I]	OVER LOAD	TIME - LAG	MDIS- 96 A.		MDID - 96 A.	
0 - 1A.	0%	8MIN.	935/-	2-POINTERS TO READ MAXIMUM DEMAND ON BIMETALIC AMMETER	1160/-	3-POINTERS MAXIMUM DEMAND ON BIMETALIC + INSTANTANEOUS READING ONMOVING IRON
	20%					
	0%	15 MIN				
	20%					
0 - 5A.	0%	8MIN.				
	20%					
	0%	15 MIN				
	20%					

* With Built-in Resistance ** With External Resistance Box

OPTIONAL FEATURES FOR 90° METERS

	DESCRIPTION	PRICE
BEZEL	OTHER THAN BLACK FOR SQ.INST.	20/-
GLASS	SPARE GLASS	25/-
	ANTI GLARE GLASS	50/-
CASE	HIGHER KV CLASS (WITH 4 kV)	30/-
SCALE	SINGLE SCALE TRIPLE STAMPING	20/-
	DOUBLE SCALE DOUBLE STAMPING	20/-
	COLOURED ARC	20/-
	COLOURED BAND	50/-
	NON STANDARD SCALE CALIBRATION	30/-
ACCURACY	BETTER ACC.CLASS OF 1.0% FOR SMR-144 OR 96X96 MM, 4 DFM / 4DPM METERS	20/-
FREQUENCY	ABOVE 60Hz TO 400Hz. FOR MI AC & MC RECTIFIER TYPE METER	50/-
	ABOVE 400Hz TO 1000Hz. FOR MI AC & MC RECTIFIER TYPE METER	100/-
DIAL	SPARE DIAL	20/-
	CENTRE ZERO SCALE (MC DC METER)	50/-
TERMINAL	SHROUD	10/-
	REAR CAP	10/-
RUBBER GASKET	THIN RUBBER GASKET FOR SQ.INS.	20/-
	THICK RUBBER GASKET+M.S CLAMPS 72X72,96X96,144X144	75/-
CLAMPS	MOSAIC GRID MOUNTING FOR SQ.INST.	50/-
SUPPRESSION	INITIAL SUPPRESSED (SMI-96 & 144)	50/-
	END SUPPRESSED UPTO 6 TIMES FOR MI AC AMMETERSEXCEPT SMI-48	15/-
	END SUPPRESSED FOR MI AC AMMETERS 8 TIMES EXCEPT SMI-48,	50/-
	END SUPPRESSED UPTO 6 TIMES FOR SMI 48 AMMETERS	50/-
POINTER	KNIFE EDGE POINTER FOR 96/144/4"	30/-
	MI AC/MC DC AMMETER MIRROR SCALE FOR 96/144 MM METER	100/-
	10KΩ SENSITIVITY FOR SMC-144 VOLTMETER	100/-
PROTECTION	IP-54 PROTECTION	75/-

16. INDOOR TAPE INSULATED RING TYPE

"BPL" LOW TENSION CURRENT TRANSFORMERS

RATED BURDEN 15 VA : ACCURACY CLASS 5P10.

RATIO	I. D. (mm) Minimum	O. D. (mm) Maximum	Ht. (mm) Maximum	PRICE
100 / 5 A	30	160	160	5,455
150 / 5 A	30	130	140	3,336
200 / 5 A	50	150	125	2,820
250 / 5 A	50	145	125	2,820
300 / 5 A	50	140	110	1,875
400 / 5 A	60	145	90	1,635
500 / 5 A	60	140	90	1,480
600 / 5 A	60	140	80	1,530
800 / 5 A	80	150	80	1,560
1000 / 5 A	105	170	70	1,605
1200 / 5 A	105	185	60	1,630
1250 / 5 A	105	185	60	1,630
1500 / 5 A	115	190	60	1,680
1600 / 5 A	115	190	60	1,680
2000 / 5 A	130	185	50	1,715
2500 / 5 A	130	205	60	1,900
3000 / 5 A	130	200	50	1,985

NOTE : Ratio from 5 / 5 A to 75 / 5 A is possible only in Wound Primary Resin Cast, price of which will be RS. 2,880/- each.

17. INDOOR TAPE INSULATED RING TYPE

"BPL" LOW TENSION CURRENT TRANSFORMERS

TYPE : CBF - 0.6 - D1

RATIO	APPROXIMATE DIMENSIONS IN MM			RATED BURDEN IN VA	ACCURACY CLASS	UNIT PRICE
	I. D. (A)	O. D. (B)	HEIGHT (C)			
50 / 5 A	30	80	50	5	5.0	330
60 / 5 A	30	80	50	5	5.0	330
75 / 5 A	30	80	50	5	5.0	330
100 / 5 A	30	80	50	5	1.0	345
100 / 5 A	30	80	95	15	1.0	1,260
150 / 5 A	30	80	50	5	1.0	345
150 / 5 A	30	80	50	15	1.0	1,065
200 / 5 A	50	95	40	10	1.0	340
200 / 5 A	50	95	40	15	1.0	635
250 / 5 A	50	95	40	10	1.0	345
250 / 5 A	50	95	40	15	1.0	635
300 / 5 A	50	95	40	10	1.0	345
300 / 5 A	50	95	40	15	1.0	565
400 / 5 A	60	100	35	15	1.0	345
500 / 5 A	60	100	35	15	1.0	345
600 / 5 A	60	100	35	15	1.0	345
800 / 5 A	80	125	35	15	1.0	385
1000 / 5 A	80	125	35	15	1.0	420
1200 / 5 A	105	140	30	15	1.0	450
1500 / 5 A	115	150	30	15	1.0	500
1600 / 5 A	115	150	30	15	1.0	520
2000 / 5 A	115	150	30	15	1.0	610
2400 / 5 A	130	165	30	15	1.0	815
2500 / 5 A	130	165	30	15	1.0	815
3000 / 5 A	130	165	30	15	1.0	895

NOTE : 1) The Accuracies listed above are as per I.S.S. 2705 / 1992

2) The general tolerance for dimensions A, B & C shall be ± 3 mm

3) 1 Amp Secondary at an extra cost of RS. 50/-

18. INDOOR RESIN CAST RING TYPE LOW TENSION CURRENT TRANSFORMERS

INDOOR RESIN CAST RING TYPE – LOW TENSION CURRENT TRANSFORMERS

RATIO	BURDEN IN VA	ACCURACY CLASS	PRICE
100 / 5 A	5	1.0	745
150 / 5 A	5	1.0	610
200 / 5 A	10	1.0	610
250 / 5 A	10	1.0	695
300 / 5 A	10	1.0	695
400 / 5 A	15	1.0	745
500 / 5 A	15	1.0	755
600 / 5 A	15	1.0	780
800 / 5 A	15	1.0	790
1000 / 5 A	15	1.0	840
1200 / 5 A	15	1.0	865
1250 / 5 A	15	1.0	865
1500 / 5 A	15	1.0	935
2000 / 5 A	15	1.0	1,105
2500 / 5 A	15	1.0	1,285
3000 / 5 A	15	1.0	1,385

NOTE - The Accuracies listed above are as per I. S. S. 2705 / 1992.

- 1) Ratio upto 75 / 5 A is possible only in Wound Primary Resin Cast Type with 15 VA, Class - 1.0.
- 2) Ratio 5 / 5 A to 75 / 5 As : RS.815/-
- 3) Ratio 100 / 5 A to 200 / 5 A : RS.940/-
- 4) 1 Amp Secondary of an extra cost of RS.50/-

19. INDOOR RESIN CAST SUMMATION CURRENT TRANSFORMERS

A. INDOOR RESIN CAST SUMMATION CURRENT TRANSFORMERS

RATIO	BURDEN IN VA	ACCURACY CLASS	PRICE
5+5/5 A	10	1.0	1,740
5+5+5/5 A	10	1.0	1,825
1+1/1 A	10	1.0	1,825
1+1+1/1 A	10	1.0	2,040
5+5/5 A	15	1.0	1,825
5+5+5/5 A	15	1.0	2,040
1+1/1 A	15	1.0	2,245
1+1+1/1 A	15	1.0	2,265

NOTE : Prices for Interposing and Auxiliary Current Transformers on request. Please specify Ratio, VA Burden, Accuracy Class.



AUTOMATIC ELECTRIC LTD.

Power System Division

DIMMERSTATS

CONTINUOUSLY VARIABLE VOLTAGE AUTO TRANSFORMERS

SINGLE PHASE MODELS

Current Rating In Amps	Flush Back of Panel (Open)		Portable Table / Floor Mounting With Enclosure		Oil Cooled (Without Oil)		
	Type	Price	Type	Price	Type	Price	Approx. Oil Qty
0.75	0.7D-1F	855					
2	2D-1F	1540	2D-1P	2310			
4	4D-1F	3260	4D-1P	3950			
8	8D-1F	4120	8D-1P	4980			
10	10D-1F	4980	10D-1P	5920			
15	15D-1F	6950	15D-1P	7900			
20	20D-1F	8920	20D-1P	9700			
28	28D-1F	11850	28D-1P	12610			
40					40D-1T	26770	55
50					50D-1T	29175	90
60					60D-1T	31350	100
75					75D-1T	38500	120
100					100D-1T	52800	180
150					150D-1T	63325	195
200					200D-1T	68000	210
300					300D-2T	114450	300
400					400D-2T	137325	350

Note: - Prices for Higher Capacity ON REQUEST.

