

Installation, Operation, & Maintenance Manual

Mustang Pony® Probe Enclosure

MODELS: PNY, PNY702, PNY750, PNYGPiL, PNYGPR, PNYGPRiL



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Valtronics, Inc. for
Mustang Sampling, LLC

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Other Patents Pending

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Mustang Sampling[®]



PONY[®]
PROBE ENCLOSURE
PATENT # US7169933

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MODEL: _____

VOLTAGE: _____

HZ: _____, PHASE: _____, WATTS: _____

Class 1, Division 1, Group C, D, T3

CAUTION: TO REDUCE THE RISK OF IGNITION OF HAZARDOUS ATMOSPHERES, DISCONNECT THE EQUIPMENT FROM THE SUPPLY CIRCUIT BEFORE OPENING.

OUVRIR LE CIRCUIT AVANT D'ENLEVER LE COUVERCLE

KEEP ASSEMBLY TIGHTLY CLOSED WHEN IN OPERATION.

GARDER LE COUVERCLE BIEN FERME TANT QUE LES CIRCUITS SONT SOUS TENSION.

SAFETY WARNINGS

STANDARDS

- Standard for Safety Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements (ANSI/UL 61010-1, 07/12/2004, Ed. 2)
- Standard for Safety Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements (CAN/CSA C22.2 No. 61010-1, 07/01/2004, Ed. 2)
- Standard for Safety Explosion-Proof and Dust-Ignition Proof Electrical Equipment for Use in Hazardous (Classified) Locations (ANSI/UL 1203, 1028/09, Ed. 4)
- Explosion-Proof Enclosures for Use in Class 1 Hazardous Locations Industrial: Industrial Products (CSA C22.2 No. 30-M1986, (G.I. No. 2, 11/1988))
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**Failure to abide by any of the safety warnings
could result in serious injury or death.**

- Electrical power must be "OFF" before and during installation and maintenance or personal injury may result. Follow site requirements for Safety Precaution Rules.
- Do not exceed any equipment pressure, or electrical ratings.
- To reduce the risk of fire or explosion, do not install where the marked operating temperature exceeds the ignition temperature of the hazardous atmosphere(s).
- Block heater surface temperature is hot enough to burn if touched without protection.
- Select a mounting location so that the system will not be subjected to impact or other damaging effects.
- The hazard location information specifying class and group listing of each system is marked on the nameplate.
- Properly ground all equipment to prevent static electric generation.

PRODUCT FEATURES

The Pony® Heated Probe Enclosure is designed to provide and maintain heat for the sample probe directly at the sample point with a remote mount Mustang® Sample Conditioning System (MSCS). The Pony® enclosure is an integral part of the MSCS, developed to install between 6" center-to-center thread-o-lets.

Consisting of a molded, insulated, and weatherproof clam shell design, the Pony® enclosure provides easy maintenance with steel latches and chain to prevent loss of lid. Construction selections include hot press glass fiber reinforced polyester or stainless steel.

The MSCS conforms to the API 14.1 requirements for hydrocarbon liquid removal and heat tracing. The system extracts, conditions and transports the sample from the pipeline to the analyzer as follows:

A membrane probe, housed in its own heated enclosure extracts a representative vapor phase sample from the pipeline. Liquids are removed at pipeline conditions of pressure and temperature thereby avoiding gas phase composition changes

The liquid and particle free gas sample is then transported through a heated line to a sample system housed in its heated enclosure. A second separator equipped with a membrane and a liquid block mechanism provides a second and third means of protection against liquid damage to the analyzer.

External to the Pony® Probe Enclosure, a heated pressure regulator (MHR or MJTHR) can be located downstream of the membrane separator which reduces the sample pressure to the level required for the analyzer. The gas sample is heated inside of the regulator **before** and **after** the pressure is reduced. This insures that the Joule-Thomson cooling effect will not cause hydrocarbon liquid condensation during the pressure reduction. The conditioned sample is transported to the analyzer via heat traced tubing to maintain the gas temperature.

