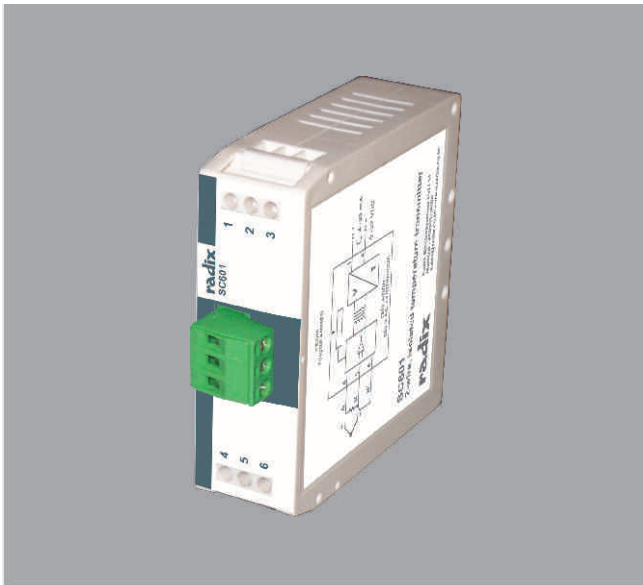


2-WIRE, ISOLATED TEMPERATURE TRANSMITTER ——— SC601

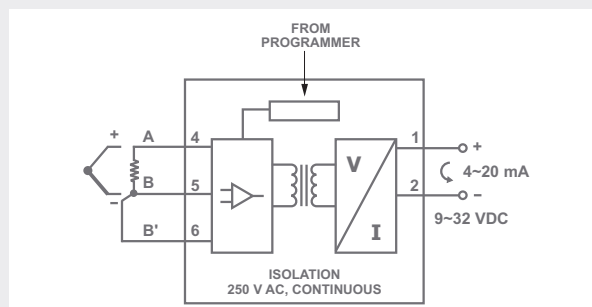
UNIVERSAL INPUT, PC-PROGRAMMABLE



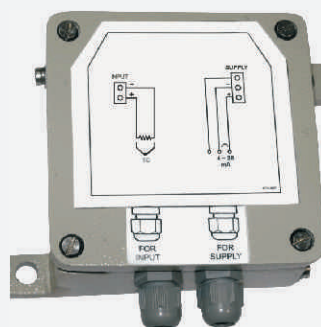
- True 2-wire operation
- Universal input :
 - TC : B, E, J, K, N, R, S, T
 - RTD : Pt100, Pt50, Pt200, Cu53
 - 0~50 mV, 0~100mV, 0~500mV, 0~1V
- 0.1% linearisation accuracy
- Software calibration - no trimpots
- Upscale/downscale selection
- 9~32 V DC loop supply
- 4~20 mA or 20~4 mA selection
- User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



