



- Accuracy : $\pm 2\%$ RH, $\pm 0.5\text{ }^\circ\text{C}$
- Software calibration - no trim pots
- 20~32 V DC loop supply
- Dual 7-segment LCD display to show RH & T
- PC programmable
- RS485 / MODBUS RTU

SC808 is a microcontroller based, high performance RH+T RS485 module. Its high reliability industrial design offers some unique functions. The RH+T sensor is integral with the enclosure. It has an integral dual 4-digit LCD display. It is PC programmable using PC Configurator PCC82. Communication with PC possible through RS485 port using MODBUS RTU protocol.

CONNECTION DIAGRAM

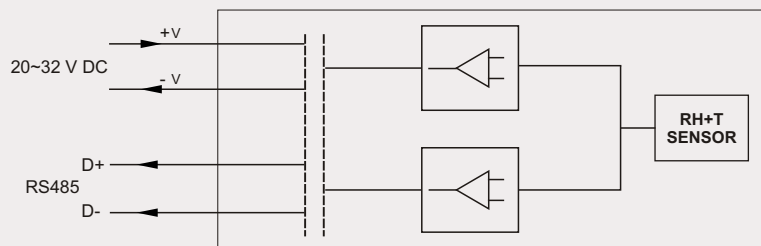


Fig 1

ISOLATED RS485, IP65, DUAL LCD DISPLAY

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

INPUT

Sensor type	Capacitive for RH, Semiconductor (Band gap) for temperature
Range limits	
Normal	0~100% RH, non-condensing -20~100 °C (-4~212 °F)
Maximum	-40~120 °C (-40~248 °F) (See fig.2)
Display	Dual 7-segment, 4-digit, 0.5" (12.7 mm) LCD
Standard Calibration	0~100% RH : 4~20 mA, 0~50 °C : 4~20 mA Other calibration ranges, eg. 25~95 %RH & 0~75 °C, can be programmed through PC using PC Configurator PCC82

ACCURACY

Linearity & calibration	± 2% RH, ± 0.5 °C
Temperature effect on accuracy	± 0.5% of span / 25 °C
Supply voltage effect	± 0.002% of span / V
Supply ripple effect, 50/60 hz, 5 Vp - p	± 0.005% of span

COMMUNICATION

Port	RS485
Protocol	MODBUS RTU
Slave ID	User Programmable (1~256)
Baudrate	User Programmable (2400, 4800, 7200, 9600, 19200, 38400, 57600)
Stop bit	User Programmable (1, 2)
Parity	User Programmable (off, odd, even)
Data format	Integer, Float

All communication parameters
program through PCC82 software

POWER SUPPLY

Supply voltage	20~32 V DC
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TEMPERATURE, HUMIDITY

Ambient, storage	-25 to +70 °C
Ambient, operation	-20 to +50 °C
Relative humidity	0 ~ 100% RH

MECHANICAL

SURFACE/WALL MOUNT

Dimensions	See fig.4
Cable gland	PG7, suitable for cable dia 3 to 6.5 mm

DUCT MOUNT

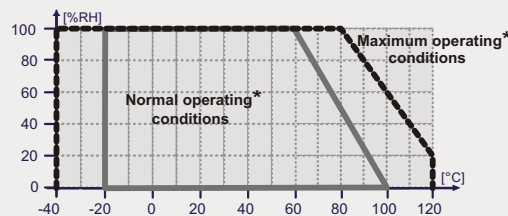
Dimensions	See fig.5
Process connection	½" BSP adjustable compression fitting
Cable gland	PG7, suitable for cable dia 3 to 6.5 mm

MOC

Enclosure	ABS plastic
Sensor tube	SS304
Filter	Sintered bronze
Protection	IP65, except sensor tube

OPERATING RANGE OF SENSOR

Fig 2



* Normal operating conditions : RH+T limits for continuous safe use
Maximum operating conditions : RH+T limits for use for short
periods of time without damage

ISOLATED RS485, IP65, DUAL LCD DISPLAY

PCC82 - PC CONFIGURATOR FOR SC808

SC808 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.

