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Energy Management...

MULTIMETER SELECTION GUIDE

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ECRAS 220	**POWYS 1120**	**POWYS 1022**		**POWYS 1110**	**POWYS 1012**	
3Ø Multimetre	1Ø Energy Analyzer	1Ø Energy Analyzer		1Ø Energy Analyzer	1Ø Energy Analyzer	
606213	606352	606355		606351	606354	
Seven Segment	LCD	LCD		Seven Segment	Seven Segment	
-	-	-		-	-	
1-5000 adj.	1-5000 adj.	1-5000 adj.		1-5000 adj.	1-5000 adj.	
1-60min adj.	1-60min adj.	1-60min adj.		1-60min adj.	1-60min adj.	
256	256	256		256	256	
-	-	-		-	-	
-	-	-		-	-	
Available	Available	-		Available	-	
85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC		85 - 300 VAC/DC	85 - 300 VAC/DC	
6 VA, 3W	<2W	<2W		<2W	<2W	
Available	Available	Available		Available	Available	
Available	Available	Available		Available	Available	
10mA-6A AC	10mA-6A AC	10mA-6A AC		10mA-6A AC	10mA-6A AC	
1-300 Vrms (L-N) 2-500 Vrms (L-L)	2-500 Vrms	2-500 Vrms		2-500 Vrms	2-500 Vrms	
Upto 31st	Upto 31st	Upto 31st		Upto 31st	Upto 31st	
Available	Available	Available		Available	Available	
Class 0.5	Class 0.5	Class 0.5		Class 0.5	Class 0.5	
Class 1	Class 1	Class 1		Class 1	Class 1	
Class 0.5	Class 0.5	Class 0.5		Class 0.5	Class 0.5	
Class 0.5	Class 0.5	Class 0.5		Class 0.5	Class 0.5	
Class 2	Class 2	Class 2		Class 2	Class 2	
Class 0.1	Class 0.1	Class 0.1		Class 0.1	Class 0.1	
Class 0.5	Class 0.5	Class 0.5		Class 0.5	Class 0.5	
Class 0.5	Class 0.5	Class 0.5		Class 0.5	Class 0.5	
Class 0.2	Class 0.2	Class 0.2		Class 0.2	Class 0.2	
Class 0.5	Class 0.5	Class 0.5		Class 0.5	Class 0.5	
Class 1	Class 1	Class 1		Class 1	Class 1	
1	1	1		1	1	
-	-	-		-	-	
Available	Available	Available		Available	Available	
Available	-	-		-	-	
-	-	-		-	-	
Available	Available	Available		Available	Available	
2 pcs. (10A, 250VAC,1250VA)	-	-		-	-	
-	-	-		-	-	
-		2 pcs. (5-30VDC)		-	2 pcs. (5-30VDC)	
-	-			-	-	
Modbus RTU	Modbus RTU	-		Modbus RTU	-	
1200-57600 bps. adj.	1200-57600 bps adj.	-		1200-57600 bps adj.	-	

