

2-WIRE, ISOLATED TEMPERATURE TRANSMITTER ——— SC601

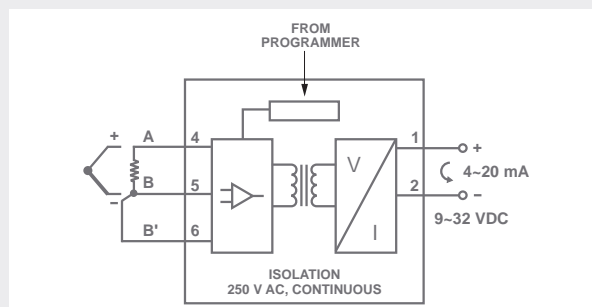
UNIVERSAL INPUT, PC-PROGRAMMABLE



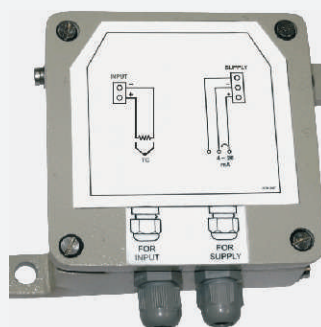
- True 2-wire operation
- Universal input :
TC : B, E, J, K, N, R, S, T
RTD : Pt100, Pt50, Pt200, Cu53
0~50 mV, 0~100mV, 0~500mV, 0~1V
- 0.1% linearisation accuracy
- Software calibration - no trimpots
- Upscale/downscale selection
- 9~32 V DC loop supply
- 4~20 mA or 20~4 mA selection
- User programmable by an RS-232 interface cable connected to PC

SC601 is a programmable, microprocessor-based temperature transmitter. It has a universal input that accepts all the common RTD and thermocouple inputs. SC601 can be easily configured for input type, range, etc.

CONNECTION DIAGRAM



FIELD MOUNT ENCLOSURE



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TABLE 1

SENSOR / INPUT	RANGE LIMITS (°C / EU)		RANGE IN WHICH ACCURACY IS SPECIFIED		TYPICAL ACCURACY AT 30 °C (°C / % SPAN)	WORST CASE ACCURACY (°C / % SPAN)	MIN SPAN (°C / mV)
	LOW SCALE	HIGH SCALE	LOW SCALE	HIGH SCALE			
Pt - 6% Rh / Pt - 30% RH (B)	400	1820	400	1820	± 5	± 6	400 °C
Chromel / Constantan (E)	-270	1000	0	1000	± 2	± 3	100 °C
Iron / Constantan (J)	-210	760	0	760	± 2	± 3	100 °C
Chromel / Alumel (K)	-270	1372	-50	1200	± 2	± 3	100 °C
Nicrosil / Nisil (N)	-270	1300	-50	1200	± 2	± 3	100 °C
Pt / Pt - 13% Rh (R)	0	1760	0	1760	± 4	± 6	400 °C
Pt / Pt - 10% Rh (S)	0	1760	0	1760	± 4	± 6	400 °C
Copper / Constantan (T)	-270	400	-200	400	± 2	± 4	100 °C
Pt100, 3-wire	-220	850	-200	400	± 0.2%	± 0.5%	40 °C
Cu53	0	180	0	180	± 1	± 2	40 °C
Linear voltage (0~50 mV)	0	50	0	50	± 0.1%	± 0.25%	5 mV
Linear voltage (0~100 mV)	0	100	0	100	± 0.1%	± 0.25%	10 mV
Linear voltage (0~500 mV)	0	500	0	500	± 0.2%	± 0.5%	50 mV
Linear voltage (0~1V)	0	1000	0	1000	± 0.2%	± 0.5%	100 mV

Note : Non-std inputs, such as 0 ~ 10 V DC, 0 ~ 100 V DC, etc. available on request

