WESTLOCK CONTROLS

QUANTUM™ XP ELIMINATOR E2007/E9479 SERIES ROTARY POSITION MONITORS

GLOBAL EXPLOSIONPROOF/FLAMEPROOF

Rotary valve position monitor comprising switch box and solenoid valve combination with single hazardous area certification.

TECHNICAL DATA

Agency approvals
Model E2007/E9479

II 2 G Ex db IIB+H2; T4 Gb
II 2 D Ex tb IIIC T*°C Db IP66/67
Ta: -40°C to 52°C (valve functional to -40°C with low-temp coil & seals)

Class I, Div 1, Groups C, D; T4
Class II, Div 1, Groups E, F, G; T4
Class I, Zone 1, AEx db / Ex db IIB+H2 T* Gb;
Zone 21, AEx tb / Ex tb IIIC T* Db IP6X;
Ta= -40°C to 52°C (valve functional to -40°C with low-temp coil & seals)
Type 4, 4X

Switches

Models E2007/E9479	Pepperl + Fuchs model NJ2-V3-N V3 (SPDT) and DPDT mechanical switches Magnum/MagPAC

Enclosures

Model E2007/E9479	Aluminum Stainless steel

Falcon solenoid valves

C_v	Choice of 1.4 and 4.3
Materials	Brass, aluminum and stainless steel

FEATURES

- Factory wired and tested combination of AccuTrak switch box and Falcon V solenoid valve.
- Simplified logistics with switch box and solenoid delivered by one supplier.
- Touch set cams are hand adjustable, spring loaded and self-locking providing quick calibration of position switches and sensors.
- Terminal strips are pre-wired and numbered with generous working space for ease of use.
- Strong durable BeaconTM offers 360° visual indication available in a choice of styles and colors.
- Additional conduit for easy field wiring and mounting accessories as standard.
- Standardized mounting pattern for easy adaptation to common bracketry.
- NAMUR shaft output compliant to VDI/VDE 3845 available.
- Aluminum enclosures with ultra-low copper content(0.2% maximum) ensure robust performance in corrosive environments
- Stainless steel enclosures available.
- Choice of factory pre-wired 3 and 5 way Falcon V explosionproof solenoid valves.
- Falcon V solenoid valves available with a choice of C_v ratings and coil voltages.

GENERAL APPLICATION

QUANTUM™ XP Eliminator series is a pre-wired and tested combination of the AccuTrak 2007/9479 switch box with the Falcon V solenoid valve supplied with a single hazardous area certificate for all electrical parts.

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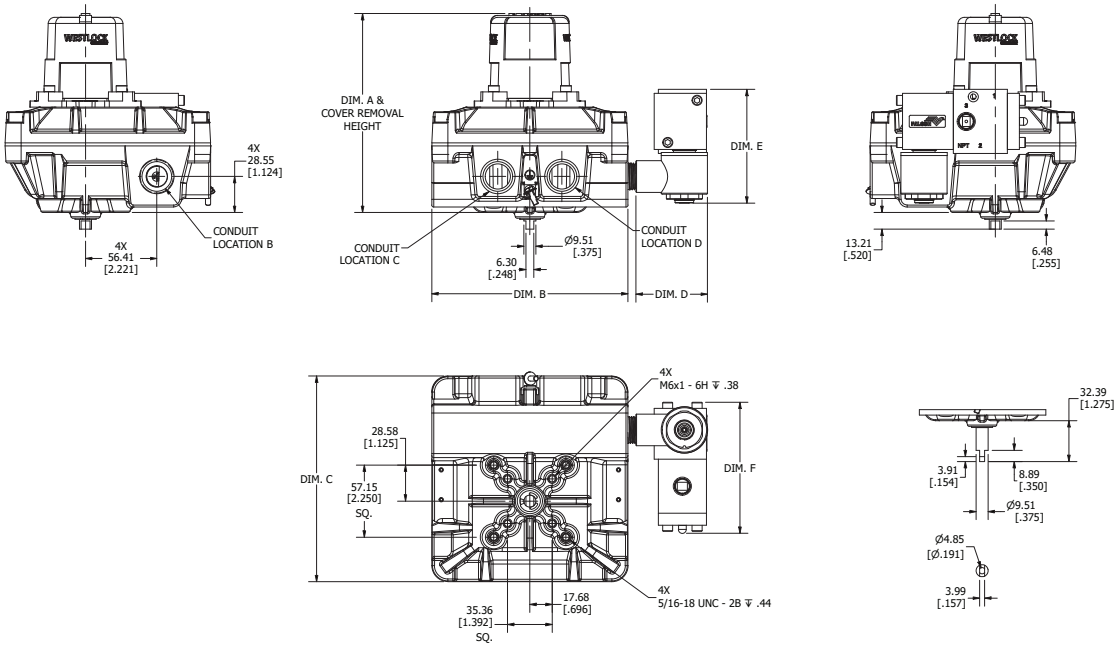
MODELS E2007/E9479 DIMENSIONS



