

QUANTUM 777 SERIES ROTARY CONTROL MONITORS
EXPLOSIONPROOF - INMETRO

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



FEATURES

- Factory wired and tested combination of Quantum control monitor and Falcon V solenoid valve
- Available with a single certificate for Ex db hazardous locations
- 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 Beacon™ 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
- Analog position transmitter option
- Stainless steel enclosures available
- Choice of factory pre-wired 3 and 4 way Falcon V explosionproof solenoid valves
- Falcon V solenoid valves available with a choice of C_v ratings and coil voltages
- Aluminum enclosures with ultra-low copper content (0.2% maximum) ensure robust performance in corrosive environments

GENERAL APPLICATION

Quantum 777 series is a pre-wired and tested combination of the AccuTrak 2007/9479 switch boxes with the Falcon V solenoid valve supplied with a single hazardous area certificate for all electrical parts.

Agency approvals

Quantum 777 Low Cover Models:

Ex db IIC T* Gb IP66W

Ex tb IIIC T* Db IP66W

-*°C ≤ Tamb +*°C

Quantum 777 High Cover Models

Ex db IIB+H2 T* Gb IP66W

Ex tb IIIC T* Db IP66W

-*°C ≤ Tamb +*°C

All enclosures IP66W

TECHNICAL DATA

Switches

Magnum
V3 (SPDT) and DPDT
mechanical / GO®

Enclosures

Aluminum