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

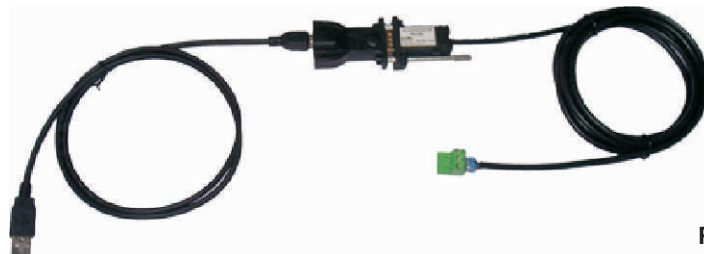
<p>INPUT Input type</p> <p>Thermocouple : B, E, J, K, N, R, S, T RTD : Pt100, Pt50, Pt200, Cu53 Linear : 0~50 mV, 0~100 mV, 0~500 mV, 1 V</p> <p>Range</p> <p>See Table 1</p> <p>MONITORING Sensor break detection Upscale current Downscale current</p> <p>20~24 mA 3.7~4 mA</p> <p>OUTPUT Current, selectable Permissible load Current limit</p> <p>4~20 mA, 20~4 mA 1 Kohms @ 32 VDC 20~22 mA</p> <p>ACCURACY Linearity & calibration Cold junction compensation Temperature effect on accuracy Supply voltage effect Supply ripple effect, 50/60 hz, 5 Vp - p Common-mode rejection ratio (CMRR) Lead resistance effect Thermocouple Pt100, 3-wire</p> <p>2 μV/ , loop resistance 0.1°C/ , individual lead resistance</p> <p>POWER SUPPLY Supply voltage</p> <p>9 to 32 VDC loop supply</p> <p>ISOLATION Between input & loop supply</p> <p>1500 V AC RMS / 1 minute 250 V AC RMS, continuous</p> <p>CALIBRATION Zero & span</p> <p>Through PC Configurator</p>	<p>TEMPERATURE, HUMIDITY Ambient, storage Ambient, operation Relative humidity</p> <p>-22 ~ +85 °C 0 ~ 60 °C 0 ~ 95%</p> <p>ENCLOSURE - DINRAIL Material Dimensions (in mm) Mounting Connection, single/ stranded wires Weight Protection</p> <p>ABS plastic 80(H) x 25(W) x 85(D) Snap on for 35 mm DIN rail to DIN 46277 2.5 mm², AWG 14 < 200 grams IP 20</p> <p>ENCLOSURE - FIELDMOUNT Material Dimensions (in mm) Mounting Connection, single/ stranded wires Weight Protection</p> <p>Aluminium alloy 95(H) x 95(W) x 50(D) Surface 2.5 mm², AWG 14 500 grams IP 54</p>
<p>PROGRAMMABLE PARAMETERS</p>	
<p>Input</p> <p>Thermocouple : B, E, J, K, N, R, S, T RTD : Pt100, Pt50, Pt200, Cu53 Linear : 0~50 mV, 0~100 mV, 0~500 mV, 1 V</p> <p>Unit</p> <p>°C, °F, EU</p> <p>Input scale</p> <p>-1999 to 9999</p> <p>Output scale</p> <p>4.0~20.0</p> <p>Preset current</p> <p>20 to 22 mA</p> <p>Sensor break</p> <p>Upscale/Downscale</p> <p>Output type</p> <p>4~20, 20~4 mA</p> <p>Digital filter</p> <p>OFF, 1(min) ~ 10(max)</p>	

