

RAPIDUS 218R

Klemsan

606021

Power Factor Controller (1Ø-8 level)

Category: Energy Management Products

Type: Reactive Power Management

Group: Electronics Products



Commercial Information

Package Unit	1 pcs.
Customs Tariff Number	903289000000
Weight Per Unit Including Packaging	415g

Technical Information

CONNECTION DATA	
Connection Type	Single phase (L-L or L-N) voltage connection with 1 CT
GENERAL	
Measurement System	1Ø
LCD Screen	+
Language Support	Turkish, English, Russian

Password Protection	+
Voltage Transformer Ratio (VTR)	1 - 5000
Current Transformer Ratio (CTR)	1 - 5.000
Number of Measurements in One Period	512
LCD/Screen Refresh Rate	1
Networks	TT, TN, IT
Signal Waveforms	-
Battery	+
Real Time Clock	+
Four Quadrant Measurement	4
Demand Period	1-60 min. adjustable
Phase Diagram	Available
Min./Max./Demand Values	+
COMPENSATION MODES	
Linear	+
Circular	+
Sequential	+
Rapidus (Smart Control Mode)	+
Manual	+
STEP CONFIGURATIONS	
Manual Definition	+
Predefined	1-1-1-1, 1-1-2-2, 1-2-2-4, 1-2-3-3, 1-2-4-4, 1-1-2-4, 1-2-3-4, 1-2-4-8, 1-1-2-3

Power (kVAR)	0.00-1000 adjustable
Type	3Ø capacitor, 3Ø shunt reactor adjustable
DCM	+
Fixed Step Assignment	+
POWER FACTOR SETTINGS	
Learnable Step and Connections	+
Target 1 cosØ	0.8 cap. to 0.8 ind. adjustable
Target 2 cosØ	0.8 cap. to 0.8 ind. adjustable
Dual cosØ Target	+
4 Quadrant Operation for Generators	+
ENERGY MEASUREMENT	
Multiple Sub Tariffs (Peak, On-Peak and Off-Peak)	-
1Ø Phase Energy Measurement	-
3Ø Phase Energy Measurement	Available
CURRENT MEASUREMENT INPUT	
Measuring Range	10mA-6A AC
Overvoltage Category	300 V Cat III
Voltage Fluctuation Measurement	2 kV
Power Consumption	<0.2 VA
Intermittent Overload	100A for 1 sec.
Sampling Frequency Between 45-65 Hz	25.6 kHz
VOLTAGE MEASUREMENT INPUT	

Overvoltage Category	300 V Cat III
Measuring Range L-N	95-272 VAC ±10%
Measuring Range L-L	95-410VAC ±10%
Frequency Measuring Range	45-65 Hz
Power Consumption	<0.1 VA
Sampling Frequency Between 45-65 Hz	25.6 kHz
POWER QUALITY MEASUREMENTS	
THD - Voltage (as %)	+
THD - Current (as %)	+
Harmonics for Current and Voltage Phases	Up to 51st
MEASURING ACCURACY - IEC 61557-12	
Total Active Power	Class 0.2
Total Reactive Power	Class 1
Total Reactive Energy	Class 2
Frequency	Class 0.05
Current	Class 0.2
Neutral Current	Class 0.5
Voltage	Class 0.2
Power Factor	Class 0.5
THDV, THDI	Class 1
Total Apparent Power	Class 0.2
Total Active Energy	Class 0.5
MEASURING ACCURACY - IEC 62053-22	

Total Active Energy	Class 0.2S
MEASURING ACCURACY - IEC 62053-23	
Total Reactive Energy	Class 2
COMPENSATION RELAY OUTPUTS	
Number of Outputs	8+2 (If alarm relay outputs are used for compensation)
Type	NO (SPST)
Max. Switching Current	2A
Max. Switching Voltage	250VAC
Max. Switching Power	1250VA
Mechanical Operating Life	10.0000000 operations
Electrical Operating Life (NO side)	5×10 ⁴ (5A@250VAC) 1×10 ⁵ (5A@30VDC)
ALARM RELAY OUTPUTS	
Number of Outputs	2
Type	NO (SPST)
Max. Switching Current	4A
Max. Switching Voltage	250 VAC
Max. Switching Power	1250 VA
Mechanical Operating Life	= 10.0000000 operations
Electrical Operating Life (NO side)	5×10 ⁴ (5A@250VAC) 1×10 ⁵ (5A@30VDC)
GENERATOR / DAY-NIGHT INPUT	
Number of Inputs	1
Frequency	45-65Hz

Input	95-240VAC
INPUTS AND OUTPUTS	
Digital Outputs	--
Analog Outputs	--
POWER SUPPLY	
Backup Supply Input	--
Voltage	La-Lb den 95-410VAC $\pm 10\%$
Frequency	45-65Hz
Consumption	< 10VA
MECHANICAL PROPERTIES	
Weight (g)	415
Protection Class	Front IP40 / Rear IP20
Mounting Type	Panel Mount
Packaging Quantity	1
CABLE CROSS-SECTIONS	
Voltage, Current, All Relay Outputs, Generator Input	2.5mm ² - 14AWG with ferrule - 4mm ² - 12AWG without ferrule, 2x1.5mm ² - 2x16AWG
RS485	1.5mm ² - 16AWG with ferrule - 1.5mm ² - 16AWG without ferrule, 2x0.75mm ² - 2x18AWG
ENVIRONMENTAL CONDITIONS	
Operating Temperature	-20°C +55°C
Storage Temperature	-30°C +80°C
Relative Humidity (Non-condensing)	Max. 95%
EMC-EMI	

EN 61000-6-1:2011	+
EN 61000-6-3 - A1 - AC:2013	+
DIAGRAMS	
Mains Connection	-
Step Output Connections	-
COMMUNICATION	
Protocol	Modbus RTU
Baud Rate	2400-115200 bps adjustable
Parity	---
Stop Bit	1
Slave ID	1-247
Isolation	2000V RMS
CONTROL PROCESS AND FUNCTIONS	
Phase Switching Angle	±45 degree adjustable
Average Time	Off, 5 sec, 10 sec, 20 sec, 30 sec, 40 sec, 50 sec, 60 sec adjustable
Step Deactivation Time	1-600 sec. adjustable
Step Discharge Time	3-1000 sec. adjustable
Step Activation Time	1-600 sec. adjustable
TIME RECORDED DATA STORAGE	
Alarm Records	50
Hourly Records	1920 Hours x 68 Different Paramaters
Daily Records	240 Days x 68 Different Paramaters

Monthly Records	36 Months x 68 Different Paramaters
Demand	4 Months x 16 Different Parameters