14. INDOOR RESIN CAST SINGLE PHASE SINGLE POLE POTENTIAL TRANSFORMERS

INDOOR RESIN CAST SINGLE PHASE SINGLE POLE POTENTIAL TRANSFORMERS

RATIO IN VOLTS	ACCURACY CLASS : 1.0			
	RATED BURDEN			
	15 VA	25 VA	50 VA	100 VA
	PRICE	PRICE	PRICE	PRICE
660 / 110	5,065	6,285	7,345	10,130
415 / 110	4,535	5,950	6,625	9,765
415 / $\sqrt{3}$ / 110 / $\sqrt{3}$	3,840	4,535	5,230	8,040
240 / 240	3,840	4,535	5,230	8,040
110 / 110	3,840	4,535	5,230	8,040

15. INDOOR RESIN CAST RING TYPE "BPL" LOW TENSION CURRENT TRANSFORMERS

RATED BURDEN 15VA : ACCURACY CLASS 5 P 10

RATIO	PRICE
150 / 5 A	3,985
200 / 5 A	3,600
250 / 5 A	3,275
300 / 5 A	3,070
400 / 5 A	2,865
500 / 5 A	2,520
600 / 5 A	2,520
800 / 5 A	2,520
1000 / 5 A	2,520
1200 / 5 A	2,280
1500 / 5 A	2,350
2000 / 5 A	2,520
2500 / 5 A	2,520
3000 / 5 A	2,665

NOTES :

- 1) Ratios upto 100 / 5 A is possible only in WOUND PRIMARY RESIN CAST with 15 VA. 5P10.
- 2) Ratio 5 / 5 A to 100 / 5 A : Rs. 2,880.00

2. VOLTMETER AND AMMETER 240°

SHAPE	SQUIRE FLUSH				
BAZEL (mm)	48 X 48	72 x 72	96 x 96	144 x 144	110 X 110
PANEL CUT. (mm)	45X45 ^{+0.6}	68X68 ^{+0.7}	92X92 ^{+0.8}	138X138 ⁺¹	100 [±]
DEPTH IN PANEL (mm)	45	50	50	60	100
SCALE LENGTH. (mm)	70 - 75	105 - 110	150 - 155	225 - 230	175 - 180
ACC. CL.	2.5%	1%	1.5%	1.5%	1.5%

D.C. VOLTMETER [MOVING COIL]

RANGE MIN.	RANGE MAX.	MODEL				
		SQ48	SQ72	SQ96	SQ144	SQ110
0-60mV	0-150mV	1015/-	885/-	945/-	1110/-	1065/-
0-300mV	0 - 750mV	1370/-*	885/-	945/-	1110/-	1065/-
0 - 1V	0 - 600V	1370/-**	885/-	945/-	1110/-	1065/-
0-750V	0 - 1000V	1465/-**	1195/-*	1255/-*	1415/-*	1370/-*

D.C. AMMETER [MOVING COIL]

RANGE MIN.	RANGE MAX.	MODEL				
		SQ48	SQ72	SQ96	SQ144	SQ110
0-500μA	0 - 750mA	905/-	790/-	845/-	990/-	950/-
0 - 1A	0 - 8A	905/-	790/-	845/-	990/-	950/-
0 - 10A #	0 - 30A #	905/-	790/-	845/-	990/-	950/-
0 - 40A ##	0 - 1000A ##	905/-	790/-	845/-	990/-	950/-

A.C. VOLTMETER [RECTIFIER TYPE]

RANGE MIN.	RANGE MAX.	MODEL				
		SQ48	SQ72	SQ96	SQ144	SQ110
0 - 10V.	0 - 30V.	1480/-**	975/-	1020/-	1180/-	1150/-
0 - 40V.	0 - 300V.	1480/-**	975/-	1020/-	1180/-	1150/-
0 - 400V.	0 - 600V.	1480/-**	975/-	1020/-	1180/-	1150/-
0 - 750V.	0 - 1000V.	1570/-**	1280/-*	1335/-*	1490/-*	1455/-*

A.C. AMMETER [RECTIFIER TYPE]

RANGE MIN.	RANGE MAX.	MODEL				
		SQ48	SQ72	SQ96	SQ144	SQ110
0 - 10mA.	0 - 50mA.	1520/-**	975/-	1020/-	1180/-	1150/-
0 - 75mA.	0 - 750mA.	1520/-**	975/-	1020/-	1180/-	1150/-
0 - 1A.	0 - 8A.	1520/-**	975/-	1020/-	1180/-	1150/-
0 - 10A.	0 - 30A.	1520/-**	975/-	1020/-	1180/-	1150/-

* With Built-in Resistance ** With External Resistance Box. # With Internal Shunt ## With External Shunt (Shunt Price Extra)

STANDARD RANGES :- 1, 1.2, 1.5, 2, 2.5, 3, 4, 5, 6, 7.5, 8. IT'S MULTIPLE :- 10, 12, 15, 20, 25, 30, 40, 50, 60, 75, 80. AND 100, 120, 150, 200, 250, 300, 400, 500, 600, 750, 800. - 8000 = 8k FOR EXAMPLE :- 2A, 20A, 200A, 2kA / 120V, 12kV. etc.

OPTIONAL FEATURES FOR MOVING COIL 240° INSTRUMENTS

	DESCRIPTION	PRICE
BEZEL	OTHER THAN BLACK FOR SQ.INST.	20/-
GLASS	SPARE GLASS	50/-
	ANTI GLARE GLASS	50/-
CASE	HIGHER KV CLASS	50/-
SCALE	SINGLE SCALE TRIPLE STAMPING	50/-
	DOUBLE SCALE DOUBLE STAMPING	20/-
	COLOURED ARC	50/-
	COLOURED BAND	30/-
	NON STANDARD SCALE CALIBRATION	50/-
CALIBRATION	1.0% ACCURACY CLASS IN 96 X 96, 110 x 110, 144 x 144 mm	50/-
	CENTRE ZERO SCALE (DC METERS)	100/-
	AT FREQUENCY (150 Hz - 400 Hz)	50/-
FREQUENCY	ABOVE 60Hz TO 400Hz. FOR MI AC & MC RECTANGULAR AC METER	100/-
SUPPRESSION	INITIAL SUPPRESSION EXCEPT 48 X 48	50/-
	END SUPPRESSED 6 TIMES (FOR AC) AND END SUPPRESSED 2TIMES (FOR DC)	50/-
DIAL	SPARE DIAL FOR 72 X 72, 96 X 96 BASE COLOUR - BLACK	50/-
	ILLUMINATED 96 X 96, 144 X 144	250/-
	ILLUMINATED + MAX. 3 COLOURED	300/-
RANGE	LOWER THAN NORMAL 72 X 72, 96 X 96, 144 X 144	50/-
	HIGHER THAN NORMAL 72 X 72, 96 X 96, 144 X 144	100/-
TERMINAL	ADDITIONAL FOR 72 X 72, 96 X 96, 144 X 144. VOLTMETER	150/-
	SHROUD	10/-
	REAR CAP	10/-
RUBBER GASKET	THIN RUBBER GASKET FOR SQ.INST.	20/-
	THICK RUBBER GASKET ROUND FLUSH INST.	20/-
	THICK RUBBER GASKET+M.S CLAMPS 72X72, 96X96, 144X144	75/-
CLAMPS	MOSAIC GRID MOUNTING FOR SQUARE INST.	50/-
PROTECTION	IP 54	75/-

3. POWER METER

BAZEL	PANEL CUT				ACCURACY CLASS.				SCALE LENGTH			
96 X 96	92 X 92 ^{+0.8}				1.5 % WATT, VAR. VA. & 2° for POWER FACTOR.				80 mm approx.			
144 X 144	138 X 138 ^{+1.0}				1.5 % WATT, VAR. VA. & 2° for POWER FACTOR.				140 mm approx.			
MODEL	WATT METER				VAR METER				PF METER			
PANEL DEPTH (mm)	1P	3P-1E	3P-2E	3P-3E*	1P	3P-1E	3P-2E	3P-3E*	1P	3P-1E	3P-2E	3P-3E
S 96	80	80	100	100	--	--	100	--	80	80	125	100
S 144	85	85	125	165	--	--	125	165	125	125	165	125

SINGLE PHASE POWER METER [DYNAMOMETER TYPE]

MODEL	POTENTIAL COIL	CURRENT COIL	WATT	VAR	P. F.
96	110V / 230V / 440V OR	0.5A / 1A. / 2A. OR	1075/-		1430/-
S 144	150V / 300V / 600V.	2.5A. / 5A. / 10A.	1460/-		1615/-

THREE PHASE POWER METER [DYNAMOMETER TYPE.]