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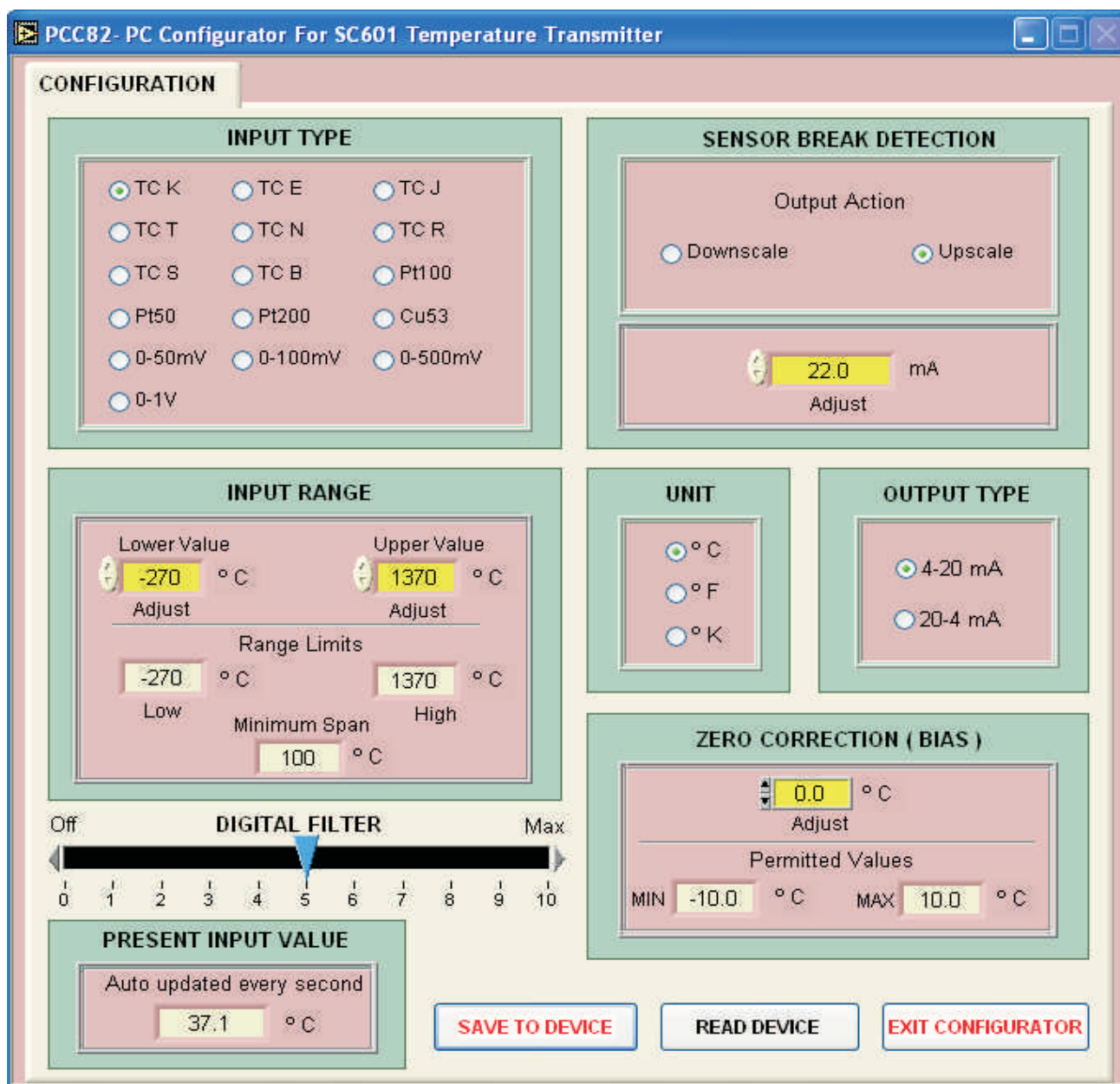
UNIVERSAL INPUT, PC-PROGRAMMABLE

PCC82 - PC CONFIGURATOR FOR SC601

SC601 can be configured using the PC Configurator PCC82. This can be connected to the USB port of any computers. PCC82 is supplied with an installable software on 1 CD.



PCC82 - with USB adaptor



The screenshot shows the PCC82 - PC Configurator For SC601 Temperature Transmitter software interface. The window title is "PCC82 - PC Configurator For SC601 Temperature Transmitter". The main area is titled "CONFIGURATION" and contains several panels:

