PRC Series
Reactive Power Control Relays

- **PRC-15**
- **PRC-15H+TCR**
- **PRC-18H+TCR**
- **PRC-18TH+TCR**

PRC Series Reactive Power Control Relays are innovative devices designed as classical, SVC supported, thyristor triggered with the hard work of our expert R&D team in power quality and compensation applications. It is designed and manufactured to minimize the reactive power generated in the facilities in accordance with the compensation regulation for 3-phase electrical systems, to obtain maximum efficiency with the minimum number of steps in the compensation of unbalanced loads that occur with SVC support, to measure the electrical parameter values in the facilities, and to protect the system with alarm options.

It offers design and efficiency together with its 100-265V AC/DC wide supply range, ergonomic design in 144x144x68 mm dimensions, SVC support and product variety with advanced features.

- **128x64 Graphic LCD Display**
- **Easy to Use with Turkish and English Menu Options**
- **RS-485 Communication (Modbus RTU)**
- **TCR (SVC) Output**
- **RTC**
- **Event and Log Records**
- **Discrete Harmonics (2-31. HD-I ve HD-V)**
- **V, A, P, Q, S, PF, Cosϕ, ∑P, ∑Q, ∑S, THD-I, THD-V (Monitoring Parameters)**
- **Import and Export Energies**
- **Can Compensate Inductive and Capacitive Systems**
- **Generator Input, Generator Energy Record and Compensation (Cos2)**
- **A Single Phase, Two Phase or Three Phase Capacitor / Shunt Reactor Support**
- **Step Value Can Be Entered Manually**
- **Monthly, Weekly, Daily, Hourly and Total Compensation Rates Can Be Monitored**
- **1 Adjustable Alarm Output for Electrical and Compensation Parameters**
- **Built-in Buzzer**
- **Step On, Off, Discharge and Transition Times Can Be Adjusted**
- **Step Advice and Step Co-Aging**
- **Cosine and Energy Values of Each Phase Can Be Monitored**

Product Code	Product Description	Dimensions (mm)	Steps	Graphic LCD Display (128x64)	3 Phase Intervention	Single-Two-Three Phase Capacitor	Single-Two-Three Phase Shunt Reactor	TCR(SVC)	TSC	Generator	Generator Mode (Cos2)	Cosϕ	Power Factor (PF)	RS-485 Communication	Step Advice	Panel Temperature Control	Alarm Output (x1)	Panel Fan Output (x1)	2-31. Harmonics (V-I)	Built-in Buzzer	THD-I, THD-V
PRC-15	15 Steps Reactive Power Control Relay	**144x144**	**15**	●	●	●	●			●	●	●	●		●		●		●	●	●
PRC-15H+TCR	15 Steps SVC Reactive Power Control Relay	**144x144**	**15 + SVC**	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
PRC-18TH+TCR	18 Steps Thyristor Triggered SVC Reactive Power Control Relay	**144x144**	**18 + SVC**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PRC-18H+TCR	18 Steps SVC Reactive Power Control Relay	**144x144**	**18 + SVC**	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●

