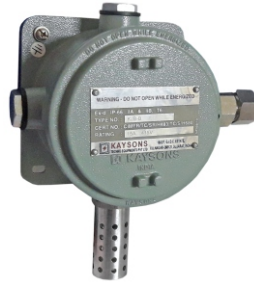


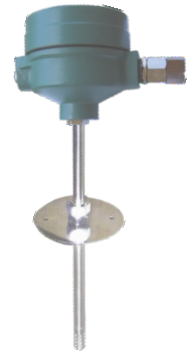
RH+TEMPERATURE TRANSMITTER



Flameproof surface mount with display



Flameproof surface mount without display



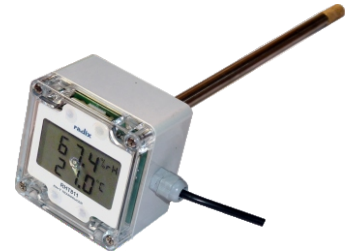
Flameproof duct mount without display



Surface mount



Surface mount with wiremesh filter



Duct mount

ABOUT RHT811

RHT811 is a microcontroller based, high performance RH+T transmitter. It can be factory configured for 2 x RH outputs, 2 x Temperature outputs, or 1 x RH + 1 x T output, RTD Pt100/Pt1000 sensor output. Its high reliability industrial design offers some unique functions. The RH+T transmitter is available in surface mount, duct mount and remote sensor versions. It has an integral dual 4-digit LCD display. It is PC programmable using PC Configurator DCC501. RS485 communication with MODBUS PROTOCOL is available.

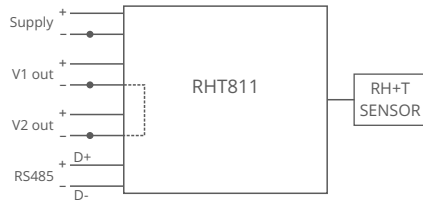
FEATURES

- 2x Analog outputs or 1xAnalog+Pt100/Pt1000 RTD output
- Accuracy : Upto $\pm 2\%$ RH
 $\pm 0.5\text{ }^{\circ}\text{C}$ for Band gap
 $\pm 0.3\text{ }^{\circ}\text{C}$ for Pt100, Pt1000 RTD
- Software calibration - no trimpots
- 18~30 V AC/DC supply
- Dual 7-segment LCD display to show RH & T
- PC programmable
- Optional RS485 communication with MODBUS PROTOCOL

