TITAN PRODUCTS
Simplify the Complex®

TP-UI-RO FEATURES

- Networkable and configurable via BACnet MS/TP
- Configurable options for setpoint, fan speed and mode adjust
- In-built temperature and humidity monitoring
- Option for inbuilt CO2 monitoring
- Full colour LCD display
- HALO LED indication
- Attractive Gen 3 aesthetics
- Excellent end user experience, with simple to navigate menus

Setup is fast and simple, with display options for setpoint, fan speed, run, and comfort modes easily configured via BACnet or directly on the device. This flexibility enables the Rotary to be configured for a wide range of applications, from a simple BACnet setpoint adjuster to a complete control user interface.

Monitor temperature, humidity and CO2 conditions over BACnet and configure the display to show any combination of these parameters on the screen.

The LED HALO can be used to provide tri-colour visual indication of CO2 levels or used to provide indication of heat / cool operation (or disabled completely).

The Rotary provides a great user experience for the end user, via its rotating dial, easy to navigate menus and push to select function, within the Gen 3 housing.

The Rotary can connect and power directly from the Titan TP-710 MS/TP controllers, or communicate to a BACnet network for 3rd party integration via its inbuilt RS485 BACnet MS/TP communications.
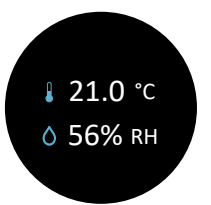
SPECIFICATION

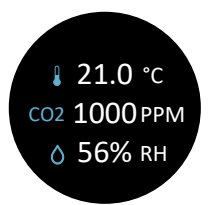|	
Power Supply	24V AC/DC +/-10% or powered directly from a Titan TP-710 MS/TP controller
Power Consumption	65mA
Display	Colour LCD
Communications	BACnet MS/TP via RS485
Operating Temperature	5-50°C
Operating Humidity	20-80% non-condensing
Accuracy	CO2: 50ppm +/- 2% of reading Humidity: +/- 2%RH Temperature: +/- 0.2°C
CO2 Sensing (if fitted)	NDIR
IP Rating	IP30
Mounting	Surface mount
Dimensions	See page 2
Country of origin	UK
Product Code	TP-UI-RO TP-UI-RO-CO2 *Add -B for black*

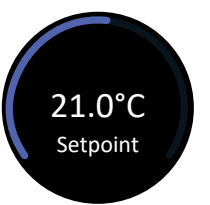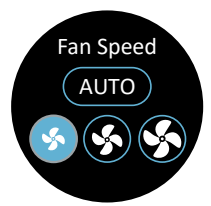UK CA CE

DISPLAY EXAMPLES

Temperature Display

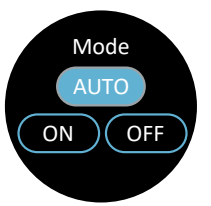Temperature / Humidity Display

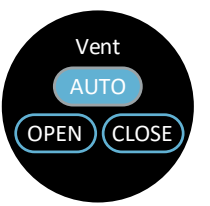Temp / Humidity / CO2 Display

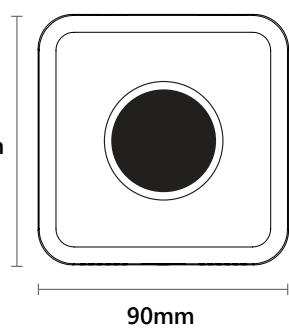Temperature Setpoint Adjust

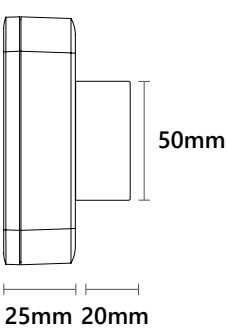Fan Speed Menu

Run Mode Menu
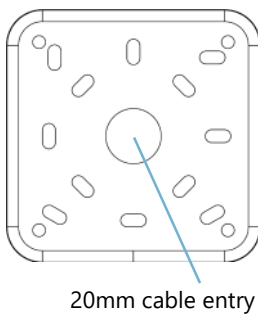

Comfort Mode Menu

ACO Vent Menu

DIMENSIONS

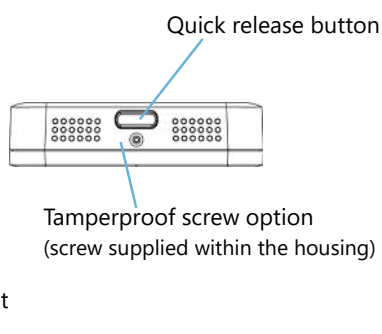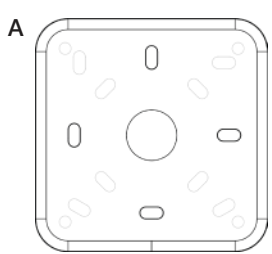Quick release button

