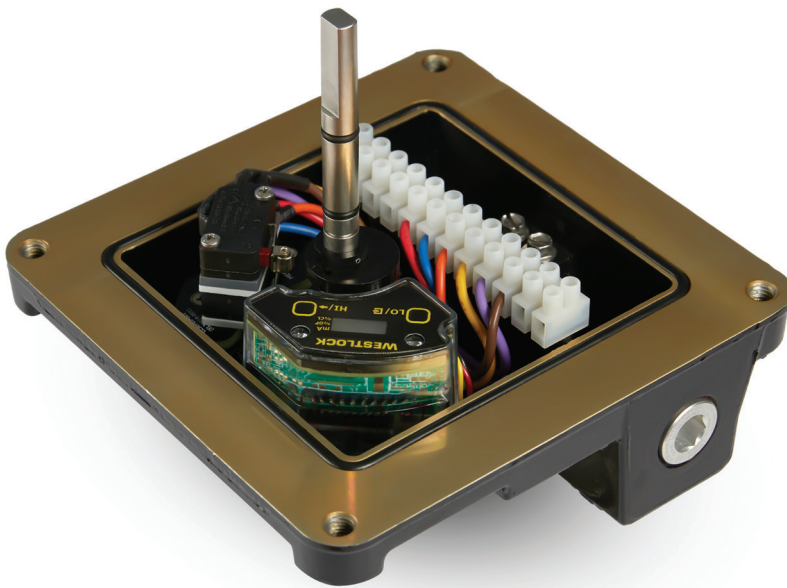


## DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

An EPIC performance in every condition. The Digital EPIC D200 serves a wide range of applications for any environment. A valve position transmitter with available switch options, offering industry leading linearity and hysteresis. The D200 features accurate position measurement with digital communication via HART<sup>®</sup> protocol in a simple integrated package.



### FEATURES AND BENEFITS

- High visibility Beacon
- Simple push button calibration makes commissioning easy
- Clear LCD display showing position and status for ease of reading feedback data
- Standard non contact position sensor for greater reliability
- High update rate of feedback signal for increased accuracy
- HART<sup>®</sup> 7 Protocol for use with the latest systems
- EEDDL/FDT<sup>®</sup> DTM
- Offers diagnostics, position and cycle count to enable customer planned maintenance
- Option to include end of travel switches giving more versatility
- Global certification for hazardous areas covers more applications worldwide
- NAMUR mount pattern for standard brackets
- User interface with digital display accessible from all sides
- Available with an integral Falcon V solenoid

### GENERAL APPLICATION

The Digital EPIC D200 digital feedback transmitter is a modular 4-20 mA loop current device that can be combined with switch options, standard HART<sup>®</sup> 7 protocol, and incorporated into the established range of Westlock designed and proven monitors.

Certified for use under US/CA standards and ATEX/IEC standards.

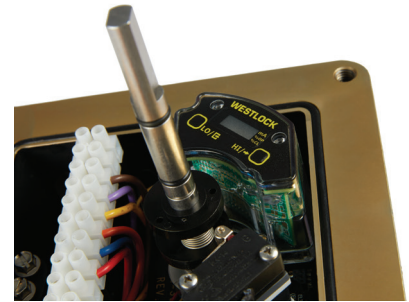
Model		Materials	Agency approvals
No solenoid	Falcon V solenoid		
	D230	Engineered Resin	<b>North America:</b> Cl. 1, Div. 2, Grps ABCD; Nonincendive Cl. II & III, Div. 2, Grps EFG; Type 4, 4X; <b>ATEX/IECEX:</b> EX ia IIC T4 Ga Ta = -40°C to +80°C IP66/IP67 EX nA T4 Gc Ta = -40°C to +80°C IP66/IP67
D241	D240	Low copper content Aluminum	
D251	D250	316 Stainless Steel	
D261	D260	Low copper content Aluminum	<b>North America:</b> Cl. I, Grps ABCD; Cl. II, Grps EFG, Type 4/4X; Cl. I Div. 2, Grps ABCD/T4, Ta=60°C <b>ATEX/IECEX:</b> II 2 GD Ex db IIC T*, Ex tb IIIC T*, IP66/67
D271	D270	316 Stainless Steel	
D281	D280	Low copper content Aluminum	<b>North America:</b> Cl. I, Div. 1 Grps CD T6 Ta=60°C; Cl. II Div. 1, Grps EFG T6 Ta=60°C Type 4/4X; Cl. I Div. 2, Grps ABCD T4, Ta=60°C <b>ATEX/IECEX:</b> II 2 GD Ex db IIB+H2 T*, Ex tbIIIC T*, IP 66/67
D291	D290	316 Stainless Steel	

# DIGITAL EPIC D200 POSITION TRANSMITTER

## EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

### OVERVIEW

The innovative Digital EPIC D200 transmitter is a step above the competition offering a wide range of user benefits, including improved linearity, reduced hysteresis (position accuracy), and improved repeatability. The Digital EPIC D200 is engineered to have greater control over wider ranges of temperature and hazardous applications compared to the competition. The D200 offers a clear LCD screen for calibration, and LED's to provide local visibility to position and system statuses including HART® 7 protocol connectivity. Auto-calibration feature reduces installation time by 80% making Digital EPIC D200 the smartest choice for users. Switch box feedback options are available to accommodate our current Westlock portfolio.



### TECHNICAL DATA

#### Standard non-contact sensor

Average position repeatability	0.5% full scale
Average hysteresis	1% of full scale
Position resolution	0.5% full scale
Average linearity	0.5%
Min/Max rotation	30° - 270°

#### Potentiometer Option

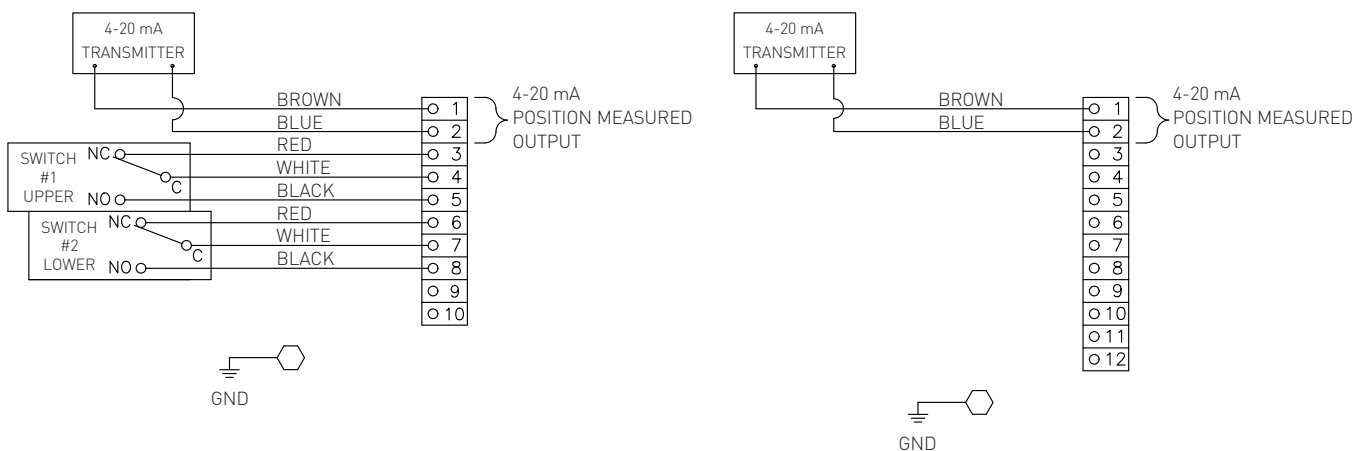
Average position repeatability	0.5% full scale
Average hysteresis	1% of full scale
Average position resolution	0.5% full scale
Average linearity	0.5%
Operating temperature range	-40°C to +80°C
Ambient temperature	-40°C to +80°C
Min/Max rotation	30° - 210°
Transmitter update rate	100 ms (HART)

#### Intrinsically safe parameters (EPIC Transmitter Module Only)

Intrinsically safe parameters for loop output connector J1 pins 1, 2

Entity parameters <sup>(4)</sup>
U <sub>i</sub> = 30 V
I <sub>i</sub> = 100 mA
P <sub>i</sub> = 0.75 W
C <sub>i</sub> = 2.2 nF
L <sub>i</sub> = 40 uH

### TYPICAL WIRING DIAGRAM



#### NOTE:

1. For coil and switch options, please see product ID label.
2. See control drawing WD-12410 for switch transmitter and component entity parameters.
3. For switch option entity parameters, see page 4.

# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## SETUP, OPTIONS AND RATINGS

### Setup, calibration and operation

HART® DD or FDT® DTM can be used to configure, calibrate and perform advanced diagnostics functions on the device.

Graphic LCD:

LCD operating temperature: -20°C to +70°C (-4°F to +158°F)

Keypad for local configuration:

2-key ruggedized push-button membrane

### Environmental

Storage: -60°C to +80°C (-76°F to +176°F)

Relative Humidity: 0 to 95% non-condensed

Vibration: 2 g, 10 Hz to 1000Hz

Shock: 18 g, 3 axis, 100 bumps each axis

References: IEC61514-2, IEC 60068-2-29/27, IEC 61298-3, IEC 60068-2-1/2

## COMMUNICATION

HART® version: 7

PV: Actual position in % FS

SV: Temperature

Polarity insensitive, two wire 4-20 mA, Namur NE43

Normal operation: adjustable  $3.8 \leq 20.5$  mA

Fixed calibration current: 12 mA

Loop current test functions: 4 mA, 12 mA, 20 mA or custom

Minimum operating voltage: 9 VDC

Maximum operating voltage: 35 VDC

## SWITCHES AND SENSORS

Westlock's control and monitoring equipment can be fitted with a variety of switches and sensors to provide the optimum combination and ideal solution for each application. See ordering guide for available switch options.

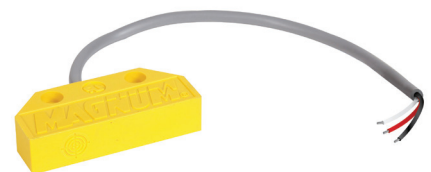
## AVAILABLE SWITCH OPTIONS

### Magnum XT-90 Hermetically sealed proximity switch

Hermetically-sealed proximity switches with either pure tungsten or rhodium contacts for use with low power I/O's to provide longer contact life.

#### MAGNUM XT-90 HERMETICALLY SEALED PROXIMITY SWITCH

Contact arrangement	SPDT, Form C (normally open)
Contacts	Pure tungsten or rhodium
Operating time	3.0 ms
Initial Contact resistance	0.50 ohms (max.) tungsten 0.10 ohms (max.) rhodium
Operating temperature	-40°C to +93°C (Rhodium)
Hysteresis	10°
Entity parameters	$U_i = 30$ V, $I_i = 100$ mA, $P_i = 1$ W, $C_i = 10$ nF, $L_i = 10$ $\mu$
Seal	Hermetic
Housing (flame retardant)	High impact PBT
Approvals	NRTL
<b>Electrical rating</b>	
Rhodium (low power, below 1 watt)	SPDT Form C (normally open) 0.2 A / 120 VAC, 0.15 A / 240 VAC, 1 A / 24 VDC
Tungsten (high power, above 1 watt)	SPDT Form C (normally open) 3 A / 120 VAC, 1.5 A / 240 VAC, 2 A / 24 VDC



# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## AVAILABLE SWITCH OPTIONS (CONTINUED)

### P+F NJ2-V3-N inductive proximity sensor Intrinsically safe

A solid state inductive proximity sensor which is available in NAMUR output. It is ideal for use in devices within potentially explosive atmospheres.

#### P+F NJ2-V3-N

Sensing range	2 mm
Electrical version	DC voltage 2 wire in accordance with EN 60947-5-6 (NAMUR)
Hysteresis	3-15% [5% typical]
Switching frequency	1 kHz
Input voltage range	5-25 VDC
Output/current consumption	Cam trigger present $\leq$ 1 mA Cam trigger absent $\geq$ 3 mA (15 mA max)
Entity Parameters	Consult manufacturer's component certificate for entity parameters



### SPDT mechanical switch V3

A V3 SPDT (single pole double throw) mechanical switch (Form C) with gold plate contacts.

#### SPDT MECHANICAL SWITCH V3

##### Electrical rating

Contact arrangement	SPDT, Form C (normally open) 15 A / 125/250 VAC 6 A / 24 VDC
Operating temperature	-20°C to +85°C
Hysteresis	3°
Entity Parameters	$U_i = 30$ V, $I_i = 100$ mA, $P_i = 1$ W, $C_i = 10$ nF, $L_i = 10\mu$



### DPDT mechanical switch (Licon)

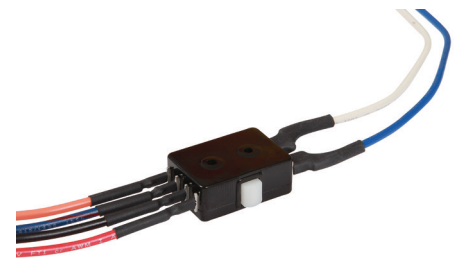
A Form CC DPDT (double pole double throw) mechanical switch with silver-plated contacts.

#### DPDT MECHANICAL SWITCH

##### Electrical rating

Contact arrangement	DPDT (Form CC) 10 A / 125/250 VAC 10 A / 24 VDC
Operating temperature	-55°C to +85°C
Hysteresis	20°

**Note:** DPDT mechanical switches are available in the explosionproof/flameproof models, but not available for the following models: D230, D240, D250. See ordering guide for complete set of options available.



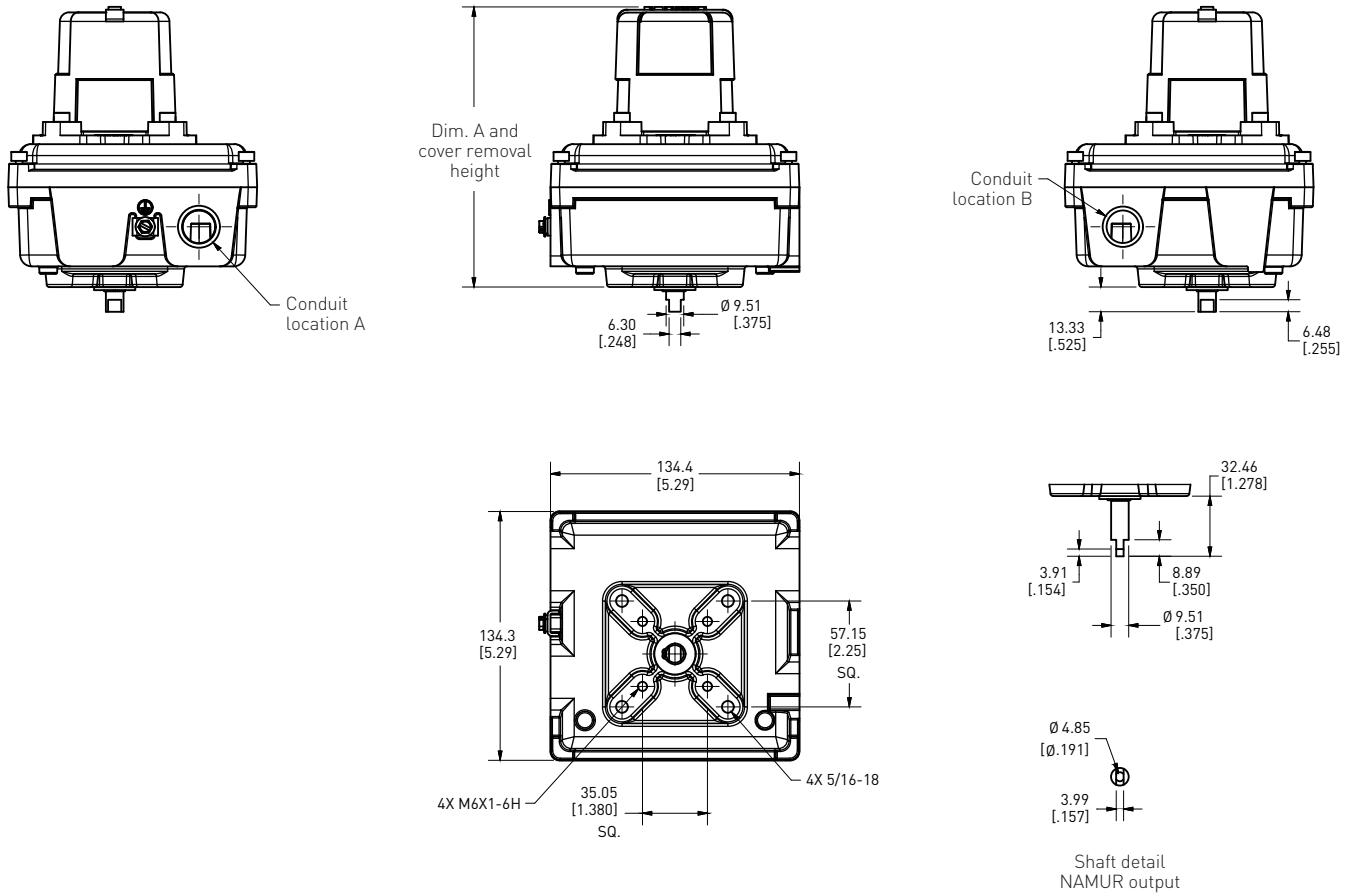
# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## D241 / D251