2-WIRE, ISOLATED TEMPERATURE TRANSMITTER — SC601

UNIVERSAL INPUT, PC-PROGRAMMABLE

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

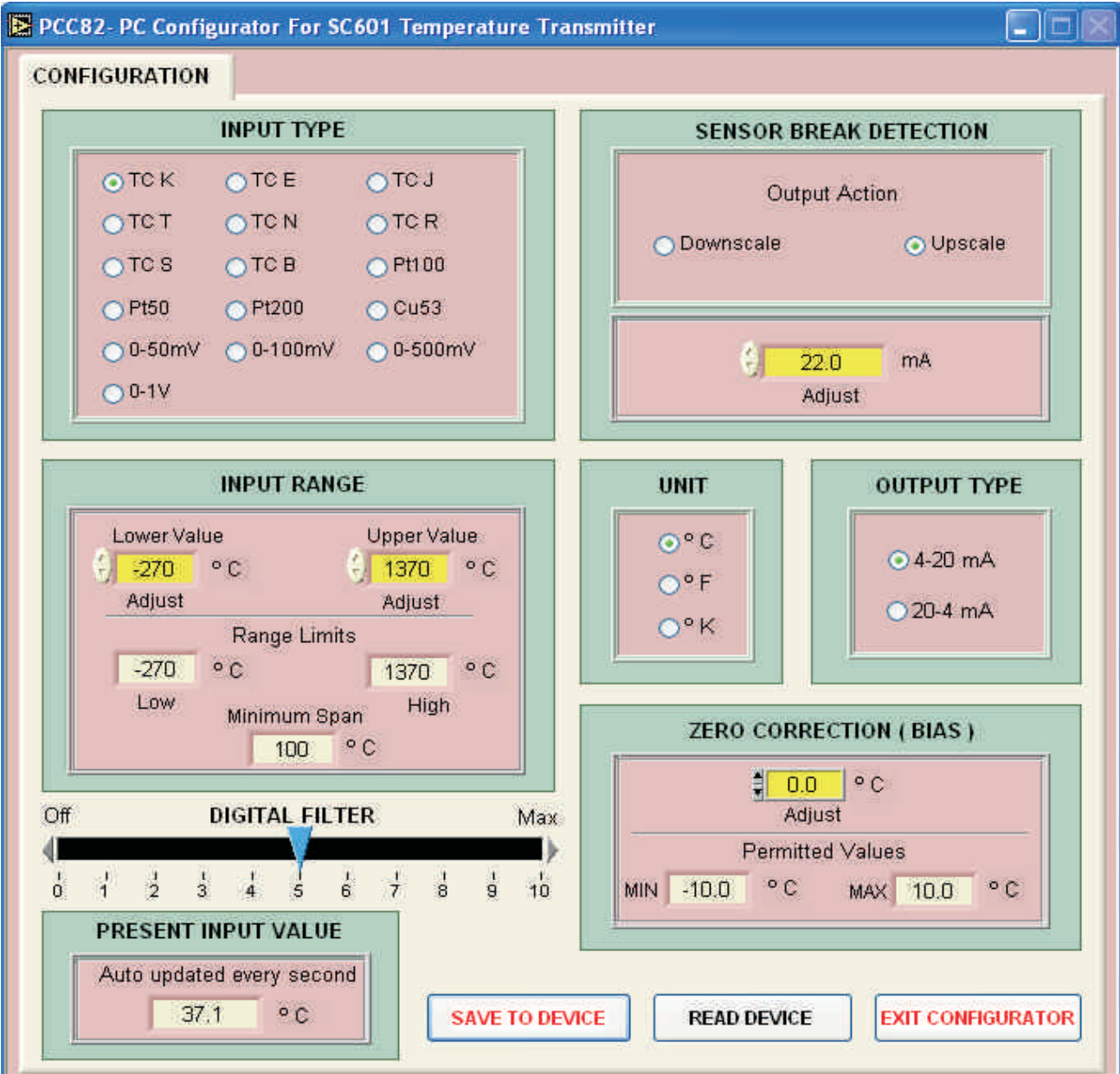
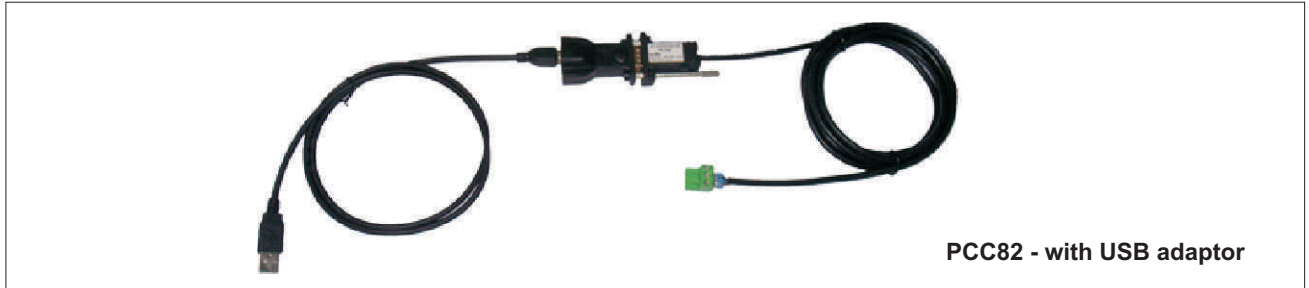
INPUT Input type Range	Thermocouple : B, E, J, K, N, R, S, T RTD : Pt100, Pt50, Pt200, Cu53 Linear : 0~50 mV, 0~100 mV, 0~500 mV, 1 V See Table 1	TEMPERATURE, HUMIDITY Ambient, storage Ambient, operation Relative humidity	-22 ~ +85 °C 0 ~ 60 °C 0 ~ 95%
MONITORING Sensor break detection Upscale current Downscale current	20~24 mA 3.7~4 mA	ENCLOSURE - DINRAIL Material Dimensions (in mm) Mounting	ABS plastic 80(H) x 25(W) x 85(D) Snap on for 35 mm DIN rail to DIN 46277 2.5 mm ² , AWG 14
OUTPUT Current, selectable Permissible load Current limit	4~20 mA, 20~4 mA 1 Kohms @ 32 VDC 20~22 mA	ENCLOSURE - FIELDMOUNT Material Dimensions (in mm) Mounting Connection, single/ stranded wires Weight Protection	Aluminium alloy 95(H) x 95(W) x 50(D) Surface 2.5 mm ² , AWG 14 500 grams IP 54
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	See Table 1 1 °C 0.5% of span / 25 °C 0.001% of span / V 0.005% of span > 120 db 2 V/ loop resistance 0.1 C/ individual lead resistance	PROGRAMMABLE PARAMETERS Input Unit Input scale Output scale Preset current Sensor break Output type Digital filter	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 C, F, EU -1999 to 9999 4.0~20.0 20 to 22 mA Upscale/Downscale 4~20, 20~4 mA OFF, 1(min) ~ 10(max)
POWER SUPPLY Supply voltage	9 to 32 VDC loop supply		
ISOLATION Between input & loop supply	1500 V AC RMS / 1 minute 250 V AC RMS, continuous		
CALIBRATION Zero & span	Through PC Configurator		