HOUSING DIMENSIONS

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

TECHNICAL SPECIFICATIONS

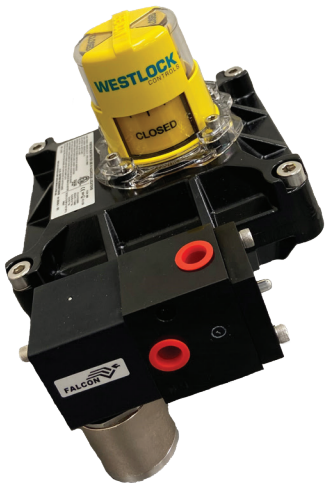
Materials of construction	
Enclosure	Aluminum with black polyester coating
Shaft and hardware	Stainless steel
Bushing	Oil impregnated bronze
Beacon visual indicator	Co-polyester
Drive shaft	
Westlock standard	Double-D with ¼" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845
Available switches	
E2007	V3 mechanical switches, SPDT (Form C) DPDT (Form ZZ) mechanical switches
E9479	Pepperl + Fuchs model NJ2-V3-N Magnum SPDT, Form C (hermetically sealed proximity type) MagPAC SPST, Form A (bifurcated switch pack)
Options	
Models E2007/E9479	Stainless steel enclosure

NOTES

1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
3. Please consult your sales office for any other requirements

SOLENOID VALVES

The Falcon range of solenoid valves allows you to choose the material, voltage, number of ports, number of coils and C_V to best suit your application. See the Falcon data sheet for more information.