Intrinsically safe – NEC/CEC/ATEX/IEC - Intrinsically Safe/Non-Incendive - NEC/CEC

DIMENSIONS mm (in)



### HOUSING DIMENSIONS

Base model	Dim. A	Cover removal height
D241	151.9 [5.98]	237.3 [9.34]
D251	153.2 [6.03]	237.0 [9.33]

### TECHNICAL SPECIFICATIONS

#### Materials of Construction

Enclosure	D241: Aluminum with black polyester powder coat finish D251: Stainless Steel with electro-polished Finish
-----------	--

<b>Shaft and hardware</b>	Stainless steel
---------------------------	-----------------

<b>Bushing</b>	Nylon, D241 Bronze Bearing
----------------	----------------------------

<b>Beacon visual indicator</b>	Co-polyester
--------------------------------	--------------

<b>Drive shaft</b>	
--------------------	--

Westlock standard	Double-D with 1/4" A/F
-------------------	------------------------

NAMUR standard	NAMUR standard with VDI/VDE 3845
----------------	----------------------------------

<b>Mounting pattern</b>	5/16 - 18 UNC and M6 x 1.0
-------------------------	----------------------------

<b>Available switches</b>	
---------------------------	--

Magnum, SPDT hermetically sealed switches, with rhodium contacts	
--	--

Pepperl + Fuchs NJ2-V3-N inductive proximity sensor	
---	--

SPDT mechanical switches, with gold-plated contacts	
---	--

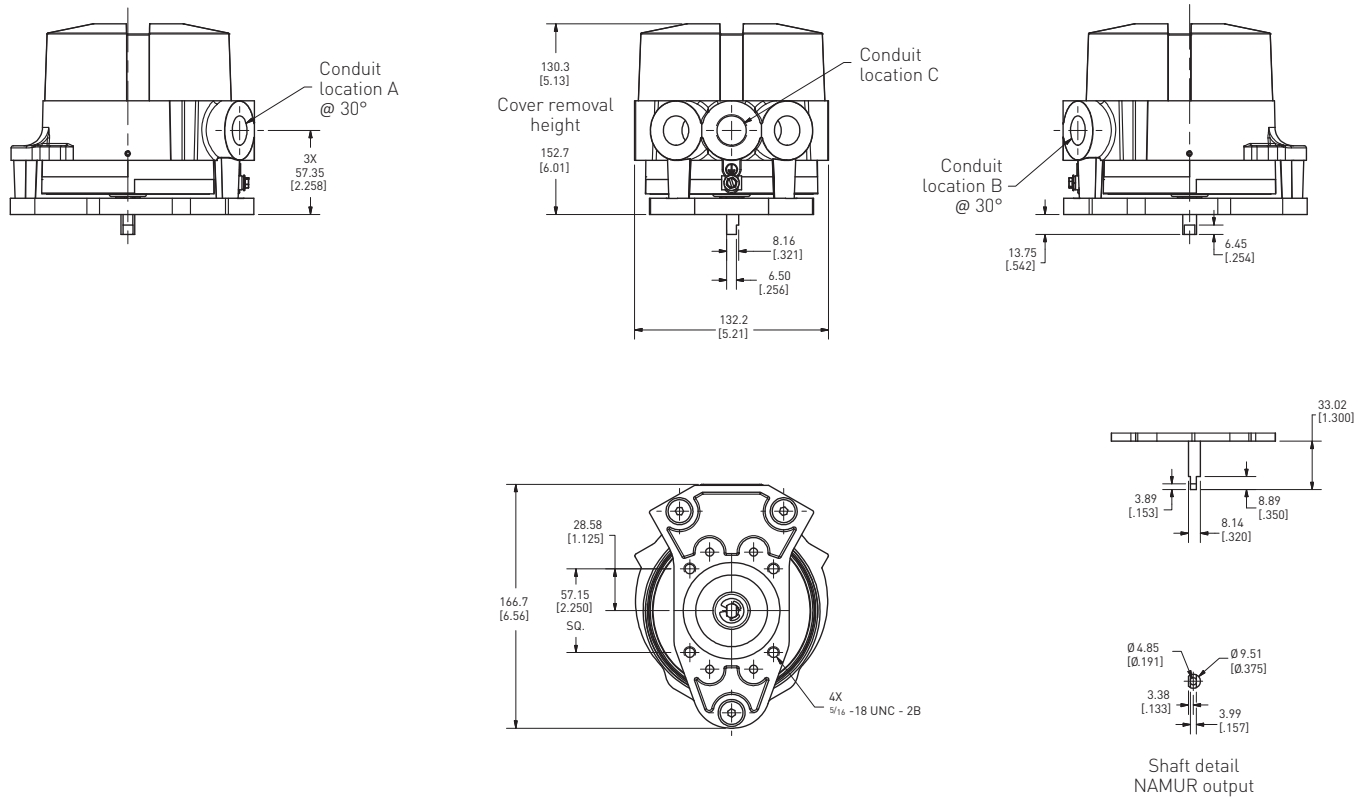
# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## D261 / D271

### Explosionproof / Flameproof – NEC/CEC/ATEX/IEC

DIMENSIONS mm (in)



### TECHNICAL SPECIFICATIONS

#### Materials of Construction

Enclosure: D261 Aluminum with black polyester powder coat finish  
 D271 Stainless steel with electro-polished finish

<b>Shaft and hardware</b>	Stainless steel
<b>Bushing</b>	Oil impregnated bronze
<b>Beacon visual indicator</b>	Co-polyester
<b>Drive shaft</b>	
Westlock standard	Double-D with 1/4" A/F
NAMUR standard	NAMUR standard complies with VDI/VDE 3845
<b>Mounting pattern</b>	5/16 - 18 UNC
<b>Available switches</b>	
Magnum, SPDT hermetically sealed switches, with tungsten contacts	
Magnum, SPDT hermetically sealed switches, with rhodium contacts	
Pepperl + Fuchs model NJ2-V3-N	
SPDT mechanical switches, with gold-plated contacts	
DPDT (Form CC) mechanical switches	