2-WIRE, ISOLATED TEMPERATURE TRANSMITTER — SC601

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 - PC Configurator For SC601 Temperature Transmitter

CONFIGURATION

INPUT TYPE

- TC K
- TC E
- TC J
- TC T
- TC N
- TC R
- TC S
- TC B
- Pt100
- Pt50
- Pt200
- Cu53
- 0-50mV
- 0-100mV
- 0-500mV
- 0-1V

SENSOR BREAK DETECTION

Output Action

- Downscale
- Upscale

22.0 mA
Adjust

INPUT RANGE

Lower Value: -270 °C
Upper Value: 1370 °C

Range Limits: Low -270 °C, High 1370 °C
Minimum Span: 100 °C

UNIT

- °C
- °F
- °K

OUTPUT TYPE

- 4-20 mA
- 20-4 mA

DIGITAL FILTER

Off | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Max

ZERO CORRECTION (BIAS)

0.0 °C
Adjust

Permitted Values: MIN -10.0 °C, MAX 10.0 °C

PRESENT INPUT VALUE

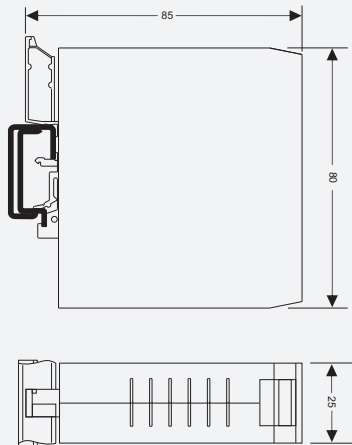
Auto updated every second
37.1 °C

SAVE TO DEVICE | READ DEVICE | EXIT CONFIGURATOR

2-WIRE, ISOLATED TEMPERATURE TRANSMITTER ——— SC601

UNIVERSAL INPUT, PC-PROGRAMMABLE

DIN RAIL ENCLOSURE



FIELD MOUNT ENCLOSURE

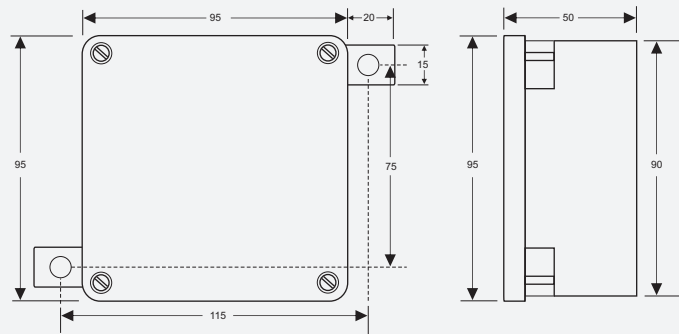


TABLE 2

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.

TABLE 3

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

ORDERING INFORMATION

2-WIRE, ISOLATED TEMPERATURE TRANSMITTER

SC601

ORDER CODE : 2124

Preferred Order Codes

	Input type	Range
2124 01	Universal	User Programmable (See Note 1)
2124 02	Pt100, 3-wire	0~100 °C
2124 03	Pt100, 3-wire	0~200 °C
2124 04	Pt100, 3-wire	0~300 °C
2124 05	Pt100, 3-wire	0~400 °C
2124 06	Cr/AI (K)	0~300 °C
2124 07	Cr/AI (K)	0~1200 °C
2124 08	Cr/AI (K)	0~600 °C
2124 09	Cr/AI (K)	0~900 °C

Notes :

- If user does not order the PC Configurator PCC82 :
 - User must specify input and range for SC601.
 - User will not be able to change input and range without the PCC82 configurator.
- Test & Cal report for SC601 will be for standard inputs and ranges (as decided by us) only, regardless of the input and range ordered.
- Test & Cal report for user - specified range & input can be supplied at an additional cost of Rs.500/- per pc.

Ordering Options

The following ordering options are available on request. Minimum order quantity and/or minimum order value may apply.

SC601 can be supplied factory configured for user - specified input type and range (See Table 3).

	Option	Details
1.	User specified input type	See Table 1
2.	User specified range	Lo scale Hi scale

PC CONFIGURATOR

PCC82

Order code 2230

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

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