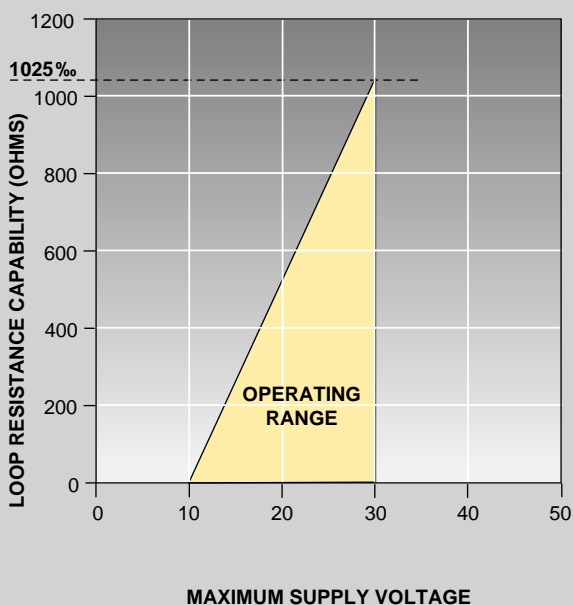




## Non-Contact HART® Enabled Position Monitoring for Rotary Valves



### Power Supply Requirements



## EPIC™ 360 & 366 Series

### Non-Contact HART® Enabled Position Transmitter

The EPIC™ 360 and 366 Position Transmitters are “smart” devices with microprocessor- based intelligence providing both 4-20 mA signal for position and digital communications via the HART® protocol. The 360 & 366 Series features low copper content aluminum or 316 SS enclosures with single solenoid valve or optional redundant solenoid valve for explosionproof service in Class I, Div. 1 Group B hazardous areas. The 360 & 366 Series design represents a significant departure from previous attempts to reliably measure the position of rotary control valves. As opposed to conventional devices, couplers are not utilized. A magnetic proximity module, attached to the actuator output shaft is the only “moving” part in the transmitter. Sensing is performed totally by non-contacting means, based upon characterization of flux strength as a function of axial position.

The ESD/PS option provides for a discrete output via the SIS to control an ESD solenoid with integrated partial stroke test functionality; PS time, configurable PS stroke duration, time/date stamp of test and PS stroke alarm. PS test can be initiated via HART.

Low current operation of the sensor is enabled through the use of new materials, which allows continuous operation rather than discrete sampling. Continuous operation permits high speed updating of the output current making it suitable for use in fast closed loop systems.

Accurate measurement of valve position provides the precision data required for the use of advanced control strategies and predictive maintenance algorithms.

### TECHNICAL SPECIFICATIONS

|                       |                                           |
|-----------------------|-------------------------------------------|
| Conduit Entries       | 3/4" NPT                                  |
| Output                | 4 to 20 mA proportional to valve position |
| Terminal Voltage Req. | 10 to 30 volts                            |
| Linearity             | ≤0.6% F.S.                                |
| Span Adjustment       | 60 to 120 degrees                         |
| Zero Adjustment       | 30% of calibration span                   |
| Resolution            | ≤0.05% F.S.                               |
| Hysteresis            | Negligible                                |
| Temperature Range     | -40°F to 185°F                            |
| Temperature Effect    | ≤0.01% F.S./°C                            |
| Humidity              | 10% to 90% non-condensing                 |
| Voltage Effect        | ≤0.2% F.S. from 10 VDC to 30 VDC          |
| Reverse Polarity      | Protected                                 |
| Mounting Attitude     | Any Position                              |
| Startup Stabilization | .5 seconds                                |