- Analytically Accurate™ design
- Patented technology utilizing existing power supplied by heat trace sample tubing
- Requires no gas consumption or external power
- Direct mount on pipeline fitting between 6" center-to-center TOL's
- Reduces maintenance by eliminating need to wrap probe in heat trace tape
- Fits over existing brand of probes with correct adaptor nut
- Rated for Class 1, Div 1 Locations

TECHNICAL SPECIFICATIONS

Classification	Class 1, Div 1, Group C, D, & T3 Zone 1 Group IIB, Category 2G, IP66, Ex d IIC T3 Gb
Process Connections	1/4" FNPT
Power	120 VAC—120VAC, 50/60 Hz, 80 W 208 VAC—208 VAC, 50/60 Hz, 80 W 230 VAC—230 VAC, 50/60 Hz, 80 W
Cabinet Construction	Hotpressed Glass Fiber Reinforced Polyester (GRP)
Wetted Materials	316 SS/NACE Compliant

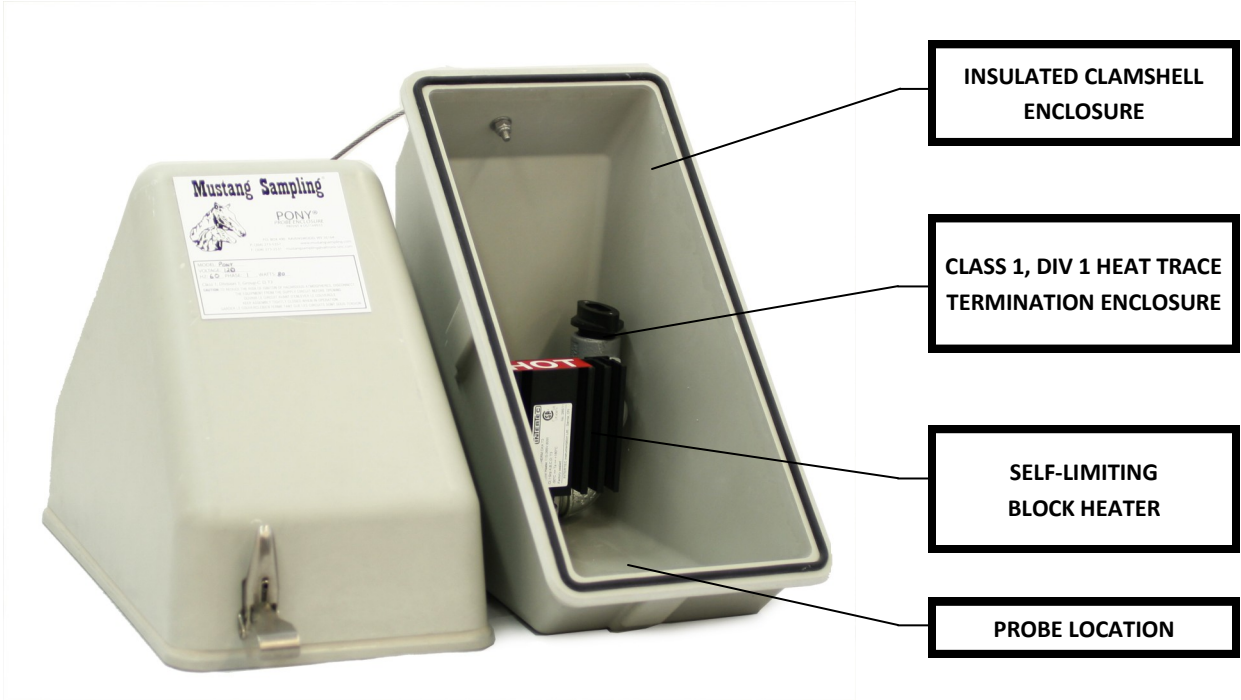
NOMENCLATURE

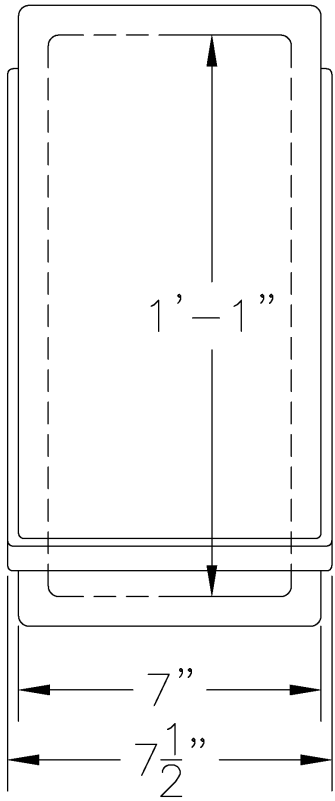
- MAOP—Maximum Allowable Operating Pressure
- LNG—Liquid Natural Gas
- BTU—British Thermal Unit

