

Thermostatic Actuators OT1100, OT2100, OT5100



Description:

These 2-Way and 3-way control valves use the OT1100, OT2100, OT2115, OT5100 family of self acting thermostatic interchangeable actuators. They are designed for the control of hot and chilled water and low pressure steam.

The OM1100 manual adjuster is also available.

These compact self acting thermostatic actuators are liquid filled for fast reaction to temperature change at the sensing point. On a rise in temperature the liquid within the metallic bellows expands, opposing the action of the return spring within the valve body moving the valve stem. An insulated heat barrier prevents the heat from the valve stem effecting the operation. The entire actuator can be removed without tools for service or replacement with simple thumbnut mounting ring. Temperature adjustment stoppers inside the unit can be set to prevent set point tampering. A theft prevention cover (OM1200) is available to order and can be installed on all units. The complete range of thermostatic actuators can be installed on all Spartan Zone Valve bodies, two way models V160, V240, V241, V243, V245 and three way models V320, V325, V420.



All valve bodies have replaceable cartridges for ease of maintenance. Stem, packing, disc and spring are replaceable as a cartridge inline without removing the valve body. Choice of Cv's (Kv's) is available, see Valve Body Data Sheet.

Specification:

Actuator types: OT1100 - Direct Coupled

OT2100 - Remote Bulb with 6.5'(2m) capillary

OT2115 - Remote Bulb with 16.5' (5m) capillary

OT5100 - Wall Mount Sensor and Adjuster 6.5'(2m) capillary

OM1100 - Manual hand adjuster

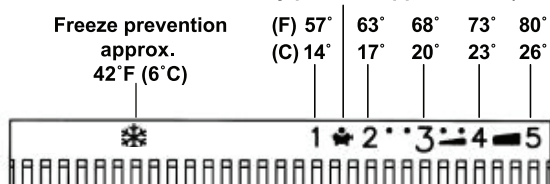
OM1200 - Theft prevention cover

Force: 27lb (120Newton)

Temperature range: 40° to 85°F (5° to 30°C)

Temperature setting scale 1 to 5; 57°F (14°C), 63°F (17°C), 68°F (20°C), 73°F (23°C), 80°F (26°C)

Economy position approx. 60°F (15°C)



Set Point memory clip.

Economy Energy saving setting

* Freeze Protection Setting. 42°F (6°C)

Maximum Temperature: 180°F (80°C)

Stroke: 3.5 mm

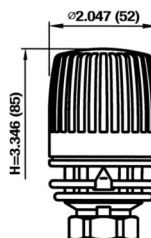
Set point limit stops

Maintenance Free

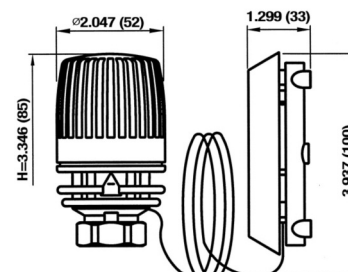
NB Ensure that the sensing head (element) is located away from the heat source in free circulated room air.

Dimensions - inches (mm)

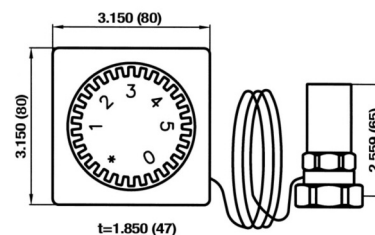
Thermostatic control head
OT1100 . with fixed sensor



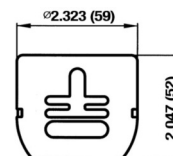
OT2100. . with remote sensor



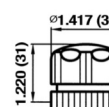
OT5100. . with remote dial and sensor



Theft protection
OM1200



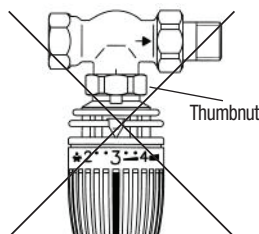
Manual control knob
OM1100



For OM1200 Theft Proof Cover, use TORX-T10 tool.

Installation Instructions:

The actuator can be installed vertically or horizontally; it cannot be installed upside down. The Actuator mounting thumbnut is to be tightened by hand only, using tools may result in over-tightening.