MODEL	POTENTIAL	CURRENT	WATTMETERS.			VARMETERS.			
			3Ph. - 1EI.	3Ph. - 2EI.	3Ph. -2 ½ EI/ 3Ph-4W	3Ph. - 1EI.	3Ph. - 2EI.	3Ph. -2 ½ EI/ 3Ph-4W	
S 96	110 V	1 A. / 5 A.	1680/-	2240/-	2715/-		2440/-	2960/-	
	440 V								
S 144	110 V	1 A. / 5 A.	1815/-	2520/-	3055/-		2695/-	3230/-	
	440 V								
MODEL	POTENTIAL	CURRENT	VA METER			PF METER			
			3Ph. - 1EI.	3Ph. - 2EI.	3Ph. - 3EI.	1Ph. - 1EI.	3Ph. - 1EI.	3Ph. - 2EI.	3Ph. - 3EI.
S 96	110 V./ 440 V.	1 A. / 5 A.	AVAILABLE IN MOVING COIL BUILT IN TRANSDUCER TYPE.			1460/-	1760/-	2625/-	3110/-
S 144	110 V. / 440 V.	1 A. / 5 A.				1615/-	1945/-	3100/-	3410/-

Standard scale range :-

Upper limit of the measuring range for meters shall be one of the following values.

1, 1.2, 1.5, 2, 2.5, 3, 4, 5, 6, 7.5, 8. OR IT'S MULTIPLE
10, 12, 15, 20, 25, 30, 40, 50, 60, 75, 80, ~ 800. TO 8000.

1. Formula for Single-phase active power

$P(\max.) = \text{VICOS } \phi$ Where $\text{COS } \phi = 1$.

To calculate power range for a system with $V = 500$, $I = 2.5$ A

CALCULATED POWER = $500 \times 2.5 \times 1 = 1.25\text{kW}$

1.25 lies within the range of 1.2 and 1.5 which are in above scale pattern

Hence 1.2kW or 1.5kW to be selected as the power range

2. Formula for Three-phase active power

$P(\max.) = \sqrt{3} \text{ VICOS } \phi \times \text{PTR.} \times \text{CTR.}$ Where $\text{COS } \phi = 1$.

To calculate power range for a system with $V = 110\text{V}$, $I = 5$ A, $\text{PTR} = 400\text{kV} / 110\text{V}$, $\text{CTR} = 1000 / 5\text{A}$

CALCULATED POWER = $\sqrt{3} \times 110 \times 5 \times 1 \times (400 \times 1000 / 110) \times (1000 / 5) = 692\text{MW}$

692 lies within the range of 600 and 750 which are in above scale pattern

Hence 0-600MW or 750MW to be selected as the power range

All active power measuring instruments are calibrated at $\text{COS } \phi = 1$
and reactive power measuring instruments are calibrated at $\text{SIN } \phi = 1$

All low power factor power measuring instruments are calibrated at $\text{COS } \phi = 0.2$ lag.

Watt and Var Meters in 96 x 96 mm for 3 Ph 4 Wire will be 2 ½ Element.

4. POWER METER [Transducer Operated]

POWER FACTOR METERS 90° MOVING COIL IN BUILT TRANSDUCER [ACC. CL.2°]

CURRENT	VOLTAGE	MODEL	48 X 48	72 X 72	96 X 96	144 X 144
1A. / 5A.	110V. / 440V.	3Ph. - 1EI.			1790/-	2145/-

POWER FACTOR METERS 240° MOVING COIL IN BUILT TRANSDUCER [ACC. CL.2°]

CURRENT	VOLTAGE	MODEL	48 X 48**	72 X 72**	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.		3420/-	3520/-	3650/-	3620/-
1A. / 5A.	110V. / 440V.	3Ph. - 1EI.		3420/-	3520/-	3650/-	3620/-

ACTIVE POWER = WATTMETERS 240° MOVING COIL IN BUILT TRANSDUCER. [ACC. CL 1.5%]

CURRENT	VOLTAGE	MODEL	48 X 48	72 X 72	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.			2310/-	2420/-	
		3Ph. - 1EI.					
		3Ph. - 2EI.			3410/-	3520/-	3475/-
		3Ph. - 3EI.			3410/-	3520/-	3475/-

REACTIVE POWER = VAR METERS 240° MOVING COIL IN BUILT TRANSDUCER. [ACC. CL 1.5%]

CURRENT	VOLTAGE	MODEL	48 X 48	72 X 72	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.			2310/-	2420/-	
		3Ph. - 1EI.					
		3Ph. - 2EI.			3410/-	3520/-	3475/-
		3Ph. - 3EI.			3410/-	3520/-	3475/-

APPARENT POWER = VA-METERS 240° MOVING COIL IN BUILT TRANSDUCER. [ACC. CL 1.5%]

CURRENT	VOLTAGE	MODEL	48 X 48	72 X 72	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.			2420/-	2585/-	
		3Ph. - 1EI.					
		3Ph. - 2EI.			3520/-	3850/-	
		3Ph. - 3EI.			3520/-	3850/-	

ACTIVE POWER = WATTMETERS 240° MOVING COIL EXTERNAL TRANSDUCER. [ACC. CL 1.5%]

CURRENT	VOLTAGE	MODEL	48 X 48**	72 X 72**	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.	3465/-	2460/-	2520/-	2660/-	2585/-
		3Ph. - 1EI.	3465/-				
		3Ph. - 2EI.		3495/-	3550/-	3695/-	3615/-
		3Ph. - 3EI.		3495/-	3550/-	3695/-	3615/-

** To be used with External box

REACTIVE POWER = VAR METERS 240° MOVING COIL EXTERNAL TRANSDUCER. [ACC. CL 1.5%]

CURRENT	VOLTAGE	MODEL	48 X 48	72 X 72**	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.	3465/-	2460/-	2520/-	2660/-	2585/-
		3Ph. - 1El.	3465/-				
		3Ph. - 2El.		3495/-	3550/-	3695/-	3615/-
		3Ph. - 3El.		3495/-	3550/-	3695/-	3615/-

APPARENT POWER = VA-METERS 240° MOVING COIL EXTERNAL TRANSDUCER. [ACC. CL 1.5%]

CURRENT	VOLTAGE	MODEL	48 X 48	72 X 72	96 X 96	144 X 144	110 X 110
1A. / 5A.	110V. / 440V.	1 - Phase.	3465/-				
		3Ph. - 1El.	3465/-				
		3Ph. - 2El.		3815/-	3870/-	4015/-	3935/-
		3Ph. - 3El.		3815/-	3870/-	4015/-	3935/-

** To be used with External box

OPTIONAL FEATURES FOR POWER METERS

	DESCRIPTION	PRICE
BEZEL	OTHER THAN BLACK FOR SQ. INST.	20/-
GLASS	SPARE GLASS	50/-
	ANTI GLARE GLASS	100/-
CASE	HIGHER KV CLASS (WITH 4 KV)	50/-
SCALE	SINGLE SCALE TRIPLE STAMPING	50/-
	DOUBLE SCALE DOUBLE STAMPING	50/-
	COLOURED ARC	20/-
	COLOURED BAND	50/-
CALIBRATION	1.0% ACC. CLASS. EXCEPT (72 X 72 mm)	100/-
	AT FREQUENCY (150 Hz ~ 400 Hz)	150/-
DIAL	SPARE DIAL FOR 72 X 72, 96 X 96	50/-
CALIBRATION	CENTRE ZERO SCALE (FOR WATT & VAR)	100/-
RANGE	LOWER THAN NORMAL 72 X 72, 96 X 96, 144 X 144	50/-
	HIGHER THAN NORMAL 72 X 72, 96 X 96, 144 X 144	100/-
TERMINAL	SHROUD	10/-
	REAR CAP	10/-
RUBBER GASKET	THIN RUBBER GASKET FOR SQ. INST.	20/-
	THICK RUBBER GASKET ROUND FLUSH INST.	75/-
CLAMPS	MOSAIC GRID MOUNTING FOR SQUARE INST.	50/-

5. FREQUENCY METER

FREQUENCY METERS [VIBATING REED TYPE.]

RANGE	INPUT	ROW	RESOLUTION	MODEL	RFS - 72	RFS - 96	RFS - 144
47 ~ 53Hz.	110V / 230V / 440V.	SINGLE	0.5Hz.	13 REEDS	650/-	760/-	930/-
45 ~ 55Hz.			1 Hz.	13 REEDS	650/-	760/-	930/-
45 ~ 55Hz.			0.5Hz.	21 REEDS	-	-	1725/-
RANGE	INPUT	ROW	RESOLUTION	MODEL	-	RFD - 96	RFD - 144
47 ~ 53Hz.	110V / 230V / 440V.	DOUBLE	0.5Hz.	13 REEDS	-	1510/-	1935/-
45 ~ 55Hz.			1 Hz.	13 REEDS	-	1510/-	1935/-
45 ~ 55Hz.			0.5Hz.	21 REEDS	-	-	3580/-

FREQUENCY METERS [BLINKING LED TYPE.]

