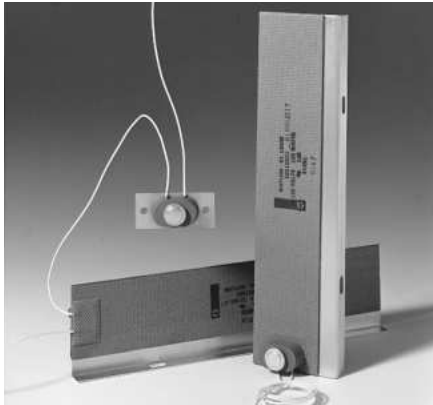


Flexible Heaters

Silicone Rubber

Stock Product Offering
Enclosure Heaters—
Wire-Wound Only



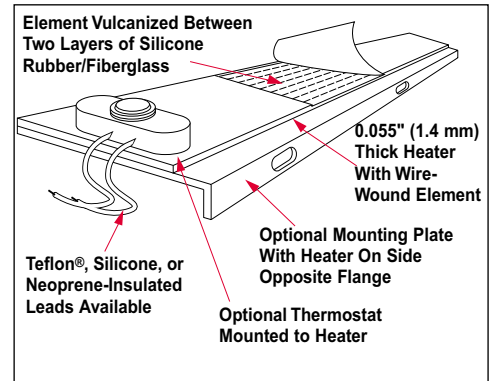
Designed for freeze and condensation protection, Watlow's enclosure heaters are rugged, reliable and safe to operate. These rectangular-shaped, wire-wound silicone rubber heaters can be ordered by themselves with adhesive or vulcanized to an aluminum mounting plate. A thermostat can be attached to the heater or mounted separately. Pictured are units with thermostat on heater in foreground and heater with remote thermostat in background.

Performance Capabilities

- Watt density rating of 5 W/in² (0.8 W/cm²)
- Temperatures to 150°F (66°C)

Features and Benefits

- **Easy to install** with options of pressure sensitive adhesive, mounting to aluminum plate, or customer cementing.
- **Quick delivery** on more than 72 variations.
- **Safe and reliable operation** due to no exposed electrical connections.
- **Custom leads** available in any length needed.
- **Horizontal and vertical mounting** options to meet your needs.



Applications

Freeze or condensation prevention in housings containing electronic equipment. Examples include:

- Traffic signal boxes
- Automatic teller machines
- Temperature control panels
- Gas or liquid control valve housings

Applications and Technical Data

Determining Minimum Wattage Requirements For Enclosures

This chart is an excellent guide for determining total wattage requirements for both insulated

and uninsulated enclosures, assuming the box is relatively airtight. For windy conditions, add an additional 50 percent to the wattage requirement listed.

		Total Enclosure Surface Area—Square Feet (Square Meters)													
		2 (0.2)	3 (0.3)	4 (0.4)	5 (0.5)	6 (0.6)	7.5 (0.7)	9 (0.8)	10 (0.9)	15 (1.4)	20 (1.9)	25 (2.3)	30 (2.8)	40 (3.7)	50 (4.7)
Temperature Rise from Ambient °F (°C)	20 (11)	30	40	55	70	80	100	120	135	205	270	335	405	540	670
	10	10	15	20	20	25	30	35	50	65	80	100	130	160	
40 (22)	55	80	110	135	160	200	245	270	405	540	670	805	1075	1340	
	15	20	30	35	40	50	60	65	100	130	160	195	260	320	
60 (33)	90	120	160	205	245	300	365	405	605	805	1005	1210	1610	2010	
	20	30	55	50	60	75	90	100	145	195	240	290	385	480	
80 (44)	110	160	215	270	325	400	485	540	805	1075	1340	1610	2145	2680	
	30	40	55	65	80	100	115	130	195	260	320	385	515	640	
100 (56)	135	200	270	335	405	500	605	670	1005	1340	1675	2010	2680	3350	
	35	50	65	80	100	125	145	160	240	320	400	480	640	800	
120 (67)	165	240	320	405	485	600	725	805	1210	1610	2010	2415	3220	4020	
	40	60	80	100	115	150	175	195	290	385	480	580	770	960	
140 (78)	190	280	375	470	565	700	845	940	1410	1880	2345	2815	3755	4690	
	45	70	90	115	135	175	205	225	340	450	560	675	900	1120	

