

RT - Room transmitter




RT transmitters are versatile room temperature and CO₂ transmitters for simple measuring applications in building automation. The transmitters can be equipped with relative humidity measurement.



The transmitters offer easy installation and adjustment, several different model options and outputs that can be configured separately for each measurement.

The transmitters are also available with Modbus RTU communication via the RS-485 connection.




The device commissioning is done by using MyProDual® smart phone application and MyTool Connect commissioning tool. Some of the basic settings can be also configured via bus in -MOD models.

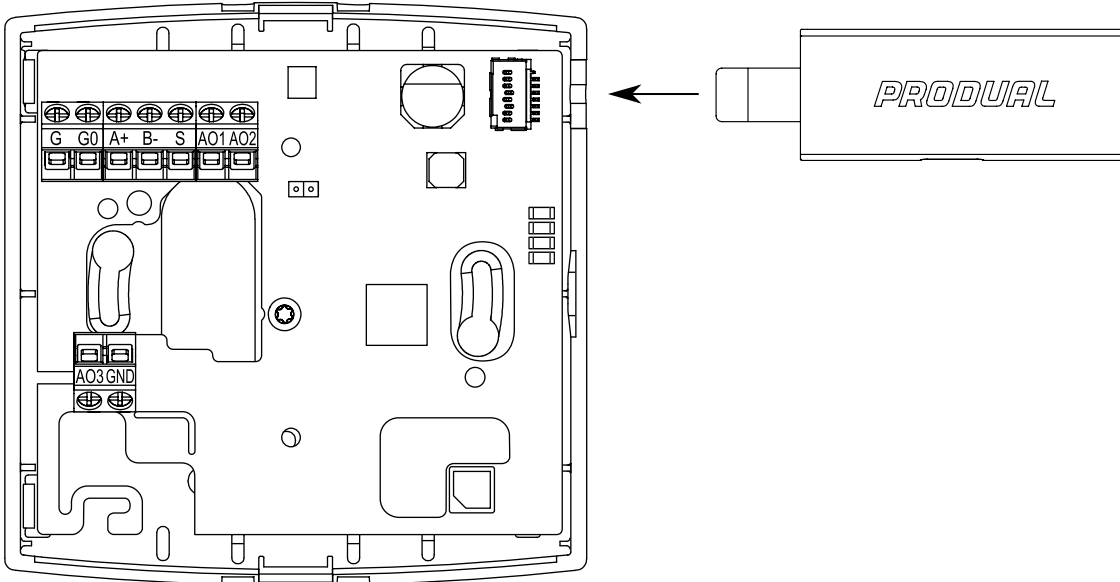
Technical specifications

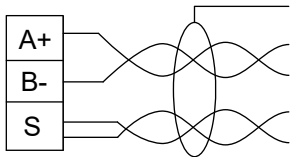

Property	Value	CE UK CA
Supply	24 Vac (22...26 V) / 24 Vdc (22...39 V), < 2 VA	
Supply (models without voltage outputs)	24 Vac (22...26 V) / 24 Vdc (10...39 V), < 1.5 VA	
Temperature measurement		
Range	0...50 °C	
Accuracy (2σ)	±0.5 °C (at 25 °C)	
Time constant	Adjustable (> 1 min)	
CO ₂ measurement		
Range	0...2000 ppm	
Accuracy (25 °C / 50 %rH)	Typ. ±50 ppm +5 % from reading	
	 Note: The accuracy is achieved after the self-calibration procedure has been completed three times (three weeks).	
Humidity measurement (-RH models)		
Range	0...100 %rH	
Accuracy (30...75 %rH)	Typ. (2σ) ±2 %rH at 22 °C, max. (3σ) ±4.5 %rH	
Voltage outputs		
Range	0...10 V*, 2 mA (freely scalable within this range)	
Accuracy	±0.1 % from full scale	
Communication (-MOD models)	Modbus RTU (RS-485)	

Property	Value	CE UK CA
Bus speed	9600*/14400/19200/38400/56000/57600/76800/115200 bit/s	
Data bits	8	
Parity	none*/odd/even	
Stop bits	1* or 2	
Unit load	1/8 UL	
Commissioning tool	MyTool Connect with MyProdual®	 
Appliance class (IEC 60664-1)	III	
Operating conditions		
Temperature	0...50 °C	
Humidity	0...95 %rH (non-condensing)	
Wiring terminals		
Type	Tilted screw terminals	
Suitable wire	0.2...2.5 mm ² , stripping length 5 mm	
Tightening torque	0.4 Nm	
Housing		
Protection class	IP30	
Materials	ABS plastic	
Mounting	On the wall surface or on a flush mounting box (60 mm hole distance)	
Dimensions (w x h x d)	97 x 97 x 27 mm	
	* factory setting	



Wiring

-  **WARNING:** Device wiring and commissioning can only be carried out by qualified professionals. Always make the device wirings in de-energised electricity network.
-  **WARNING:** This product is appliance class III product according to IEC 60664-1. The product may only be connected to SELV (separated extra low voltage) electricity network.
-  **CAUTION:** The product may only be connected to overvoltage category I, II or III electricity network according to IEC 60664-1.



G	Supply, 24 Vac/dc, < 1 VA	
G0	0 V	
A+		Modbus RTU, RS-485 (-MOD models).
B-		 Note: Connector S can only be used for chaining the cable shield pair.
S		
AO1	Voltage output 1, 0...10 Vdc, < 2 mA (freely scalable within this range). Not available in -MOD models.	
AO2	Voltage output 2, 0...10 Vdc, < 2 mA (freely scalable within this range). Not available in -MOD models.	
AO3	Voltage output 3, 0...10 Vdc, < 2 mA (freely scalable within this range). Not available in -MOD models.	
GND	Ground	

The nominal wire terminal screw tightening torque is 0.4 Nm.