TOOLS REQUIRED

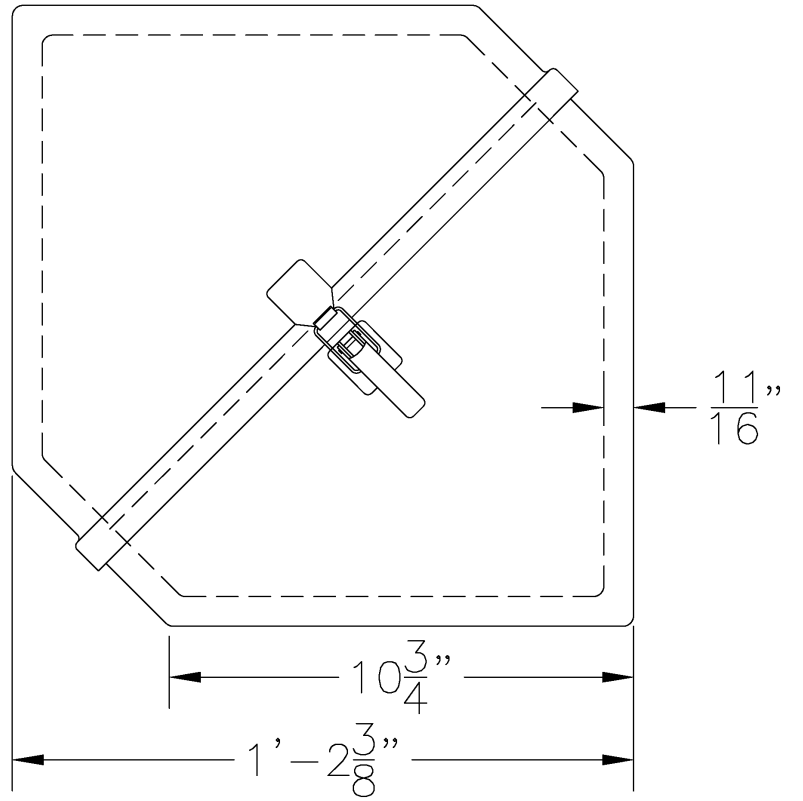
- Standard Hand Tools
- Utility Knife

PRODUCT DIMENSIONS & PARTS



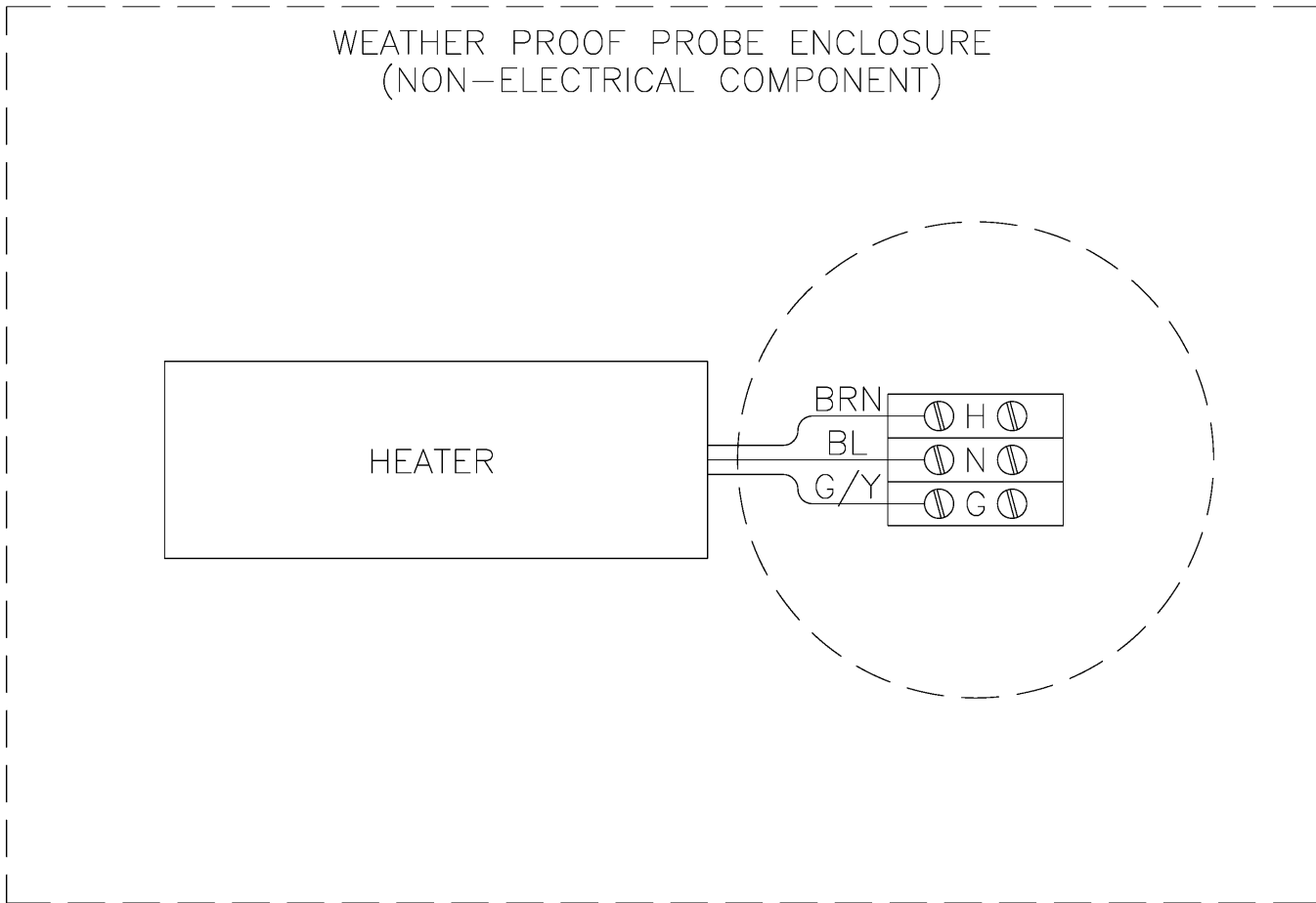


FRONT VIEW



SIDE VIEW

ELECTRICAL & WIRING DIAGRAMS



NOTE:

1. SEE BOM FOR SUPPLY VOLTAGE VARIATIONS

INSTALLATION INSTRUCTIONS

The Mustang® Sample Conditioning System assembly can be mounted in one of several mounting configurations.