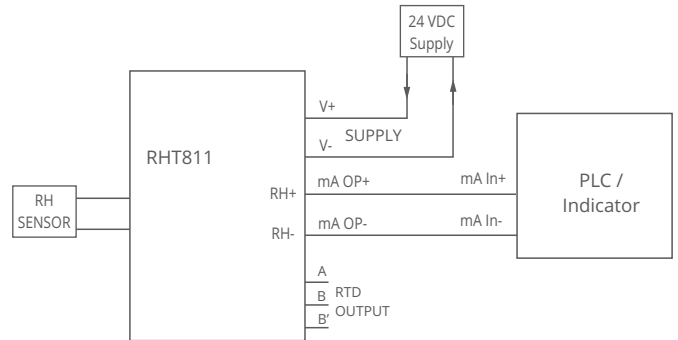
RH+ TEMPERATURE TRANSMITTER

CONNECTION DIAGRAM

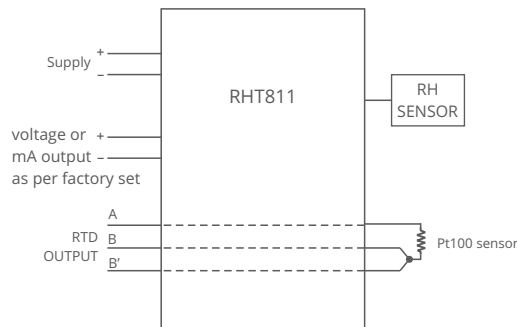
Voltage output for RH & T



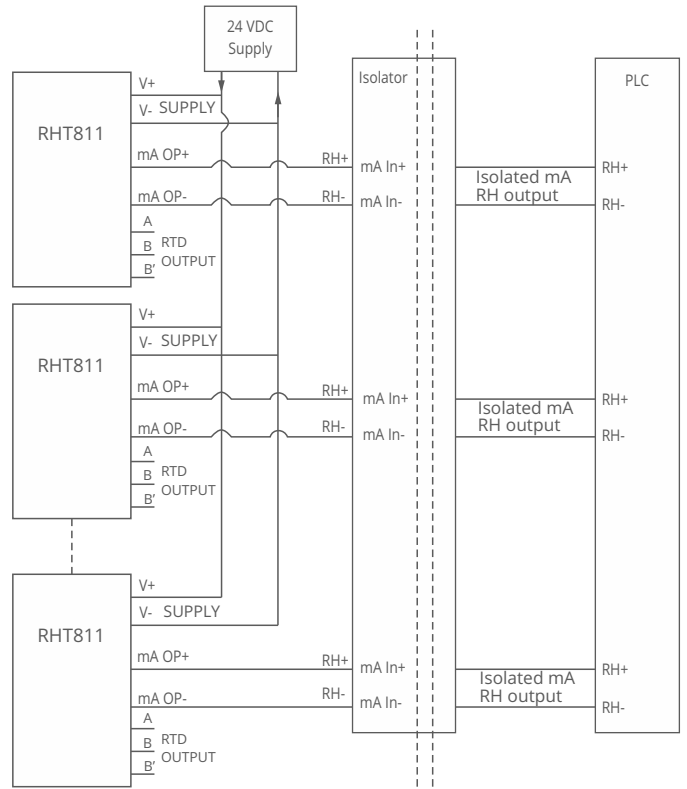
Single RHT811 connected to PLC / Indicator for 4~20mA output



Passive temperature output



More than one RHT811 connected to PLC / indicator for 4~20 mA output

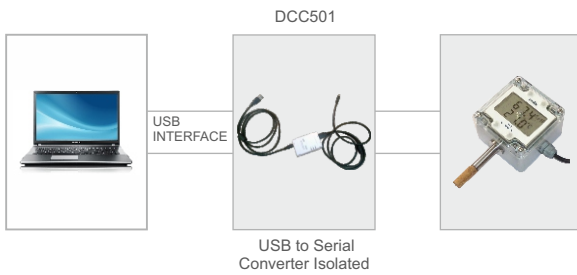


Note : It is necessary to use isolator for 4~20 mA output, if more than one instrument connected in loop

RH+ TEMPERATURE TRANSMITTER

PC CONFIGURATOR FOR RHT811

DCC501 USB to Serial Converter Isolated can be used to program the parameters. The Programmer DCC501 must be purchased separately.



OPERATING RANGE OF SENSOR

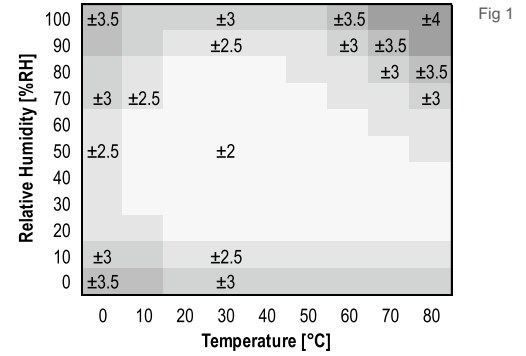


TABLE1 - MONITORING

Monitoring	0~10 VDC output
Underrange	0 VDC
Overrange	11 VDC
Upscale	10~12 VDC
Downscale	0 VDC