Tamperproof screw option
(screw supplied within the housing)

90mm

90mm

25mm 20mm

50mm

20mm cable entry cut out
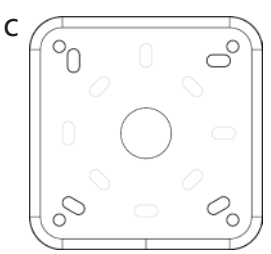
Mounting Options

A
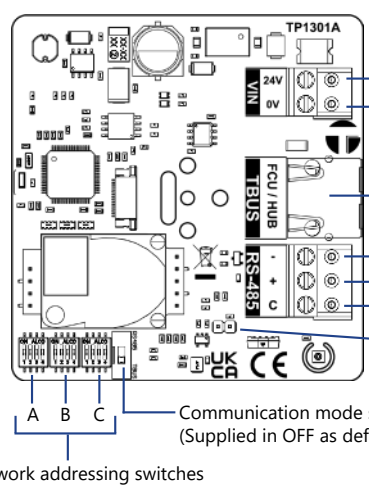
B

C

Option:	Mounting type:	Screw required:
A	Standard UK back box	M3.5 countersunk screw
B	Standard European back box	M3.5 countersunk screw
C	Direct to wall (no back box)	No. 6 (3.5mm counter-sunk wood screw

CONNECTIONS

24V AC/DC supply

0V supply

(Supply only required when not using with Titan 710 Controllers)

T-BUS (RJ45 Cat 5)
(Power/communication when using Titan 710 Controllers - 24V Supply should not be connected when using T-BUS)

BACnet (-ve)
BACnet (+ve)
BACnet (Com)

End of line resistor jumper.
Fitted = resistor enabled

Communication mode selection
(Supplied in OFF as default)

Network addressing switches

Communication Mode Selection		
	Switch Position	Operation
MS/TP	ON	Communicates via BACnet MS/TP connections and requires 24 AC/DC supply
T-BUS (Default)	OFF	Communicates with Titan 710 Controllers and takes power from this connection

ENGINEER MENU

Use the Engineer Menus or BACnet to configure the Rotary for your application needs.
To enter the Engineer Menu press and hold the Rotary dial inwards for approx 10 seconds.

Brightness	Auto	Uses the ambient light sensor to automatically adjust display brightness
	Manual	Manually adjust display brightness between 10 and 100%
Setpoint Limit	Min Set Point	Adjust the minimum setpoint adjustment range (0-50°C)
	Max Set Point	Adjust the maximum setpoint adjustment range (0-50°C)
	Default SP	Default setpoint on power up is 21°C (range is 0-50°C)
HALO Mode *The HALO LED light ring can be configured to indicate if the space is in a heating or cooling, or when CO2 monitoring is used the HALO can be used for CO2 indication.*	Heat / Cool	Heat / Cool mode is written to the Rotary via the BMS Red LED = Heating active Blue LED = Cooling active
	CO2 Mode *(requires CO2 model)*	The Halo LED colour thresholds can be altered over BACnet. As a factory default the LED settings are set to: Green: Less than 1000 ppm Yellow: between 1000-1500 ppm Red: Higher than 1500 ppm
	Off	As default the unit is supplied with the HALO off
Fan Adjust	Show all	Displays Low, Medium, High & Auto fan speed user selections
	Hide Auto	Removes Auto from the user selections, only showing Low, Medium, High
	Hide	Hides fan options completely from the interface
Run Mode	Show all	Enables run mode with options for Auto, On & Off
	Hide Auto	Removes Auto from the user selections, only showing On & Off
	Hide	Hides mode options completely from the interface
Comfort Mode	Show all	Enables comfort mode with options for combined Heat/Cool (Auto), Heat Only & Cool Only
	Hide Auto	Removes Auto from the user selections, only showing Heat Only & Cool Only
	Hide	Hides comfort mode options completely from the interface
Vent Mode* *Enables Auto, Open, Close options on the display which are typically used for switching between Auto control or manual override of automated window / ventilation control*	Show	Enables vent mode user selection showing Auto, Open, Close for Natural Ventilation applications
	Hide	Hides vent mode user selection
	Set Timer	Set the amount of time before reverting from manual Open / Close condition back to an Auto condition (range 0-180 minutes)
Display	Temperature Humidity CO2 (*requires CO2 model)*	As default all environmental monitoring parameters are displayed, but the Rotary can be configured to display any combination, or none at all. If no parameters are selected then the Set Point Adjust menu will display on wake. Any non-displayed parameters are still exposed over BACnet.
Setpoint Disp	Show	Display setpoint adjustment
	Hide	Hides setpoint adjustment