RANGE	INPUT	ROW	RESOLUTION	MODEL	ELFS - 72	ELFS - 96	ELFS - 144
47 ~ 53Hz.	110V / 230V / 440V.	SINGLE	0.5	13 LEADS	590/-	690/-	845/-
45 ~ 55Hz.			1	13 LEADS	590/-	690/-	845/-
57 ~ 63Hz.			0.5	13 LEADS	590/-	690/-	845/-
55 ~ 65Hz.			1	13 LEADS	590/-	690/-	845/-
370 ~ 430Hz.			1	13 LEADS	620/-	720/-	875/-
47 ~ 53Hz.			0.2	21 LEADS	-	-	1320/-
45 ~ 55Hz.			0.5	21 LEADS	-	-	1320/-
58 ~ 62Hz.			0.2	21 LEADS	-	-	1320/-
55 ~ 65Hz.			0.5	21 LEADS	-	-	1320/-
380 ~ 420Hz.			1	21 LEADS	-	-	1345/-
RANGE	INPUT	ROW	RESOLUTION	MODEL	-	ELFD - 96	ELFD - 144
47 ~ 53Hz.	110V / 230V / 440V.	DOUBLE	0.5	13LEADS	-	1375/-	1760/-
45 ~ 55Hz.			1	13LEADS	-	1375/-	1760/-
57 ~ 63Hz.			0.5	13LEADS	-	1375/-	1760/-
55 ~ 65Hz.			0.5	13LEADS	-	1375/-	1760/-
370 ~ 430Hz.			1	13 LEADS	-	1400/-	1785/-
47 ~ 53Hz.			0.2	21 LEADS	-	-	2090/-
45 ~ 55Hz.			0.5	21 LEADS	-	-	2090/-
58 ~ 62Hz.			0.2	21 LEADS	-	-	2090/-
55 ~ 65Hz.			0.5	21 LEADS	-	-	2090/-
380 ~ 420Hz.			2	21 LEADS	-	-	2115/-

FREQUENCY METERS [90°MOVING COIL BUILT IN TRANSDUCER TYPE.]

RANGE	INPUT	48 X48	72 x 72	96 x 96	144 x 144	PORATBLE
45 ~ 55Hz.	110V / 230V / 440V.		1045/-	1385/-	1530/-	2010/-
55 ~ 65Hz.			1045/-	1385/-	1530/-	2010/-
45 ~ 65Hz.			1045/-	1385/-	1530/-	2010/-
45 ~ 65Hz.	110 V / 440 V		770/-	1385/-	-	-

FREQUENCY METERS [240°MOVING COIL BUILT IN TRANSDUCER TYPE.]

RANGE	INPUT	48 X48	72 x 72*	96 x 96	144 x 144	110 x 110
45 ~ 55Hz.	110V / 230V / 440V.		1605/-	1420/-	1570/-	1505/-
55 ~ 65Hz.	110V / 230V / 440V.		1605/-	1420/-	1570/-	1505/-
45 ~ 65Hz.	110V / 230V / 440V.		1605/-	1420/-	1570/-	1505/-
45 ~ 65Hz.	DUAL		-	-	-	-

* With Ext. Transducer

6. PORTABLE INSTRUMENTS

A. MINIATURE MOVING COIL PORTABLE

a) DC VOLTMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT SSSP-1	DC	MILLIVOLT	SINGLE RANGE 0 - 50, 75, 100, 300, 500, 1000 mV	1	615/-
PORT SSSP-1		MILLIVOLT	DUAL RANGE 0- 50/100, 75/150, 100/200, 250//500 mV		670/-
PORT SSSP-1		MILLIVOLT	TRIPLE RANGE 0 - 50/100/200, 150/300/600 mV		715/-
PORT SSSP-1		VOLT	SINGLE RANGE 0 - 2, 10, 30, 50, 75, 100 V	1	670/-
			SINGLE RANGE 150, 250, 300 V		715/-
PORT SSSP-1		VOLT	DUAL RANGE 0 - 1/2, 2.5 / 5, 5/10 , 30/60, 50/100 V	1	715/-
			DUAL RANGE 0 - 75/150, 100/200, 150/300 V		760/-
PORT SSSP-1		VOLT	TRIPLE RANGE 0 - 1/3/10, 10/30/60, 25/50/100, 75/150/300 V	1	825/-

b) DC AMMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT SSSP-1	DC	MILLIAMPS	SINGLE RANGE 0 - 30, 50, 100, 300, 500, 1000 mA	1	615/-
PORT SSSP-1		MILLIAMPS	DUAL RANGE 0 - 50/100, 150/300, 250/500, 500/1000 mA		715/-
PORT SSSP-1		AMPS	SINGLE RANGE2A TO 10A,		670/-
			SINGLE RANGE15A TO 30A		715/-
PORT SSSP-1		AMPS	DUAL RANGE1/2, 2.5/5, 5/10A		715/-
			DUAL RANGE10/20A, 15/30A		745/-

B. MINIATURE MOVING IRON PORTABLE

a) AC VOLTMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT-SSSP-3	1PH	VOLT	ANY SINGLE RANGE FROM 75 TO 600 V	1.5	570/-
PORT-SSSP-3			ANY TWO RANGES (1:2 RATIO) 0 - 75/150, 150/300, 250/500, 300/600V		760/-
PORT-SSSP-3			ANY THREE RANGES 0 - 75/150/300, 125/250/500, 150/300/600 V		745/-

b) AC AMMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT-SSSP-3	1PH	AMP	ANY SINGLE RANGE FROM 0.5 TO 15 A	1.5	660/-
PORT-SSSP-3			ANY DUAL RANGE (1:2 RATIO) 0 - 0.5/1, 1/2, 2.5/5, 5/10 A		760/-

C. MOVING COIL PORTABLE
a) DC VOLTMETER (sensitivity 1000 ohms / V)

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT MSSB-1	DC	MILLIVOLT	SINGLE RANGE 0-10, 0-25, 0-50, 0-75, 0-100, 0-150, 0-250, 0-300, 0-500, 0-750 mV	1	1165/-
PORT MSSB-1			DUAL RANGE 0 - 25 / 50, 30 / 60, 50 / 100, 75 / 150, 125 / 250, 300 / 600, 500/1000 mV		1220/-
PORT MSSB-1			TRIPLE RANGE 0 - 25 / 50/100, 30 / 75 / 150, 75 / 150 / 300, 125 / 250 / 500, 150 / 300 / 600, 250 / 500 / 1000 mV		1265/-
PORT MSSB-1			MULTI RANGE 0 - 25 / 50 / 100 / 250, 30 / 75 / 150 / 300, 75 / 150 / 300 / 600, 125 / 250 / 500 / 1000 mV		1285/-
PORT MSSB-1		VOLT	SINGLE RANGE 0-1.5, 0-3, 0-7.5, 0-15, 0-30, 0-60, 0-75, 0-125, 0-150, 0-300, 0-500, 0-600 V		1165/-
PORT MSSB-1			DUAL RANGE 0 - 1.5 / 3, 7.5 / 15, 15/30, 30 / 60, 75 / 150, 125 / 250, 150 / 300, 250 / 500, 300 / 600 V		1220/-
PORT MSSB-1			TRIPLE RANGE 0 - 1.5/3/7.5, 3/7.5/15, 7.5/15/30, 15/30/75, 30/75/150, 75/150/300, 125/250/500, 150/300/600 V		1265/-
PORT MSSB-1			MULTI RANGE 0 - 1.5 / 3 / 7.5/15, 3 / 7.5 / 15/30, 7.5 / 15 / 30 / 60, 15 / 30 / 75 / 150, 30 / 75 / 150 / 300, 75 / 150 / 300 / 600 V		1285/-

b) DC AMMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT MSSB-1	DC	MICROAMP	ANY SINGLE RANGE 0-50, 0-100, 0-150, 0-200, 0-250, 0-500, 0-750 μ A	1	1285/-
PORT MSSB-1		MILIAMP	ANY SINGLE RANGE 0-1, 0-2, 0-2.5 mA		1230/-
PORT MSSB-1			ANY SINGLE RANGE 0-5, 0-10, 0-15, 0-20, 0-25, 0-50, 0-75, 0-100, 0-150, 0-200, 0-300, 0-500, 0-750 mA		1165/-
PORT MSSB-1			ANY TWO RANGES 0 - 1/2, 2.5 / 5		1190/-
PORT MSSB-1			ANY TWO RANGES 5/ 10, 10/ 20, 15/ 30, 25/ 50 75/ 150, 150/ 300, 300/ 600, 500/ 1000 mA		1285/-
PORT MSSB-1		AMPERE	ANY SINGLE RANGE 0-1, 0-2.5, 0-5, 0-10, 0-15, 0-20, 0-25, 0-30, 0-50 A With internal shunt		1165/-
PORT MSSB-1			ANY SINGLE RANGE 0-75, 0-100, 0-150, 0-200, 0-250, 0-300, 0-500, 0-750, 0-1000, 0-2000, 0-3000, 0-4000, 0-5000, 0-6000 A With external shunt - Shunt price extra		1165/-
PORT MSSB-1			ANY TWO RANGES 0-1/2, 2.5/5, 5/10, 10/20, 15/30, 25/50 A With internal shunt		1285/-

c) RECTIFIER TYPE AC VOLTMETER(Sensitivity 1000 Ohms/Volt)

