



Low Power Control Monitor for use in Intrinsically Safe Hazardous Areas

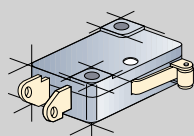
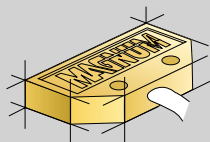
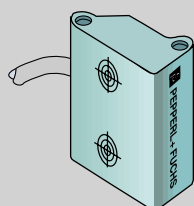
## Quantum® Dual Coil Intrinsically Safe

Intrinsically safe Quantum units meet Class I, Groups A, B, C, & D and Class II, Groups E, F, & G, Division 1 and 2 requirements. Intrinsically safe dual coil Falcon solenoid valves operate through approved I.S. barriers at 12 VDC, 33 mA. and are available in a wide variety of body materials and Cv. ratings. P&F Kriterium sensors are internationally approved for intrinsically safe applications as are both Magnum and mechanical sensors under their classification as "simple apparatus". Housed within a high impact engineered resin enclosure and capable of operating in

any position, Falcon solenoid valves elevate the integration of sensors and controls to a new level. Offering an extremely efficient and compact method for the integration of position sensors and dual coil solenoid valves, the Quantum integrates both components into a single cost effective unit.



### Standard Sensor Options



### P+F Kriterium 2000 Proximity Type (Solid State) Intrinsically Safe, FM, CSA, PTB, CENELEC

Sensing Range	3mm
Electrical Version	D.C. Voltage 2 wire in accordance with DIN19234 (NAMUR)
Hysteresis	Approx 5%
Switching Frequency	1.5 KHz
Input Voltage Range	5-25 VDC
Output/Current Consumption	Cam Trigger Present: ≤ 1 mA Cam Trigger Absent: ≥ 3 mA (15 mA max)
Operating Temp.	-25°C to +100°C

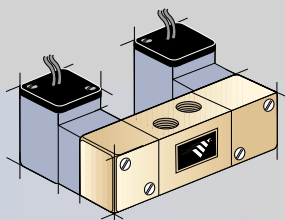
### MAGNUM® Proximity Sensor w/ Low Power Contacts

UL, CSA "Simple Apparatus", Hermetically Sealed, SPST

Voltage	24 VDC Nominal
Nominal Contact Resistance	≤ .10 ohm
Operating Current Range	.5 mA to 1A
Power Range	10 mW to 25 W
Temperature Range	-40°F to 185°F

### Micro-Switch V3 w/ Gold Contacts UL, CSA "Simple Apparatus"

VDC	Contact Rating
12	100 mA Resistive
24	100 mA Resistive



### COIL POWER SUPPLY

	COILS
Operating Voltage	<b>24 VDC</b>
Wattage	0.48 Watts*
Operating Current	33 mA*
Coil Resistance	380 Ohms

\*When operated through approved I.S. barrier.