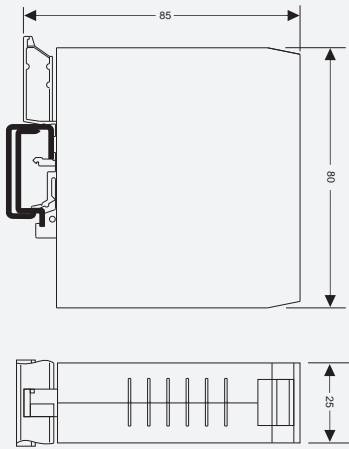
- INPUT TYPE:** Radio buttons for TC K (selected), TC E, TC J, TC T, TC N, TC R, TC S, TC B, Pt100, Pt50, Pt200, Cu53, 0-50mV, 0-100mV, 0-500mV, and 0-1V.
- SENSOR BREAK DETECTION:** "Output Action" with radio buttons for Downscale and Upscale (selected). Below is a slider set to 22.0 mA with an "Adjust" button.
- INPUT RANGE:** "Lower Value" slider at -270 °C and "Upper Value" slider at 1370 °C, both with "Adjust" buttons. Below are "Range Limits" with "Low" at -270 °C and "High" at 1370 °C. "Minimum Span" is set to 100 °C.
- UNIT:** Radio buttons for °C (selected), °F, and °K.
- OUTPUT TYPE:** Radio buttons for 4-20 mA (selected) and 20-4 mA.
- ZERO CORRECTION (BIAS):** Slider set to 0.0 °C with an "Adjust" button. Below are "Permitted Values" with "MIN" at -10.0 °C and "MAX" at 10.0 °C.
- DIGITAL FILTER:** A slider from 0 to 10, with a blue triangle pointing to 5. Labels "Off" and "Max" are at the ends.
- PRESENT INPUT VALUE:** A box showing "Auto updated every second" and a value of 37.1 °C.

At the bottom right, there are three buttons: "SAVE TO DEVICE", "READ DEVICE", and "EXIT CONFIGURATOR".

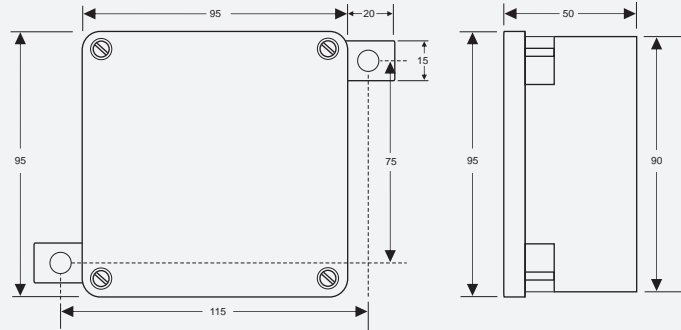
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DIN RAIL ENCLOSURE



FIELD MOUNT ENCLOSURE



DEFAULT CONFIGURATION

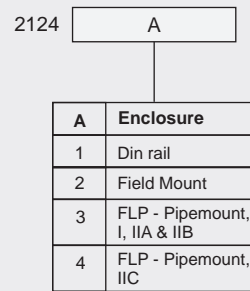
The following default configuration will be supplied, unless a user specifies and orders a different configuration (see below)

Input	' K ' TC
Range	0 to 1200
Unit	°C
Sensor break	Upscale
Preset current	22 mA
Digital filter	4

Note : To change the default configuration, the user will need the PC Configurator PCC82.

ORDERING INFORMATION

2-WIRE, ISOLATED TEMPERATURE TRANSMITTER SC601



USER SPECIFIED CONFIGURATION

If the user wishes the instrument to be supplied with a configuration specified by him, he must give the following information while ordering :

Parameter	User to fill	Suggested values
Input		-
Range low scale		-
Range high scale		-
Unit		°C
Sensor break		upscale
Preset current(mA)		22 mA
Digital filter		4

PC CONFIGURATOR

PCC82

Order code 2230

Product url : www.radix.co.in/tx.htm



SALES INQUIRIES

1800-22-radix
1800-22-7234

www.radix.co.in

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Mumbai - 400 053, India
Tel : + 91 22 26730101 • Fax : + 91 22 26731891
Email : sales@radix.co.in • www.radix.co.in

BANGALORE C : 0-9341063830
BARODA C : 0-9376215882
CHANDIGARH C : 0-9316460869
CHENNAI C : 0-9381056345
CHHATISGARH C : 0-9329418246
COIMBATORE C : 0-9380284497
GOA C : 0-9371439090

GWALIOR C : 0-9329126120
HP C : 0-9316460869
HYDERABAD C : 0-9391053480
INDORE C : 0-9301995060
KARNATAKA C : 0-9341063831
KERALA C : 0-9341273814
NAGPUR C : 0-932245543

NEW DELHI C : 0-9312600076
T : 011-25786350
ORISSA C : 0-9337002344
PUNE C : 0-9371113404
T : 020-24479759
PUNJAB C : 0-9316460869