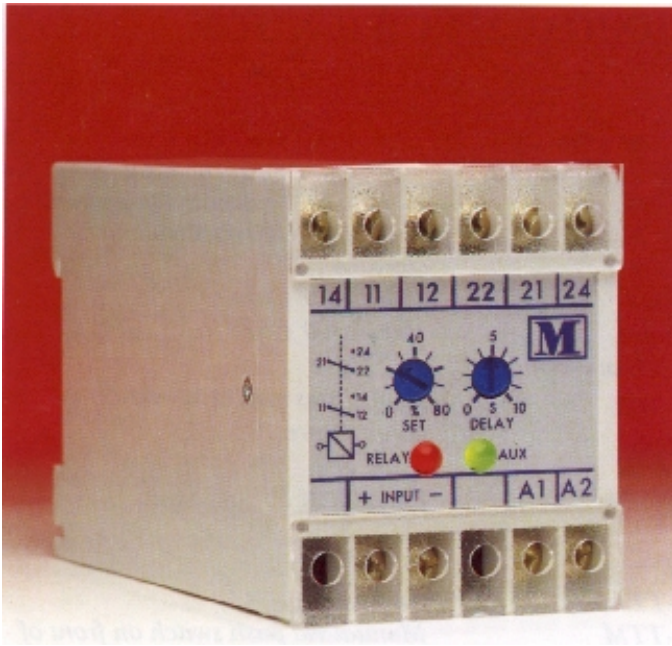




MILLIVOLT TRIP



TECHNICAL SPECIFICATION

INPUT

Rated value mV dc	10-999.9mV dc
Input Impedance	50k Ohm
Source impedance	100 ohms max
Overload	10 x Input continuous

SETPOINT

Range Over	Adjustable 40% to 120%
Range Under	Adjustable 0% to 80%
Repeatability	Better than 0.5% of full span
Time delay	Adjustable 200 ms to 10 seconds
Differential	Fixed 5%

AUXILIARY

AC Voltage	115/230/400V ± 25% / 45-65 Hz / <2VA
DC Voltage	24V (± 20% galvanically isolated) < 3 W

WEIGHT & CASE SIZE

Single units	Approx. 0.4kg 55mm case
Combined units	Approx. 0.6kg 100mm case

SELECTION GUIDE

M200-MVU	mV under trip
M200-MVO	mV over trip
M200-MVC	mV combined trip

TYPICAL APPLICATIONS

The mV trip relays will accept DC millivolt signals from shunts, sensors and transducers. A common application is to protect equipment from over current in a DC charging system. For example using a 400A to 75mV shunt. The 75mV signal is fed to the M200-MVO if the customer wishes to ensure the current does not exceed 300 amps then the MVO trip would be set at 75 % (56.25mv). If the current goes above 300 Amps the relay would energise. As is common with all the M200 relays, on over units the relay energises when the input signal exceeds the trip point and on under units the relay de-energises when the input signal goes below the trip point. A red LED indicates the state of the relay, whilst a green LED indicates the condition of the power supply.

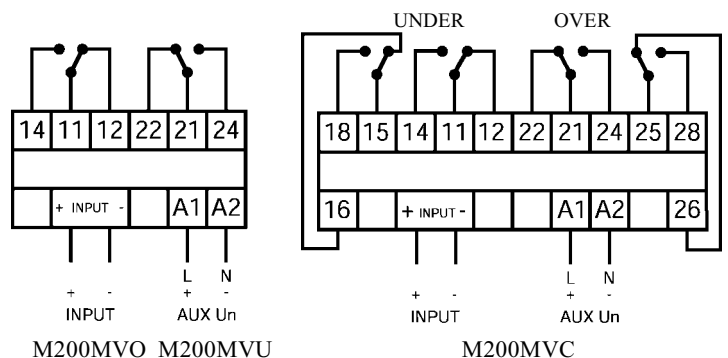
ORDERING INFORMATION

Product Code	Input	Aux	Freq	Options
M200-MVU	75mV	230V	50Hz	Cal 40°C

OPTIONS

- Adjustable time delay max 30 seconds
- AC auxiliary in the range 577 to 480 volt
- Calibration at temperature other than 23° C

