



RS-485

FEATURES

- **KPF-08** power factor controllers are instruments intended to measure and compensate reactive power in electrical installations, by means of capacitor banks management.
- Applicable either on low, mid or high voltage, since it is possible to program the potential and/or current transformer ratios and the connection diagrams (single-phase connections, with three-phase power factor control).
- **KPF-08** includes 8 outputs for capacitor banks activation and management, 2 alarm outputs (electrical parameters and temperature alarms) and 1 RS-485 output for communication.
- Allows programming of 12 stage activation patterns, and presents 2 operating modes (automatic and auto setting).

APPLICATIONS

- Capacitor banks activation and management in power factor correction applications

PRODUCT INFO

ELECTRICAL PARAMETERS – 58

- Includes current, voltage, active, reactive and apparent powers, power factor, inductive energy/active energy ratio, capacitive energy/active energy ratio, THD (voltage, current, powers, odd harmonics calculations up to 19th order)

MEASUREMENT CONNECTIONS

- KPF-08 uses single-phase measurement diagrams for correction of power factor in three-phase systems (Star or Delta)
- By means of an additional voltage input, can be used for power factor correction in applications driven by generators.

INSTALLATION

- Panel's Door
- Technical support: get in touch via e-mail, telephone, WhatsApp and YouTube videos

INTERFACES, READINGS & CONFIGURATIONS

- Man Machine Interface (MMI) composed of display (LED) and four navigation keys, allowing local reading and configuration
- RS-485 communication
- Modbus-RTU protocol, allowing integration to PLCs, master MMIs, supervisory systems and data concentrators
- Includes 8 outputs for activation and management of capacitor banks. Also features two auxiliary outputs, one for electrical measurement alarms (overvoltage, over THD – voltage, and Inductive/active and Capacitive/active energy ratios) and the other for temperature alarm
- Allows programming of 12 distinct stage activation patterns, including a special condition where the user can define each stage reactive power value or, associated with auto-setting mode, check each stage reactive power and use it as a reference for power factor control.

RELAY OUTPUTS

Capacitor Banks
(power factor correction)

8 outputs for management of power factor correction stages (3Aac/250Vac).

12 stage activation patterns are available for management of the reactive power. The controller can be used in two modes - automatic (user defines pattern and connection diagrams) or auto-setting (KPF-08 checks the reactive power of the stage(s) and the connection diagram and uses the obtained values as the new configurations for power factor controlling)

MEASUREMENTS AND INPUT INFO

Fan Alarm

1 output (3Aac/250Vac): Temperature related

Measurement Alarms

1 output (3Aac/250Vac): Electrical parameters related - Overvoltage, Over THD (voltage), Inductive/active and Capacitive/active energy Ratio

Instantaneous

Current, voltage, powers (active, reactive and apparent), power factor, inductive/active energy ratio, capacitive/active energy ratio and THD (voltage, current and powers, with odd harmonics calculation up to the 19th order)

Measurement

Single phase, 1 current, 1 voltage (Ph-Ph or Ph-N)

Power Factor Control

Three-phase (Star or Delta)

Voltage Input (Load) – Working Range

20 to 500Vac

Voltage Input (Generator) – Working Range

110 to 250Vac

Current – Working Range

50mA to 5.5Aca

Frequency

50/60Hz

Connection

Quick coupling terminal blocks

Maximum Cable to be used

2.5mm²

Internal Consumption

<10VA

Temperature Measurement

0 to 100°C (32 to 212°F)

POWER SUPPLY

Voltage – Working Range

190 to 260Vac

Internal Consumption

< 13VA

ACCURACY
at 25°C (77 °F), referred to the full scale

Voltage, Current and Power Factor

1.0% ± 1 digit

Powers

2.0% ± 1 digit

COMMUNICATION

Connection/Protocol

RS-485 - Modbus RTU

RS-485 Cabling

Shielded cables, with at least two twisted pairs (2x24 AWG), minimum section of 0.25mm² and characteristic impedance of 120ohms

Transmission Speed

9600, 19200 or 38400 (configurable)

Data Format

8N1, 8N2, 8E1 or 8O1 (configurable)

Addressing

1 to 247 (configurable)

DISPLAY

LED (red)

