



Monitoring Relays

# AC Current Relays

1 Phase and 3 Phase



## TECHNICAL SPECIFICATIONS

### INPUT

Rated Value In	1A or 5A from CT 0.2 to 10 Amp direct connected
Frequency	50 / 60 / 400 Hz
Burden	<0.5 VA per phase
Overload	10 x In for 3 seconds

### SETPOINT

Range Over	Adjustable 40% to 120% In
Range Under	Adjustable 0% to 80% In
Repeatability	Better than 0.5% to full span
Differential	Fixed 5%
Time Delay	Adj. 200mSeconds to 10 seconds

### AUXILIARY

AC Voltage	115 / 230 / 400 V (± 25% / 45-65 Hz / <2VA)
DC Voltage	24, 48, 125 and 220V,DC ± 20% / galvanically isolated < 3 watt

## SELECTION GUIDE

<b>M200-A1U</b>	Single Phase Under Current
<b>M200-A1O</b>	Single Phase Over Current
<b>M200-A1C</b>	Single Phase Combined Current
<b>M200-A3U</b>	3 Phase Under Current
<b>M200-A3O</b>	3 Phase Over Current

## TYPICAL APPLICATIONS

The M200 AC Current relays provide current monitoring and protection in both single and 3 phase systems. These relays are used in applications such as motor protection, load detection and generator control.

Under, over and combined under/over units are available. The relay operates when the adjustable trip point is reached. An externally adjustable time delay is provided to prevent nuisance tripping.

As is common with all the M200 relays, on over units the relay energizes when the input signal exceeds the trip point. On under units, the relay de-energizes when the input signal goes below the trip point.

A red LED indicates the state of the relay. A green LED indicates the condition of the power supply.

## WEIGHT & CASE SIZE

Single units (55mm)	Approx. 0.88 lbs. (0.4 kg)
Combined units (100mm)	Approx. 1.32 lbs. (0.6 kg)

## ORDERING INFORMATION

Part No.	Input	Freq.	Aux.	Options
<b>M200-A3O</b>	5A	50 Hz	230V	
<b>M200-A3U</b>	5A	60 Hz	120V	

## OPTIONS

- Adjustable time delay (max.): 30 seconds
- AC Auxiliary (in range): 57.7 to 480 volts
- Calibration at nominal Hz: 35 to 450Hz
- Calibration at temperature other than 23°C

Products constantly update. All specifications are subject to change without notice.  
For more information on this product, please contact:

**PC&S, Inc. at +1 (800) 523-9194 or +1 (973) 448-9400**

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# GENERAL SPECIFICATIONS

## ENVIRONMENTAL

<b>Working Temperature</b>	+32°F to +140°F (0° to +60°C)
<b>Functional Temperature</b>	-13°F to +158°F (-25° to +70°C)
<b>Storage Temperature</b>	-40°F to +185°F (-40° to +85°C)
<b>Temperature Coefficient</b>	0.03% per °C (200ppm/°C)
<b>Relative Humidity</b>	95% Non-Condensing
<b>Class of Climate</b>	HSE compliant with DIN 40040 -3 complying with VDE/VDI 3540

## INSULATION

<b>Test Voltage</b>	4kV RMS 50Hz 1 min between Input / Case / Auxiliary.
<b>Impulse Test</b>	EMC 5kV Transient. Compliant with IEC 801 / EN 55020.
<b>HF Interference Test</b>	EHF 2.5kV@1MHz. Compliant with IEC 255-4.
<b>Potential Class</b>	Class II. Compliant with IEC 348.

## APPLIED STANDARDS

<b>General</b>	IEC 144 / BS 5420 / VDE VDI 0435 / IEC 947 / EN 60947.
<b>Safety</b>	BS EN 61010 DIN 57411 / VDE 0411 ANSI C37.
<b>Surge Withstand</b>	IEC 801 / EN 55020 ANSI C37-90a.
<b>Radio Screening</b>	RFI degree N. Compliant with VDE 0875.
<b>EMC</b>	Emissions EN 50081-2 Immunity EN 50082-1

