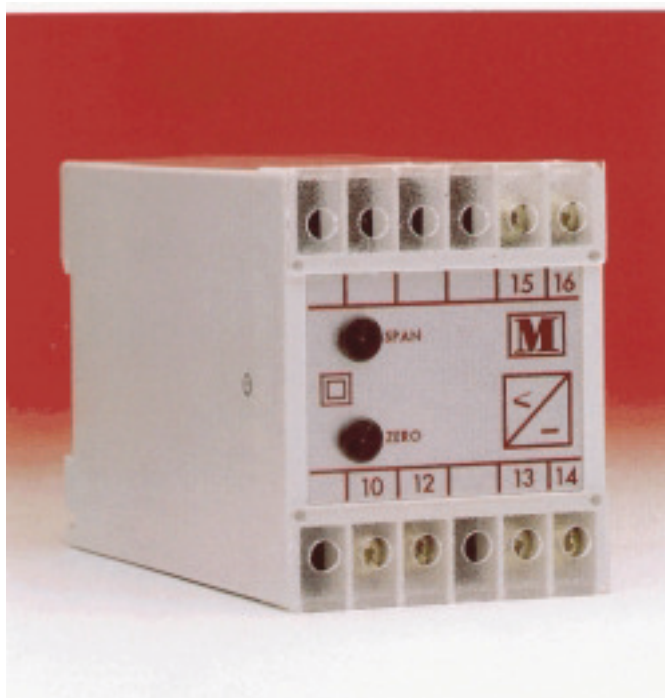


THERMOCOUPLE TEMPERATURE



SELECTION GUIDE

M100-TJ1 Type J thermocouple
M100-TK1 Type K thermocouple

TYPICAL APPLICATIONS

The M100-TJ1 and TK1 measure the millivolt drop of J and K type thermocouples respectively.

Thermocouples are made from two dissimilar metals and as the temperature rises, the mV across the thermocouple increases. The millivolts developed corresponds to the change in temperature, thermocouple manufacturers provide tables showing temperature versus voltage drop.

The M100 TJ1 / TK1 measures this voltage change and converts it to an output signal that corresponds to the temperature being monitored. The output from the M100-TJ1/TK1 is not linearised

Thermocouple temperature measurement is used in a variety of applications, including monitoring of temperature of furnaces etc.

The M100 thermocouple transducer is provided with automatic cold junction temperature compensation over the range 0-50 °C. Also provided is thermocouple break protection should the thermocouple leads break, the output from the transducer will go to its maximum or minimum output value, depending on which option is chosen at time of ordering.

TECHNICAL SPECIFICATION

INPUT

Type J Fe/Const. Min. range 0-185°C (min. span 10mV)
Max range 0-870 °C (max. span 50mV)
Type K NiCr/NiAl Min. range 0-245 °C (min. span 10mV)
Max. range 0-1230 °C (max. span 50mV)

Impedance >10kOhm

Thermocouple Break protection

Upscale or down scale optional

Cold junction

compensation

Automatic over the range 0-50 °C

Overload

10 x input continuous

OUTPUT

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

Load resistance 12/2.4/1.2/0.6 kOhm

Rated value volts 0-5 / 10 & 1-5 V

ADJUSTMENT

Zero ±2%

Span ±10%

AUXILIARY

A.C. Voltage 115 / 230 / 400 V (± 25% / 45-65 Hz / < 2VA)

D.C. Voltage 24 / 48 / 110 V (± 20% / galvanically isolated / < 3W)

WEIGHT & CASE SIZE Approx. 0.4 kg. case 55mm

NOTE

No isolation is provided between input and output

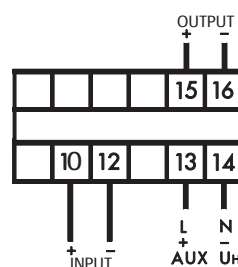
ORDERING INFORMATION

Product Code	Temp.	O/p.	Aux.	Freq.	Options
M100-TK1	0-500°C	1 mA	120V	60Hz	Up scale

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
4. Up or down scale break protection

CONNECTION DIAGRAMS



M100-TJ1 / TK1