# EPIC™ 360 & 366 Series

## Non-Contact HART® Enabled Position Transmitter



| AREA CLASSIFICATIONS                      |  |
|-------------------------------------------|--|
| Class I, Groups B, C, D                   |  |
| Class II, Groups E, F, G, Divisions 1 & 2 |  |
| Class I, Group A, Division 2              |  |

| MATERIALS OF CONSTRUCTION |               |                          |
|---------------------------|---------------|--------------------------|
| <b>360</b>                | Housing/Cover | Cast Aluminum            |
| <b>366</b>                | Housing/Cover | Cast 316 Stainless Steel |

**ORDERING GUIDE** (FALCON™ SOLENOID)

| COILS                              | CV            | Body     | 3-Way       | 4-Way       |
|------------------------------------|---------------|----------|-------------|-------------|
| <b>XSO</b><br>24 VDC<br>0.55 watts | <b>.3 Cv</b>  | Brass    | <b>2100</b> | <b>2500</b> |
|                                    |               | Alum.    | <b>3100</b> | <b>3500</b> |
|                                    |               | 303 S.S. | <b>4100</b> | <b>4500</b> |
| <b>XAO</b><br>120 VAC<br>4.0 watts | <b>.5 Cv</b>  | 316 S.S. | <b>5100</b> | <b>5500</b> |
|                                    |               | Brass    | <b>2200</b> | <b>2600</b> |
| <b>XVO</b><br>125 VDC<br>1.0 watts | <b>.5 Cv</b>  | Alum.    | <b>3200</b> | <b>3600</b> |
|                                    |               | 303 SS   | <b>4200</b> | <b>4600</b> |
|                                    |               | 316 S.S. | <b>5200</b> | <b>5600</b> |
| <b>XHO</b><br>220 VAC<br>4.0 watts | <b>1.2 Cv</b> | Brass    | <b>2300</b> | <b>2700</b> |
|                                    |               | Alum.    | <b>3300</b> | <b>3700</b> |
|                                    |               | 303 S.S. | <b>4300</b> | <b>4700</b> |
|                                    |               | 316 S.S. | <b>5300</b> | <b>5700</b> |
|                                    | <b>3.5 Cv</b> | Alum.    | <b>3400</b> | <b>3800</b> |

**OPTIONAL FEATURES** (See BULLETIN NO. Q-18.02)

**DIMENSIONS** (inches/mm)

**APPROVALS / CERTIFICATION**

**FM** (Factory Mutual Research)  
**CSA** (Canadian Standards Association)

| Solenoid Valve | Dimensions |           |           |      |
|----------------|------------|-----------|-----------|------|
|                | A          | B (3-WAY) | C (4-WAY) | D    |
| .3 & .5 Cv     | 1.50       | 3.31      | 4.06      | 4.26 |
| 1.2 Cv         | 2.00       | 4.50      | 5.50      | 4.69 |
| 3.5 Cv         | 2.75       | 5.25      | 6.56      | 5.01 |

**Ordering Example**

**D4 70-RO-X-3-2100-1-1-1**

- Beacon Options "1" = Black/Yellow (for add. options refer to Price Book)
- Special Operation Options "0" = No Special Option, "1" = ESD/PST Relay Controller
- Solenoid Coil Options "6" = XSO 24Vdc, 0.5W (for additional options refer to Price Book)
- Solenoid Override Options "0" = None (for options E, L, M, N, R or S refer to Price Book)
- Solenoid Valve Body "0" = No Solenoid, 2100- 4800 (see Falcon Solenoid Ordering Guide)  
For additional solenoid options (3rd character) refer to Price Book.
- Conduit Options "1" = 1/2" NPT, "2" = M20, "3" = 3/4" NPT, "6" = M25
- Area Class Option "X" = Explosion Proof (Class I, Div. 1, Grps B-D/Class I, Div. 2, Grps A-G)
- Valve Type Options "RO" = Rotary Valve, "RR" = Rotary Valve with Remote Option
- Enclosure Options "60" = 360- Aluminum Single/Dual Coil Falcon "70" = 366- Stainless Steel Single/Dual Coil Falcon
- Product Code for Digital Epic **D4**