



ELECTRO-FLEX HEAT

a Division of MCF, LLC

Product Data Sheet for Enclosure Heaters

FEATURES

- Standard sizes in the most frequently requested dimensions for immediate delivery
- 115V standard, 230V available
- Operating temperature range of -40°F to 350°F
- Available with built-in thermostat in two configurations
- Resistant to many chemical substances
- Choice of attachment to aluminum mounting plate
- Pre-drilled standard mounting plate
- Horizontal or vertical mounting
- UL Recognized and CSA Certified
- Custom products available

APPLICATIONS

Provides freeze prevention and condensation build-up protection in enclosures where heat is needed:

- Circuitry boxes
- Instrument cabinets
- Service panels
- Signal boxes
- ATM machines

Please contact the engineering department at Electro-Flex Heat, a Division of MCF, LLC, for assistance with specific applications.



GENERAL INFORMATION

Enclosure Heaters are made of etched foil heating circuits laminated between thin layers of fiberglass-reinforced, high temperature insulation, silicone rubber, and may be attached to an aluminum mounting plate by factory vulcanization or with PSA (Pressure Sensitive Adhesive).

Enclosure Heaters may be used on various enclosures in which effective temperature control is desirable. They offer safe and effective protection against problems brought on by temperature variations such as condensation. Certain temperature conditions may cause a moisture buildup which can be very damaging to electric equipment, affecting proper function and leading to equipment failure. Condensation buildup and freezing can affect poorly insulated enclosures as well as those that are well-sealed and protected. Using enclosure heaters is a cost-effective way to avoid replacing and repairing equipment damaged by inefficiently controlled temperatures.

A built-in, air sensing thermostat maintains the temperature to prevent freezing or condensation within the enclosure. Two thermostat configurations are available: direct mounted, where the thermostat is molded into the heater; and remote mounted, where a remote thermostat attaches to one of the leads so the customer can place it in any location in the application.

The mounting plates are drilled with 0.25in. holes for mounting to sub panels and other surfaces. Enclosure Heaters can be mounted vertically or horizontally using this mounting plate. Optimal temperature control is achieved by vertically mounting an Enclosure Heater with a direct thermostat.

How to order:

1. Specify model number (see Figure 2).
2. Contact factory or representative (see back page for contact information)



Table 1. General Specifications

Characteristic	Value
Material and construction	fully vulcanized fiberglass-reinforced silicone rubber encapsulating a nickel alloy or a thin foil heating element
Voltage	115V
Power densities available (115 V)	5 W/in. ²
Operating temperature range: with thermostat without thermostat	-40°F to 350°F see Figure 2 for available set points
Exposure temperature range: with thermostat without thermostat	-40°F to 350°F see Figure 2 for available set points
Resistance tolerance	±10%
Thickness	0.125in.
Leads: gage insulation length	22 AWG Teflon® 48.0in. min.
Component approvals	UL, CSA
High-potential dielectric testing (115 V)	1250V
Serviceable parts	none

Note: *See Figure 2 for available lengths.

Table 2. Desired Temperature vs Total Enclosure Surface Area (W)*

Delta Temp. (F°)	Total Enclosure Surface Area (ft ²)												
	2	3	4	5	6	7.5	10	15	20	25	30	40	50
20	30	40	55	70	80	100	135	205	270	335	405	540	670
	10	10	15	20	20	25	35	50	65	80	100	130	160
40	80	80	110	135	160	200	270	405	540	670	805	1075	1340
	15	20	30	35	40	50	65	100	130	160	195	250	320
60	90	120	160	205	245	300	405	605	805	1005	1210	1610	2010
	20	30	55	50	60	75	100	145	195	240	290	385	480
80	110	160	215	270	325	400	540	805	1075	1340	1610	2145	2680
	30	40	55	65	80	100	130	195	250	320	395	515	640
100	135	200	270	335	405	500	670	1005	1340	1675	2010	2680	3350
	35	50	65	80	100	125	160	240	320	400	480	540	800
120	165	240	320	405	485	600	805	1210	1610	2010	2415	3220	4020
	40	60	80	100	115	150	195	290	325	460	500	770	960
140	190	280	375	470	565	700	940	1410	1880	2345	2815	3755	4690
	45	70	80	115	135	175	225	340	450	500	675	800	1120

Note: *Non-shaded areas indicate enclosure with no insulation; shaded areas indicate enclosure with 1in. fiberglass insulation.

How to use Table 2:

1. Determine the total enclosure surface area (four sides plus top and bottom).
2. Find total enclosure surface area on the horizontal axis.
3. Find delta temperature on the vertical axis.
4. The intersection of these two axes indicates the wattage needed to maintain the desired temperature.



Figure 1. Mounting Plate Dimensions (For reference only. in.)

