Caloritech™
Engineered Electric Heat

Certified System ISO 9001

Electric Enclosure Heaters — Type PH

Caloritech™ type PH enclosure heaters are fan-forced air heaters designed to control the environment within enclosures by maintaining a stable temperature.

Effects of low temperatures such as corrosion, freezing or condensation will adversely affect the components inside control panels. The Caloritech™ PH enclosure heater provides an optimal performance environment for the critical components contained within the control panel.

C SA® US

Fan AUTO/ON switch to prolong motor life

Externally adjustable thermostat 0°F to 100°F (-18°C to 38°C)

Pilot light for 'HEAT ON' indication

Terminal strip provides quick installation with both stranded and solid wire

High temperature safety protection

Optional DIN rail mounting

Additional Features:

- CSA C/US approved
- Light Weight
- Low Maintenance
- Aluminum alloy outer casing protects interior components
- Screw fasteners provide easy access to components inside casing

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Heater Selection

The wattage requirement is determined from a consideration of the surface area, insulation properties of the enclosure or space and the temperature difference between the ambient and the enclosure. For small enclosures (less than 100 ft2 surface area) conservative values for heat losses are as shown in Table 1.

TABLE 1 - WATTS/FT² PER 10˚F TEMPERATURE DIFFERENCE

	INDOORS	OUTDOORS
UNINSULATED	5	7
INSULATED (MIN. 1")	1	1.2

Example: To find wattage requirements in an uninsulated enclosure 2’ x 3’ x1’, which must be held at 40˚F in a 10˚F outdoor ambient, with internal electrical components that generate 80 watts.

Surface Area = 2[(2’ x 3’) + (2’ x 1’) + (3’ x 1’)] = 22 ft²

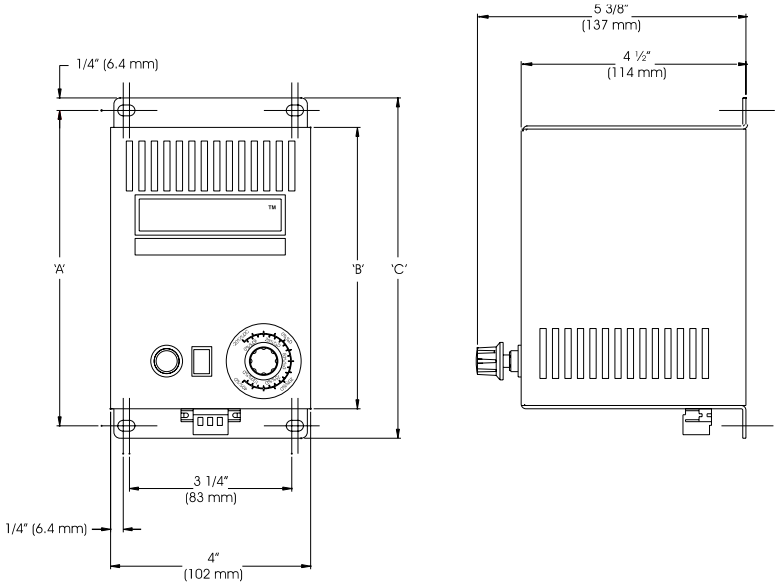
From Table 1, an uninsulated outdoor enclosure requires 7 watts per square foot for each 10˚F temperature difference.

Temperature Difference = 40˚F - 10˚F = 30˚F
Wattage Required = (30˚F ÷ 10˚F) x 7 W/ft² x 22 ft² = 462 watts
Heater Wattage = Wattage required - component wattage
= 462 - 80 = 382 watts

Use one PH400 rated at 400 watts. For enclosures requiring more than 800 watts, two or more PH heaters may be used.

Installation

The Caloritech™ PH enclosure heater should be installed in the center of the cabinet and as low as practical for the best possible heat distribution. The optimum efficiency is obtained when the unit is mounted in a vertical position allowing the top air vents to release the heated air in the most effective manner. The enclosures should be sealed and free from dust and dirt. Do not install the heaters on wood, cardboard or other flammable panels. Heat sensitive components should not be placed near the heat discharge area. For larger enclosures, two or more heaters may be used.



DIMENSIONS

PH125/PH200		
A	5	(127mm)
B	4 3/16"	(106mm)
C	5 1/2"	(140mm)
PH400/PH800		
A	7	(178mm)
B	6 3/16"	(157mm)
C	7 1/2"	(191mm)

STANDARD MODELS

CATALOG NUMBER	WATTS	VOLTAGE	HERTZ	PHASE	WEIGHT LBS.	WEIGHT KG
PH12511	125	120	60	1	2.2	1.0
PH12531	125	240	60	1	2.2	1.0
	105	220	50	1	2.2	1.0
PH20011	200	120	60	1	2.2	1.0
PH20031	200	240	60	1	2.2	1.0
	168	220	50	1	2.2	1.0
PH40011	400	120	60	1	3.0	1.4
PH40031	400	240	60	1	3.0	1.4
	336	220	50	1	3.0	1.4
PH80011	800	120	60	1	3.0	1.4
PH80031	800	240	60	1	3.0	1.4
	672	220	50	1	3.0	1.4