TABLE2 - MECHANICAL

Parameters	Flameproof surface mount with display	Flameproof surface mount without display	Flameproof duct mount without display	Surface mount	Duct mount
Dimensions (in mm)	See Fig 2	See Fig 3	See Fig 4	See Fig 5 & 6	See Fig 7
Enclosure housing	LM6, pressure die-cast	LM6, pressure die-cast	LM6, pressure die-cast	ABS plastic	ABS plastic
Protection	IP66	IP65	IP66	IP65	IP65
Cable gland	1/2" NPT threading gland	3/4" ET threading gland	3/4" ET threading gland	PG7, suitable for cable dia 3 to 6.5 mm	PG7, suitable for cable dia 3 to 6.5 mm
Certification	Flameproof for gas group I, IIA & IIB	Flameproof for gas group I, IIA & IIB	Flameproof for gas group I, IIA & IIB	-	-
Sensor housing Material	SS304 sensor tube	SS304	SS304 with adjustable flange	SS304 sensor tube or wiremesh filter	SS304 sensor tube with flange
Size	ø25mm, length 50mm	ø25mm, length 50mm	ø12mm, length 300mm	ø12mm, length 70mm	ø12mm, length 300mm

RH+ TEMPERATURE TRANSMITTER

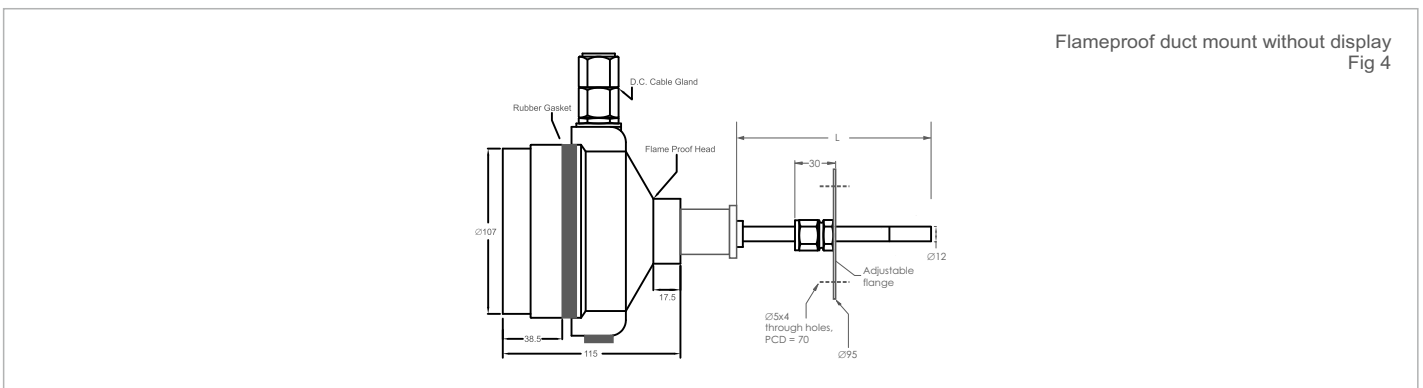
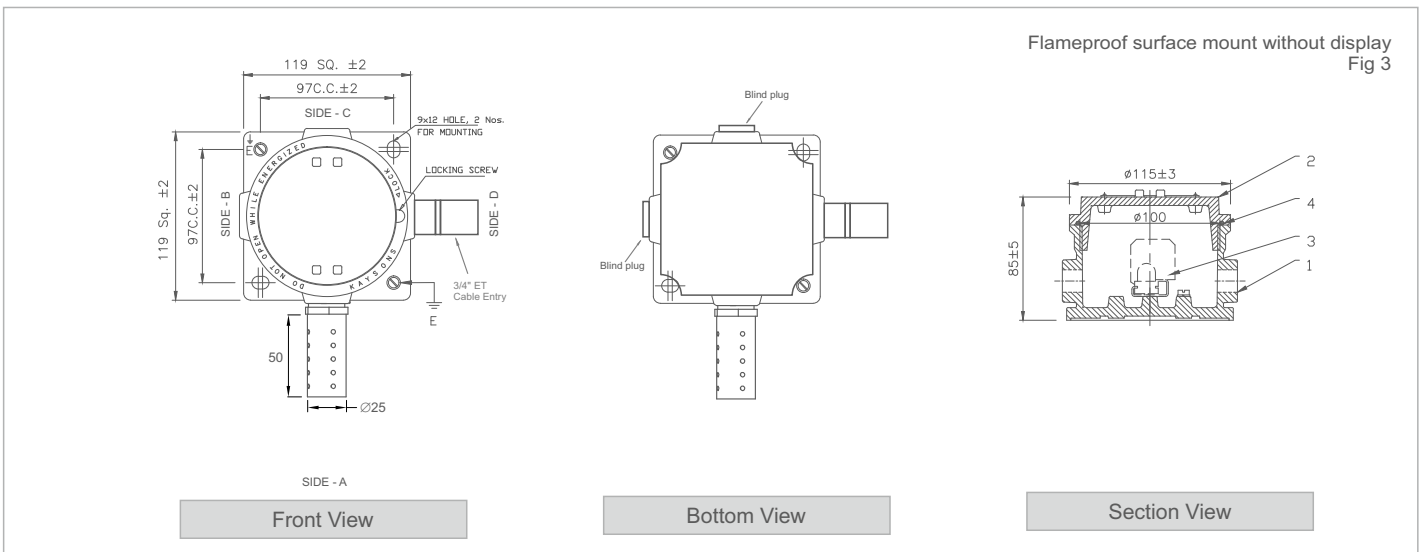
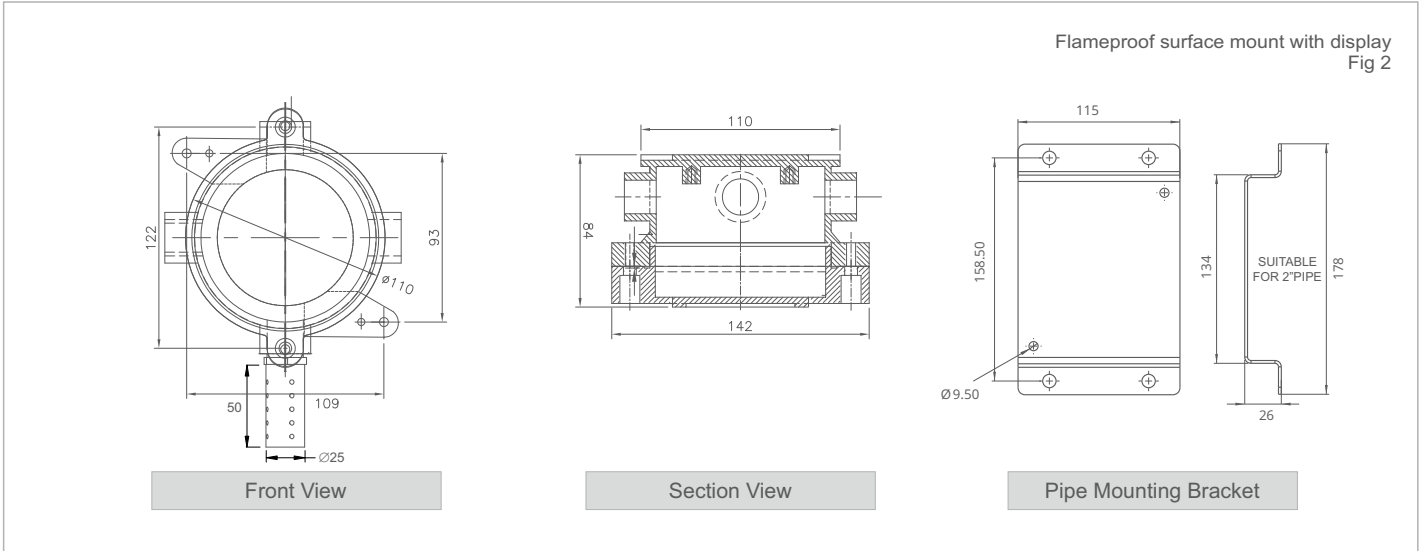
SPECIFICATIONS

