MPR MULTIFUNCTION PROTECTION RELAY





Introduction

The MPR-6M delivers reliable circuit protection and real-time monitoring for power lines and distribution cabinets, measuring current, voltage, power, and energy with class 0.2 accuracy. It features expandable DI/DO, temperature channels, and residual current inputs, supporting overcurrent, overvoltage, and undervoltage protection with alarms and automatic tripping.

With RS485/ Modbus RTU communication, the MPR-6M integrates seamlessly into SCADA, EMS and smart platforms, ideal for critical power lines, fire safety, industrial distribution, data centers, and intelligent buildings.

Main Features

- Class 0.2, real-time measurement of key electrical parameters;
- 30 lists DI/DO event record, 30 lists alarm event record;
- 2 relay outputs (custom logic);
- 4 expandable passive digital inputs;
- 4 channel temperature monitoring;
- 2 channel residual current detection;
- RS485 Modbus RTU communication;
- Built-in sound and light alarm; manual mute/reset/self-test;

Protection Function

Real-time monitor parameter	Protection function
Three-phase current	Residual current monitoring
Three-phase voltage	Temperature monitoring
Frequency	30 lists alarm event record
Power factor	
Active power	
Reactive power	
Apparent power	
Electrical energy	
Maximum demand	
Time-of-Use energy metering	
Harmonic Distortion	

Application

- Safety monitoring: smart buildings, industrial plants, etc;
- Medium and low voltage systems;
- Commercial and residential buildings;
- Utilities and power distribution systems;
- Industrial cabinet: electrical fire prevention & fault isolation;
- Motor control panels and switchboards;
- Protection for transformers, generators, motors;
- System leakage current measurement;
- Industrial control system (PLC, SCADA, DCS);

Technical Characteristics

Working power	Value
Power grid mode	1P2W, 3P3W, 3P4W
Power supply	85-265Vac/dc, 45-65Hz
Consumption	≤5VA
Voltage input	
Rate value	100V/220V/380V
Overload	1.2Un
Power consumption	<0.2VA
Impedance	0.5MΩ
Current input	
Rate value	AC 1A/5A (please specify when ordering)
Overload	Measurement: 1.2 times Instantaneous: 10 times/3s
Power consumption	<0.1VA
Impedance	<20MΩ
I/O capacity	
DI	2-4 channels, dry contact, Ri<500Ω turns on, Ri>100kΩ turns off
DO	2 channels, Relay contact capacity: 5A@250VAC; 5A@30VDC
Pulse output	1 channel, pulse width 80ms, photoelectric isolation
Communication	RS485, Modbus-RTU or Ethernet, Modbus-TCP/IP
Others	
Working environment	-10°C ~ +55°C; RH 5% ~ 95% (non-condensation)
Storage environment	-40°C ~ +85°C; RH 5% ~ 95% (non-condensation)
SOE record	60 lists, (30 lists DI/DO SOE and 30 lists Alarm SOE)
Dimension	110mm×108mmx66mm (W*H*D), 35mm Din-rail mounting