

# 2-WIRE RTD TRANSMITTER DIN RAIL

Inputs : Resistance thermometers (RTD), resistance

Input selection : Via PC software

High performance, high reliability

The slim housing with 12.5 mm wide for DIN rail mounting



## APPLICATION AREAS

- DIN rail temperature transmitter to convert RTD input signals into a scalable 4 to 20 mA analog output signal
- Inputs : Resistance thermometers (RTD) Resistance
- Installation on DIN rail

## PERFORMANCE

- User programmable with PC based utility software for various input signals
- 2-wire technology, 4~20 mA analog output
- High accuracy over total ambient temperature range
- An internal temperature sensor for active temperature compensation
- Wide voltage supply range
- User programmable measurement range, unit, bias, preset output, etc
- No external power supply for configuration with USB interface Simple and user friendly software
- Expanded resistance input (max 5KΩ)

# 2-WIRE RTD TRANSMITTER

## DIN RAIL

### SPECIFICATIONS

All specifications at ambient of 25 °C, 24VDC unless specified otherwise

#### INPUT

Input type	RTD	Pt100, Pt500, Pt1000, Cu53, Ni100, Ni500, Ni1000
Resistance		0~400 Ω, 0~2000 Ω, 0~5000 Ω
Range limits		See Table 1
RTD excitation		0.420 mA (0.2 mA for 0~5000 Ω)
Cold junction compensation		Automatic (for thermocouples)
Underranging		Linear upto 3.6mA
Overranging		Linear upto 22mA

#### SENSOR BREAK DETECTION

Preset output	Upscale ~ 22 mA Downscale ~ 3.6 mA
---------------	---------------------------------------

#### OUTPUT

Output signal	4~20 mA
Load	Max (V power supply - 7.5V) / 0.0208A
Resolution	0.3 μA
Response time	Approx 500 ms
Switch on delay	≤ 5s
Input/output relation	TC : Temperature linear RTD : Temperature linear Voltage : Linear Resistance : Linear
Input/output isolation	1800 VAC, 1 minute

#### ACCURACY

Accuracy	See Table 1
Temperature coefficient of accuracy	See Table 1
Lead resistance effect	
Thermocouple	2μV/Ω, loop resistance
Pt100, 3-wire	0.1°C/Ω, individual lead resistance
Supply voltage effect	± 0.001% of span / V
Supply ripple effect, 50/60hz, 5 Vp - p	± 0.005% of span
Long term stability	≤ 0.05% / year
CJC error	± 0.5 °C
Common-mode rejection ratio (CMRR)	>120db

#### POWER SUPPLY

Supply voltage	7.5 to 48 VDC
Reverse polarity	Protected

#### ENVIRONMENTAL CONDITIONS

Ambient, storage	-40 to 85 °C (-40 to 185 °F)
Ambient, operation	-40 ~ 85 °C
Relative humidity	0 ~ 95%

#### ENCLOSURE

Dimensions (in mm)	100(H) x 12.5(W) x 114(D)
MOC	Nylon 6 (PA66)
Mounting	Din rail
Weight	Approx. 90g
Protection	IP20

#### PROGRAMMABLE PARAMETERS \*

List of parameters	Input type Unit Sensor break detection Offset for PV
--------------------	---

\* USB configurator DCC501 USB to serial converter can be used to program the SCC622 transmitter

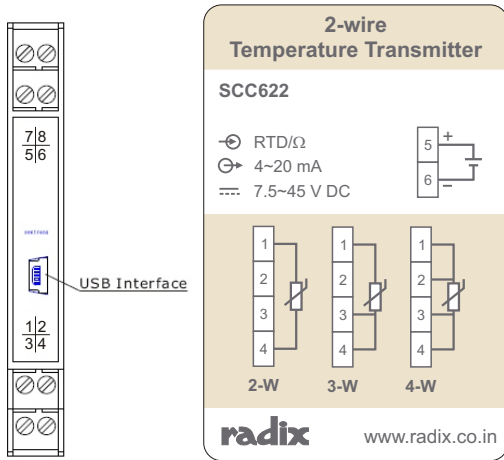
# 2-WIRE RTD TRANSMITTER DIN RAIL

TABLE 1

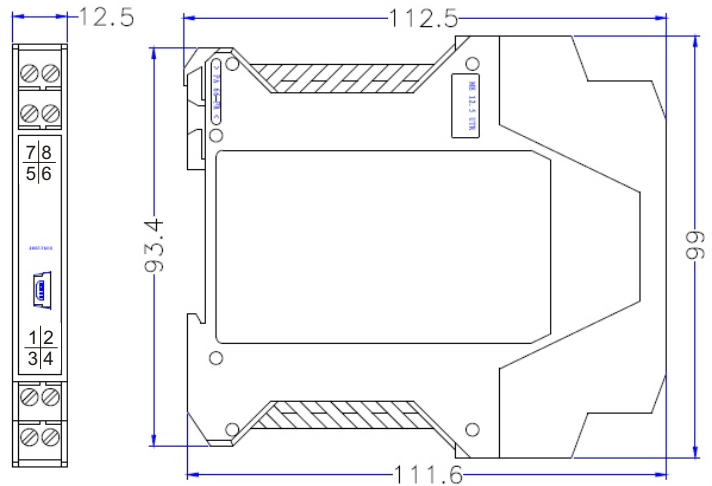
SENSOR / INPUT	RANGE LIMITS		MINIMUM SPAN (°C)	ACCURACY AT 25 °C (°C / EU)	TEMPERATURE COEFFICIENT OF ACCURACY
	LOW SCALE	HIGH SCALE			
Pt100	-200 °C	850 °C	10 °C	± 0.2 °C or 0.08% of span	0.003 % of span per °C
Pt500	-200 °C	250 °C	10 °C	± 0.5 °C or 0.20% of span	0.060 % of span per °C
Pt1000	-200 °C	250 °C	10 °C	± 0.3 °C or 0.12% of span	0.036 % of span per °C
Ni100 (6180ppm/K)	-60 °C	180 °C	10 °C	± 0.2 °C or 0.08% of span	0.003 % of span per °C
Ni500 (6180ppm/K)	-60 °C	180 °C	10 °C	± 0.5 °C or 0.20% of span	0.060 % of span per °C
Ni1000 (6180ppm/K)	-60 °C	150 °C	10 °C	± 0.3 °C or 0.12% of span	0.036 % of span per °C
Cu53	-50 °C	150 °C	10 °C	± 0.2 °C or 0.08% of span	0.003 % of span per °C
0 to 400 Ω	0 Ω	400 Ω	10 Ω	± 0.1 Ω or 0.08% of span	0.003 % of span per °C
0 to 2000 Ω	0 Ω	2000 Ω	20 Ω	± 1.5 Ω or 0.12% of span	0.060 % of span per °C
0 to 5000 Ω	0 Ω	5000 Ω	100 Ω	± 7.5 Ω or 0.20% of span	0.036 % of span per °C

Accuracy specified is for 2,3 and 4-wire RTD & resistance inputs. For 2-wire, lead resistance is taken as '0' ohms.

ELECTRICAL CONNECTIONS



DIMENSIONS



PROGRAMMING OF INSTRUMENT VIA USB CONFIGURATOR

ORDERING INFORMATION

ITEM	MODEL	ORDER CODE
2-WIRE RTD TRANSMITTER, DIN RAIL	SCC622	2487
USB TO SERIAL CONVERTER *	DCC501	2555

\* To be purchased separately.