- Mount the Model PONY® assembly in accordance with previous cautions and warnings.
- Perform the electrical hook up with de-energized conductors.
- Verify the unit that you are hooking up to matches voltage wise with the power supply that you are connecting. Damage to the unit can occur if the wrong source power is applied.
- A seal fitting is required for the power input connection to the PONY conduit fitting to maintain its electrical hazard classification rating.
- For 120 volt single phase input power: Connect the “hot” wire to wiring terminal #H. Connect the “Neutral” wire to wiring terminal #N. Connect the earthing (ground) wire to the green screw (G) in the bottom of the enclosure.
- For 208 or 230 volt single phase input power: Connect one “hot” wire to wiring terminal #H1. Connect the “Neutral” to wiring terminal #N. Connect the second “hot” wire to wiring terminal #H2. Connect the earthing (ground) wire to the green screw in the bottom of the enclosure.
- For 24 vdc input power: Connect the positive wire to wiring terminal #1. Connect the negative wire to wiring terminal #2. Connect the earthing (ground) wire to the green screw in the bottom of the enclosure.
- Externally connect earthing (grounding) conductors from assembly to equipment ground connections.
- After installing the probe housing, tighten the K.T. nut down onto the housing.
- Back the K.T. nut off until the set screw groove is lined up with the set screw.
- Set the Pony® probe enclosure onto the probe housing, lining the enclosure up with the pipe line.
- Mark the set screw and 4 bolt holes on the bottom of the enclosure.
- Remove the enclosure from the probe house.
- Place the yellow cover (provided) over the probe to keep dirt out of the housing.
- Drill 4 holes into the bottom of the enclosure using a 3/8” drill bit.
- Place the enclosure onto the housing, and using split washers, bolt the enclosure to the K.T. nut with 1/4-20 bolts.

- Once the enclosure is secured, determine the best place for the Heat Trace Tubing to come into the Pony® probe enclosure. With a 1-1/2" conduit hole saw, drill a hole into the side of the enclosure making sure the lid will be able to shut.
- Screw in the Raychem Bundle seal 1.60 leaving about 5 feet. Mark the tubing bundle and strip back the black coating and insulation. DO NOT CUT INTO HEAT TRACE. Carefully cut foil coating exposing tubing and Heat Trace.
- Slide the 2 legged Raychem TS1-SB2 boot over the tubing and Heat Trace. Heat shrink the boot to the bundle.
- Pull the bundle through the 1.60 boot leaving 3/4"-1" exposed inside the Pony® probe enclosure. Heat shrink the 1.60 boot.
- With a 1/2" drive ratchet, take the plug out of the seal. Loop the Heat Trace over to the seal and mark the Heat Trace where it is in the center of the seal.
- Tape the end of the wires on the Heat Trace and slide the gland with the screws over the Heat Trace followed by the red grommet.
- Carefully pull the wires through the seal into the Adalet enclosure leaving 1/2"-1" of white core inside the Adalet enclosure. Remove the tape and insert the bus wires into the guide tubes of the CS-100 core sealer. MAKE SURE THE WIRES ARE NOT CROSSED.
- Using pin terminals, dead end the circuit into the terminal block provided.
- NOTE: In the Pony® probe enclosure with Heater Block, you must NOT terminate until you check for polarity and land bus wires accordingly.

ADJUST THE TEMPERATURE SET POINT.

- The heater block is a self limiting heater.

START UP

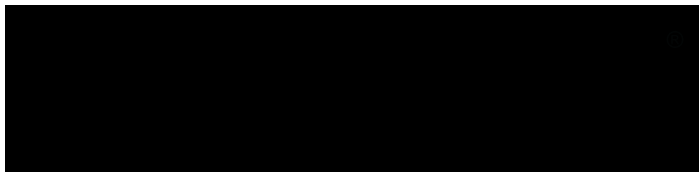
- Close the cover on the PONY® probe enclosure.
- Turn on the electrical supply to the controller.
- Allow a few minutes for the system temperature to stabilize.
- Seal the seal fittings if the PONY® block heater is functioning as desired.

OPERATION INSTRUCTIONS

- Verify that sample stream supply is shut off.
- Verify that power to the heat tracing is off.
- Connect the heat tracing to the PONY block heater.
- Turn power on to the heat tracing.

MAINTENANCE INSTRUCTIONS

- Once system is operational, no routine maintenance is required.
- Monitoring of flow and temperature values is recommended at least annually.



Analytically Accurate™ Liquid & Gas Solutions