

# PMAC811 Intelligent Motor Protection Controller

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# **PMAC811 Intelligent Motor Protection Controller**

#### **Feature**

- Integrated motor protection, control, measurement, metering, management and communication among PMAC811 series intelligent motor protection controller
- > Widely used in petroleum, chemical, electricity, metallurgy, steel, paper, textile, cement, municipal industrials etc
- > Suitable for low voltage motor applications with AC380 / 690V rated voltage, 50 / 60Hz
- Replace discrete components in the motor control center (MCC), greatly simplify the motor control loop, improve the reliability and stability and reduce the comprehensive cost
- > Adopt modular structure design with small size, compact structure, strong versatility, easy installation and operation
- > Record 256 Events, accurately trace back to the failure reason
- The AC contactor can be blocked when has extremely large short-circuit current, achieve complete protection of the MCC circuit by driving circuit breaker by the product internal relay
- > With strong and reliable RS485 communication interface, can undertake AC380V strong electricity without damage





#### **Function**

Measurement	Three phase current, ground current, three phase current imbalance rate, average current, positive sequence current, negative sequence current, three phase line voltage, frequency, power factor, active power, reactive power, active energy, positive sequence voltage, negative sequence voltage, three phase voltage unbalance rate, three phase current harmonics, three phase voltage harmonics etc.		
Protection	Starting overtime, starting overcurrent, overload, tE time, stall, phase failure, imbalance, quick-break, grounding, underload/power, external failure, under/overvoltage, Phase sequence, TV disconnection, negative sequence protection etc.		
Maintenance	Record 256 recent event information (32 events of each type, total 8 types), record event type, occurrence time, characteristic quantity; cumulative total running/stop time of motor, current running/stop time, total stop and trip times, maximum starting time/current etc.		
Control	Communication control, dangling power control, restart controlled by time-shared or in batch		
Communication	2 channel RS485 interfaces, Modbus-RTU communication protocol. Support to expand Profibus-DP communication, DI/DO quantity, AI, temperature detection etc.		

#### Specification

Working Power		AC85-265V, DC100-300V	Power / Electricity accuracy	±1%
Power Consumption		<8W	Working Temperature	-20-60 <sup>°</sup> C , 10-90% Non-condensing
Current	Measurement Accuracy	50%-200%le, ±0.5%	Storage Temperature	-40-80 <sup>°</sup> C , 10-90% Non-condensing
Voltage		50%-150%Ue, ±0.5%	Implementation Standards	GB 14048.4-2010, GB/T 14598.303-2011

# PMAC811 Intelligent Motor Protection Controller

#### Dimension & Installation



Installation: screen panel installation, 96.8 \* 48.8mm (reverse shell ), 97.5 \* 49.5mm (recommended opening size)

## **Order Information**



#### Notes:

- 1. Standard 1 channel Modbus-RTU communication, tE time and single phase grounding protection (internal vector & algorithm)
- 2. Three phase CT (1-400) A is a direct connection, 5P10 protection level

Standard 1 channel modbus communication and 1 channel 4-20mA AO

- 3. When the rated current of the motor is over 400A, using indirect connection, that is, the product provides a standard 5A (1A) of CT+\*\*A/5A (\*\*A/1A) . E.g. , 500A / 5A with 3 CTs for each motor
- 4. Pease specify the optional function when Profibus-DP communication, additional DI / DO, AI, temperature detection are needed. Example: PMAC811-A-25A-AO indicates color screen display, 5 channel relay output, harmonic, fault record, 25A rated current CT,

## Current Transformer Specification

(1) 1A, 5A, 25A, 100A CT Specification: (unit: mm)







35mm DIN-rail installation

(2) 250A, 400A CT Specification: (unit: mm)



Connection: The secondary side outlet of yellow, green, red, black cables separately represent the secondary outlet and common ports of A, B, C phase currents. Do not ground the common port. The length of the secondary side cable is 1 meter.

#### **Connection Port**



#### Schematic Diagram



#### Notes:

- 1. The above picture is one of the typical diagrams, the blue dotted line is the optional function
- 2. The above diagram is the secondary schematic diagram of the motor protection controller, which can upload the start / stop, operation, failure, restart, management information to the low-voltage motor integrated control system through communication