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT MSSB-2	1PH	VOLT	SINGLE RANGE 0-7.5, 0-15, 0-30, 0-60, 0-75, 0-125, 0-150, 0-300 , 0-500, 0-600 V	1.5	1395/-
PORT MSSB-2			DUAL RANGE 0 - 7.5/15, 15/30, 30/60, 75/150, 125/250, 150/300, 250/500, 300/600 V		1450/-
PORT MSSB-2			TRIPLE RANGE 0 - 3/7.5/15, 7.5/15/30, 15/30/75, 30/75/150, 75/150/300, 125/250/500, 150/300/600 V		1505/-
PORT MSSB-2			MULTI RANGE 0 - 7.5/15/30/60, 15/30/75/150, 30/75/150/300, 75/150/300/600 V		1515/-

d) RECTIFIER TYPE AC AMMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT MSSB-2	1PH	MILLIAMP	ANY SINGLE RANGE 0-10, 0-15, 0-25, 0-50 mA	1.5	1395/-
PORT MSSB-2			ANY SINGLE RANGE 0-75, 0-100, 0-200, 0-250, 0-300, 0-500, 0-750 mA (With internal CT)		1395/-
PORT MSSB-2		AMP	ANY SINGLE RANGE 0-1, 0-2, 0-2.5, 0-5, 0-10, 0-15, 0-20, 0-25, 0-30 A (With internal CT)		1470/-

D. MOVING IRON PORTABLE
a) AC VOLTMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT MSSB-3	1PH	VOLT	ANY SINGLE RANGE FROM 15V TO 600V	1	1075/-
PORT MSSB-3			ANY TWO RANGES (1:2 RATIO) 0 - 15-30V, 30-60V, 75-150V, 150-300V, 250-500V, OR 300-600V		1120/-
PORT MSSB-3			ANY THREE RANGES (1:2:4 RATIO) 0 - 15-30-75V, 62.5-125-250V, 75-150-300V, 125-250-500V, OR 150-300-600V		1165/-

b) AC AMMETER

MODEL	PHASE	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT MSSB-3	1PH	AMP	ANY SINGLE RANGE FROM 200mA TO 50 A	1	1075/-
PORT MSSB-3			ANY SINGLE RANGE 60A TO 300A		1165/-
PORT MSSB-3			ANY TWO RANGES (1:2 RATIO) 0 - 0.5-1A, 1-2A, 2.5-5A, 5-10A, 10-20A, 15-30A		1120/-
PORT MSSB-3			ANY TWO RANGES (1:2 RATIO) 0 - 50-100A, 75-150A, 100-200A, 150-300A		1175/-
PORT MSSB-3			ANY THREE RANGES 0 - 1-3-10A, 3-10-30A, 10-30-100A, 5-10-25A, 10-25-50A OR 25-50-100A		1175/-
PORT MSSB-3			ANY FIVE RANGES 0 - 1-3-10-30-100A, 5-10-25-50-100A		1285/-

E. MOVING IRON TYPE – PRECISION GRADE INSTRUMENTS
a) AC VOLTMETER

MODEL	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT LSPW-2 (SIZE: 300X196X133mm)	VOLT	ANY ONE TRIPLE RANGE 0 – 62.5 / 125 / 250 V 0 – 75 / 150 / 300 V 0 – 125 / 250 / 500 V 0 – 150 / 300 / 600 V	0.5	2220/-

b) AC AMMETER

MODEL	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT LSPW-1 (SIZE: 300X196X133mm)	AMP	ANY ONE DUAL RANGE 0 - 0.2 / 1 A 0 - 0.5 / 2.5 A 0 - 1 / 5 A 0 - 2 / 10, 10 / 20, 15 / 30 A	0.5	2220/-

F. MOVING COIL TYPE-- PRECISION GRADE INSTRUMENTS
a) DC VOLTMETER

MODEL	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT LSPW-1 (SIZE: 300X196X133mm)	MILLIVOLT	ANY ONE TRIPLE RANGE 0 - 50/100/200 mV 0 - 75/150/300 mV 0 - 150/300/600 mV 0 - 250/500/1000 mV	0.5	2625/-
PORT LSPW-1 (SIZE: 300X196X133mm)	VOLT	ANY ONE TRIPLE RANGE 0 - 1.5/3 / 7.5 V 0 - 3 / 7.5 / 15 V 0 - 15/30/60 V 0 - 75/150/300 V 0 - 125/250/500 V 0 - 150/300/600 V	0.5	2625/-

b) DC AMMETER

MODEL	PARAMETER	RANGE	ACCU. CLASS	PRICE
PORT LSPW-1 (SIZE: 300X196X133mm)	MIILLIAMP	ANY ONE DUAL RANGE 0 - 1/2 mA 0 - 2.5/5 mA 0 - 5/10 mA 0 - 10/20 mA 0 - 25/50 mA 0 - 75/150 mA 0 - 150/300 mA 0 - 250/500 mA 0 - 500/1000 mA	0.5	2625/-
	AMP	ANY ONE DUAL RANGE 0 - 1/2 A, 0 - 2.5/5 A 0 - 5/10 A, 0 - 10/20 A	0.5	3025/-

Note : Higher range with External Shunts can be quoted on request.

c) POWER METERS WITH BUILT-IN TRANSDUCERS

MODEL	PARAMETER	RANGE		ACCU. CLASS	PRICE
		POTENTIAL	CURRENT		
PORT SPW-UPF-R (ANALOGUE)	1PH WATT (Unity Power Factor)	ANY ONE VOLTAGE 0 - 15V TO 600 V	ANY TWO CURRENTS (1:2 RATIO)100 mA to 5 A	0.5	5640/-
		ANY TWO VOLTAGES (1:2 RATIO) 0 - 15/30 TO 300/600 V	ANY TWO CURRENTS (1:2 RATIO)100mA to 10 A		6410/-
PORT SPW-UPF-D (DIGITAL)	1PH WATT (Unity Power Factor)	ANY ONE VOLTAGE 0 - 15V TO 600V	ANY TWO CURRENTS (1:2 RATIO)100 mA to 5 A		7205/-
	3PH-2EL-3W WATT OR 3PH-3EL-4W WATT (Unity Power Factor)				9610/-
PORT SPW-LPF-R (ANALOGUE)	1PH WATT (Low Power Factor)	ANY ONE VOLTAGE 0 - 15V TO 600 V	ANY TWO CURRENTS (1:2 RATIO)100 mA to 5 A	0.5	5640/-
		ANY TWO VOLTAGES (1:2 RATIO) 0 - 15/30 TO 300/600 V	ANY TWO CURRENTS (1:2 RATIO)100mA to 10 A		6410/-
PORT SPW-LPF-D (DIGITAL)	1PH WATT (Low Power Factor)	ANY ONE VOLTAGE 0 - 15V TO 600V	ANY TWO CURRENTS (1:2 RATIO)100 mA to 5 A		7205/-
	3PH-2EL-3W WATT OR 3PH-3EL-4W WATT (Low Power Factor)				9610/-

G. DYNAMOMETRIC PORTABLE INSTRUMENTS
a) POWER FACTOR METERS

MODEL	PHASE	PARAMETER	CURRENT	VOLTAGE	ACCU. CLASS	PRICE
PORT LSDW-8	IPH	POWER FACTOR	SINGLE CURRENT 0.5, 1, 2.5, 5, 10 A	110 / 250 / 500V 125 / 250V 250 / 500V 62.5 / 125 / 250V 125 / 250 / 500V 150 / 300 / 600V	± 2°	2770/-
PORT MSMB-3	3PH-1EL	POWER FACTOR	1 OR 5 A	110 OR 440 V	± 2°	3155/-

b) POWER FACTOR METERS

MODEL	PHASE	PARAMETER	CURRENT		VOLTAGE	ACCU. CLASS	PRICE
PORT LSDW-8	3P-2E	POWER FACTOR	0 - 0.5, 1, 2.5, 5, 10 A	2.5/5, 5/10, 10/20 A	125 / 250 V	± 2°	3695/-
					250 / 500 V	± 2°	3870/-
PORT LSDW-9	3P-3E		0 - 0.5, 1, 2.5, 5, 10 A		110, 250, 500 V	± 2°	4265/-

c) WATT / VAR INSTRUMENTS

MODEL	PHASE	PARAMETER	CURRENT	VOLTAGE	ACCU. CLASS	PRICE
PORT MSMB-4	1PH	WATT	0 - 0.5, 1, 2.5, 5, 10 A	150, 300, 600 V	1	1595/-
PORT MSMB-4			0 - 0.5, 1, 2.5, 5, 10 A	75/150, 150/300, 300/600 V		1715/-
PORT MSMB-4			0 - 0.5, 1, 2.5, 5, 10 A	75/150/300, 150/300/600 V		1760/-
PORT MSMB-4			0 - 1/2, 2.5/ 5, 5/10, 10/20 A	150, 300, 600 V		1715/-
PORT MSMB-4			0 - 1/2, 2.5/ 5, 5/10, 10/20 A	75/150, 150/300, 300/600 V		1780/-
PORT MSMB-4 UPTO 5/10)			0 - 1/2, 2.5/ 5, 5/10 A	75/150/300, 150/300/600 V		1815/-
PORT MSMB-4 (UPTO 10/20)			0 - 1/2, 2.5/ 5, 5/10, 10/20 A	75/150/300, 150/300/600 V		1900/-