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

INPUT Sensor type Range limits Normal Maximum Display Standard calibration		RH : Capacitive Temperature : Band gap or Pt100 class A RTD 0~100% RH, non-condensing -20~100 °C (-4~212 °F) -40~120 °C (-40~248 °F) (See fig.1) Dual 7-segment, 4-digit, 0.5" (12.7 mm) LCD 0~100% RH : 0~10 V DC, 0~50 °C : 0~10 V DC Other calibration ranges, eg. 25~95 %RH & 0~75 °C, can be programmed through PC using DCC501 Configurator
ACCURACY Linearity & calibration RH Temperature Temperature effect on accuracy Supply voltage effect Supply ripple effect, 50/60 hz, 5 Vp - p		± 2% RH & ± 3% RH ± 0.5 °C for Band gap ± 0.3 °C for Pt100/Pt1000 ± 0.5% of span / 25 °C ± 0.002% of span / V ± 0.005% of span
COMMUNICATION Port Protocol Slave ID Baud rate		RS485 MODBUS RTU User programmable (1~255) 9600
POWER SUPPLY Supply voltage		18~30 V AC/DC
ANALOG OUTPUTS No. of outputs Output type Standard Voltage Load for voltage output Current Load Non - standard Temperature sensor output		1 or 2 0~1 V DC, 0~5 V DC, 0~10 V DC / user specified > 10 kohms 1 x 4~20 mA* *Note : It is necessary to use isolator for 4~20 mA output, if more than one instrument connected in loop 560Ω at 24VDC Please specify Note : For EACH output, one of the Std or Non-standard outputs MUST be specified Pt100 or Pt1000 class A RTD sensor
MONITORING		Measurement circuit monitoring to NAMUR recommendation NE43 (See Table 1)
TEMPERATURE, HUMIDITY Ambient, storage Ambient, operation Relative humidity		-25 to +70 °C -20 to +50 °C 0 ~ 100% RH
MECHANICAL		See Table 2

