

Neo-Dyn

ITT Aerospace Controls 28150 Industry Drive Valencia, CA 91355-4100 Telephone (661) 295-4000 Fax (661) 294-1750 www.neodyn.com

INSTALLATION AND OPERATING INSTRUCTIONS SERIES **112P** ADJUSTABLE PRESSURE SWITCHES ENCLOSURE 6 (NEMA TYPE 3, 3R, 3S, 4, 4X, 7, 9, 13 AND IP66)

SUITABLE FOR USE IN FLAMMABLE/COMBUSTIBLE ATMOSPHERES

CLASS I: GROUPS A, B, C, AND D CLASS II: GROUPS E, F AND G AS DEFINED BY THE NATIONAL ELECTRICAL CODE

NOTICE

- 1. For industrial use only, not a consumer product.
- 2. This item should be installed, operated, and maintained by technical personnel knowledgeable in local and national electrical and mechanical codes.
- 3. Always use wrench flats provided.
- 4. Avoid excessive torque on any threaded connection.
- When surface mounting is used, insure surface is flat.
- 6. Manual operation of the electrical assembly may result in the unit becoming nonfunctional.
- 7. The user must evaluate the appropriate useful life of these products for their application. An appropriate periodic system check and replacement plan should be made for sensitive or hazardous systems. Life can be affected by many factors including the amount of power applied, system pressure, surges in power or pressure, cycle frequency, temperature, and corrosiveness of the media.

WARNING: Before proceeding, read and understand the following:

- 1. Hazardous electrical power may cause severe personal injury or death.
 - A. Do not make electrical connections while electrical power is on.
 - B. Do not exceed voltage and current ratings.
 - C. Do not remove conduit connections or make wiring repairs while electrical power is on. Check for multiple circuits.
 - D. Provide adequate electrical grounding.
- 2. Media leakage may cause property damage, severe personal injury or death.
 - A. Improper installation may result in media leakage.
 - 1. Ensure that the gasket and diaphragm material is compatible with system media.
 - 2. Flange performance is dependent upon bolt-up loads necessary to maintain gasket seal tightness. Methods for bolting and testing of flange joints must assure adequate and uniform tension in flange bolts.
 - B. Diaphragm failure may result in media leakage.
 - 1. The customer is responsible for instituting a regular diaphragm replacement schedule to preclude diaphragm failure due to media erosion.
 - 2. The unit incorporates a stainless steel secondary diaphragm seal and a 1/4-18 female leakage detection port. This port must be connected to a gauge or pressure switch.
 - 3. The diaphragm is designed to be field replaceable. Order the proper replacement diaphragm by specifying the switch part number and wetted material (includes removal and installation instructions).
 - 4. Do not repair and reinstall any unit on which the diaphragm has failed and media leakage resulted. The factory should be consulted to determine if component damage may have occurred.
- 3. Excessive pressure may rupture the pressure switch; severe injury, death, or property damage may result. Do not subject this item to pressures in excess of nameplate listed proof pressure.
 - A. <u>Mounting:</u>
 - 1. Units may be flange mounted in any position.
 - B. Pressure Connection (See Warning 2 & 3):
 - Units are supplied with a 1 inch, 1/16 raised face flange per ANSI B16.5 1983. A diaphragm forms an integral part of the flange and must be handled with caution. Installation should be accomplished in accordance with ANSI B16.5 using appropriate flange gasket..
 - C. <u>Electrical Connections</u> (See Warning 1):
 - 1. Units are supplied with 18 AWG free leads exiting from a 1/2-14 NPT male conduit connection. The leads are color coded and marked for proper electrical circuitry.
 - a. Splices to main wiring should be accomplished in accordance with "National Electrical Code" (NEC) and local code instructions.
 - b. Grounding: Proper grounding must be accomplished by use of green ground wire or by connection to grounded metal conduit.
 - c. Conduit Connections: Install conduit. If surface mounting is used, it is recommended that flexible conduit be used for the final connection.
 - d. <u>Flammable/Combustible Locations</u>: Since the unit is "factory sealed", a sealing fitting <u>is not</u> required.
 - D. Adjustment:
 - 1. Pressure settings are internally adjustable, however, electrical power may remain on.
 - a. Loosen access cover screws, swing cover away. Using a common blade screw driver, rotate the adjustment wheel:
 - 1. Clockwise to increase settings.
 - 2. Counterclockwise to decrease settings.
 - NOTE: When range scale is provided, increasing set point is indicated at bottom of adjustment wheel.
 - b. Replace access cover and tighten cover screws.

Revision date: 10/2/2007