## RELAY OUTPUT

<b>Relay Type</b>	Dual Pole Change Over
<b>Material</b>	Silver / Cadmium
<b>Contact Resistance</b>	200m Ohm max. Typically <50m Ohm
<b>Rating AC</b>	250V 5A non-resistive
<b>Rating DC</b>	125V 1A resistive
<b>Electrical Life</b>	1 x 10 <sup>5</sup>
<b>Mechanical Life</b>	5 x 10 <sup>6</sup>
<b>Operating Time (approx.)</b>	7mS (20mS max)
<b>Dielectric Strength</b>	Between coil and contacts: 5kV RMS - 1 minute Between open contacts: 1kV RMS - 1 minute Between adjacent contacts: 1kV RMS - 1 minute
<b>Insulation Resistance</b>	1000M Ohm at 500V,DC
<b>Operating Temperature Approval</b>	-22°F to +162°F (-30° to +75°C) UL, cUL and CSA recognized

## ENCLOSURE

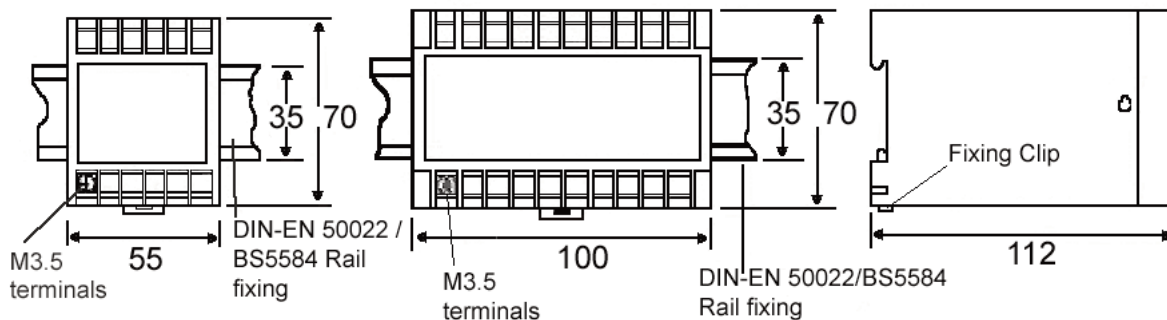
<b>Fixing</b>	DIN Rail 35mm. Compliant with DIN-EN 50022 and BS 5584.
<b>Mounting</b>	Any Position.
<b>Enclosure Code</b>	Case IP50 / Terminals IP30. Compliant with IEC 529, BS 5490 and DIN 40050.
<b>Material</b>	Compliant with UL 94 VO

## APPROVALS

<b>UL and cUL Approval</b>	File No. E157034
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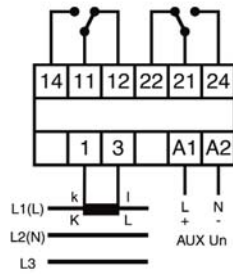
## M200 Series CASE DIMENSIONS

(All dimensions shown in mm)

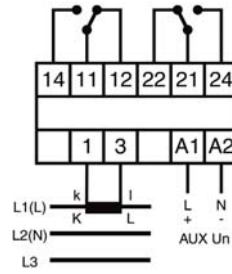


# M200-A1 Current Relay for 1Ph and 3Ph Systems

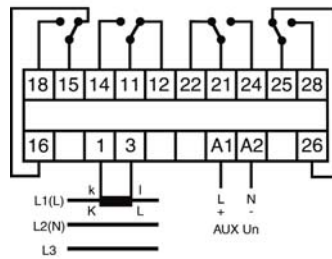
## WIRING CONNECTIONS



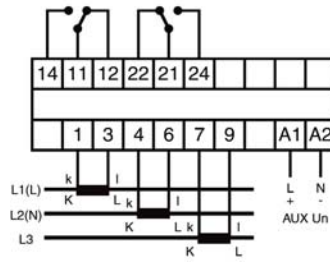
M200-A1U



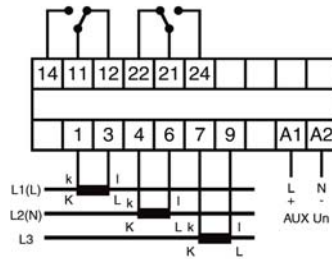
M200-A1O



M200-A1C



M200-A3U



M200-A3O



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