* When mapping vent mode to Titan CCM-204 or NVC-1204 Natural Ventilation controllers, BACnet object 'Vent Output Value' will need to be mapped to the allocated ACO input on the controller.
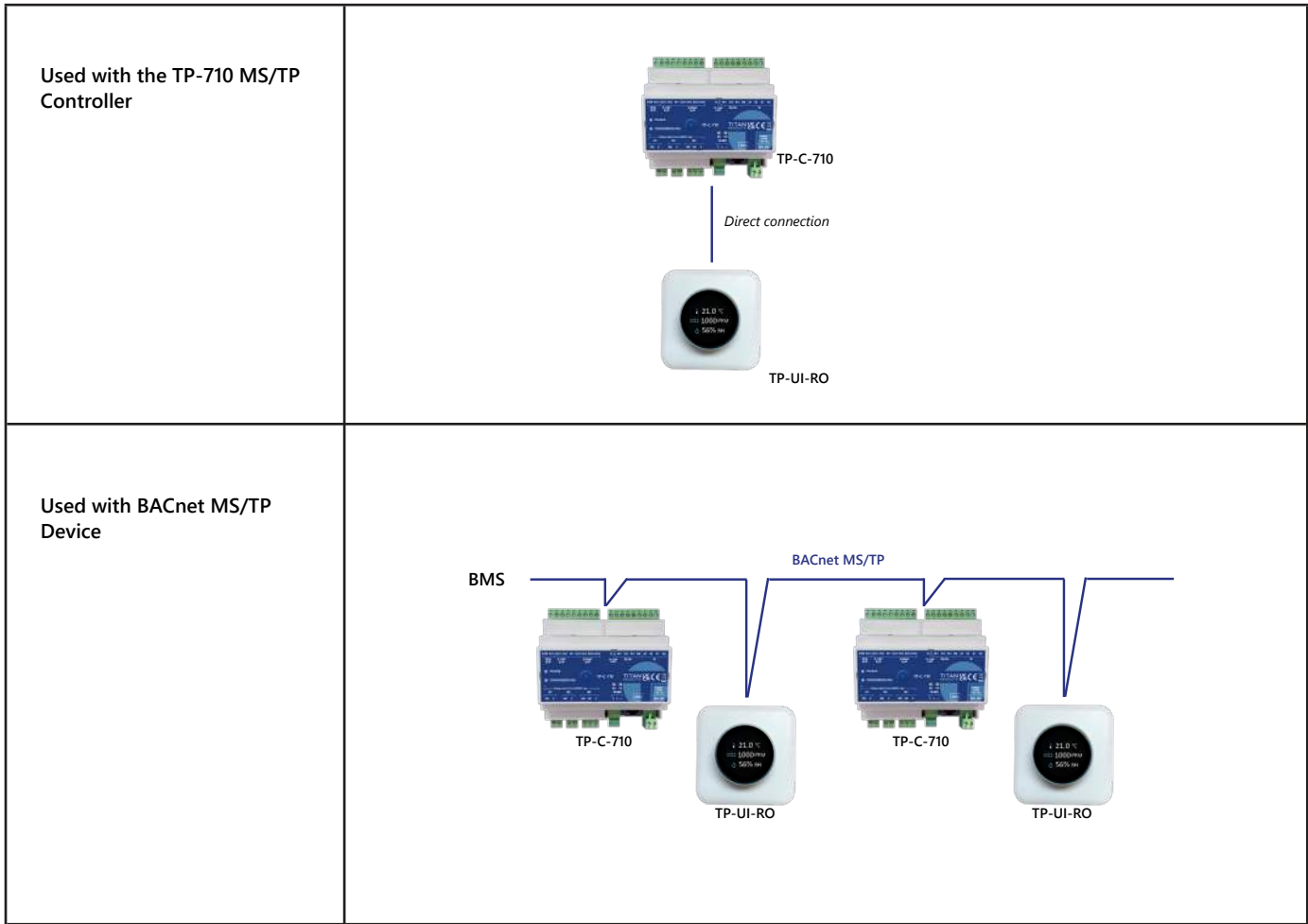
CO2 (For CO2 variant only)