High-bright LED Display, 4 digits and 7 segments

CASE

Material

Thermoplastic

Mass

0.5Kg

Protection Degree

IP-40 for front panel and IP-20 for enclosure

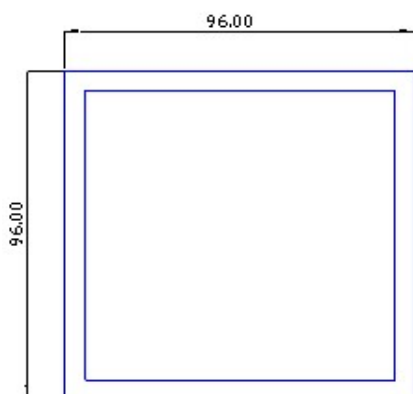
ENVIRONMENTAL CONDITIONS

Operation Temperature

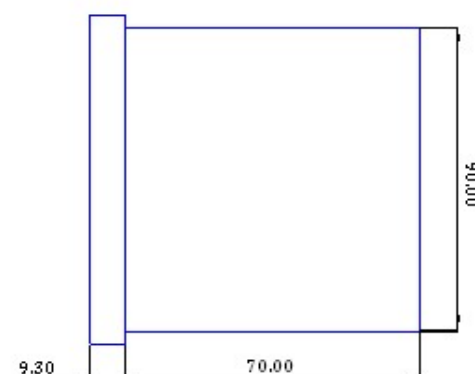
-5 to 55°C (23 to 131°F)

DIMENSIONS

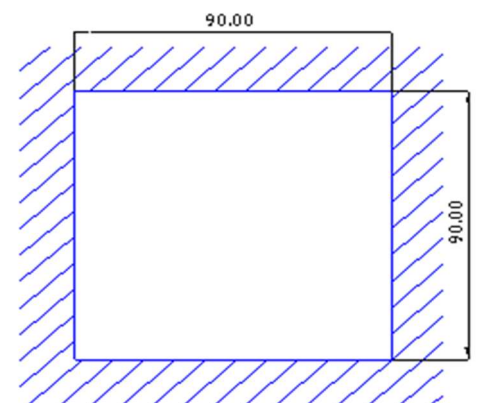
Front View



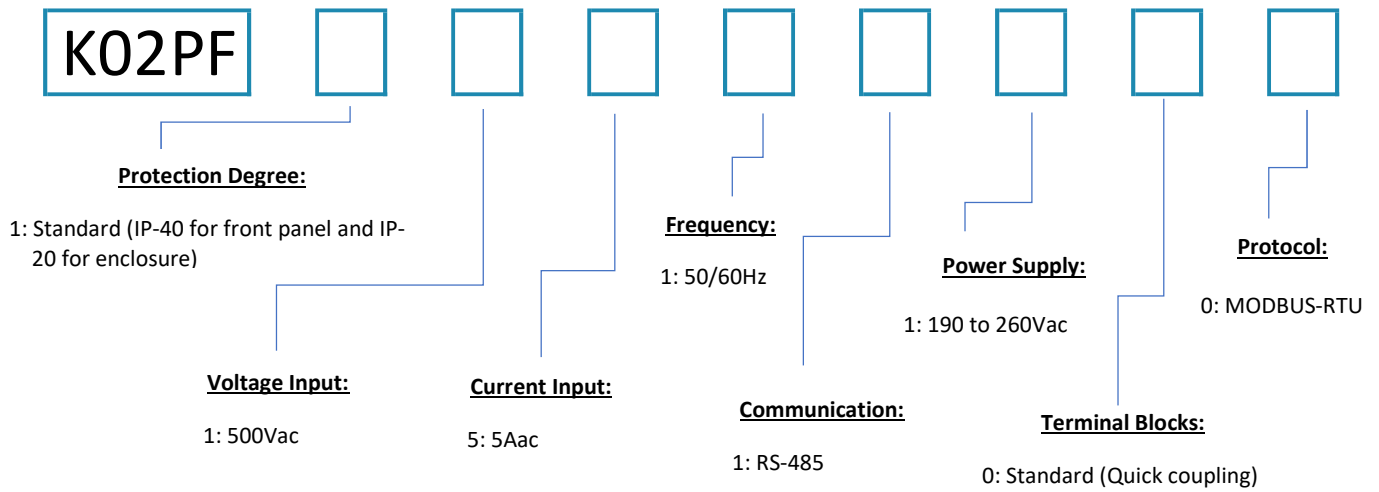
Side View



Panel Cutout



How to Specify:



Standard Model (Example):

K02PF 1 1 5 1 1 1 0 0

Power Factor Controller {Protection Degree – Standard}{Voltage Input 500Vac} {Current Input 5Aac} {Frequency 50/60Hz} {Power Supply - 190 to 260Vac} {RS-485} {Standard – Terminal Blocks} { Modbus-RTU}

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For correct utilization of the product, the User Manual must be consulted before its installation or operation.
Some items presented here may be optional, being necessary the correct product specification by their code.

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