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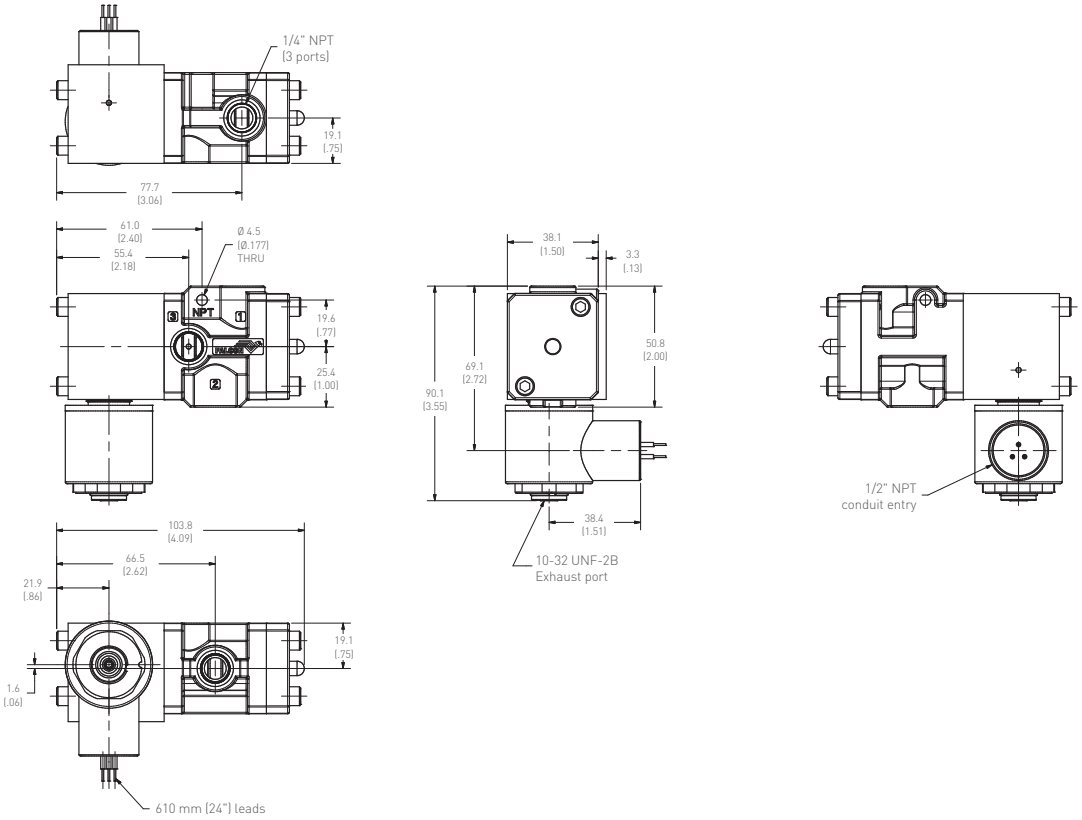
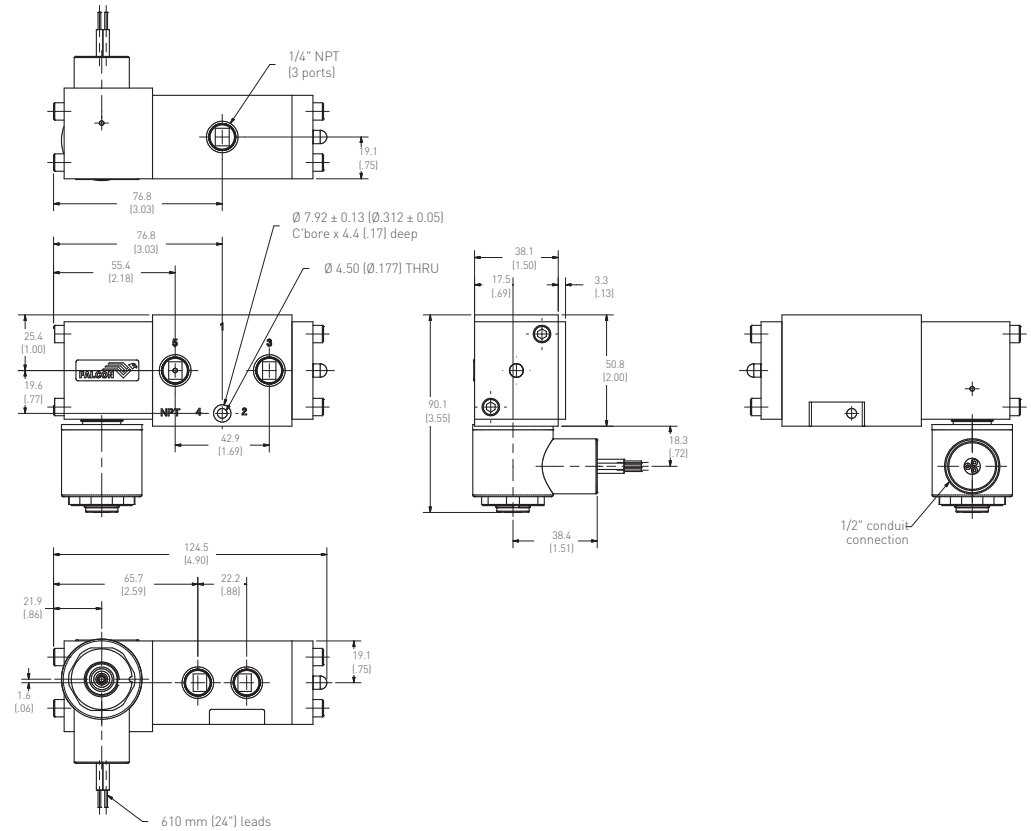
FALCON V SOLENOID VALVE

FALCON 3-WAY SOLENOID VALVE



FALCON 4-WAY SOLENOID VALVE (SHOWN WITH COIL)



