Features

- THERMOCOUPLE K,J,E,N,T,R,S,L,U,B,C,D ,G

- (4 to 20) mA TWO WIRE OUTPUT

- USER OUTPUT ZERO and SPAN

- PC CONFIGURATION USING USB PORT

- LIVE DATA CAN BE VIEWED ON AN ANDROID PHONE OR TABLET

RS PRO THERMOCOUPLE DIN RAIL TRANSMITTER

RS Stock No.: 0458744

RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

Temperature Transmitter

RS PRO

The RS PRO article is a DIN rail mounted temperature transmitter.
It has been designed to accept most common thermocouple sensor inputs and provide the user with a standard two wire (4 to 20) mA output signal.
Galvanic isolation is provided between input and output and all temperature ranges are linear to temperature.
Designed for ease of use, our latest USB interface is fitted for quick and easy configuration.
Connect a standard USB cable between the product and your PC.
Our free configuration software will guide you through any changes you wish to make.
To further help save time, the product does not need to be wired to a power supply during the configuration process, it is powered via the USB interface from your PC.

TC SENSOR INPUT — SPECIFICATIONS @20°C

Type/ Function	Range/ Description	Accuracy/ Stability/ Notes
K	(–150 to 1370) °C	± 0.1% of full input range ± CJ error *1
J	(–100 to 1200) °C	
E	(–200 to 1000) °C	
N	(–200 to 1300) °C	
T	(–200 to 400) °C	± 0.2% of full input range ± CJ error *1
R	(–10 to 1760) °C	± 0.1% of full input range ± CJ error *1 over the range (800 to 1600) °C
S	(–10 to 1760) °C	± 0.1% of full input range ± CJ error *1 over the range (800 to 1600) °C
mV	(–10 to 70) mV	± 0.02 % of full input range
Thermal drift	(–20 to 50) °C	(± 0.15 °C/ °C at zero) + (± 0.1 °C/ °C at
	(50 to 70) °C	Typically as above
Any span may be selected; full accuracy is only guaranteed for spans greater 25°C		
Basic measurement accuracy includes the effects of calibration, linearization and repeatability		
*1 plus any sensor error		

COLD JUNCTION (CJ) SPECIFICATIONS @20°C

Type	Range °C	Accuracy/ Stability
Thermistor bead	(–40 to 85) °C	± 0.5 °C
Thermal drift	Zero at 20 °C	± 0.05 °C/ °C

OUTPUT — SPECIFICATIONS @20°C

Type/ Function	Range/ Description	Accuracy/ Stability/ Notes
Two wire current	(4 to 20) mA	(mA output/2000) or 5 uA (Whichever is the greater)
Thermal drift	Zero at 20°C	2 uA /°C
Maximum output current	21.5 mA	In high burnout condition
Minimum output current	< 3.9 mA	In low burnout condition
Loop voltage effect		0.2 uA / V
Maximum output load	[(V supply – 10)/20] KΩ	700 Ω @ 24 V DC
Loop supply	(10 to 30) V DC	SELV
Power		< 1 W full power
Thermal stability		± 2 uA/ °C

USB USER INTERFACE

Type/ Function	Range/ Description	Notes
Configuration hardware		USB A to mini B lead
Configuration software	USBSpeedLink	
Sensor configuration	Sensor type	Thermocouple list
	Temperature range for (4 to 20) mA retransmission	°C or °F
	Sensor offset	±10 °C or ±18°F
	Burnout current	Upscale, downscale or user set
Pre-set temperature (diagnostics)	Any within sensor range	°C or °F
Pre-set output current (diagnostics)	Any within output range	mA
Type/ Function	Range/ Description	Notes
Tag		20 characters
Button function	Active range	On, off
Read live data	Temperature Output	°C or °F mA
Save/ open configuration	To/ from PC file	

ANDROID USER INTERFACE

Type/ Function	Range/ Description	Accuracy/ Stability/ Notes
Hardware	USB Lead	OTG plus A to Mini B
Software	USBView	
Read live data	Input signal Output value	°C, °F mA

USER PUSH BUTTON INTERFACE

Function	Description
Active range	Range 4 mA and 20 mA points against live input

GENERAL

Function	Description
Responce time	500 ms to 70& of final value
Start-up time	8 s
Warm-up time	120 s to full accuracy
Default configuration	Type K (0 to 1000) °C, upscale burnout, 0 °C offset, active range buttons
LED (red)	If mA output < -0.1% or > 100.1 % LED ON
Protection	Reverse connection

ENVIRONMENTAL

Function	Description
Ambient temperature	Operating (-30 to 70) °C Storage (-40 to 85) °C
Ambient humidity	Operating/Storage (10 to 90) %RH non-condensing
Protection requirement	Device must be installed in an enclosure offering >IP65 Protection
USB configuration ambient	(10 to 30) °C

MECHANICAL

Function	Description
Dimensions	12.5 mm width, 56.4 mm depth from rail, 90 mm height
Enclosure	DIN rail mount
Material	Polymide 6.6 self-extinguishing: Grey
Connections	Screw terminals 2.5 mm wire maximum
Weight	60 g approximate

APPROVALS

EMC	BS EN 61326: Note - Sensor input wires to be less than 30 m to comply
Ingress protection	BS EN 60529
RoHS Directives 2 + 3	2011/65/EU & EU 2015/863, and the UK designated standards

12,50

90,00

56,40