d) WATT / VAR METERS

MODEL	PHASE	PARAMETER	CURRENT	VOLTAGE	ACCU. CLASS	PRICE
PORT LSDW-1 (LPF METER PF0.2)	1PH	WATT	0 - 0.5/1, 1/2, 2.5/5, 5/10, 10/20 A	75/150/300 125/250/500, 150/300/600 V	1.5	3990/-
PORT LSDW-2	1PH		ANY ONE SET 0 - 0.5/1, 1/2, 2.5/5, 5/10, 10/20 A	62.5 / 125 / 250 V	0.5	3155/-
PORT LSDW-2	1PH		ANY ONE SET 0 - 0.5/1, 1/2, 2.5/5, 5/10, 10/20 A	75 / 150 / 300 V		3155/-
PORT LSDW-2	1PH		ANY ONE SET 0 - 0.5/1, 1/2, 2.5/5, 5/10, 10/20 A	125/ 250 / 500 V		3340/-
PORT LSDW-2	1PH		ANY ONE SET 0 - 0.5/1, 1/2, 2.5/5, 5/10, 10/20 A	150 / 300 / 600 V		3340/-
PORT LSDW-3	3PH-1EL		1, 2.5, 5, 10 A	110, 150, 300, 440, 600 V	1.5	3025/-
PORT LSDW-4	3PH-2EL		0 - 0.5, 1, 2.5, 5, 10, 1/2, 2.5/5, 5/10, 10/20 A	110, 150, 300, 440, 600, 150/300, 110/440, 300/600 V	1.5	3870/-
PORT LSDW-5	3PH-3EL	VAR	0 - 0.5, 1, 2.5, 5, 1/2, 2.5/5, 5/10, 10/20 A	110, 150, 300, 440, 600	1.5	4070/-
PORT LSDW-6	3PH-2EL		0 - 0.5, 1, 2.5, 5, 10 A	110, 150, 300, 440, 600, 150/300, 110/440, 300/600	1.5	4265/-
PORT LSDW-7	3PH-3EL		0 - 0.5, 1, 2.5, 5, 10, 1/2, 2.5/5, 5/10, 10/20 A	110, 150, 300, 440, 600	1.5	4620/-

7. OTHER METER

A. SYNCHROSCOPE (MECHANICAL & LED TYPE)

MODEL	TYPE	OPERATING VOLTAGE	ACCU.	PRICE
SYN-96M	MOVING VANE TYPE	110 VOLTS	± 2°	1030/-
SYN-96M	MOVING VANE TYPE	63.5/230/440V (WITH EXT. POTENTIAL TRANSFORMER)		1310/-
SYN-96E	ROTATING LIGHT TYPE	110 VOLTS		2100/-
SYN-96E	ROTATING LIGHT TYPE	63.5/230/440V (WITH EXT. POTENTIAL TRANSFORMER)		2375/-
SYN-144M	MOVING VANE TYPE	110 VOLTS		1330/-
SYN-144M	MOVING VANE TYPE	63.5/230/440V (WITH EXT. POTENTIAL TRANSFORMER)		1605/-
SYN-144E	ROTATING LIGHT TYPE	110V		2255/-
SYN-144E	ROTATING LIGHT TYPE	110V (WITH EXT. POTENTIAL TRANSFORMER)		2530/-

EXTERNAL PT ALSO AVAILABLE AT RS. 300/- EXTRA

B. PHASE SEQUENCE INDICATOR

MODEL	TYPE	OPERATING VOLTAGE	PRICE
PSI 96-M	96X96mm ELECTRO MECHANICAL	50V TO 500V AC FOR 25 TO 60 Hz	460/-

C. DIFFERENTIAL VOLTMETER (MOVING COIL TYPE)

MODEL	TYPE	OPERATING VOLTAGE	PRICE
SM-96	MOVING COIL(FSD 90DEG.)	63.5V TO 600V (SINGLE RANGE)	880/-
SQ-96	MOVING COIL(FSD 240DEG.)	63.5V TO 600V (SINGLE RANGE)	1210/-

D. SYNCHRONIZING PANEL

MODEL	TYPE	OPERATING VOLTAGE	PRICE
144SQ.	WALL MOUNTING TYPE AND CONSISTS OF: DOUBLE SCALE VOLTMETER DOUBLE SCALE Hz METER SYNCHROSCOPE	110V AC	5355/-
144SQ.	WALL MOUNTING TYPE AND CONSISTS OF: ABOVE + EXTERNAL POTENTIAL TRANSFORMER	230V OR 440V AC	5630/-
ACCESSORY	ALUMINIUM BRACKET WITH GLAND FOR MOUNTING	ONE BRACKET FOR VERTICAL POSITION	295/-
		TWO BRACKETS FOR HORZ. POSITION	590/-

B. DIGITAL DC METERS WITH 3½ DIGIT DISPLAY
a) DC VOLT METER

MODEL	TYPE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
AE 82131	1 PH	VOLT	200mV to 600V With Built in Resistance	48 x 96	0.5	1400/-
AE 82132				96 x 96		1400/-
AE 82133				72 x 72*		1400/-
AE 82134				72 x 144		2850/-
AE 82135				144 x 144*		2100/-
AE 82141	1 PH	VOLT	200mV to 600V With Built in Resistance	48 x 96	1	1090/-
AE 82142				96 x 96		1090/-
AE 82143				72 x 72*		1300/-
AE 82144				72 x 144		2675/-
AE 82145				144 X 144*		1850/-

b) DC AMMETER

MODEL	TYPE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
AE 80131	1 PH	AMP	20mA to 5A Direct Beyond 5A - used External Shunt of 50 / 60 / 75mV drop	48 x 96	0.5	1400/-
AE 80132				96 x 96		1400/-
AE 80133				72 x 72*		1260/-
AE 80134				72 x 144		2760/-
AE 80135				144 x 144*		2200/-
AE 80141	1 PH	AMP	20mA to 5A Direct Beyond 5A - used External Shunt of 50 / 60 / 75mV drop	48 x 96	1.0	1090/-
AE 80142				96 x 96		1090/-
AE 80143				72 x 72*		1200/-
AE 80144				72 x 144		2510/-
AE 80145				144 x 144*		1950/-

C. FREQUENCY METER (4 DIGIT)

MODEL	TYPE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
AE 64111	1 PH	Frequency	30 to 99.99 Hz with Built – in Transducer	48 x 96	0.1	1530/-
AE 64112				96 x 96		1530/-
AE 64114				72x 144 *		3030/-
AE 64115				144 x 144*		2000/-
AE 64121				48 x 96	0.2	1025/-
AE 64122				96 x 96		1025/-
AE 64124				72 x 144*		2595/-
AE 64125				144 x 144*		1750/-

Note : 1) Frequency Meters are with 4 Digit Display.

2) No Auxiliary supply is required for Frequency Meter between Range 45 – 55Hz and Input supply 110V/240V 50Hz. For any other Frequency range or Input supply, Auxiliary supply of 110V/240V, 1-Phase, 50 Hz AC is required.

D) POWER FACTOR METER (4 DIGIT)

MODEL	TYPE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
AE 65101	1 PH	Power Factor	1A / 5A and 110V / 230V with Built-in Transducer	48 x 96	± 2°	2860/-
AE 65102				96 x 96		3100/-
AE 66301	3 PH 1EL		1A / 5A and 110V / 230V / 440V	48 x 96	± 2°	2860/-
AE 66302				96 x 96		3100/-
AE 66303				72 x144*		3500/-
AE 67302	3PH 2EL 3W		1A / 5A and 110V / 230V / 440V	96 x 96	± 2°	3390/-
AE 68302	3PH 3EL 4W					3820/-

3PH 3EL 4W - 72x144mm - AE 68302 4890/-
3PH 3EL 4W - 72x144mm - AE 68302 4890/-

E. DIGITAL POWER METERS WITH IN BUILT TRANSDUCER
Watt/VAR/VA Meter

MODEL	TYPE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
AE 70131 •	1 PH	Watt / VAR / VA	110V or 230V or 440V & 1A or 5A Note : Please specify exact parameter while ordering.	48 x 96 #	0.5	2500/-
AE 70132 •				96 x 96	0.5	2500/-
AE 70134 •				72 x 144* #	0.5	4900/-
AE 70151 •				48 x 96 #	1.0	2250/-
AE 70152 •				96 x 96	1.0	2250/-
AE 70154 •				72 x 144* #	1.0	4750/-
AE 73332 •	3PH 2EL 3W Balanced & Unbalanced Load	Watt / VAR / VA		96 x 96	0.5	3250/-
AE 73334 •				72 X 144	0.5	5050/-
AE 73342 •	3PH 2EL 3W Balanced & Unbalanced Load	Watt / VAR / VA		96 x 96	1.0	2800/-
AE 73344 •				72 X 144	1.0	4850/-
AE 74342 •	3PH 3EL 4W Balanced & Unbalanced Load	Watt / VAR / VA		96 x 96	0.5	3300/-
AE 74344 •				72 X 144	0.5	5350/-
AE 74342 •	3PH 3EL 4W Balanced & Unbalanced Load	Watt / VAR / VA		96 x 96	1.0	3000/-
AE 74344 •				72 X 144	1.0	5100/-

Note: While Ordering the "Power Meters", please add below mentioned alphabet given in
 • to the model :- "A" : W, "B" : kW "C" : MW "D" : VAR "E" : kVAR
 "F" : MVAR "G" : VA "H" : kVA "I" : MVA
 # Meters are available with External Transducer.