Control Valve Assemblies with Self Acting Thermostatic Actuators

OT1100, OT2100, OT5100

Valve Body	Description	Size	*Cartridge CV/KV selection	Actuator OT1100	Actuator OT2100	Actuator OT5100	EP Cartridge Max. Close-off PSI / Bar	EB Cartridge Max. Close-off PSI / Bar
V240 - 2 way valve body - union connection both ports								
V240-12X	2 Unions In-line - Select 1/2" or 3/4"		BC-0.15,0.25	VT240-BCXX-1100	VT240-BCXX-2100	VT240-BCXX-5100	60 / 4.0	-
V240-34X	unions, solder S or threaded N		(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VT240-EP/EBXX-1100	VT240-EPXX-2100	VT240-EPXX-5100	35 / 2.4	100 / 6.8
V241 - 2 way valve body - female port in, X union connection port out								
V241-12	Single Union Straight	1/2"	BC-0.15,0.25	VT241-12-BCXX-1100	VT241-12-BCXX-2100	VT241-12-BCXX-5100	60 / 4.0	-
V241-12	Female port in	1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VT241-12-EP/EBXX-1100	VT241-12-EP/EBXX-2100	VT241-12-EP/EBXX-5100	35 / 2.4	100 / 6.8
V241-34	Male union out	3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VT241-34-EP/EBXX-1100	VT241-34-EP/EBXX-2100	VT241-34-EP/EBXX-5100	35 / 2.4	100 / 6.8
V241-10		1"	EB-6.0,6.4,8.0,9.0	VT241-10-EBXX-1100	VT241-10-EBXX-2100	VT241-10-EBXX-5100	-	100 / 6.8
V243 - 2 way valve body - female port in, X female port out								
V243-12	Female by Female Port	1/2"	BC-0.15,0.25	VT243-12-BCXX-1100	VT243-12-BCXX-2100	VT243-12-BCXX-5100	60 / 4.0	-
V243-12	Straight	1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VT243-12-EP/EBXX-1100	VT243-12-EP/EBXX-2100	VT243-12-EP/EBXX-5100	35 / 2.4	100 / 6.8
V243-34		3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VT243-34-EP/EBXX-1100	VT243-34-EP/EBXX-2100	VT243-34-EP/EBXX-5100	35 / 2.4	100 / 6.8
V243-10		1"	EB-6.0,6.4,8.0,9.0	VT243-10-EBXX-1100	VT243-10-EBXX-2100	VT243-10-EBXX-5100	-	100 / 6.8
V245 - 2 way valve body - female port in, X female port out								
V245-12	Direct solder body	1/2"	BC-0.15,0.25	VT245-12-BCXX-1100	VT245-12-BCXX-2100	VT245-12-BCXX-5100	60 / 4.0	-
V245-12		1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VT245-12-EP/EBXX-1100	VT245-12-EP/EBXX-2100	VT245-12-EP/EBXX-5100	35 / 2.4	100 / 6.8
V245-34		3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VT245-34-EP/EBXX-1100	VT245-34-EP/EBXX-2100	VT245-34-EP/EBXX-5100	35 / 2.4	100 / 6.8
V260 - 2 way angle valve body - double union OR V261 - 2 way angle valve body - single union								
V260/V261-12	Angle body	1/2"	(EP or EB)-0.50,1.0,1.5,2.0,2.5,3.5	VT26X-12-EP/EBXX-1100	VT26X-12-EP/EBXX-2100	VT26X-12-EP/EBXX-5100	35 / 2.4	100 / 6.8
V260/V261-34	Single or Double Union	3/4"	(EP or EB)-1.0,1.5,2.0,2.5,3.5,4.5	VT26X-34-EP/EBXX-1100	VT26X-34-EP/EBXX-2100	VT26X-34-EP/EBXX-5100	35 / 2.4	100 / 6.8
V261-10		1"	EB-6.0,6.4,8.0,9.0	VT261-10-EBXX-1100	VT261-10-EBXX-2100	VT261-10-EBXX-5100	-	100 / 6.8
V320 - 3 way diverting valve body - unions on all three ports								
V320-12X	3 Way Diverting - Select 1/2" or 3/4"		ED1 0.2,0.3,0.3,5	VT320-12-EDXX-1100	VT320-12-EDXX-2100	VT320-12-EDXX-5100	50 / 3.4	-
V320-34X	unions, solder S or threaded N		ED1 0.2,0.3,0.3,5	VT320-34-EDXX-1100	VT320-34-EDXX-2100	VT320-34-EDXX-5100	50 / 3.4	-
V345-34			CV5.5	VT345-34-5.5-1100	VT345-34-5.5-2100	VT345-34-5.5-5100	50 / 3.4	-
V345-10			CV5.5	VT345-10-5.5-1100	VT345-10-5.5-2100	VT345-10-5.5-5100	50 / 3.4	-
V321 - 3 way mixing valve body - unions on all three ports								
V321-12-EM3.5	Sel. 1/2" or 3/4" unions S or N 1/2", 3/4"		3.5	VT321-12-EM3.5-1100	VT321-12-EM3.5-2100	VT321-12-EM3.5-5100	50 / 3.4	-
V323 - 3 way diverting valve body - Female thread all ports								
V323-12	Female thread	1/2"	ED1 0.2,0.3,0	VT323-12-EDXX-1100	VT323-12-EDXX-2100	VT323-12-EDXX-5100	50 / 3.4	-
V325 - 3 way diverting valve body - direct solder								
V325-12	3 Way Diverting	1/2"	ED1 0.2,0.3,0.3,5	VT325-12-EDXX-1100	VT325-12-EDXX-2100	VT325-12-EDXX-5100	50 / 3.4	-
V325-34	Direct Solder	3/4"	ED1 0.2,0.3,0.3,5	VT325-34-EDXX-1100	VT325-34-EDXX-2100	VT325-34-EDXX-5100	50 / 3.4	-

*Select CV from available cartridges and replace XX with CV value in complete part number of the assembly. †Maximum differential pressure to prevent water noise.