

Electronic Products

RAPIDUS Series Power Factor Controllers



Type		RAPIDUS 118R	RAPIDUS 110	RAPIDUS 110R	
Definiton		Power Factor Controller (10-8steps)	Power Factor Controller (10-10steps)	Power Factor Controller (10-10steps)	
Order Number		606065	606070	606071	
General	Measuring system	10	10	10	
	LCD Sreen	Custom LCD	Custom LCD	Custom LCD	
	Language Support	Turkish, English	Turkish, English	Turkish, English	
	Battery	-	-	-	
	Real Time Clock	-	-	-	
	Password Protection	Available	Available	Available	
	Current Transformer Ratio	1 - 5.000	1 - 5.000	1 - 5.000	
	Voltage Transformer Ratio	1 - 999.9	1 - 999.9	1 - 999.9	
	Demand Period	-	-	-	
	Connection Type	L-L/L-N	L-L/L-N	L-L/L-N	
	Measurement in Quadrants	-	-	-	
	Number of Measurement in a period	256	256	256	
	LCD/Display Refresh Period	<0.5 sec.	<0.5 sec.	<0.5 sec.	
	Networks	TT, TN	TT, TN	TT, TN	
	Phasor Diagram	-	-	-	
	Signal Waveforms	-	-	-	
Min/Max/Demand Values	-	-	-		
Control Operations and Functions	Compensation Modes	Rapidus (Intelligent control mode)	Available	Available	Available
		Sequential	-	-	-
		Linear	-	-	-
		Circular	-	-	-
	Step Configurations	Manual	Available	Available	Available
		Manually Assign	Available	Available	Available
		Predef ined	1-1-1-1, 1-2-2-2, 1-2-4-4	1-1-1-1, 1-2-2-2, 1-2-4-4	1-1-1-1, 1-2-2-2, 1-2-4-4
		DCM	-	-	-
	Power factor settings	Fixed Step Assignment	-	-	-
		Power(kVAr)	0.00-1000 adjustable	0.00-1000 adjustable	0.00-1000 adjustable
	Learning Step Powers and Connections	Type	30 capacitor or 10 capacitor	30 capacitor or 10 capacitor	30 capacitor or 10 capacitor
		Target 1 cos0	0.8cap. to 0.8ind. Adjustable	0.8cap. to 0.8ind. Adjustable	0.8cap. to 0.8ind. Adjustable
	Dual cos0 target	Target 2 cos0	0.8cap. to 0.8ind. Adjustable	0.8cap. to 0.8ind. Adjustable	0.8cap. to 0.8ind. Adjustable
		4 Quadrant operation for generators	-	-	-
	Time delays	Step activation time	1-600 sec adjustable	1-600 sec adjustable	1-600 sec adjustable
		Step deactivation time	1-600 sec adjustable	1-600 sec adjustable	1-600 sec adjustable
Step discharge time		3-600 sec adjustable	3-600 sec adjustable	3-600 sec adjustable	
Phase shift angle	-	-	-		
Averaging time	-	-	-		
Energy Meters	Number of Tariffs	1	1	1	
	Multi Sub-Tariffs(Peak, Day and Off-Peak)	-	-	-	
	10 Phase Energy Meter	Available	Available	Available	
	30 Phase Energy Meters	-	-	-	
4 Quadrant Reactive Energy Meters	-	-	-		
Current Measurement Input	Measurement Range	10mA-6A AC	10mA-6A AC	10mA-6A AC	
	Overvoltage Category	510V CAT II	510V CAT II	510V CAT II	
	Measurement Surge Voltage	2 kV	2 kV	2 kV	
	Power Consumption	<0.3 VA	<0.3 VA	<0.3 VA	
	intermittent overload	100A for 1 sec	100A for 1 sec	100A for 1 sec	
	Sampling Freq.between 45-65 Hz	12,8 kHz	12,8 kHz	12,8 kHz	
Voltage Measurement Input	Overvoltage Category	510V CAT III	510V CAT III	510V CAT III	
	Measured Range L-N	120-510V AC ±10%	120-510V AC ±10%	120-510V AC ±10%	
	Measured Range L-L	120-510V AC ±10%	120-510V AC ±10%	120-510V AC ±10%	
	Measured Frequency Range	45...65 Hz	45...65 Hz	45...65 Hz	
	Power Consumption	<0.2 VA	<0.2 VA	<0.2 VA	
	Sampling Freq.between 45-65 Hz	12,8 kHz	12,8 kHz	12,8 kHz	