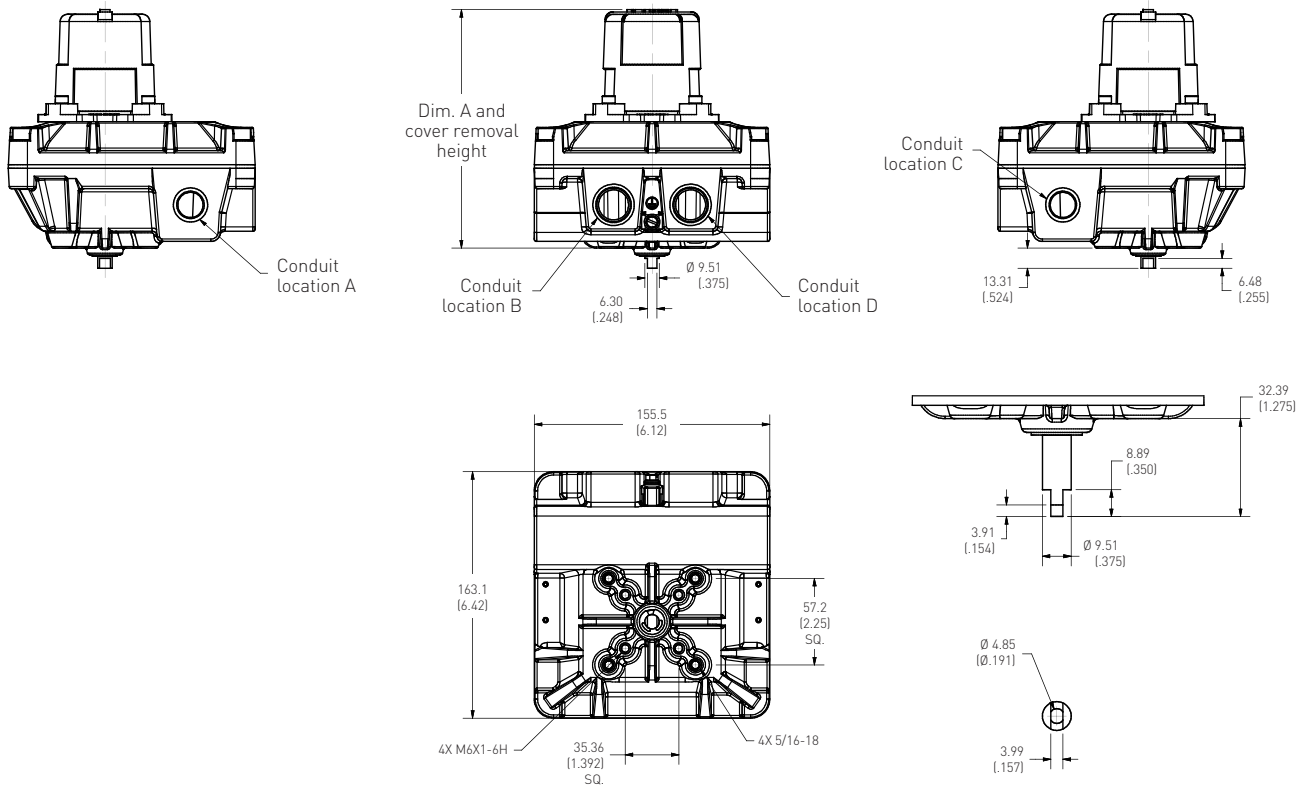
# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## D281 /D291

### Explosionproof / Flameproof – NEC/CEC/ATEX/IEC

DIMENSIONS mm (in)



### HOUSING DIMENSIONS

Base model	Cover type	Dim. A	Cover removal height
D281	Hi cover	211.1 [8.31]	332.3 [13.08]
D281	Std. cover	157.8 [6.21]	247.2 [9.73]
D281	Flat cover	88.4 [3.48]	111.3 [4.38]
D291	Hi cover	211.1 [8.31]	332.3 [13.08]
D291	Std. cover	157.8 [6.21]	247.2 [9.73]
D291	Flat cover	88.4 [3.48]	111.3 [4.38]

### TECHNICAL SPECIFICATIONS

#### Materials of Construction

Enclosure D281 Aluminum with black polyester powder coat finish  
D291 Stainless steel with electro-polished finish

Shaft and hardware Stainless steel

Bushing Oil impregnated bronze

Beacon visual indicator Co-polyester

#### Drive shaft

Westlock standard Double-D with 1/4" A/F

NAMUR standard NAMUR standard complies with VDI/VDE 3845

Mounting pattern 5/16 – 18 UNC and M6 x 1.0

#### Available switches

Magnum, SPDT hermetically sealed switches, with tungsten contacts

Magnum, SPDT hermetically sealed switches, with rhodium contacts

Pepperl + Fuchs model NJ2-V3-N

V3 mechanical switches, SPDT

DPDT (Form CC) mechanical switches

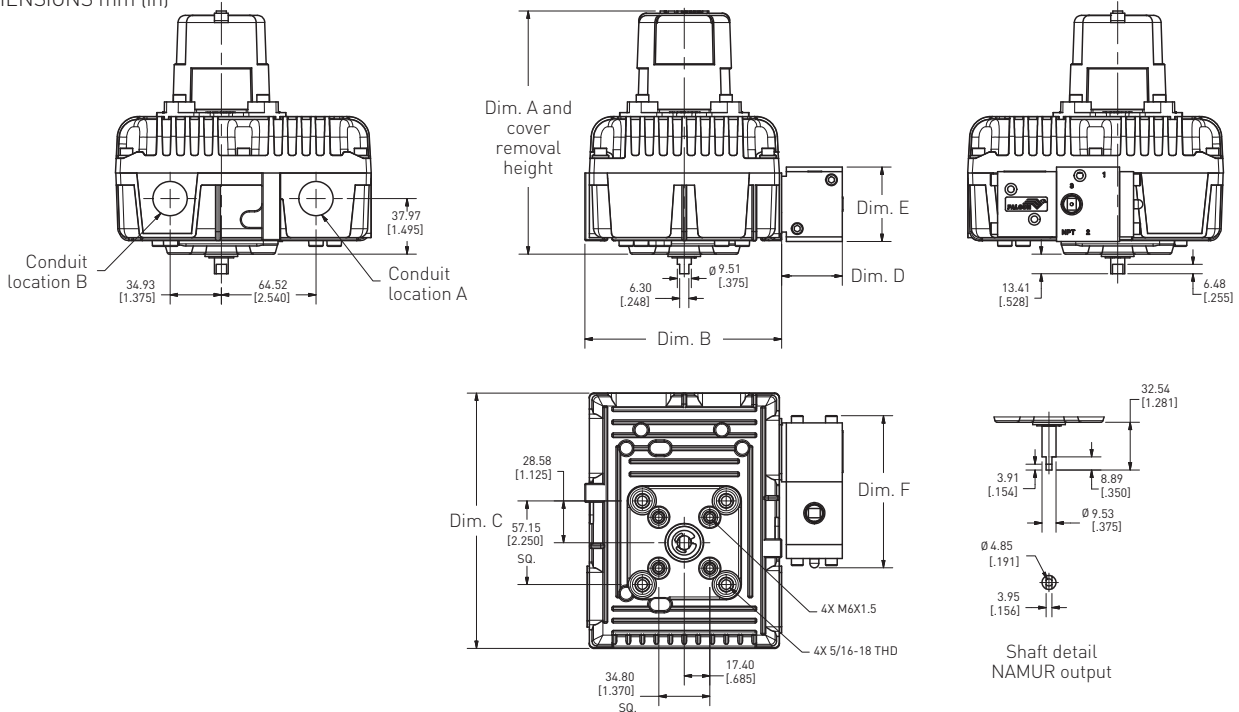
# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## D230 / D240 / D250

### Intrinsically safe – NEC/CEC/ATEX/IEC

DIMENSIONS mm (in)



### HOUSING DIMENSIONS

Base model	Dim. A	Cover removal height	Dim. B	Dim. C
D230	166.1 [6.54]	258.6 [10.18]	134.6 [5.30]	175.3 [6.90]
D240	165.1 [6.50]	257.6 [10.14]	147.3 [5.80]	180.3 [7.10]
D250	165.1 [6.50]	257.6 [10.14]	147.3 [5.80]	180.3 [7.10]