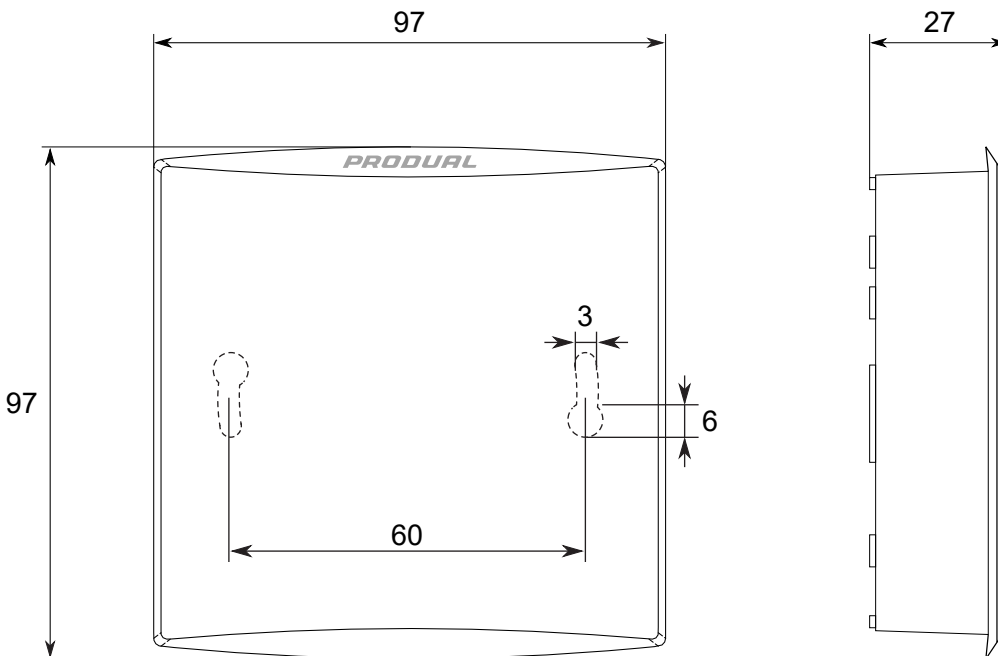
-  **Important:** Do not use excessive force when tightening the wiring terminal screws.
-  **CAUTION:** Ensure that all covers are closed before connecting supply voltage to the product. Don't remove the covers when the supply voltage is connected.

Ordering information

		Type	0	1	2	3	4	5	6
0	Room transmitter		5302	2		0			0
1	Device type	Room transmitter with temperature and CO ₂ measurement	RT-CO2	2					
2	Body colour	White			W				
		Black	B		B				
3	User interface	No user interface				0			
4	Additional measurements	No additional measurements					0		
		Relative humidity	-RH				H		
5	Additional functions	No additional functions						0	
		Modbus RTU	-MOD					M	

Dimensions

All dimensions are in millimeters (mm).



Supported directives, regulations and standards

All RT products support the following EU directives, UK regulations and standards.

EU directives

Standard	Description
2014/30/EU	Electromagnetic Compatibility (EMC).
2014/35/EU	Low Voltage Directive (LVD).
2011/65/EU	Restriction of Hazardous Substances (RoHS2) Directive.
(EU) 2015/863	Commission Delegated Directive, amending Annex II to Directive 2011/65/EU.
2001/95/EC	General product safety.
2012/19/EU	Waste electrical and electronic equipment (WEEE).

UK regulations

Standard	Description
S.I. 2016 No. 1091	Electromagnetic compatibility regulations
S.I. 2016 No. 1101	The electrical equipment (safety) regulations
S.I. 2012 No. 3032	The restriction of the use of certain hazardous substances in electrical and electronic equipment regulations
S.I. 2013 No. 3113	The waste electrical and electronic equipment regulations
S.I. 2005 No. 1803	The general product safety regulations

Standards

Standard	Description
EN 63044-1:2017 + A1:2021	Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 1: General requirements
EN IEC 63044-3:2018	Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 3: Electrical safety requirements
IEC 60730-1:2022 ed6.0 (2022-09)	Automatic electrical controls - Part 1: General requirements.
EN IEC 63044-5-1:2019	Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up
EN IEC 63044-5-2:2019	Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light-industrial environments
EN IEC 61000-6-1:2019	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards. Immunity standard for residential, commercial and light-industrial environments
EN 61000-6-3:2021	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.
EN IEC 61000-4-2:2010	Electromagnetic compatibility (EMC). Testing and measuring techniques - Electrostatic discharge immunity test.
EN IEC 61000-4-3:2020	Electromagnetic compatibility (EMC). Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test.
EN 61000-4-4:2012	Electromagnetic compatibility (EMC). Testing and measurement techniques - Electrical fast transient/burst immunity test.
EN 61000-4-5:2014/AMD1:2017	Electromagnetic compatibility (EMC). Testing and measurement techniques - Surge immunity test.
EN 61000-4-6:2014	Electromagnetic compatibility (EMC). Testing and measurement techniques. Immunity to conducted disturbances, induced by radio-frequency fields.
CISPR 16-2-3:2016+AMD1:2019 ed4.1	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements
CISPR 16-2-1:2014+AMD1:2017	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements
CISPR 32:2015+AMD1:2019	Electromagnetic compatibility of multimedia equipment - Emission requirements