□ Uninsulated boxes □ Insulated boxes

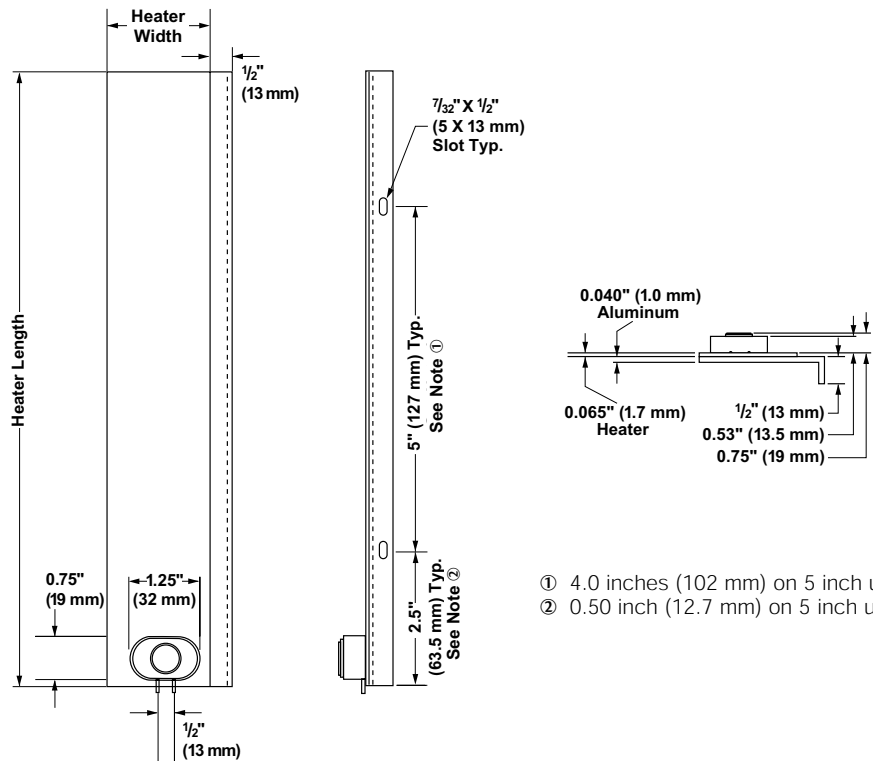
Flexible Heaters

Silicone Rubber Stock Product Offering Enclosure Heaters Options

Aluminum Mounting Plate

Both vertical and horizontal mounting can be accomplished with enclosure heaters. The mounting plates are 0.040 inch (1 mm) thick, specified as #3003 H14 aluminum. The preferred orientation is vertical, with a thermostat attached at the lower end (as shown in the drawing).

For horizontal mounting, a remote thermostat is recommended. An enclosure heater can be ordered by itself, with PSAS or vulcanized to an aluminum mounting plate. See *Thermostats* below for more information.



- ① 4.0 inches (102 mm) on 5 inch unit.
- ② 0.50 inch (12.7 mm) on 5 inch unit.

Thermostats

Mounted on Heater

Built-in snap action thermostats from Watlow are designed to sense air temperature. See the ordering chart on the following page for available settings.

Remote From Heater

For an air sensing thermostat separate from the heater, the ST-207E is ideal. This is a modified ST-207 mounted on a 1/32 inch (0.8 mm) thick G-10 circuit board with the thermostat's metal cap exposed to sense air temperature. The thermostat is placed at the

midpoint of the lead length. The sensor can be preset at the temperatures listed for integral sensors. For more information, turn to **pages 167-168**.

Notes:

- On both integral and remote sensors, the thermostat's exposed metal cap is vulnerable to impact. This could defeat the thermostat's switching action and cause heater malfunction.
- T-10 thermostats are not recommended for enclosure heating applications.