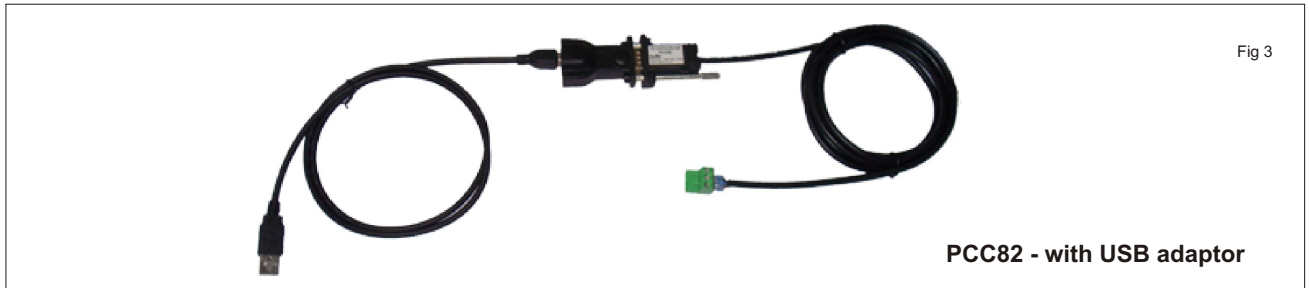


Fig 3

PCC82 - with USB adaptor

PCC82- v713.1 PC Configurator For RH+T Indicators - Advanced Version

radix®

CONFIGURATION CALIBRATION ADVANCED README

INPUT PARAMETERS

RELATIVE HUMIDITY

ZERO CORRECTION (BIAS) RESOLUTION

0.0 %RH
Adjust

Permitted Values

-10.0 %RH 10.0 %RH
MIN MAX

RESOLUTION: 1 0.1

TEMPERATURE

ZERO CORRECTION (BIAS) RESOLUTION

0.0 °C
Adjust

Permitted Values

-10.0 °C 10.0 °C
MIN MAX

RESOLUTION: 1 0.1

UNIT: °C °F

SERIAL COMMUNICATION

BAUD RATE DEVICE ID PARITY

57600 8 None

38400 Even

19200 Odd

STOP BITS

1 2

DATA FORMAT

Float Integer

9600

7200

4800

2400

RELATIVE HUMIDITY

0.0 %RH

TEMPERATURE

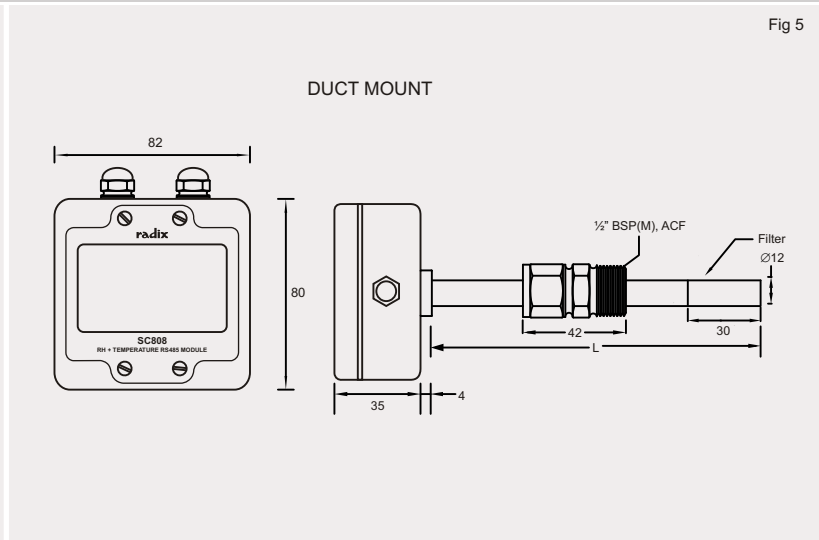
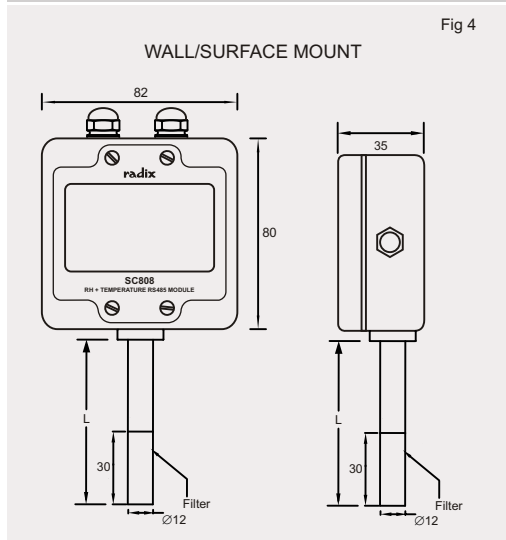
0.0 °C

SAVE TO DEVICE

READ DEVICE

EXIT CONFIGURATOR

DIMENSIONAL DETAILS



DEFAULT COMMUNICATION PARAMETERS

The default configuration shown in Table 1 will be supplied, unless a user specifies and orders a different configuration (see Table 2)

TABLE 1

Baudrate	9600
Parity	None
Stop bits	1
Data format	Float

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

USER SPECIFIED COMMUNICATION PARAMETERS

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

TABLE 2

Parameter	User to fill	Suggested values
Baudrate		
Parity		
Stop bits		1
Data format		Float

ORDERING INFORMATION

SC808 - Surface / Wall Mount will be supplied with the following standard specifications :

Immersion length (L)	70 mm (See Fig 4)
Filter	Sintered bronze
Sensor break	> 20 mA

ORDER CODE : 2341

Ordering Options

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

Option ID	Option details
1.	Customer specified immersion length (>70 mm)
2.	Remote sensor (upto 25 meters from instrument)
3.	User specified communication parameters
4.	SS wiremesh filter

SC808 - Duct Mount will be supplied with the following standard specifications :

Immersion length (L)	300 mm (See Fig 5)
Filter	Sintered bronze
Sensor break	> 20 mA

ORDER CODE : 2327

Ordering Options

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

Option ID	Option details
1.	Customer specified immersion length
2.	SS wiremesh filter
3.	User specified communication parameters

PC CONFIGURATOR - PCC82

Order code 2304



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