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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_v valve body available in Aluminum with ½" NPT ports
- Viton seals as standard (1.4 C_v and 4.3 C_v only)
- Internal venting design as standard
- Increased C_v of the standard valve body (1.4 C_v) 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 +60°C (-4°F to +140°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_v only), nickel plated brass	Available in stainless steel
Valve flow rates	1.4 C_v, 4.3 C_v	3.5 C_v
Standard coil voltage	24 VDC, 1.8 watt 110/120 VAC, 1.8 VA	24 VDC, 1.8 watt 110/120 VAC, 1.8 VA
Valve port tapping	1.4 C_v – ¼" NPT air ports for intlet, outlet and exhaust 4.3 C_v – ½" NPT air ports for inlet, outlet and exhaust	3.5 C_v - 1/2" NPT air ports for inlet, outlet and exhaust

FALCON V TECHNICAL DATA

	Falcon V (1.4 C_v / 4.3 C_v)	**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 +60°C (-4°F to +140°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)

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Base model

E2007 Aluminum Enclosure

Shaft output

S	Standard (Double-D with 1/4" Flats)
D	Direct mount to Keystone F89 or MRP actuators
N	NAMUR

Beacon

BY	BM2-Y (Standard)
RG	BM2-RG (Red Closed/Green Open)
FE	Bm2-Y-Fe (French/English)
LP	BM2-Y-LP (Low Profile Standard)
B1	BM3-1 (3-way B1 Flowpath)
B3	BM3-3 (3-way B3 Flowpath)
B5	BM3-5 (3-way B5 Flowpath)
B7	BM3-7 (3-way B7 Flowpath)
B9	BM3-9 (3-way B9 Flowpath)
FC	Flat Cover - **not available w/switch options requiring high cover**

Conduit

4E	Two 3/4NPT (F), One 1/2NPT F) & One 1/2NPT (M) Global Eliminator Fitting
EM	Three M20 (F) and One 1/2NPT (F) Global Eliminator Fitting

Position Switches

2M02	Two SPDT Mechanical Switches - 16 pt. Terminal Strip
4M02	Four SPDT Mechanical Switches - 16 pt. Terminal Strip
6M02	Six SPDT Mechanical Switches - 24 pt. Terminal Strip, High Cover
2M04	Two DPDT Mechanical Switches - 16 pt. Terminal Strip

Position Transmitter

00	None

Coil Voltage/Type

ET	24 VDC, 1.8 watt, 1/2NPT female hub, stainless steel housing, fully potted coil
EZ	120 VAC, 1.8 watt, 1/2NPT female hub, stainless steel housing, fully potted coil

Coil Temperature Rating

0	Ordinary temperature (-20°C service)
L	Low Temperature (-40°C) - **requires Valve Option "X"**

Falcon V Valve Body

2V3	1.4Cv, 3-Way, Brass, 1/4NPT	2V7	1.4Cv, 4-Way, Brass, 1/4NPT
3V3	1.4Cv, 3-Way, Alum., 1/4NPT	3V7	1.4Cv, 4-Way, Alum., 1/4NPT
5V3	1.4Cv, 3-Way, 316 SS, 1/4NPT	5V7	1.4Cv, 4-Way, 316 SS
3V4	4.3Cv, 3-Way, Alum., 1/2NPT*	3V8	4.3Cv, 4-Way, Alum., 1/2NPT*
3B3	1.4Cv, 3-Way, Alum., 1/4BSP	3B7	1.4Cv, 4-Way, Alum., 1/4BSP
5B3	1.4Cv, 3-Way, 316 SS, 1/4BSP	5B7	1.4Cv, 4-Way, 316 SS, 1/4BSP
3B4	4.3Cv, 3-Way, Alum., 1/2BSP*	3B8	4.3 C_v, 4-Way, Alum., 1/2BSP*

Valve Options

0	None
X	Low Temp. Seals (-40C service)-**requires Coil Temp. Rating "L"**
M	Momentary Override
L	Locking Override
E	External Pilot -**required for inlet pressure below 45 psi**

Unit Speacialty Code

00124	316 Stainless Steel Enclosure
00692	**120VAC Heater Resistor
00710	12 pt. Terminal Strip
00816	**24VDC Heater Resistor

E2007	**N**	**BY**	**EA**	**2M02**	**00**	**ET**	**L**	**3V3**	**X**	**00124**	= Model number **E2007NBYEA2M0200ETL3V3X**

NOTES

*3V4 and 3B4 valves are 3V8 and 3B8 valves respectively with ports 2 & 3 plugged at the factory for 3-way functionality.

