

RTD TEMPERATURE



TECHNICAL SPECIFICATION

INPUT

2 or 3 wire input

Platinum Pt 100 Ohm RTD

min. span 20 Ohms ...max.

span 200 Ohms

Nickel Ni 120 Ohm RTD

min. span 24 Ohms....max.

span 240 Ohms

OUTPUT

Rated value mA

0-1/5/10/20 & 4-20mA

Rated value volts

0-5 / 10 & 1-5 V

ACCURACY

Class $\pm 0.5\%$

ADJUSTMENT

Zero

$\pm 2\%$

Span

$\pm 10\%$

AUXILIARY

A.C. Voltage

115 / 230 / 400 V ($\pm 25\%$ / 45-65 Hz / < 2VA)

D.C. Voltage

24 / 48 / 110 V ($\pm 20\%$ / galvanically isolated / <3W)

WEIGHT & CASE SIZE

Approx. 0.3 kg. 55mm case

NOTE

No isolation is provided between input and output

SELECTION GUIDE

M100-RTD RTD temperature measurement

TYPICAL APPLICATIONS

The M100-RTD monitors the resistance of either 100 Ohm Platinum, or 120 Ohm Nickel. The RTDs resistance increase as the temperature rises, this resistance change is detected by the M100-RTD, which provides an output corresponding to the temperature being measured.

The temperature versus resistance values, are provided by the supplier of the RTD used.

RTD measurement of temperature is used in large transformers and large motors, to ensure winding temperatures do not rise to a level that would damage the winding.

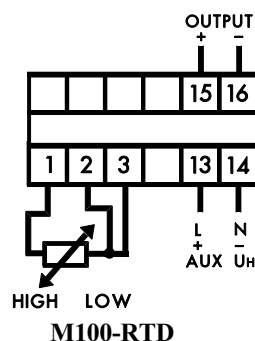
ORDERING INFORMATION

Product Code	RTD	Temp	O/p	Aux	Freq Options
M100-RTD	Pt 100	0-250°C	5 mA	230V	50Hz

OPTIONS

1. Non standard inputs / outputs only as far as technically acceptable.
2. A.C. Auxiliary in range 57.7 to 450 volts
3. Calibration at temperature other than 23°C

CONNECTION DIAGRAM



Panel Components & Systems

GENERAL SPECIFICATIONS

ENVIRONMENTAL

Working temperature	0 to +60 deg C
Functional temperature	-25 to +70 deg C
Storage temperature	-55 to +85 deg C
Temperature coefficient	0.02% per deg C (100 ppm / °C)
Relative humidity	95% non condensing
Class of climate	HSE complying with DIN 40040 -3 complying with VDE/VDI 3540

INSULATION

Test voltage	4kV RMS 50Hz 1min. between Input / Case / Auxiliary / Output
Impulse test	EMC 5kV transient complying with IEC 801 / EN55020
HF interference test	EHF 2.5kV 1MHz complying with IEC 255-4
Protection class	II complying with IEC 348 BS 4753 / DIN 57411 / VDE 0411

APPLIED STANDARDS

General	IEC 688 / BS 6253 / VDE/ VDI 2192
Safety	BS EN61010 DIN 57411 / VDE 0411 ANSI C37
Surge withstand	IEC 801 / EN 55020 ANSI C37-90a
Radio screening	RFI degree N complies with VDE 0875
EMC	Emissions EN50081-2 Immunity EN50082-1

ACCURACY

Class	±0.2 % complying with IEC 688
Calibration temperature	23°C
Temperature coefficient	0.01% / °C (100 ppm / °C)
Stability	0.05 % per annum non cumulative
Warm up time	<15 min

OUTPUT

Rated value	See individual product pages
Load resistance mA (Unless otherwise stated)	1mA <15 kOhm 5mA <3 kOhm 10mA <1.5 kOhm 20mA <0.75kOhm 4-20mA <0.75kOhm
Load resistance volts (M100-VA1,VA3 only)	1, 5 & 10 volts >1 kOhm 1, 5 & 10 volts > 50kOhm
Load influence	<0.1 %
Ripple	<0.5% peak-peak at full load
Response time	<200 msec for 0-99 % at full load
Overload	<2 x rated value at full load
No load voltage	<27 V

ENCLOSURE

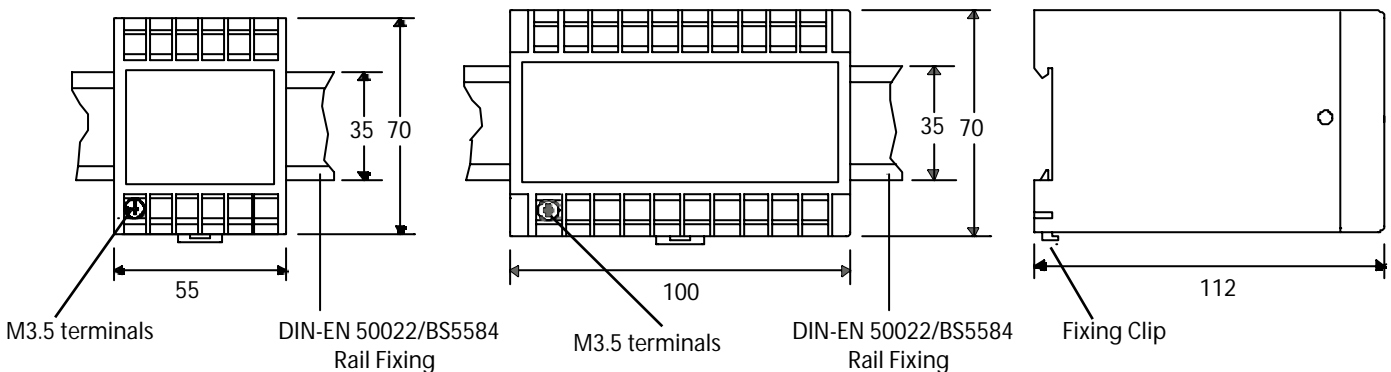
Fixing	Snap on to DIN rail 35 x 7.5 mm complies with DIN-EN 50022 BS 5584
Mounting Enclosure Code	Any position Case IP 50 / terminals IP 30 Complies with IEC 529 BS 5490 DIN 40050

APPROVALS

cU.L. Approval	File No E157034
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CASE DIMENSIONS

All Dimensions in mm



Panel Components & Systems