1 - General Specifications										
Type	**KLEA 220P**	**POWYS 3121**	**KLEA 110P**	**POWYS 3111**	**POWYS 3101**	**POWYS 3100**	**ECRAS VCF**	**ECRAS 100**	**ECRAS 120**	**ECRAS 200**
Definition	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Multimetre	3Ø Multimetre	3Ø Multimetre	3Ø Multimetre
Order Number	606160	606305	606180	606304	606303	606300	606218	606210	606211	606212
Display	LCD	LCD	Seven Segment	Seven Segment	-	-	Seven Segment	Seven Segment	Seven Segment	Seven Segment
Data Logging with Timestamp	-	-	-	-	-	-	-	-	-	-
CTR & VTR	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.
Demand Period	1-60min adj.	1-60min adj.	1-60min adj.	1-60min adj.	1-60min adj.	1-60min adj.	-	1-60min adj.	1-60min adj.	1-60min adj.
Number of Measurement in a period	256	256	256	256	256	256	256	256	256	256
Phasor Diagram	-	-	-	-	-	-	-	-	-	-
Signal Waveforms	-	-	-	-	-	-	-	-	-	-
RS485 Communication	Available	Available	Available	Available	Available	Available	-	-	-	Available
2 - Auxilary Power										
Range	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC
Power Consumption	<2W, <4.5VA	<2W, <4.5VA	<3W, <6VA	<3W, <6VA	<3W, <6VA	<3W, <6VA	6 VA, 3W	6 VA, 3W	6 VA, 3W	6 VA, 3W
3 - Measurement										
Basic Measurements(V, I, f, CosØ, PF, P, Q, S, THDI, THDV, etc.)	Available	Available	Available	Available	Available	Available	V-I-f measurements	Available	Available	Available
Min, Max and Demand Values	Available	Available	Available	Available	Available	Available	-	Available	Available	Available
Current Measurement Input	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC
Voltage Measurement Input	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)	1-300 Vrms (L-N) 2-500 Vrms (L-L)
Harmonics for Current and Voltage Phases	Upto 31st	Upto 31st	Upto 31st	Upto 31st	Upto 31st	Upto 31st	-	Up to 31st	Upto 31st	Upto 31st
THD for Voltage and Current in %	Available	Available	Available	Available	Available	Available	-	Available	Available	Available
4 - Measurement Accuracy										
Total Active Power	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5
Total Reactive Power	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1
Total Apparent Power	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5
Total Active Energy	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5
Total Reactive Energy	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2
Frequency	Class 0.1	Class 0.1	Class 0.1	Class 0.1	Class 0.1	Class 0.1	Class 0.1	Class 0.1	Class 0.1	Class 0.1
Current	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5
Neutral Current	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5
Voltage	Class 0.2	Class 0.2	Class 0.2	Class 0.2	Class 0.2	Class 0.2	Class 0.2	Class 0.2	Class 0.2	Class 0.2
Power factor	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5	Class 0.5
THDV, THDI	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1
5 - Energy Meters and Counters										
Number of Tariffs	2	2	2	2	2	1	1	1	1	1
Multi Sub-Tariffs(Peak, Day and Off-Peak)	-	-	-	-	-	-	-	-	-	-
1Ø Phase Energy Meters	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
3Ø Phase Energy Meters	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
4-Quadrant Reactive Energy Meters	-	-	-	-	-	-	-	-	-	-
On Hour, Run Hour and Int Counter	Available	Available	Available	Available	Available	Available	-	Available	Available	Available
6 - Inputs and Outputs										
Alarm Relay Outputs	2 pcs. (10A, 250VAC,1250VA)	2 pcs. (10A, 250VAC,1250VA)	2 pcs. (10A, 250VAC,1250VA)	2 pcs. (10A, 250VAC,1250VA)	2 pcs. (10A, 250VAC,1250VA)	-	-	-	2 pcs.(10A, 250VAC,1250VA)	-
Digital Inputs	2 pcs. (Dry Contact)	2 pcs. (Dry Contact)	1 pc. (Dry Contact)	2 pcs. (Dry Contact)	2 pcs. (Dry Contact)	-	-	-	-	-
Digital Outputs	2 pcs. (5-30VDC)	2 pcs. (5-30VDC)	2 pcs. (5-30VDC)	2 pcs. (5-30VDC)	2 pcs. (5-30VDC)	-	-	-	-	-
Analog Outputs	-	-	-	-	-	-	-	-	-	-
7 - Communication										
Protocol	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU	-	-	-	Modbus RTU
Baud Rate	1200-57600 bps adj.	1200-57600 bps adj.	1200-57600 bps adj.	1200-57600 bps adj.	1200-57600 bps adj.	1200-57600 bps adj.	-	-	-	1200-57600 bps. adj.