Stainless steel

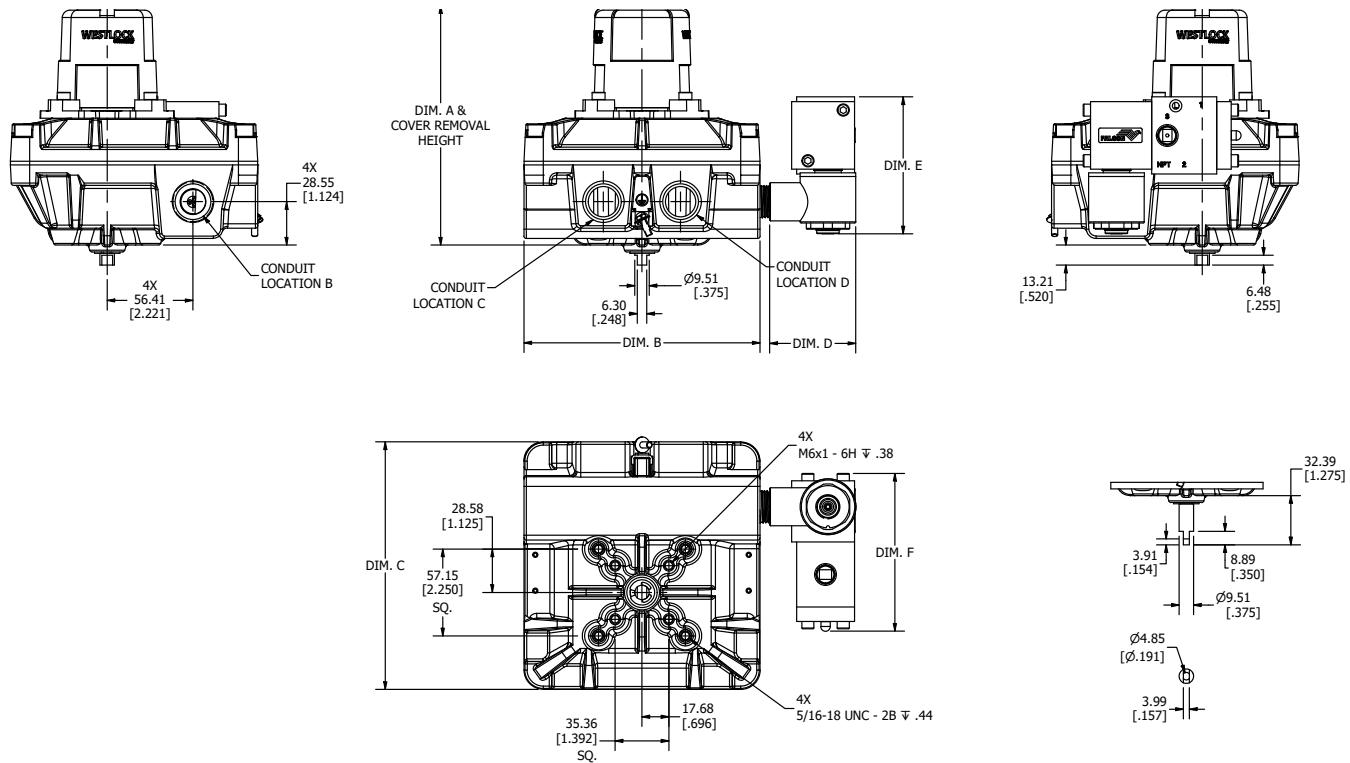
Falcon V solenoid valves

C_v Choice of 1.4 and 4.3
Materials Brass, Aluminum,
Stainless Steel

QUANTUM 777 SERIES ROTARY CONTROL MONITORS

QUANTUM CONTROL MONITOR

MODEL 777 DIMENSIONS



VALVE DIMENSIONS

VALVE OPTION	DIM. D	DIM. E	DIM. F
1.4Cv, 3-Way, Brass, Aluminum, 316 SS	56.7 [2.24]	90.2 [3.56]	103.9 [4.09]
4.3Cv, 3-Way, Aluminum	60.5 [2.39]	87.9 [3.46]	180.0 [7.09]
1.4Cv, 4-Way, Brass, Aluminum, 316 SS	56.7 [2.24]	90.2 [3.56]	124.6 [4.91]
4.3Cv, 4-Way, Aluminum	60.5 [2.39]	87.9 [3.46]	180.0 [7.09]

HOUSING DIMENSIONS

BASE MODEL	COVER TYPE	DIM. A	COVER REMOVAL HEIGHT	DIM. B	DIM. C
777	HI COVER	211.1 [8.31]	332.3 [13.08]	155.5 [6.12]	163.1 [6.42]
777	STD. COVER	157.8 [6.21]	247.2 [9.73]	155.5 [6.12]	163.1 [6.42]
777	FLAT COVER	88.4 [3.48]	111.3 [4.38]	155.5 [6.12]	163.1 [6.42]

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

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

Available switches

Model 777	Magnum (hermetically sealed proximity type) V3 mechanical switches, SPDT DPDT (Form CC) mechanical switches GO® switches
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Options

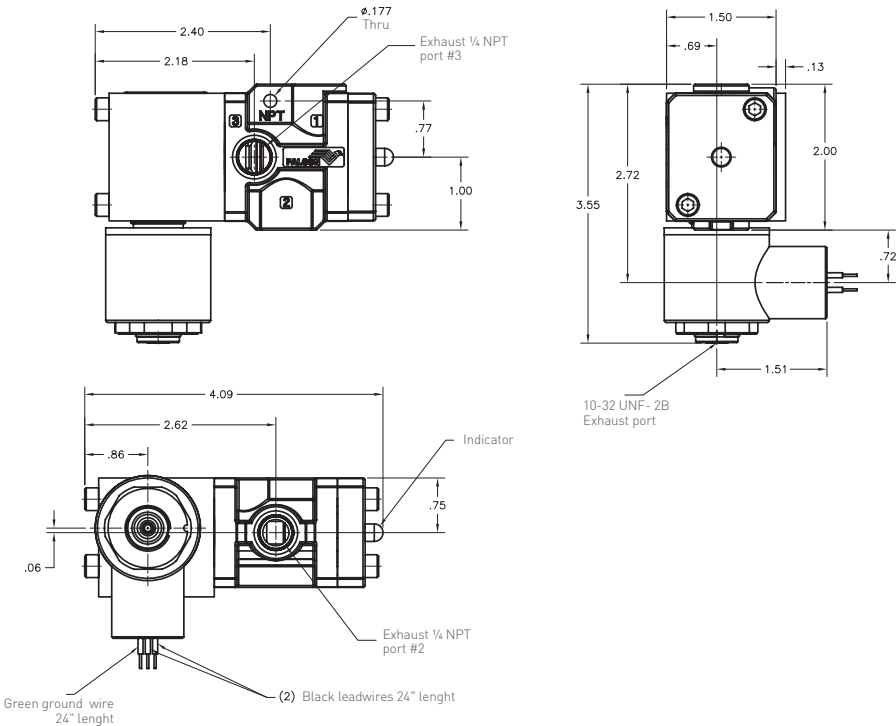
Model 777	Stainless steel enclosure 4-20 mA position transmitter
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NOTES

