



**Power Factor Solutions**



## MPC and MSC Controllers

MSC 6n/ MSC 12n/ MPC 7/ MPC 14

Reactive Power Controller  
Power Factor Controller

# Product description



## MH Power Factor Controller

### DEVICE FEATURES

- 6/ 12/ 7/ 14 Steps capacitor switching model
- Capacitive & Inductive  $\text{COS}\phi$  value indicator
- THD-i, THD-v, V, A, VA, P, VAR value indicator
- Manual operation selector
- Alarm warning indicator
- Switched in steps indicator
- Fault type indicator
- Relay trigger on fault
- Modbus communication\*
- Standard compliance
  - IEC 61000-4-2
  - IEC 61000-4-4
  - IEC 61000-4-5
  - IEC 61000-4-11

## Basic of Power Factor Correction

Operation of inductive loads (e.g. electric motor, welding machine, arc furnace and florescence lighting), draws reactive power from the supply. Reactive power is necessary for proper function of these equipment. However, the increased reactive power will place an undesirable burden on the supply and reduce its Power Factor rating. The Power Factor of a load is defined as the ratio of active power (Watt) to apparent power (VAR), and is referred to as  $\text{COS}\phi$ . The closer  $\text{COS}\phi$  is to unity, the less reactive power is drawn from the supply.

Utility power companies place emphasis for power users to maintain high power factor to minimize impact on network power quality. It is required for users to install suitable power factor correction system to meet this requirement. A typical power factor correction system would consist of a number of capacitors units, connected to contact switches and managed by a power factor controller.

The use of Automatic Power Factor Controller allows the correct amount of reactive power compensation to be applied and respond dynamically to load changes. It will also determine the optimal switching sequence to evenly distribute the duty cycle for each capacitor unit. Other advance features such as remote monitoring via Modbus allows Facility Management Center to receive real-time information on the power factor system.

MH Automatic Power Factor Controller is available in 2 models:

- MH MPC
- MH MSC

## Product application

### MH MPC - 7/ 14

- 7 Steps/ 14 Steps Advanced PFC controller
- System where remote monitoring is required
- PFC device status and running values can be remotely retrieved
- Fault condition can trigger an internal relay to activate remote system

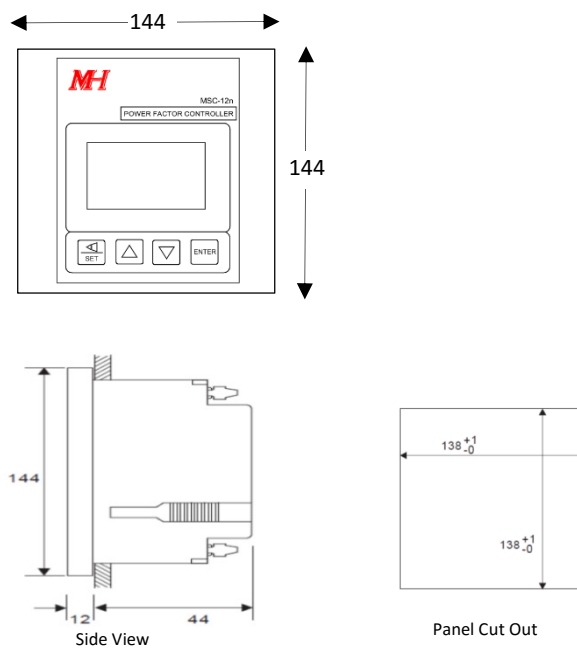
### MH MSC - 6n/ 12n

- Basic 6 Steps/ 12 Steps PFC controller
- Simple implementation of a PFC solution
- User configurable switching steps
- Operated as standalone scheme

# Technical Specification

Voltage	AC 240V (L-N) $\pm 15\%$ AC 415V (L-L) $\pm 15\%$
Switching-Steps	6 steps for MSC-06n 12 steps for MSC-12n 7 steps for MPC-7 14 steps for MPC-14
Load Burden	$< 8VA$ $\leq 0.5VA$
Display	LCD Backlit, PF 3 digit, electrical parameter 4 digit COS $\phi$ or THD-I display user selectable
PF Setting	Cap 0.95 to Ind 0.85 Cap 0.97 default
Measure-Accuracy	V,A: $\pm 0.2\%$ , VA,W,VAR: $\pm 0.5\%$ , THD upto 30 <sup>th</sup> Order
C/K setting	Automatic self-adjustment C/K value. Manual setting option 0.01-2.40
Energize Delay time	5-300sec. factory default 30sec.
Over-Voltage setting	110-130%, 120% default
Relay Rating	AC 380V, 5A max AC220V, 5A typical
Operating Temperature	0 to 60°C
Communication Protocol	RS485 (for MPC-7/14) Modbus-RTU
Address range	1-255 programmable
Wire Terminal	Pluggable piece
Weight	0.25kg

## Dimension Detail



Dimensions are in mm

# MPC and MSC Controllers

**Authorized Distributor:**