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Type		RAPIDUS 118R	RAPIDUS 110	RAPIDUS 110R	
Power Quality Measurements	Harmonics / current and voltage	-	-	-	
	THD-Voltage in %	Available	Available	Available	
	THD-Current in %	Available	Available	Available	
Type		RAPIDUS 118R	RAPIDUS 110	RAPIDUS 110R	
Measurement Accuracy	According to IEC 61557-12	Total Active Power	Class 0.5	Class 0.5	Class 0.5
		Total Reactive Power	Class 1	Class 1	Class 1
		Total Apparent Power	Class 0.5	Class 0.5	Class 0.5
		Total Active Energy	Class 0.5	Class 0.5	Class 0.5
		Total Reactive Energy	Class 2	Class 2	Class 2
		Frequency	Class 0.1	Class 0.1	Class 0.1
		Current	Class 0.5	Class 0.5	Class 0.5
		Neutral Current	Class 0.5	Class 0.5	Class 0.5
		Voltage	Class 0.2	Class 0.2	Class 0.2
	Power factor	Class 0.5	Class 0.5	Class 0.5	
	THDV, THDI	Class 1	Class 1	Class 1	
According to IEC 62053-22	Total Active Energy	Class 0.5S	Class 0.5S	Class 0.5S	
According to IEC 62053-23	Total Reactive Energy	Class 2	Class 2	Class 2	
Input and Outputs	Compensation Relay Outputs	Number of outputs	8	10	10
		Type	NO (SPST)	NO (SPST)	NO (SPST)
		Max. Switching Current	2A	2A	2A
		Max. Switching Voltage	250VAC	250VAC	250VAC
		Max. Switching Power	500 VA	500 VA	500 VA
		Mechanical life time	≥ 10.0000000 operations	≥ 10.0000000 operations	≥ 10.0000000 operations
	Electrical life time operations (for NO side)	5×104(5A@250VAC) 1×105(5A@30VDC)	5×104(5A@250VAC) 1×105(5A@30VDC)	5×104(5A@250VAC) 1×105(5A@30VDC)	
	Alarm Relay Outputs	Number of outputs	2	2	2
		Type	NO (SPST)	NO (SPST)	NO (SPST)
		Max. Switching Current	4A	4A	4A
		Max. Switching Voltage	250 VAC	250 VAC	250 VAC
		Max. Switching Power	1000 VA	1000 VA	1000 VA
		Mechanical life time	≥ 10.0000000 operations	≥ 10.0000000 operations	≥ 10.0000000 operations
	Electrical life time operations (for NO side)	5×104(5A@250VAC) 1×105(5A@30VDC)	5×104(5A@250VAC) 1×105(5A@30VDC)	5×104(5A@250VAC) 1×105(5A@30VDC)	
	Generator/ Day-Night Input	Number of inputs	1	1	1
		Frequency	45-65Hz	45-65Hz	45-65Hz
	Input Present or Not	95-240VAC	95-240VAC	95-240VAC	
Digital Outputs		-	-	-	
Analog Outputs		-	-	-	
Supply	Auxiliary supply input				
	Voltage	120...510V AC ±10% from L1-N	120...510V AC ±10% from L1-N	120...510V AC ±10% from L1-N	
	Frequency	45-65Hz	45-65Hz	45-65Hz	
	Consumption	AC DC	< 10VA -	< 10VA -	
Data Logging with timestamp	Min/max/avg Values	Hourly records	-	-	
		Daily records	-	-	
		Monthly records	-	-	
	Demand		-	-	
	Alarm records		-	-	
Communication	Protocol	Modbus RTU	-	Modbus RTU	
	Baud rate	1200-38400 bps adjustable	-	1200-38400 bps adjustable	
	Parity number	Odd, Even, None	-	Odd, Even, None	
	Stop bit	1	-	1	
	Address	1-247	-	1-247	
	Isolation	2000V RMS	-	2000V RMS	
Mechanical Properties	Weight(g)	334	365	369	
	Protection Class	Front IP40 / Rear IP20 (IP66 with accessory)	Front IP40 / Rear IP20 (IP66 with accessory)	Front IP40 / Rear IP20 (IP66 with accessory)	
Cable Cross Sections	Voltage, Current, All Relay Outputs, Gen Input	Stranded:	2.5mm ² - 14AWG	2.5mm ² - 14AWG	2.5mm ² - 14AWG
		Solid:	4mm ² - 12AWG, 2x1.5mm ² - 2x16AWG	4mm ² - 12AWG, 2x1.5mm ² - 2x16AWG	4mm ² - 12AWG, 2x1.5mm ² - 2x16AWG
	RS 485	Stranded:	1.5mm ² - 16AWG	-	1.5mm ² - 16AWG
		Solid:	1.5mm ² - 16AWG, 2x0.75mm ² - 2x18AWG	-	1.5mm ² - 16AWG, 2x0.75mm ² - 2x18AWG
Ambient Conditions	Operating Temperature	-20 to +55 °C	-20°C +55°C	-20°C +55°C	
	Storage Temperature	-30 to +80 °C	-30°C +80°C	-30°C +80°C	
	Relative Humidity (no condensation)	Max.95%	Maks. 95%	Maks. 95%	