

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

## SURFACE SENSING TEMPERATURE CONTROL VALVE

### BENEFITS

- Maintains optimal process temperature
- Prevents process overheating
- Self-operating, no power or signal required
- Discharges minimum amount of media for temperature control
- Quick and easy installation
- Long service life

### DESIGN FEATURES

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



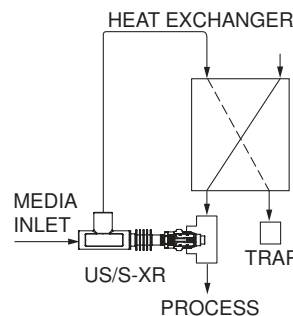
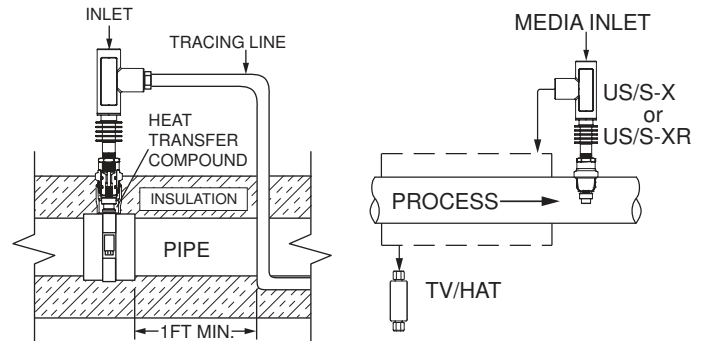
### APPLICATIONS

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®** thermal actuator element may be placed in contact with the process line or pipe with the optional band-o-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.

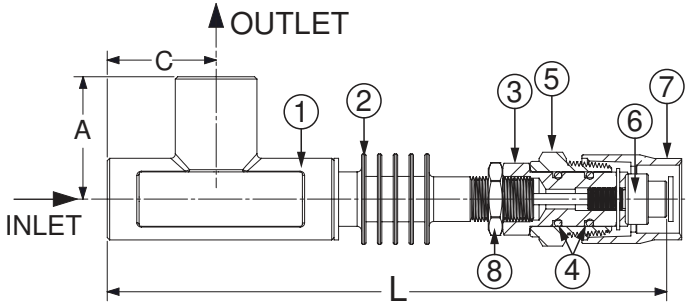
### SAMPLE APPLICATIONS



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

## SURFACE SENSING TEMPERATURE CONTROL VALVE

### PARTS & MATERIALS



ITEM	DESCRIPTION	MATERIAL
1	VALVE BODY	CF8M (316 SS)
2	YOKE	300 Series SS
3	ADAPTER	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 (198°C)	150°F(66°C) over set-point limit 300°F(149°C)
3/4"	8.7	221	1.8	45.7	1.8	45.7	1.4	0.6	2.0			

### 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
- Buna is standard; Viton, 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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5/29/2020