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Terminal Valve Actuators

Features

- No tools required for mounting
- Hand override
- Life expectancy in excess of ½ million cycles
- Quite operation

Specification

Power supply	24Vac +10% -5%
Power consumption	45mA, 1VA
Frequency	50/60Hz
Control type:	
VT-24-RL	Raise/lower (3-point)
VT-24-M	0-10Vdc Modulating
Cable length	0.9m
Stroke	4.5mm
Speed:	
VT-24-RL	90 seconds @60Hz
VT-24-RL	108 seconds @ 50Hz
VT-24-M	120 seconds
Ambient:	
Temperature	5 to 50°C
Humidity	0 to 95% non-condensing
Protection	IP51
Country of origin	Canada

Product Codes

VT-24-RL
Terminal valve 24Va raise/lower (3-point) actuator

VT-24-M
Terminal valve 24Vac modulating actuator

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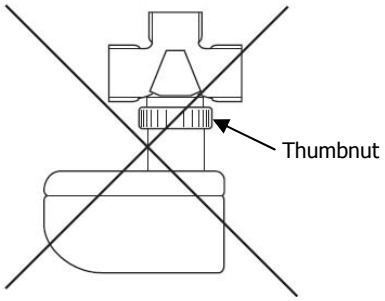
Technical Overview

The VT-24 range of actuators are for use with the VT-xP terminal unit valves. They have end of travel automatic shut -off for long life expectancy. On start-up the modulating version has an automatic calibration sequence during which the two ends of travel are programmed. The reversible, brushless, synchronous, electric motor maintains accurate positioning and provides creep-free control with extreme accuracy.

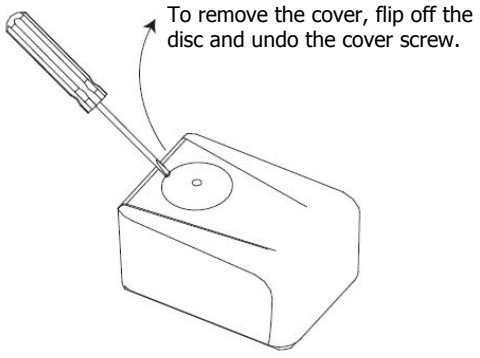
Installation

The actuator can be installed vertically, or at any angle not exceeding the horizontal.
The Actuator mounting thumbnut is to be hand-tightened only, using tools may result in over-tightening.



Take note that the actuator should never be attached to the valve if its stem has been electrically driven down for fear of damaging the operating mechanism inside.
Actuators default is stem up.

Releasing the cover



Installation (continued)

VT-24-RL:

The VT-24-RL 3 point (raise lower) floating actuator utilizes a brushless, reversible synchronous A/C motor with constant torque and constant speed for accurate positioning over the full span of the travel. The VT-24-RL can be controlled by a triac or dry contact relays.

End of travel shut off:
The actuator has a controlled force balanced output and an end of the travel shut off for long life expectancy. The unit can be left powered by the controller indefinitely without damaging or wearing out the base motor.

Parallel connection:
Isolating triacs will allow the units to be connected in parallel from the same output point without electrical interference.

Diagnostics:
Diagnostic LED's, green for up travel and red for down travel will be lit while the signal is on in their particular direction. When the unit achieves its end position or when there is no signal, the LED's will turn off.

Connections:

Black	Stem down
White	Common
Red	Stem up

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Connections (continued)

VT-24-M:

The VT-24-M 0/2-10Vdc microprocessor based modulating actuator uses a LED and photo transistor pick up for precise positioning and for end travel automatic shut off. On start up an automatic calibration sequence takes place with the unit running from open to closed position during which the two ends of travel are programmed. The microprocessor also transmits a 1 to 5Vdc signal (0 volts indicates loss of power) on the fourth (green) wire for position transmission to remote BAS system. There is a two second delay before the actuators direction change is implemented.

Input Signal:
0-10Vdc or 2-10Vdc, 100KΩ impedance.
Selected by jumper J4

On - 0-10Vdc 

Off - 2-10Vdc 

* If 4-20mA input is used, select 2-10Vdc with 500Ω 1% resistor.
See wiring diagram
* If 0-20mA input is used, select 0-10Vdc with 500Ω 1% resistor.

Output Signal:
1-5Vdc, 33KΩ impedance.
0Vdc = no power to the unit,
1Vdc = actuator stem up,
5Vdc = actuator stem down

Direct/Reverse Acting:
Jumper J1

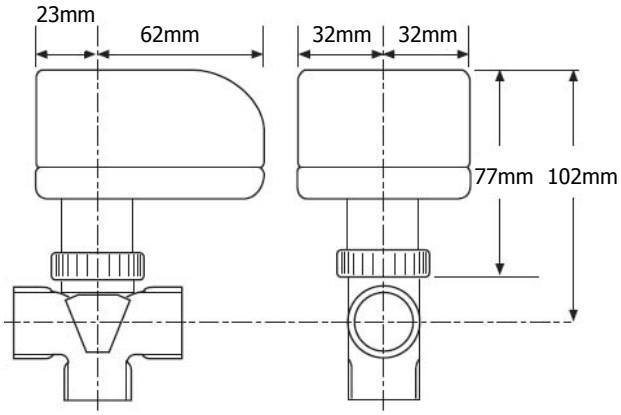
R.A. 0/2Vdc Drive up 

R.A. 0/2Vdc Drive down 

Connections:

White	Common
Black	24V
Red	0-10Vdc control signal
Green	1-5Vdc Feedback signal

Dimensions



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