F. OPTIONAL FEATURES

1.	48 x 96, 96 x 96 and 72 x 144mm Meters can also be supplied with 4½ Digit display (Indication upto 1 9 9 9 9) at extra cost per meter.	300/-
2.	Non-standard unit calibration such as %, RPM, kg/cm can be provided (subject to technical feasibility).	100/-
3.	Frequency Meter suitable for higher frequency (100 to 1000Hz) can be supplied.	100/-
4.	DC Ammeters beyond 5A to be used with DC External Shunt of 50/60/75mV drop.	Shunt price extra.
5.	Digital Panel Meters are normally supplied with RED LED display. However, these can also be supplied with GREEN LED display depending upon availability.	Nil
6.	For DC Auxiliary Supply 48 V / 110 / 230V DC	500/-
7.	For DC Auxiliary Supply 24VDC	750/-

NOTES :

- 1) Above Digital Meters, except Frequency and Power Factor Meters, are with 3½ Digit display, i.e. indication upto 1 9 9 9.
- 2) 72 x 144mm and 144 x 144mm Meters are with 25mm (1") Display height, whereas all other sizes are with 12.5mm (½ ") Display height.
- 3) Auxiliary Supply of 110V/240V 50Hz is required for all types of Digital Panel Meters except Frequency Meter.
- 4) Auxiliary supply of 24V DC, 48V / 110V / 220V DC can be supplied against specific enquiry.
- 5) '*' Indicates subject to availability minimum 10 no's meters in a single order.
- 6) 4½ Digit Meter not available in 72 x 72 mm size.
- 7) Ammeter with selector switch and Voltmeter with selector switch also available with 0.8 inch display at extra price Rs. 250/- each

10. ENERGY METER (kWh)

a) ENERGY METER (WITH 6 DIGIT IMPULSE COUNTER)

MODEL	PHASE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
KWHM 30132	1 PHASE	KWH	63.5V / 110V / 240V / 440V & 1A / 5A	96 X 96	0.5	2250/-
KWHM 30142	1 PHASE	KWH			1.0	1900/-
KWHM 31332	3PH – 2EL – 3W	KWH			0.5	3150/-
KWHM 31342	3PH – 2EL – 3W	KWH			1.0	2725/-
KWHM 32332	3PH – 3EL – 4W	KWH			0.5	3300/-
KWHM 32342	3PH – 3EL – 4W	KWH			1.0	3000/-

b) ENERGY METER (WITH 6 DIGIT LED DISPLAY)

MODEL	PHASE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
KWHD 33132	1 PHASE	KWH	63.5V / 110V / 240V / 440V & 1A / 5A	96 X 96	0.5	2500/-
KWHD 33142	1 PHASE	KWH			1.0	2150/-
KWHD 34332	3PH – 2EL – 3W	KWH			0.5	3750/-
KWHD 34342	3PH – 2EL – 3W	KWH			1.0	3000/-
KWHD 35332	3PH – 3EL – 4W	KWH			0.5	3800/-
KWHD 35342	3PH – 3EL – 4W	KWH			1.0	3500/-

NOTES :

- RS 485 Communication Port can be provided on the Static Energy Meters at the following EXTRA CHARGES per Meter.
 - Static Energy Meter with Accuracy Class 1.0 : @ Rs. 700.00
 - Static Energy Meter with Accuracy Class 0.5 : @ Rs. 750.00
 However, a MSC485-232 Module is required to be connected to RS-485 Port for communication, with PC (for Static Energy Meter). This "MSC485-232 Converter Module" can be provided at an extra cost of Rs. 3,500.00 and one such Module can drive 255 KWH Units upto a distance of 1000 meters.
- Static Energy Meters with Impulse Counter / LED Display are "self-powered". However, meters with RS485 port required Auxiliary Supply. KWH Meter with LED display has height of 8mm. All LED displays are Red LEDs.
- MS-Windows compatible 'Energy Monitoring Software' – "KWH SOFTCOM" is available at extra cost.
- While ordering these Meters, please state the Model Nos. mentioned in the Price List.

11.COMBIMETER

a) DIGITAL COMBIMETER WITH 4 DIGIT LED DISPLAY (kW / COS ϕ)

MODEL	PHASE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
KWC 10132	1 PHASE	KW / COS ϕ (TRUE RMS)	63.5V / 110V / 240V / 440V & 1A / 5A	96 X 96	0.5 & $\pm 2^\circ$ for ϕ	3250/-
KWC 10142	1 PHASE				1.0 & $\pm 2^\circ$ for ϕ	3150/-
KWC 11332	3PH – 2EL – 3W				0.5 & $\pm 2^\circ$ for ϕ	3950/-
KWC 11342	3PH – 2EL – 3W				1.0 & $\pm 2^\circ$ for ϕ	3850/-
KWC 12332	3PH – 3EL – 4W				0.5 & $\pm 2^\circ$ for ϕ	4000/-
KWC 12342	3PH – 3EL – 4W				1.0 & $\pm 2^\circ$ for ϕ	3500/-

b) DIGITAL COMBIMETER (VIF) WITH THREE WINDOW LED DISPLAY

MODEL	PHASE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
VIF 16142	1 PHASE (3 digit)	VIF	0-300 / 0-600V AC 1A / 5A 45-55Hz.	96 X 96	1.0	1350/-
VIF 17142	3 PHASE (3 or 4 digit)	VIF	Field settable CTR/PTR, 440/110 V AC 1A / 5A	96 X 96	1.0	2000/-

c) DIGITAL COMBIMETER (7 IN 1) WITH 4 DIGITS LED DISPLAY

MODEL	PHASE	PARAMETER	RANGE	SIZE(mm)	ACCU. CLASS	PRICE
MPI 18142	1 PHASE	V(L-N), V(L-L), I, F, PF, KW, KVAR & KVA Phasewise & Average (True RMS)	110V / 240V / 440V, 1A / 5A 45-55Hz.	96 X 96	1.0 (i.e. Class 1.0 for V, I, KW, KVAR & KVA. Class 0.2 for Hz. & $\pm 2^\circ$ for PF)	4500/-
MPI 19342	3PH - 2EL - 3W			96 X 96		5400/-
MPI 20342	3PH - 3EL - 4W			96 X 96		5700/-

d) DIGITAL COMBIMETER (8 IN 1 / DM 800 Series) WITH 4 DIGITS LED DISPLAY

MODEL	PHASE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
MPI 25142	1 PHASE	V(L-N), V(L-L), I, F, PF, KW, KVAR & KVA Phasewise & Average & KWH (True RMS)	110V / 240V / 440V, 1A / 5A 45-55Hz.	96 X 96	1.0 (i.e. Class 1.0 for V, I, KW, KVAR & KVA. Class 0.2 for Hz. & $\pm 2^\circ$ for PF)	5750/-
MPI 26142	3PH - 2EL - 3W			96 X 96		6250/-
MPI 27142	3PH - 3EL - 4W			96 X 96		6500/-

* For accuracy class 0.5 (8 in 1 / 7 in 1) price will be 500/- extra.

e) DIGITAL DEMAND CONTROLLER MDC (1000)

MODEL	PHASE	PARAMETER	RANGE	SIZE (mm)	ACCU. CLASS	PRICE
MDC 1000	3PH - 3EL - 4W	V(L-N), V(L-L), I, F, PF, KW, KVAR & KVA Phasewise & Average & KWH (True RMS) KVAH, KVARH	0 - 110V / 240V / 440V, 1A / 5A 45- 55Hz.	144 x 144	1.0 (i.e. Class 1.0 for V, I, KW, KVAR & KVA. Class 0.2 for Hz. & $\pm 2^\circ$ for PF)	10,000/- (with Alarm & Trip)

f) AMPERE-HOUR METER

MODEL	PHASE	PARAMETER	RANGE	SIZE(mm)	ACCU. CLASS	PRICE
AH 96	DC	--	75 mV, 50 mV, 60 mV (With external Shunt, Shunt price extra)	96 x 96	1.0	5000/-

12. POWER LINE MONITOR (PLM)

POWER LINE MONITOR (PLM)

