

H-PD-2 Heater Power Detector System

***EDE Electric Motor
Testing***

1545 Reeves Drive

Fort Collins, CO 80526

970/581-6797

www.edeinst.com



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USER GUIDE H-PD-2 HEATER POWER DETECTOR:

This guide is intended to assist professionals in the operation of the H-PD-2 Heater Power Detector.

The H-PD-2 is supplied with the following materials, verify you have received them:

Items required to deploy the H-PD-2

Qty: 1: H-PD-2 Heater Power Detector (DIN rail mount package).

Qty: 1: 1 x Split core CT

Optional deployment items:

Qty: 2: (1 x extra split core CT to monitor motor starter controls)

Qty: 1: IP65 enclosure for up to 2 x H-PD-2 devices

Qty: 1: Small straight blade screwdriver suitable for WAGO type terminal blocks (for landing CT wires)

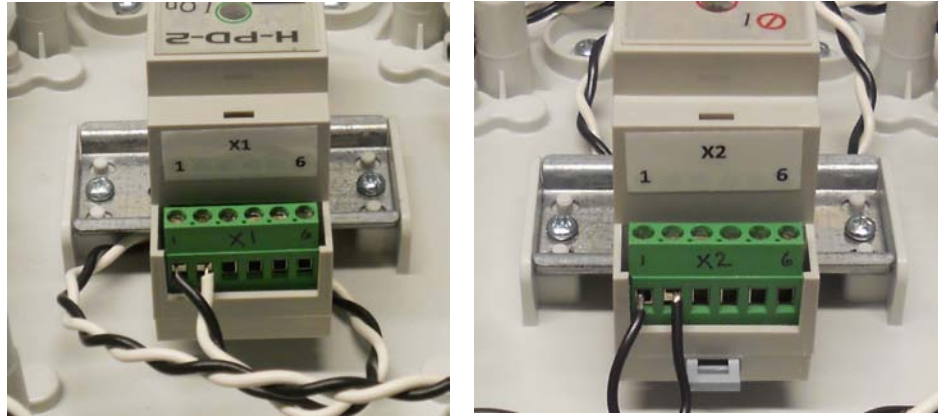


FIG 1: X1 AND X2 PIN PLACEMENTS

H-PD-2 Heater Power Detector:

The H-PD-2 Heater Power Detector is a passive device designed to be used as a power supply monitoring system for resistive space heaters that are supplied with 50/60Hz AC current. It is of value to companies that want to continually assure the performance of space heaters inside of electrical equipment/enclosures or circuits. Technicians or engineers can verify performance of their equipment by visual observation (RED light/GREEN light approach) or, by implementation of external optically coupled transistor/relay or contacts.

Intended use

It is intended to help provide timely notification of performance issues with heater circuits, or other circuits including (but not limited to):

- Flexible winding heaters which wrap around electric windings inside rotating electric machines. i.e. Electric motors and generators.
- Solid winding heaters comprised of resistance wire which are installed underneath or in proximity to the electric coils inside motors and generators.
- Varieties of constant current circuits such as “Freeze Indicators” or other implementations of resistive liquid heaters/space heaters.

Specifications and absolute maximum ratings:

The H-PD-2 is not rated, not intended to accept any input from any external device, or non EDE provided power supply.

Ratings

In any uncontrolled industrial environment, or with any power supplies that are capable of providing high fault currents, the EDE **H-PD-2 should not be operated beyond listed maximums below:**

Maximum suggested ratings	Voltage	Current
X1 pin 1 through 6	5 Volts AC or DC	1.0 – 10.0 Amps AC
X2 pin 1 through 6		

AC or DC Voltage impressed on X-1 or X-2 **must not exceed** the power rating of the input circuits. In no case, should 5 or more AC or DC volts be impressed.

Temperature

Recommended use is at ambient temperature between 0° C and 40°C. Dissipated power rating is affected by temperature. De-rate power rating by 3% per degree C above 25°. The item is not rated for use above 55°C, or in the presence of condensing liquid.

Humidity

Not rated for use in the presence of condensing humidity. System indicated results may be affected by deposit of water on its surfaces. The system should be kept clean and dry. The device can be provided in an IP65 enclosure that carries an ingress protection rating, and allows it a measure of protection against condensing humidity.

Periodic Calibration:

The H-PD-2 is factory calibrated to provide activation of the visual indicator LED's if steady current between 1.0 ampere to 10.0 amperes AC at 50/60Hz is passing through the center of the split core CT (provided with the H-PD-2).

Periodic calibration is generally un-necessary for the service life of the device. Simple field verification can be determined by current probes available from many vendors. Clamp the current probe around the current carrying conductor, and observe if current is flowing, in the range of 1-10 amperes. If so, the GREEN led should be illuminated with a flashing light every 1-5 seconds.

The H-PD-2 calibration verification procedure is available from EDE Electric upon request.

Guide for installation and use:

Identify the type of equipment that will be monitored. The most typical application will be the space heaters inside electric motors. These heaters are often fed with a separate single phase 120/240 V AC distribution circuit. (Separate from three phase mains power feed to the electric motor).

To begin your installation procedures review the following:

- H-PD-2 unit, with clearly labeled X1 1-6 and X2 1-6 labeling
- CT with split core.
- IP65 rated enclosure with DIN rail mount for H-PD-2
- Schematic of electrical feed to the electric motor space heaters. This is to help identify appropriate locations where the H-PD-2 can be installed.

NOTE: Electric motor space heaters are often provided power from separate lighting/distribution panels, separated by some distance from the motor switchgear/feeder panels.

Determination of Installation Method

Determine the most appropriate method of installation for your application by answering the following questions:

1. Is the mounting area easily observable to maintenance staff?

2. Is the mounting area located in an area where it is safe for staff to observe the light indicators?
3. Has the device been installed using appropriate enclosure to prevent ingress of foreign materials and/or liquids?

Application Summary

These instructions are a basic guideline and by no means show every possible implementation. If you have a different application, or questions about installation, please contact EDE Electric Motor Testing at 970-581-6797.

We will make every effort to develop a solution, adapter or work

through the application with you. For further products and services that EDE Electric Motor Testing offers, please visit our website at www.edeinst.com.