

## US/S-X & US/S-XR

SURFACE SENSING TEMPERATURE CONTROL VALVE



### BENEFITS

- Prevents process overheating
- Discharges minimum amount of media for temperature control
- Maintains optimal process temperature
- Quick and easy installation
- Long service life

### DESIGN FEATURES

- All stainless steel construction
- Exclusive **Thermoloid®** sensor/controller
- Narrow temperature band
- Compact low mass - fast response
- Ram-type plug for reliable shut off
- Unaffected by pressure variations



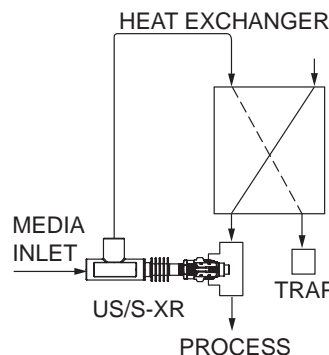
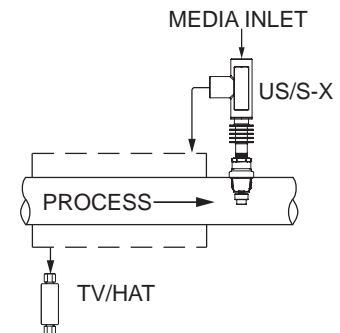
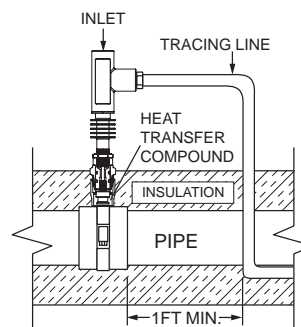
### APPLICATIONS

These compact self contained control valves can maintain very tight temperature control of any number of control loops using steam, liquid phase heat transfer media such as Dowtherm®, hot water, hot oil, glycol, etc. In general they can be used whenever accurate but low cost control is required. The reverse acting model, **US/S-XR** can be used to control cooling media to economically remove heat from equipment or a process

### OPERATION

The **US/S-X** and **US/S-XR** valves' **Thermoloid®** sensor/controller element may be placed in contact with the process line or pipe with the optional band-on-let, or in the line with the integral 3/4" NPT bushing. This allows the temperature element to be in contact with the process to control the valve and regulate the inflow of heating media (or cooling media with the US/S-XR). Input temperatures or steam supply can vary widely, but the control temperature is maintained within desired limits.

### SAMPLE APPLICATIONS

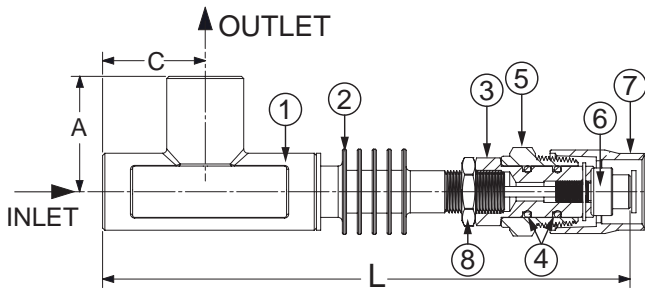


# US/S-X & US/S-XR

## SURFACE SENSING TEMPERATURE CONTROL VALVE



### PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	VALVE BODY	CF8M (316 SS)
2	THERMAL ISOLATION EXTENSION	300 Series SS
3	YOKE	300 Series SS
4	BUSHING SEALS	See Note #3
5	3/4" NPT BUSHING	300 Series SS
6	THERMAL ACTUATOR	300 Series SS
7	OPTIONAL BAND-O-LET FITTING	300 Series SS
8	LOCKNUT	300 Series SS

### DIMENSIONS & CAPACITIES

SIZE (NPT)	L		A		C		Weight		C <sub>v</sub>	Maximum Operating Pressure	Maximum Temperature	
	in	mm	in	mm	in	mm	Lb	Kg			Valve End	Sensing End
1/2"	7.9	201	1.7	43	1.5	38	1.2	0.5	1.3	200 PSIG (13.8 BAR)	388°F	150°F Over Setpoint
3/4"	8.7	221	1.8	45.7	1.8	45.7	1.4	0.6	2.0		(198°C)	

### ORDERING

Part Number <sup>1</sup>	Description
654 - 000000 - XXX	1/2" US/S-X-S
654 - 010000 - XXX	1/2" US/S-X-S-BAND <sup>2</sup>
655 - 000000 - XXX	3/4" US/S-X-S
655 - 010000 - XXX	3/4" US/S-X-S-BAND <sup>2</sup>
664 - 000000 - XXX	1/2" US/S-XR-S
664 - 010000 - XXX	1/2" US/S-XR-S-BAND <sup>2</sup>
665 - 000000 - XXX	3/4" US/S-XR-S
665 - 010000 - XXX	3/4" US/S-XR-S-BAND <sup>2</sup>

#### NOTES

- Full open temperatures "XXX" available:
  - X Series:** 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
  - XR Series:** 040°F, 045°F, 050°F, 060°F, 070°F, 075°F, 085°F, 095°F, 100°F, 105°F, 110°F, 115°F, 120°F, 125°F, 130°F, 140°F, 150°F, 160°F, 170°F, 175°F, 180°F, 190°F, 200°F, and 210°F.
  - Note:** Closing temperature is typically 10°F above opening temperature for Direct Acting valves and 10°F below opening temperature for Reverse Acting valves.
- Includes Band-O-Let fitting
- Viton is standard; BUNA, EPDM, and Kalrez are available. Consult our engineers for ordering information.
- A #20 mesh strainer is recommended.
- Warranty information disclosed at [www.thermomegatech.com/terms-conditions/](http://www.thermomegatech.com/terms-conditions/)



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