Explosion-Proof DC Pulse Input (XS)

The Model 2400 M/P Converter is isolated from an explosive environment by enclosing in an explosion-proof housing. The Stepper Motor configuration is equipped with a clock generator positioned horizontally, which plugs into a vertically mounted translator board. The configuration includes limit switches.

The Stepper Motor is mounted on the bottom of the motor assembly in the base of the explosion-proof housing. Wiring to the unit is made to a terminal board through a 1/2" - 14 NPT conduit fitting in the base of the housing.

The unit includes two single pole, double throw, double break limit switches.

Switches on the clock generator board allow selection of:

a) Internally or Externally powered controls loops.
b) Half-step or Full step mode.
c) High-Speed or Low-Speed operation.
**Specifications**

- **Supply Pressure**: 20 psi continuous up to 150 psi max
- **Range**: 0-20° Water
- **Consumption**: None Detected
- **Power Supply**: 12-24 VDC
- **Materials**: Stainless Trim; Aluminum Housings
- **Submersible to 6 feet**

**External Control Connections - Explosion-Proof (XS) Unit**

The Explosion-Proof stepper motor unit is equipped with a Clock Generator and a Translator. Connections from an external Controller are made to the terminal clock on the Input Board as shown.

- **Controller with Isolated Loop Supply**
  - FROM: External Controller
  - TO: Input Board
  - +DC
  - Switch Closure: TB-1 Term 3 (Increase)
  - Switch Closure: TB-1 Term 4 (Decrease)

- **Controller with Dual Isolated Loop Supply**
  - FROM: External Controller
  - TO: Clock Generator DC Supply
  - Switch Closure: TB-1 Term 3
  - TB-1 Term 4
  - TB-1 Term 1

- **Controller using supply which powers Model 2400 as Control Loop Supply**
  - FROM: External Controller
  - TO: DC Supply Clock Generator
  - Switch Comm
  - Switch Closure: TB-1 Term 3
  - Switch Closure: TB-1 Term 4

**Catalog Information**

**Catalog Number**

- 24 X F 2
- S 4 B 8 A 0 0 2

- DC Pulse
- Model 4000A
- DC Pulse Input with 24VDC Clock Generator Control
- DC Motor
- FM Explosion-Proof Enclosure
- Outlet on Right Standard
- FM Explosion-Proof Enclosure

**Table 1. Clock Generator PC Board Wiring Connections**

<table>
<thead>
<tr>
<th>FROM Connector</th>
<th>Color</th>
<th>Function</th>
<th>TO Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1-1</td>
<td>Green</td>
<td>Internal Pressure</td>
<td>Normally Open</td>
</tr>
<tr>
<td>-2</td>
<td>White/Green</td>
<td>High Pressure</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>-3</td>
<td>Black</td>
<td>Limit Switch</td>
<td>Common</td>
</tr>
<tr>
<td>J2-1</td>
<td>Red</td>
<td>Internal Pressure</td>
<td>Normally Open</td>
</tr>
<tr>
<td>-2</td>
<td>White/Red</td>
<td>Low Pressure</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>-3</td>
<td>White/Black</td>
<td>Limit Switch</td>
<td>Common</td>
</tr>
<tr>
<td>J3-1</td>
<td>Gray</td>
<td>Customer’s Low</td>
<td>Common</td>
</tr>
<tr>
<td>-2</td>
<td>White/Yellow</td>
<td>Pressure Alarm</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>-3</td>
<td>Yellow</td>
<td>limit Alarm</td>
<td>Normally Open</td>
</tr>
<tr>
<td>J4-1</td>
<td>Brown</td>
<td>Customer’s Low</td>
<td>Common</td>
</tr>
<tr>
<td>-2</td>
<td>White/Orange</td>
<td>Pressure Alarm</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>-3</td>
<td>Orange</td>
<td>Limit Alarm</td>
<td>Normally Open</td>
</tr>
</tbody>
</table>

FM Explosion Proof for CL1, DIV1, GRPS B, C & D and CL2, DIV1, GRPS E, F, G, NEMA 4X

[Diagram of J1 & J2 connections and explanation of terminals and functions for internal and external connections]