MODEL	PHASE	PARAMETER	SIZE (mm)	ACCU. CLASS	PRICE
PLM - 1 *PLM-100	SINGLE PHASE	CURRENT, VOLTAGE (L-N), VOLTAGE (L-L), P.F., KW, KVA, KVAR/MVAR - Phasewise & Average, System FREQUENCY, KWH, KVAH, KVARH	96 X 96	1.0	5000/-
	3PH - 3W				7500/-
	3PH - 4W				8000/-
PLM - 2 *PLM-200	3PH - 3W	PLM1 with in-built RS232 port (only one meter can be connected directly to PC within 2 meter length)	96 x 96	1.0	8000/-
	3PH - 4W				8500/-
PLM - 3 *PLM-300	3PH - 3W	PLM1 with in-built RS485 Port, 255 meters can be connected with the help of RS485/232 converter module to PC within 1 km. Distance	96 x 96	1.0	9000/-
	3PH - 4W				10000/-
PLM - 4	3PH - 3W	PLM1 with Maximum Demand of KW, KVA and real time clock	96 x 96	1.0	9000/-
	3PH - 4W				9500/-
PLM - 5	3PH - 3W	PLM3 with Maximum Demand of KW, KVA and real time clock	96 x 96	1.0	10000/-
	3PH - 4W				11000/-
PLM - 6	3PH - 3W	PLM5 with memory backup and inbuilt RS232 Port	96 x 96	1.0	12000/-
	3PH - 4W				12500/-
PLM - 7	3PH - 3W	PLM5 with memory backup and inbuilt RS485 Port	96 x 96	1.0	12500/-
	3PH - 4W				13000/-
PLM 100/300	3PH - 3W	PLM METER WITH FOUR WINDOW LED DISPLAY	96 x 96	0.5 / 1.0	Prices on Request.
	3PH - 4W				
Converter Module		RS 485/232 Converter Module (1 no. req. to connect max. 255 PLM with in built RS 485 Port to PC)			5500/-
PLMTB-1		Audit Kit, with 3 nos. clamp on CT's and voltage probe in a portable bag			60000/-
PLMTB-2		Audit Kit, with 3 no's clamp on CT's (up to 1000 A) and voltage probe in a portable bag having communication feature and with advanced Java based software			65000/-
Software		Highly advanced Java based front end software for Energy Monitoring System			Prices on Request.

* PLM 100/200/300 with 4 window LED Display Please add 500/- each Extra on PLM 1/2/3 Prices

Please note for All PLM meter accuracy in V & I $\pm 0.5\%$, Hz. $\pm 0.2\%$, PF $\pm 2^\circ$, Power & Energy $\pm 1\%$ price will be 250/- Rs. Extra. Please refer catalogue for technical details. The software will have following basic features.

- 1) Real Time values display.
- 2) Any meter any parameter display in numeric format for real time values.
- 3) Real time graphical display.
- 4) RS 485 Bus Status.
- 5) Historical Trends (graphical format) for all parameter.
- 6) Historical Reports (tabular format) for all parameter in any meter any parameter selection format.
- 7) Alarm Reports for exceeded alarmed parameters.
- 8) Tariffs. (for cross checking energy bills).
- 9) KWH report in tabular format with total consumption of selected feeder.
- 10) Emailing alarm parameter on exceeding alarm set limits.
- 11) PC based audio and visual alarm.
- 12) Back up, Restore, Delete facilities for the old data
- 13) Help at each stage of use is present in the software.
- 14) Software will have either BAR Chart OR Pie Chart for KWH report

13. POWER LINE TRANSDUCER

A. VOLTAGE TRANSDUCER

a) VOLTAGE TRANSDUCER WITH AC AUXILIARY SUPPLY (SINGLE OUTPUT)

MODEL	TYPE	PHASE	PARAMETER	INPUT RANGE	OUTPUT RANGE	SIZE (mm)	ACCU. CLASS	PRICE
50135	PD1	DC	VOLTAGE	0-500V	Refer Table 13 E	130X70X108	0.5	3150/-
51135	PD1	AC	VOLTAGE	0-500V		130X70X108	0.5	3150/-

B. CURRENT TRANSDUCER

a) CURRENT TRANSDUCER WITH AC AUXILIARY SUPPLY (SINGLE OUTPUT)

MODEL	TYPE	PHASE	PARAMETER	INPUT RANGE	OUTPUT RANGE	SIZE (mm)	ACCU. CLASS	PRICE
52135	PD1	DC	CURRENT	0-5A Above 5 A Use External Shunt	Refer Table 13 E	130X70X108	0.5	3150/-
53135	PD1	AC	CURRENT	0-5A Above 5 A		130X70X108	0.5	3150/-

C. FREQUENCY POWER FACTOR TRANSDUCER

a) FREQUENCY & POWER FACTOR TRANSDUCER WITH AC AUXILIARY SUPPLY (SINGLE OUTPUT)

MODEL	TYPE	PHASE	PARAMETER	INPUT	OUTPUT RANGE	SIZE (mm)	ACCU. CLASS	PRICE
54125	PD1	AC	FREQUENCY	50/60 Hz, 400(± 20) Hz 1PH or 3PH-1EL	Refer Table 13 E	130X70X108	0.2% OF C.F.	3150/-
55135	PD1	AC	PF	1PH or 3PH-1EL, 3PH-3EL-4W Balanced Load		130X70X108	0.5	5250/-

D. POWER TRANSDUCER

a) WATT TRANSDUCER WITH AC AUXILIARY SUPPLY (SINGLE OUTPUT)

MODEL	TYPE	PHASE	PARAMETER	INPUT RANGE	OUTPUT RANGE	SIZE (mm)	ACCU. CLASS	PRICE
56135 *	PD3	1PH	WATT	Voltage : 500V AC Current : 1A OR 5A CT secondary	Refer Table 13 E	175X75X110	0.5	5250/-
56336 *	PD3	3PH-2EL-3W	WATT			175X75X110	0.5	5250/-
56338 *	PD3	3PH-3EL-4W	WATT			175X75X110	0.5	5250/-

b) VAR TRANSDUCER WITH AC AUXILIARY SUPPLY (SINGLE OUTPUT)

MODEL	TYPE	PHASE	PARAMETER	INPUT RANGE	OUTPUT RANGE	SIZE (mm)	ACCU. CLASS	PRICE
57136 *	PD3	1PH	VAR	Voltage : 500V AC CT secondary	Refer Table 13 E	175X75X110	0.5	5250/-
57336 *	PD3	3PH-2EL-3W	VAR			175X75X110	0.5	5250/-
57336 *	PD3	3PH-3EL-4W	VAR			175X75X110	0.5	5250/-

c) VA TRANSDUCER WITH AC AUXILIARY SUPPLY (SINGLE OUTPUT)

MODEL	TYPE	PHASE	PARAMETER	INPUT RANGE	OUTPUT RANGE	SIZE (mm)	ACCU. CLASS	PRICE
58136 *	PD3	1PH	VA	Voltage : 500V AC CT secondary	Refer Table 13 E	175X75X110	0.5	5250/-
58336 *	PD3	3PH-2EL-3W	VA			175X75X110	0.5	5250/-
58336 *	PD3	3PH-3EL-4W	VA			175X75X110	0.5	5250/-

E. OUTPUT RANGE TABLE (ANY ONE)

CURRENT	0-1mA	0-5mA	0-10mA	0-20mA	4-20mA	10-0-10mA
MAX. LOAD	10 k OHMS	2 k OHMS	1 k OHMS	500 OHMS	500 OHMS	1 k OHMS

VOLTAGE	0-1 V	0-5 V	0-10 V	1-5 V	2-10 V	10-0-10 V
MAX. LOAD	500 OHMS	2.5 k OHMS	5 k OHMS	2.5 k OHMS	5 k OHMS	5 k OHMS

F. AUXILIARY SUPPLY (ANY ONE)

AC V	63.5 V, 110V, 220 V, 230 V, 240 V, 380 V, 415 V, 440 V +/- 10% AT 50 / 60 Hz
DC V	24 V, 48 V, 110 V, 220 V +/- 10% (at extra cost)

G. OPTIONAL FEATURES

Dual Output	700/-
DC Auxiliary Supply	
a) 24V DC	1100/-
b) 48V to 220V DC	1600/-
4kV High Voltage withstand test level for 1 minute (Standard is 2kV RMS for 1 Minute)	600/-
O/P 4 to 20 mA at 750 ohm load resistance	1600/-
Bipolar (kW / kVAR) Transducers with Auxiliary Supply –	
a) 240V / 110V AC	1100/-
b) 24V DC	2100/-
c) 48V to 220V DC	2700/-

Notes :

1) While Ordering the "Transducer", please add below mentioned alphabet given in * to the model:-

"A" : W "B" : kW "C" : MW
 "D" : VAR "E" : kVAR "F" : MVAR
 "G" : VA "H" : kVA "I" : MVA

2) Din Rail Mounting on request without extra cost.

AE**AUTOMATIC ELECTRIC LTD.****Power System Division****THREE PHASE MODELS**

Current Rating In Amps	Flush Back of Panel (Open)		Portable Table / Floor Mounting With Enclosure		Oil Cooled (Without Oil)		
	Type	Price	Type	Price	Type	Price	Approx. Oil Qty
2	2D-3F	4800	2D-3P	5480			
4	4D-3F	10400	4D-3P	11840			
8	8D-3F	13400	8D-3P	14850			
10	10D-3F	15875	10D-3P	17680			
15	15D-3F	21450	15D-3P	23600			
20	20D-3F	27500	20D-3P	28000			
28	28D-3F	36650	28D-3P	40070			
40					40D-3T	60060	115
50					50D-3T	65200	125
60					60D-3T	69750	130
75					75D-3T	101250	246
100					100D-3T	108900	270
150					150D-3T	153150	330
200					200D-3T	180850	385
300					300D-6T	334000	895
400					400D-6T	376475	970
500					500D-9T	549100	1375
600					600D-9T	592000	1475

Note:-Prices for Higher Capacity ON REQUEST.