

QUANTUM™ ROTARY CONTROL MONITORS

INTRINSICALLY SAFE – NEC

Low-power rotary position control monitors for quarter-turn valve applications in intrinsically safe hazardous areas. They offer a variety of switching options and a choice of single or dual-coil Falcon solenoid valves.



FEATURES

- Quantum enclosures integrate position sensors and low power solenoid valves into a single unit.
- Solenoid coils integrated within Quantum housing.
- Choice of factory pre-wired 3 and 4 way Falcon solenoid valves.
- Solenoid valves with a choice of C_v ratings and coil voltage.
- Strong durable Beacon™ offers 360° visual indication in a choice of styles and colors.
- 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 for ease of use.
- Additional conduit for easy field wiring and mounting accessories as standard.
- Standardized mounting pattern for easy adaptation to common bracketry.
- Robust stainless steel conduit entry inserts provide protection from excessive torque and reliable grounding.
- NAMUR shaft output compliant to VDI/VDE 3845 available.
- Engineered resin enclosure is robust, lightweight and provides exceptional chemical, UV and impact resistance.
- Aluminum enclosures with ultra-low copper content (0.2% maximum) suitable for corrosive environments.
- Rugged stainless steel enclosure.

TECHNICAL DATA

Agency approvals

Area classification (NEC 500)
Models 711/722/811

Intrinsically safe Class I, II & III, Division 1, Groups A, B, C, D, E, F, G, T6, $T_a = 40^\circ\text{C}$ (Entity) when operated through approved I.S. barriers
Non-incendive Class I, Division 2, Groups A, B, C, D, T6, $T_a = 40^\circ\text{C}$

Enclosure standards (ANSI/NEMA 250)

All enclosures

Type 4, 4X

Switches

Models 711/722/811

Pepperl + Fuchs inductive proximity sensors
SPDT mechanical switches, with gold-plated contacts
Magnum, SPDT hermetically-sealed magnetic proximity switches