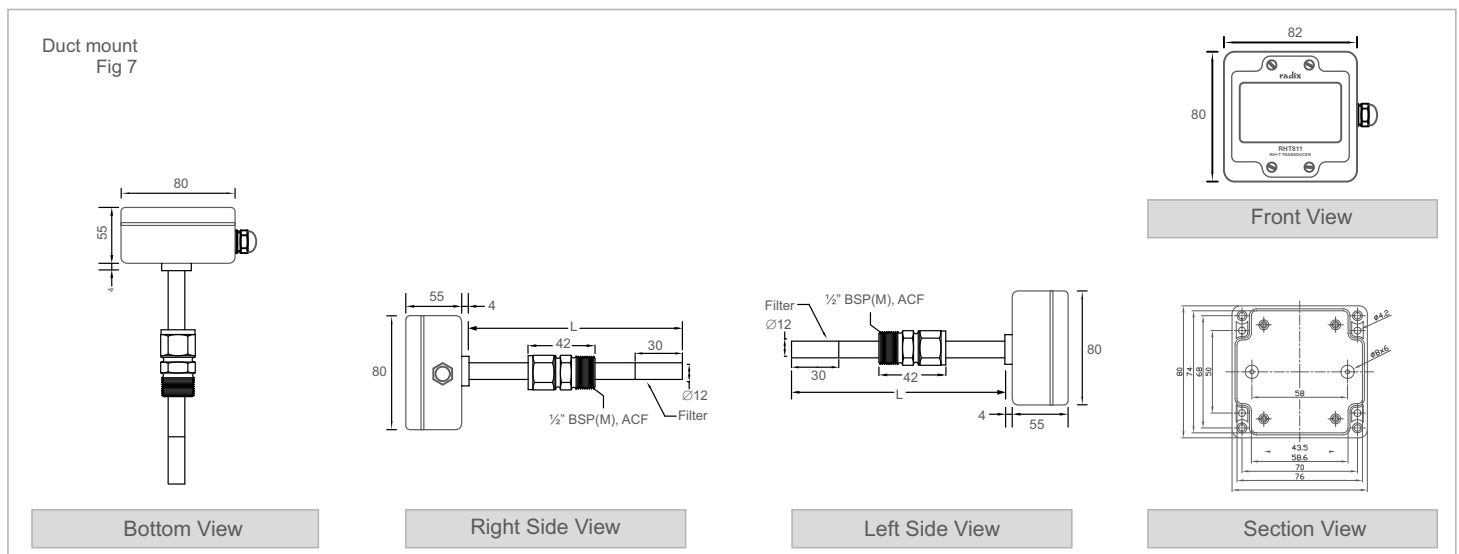
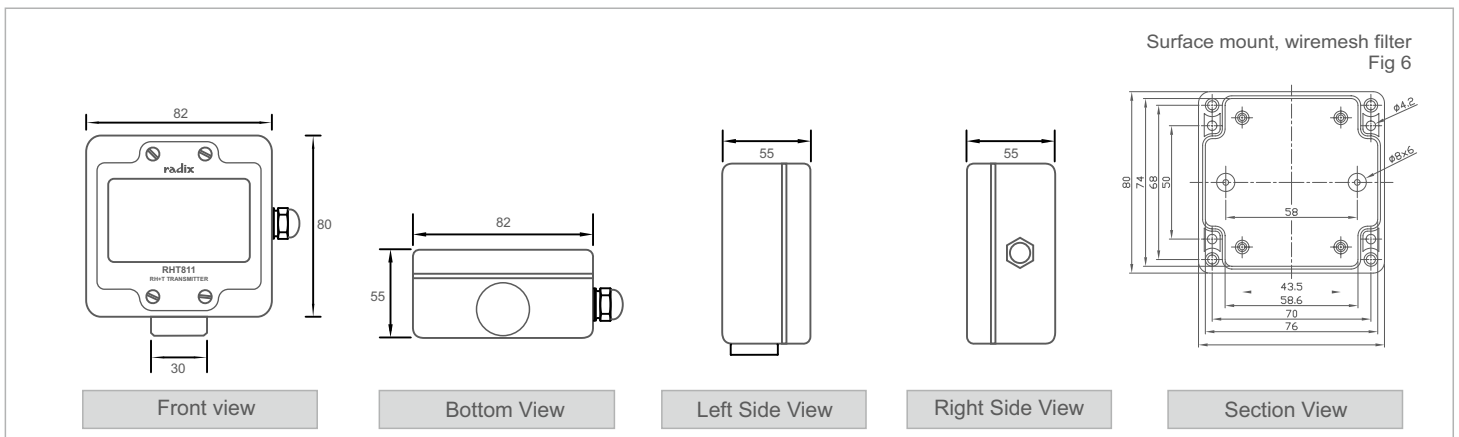
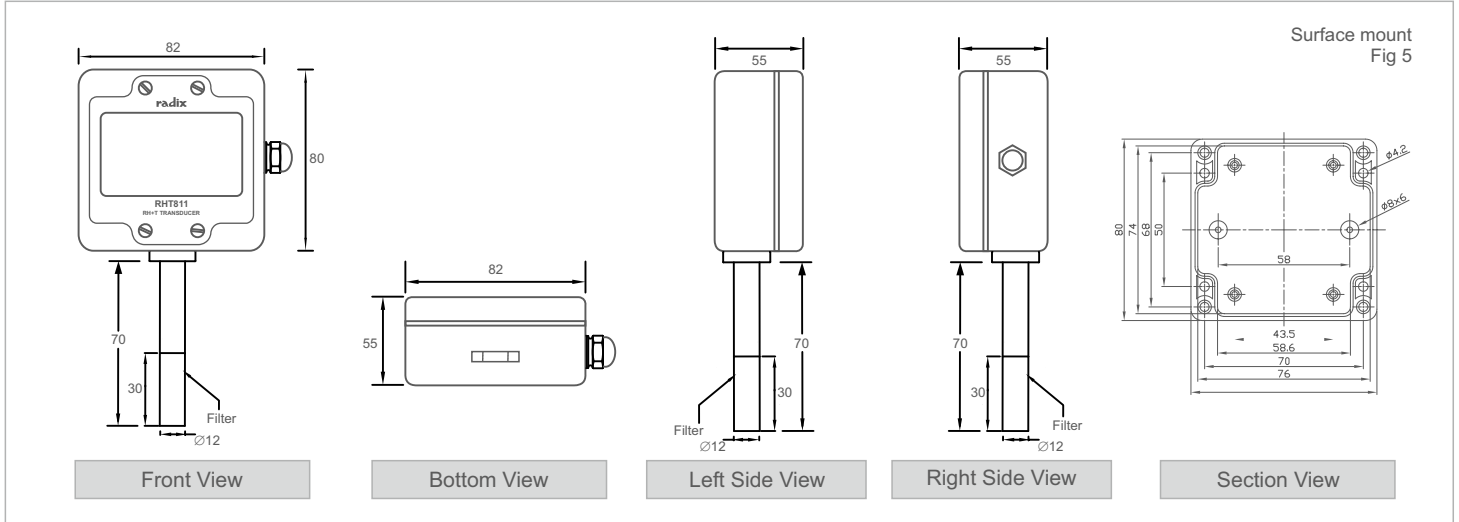
RH+ TEMPERATURE TRANSMITTER