CONNECTION DIAGRAMS



GENERAL SPECIFICATIONS

ENVIRONMENTAL

<i>Working temperature</i>	0 to +60 deg C
<i>Functional temperature</i>	-25 to + 70 deg C
<i>Storage temperature</i>	-40 to +85 deg C
<i>Temperature Coefficient</i>	0.03% per deg C (300ppm/ ^o C)
<i>Relative humidity</i>	95% non condensing
<i>Class of climate</i>	HSE complying with DIN 40040 -3 complying with VDE/VDJ 3540

INSULATION

<i>Test voltage</i>	4kV RMS 50Hz 1min between Input / Case /Auxiliary
<i>Impulse test</i>	EMC 5kV transient complying with IEC 801 / EN55020
<i>HF interference test</i>	EHF 2.5kv 1MHz complying with IEC 255-4
<i>Protection class</i>	II complying with IEC 348

APPLIED STANDARDS

<i>General</i>	IEC 144/ BS 5420/ VDE/ VDI 0435/ IEC 947/ EN60947
<i>Safety</i>	BS EN 61010 DIN 57411 / VDE 0411 ANSI C37
<i>Surge withstand</i>	IEC 801 / EN 55020 ANSI C37-90a
<i>Radio screening</i>	RFI degree N complies with VDE087S
<i>EMC</i>	Emissions EN50081-2 Immunity EN50082-1

RELAY OUTPUT

<i>Relay type</i>	dual pole change over
<i>Material</i>	Silver / Cadmium
<i>Contact resistance</i>	200mOhm max Typically <50m Ohm
<i>Rating AC</i>	250V 5A non resistive 1200VA
<i>Rating DC</i>	125V 1A resistive 120 watts
<i>Electrical life</i>	1 x 10 ⁶ at above load
<i>Mechanical life</i>	5 x 10 ⁶
<i>Operating time approx.</i>	7ms (20ms max)
<i>Dielectric strength</i>	Between coil and contacts 5kV RMS 1min Between open contacts 1kV RMS 1min Between adjacent contacts 1kV RMS 1min
<i>Insulation resistance</i>	1000M Ohm at 500V DC
<i>Operating temperature</i>	-30 to + 75 deg C
<i>Approval</i>	UL and CSA recognised

ENCLOSURE

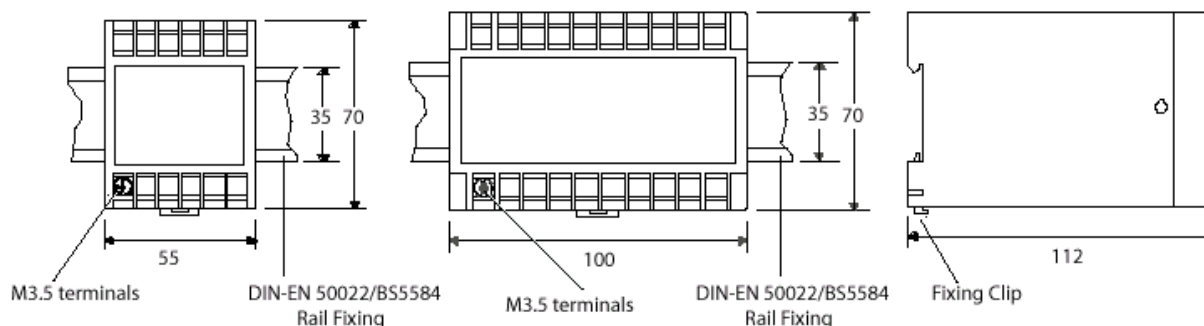
<i>Fixing</i>	Snap on to DIN rail 35 x7.5 mm complies with DIN-EN 50022 BS 5584
<i>Mounting</i>	Any position
<i>Enclosure Code</i>	Case IP 50/ terminals IP 30 Complies with IEC 529 BS 5490 DIN 40050
<i>Material</i>	Complying with UL 94 VO

APPROVALS

U.L. Approval File No E157034

CASE DIMENSIONS

All Dimensions in mm



Panel Components & Systems