General Specifications Table

Technical Information	PRC-15	PRC-15H+TCR	PRC-18H+TCR	PRC-18TH+TCR
Steps	15	15+TCR	18+TCR	18+TCR
Operating Voltage	100 - 265 Vac	100 - 265 Vac	100 - 265 Vac	100 - 265 Vac
Operating Frequency	45 - 65 Hz	45 - 65 Hz	45 - 65 Hz	45 - 65 Hz
Current Measurement Range	1mA - 5,5 A	1mA - 5,5 A	1mA - 5,5 A	1mA - 5,5 A
Voltage Measurement Range	5 - 300 V AC (L-N) 10 - 520 V AC (L-L)	5 - 300 V AC (L-N) 10 - 520 V AC (L-L)	5 - 300 V AC (L-N) 10 - 520 V AC (L-L)	5 - 300 V AC (L-N) 10 - 520 V AC (L-L)
Frequency	√	√	√	√
Cosϕ	√	√	√	√
Power Factor	√	√	√	√
%THD-V / %THD-I	√	√	√	√
Active Power	√	√	√	√
Reactive Power	√	√	√	√
Apparent Power	√	√	√	√
Active Energry	√	√	√	√
Reactive Energy	√	√	√	√
Apparent Energy	√	√	√	√
LV / MV	AG	AG	AG	AG
Shunt Reactor	√	√	√	√
TCR	-	√	√	√
TSC	-	-	-	√
Monophase Capacitor	√	√	√	√
Three-phase Capacitor	√	√	√	√
Over Voltage Protection	√	√	√	√
Under Voltage Protection	√	√	√	√
Over Temperature Protection	-	√	√	√
Under Temperature Protection	-	-	√	√
Temperature Control	-	-	√	√
Generator	√	√	√	√
Cosϕ2 (Generator)	√	√	√	√
Generator Energy Record	√	√	√	√
Advanced Energy Analysis	-	-	-	√
Event Log	-	-	-	√
Scheduled Energy	-	-	-	√
RTC	-	-	-	√
Graphic LCD	128x64	128x64	128x64	128x64
Discrete Harmonics	31	31	31	31
RS-485 Communication	-	√	√	√
MODBUS Baud Rate	-	1200 - 19200	1200 - 19200	1200 - 19200
Alarm Output	√	√	√	√
Offset Adjust (3 Phase)	√	√	√	√
Cosϕ Adjust	√	√	√	√
Step On Time	1 - 60 sec	1 - 60 sec	1 - 60 sec	100 ms- 60 sec
Step Off Time	1 - 60 sec	1 - 60 sec	1 - 60 sec	100 ms - 60 sec
Discharge Time	1 - 60 sec	1 - 60 sec	1 - 60 sec	100 ms - 60 sec
Reaction Time	100 ms - 5 sec	100 ms - 5 sec	100 ms - 5 sec	100 ms - 5 sec
Relay Output	5A / 250Vac Cosϕ1	5A / 250Vac Cosϕ1	5A / 250Vac Cosϕ1	5A / 250Vac Cosϕ1
Protection Class	IP54 (Front Panel) IP20 (Body)	IP54 (Front Panel) IP20 (Body)	IP54 (Front Panel) IP20 (Body)	IP54 (Front Panel) IP20 (Body)
Dimensions (mm)	144 x 144	144 x 144	144 x 144	144 x 144
Buzzer	√	√	√	√
Advice	√	√	√	√

Technical Specifications Table

Operating Voltage	100V – 265 V AC
Operating Range	Un x (0,9 – 1,1)
Operating Frequency	45 – 65 Hz.
Power Consumption	3 – 11 VA
Measuring Inputs Power Consumption	< 0,5 VA
Current Measurement Range	1 mAAC – 5,5 AAC
Voltage Measurement Range	5 – 300 VAC (L-N)
	10 – 520 VAC (L-L)
Current Transformer Ratio	8000 / 5
Measurement Accuracy	
Voltage	%0,50
Current	%0,50
Frequency	%0,10
Cosφ	%0,20
Active Energy	%1
Reactive Energy	%2
Relay Output	NO Max 5 AAC 250 VAC Cosφ=1
Communication	Modbus RTU Optical Isolated, Programmable
Baudrate (bps)	1200, 2400, 4800, 9600, 14400, 19200
Address (ID)	1 – 247
Harmonics	2 – 31
Protection Class	IP54 (Front Panel)
	IP20 (Body)
Device Protection Class	Double Insulated
Operating Temperature	-25°C ……+70°C
Humidty	Maximum %90
Operating Altitude	<2000 m
Panel Connection Type	Front
Connection Type	3P4W (Star)
IK Code	IK06
Supply Terminal Cable Cross Section	Max 2,5 mm²
Voltage Terminal Cable Cross Section	Max 2,5 mm²
Current Terminal Cable Cross Section	Max 2,5 mm²
RS485 Terminal Cable Cross Section	Max 2,5 mm²
Weight	570 gr
Dimensions	144 x 144 x 68 mm
Panel Mounting Dimensions	137x137 mm