



TV/SC-A

AMBIENT TEMPERATURE CONTROL

DESIGN FEATURES

- ◆ Narrow operating temperature band
- ◆ Compact low mass - fast response
- ◆ Ram-type plug for reliable shut off
- ◆ Unaffected by pressure variations
- ◆ Quick, easy installation
- ◆ Compatible with standard tubing and connections
- ◆ Long service life
- ◆ Direct acting (no pilot valve)



ADVANTAGES

TV/SC-A type valves economically automate fluid flow in response to ambient temperature. Many setpoints are available from about 30°F to 240°F. Standard tubing connections allow quick installation at a low cost. These compact valves reduce energy waste, lower maintenance costs and are economical to operate. **TV/SC-A** valves are covered with our standard 36 month prorated warranty.

OPERATION

At the designated set point, a thermostatic element located at one end of the valve (and thermally isolated from the body of the valve), will open or close within a 10°F (5.6°C) differential (e.g. 35°-45°F, etc.) and control the flow of steam, gas, or fluid through the valve based on ambient temperature. The **TV/SC-A** opens on falling temperature. The **TV/SC-A** may also be used to control instrument enclosure temperatures (see TV/SC-I and ITCH product fact sheets).

APPLICATIONS

There are literally hundreds of applications for these compact, self-contained, automatic control valves. Ambient sensing valves can be used to turn on steam, air, gas or liquids compatible with Teflon® and stainless steel, in response to ambient temperature change. Applications include automation of steam trace lines, operation of pneumatically operated pumps for injection of antifreeze liquids and instrument enclosure control.

TV/SC-A

AMBIENT TEMPERATURE CONTROL



PARTS AND MATERIALS

ITEM	DESCRIPTION	MATERIAL
1	THERMAL ACUATOR	300 Series Stainless
2	ISOLATION EXTENSION	300 Series Stainless
3	CALIBRATION LOCKNUT	300 Series Stainless
4	YOKE	300 Series Stainless
5	BODY	300 Series Stainless
6	TUBING COMPRESSION NUT	300 Series Stainless

SPECIFICATIONS

Tube O.D.	L		M		Weight		C _v	Maximum Pressure	Maximum Temperature (note 2)	
	in	mm	in	mm	Lb	Kg			Valve End	Sensing End
3/8"	7.37	187	1.19	30	0.45	0.20	0.5	200 PSIG (13.8 BAR)	390°F	150°F
1/2"	7.88	200	1.38	25	0.75	0.34	0.9		(199°C)	over setpoint

TO ORDER SPECIFY: (See Note #1 for standard temperatures)

Part Number	Description
713-000000-XXX	3/8" TV/SC-A
713-001000-XXX	3/8" TV/SC-A (stainless steel extension)
714-000000-XXX	1/2" TV/SC-A
714-001000-XXX	1/2" TV/SC-A (stainless steel extension)

NOTES:

- Standard open set point temperatures "XXX" available: 035°F, 040°F, 050°F, 055°F, 060°F, 065°F, 075°F, 085°F, 090°F, 095°F, 100°F, 105°F, 110°F, 125°F, 130°F, 140°F, 150°F, 155°F, 160°F, 170°F, 180°F, 190°F and 200°F.
- Closing temperature is typically 10°F above opening temperature.
- Acetal Isolation Extension to be used for applications up to 150°F maximum temperature. For applications above 150°F, stainless steel will be used
- A #20 mesh strainer is recommended for use with all port sizes.

Therm-Omega-Tech, Inc. reserves the right to change the design and specifications without notice



THERM-OMEGA-TECH, INC.





