

# Intelligent Reactive Power Management - RM-12P 3-Phase

## General

The RM-12-3P Controller is for compensation of Balanced and Unbalanced loads. It is a ultimate solution for Compensation of Unbalanced Load. The compensation is realized by measuring the reactive power of the system through 3 current transformers from 3 phase. This series is a unique selection for Unbalanced load compensation.

## Features

- >> Fast Real Time Thyristor Switching
- >> Measuring and displaying up to 19th harmonic for electrical parameters
- >> Programmable THD (Total Harmonic Distortion) protection.
- >> Programmable discharge time
- >> Automatic calculation of power values for each capacitors step.
- >> Providing minimum switching steps for maximum service life time.
- >> Connection of single phase & 3 phase capacitor steps at the same time.
- >> Compensation of each phase separately for unbalanced loads.
- >> Displaying of electrical parameters for each phase at the same time.
- >> Measurement of A, V, PF, Cos phi, W, Var, VA, THD-V%, THD-I%,  $\Sigma kWh$ ,  $\Sigma kVArh$ ,  $\Sigma W$ ,  $\Sigma VA$ ,  $\Sigma VAR$
- >> Automatic / Manual mode selection
- >> Dual Power Factor Setting for Mains and DG set supply
- >> 10 different programs
- >> C+ / NORMAL / C-condition lights
- >> Automatic calculation of C/k value
- >> Target cos phi setting (Ind. 0,80 - Cap. 0,80)
- >> Optional temperature control with J-type thermocouple input
- >> Insufficient Compensation Alarm
- >> Wrong Phase sequence detection Alarm
- >> Over Compensation Alarm
- >> Programmable over voltage protection and alarm for Capacitors



## Features

- >> Measuring and displaying up to 19th Harmonic for Electrical Parameters.
- >> Programmable THD Protection.
- >> Connection of Single Phase and 3-Phase Capacitors steps at the same time.
- >> Potential Free Alarm Contact Output
- >> Isolated RS-485 Modbus RTU (IEEE 754 floating point) / Elcom Communication
- >> Over Temperature Protection
- >> Software interactive communication
- >> Automatic Correction of Wrong Connections
- >> Full Remote Control
- >> Micro Processor Controlled Measurement
- >> Maximum 12 Step Programmable
- >> All measurement with 0.5 Class Accuracy
- >> Monitoring facility for Capacitor Healthiness
- >> Harmonic Compensation algorithm to maintain the set power factor.
- >> Auto correction of capacitor values at a regular interval for each step.
- >> Programmable over THD Alarm
- >> Transient detection Alarm
- >> Automatic disconnection of all capacitor steps in case of Mains failure over 20 msec.
- >> Programmable current and voltage transformer ratio
- >> Non-flammable enclosure
- >> IEC61000-6-2, IEC 61000-6-4, IEC 61010-1

## SPECIFICATIONS

## Intelligent Reactive Power Management - RM-12P-3 Phase

Electrical Parameters	
Operating Voltage ( $U_n$ )	230 V AC* $\pm 10\%$ ; 50 / 60 Hz
Operating Current	40 mA - 5,5 A
Capacitor Steps	12 Steps
Network Type	3-phase 3 CTs
Accuracy	.5%
Current Transformer Ratio	5...10000 / 5A
Power Consumption	< 2 VA (Current Circuit) < 3 VA - 10 VA (Voltage Circuit)
Cos phi Setting	0,8 < cos phi < 1 (inductive/capacitive)
C/k Setting	0,02 - 1,00
Automatic Energy Correction	●
Automatic Disconnection of Damaged Capacitor Steps	●
Time Delay Between Steps	1 Cycle
Over Voltage Setting	240 - 275 V AC
Output Contact	3 A, 750 VA
Display	Red LED, 14 mm Height (144x144 mm)
Harmonic Measurement	Up to 19th harmonic for current and voltage separately
Programmable THD-I and THD-V Alarm	●
Programmable Discharge Time	●
Programmable Over Voltage Alarm	●
Transient Detection Alarm	●
Wrong Phase sequence detection Alarm	●
Programmable over THD Alarm	●
Automatic Power Calculation	●
Energy Measurement	●
Programmable Energy Ratio Alarm (Inductive/Active) / (Capative/Active)	●
Compensation of Each Phase	●
Displaying Parameters for Each Phase	●
Password Protection for Setup	●
RS-485 Communication	●
Alarm Contact Output (Over Voltage, Temperature, Harmonic)	●
Over Temperature Protection Alarm	●
Fan Contact Output (Optional)	○
Mechanical Parameters	
Equipment Protection	Double Insulation ( <input type="checkbox"/> ), Measurement Category III
Ambient Operating Temperature	-5°C, +55°C
Ambient Humidity	95%
Degree of Protection	IP40 (front panel)
Connection / Installation	Terminal / Flush-mounting with rear terminals
Dimensions	144x144mm
Packing Weight	0,9 kg

● Standard ○ Optional

Network Analysis by:



E-mail : info@naacenergy.com



Sales & Marketing Office :

**NEPTUNE SYSTEMS PVT. LTD.**

A-11, Sec.-59, Noida-201301 (UP) (INDIA)

Tel: 0120-3069000, 3069040, 3069042

Fax: 0120-3069041

E-mail: enquiry@neptuneindia.com

Web: www.neptuneindia.com