# Quantum® Dual Coil Intrinsically Safe

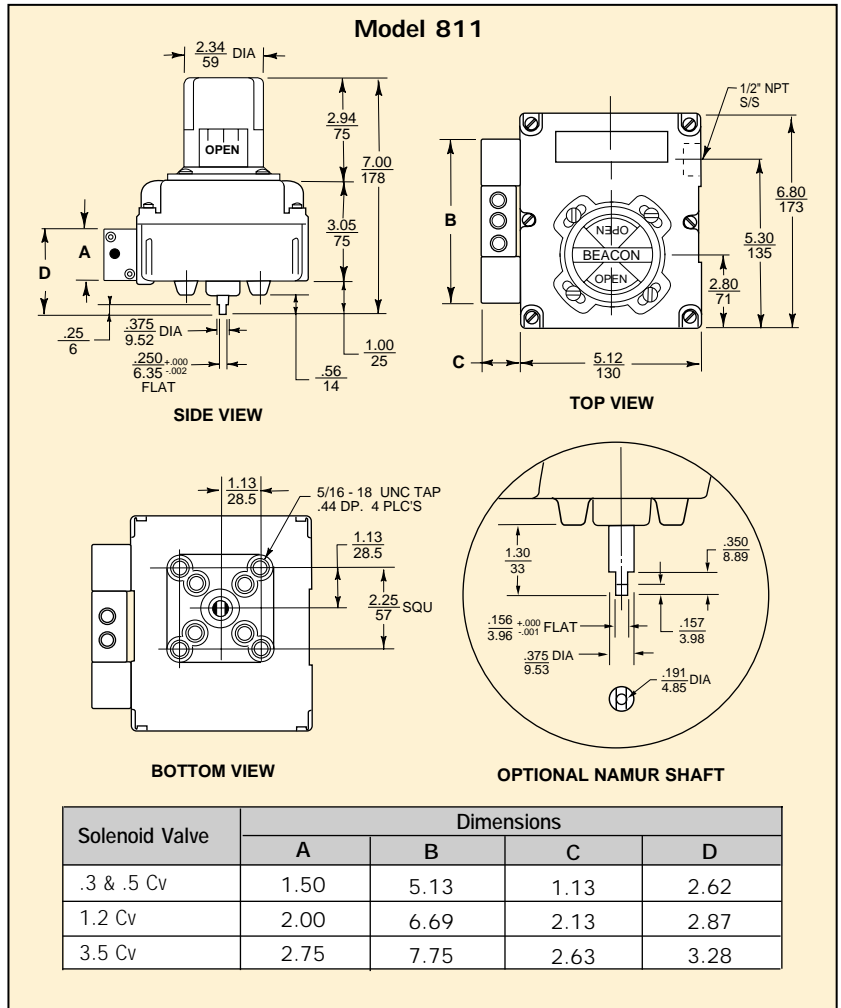
### AREA CLASSIFICATIONS

NEMA 4, 4x  
Class I, Groups A, B, C, D,  
Class II, Groups E, F, G, Div. 1 & 2

### ORDERING GUIDE (FALCON® SOLENOID)

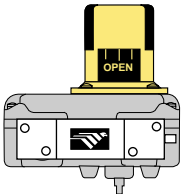



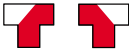


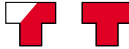

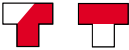




COILS	CV	Body	4-Way
<b>FIO</b> 24 VDC 0.48 watts	<b>.3 Cv</b>	Brass	<b>2900</b>
		Alum.	<b>3900</b>
		303 S.S.	<b>4900</b>
		316 S.S.	<b>5900</b>
		Delrin	<b>6900</b>
<b>NOTE:</b> I.S. valves must be operated through approved I.S. barriers.	<b>.5 Cv</b>	Brass	<b>2000</b>
		Alum.	<b>3000</b>
		303 SS	<b>4000</b>
		316 S.S.	<b>5000</b>
		Delrin	<b>6000</b>
<b>Entity Parameters</b> V max=35V I max=300mA Capacitance=0 Inductance=0	<b>1.2 Cv</b>	Brass	<b>2Y00</b>
		Alum.	<b>3Y00</b>
		303 S.S.	<b>4Y00</b>
		316 S.S.	<b>5Y00</b>
		Delrin	<b>6Y00</b>
<b>OPTIONAL FEATURES</b> (See BULLETIN NO. Q-18.00)	<b>3.5 Cv</b>	Alum.	<b>3Z00</b>
		Delrin	<b>6Z00</b>

### DIMENSIONS (inches/mm)



Note: Minimum operating pressure: 45 psi.

### ORDERING GUIDE

QUANTUM™ LP	BEACON™	3-WAY BEACON™	SENSOR	SOLENOID (Falcon®)
<b>811</b> Engineered Resin   NEMA 4, 4x Class I, Groups A, B, C, D Class II, Groups E, F, G Div. 1 & 2   	<b>STANDARD</b> (Black & Yellow) <b>BY</b> 	<b>90° Rotation B1</b> 	Kriterium <b>M11</b>  Magnum (SPST) <b>M10</b>  Mech. (SPDT) w/ Gold Plated Contacts <b>M9</b>	Use above listing for ordering solenoid  
	<b>ANSI YELLOW</b> (Inherently Hazardous) <b>AY</b> 	<b>90° Rotation B3</b> 		
	<b>ANSI GREEN</b> (Liquid-Low Hazard) <b>AG</b> 	<b>90° Rotation B5</b> 		
	<b>ANSI BLUE</b> (Gas-Low Hazard) <b>AB</b> 	<b>180° Rotation B7</b> 		
	<b>ANSI RED</b> (Fire Quenching) <b>AR</b> 	<b>180° Rotation B9</b> 		

NOTE: Model 811 Max. 3 Switches.

Ordering Example: Quantum LP Intrinsically Safe, resin enclosure with standard black & yellow Beacon, 2 Magnum Sensors and Falcon 24 VDC/.48 watts, .5 Cv, brass, 4-Way solenoid valve. 811-BY-M10-FIO-2000