US/A

AMBIENT TEMPERATURE CONTROL

DESIGN FEATURES

- ◆ Compact, low mass - Fast response
- ◆ Corrosion resistant - Long service life
- ◆ All stainless steel construction
- ◆ Ram-type plug for tight reliable shutoff
- ◆ Narrow temperature band
- ◆ Operating temperatures unaffected by pressure
- ◆ Wide choice of set points



ADVANTAGES

At any chosen set point from 35°F (-1°C) to 140°F (60°C), these valves can economically automate a system in response to ambient temperature. Reduce waste, lower maintenance, reduce cost and save space. **US/A** valves are covered with our standard 36 month prorated warranty.

OPERATION

At the designated set point, a thermostatic element located at one end of the valve, will open or close completely over a 10°F (5.5°C) differential (i.e. 35-45°F, 90-100°F, etc.) and control the flow of steam, gas, or fluid through the valve based on ambient temperature. The **US/A** typically will handle up to 400' of 1/2" tracer while providing up to approximately 270,000 BTU/hr. at 100 PSIG steam pressure.

APPLICATIONS

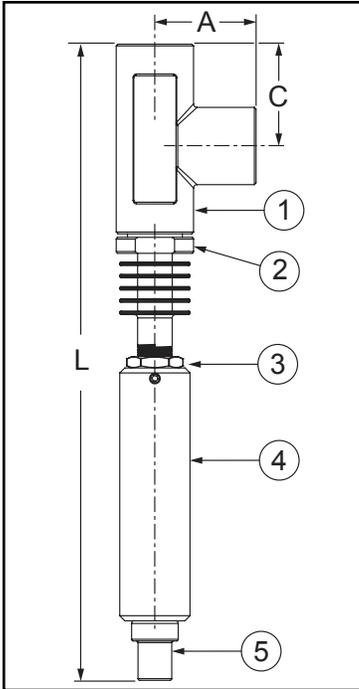
There are literally hundreds of uses for these compact, self-contained, automatic valves. Ambient sensing valves can be used to turn on steam, air, gas or liquids compatible with teflon and stainless steel in response to temperature change. Applications include automation of steam trace lines, control of pneumatically operated pumps for injection of anti-freeze liquids, ambient sensing water line freeze protection, etc. These valves also offer maximum economy as unit heater controls. They are also ideal for controlling steam heated drum heater enclosures and plate or panel coil tank heaters.

US/A

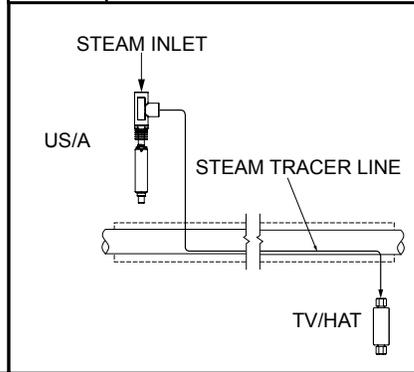
AMBIENT TEMPERATURE CONTROL



PARTS AND MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	VALVE BODY	CF8M (316 SS)
2	YOKE	CF8M (316 SS)
3	CALIBRATION LOCKNUT	300 SERIES STAINLESS
4	ISOLATION EXTENSION	ACETAL COPOLYMER or SS (Note 2)
5	THERMAL ACTUATOR	300 SERIES STAINLESS



SPECIFICATIONS

SIZE (NPTF)	L		A		C		Weight		C _v	Maximum Pressure PSIG (BAR)	Maximum Temperature	
	in	mm	in	mm	in	mm	Lb	Kg			Valve End	Sensing End
1/2"	10.7	287	1.7	43	1.5	38	1.5	0.68	1.3	200	388°F (198°C)	250°F (121°C)
3/4"	11.5	292	1.8	45.7	1.8	45.7	1.7	0.77	2.0	(13.8)		

TO ORDER SPECIFY:

Part Number	Description
614-000000-XXX	1/2 US/A
614-010000-XXX	1/2 US/A (Note 2)
615-000000-XXX	3/4 US/A

NOTES:

- Standard open set point temperatures "XXX" available: 035°F, 040°F, 050°F, 055°F, 060°F, 065°F, 075°F, 085°F, 090°F, 095°F, 100°F, 105°F, 110°F, 125°F, 130°F, 140°F, 150°F, 155°F, 160°F, 170°F, 180°F, 190°F and 200°F. **Note: Closing temperature is typically 10°F above opening temperature for Direct Acting valves.**
- Acetal Isolation Extension to be used for applications up to 150°F maximum temperature. For applications above 150°F, stainless steel will be used.
- A #20 mesh strainer is recommended for use with all port sizes.