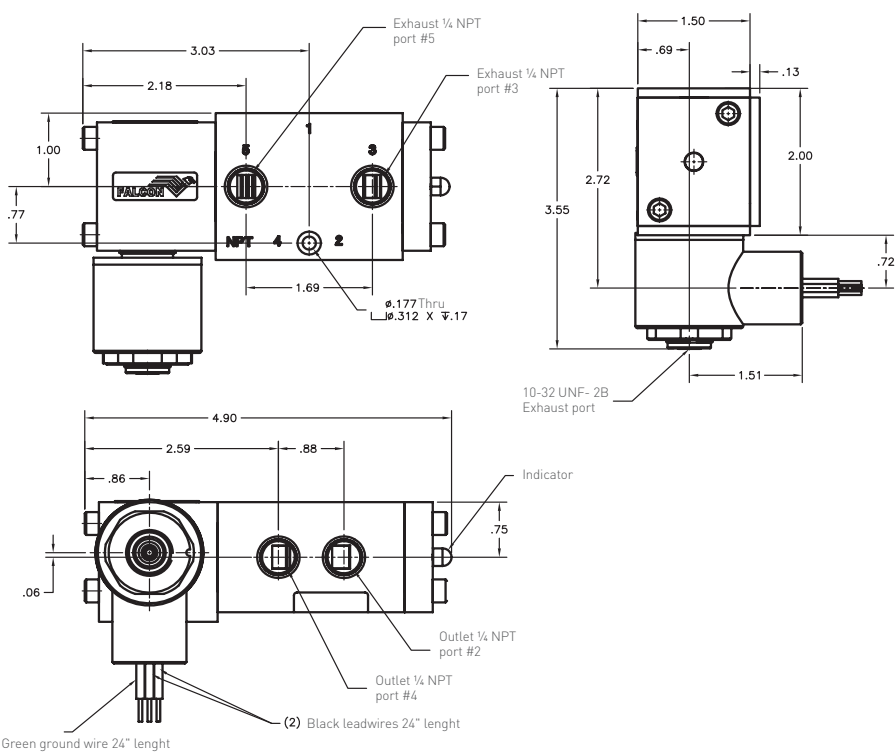
1. See selection guide for standard conduit entries.
2. See switches and sensors data sheet for further information.
3. Please consult your sales office for any other requirements.

QUANTUM 777 SERIES ROTARY POSITION MONITORS
 FALCON V SOLENOID VALVE

FALCON V 3-WAY SOLENOID VALVE



FALCON V 4-WAY SOLENOID VALVE



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 1/2" NPT ports
- Viton seals as standard
- Internal venting design as standard
- Increased C_v of the standard valve body (1.4 C_v) allows for automation 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 across all Westlock brands for ease of automation (model in ISO view)
- Spool indicator design protects the indicator from incidental contact damage
- 5 cc or less air leakage at steady state reduces losses
- Standard valve temperature range -4°F to 104°F (-20°C to 40°C)
- Extended low temp -40 °F (-40 °C) seal optional
- Suitable for high cycle applications

Standard specification		Technical data	
Materials	Anodized aluminum, nickel plated brass, 316 stainless steel	Operating pressure	30 - 120 psi (2.1 - 8.3 bar)
Valve flow rates	1.4 C _v , 4.3 C _v	Operating temperature (Agency approved)	
Standard coil voltages	24 V DC, 0.85 watt and 1.8 watt (1.8 watt as standard)	Standard	-4°F to +104°F (-20°C to +40°C)
	110/120 V AC, 3.2 watt with Class H	Extended	-40°F to +104°F (-40°C to +40°C)
Valve port tapping	1.4 C _v - 1/4" NPT air ports for inlet, outlet and exhaust	Operating media	Filtered air to 20 microns
	4.3 C _v - 1/2" NPT air ports for inlet, outlet and exhaust		