Enclosures

Models 711/811

Model 722

Models 722/811

Engineered resin

Aluminum

Stainless steel

Falcon solenoid valves

C_v

Choice of 1.4 and 4.3

Materials

Brass, aluminum and stainless steel

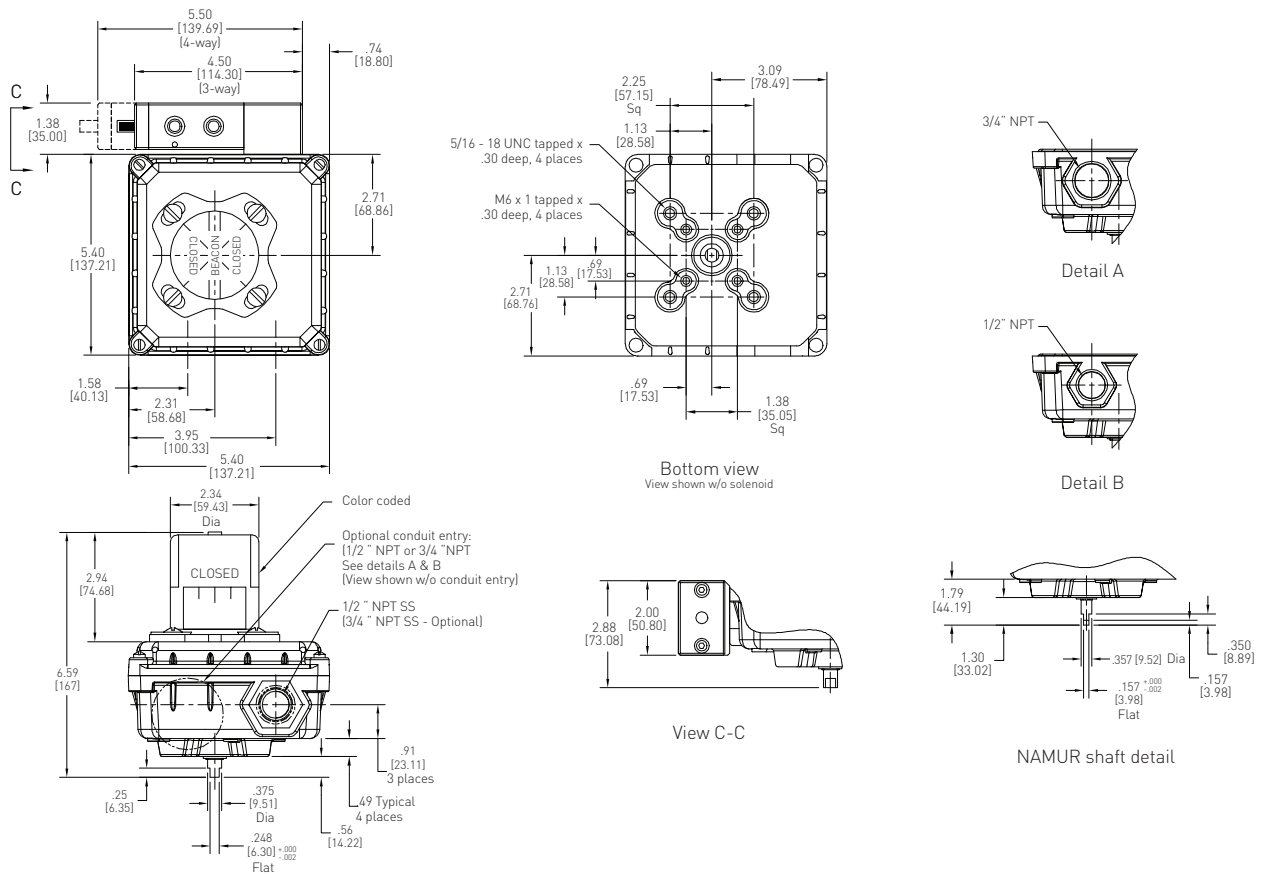
GENERAL APPLICATION

Quantum control monitors combine consistent and accurate valve monitoring with the control of automation process valves using integrated position sensors and low power solenoid valves in a single compact unit.

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MODEL 711 DIMENSIONS



Dimensions in inches, where available metric dimension (mm) in parentheses

TECHNICAL SPECIFICATIONS

Materials of construction

Enclosure	Engineered polyamide resin
Shaft and hardware	Stainless steel
Bushing	Nylon
Beacon visual indicator	Co-polyester

Drive shaft

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

Available switches

Pepperl + Fuchs NJ2-V3-N inductive proximity sensors
SPDT mechanical switches, with gold-plated contacts
Magnum, SPDT hermetically-sealed magnetic proximity switches

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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MODELS 711/722/811 SELECTION GUIDE

Base model

711-	Engineered resin enclosure
722-	Aluminum enclosure ^[3]
811-	Engineered resin enclosure for dual coil ^[5]

Shaft output

S	Standard (double-D with 1/4" flats)
N	NAMUR

Beacon

BY	BM2-Y (standard)	B1	BM3-1
RG	BM2-RG	B3	BM3-3
FE	BM2-Y-FE (French/English)	B5	BM3-5
AB	BM2-B	B7	BM3-7
AR	BM2-R	B9	BM3-9
FC	Flat cover		

Conduit

1A	One 1/2" NPT (F)
1B	One 3/4" NPT (F)
2A	Two 1/2" NPT (F)
2B	Two 3/4" NPT (F)

Position switches

2M08	Two P+F sensors model NJ2-V3-N - 8 pt. TS
2M09	Two SPDT mechanical switches with gold-plated contacts - 8 pt. TS
2M12	Two SPDT Magnum switches with rhodium contacts - 8 pt. TS

Analog position transmitter

00	Not available
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Coil voltage

I	24 V DC IS coil
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Falcon V valve body

2V3	1.4 Cv, 3-way, brass	2V7	1.4 Cv, 4-way, brass
3V3	1.4 Cv, 3-way, aluminum	3V7	1.4 Cv, 4-way, aluminum
5V3	1.4 Cv, 3-way, 316 SS	5V7	1.4 Cv, 4-way, 316 SS
3V4	4.3 Cv, 3-way, aluminum**	3V8	4.3 Cv, 4-way, aluminum
2VY	1.4 Cv, dual coil, brass*	3VY	1.4 Cv, dual coil, aluminum*
5VY	1.4 Cv, dual coil, 316 SS*	3VZ	4.3 Cv, dual coil, aluminum*

Valve options

0	None
M	Momentary over-ride
L	Locking over-ride
R	Manual reset
N	Manual reset with latch
E	External pilot

711- N BY 1A 2M12 00 I 3V3 0 = Model number **711-NBY1A2M1200I3V30**

NOTES

- * Dual coil valve body options only available with base model 811
- ** 3V4 valves are 3V8 valves with ports 2 & 3 plugged at the factory for 3-way functionality

1. Please contact your sales office for guidance on selecting the best possible combination for your control and monitoring requirements.
2. See Hazardous area classification technical bulletin for further information on global standards.
3. For stainless steel enclosure, please add '00124' to the end of your part number built with the above selection guide.