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THERM-OMEGA-TECH, INC.





2" US/A

AMBIENT TEMPERATURE CONTROL

DESIGN FEATURES

- ◆ All stainless steel components
- ◆ Large flow change on small temperature change
- ◆ Compact low mass actuator - fast response
- ◆ Modulating action prevents water hammer
- ◆ Unaffected by pressure variations
- ◆ Quick, easy installation
- ◆ Long service life (36 month pro rated warranty)
- ◆ Direct acting (no pilot valves)
- ◆ Special temperatures available



ADVANTAGES

At any chosen set point from 35°F (1.7°C) to 200°F (93°C), these valves can economically automate a system in response to ambient temperature. Reduce waste, lower maintenance, reduce cost, save space.

OPERATION

At the specified set point, a thermal actuator located at one end of the valve (and thermally isolated from the body of the valve), will open or close completely over a 10°F (5.5°C) differential (i.e. 35-45°F, 90-100°F, etc.) and control the flow of steam, gas, or fluid through the valve based on ambient temperature.

APPLICATIONS

There are many uses for these compact, self-contained, automatic control valves. Ambient sensing valves can be used to turn on steam, air, gas or liquids compatible with teflon and stainless steel, in response to temperature change. The **2" US/A** valves are perfectly suited for controlling flow to steam headers supplying winterization tracing or other tracing that can be controlled based on ambient temperature. They are also suitable for controlling steam flow to unit heaters up to the maximum flow capacity of the valve. They are ideal for controlling steam heated drum heater enclosures, plate or panel coil clad tanks, and ambient sensing water line freeze protection

2" US/A

AMBIENT TEMPERATURE CONTROL



PARTS AND MATERIALS

ITEM	DESCRIPTION	MATERIAL
2	VALVE STEM	300 SERIES STAINLESS
3	VALVE BODY	300 SERIES STAINLESS
4	THERMAL ACTUATOR	300 SERIES STAINLESS
5	CAP	300 SERIES STAINLESS

SPECIFICATIONS

L		A		C		Weight		C _v	Maximum Pressure PSIG (BAR)	Maximum Temperature	
in	mm	inn	mm	in	mm	Lb	Kg			Valve End	Sensing End
14.50	368	6	152	3	76	12.2	5.55	20.7	50 (3.4)	298°F (148°C)	150°F Above Setpoint
								9.6	100 (6.9)	338°F (170°C)	
								6.0	150 (10.3)	366°F (186°C)	

TO ORDER SPECIFY:

Part Number	Description
619 - 000000 - XXX	2" US/A-0-50
619 - 010000 - XXX	2" US/A-50-100
619 - 020000 - XXX	2" US/A-100-150

NOTES:

- Standard open set point temperatures "XXX" available: 035°F, 040°F, 050°F, 055°F, 060°F, 065°F, 075°F, 085°F, 090°F, 095°F, 100°F, 105°F, 110°F, 125°F, 130°F, 140°F, 150°F, 155°F, 160°F, 170°F, 180°F, 190°F and 200°F.
Note: Closing temperature is typically 10°F above opening temperature.
- A #20 mesh strainer is recommended for use with all port sizes.

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REGOM INSTRUMENTS s.r.o.

Brabcova 1159 / 2

147 00 Praha 4

CZECH REPUBLIC

Tel: +420 241 402 206

Fax: +420 241 400 290

Mail: regom@regom.cz

Skype: regom-office

www.regom.cz