ユサキ・オートメーション 合同会社 御中

Chromalox の Type E2 Terminal Enclosure
Explosion Resistant/Moisture Resistant × 1台
のお見積りよろしくお願い致します。

(株)ニシイ 佐世保営業所 山内

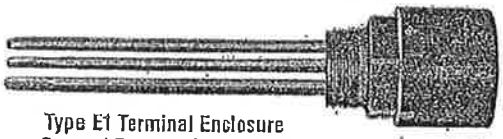
Chromalox®

Installation, Operation and MAINTENANCE INSTRUCTIONS

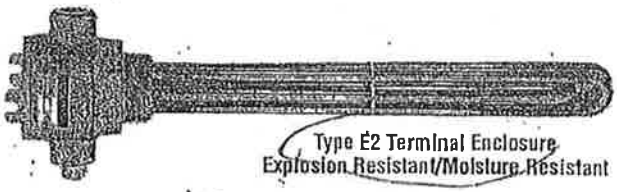
SERVICE REFERENCE	
DIVISION 4	SECTION MT
SALES REFERENCE (Supersedes PD407-17)	PD407-18
	161-048381-001
DATE AUGUST, 2009	

Industrial Screw Plug Immersion Heaters
ARMT, ARMTO, ARMTS, ARMTI, AREMTI, AREMTO, AREMTS, CH-SD, EMT, EMTI, EMTO, EMTS, E4TP, MT, MTI, MTO, MTS, ARTM, ARTMO, ARTMS & ARTMI

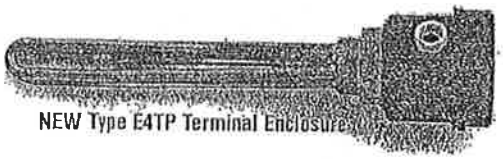
Note: These instructions relate to all enclosure styles shown within.



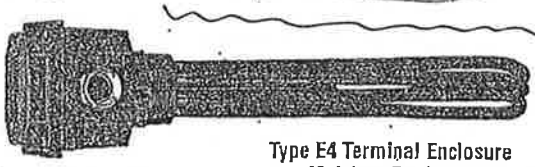
Type E1 Terminal Enclosure
General Purpose (Rotatable)



Type E2 Terminal Enclosure
Explosion Resistant/Moisture Resistant



NEW Type E4TP Terminal Enclosure



Type E4 Terminal Enclosure
Moisture Resistant

GENERAL

Chromalox type ARMT, ARMTO, ARMTS, ARMTI, AREMTI, AREMTO, AREMTS, CH-SD, EMT, EMTI, EMTO, EMTS, E4TP, MT, MTI, MTO, MTS ARTM, ARTMO, ARTMS and ARTMI screw plug immersion heaters are designed for a wide variety of heating applications.

Heater Construction Characteristics:

A. High quality resistance wire held in place by compacted Magnesium Oxide Refractory enclosed in a wide variety of sheath materials.
B. Low to high watt densities.
C. Standard selection of sheath materials include copper, steel, INCOLOY® alloy and stainless steel. This broad selection of sheath materials will operate successfully in many corrosive solutions.
D. Proper selection of sheath material is the sole responsibility of the customer.
E. Units are available with E1 General Purpose, E4 Moisture Resistant and E2/E3 Explosion/Moisture-Resistant terminal enclosures.

Additional enclosure styles available but not shown above.

⚠WARNING

IMPORTANT: ***It is the responsibility of the purchaser of the heater to make the ultimate choice of sheath material based upon his/her knowledge of the chemical composition of the corrosive solution, character of the materials entering the solution, and controls which he/she maintains on the process.***

⚠WARNING

Sheath corrosion can result in a ground fault which, depending upon the solution being heated, can cause an explosion or fire.

⚠WARNING

The system designer is responsible for the safety of this equipment and should install adequate back-up controls and safety devices with their electric heating equipment. Where the consequences of failure could result in personal injury or property damage, back-up controls are essential.

⚠WARNING

FIRE HAZARD. An integral thermostat, if provided, is designed for temperature control service only. Because the thermostat does not fail safe, it should not be used for temperature limiting duty. Wiring to this device is the responsibility of the user.