**T Rating for optional heater resistor changes to T2C

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Base model

E9479 Aluminum Enclosure

Shaft output

S Standard (Double-D with 1/4" Flats)
D Direct mount to Keystone 79U or MRP actuators
N NAMUR

Beacon

BY BM2-Y (Standard)
RG BM2-RG (Red Closed/Green Open)
FE Bm2-Y-Fe (French/English)
LP BM2-Y-LP (Low Profile Standard)
B1 BM3-1 (3-way B1 Flowpath)
B3 BM3-3 (3-way B3 Flowpath)
B5 BM3-5 (3-way B5 Flowpath)
B7 BM3-7 (3-way B7 Flowpath)
B9 BM3-9 (3-way B9 Flowpath)
FC Flat Cover - **not available w/switch options requiring high cover**

Conduit

4E Two 3/4NPT (F), One 1/2NPT F) & One 1/2NPT (M) Global Eliminator Fitting
EM Three M20 (F) and One 1/2NPT (M) Global Eliminator Fitting

Position Switches

2M06 Two SPDT Magnum Switches - 16 pt. Terminal Strip
2M08 Two P+F NJ2-V3-N NAMUR Inductive Proximity Sensors - 16 pt. Terminal Strip
2M12 Two SPDT Magnum Switches, Rhodium Contacts - 16 pt. Terminal Strip
2M13 MagPAC Module (SPST Bifurcated switches with LEDs) - 16 pt. Terminal Strip
4M06 Four SPDT Magnum Switches - 16 pt. Terminal Strip
4M08 Four P+F NJ2-V3-N NAMUR Inductive Proximity Sensors - 16 pt. Terminal Strip
4M12 Four SPDT Magnum Switches, Rhodium Contacts - 16 pt. Terminal Strip
6M06 Six SPDT Magnum Switches - 24 pt. Terminal Strip, High Cover, 4 Conduits
6M08 Six P+F NJ2-V3-N NAMUR Inductive Proximity Sensors - 16 pt. Terminal Strip, High Cover
6M12 Six SPDT Magnum Switches, Rhodium Contacts - 24 pt. Terminal Strip, High Cover, 4 Conduits

Position Transmitter

00 None

Coil Voltage

ET 24 VDC, 1.8 watt, 1/2NPT female hub, stainless steel housing, fully potted coil
EZ 120 VAC, 1.8 watt, 1/2NPT female hub, stainless steel housing, fully potted coil

Coil Temperature Rating

0 Ordinary temperature (-20°C service)
L Low Temperature (-40°C) - **requires Valve Option "X"**

Falcon V 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*
3B3	1.4Cv, 3-Way, Aluminum, 1/4BSP	3B7	1.4Cv, 4-Way, Aluminum, 1/4BSP
5B3	1.4Cv, 3-Way, 316 SS, 1/4BSP	5B7	1.4Cv, 4-Way, 316 SS, 1/4BSP
3B4	4.3Cv, 3-Way, Aluminum, 1/2BSP*	3B8	4.3Cv, 4-Way, Aluminum,1/2BSP*

Valve Options

0 None
X Low Temp. Seals (-40C service)-**requires Coil Temp. Rating "L"**
M Momentary Override
L Locking Override
E External Pilot -**required for inlet pressure below 45 psi**

Unit Speacialty Code

00124 316 Stainless Steel Enclosure
00692 **120VAC Heater Resistor
00710 12 pt. Terminal Strip
00816 **24VDC Heater Resistor

E9479	**N**	**BY**	**4E**	**2M12**	**00**	**ET**	**0**	**3V3**	**0**	**00124**	= Model number **E9479NBY2E2M1200DTO3V30**

NOTES

* 3V4 valves are 3V8 valves with ports 2 & 3 plugged at the factory for 3-way functionality.

**T Rating for optional heater resistors changes to T2C.

For 24 VDC service below 1 watt, M12 (Rhodium Magnum switches)
For 24 VDC service above 1 watt, M06 (Tungsten Magnum switches)
For 120 VAC service, M13 (MagPAC) is recommended
For 24 VDC service below 1 watt, M12 (Rhodium Magnum switches) or M13 (MagPAC) is recommended
For 24 VDC service above 1 watt, M06 (Tungsten Magnum switches) or M13 (MagPAC) is recommended

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