DIMENSIONS mm



RH+ TEMPERATURE TRANSMITTER

DIMENSIONS mm



RH+ TEMPERATURE TRANSMITTER

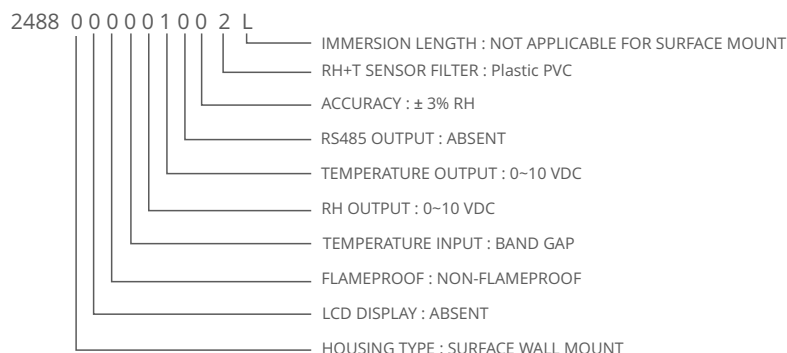
ORDERING INFORMATION

Example	2488	0	0	0	0	0	1	0		2		2488 0 0 0 0 1 0 2
Order Code	2488											
Housing Type		0										Surface wall mount
		1										Surface wall mount, wiremesh filter
		2										Duct mount with flange
		3										Duct mount with adjustable compression fittings
LCD Display		0										Absent
		1										Present
Flameproof			0									Non-flameproof
			1									Flameproof
Temperature Input				0								Band gap
				1								Pt100 RTD sensor
RH Output					0							0~10 VDC
					1							0~5 VDC
					2							0~1 VDC
					3							4~20 mA*
Temperature Output						0						None
						1						0~10 VDC
						2						0~5 VDC
						3						0~1 VDC
						4						Pt100 RTD
						5						Pt1000 RTD
RS485 Output							0					Absent
							1					present
Accuracy								0				± 3% RH
								1				± 2% RH**
RH+T Sensor Filter									0			Sintered bronze
									1			Stainless Steel
									2			Plastic PVC
Immersion Length for Duct Mount Sensor in mm										L		Default length is 300mm. User can specify a different length.

* It is necessary to use isolator for 4~20mA output, if more than one instrument connected in loop.

** for higher accuracy please contact sales

EXAMPLE



PC Configurators

Parameter	Model	Order Code	Communication
USB-to-Serial Converter	DCC501	2555	RS232
USB-to-RS485 Converter - Isolated	DCC505	2588	RS485

CAT#487R7/A

ENQUIRIES

Instruments: sales@radix.co.in
Sensors: sensors@radix.co.in
Gauges: gauges@radix.co.in
Automation: automation@radix.co.in
Level: level@radix.co.in

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