### SOLENOID VALVE DIMENSIONS

Solenoid valve option	Dim. D	Dim. E	Dim. F
1.4 C <sub>v</sub> , 3-Way, Brass/Aluminum/316 SS	41.4 [1.53]	50.8 [2.00]	103.8 [4.09]
4.3 C <sub>v</sub> , 3-Way, Aluminum	58.7 [2.31]	57.2 [2.25]	179.9 [7.08]
1.4 C <sub>v</sub> , Dual Coil, Brass/Aluminum/316 SS	54.1 [2.13]	50.8 [2.00]	153.7 [6.05]
4.3 C <sub>v</sub> , Dual Coil, Aluminum	58.7 [2.31]	57.2 [2.25]	219.5 [8.64]
1.4 C <sub>v</sub> , 4-Way, Brass/Aluminum/316 SS	41.4 [1.53]	50.8 [2.00]	124.5 [4.90]
3.5 C <sub>v</sub> 4-Way, 316 SS	47.5 [1.87]	69.9 [2.75]	166.6 [6.56]
4.3 C <sub>v</sub> , 4-Way, Aluminum	58.7 [2.31]	57.2 [2.25]	179.9 [7.08]

### TECHNICAL SPECIFICATIONS

#### Materials of Construction

Enclosure	D230 Engineered polyamide resin D240 Aluminum with black polyester powder coat finish D250 Stainless steel with electro-polished finish
-----------	---

#### Shaft and hardware

Stainless steel

#### Bushing

D230/D250 Nylon bearing, D240 Bronze bearing

#### Beacon visual indicator

Co-polyester

#### Drive shaft

Westlock standard Double-D with 1/4" A/F  
NAMUR standard NAMUR standard with VDI/VDE 3845

#### Mounting pattern

5/16 - 18 UNC and M6 x 1.0

#### Available switches

Magnum, SPDT hermetically sealed switches, with rhodium contacts

Pepperl + Fuchs NJ2-V3-N inductive proximity sensor

V3 SPDT mechanical switches, with gold-plated contacts

### SOLENOID VALVES

The Falcon range of solenoid valves allows you to choose the material, voltage, number of ports, number of coils and C<sub>v</sub> to best suit your application. See the Falcon date sheet for more information.

**Note:** 4.3 C<sub>v</sub> solenoid valve is available in aluminum only.



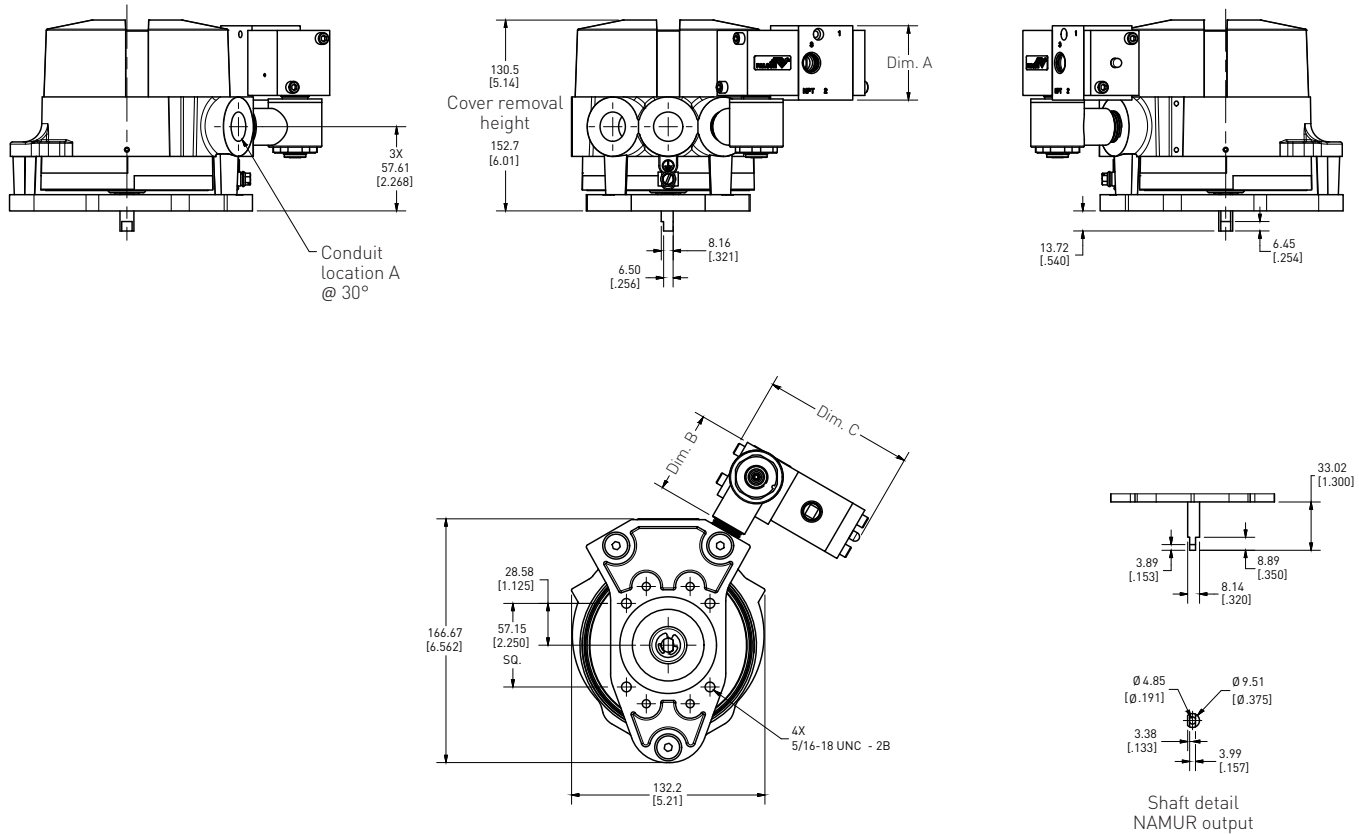
# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## D260 / D270

### Explosionproof / Flameproof – NEC/CEC/ATEX/IEC

DIMENSIONS mm (in)



### SOLENOID VALVE DIMENSIONS

Solenoid valve option	Dim. A	Dim. B	Dim. C
1.4 C <sub>v</sub> , 3-Way, Brass/Aluminum/316 SS	50.8 [2.00]	55.8 [2.20]	103.8 [4.09]
4.3 C <sub>v</sub> , 3-Way, Aluminum	57.2 [2.25]	60.5 [2.38]	179.9 [7.08]
1.4 C <sub>v</sub> , 4-Way, Brass/Aluminum/316 SS	50.8 [2.00]	55.8 [2.20]	124.5 [4.90]
4.3 C <sub>v</sub> , 4-Way, Aluminum	57.2 [2.25]	60.5 [2.38]	179.9 [7.08]

### TECHNICAL SPECIFICATIONS

#### Materials of Construction

Enclosure D260 Aluminum with black polyester powder coat finish  
D270 Stainless steel with electro-polished finish

Shaft and hardware Stainless steel

Bushing Oil impregnated bronze

Beacon visual indicator Co-polyester

#### Drive shaft

Westlock standard Double-D with 1/4" A/F

NAMUR standard NAMUR standard complies with VDI/VDE 3845

Mounting pattern 5/16 - 18 UNC

#### Available switches

Magnum, SPDT hermetically sealed switches, with tungsten contacts

Magnum, SPDT hermetically sealed switches, with rhodium contacts

Pepperl + Fuchs model NJ2-V3-N

V3 mechanical switches, SPDT

DPDT (Form CC) mechanical switches

### SOLENOID VALVES

The Falcon range of solenoid valves allows you to choose the material, voltage, number of ports, number of coils and C<sub>v</sub> to best suit your application. See the Falcon date sheet for more information.