QUANTUM 777 SERIES ROTARY POSITION MONITORS

MODEL 777 SELECTION GUIDE

Base model										
777	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)						B1	BM3 (3-Way B1 Flowpath)	
	RG	BM2-RG (Red Closed/Green Open)						B3	BM3 (3-Way B3 Flowpath)	
	FE	BM2-Y-FE (French/English)						B5	BM3 (3-Way B5 Flowpath)	
	LP	BM2-Y-LP (Low Profile Standard)						B7	BM3 (3-Way B7 Flowpath)	
	FC	Flat Cover - not available w/switch options requiring high cover						B9	BM3 (3-Way B9 Flowpath)	
	Conduit									
	4E	One 3/4" NPT (F) and One 1/2" NPT (M) Global Eliminator Fitting								
	EM	Three M20 and One 1/2" NPT (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								
	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								
	2M17	Two DPDT Magnum Cobra - 24 pt Terminal Strip, High Cover, 4 Conduits								
	2M18	Two DPDT Magnum Cobra - Rhodium Contacts - 24 pt. Terminal Strip, High Cover, 4 Conduits								
	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	Siz SPDT Magnum Switches, Rhodium Contacts - 24 pt. Terminal Strip, High Cover, 4 Conduits								
	Position Transmitter									
	00	None								
	DS	4-20 mA Digital Signal Position Transmitter: -available only w/ 12 pt. Terminal Strip and 2M06, 2M12, 2M08 OR w/ 16 pt. Terminal Strip, 4M06, 4M08, 4M12 and high cover -not available w/ 6M02 switch options								
	Coil Voltage/Types									
	EG	24 VDC, 0.5 watt, 1/2 NPT female hub, stainless steel housing, fully potted coil (Consult Sales Rep.)								
	ET	24 VDC, 1.8 watt, 1/2 NPT female hub, stainless steel housing, fully potted coil								
	EZ	120 VAC, 1.8 watt, 1/2 NPT female hub, stainless steel housing, fully potted coil								
	EM	120 VDC, 1.8 watt, 1/2 NPT female hub, stainless steel housing, fully potted coil (Consult Sales Rep.)								
	EN	120 VAC, 1.8 watt, 1/2 NPT female hub, stainless steel housing, fully potted coil (Consult Sales Rep.)								
	Coil Temperature Rating									
	O	Ordinary Temperature (-20°C service)								
	L	Low Temperature (-40°C service) - requires Valve Option "X"								
	Falcon V Valve Body									
	2V3	1.4Cv, 3-Way, Brass, 1/4 NPT					2V7	1.4Cv, 4-Way, Brass, 1/4 NPT		
	3V3	1.4Cv, 3-Way, Aluminum, 1/2 NPT					3V7	1.4Cv, 4-Way, Aluminum, 1/4 NPT		
	5V3	1.4Cv, 3-Way, 316 SS, 1/4 NPT					5V7	1.4Cv, 4-Way, 316 SS		
	3V4	4.3Cv, 3-Way, Aluminum, 1/4 NPT*					3V8	4.3Cv, 4-Way, Aluminum, 1/2 NPT*		
	3B3	1.4Cv, 3-Way, Aluminum, 1/4 BSP					3B7	1.4Cv, 4-Way, Aluminum, 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, Aluminum, 1/2 BSP*					3B8	4.3Cv, 4-Way, Aluminum, 1/2 BSP*		
	Valve Options									
	0	None								
	X	Low Temp. Seals (-40°C service) - requires Coil Temp. Rating "L"								
	M	Momentary Override								
	L	Locking Override								
	E	External Pilot - required for inlet pressure below 45 psi								
	Unit Specialty Codes (leave M0000 for standard builds)									
	M0124	316 Stainless Steel ENclosure (InMetro Approval)								
	M0710	12 pt. Terminal Strip (InMetro Approval)								
	M1351	SIL 3 - some restrictions may applyl consult Sales (InMetro Approval)								
777	N	BY	4E	2M06	DS	ET	O	3V3	0	M000 = Model # 777NBY4E2M06DSETO3V30M0000

ORDERING NOTES

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

For stainless steel enclosure, please use code M0124.

Translations

Where translated the copy is taken from the original English document TD10065-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.

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