

QVR20 / QVR22 - TVR20 / TVR22

INTELLIGENT TOUCHSCREEN VAV CONTROLLERS (Temperature, CO2, rH, VOC, PIR)

STANDARD

SLIMLINE



The TVR/QVR Series Controllers have been designed to be wall mounted VAV (Variable Air Volume) controllers in room spaces. The controllers are suitable for both pressure independent and pressure dependent VAV control with additional control logic for zone heating or cooling. Optional built-in CO2, humidity, VOC and Occupancy (PIR) measurements and control logic can expand the control functionality and energy savings further. The controllers can also connect direct to Sention's DPT50 Pressure Sensors.

The room controllers have an optional sharp colour touchscreen display with glass front that provides intuitive user interface. An optional PIR sensor is available for occupancy mode. The controllers are mounted on the wall surface directly or to standard wall mounting boxes. The controllers have built-in Modbus RTU or BACnet MS/TP communication that allow interaction to the BMS systems. Wireless LoraWan adds unique functionality. Optional Bluetooth wireless interface provides Smart Phone App interface (iOS).



Technical Details Summary

Power: 24Vac/dc, max 80mA with Touchscreen

Temperature: Range: 0..50° (32..122°F)

Accuracy: ±0.5°C

CO2 (QVR Models): Range: 0..5,000ppm

Accuracy: ±30ppm ±3.0% m.v.

Humidity (Option): Range: 0..100%rH

Accuracy: ±2%rH (within 20 to 80%rH)

VOC (Option): Volatile Organic Compound

Range: Air Quality Index: 0..500

Device to Device Variation: ±10 index points

PIR (Option): Occupancy Detection, Range: 5m

Inputs: 1 x Flow/Pressure Input, 0-10V

1 x Universal Inputs, NTC10, 0-10V, Digital

Analogue Outputs: 4 x Analogue 0-10Vdc Outputs, max 2mA

Digital Outputs: 1 x Optional 24V Pilot Relay, max 1.0A

Wired Network: Modbus RS485 or BACnet MS/TP, with 60V Fault Tolerance, 1/10 Unit Load

Address Setup via Bitswitch, Display or Tool

Wireless: Bluetooth Interface to SmartPhone App or BLE USB Dongle

LoraWan® Wireless Interface (EU868, US915, AS923)

Display: Full Colour 2.4" LCD, 240x320px

Cover Glass Hardened ≥6H

Touch: Capacitive Touchscreen

Terminals: Rising Cage Screw Terminals, 0.2 to 2.5mm² / 26 to 12 AWG

Enclosure: ABS ULV0 Plastics - White or Black, IP30

Dimensions: xVR20: W86 x H86 x D24mm

xVR22: W86 x H86 x D24mm W86 x H86 x D13.8mm (Surface Part)

xVR22: W86 x H86 x D39mm (Total)

Origin: United Kingdom

Part Number		SKU# Number	
Product Name	Code	Product Options	
TVR20 Room VAV Controller, 1FLOW, 1UI, 4AO, 24V Supply	6000		
QVR20 Room VAV Temperature and CO2 Controller, 1FLOW, 1UI, 4AO, 24V Supply	6100		
TVR22 Slimline Room VAV Controller, 1FLOW, 1UI, 4AO, 24V Supply	6400		
QVR22 Slimline Room VAV Temperature and CO2 Controller, 1FLOW, 1UI, 4AO, 24V Supply	6500		
Communications Options			
No RS485 Communications	0		
MOD Modbus RS485, Up to 60V Protection	1		
BAC BACnet MS/TP, Up to 60V Protection	2		
Interface and Wireless Options			
No Interface (Blank Front)	00		
TS Colour Capacitive Touchscreen	02		
BLE Bluetooth App Interface	03		
TS-BLE Touchscreen and Bluetooth	05		
LRA LoraWan Wireless Interface (select region)	06		
TS-LRA LoraWan Wireless Interface with Touchscreen (select region)	08		
Measurement Options			
No Extra Measurements	00		
RH Relative Humidity, 2% Acc	01		
RH-VOC Volatile Organic Compound and Humidity	02		
OE Passive Infrared Movement Sensor (PIR)	03		
RH-OE Relative Humidity and Movement (PIR)	04		
RH-VOC-OE VOC, Relative Humidity and PIR	05		
Output Options			
No Output Options	00		
RL 24V Relay Output	01		
Region Options (LoraWan)			
Non Lora & EU868MHz LoraWan (Default)	0		
US US915MHz LoraWan	1		
AS AS923MHz LoraWan	2		
IN IN815MHz LoraWan	3		
Colour Options			
B Black	1		
W White	2		

Order Example: TVR20-BAC-TS-OE-B, SKU# 6000 2 02 03 00 01

Accessories (see next page)		SKU# Number
DPT50-R3-Y1-W Differential Pressure Sensor, Duct, Range -20..250Pa		7500 0 01 03 00 2
DPT50-R4-Y1-W Differential Pressure Sensor, Duct, Range -20..500Pa,		7500 0 01 04 00 2