Automatic Background Calibration (ABC):

The CO2 variant is supplied pre-calibrated and will auto calibrate every 7 days thereafter using automatic background calibration. To maintain calibration and long-term accuracy stability, the sensor should be exposed to low, unoccupied CO2 levels (typically 400ppm) at least once every 7 days.

SETUP OPTIONS

The Rotary can connect and power directly from the Titan TP-710 MS/TP controllers, or communicate to a BACnet network for 3rd party integration via its inbuilt RS485 BACnet MS/TP communications.

Used with the TP-710 MS/TP Controller	TP-C-710 *Direct connection* TP-UI-RO
Used with BACnet MS/TP Device	BMS — BACnet MS/TP TP-C-710 TP-UI-RO TP-C-710 TP-UI-RO

INSTALLATION AND MAINTENANCE

- The interface must be installed by a competent and suitably qualified person and maintained within its stated operating environment
- The interface should be mounted in the space at approximately 1.5m from floor level.
- Mount away from the effects of direct sunlight, radiators and supply air ducts.
- Communication cables should be segregated from any mains carrying conductors and electrical noise emitting equipment such as fluorescent lighting.

- Ensure correct screw sizes are used.
- The interface should be installed after the space has been plastered, decorated and any flooring fitted.
- Do not spray any liquid or cleaning products directly onto the ventilated housing.
- Do not obstruct air flow vents.
- **Do not** blow directly on to the CO2 cell within the unit (if fitted), this can damage the cell membrane and could cause incorrect readings.

NETWORK ADDRESSING (WHEN USED AS A BACNET MS/TP DEVICE)

BACnet Baud Rate Settings (Switch A):

BACnet Baud Rate	SW1 Setting Position	SW2 Setting Position	SW3 Setting Position	SW4 Setting Position
9600	OFF	OFF	OFF	OFF
19200	OFF	OFF	ON	OFF
38400	OFF	OFF	OFF	ON
76800	OFF	OFF	ON	ON

BACnet MAC Address Settings (Switches B & C):

	Switch B					Switch C			
Address example	SW1 (1)	SW2 (2)	SW3 (4)	SW4 (8)		SW1 (16)	SW2 (32)	SW3 (64)	SW4 (128)
1	ON	OFF	OFF	OFF		OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF		OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF		OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF		OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF		OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON		OFF	OFF	OFF	OFF
15	ON	ON	ON	ON		OFF	OFF	OFF	OFF
20	OFF	OFF	ON	OFF		ON	OFF	OFF	OFF
50	OFF	ON	OFF	OFF		ON	ON	OFF	OFF
100	OFF	OFF	ON	OFF		OFF	ON	ON	OFF
127	ON	ON	ON	ON		ON	ON	ON	OFF

Note
Switches use Binary to set device BACnet MAC address.
Value achieved by adding relevant switch values together. See examples in table.
Switches all OFF or all ON are not valid settings for addressing.
Max MAC address for BACnet systems is 127.
Address 0 is not valid.
BACnet Device ID = Set MAC address prefixed with 151, for example MAC address 100 would equate to a Device ID as 151100.
It is recommended this is altered during commissioning via BACnet communications once the device is discovered by the BMS.
It is recommended to set the network addresses prior to powering up the device.