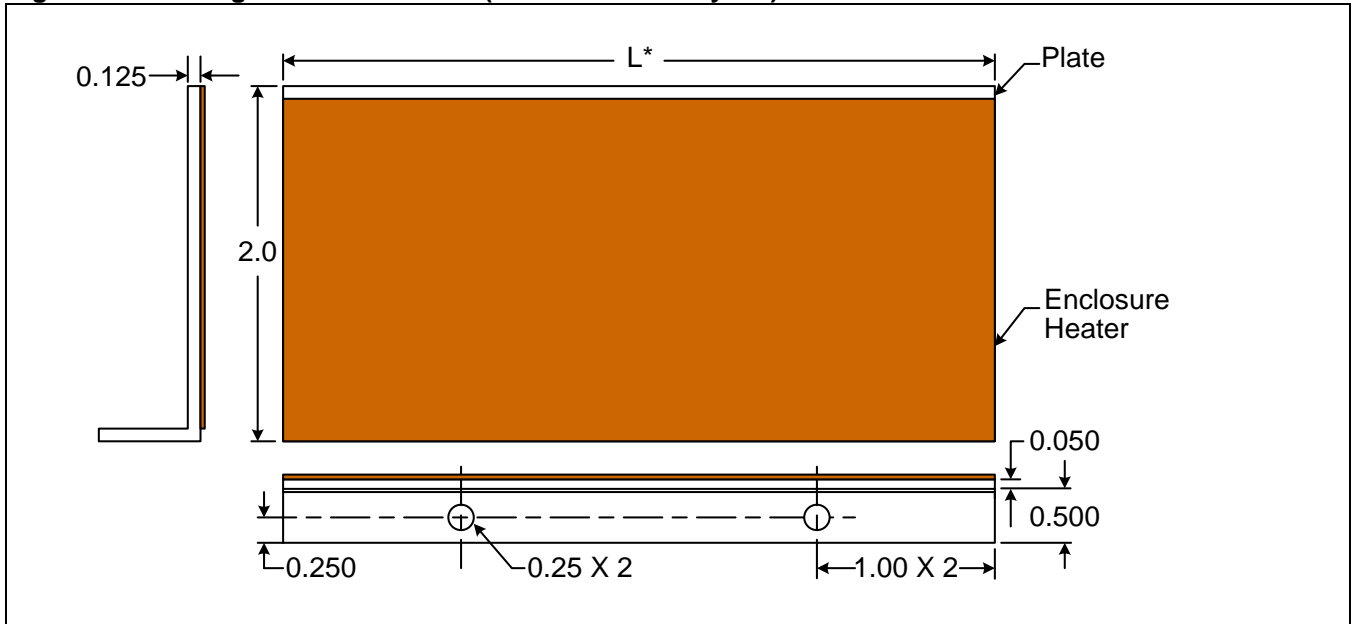
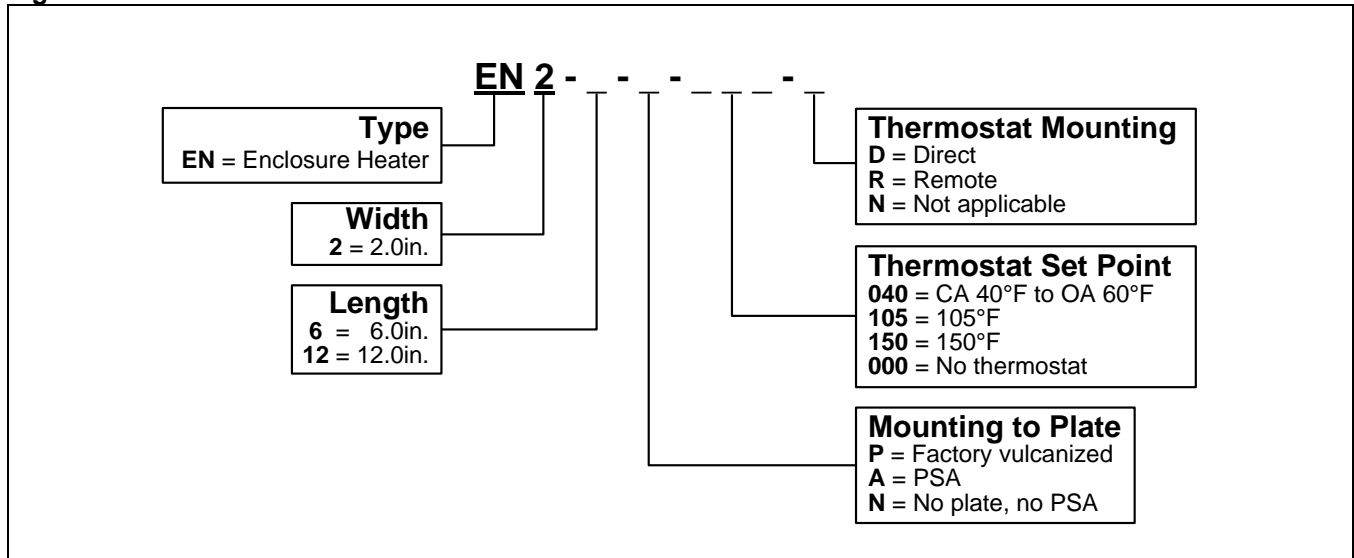


Figure 2. Model Number Order Guide





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EFH1005 Issue 6
February 2017
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