INSTALLATION (cont'd)

⚠WARNING

10. ***FIRE HAZARD. Since heaters are capable of developing high temperatures, extreme care should be taken to:***
    A. Use explosion-resistant terminal enclosures in hazardous locations. See Chromalox catalog for specification of explosion-resistant terminal enclosures for hazardous locations. All options not shown here.
    B. Avoid contact between heaters and combustible material.
    C. Keep combustible materials far enough away to be free of the effects of high temperatures.

⚠WARNING

Provisions should be made to prevent damage from any eventual leaking of tank or components. Failure to comply could result in personal injury or property damage.

11. Adjustment Instructions for E1 Enclosure only (Figure 5).
    A. After tightening the heater into the tank opening, the terminal enclosure can be rotated to a more convenient position to install the power feed.
    B. Remove the terminal box cover (Item A) by loosening the three cover screws (Item B) (do not completely remove the screws since the cover holes are open slotted).
    C. To rotate the terminal enclosure, loosen the three mounting screws (Item C) until the base rotates freely (do not completely remove).
    D. Turn the base until the conduit opening is at the desired position.
    E. Tighten the base mounting screws securely (Item C). **Caution: *Do not over tighten.***
    F. Follow the rest of the screw plug installation instructions to complete the installation

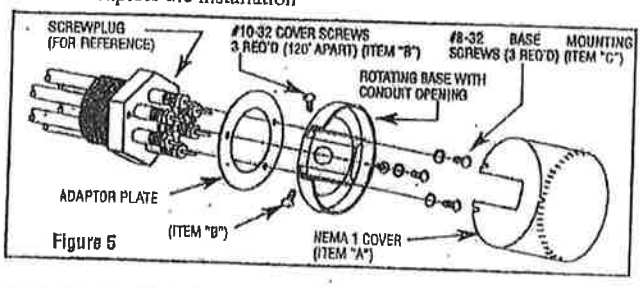


Figure 5

⚠WARNING

FIRE OR SHOCK HAZARD: Moisture accumulation in the element refractory material, element over-temperature, or sheath corrosion can cause ground fault to the element sheath, generating arcing and molten metal. Install Ground Fault Circuit-Interrupter (GFCI) to prevent personal injury or Equipment Ground Fault Protection to prevent property damage.

12. Adjustment Instructions for E4TP Enclosure only (Figure 6).
    A. After tightening the heater into the tank opening, the terminal enclosure can be rotated to a more convenient position to install the power feed.
    B. Remove the lid by loosening the set screw and giving the lid a 1/4 turn twist off motion. After lid removal, loosen the nuts holding the clamp down plate against the inside enclosure lip and turn to the desired position.
    C. Tighten nuts and secure enclosure.
    D. For maximum flexibility and optimal moisture resistant performance of the large Buna O-ring gasket, the gasket should be lubricated with an inert lubricant such as silicone or white lithium based product.

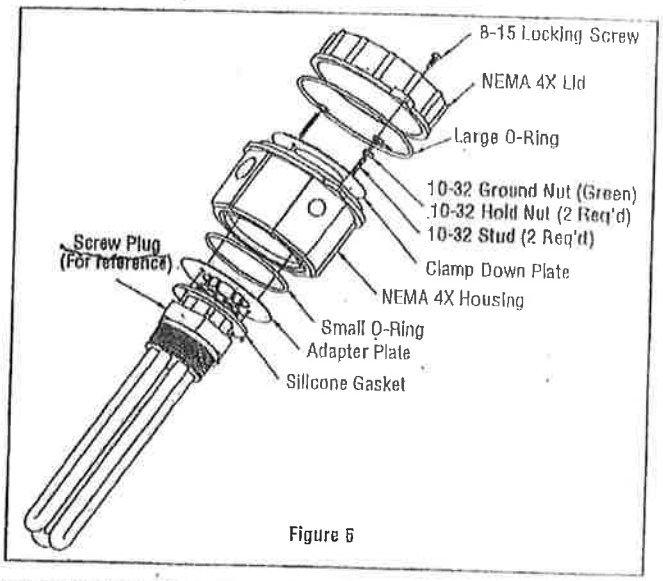


Figure 6

THERMOSTATS

1. Integrally mounted thermostats are available.
2. Thermostats may be connected directly to heaters that are rated within the electrical capacities. When the heater amperage exceeds the contact rating of the thermostat, the heater should be controlled by a magnetic contactor with the thermostat wired for pilot duty. Refer to the thermostat instruction sheet packed with the heater. If one isn't provided, please contact Chromalox for ratings.