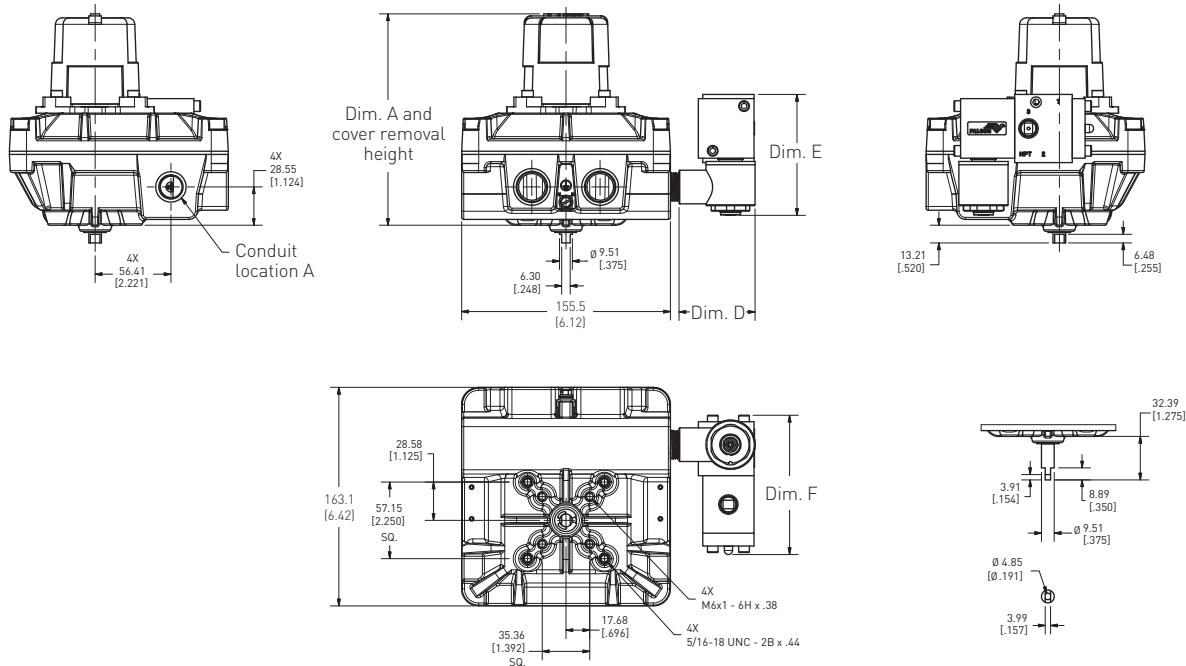
**Note:** 4.3 C<sub>v</sub> solenoid is available in aluminum only.

# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## D280 / D290 - NEC/ATEX/IEC

DIMENSIONS mm (in)



### HOUSING DIMENSIONS

Base model	Cover type	Dim. A	Cover removal height
D281	Hi cover	211.1 [8.31]	332.3 [13.08]
D281	Std. cover	157.8 [6.21]	247.2 [9.73]
D281	Flat cover	88.4 [3.48]	111.3 [4.38]
D291	Hi cover	211.1 [8.31]	332.3 [13.08]
D291	Std. cover	157.8 [6.21]	247.2 [9.73]
D291	Flat cover	88.4 [3.48]	111.3 [4.38]

### SOLENOID VALVE DIMENSIONS

Solenoid valve option	Dim. D	Dim. E	Dim. F
1.4 C <sub>v</sub> , 3-Way, Brass/Aluminum/316 SS	56.7 [2.24]	90.2 [3.56]	103.9 [4.09]
1.4 C <sub>v</sub> , 4-Way, Brass/Aluminum/316 SS	56.7 [2.24]	90.2 [3.56]	124.6 [4.91]

### TECHNICAL SPECIFICATIONS

#### Materials of Construction

Enclosure D280 Aluminum with black polyester powder coat finish  
D290 Stainless steel with electro-polished finish

Shaft and hardware Stainless steel

Bushing Oil impregnated bronze

Beacon visual indicator Co-polyester

#### Drive shaft

Westlock standard Double-D with 1/4" A/F

Option NAMUR standard VDI/VDE 3845

#### Available switches

Magnum (hermetically sealed proximity type) with tungsten contacts

Magnum (hermetically sealed proximity type) with rhodium contacts

V3 mechanical switches, SPDT

DPDT (Form CC) mechanical switches

Pepperl + Fuchs model NJ2-V3-N

### SOLENOID VALVES

The Falcon range of solenoid valves allows you to choose the material, voltage, number of ports, number of coils and C<sub>v</sub> to best suit your application. See the Falcon date sheet for more information.

**Note:** 4.3 C<sub>v</sub> solenoid valve is available in aluminum only.

# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## FALCON V FEATURES

The Falcon V is engineered specifically to address low power valve actuation requirements in hazardous locations.

- Available in 3 and 4 – way anodized aluminum (all wetted parts), nickel-plated brass with stainless steel internals and 316 SS (all wetted parts)
- Larger 4.3 C<sub>v</sub> valve body available in Aluminum with 1/2" NPT ports
- Viton seals as standard (1.4 C<sub>v</sub> and 4.3 C<sub>v</sub> only)
- Internal venting design as standard
- Increased C<sub>v</sub> of the standard valve body (1.4 C<sub>v</sub>) of the standard of a wider range of actuators and reduces stock requirements
- Reduced pilot pressure coil allows use on low supply pressure without external pilot
- Anti-extrusion seal design
- Common global porting system and location allows all Westlock brands for ease of automation (model in ISO view)
- Spool indicator design protects the indicator from incidental contact damage
- 5cc or less air leakage at steady state reduces losses
- Standard valve temperature range -20°C to +85°C (-4°F to +185°F)
- Extended low temp -40°C (-40°F) seal optional
- Suitable for high cycle applications

## FALCON V STANDARD SPECIFICATION

	Falcon V	Falcon
Materials	Anodized aluminum (4.3 C <sub>v</sub> only), nickel plated brass	Available in stainless steel
Valve flow rates	1.4 C <sub>v</sub> , 4.3 C <sub>v</sub>	3.5 C <sub>v</sub>
Standard coil voltage	24 VDC, 1.8 watt 110/120 VAC, 1.8 watt	24 VDC, 1.8 watt 110/120 VAC, 1.8 watt
Valve port tapping	1.4 C <sub>v</sub> – 1/4" NPT air ports for inlet, outlet and exhaust 4.3 C <sub>v</sub> – 1/2" NPT air ports for inlet, outlet and exhaust	3.5 C <sub>v</sub> - 1/2" NPT air ports for inlet, outlet and exhaust

## FALCON V TECHNICAL DATA

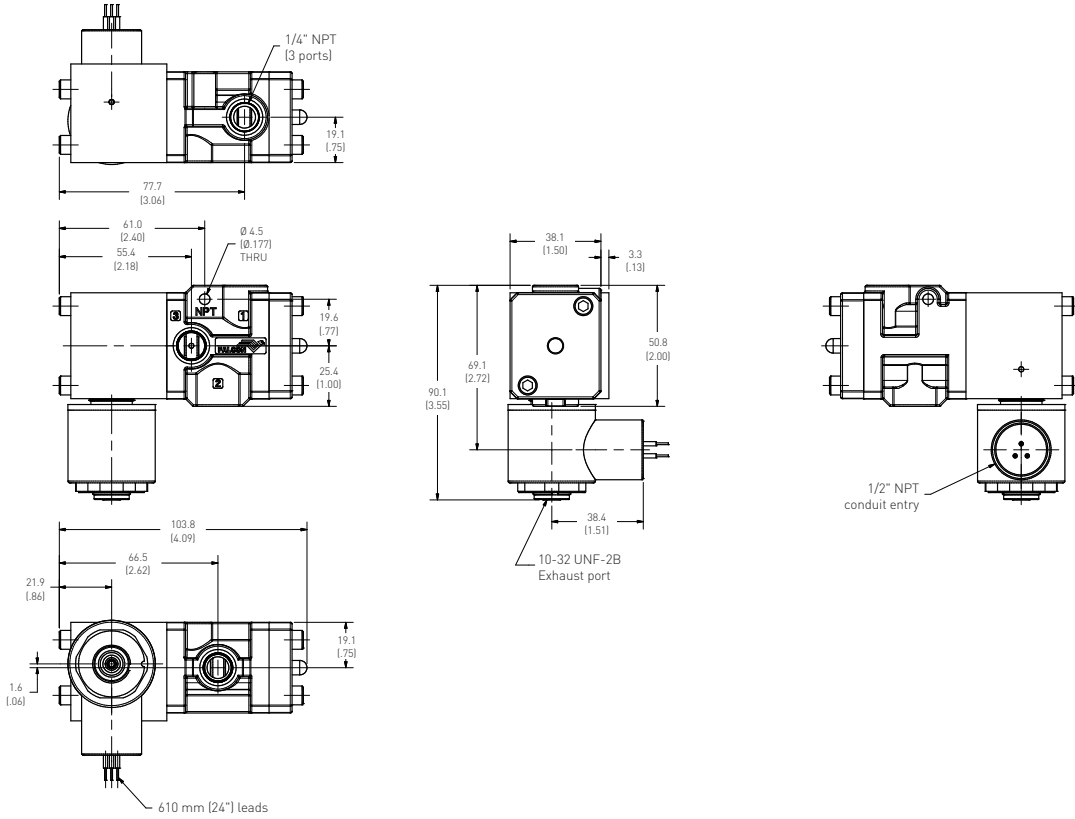
	Falcon V (1.4 C <sub>v</sub> / 4.3 C <sub>v</sub> )	Falcon
Operating pressure	30 – 120 psi (2.1 – 8.3 bar)	45 - 120 psi (3.1 - 8.3 bar)
Operating temperature	Standard: -20°C to +85°C (-4°F to +185°F) Optional: -40°C to +85°C (-40°F to +185°F)	-20°C to +65°C (-4°F to +149°F) -20°C to +82°C (-4°F to +180°F)
Operating media	Filtered air to 20 microns	Filtered air to 20 microns

# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

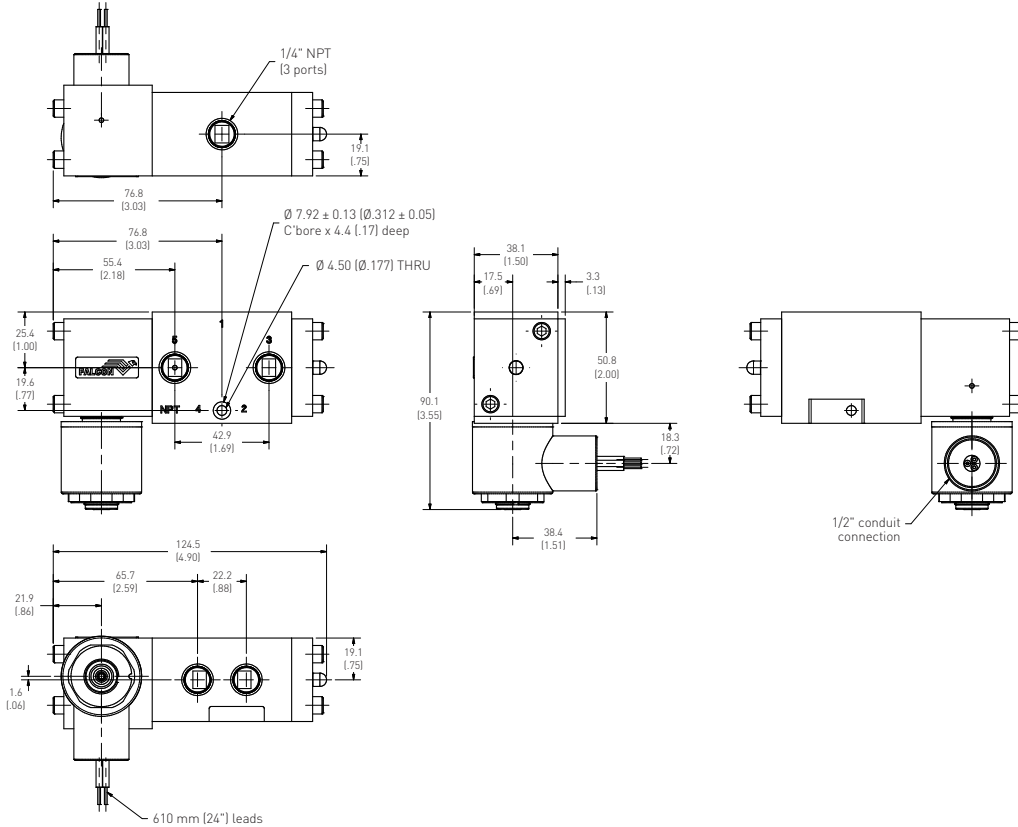
EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

## FALCON V SOLENOID VALVE

### FALCON 3-WAY SOLENOID VALVE



### FALCON 4-WAY SOLENOID VALVE (SHOWN WITH COIL)



# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE - SELECTION GUIDE NO SOLENOID VALVE

## Base Model

- D241 Intrinsically Safe/Non-Incendive - Aluminum encl., (2) conduits, 12 pt. terminal strip
- D251 Intrinsically Safe/Non-Incendive - 316 stainless steel encl., (2) conduits, 12 pt. terminal strip
- D261 Explosionproof / Flameproof - Screw-on cover, aluminum encl., (2) conduits, 10 pt. terminal strip
- D271 Explosionproof / Flameproof - Screw-on cover, 316 stainless steel encl., (2) conduits, 10 pt. terminal strip
- D281 Explosionproof / Flameproof - Bolted cover, aluminum encl., (2) conduits, 12 pt. terminal strip **(exceptions noted in switch options)**
- D291 Explosionproof / Flameproof - Bolted cover, 316 stainless steel encl., (2) conduits, 12 pt. terminal strip **(exceptions noted in switch options)**

### Continuous Rotary Position Sensing Option with Shaft Option

- NP Potentiometer with NAMUR Output Shaft
- NT Non-Contact Sensor with NAMUR Output Shaft
- SP Potentiometer with Standard Output Shaft
- ST Non-Contact Sensor with Standard Output Shaft

### End-of-Travel Feedback Switch Option

- 0000 No end-of-travel switch confirmation required
- 2M04 (2) DPDT mechanical switches, (3) conduits [D261/D271] or (4) conduits [D281/D291], 16 pt. terminal strip - **D261/D271/D281/D291 only**
- 2M06 (2) SPDT Magnum XT-90 proximity switches\* - **D261/D271/D281/D291 only**
- 2M08 (2) P&F NJ2-V3-N inductive proximity sensors
- 2M09 (2) SPDT mechanical switches with gold contacts **(requires suitable barrier for Div. 2 installation)**
- 2M12 (2) SPDT Magnum XT-90 proximity switches with rhodium contacts\*
- 4M06 (4) SPDT Magnum XT-90 proximity switches\*, (4) conduits, high cover, 16 pt. terminal strip - **D281/D291 only**
- 4M08 (4) NJ2-V3-N inductive proximity sensors, (4) conduits, high cover, 16 pt. terminal strip - **D281/D291 only**
- 4M09 (4) SPDT mechanical switches, (4) conduits, high cover, 16 pt. terminal strip **(requires suitable barrier for Div. 2 installation) -D281/D291 only**
- 4M12 (4) SPDT Magnum XT-90 proximity switches\*, (4) conduits, high cover, 16 pt. terminal strip - **D281/D291 only**

### Westlock Signature Beacon

- BY Black Open/Yellow Closed
- RG Green Open/Red Closed
- FE Black Open/Yellow Closed French/English
- LP Low-Profile Black Open/Yellow Closed
- B1 3-Way 90° B1 Flow Path
- B3 3-Way 90° B3 Flow Path
- B5 3-Way 90° B5 Flow Path
- B7 3-Way 90° B7 Flow Path
- B9 3-Way 90° B9 Flow Path
- FC Flat Cover (no beacon)

### Approval Options

- NS NEC/ATEX/IEC Intrinsically Safe (IS) and NEC Nonincendive (NI)- **D231, D241, D251 only**
- EX NEC/ATEX/IEC Explosionproof/Flameproof and NEC Nonincendive (NI)- **D261, D271, D281, D291 only**

### Conduit Options

- 2 **M20 (Quantity based on switch options)**
- 3 **3/4" NPT (Quantity based on switch options)**

