



THEM-OMEGA-TECH

ISO 9001 CERTIFIED

1/2" IC/FP

SOLAR FREEZE PROTECTION

**FREEZE PROBLEMS?
CALL THERM-OMEGA-TECH
TOLL-FREE 1-877-379-8258**

DESIGN ADVANTAGES

- ◆ Brass body and thermal element
- ◆ Easily maintained
- ◆ Corrosion and crack resistant
- ◆ Most narrow temperature band available
- ◆ Ram-type plug for reliable tight shutoff
- ◆ Sensitive to fluid temperature only
- ◆ Unaffected by pressure variations
- ◆ Easy installation with pipe wrench
- ◆ Discharges the minimum amount of water required to prevent freeze damage



FREEZE PROTECTION

Solar collectors and associated piping, tanks, and other water-bearing equipment are susceptible to freeze damage when exposed to freezing weather. Annually, Therm Omega Tech protects billion of dollars of machines and equipment around the world from the hazards of freezing.

Therm-Omega-Tech, Inc. is the industry leader in the design and manufacture of self-operating temperature actuated freeze protection valves. These valves act reliably and automatically to drain water from exposed equipment before the freeze damage can occur.

WHAT WE CAN DO FOR YOU

Our facility, located just outside of Philadelphia, gives us the unique opportunity and resources to research and develop solutions for most any project or application. Contact us and find out how we can help your solar equipment operate properly and more efficiently.

OPERATION

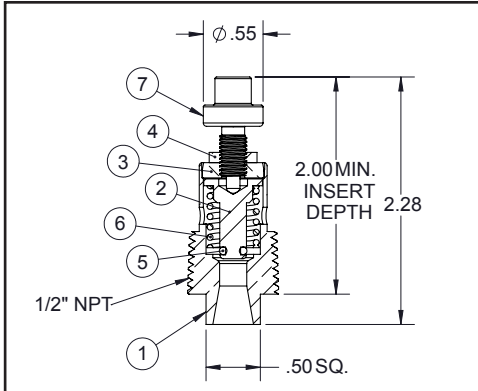
The 1/2" **IC/FP** will screw into any threaded opening with adequate internal clearance (see drawing at "**Parts and Materials**"). When the fluid temperature approaches freezing, and freeze damage is imminent, the thermal actuator modulates the valve open. When the makeup water temperature returns to the safe range, the valve then modulates closed, minimizing water loss. Due to the actuator's placement in the fluid stream, this valve is unaffected by ambient air temperature, and opens only when the water is in danger of freezing, being open at 35°F (1.7°C), and closed at 40°F (4.4°C). For applications requiring higher setpoint (in cases of black sky radiation cooling effect, etc...) we offer a 39°F (3.9°C) open and 45°F (7.2°C) close.

1/2" IC/FP

SOLAR FREEZE PROTECTION



PARTS AND MATERIALS

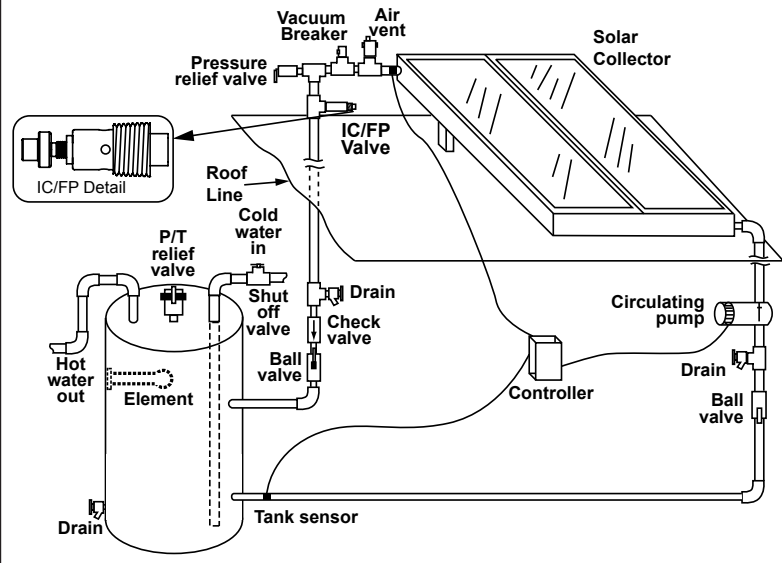


ITEM	DESCRIPTION	MATERIAL
1	VALVE BODY	BRASS
2	PLUG	STAINLESS STEEL
3	RETAINING PLATE	BRASS
4	LOCKNUT	STAINLESS STEEL
5	O-RING	EPDM
6	OPERATING SPRING	STAINLESS STEEL
7	ACTUATOR	BRASS

SPECIFICATIONS

C _v	Weight		Maximum Pressure	Maximum Temperature
	Lb	Kg		
0.6	0.14	0.06	150 PSIG (10.3 BAR)	300°F (149°C)

A Typical Solar Setup with the IC/FP



TO ORDER SPECIFY: (see note 1 for standard temperatures)

Part Number	Description
180-000000-035	1/2" IC/FP-35 Cartridge (Note 2)
180-000000-039	1/2" IC/FP-39 Cartridge (Note 2)
180-110000-035	1/2" IC/FP-35 Stainless Steel Cartridge (Note 2)
180-110000-039	1/2" IC/FP-39 Stainless Steel Cartridge (Note 2)

NOTES:

- Open / Close temperatures: 35°F/40°F, 39°F/45°F (others available, consult factory)
- A #20 mesh strainer is recommended

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



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