D281 NP 4M02 RG EX 2 = Model Number **D281NP4M02RGEX2**

### \*Magnum Proximity Switch Application Note:

For 24 VDC **service below 1 Watt**, M12 (Rhodium Magnum) is recommended

For 24 VDC **service above 1 Watt**, M06 (Tungsten Magnum) is recommended

# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

## EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE - SELECTION GUIDE WITH SOLENOID VALVE

### Base Model

- D230 Intrinsically Safe/Non-Incendive - Resin encl., (2) conduits, clear cover, 12 pt. terminal strip, Falcon interface
- D240 Intrinsically Safe/Non-Incendive - Aluminum encl., (2) conduits, 12 pt. terminal strip, Falcon interface
- D250 Intrinsically Safe/Non-Incendive - 316 stainless steel encl., (2) conduits, 12 pt. terminal strip, Falcon interface
- D260 Explosionproof /Flameproof - Screw-on cover, aluminum encl., (2) conduits and (1) male fitting, 14 pt. terminal strip
- D270 Explosionproof / Flameproof - Screw-on cover, 316 stainless steel encl., (2) conduits and (1) male fitting, 14 pt. terminal strip
- D280 Explosionproof / Flameproof - Bolted cover, aluminum encl., (3) conduits\*\*\*\* and (1) male fitting, 16 pt. terminal strip **(exceptions noted in switch options)**
- D290 Explosionproof / Flameproof - Bolted cover, 316 stainless steel encl., (3) conduits\*\*\*\* and (1) male fitting, 16 pt. terminal strip **(exceptions noted in switch options)**

### Continuous Rotary Position Sensing Option with Shaft Option

- NP Potentiometer with NAMUR Output Shaft
- NT Non-Contact Sensor with NAMUR Output Shaft
- SP Potentiometer with Standard Output Shaft
- ST Magneto-resistive Non-Contact Sensor with Standard Output Shaft

### End-of-Travel Feedback Switch Option

- 2M04 (2) DPDT mechanical switches - **D280/D290 only**
- 2M06 (2) SPDT Magnum XT-90 proximity switches\* - **D260/D270/D280/D290 only**
- 2M08 (2) P&F NJ2-V3-N inductive proximity sensors
- 2M09 (2) SPDT mechanical switches with gold contacts **(require suitable barrier for Div. 2 installation)**
- 2M12 (2) SPDT Magnum XT-90 proximity switches, rhodium contacts
- 4M06 (4) SPDT Magnum XT-90 proximity switches, high cover - **D280/D290 only**
- 4M08 (4) NJ2-V3-N inductive proximity sensors, high cover - **D280/D290 only**
- 4M09 (4) SPDT mechanical switches with gold contacts, high cover - **D280/D290 only**
- 4M12 (4) SPDT Magnum XT-90 proximity switches, rhodium contacts, high cover - **D280/D290 only**

### Westlock Signature Beacon

- BY Black Open/Yellow Closed
- RG Green Open/Red Closed
- FE Black Open/Yellow Closed French/English
- LP Low-Profile Black Open/Yellow Closed
- B1 3-Way 90° B1 Flow Path
- B3 3-Way 90° B3 Flow Path
- B5 3-Way 90° B5 Flow Path
- B7 3-Way 90° B7 Flow Path
- B9 3-Way 90° B9 Flow Path
- FC Flat Cover (no beacon)

### Coil Voltage/Type

- I 24 VDC Dual-certified IS/NI (optional for D230, D240, D250 only); entity Vmax=35V, Imax=300mA, Pmax=2.98W, Li=0mH, Ci=0µF
- P 24 VDC Dual-certified IS/NI (standard for D230, D240, D250 only); entity Vmax=28V, Imax=115mA, Pmax=1.6W, Li=0mH, Ci=0µF
- T 24 VDC Explosionproof, 1.8W, Potted Hub (D260, D270, D280, D290 only)
- Z 120 VAC Explosionproof, 1.8W, Potted Hub (D260, D270, D280, D290 only)

### Falcon Valve Body

- |  |                                    |
|--|------------------------------------|
| 2V3 1.4Cv, 3-Way, Brass                | 2V7 1.4Cv, 4-Way, Brass            |
| 3V3 1.4Cv, 3-Way, Aluminum             | 3V7 1.4Cv, 4-Way, Aluminum         |
| 5V3 1.4Cv, 3-Way, 316 SS               | 5V7 1.4Cv, 4-Way, 316 SS           |
| 3V4 4.3Cv, 3-Way, Aluminum***,**       | 3V8 4.3Cv, 4-Way, Aluminum **      |
| 540 3.5Cv, 3-Way, 316SS**              | 580 3.5Cv, 4-Way, 316SS**          |
| 2VY 1.4Cv, Dual Coil, Brass**          | 3VY 1.4Cv, Dual Coil, Aluminum**   |
| 5VY 1.4Cv, Dual Coil, 316 SS**         | 3VZ 4.3Cv, Dual Coil, Aluminum**   |
| 3B3 1.4Cv, 3-Way, Alum., 1/4 BSP       | 3B7 1.4Cv, 4-Way, Alum., 1/4 BSP   |
| 5B3 1.4Cv, 3-Way, 316 SS, 1/4 BSP      | 5B7 1.4Cv, 4-Way, 316 SS, 1/4 BSP  |
| 3B4 4.3Cv, 3-Way, Alum., 1/2 BSP***,** | 3B8 4.3Cv, 4-Way, Alum., 1/2 BSP** |

### Valve Option

- 0 None
- X Low Temp. Seals (-40°C service)- **comes with low-temp. coil**
- M Momentary Override
- L Locking Override
- E External Pilot - **required for inlet pressure below 45 psi**

### Approval Option

- NS NEC/ATEX/IEC Intrinsically Safe/NEC Nonincendive- ratings as noted above; **D230, D240, D250 only**
- EX NEC/ATEX/IEC Explosionproof/Flameproof- ratings as noted above; **D260, D270, D280, D290 only**

### Conduit Options

- 2 **M20 (Quantity based on options)**
- 3 **3/4" NPT (Quantity based on options)\*\*\*\***

3 = Model Number **D250NT2M12BY15V30NS3**

D250

NT

2M12

BY

I

5V3

0

NS

3

### \*Magnum Proximity Switch Application Note:

For 24 V DC **service below 1 Watt**, M12 (Rhodium Magnum) is recommended  
 For 24 V DC **service above 1 Watt**, M06 (Tungsten Magnum) is recommended

### Ordering notes:

- \*\* these valve bodies are only available for series D230, D240 and D250; consult Sales for availability of options M, L, E on 540 & 580 Falcon Valve Bodies.
- \*\*\* 3V4 and 3B4 valve bodies are 3V8 and 3B8 valve bodies respectively, with ports 2 & 3 plugged at the factory for 3-way functionality.
- \*\*\*\* 3 open conduits are (2) 3/4" NPT and (1) 1/2" NPT for D280/D290

**DIGITAL EPIC D200** DIGITAL POSITION TRANSMITTER  
EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

---

# DIGITAL EPIC D200 DIGITAL POSITION TRANSMITTER

EXPLOSIONPROOF / FLAMEPROOF, INTRINSICALLY SAFE OR NON-INCENDIVE

---

## Translations

Where translated, the copy is taken from the original English document TD10000-EN as checked by the relevant notified certification body and therefore the original English document will prevail. No rights or liability can be derived from any translation.

Crane Co., and its subsidiaries cannot accept responsibility for possible errors in catalogues, brochures, other printed materials, and website information. Crane Co. reserves the right to alter its products without notice, including products already on order provided that such alteration can be made without changes being necessary in specifications already agreed. All trademarks in this material are the property of the Crane Co. or its subsidiaries. The Crane and Crane brands logotype (WESTLOCK CONTROLS®) are registered trademarks of Crane Co. All rights reserved.

## WESTLOCK CONTROLS

Head Office	USA	Europe	Asia
280 N. Midland Avenue, Ste 258	+1 201 794 7650	+44 (0)1892 516277	+65 6266 4535
Saddle Brook, NJ 07663			
United States	westlockcontrols.com		