

QUANTUM™ ROTARY CONTROL MONITORS

INTRINSICALLY SAFE – ATEX/IEC

Fully integrated rotary valve control monitors that are certified to intrinsically safe standards. They offer a choice of enclosure materials, switching options and single or dual coil Falcon solenoid valves



FEATURES

- Intrinsically Safe design meeting a wide range of worldwide approvals.
- 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 3/2 and 5/2 way Falcon solenoid valves.
- Inductive NAMUR sensor rated for IS applications.
- Magnum switches with rhodium contacts for longer contact life.
- 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.
- Wide range of switches and sensors.
- Standardized mounting pattern for easy adaptation to common bracketry.
- Range of drive shaft options.
- 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 option.
- IP rated plugs certified where applicable.

TECHNICAL DATA

Agency approvals

Area classification (ATEX/IEC)
3600/8600 series

Ex II *GD
Exia II* T* G*
Ex t IIIC T135°C Da IP6X

Enclosure standards (IEC)
3600/8600 series

Pepperl + Fuchs inductive NAMUR sensors
V3 SPDT mechanical switches, with gold-plated contacts
Magnum, SPDT (hermetically sealed proximity type) switches with rhodium contacts

Enclosures

3600/8600 series

Engineered resin
Aluminum
Stainless steel

Falcon solenoid valves

C_v
Materials

Choice of 1.1, 3.5
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.

INTRINSICALLY SAFE – ATEX/IEC

Technical drawings of BEACON actuators, showing various views and dimensions for different models.

Top View (Left): Dimensions include 133 [5,235] (height), 56 [2,205] (width), 99 [3,896] (width), 61.8 [2,434] (height), 65 [2,559] (width), and 130 [5,118] (width). The BEACON logo is visible.

Top View (Middle): Dimensions include 14 [0,551] (height), 6.35 [0,250] (height), 6.35 [0,250] (height), 47 [2,637] (width), and 75.03 [2,954] (width).

Top View (Right): Dimensions include 17.5 [0,689] (width), 28.5 [1,122] (width), 57.5 [2,244] (width), 169 [6,665] (width), and 129.3 (width). It notes "4 holes with metal inserts M6 x 1.0 x 9.5 deep".

Front View (Left): Dimensions include 64 Ø (width), 75 [2,945] (height), 167 [6,567] (height), 21 [0,827] (height), 40 [1,575] (height), and 41 [1,614] (height).

NAMUR shaft details: Dimensions include 33 [1,299] (height), 8.89 [0,350] (height), 9.52 Ø [0,375] (height), 3.98 [0,157] (height), 4.85 Ø [0,191] (height), and 3.95 A/F [0,156] (height).

Falcon II 3/2 way: Dimensions include 107.3 (width), 72 (width), 61 (width), 50 (width), 19 (height), 38 (height), 72 (height), and 50 (height). It labels Inlet port 1, Exhaust port 3, and Outlet port 2.

Falcon II 5/2 way: Dimensions include 129.3 (width), 94 (width), 72 (width), 50 (width), 19 (height), 38 (height), 61 (width), 83 (width), 72 (height), and 50 (height). It labels Inlet port 1, Exhaust port 3, Outlet port 2, and Outlet port 4.

Override (optional): contact sales office for details

TECHNICAL SPECIFICATIONS

Enclosure	Engineered resin
Shaft and hardware	Stainless steel
Bushing	Nylon
Beacon visual indicator	Co-polyester
Drive shaft	
Westlock standard	Double-D with ¼" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845
Available switches	
	Pepperl + Fuchs model NJ2-V3-N
	V3 SPDT mechanical switches, with gold-plated contacts
	Magnum, SPDT (hermetically sealed proximity type) switches with rhodium contacts

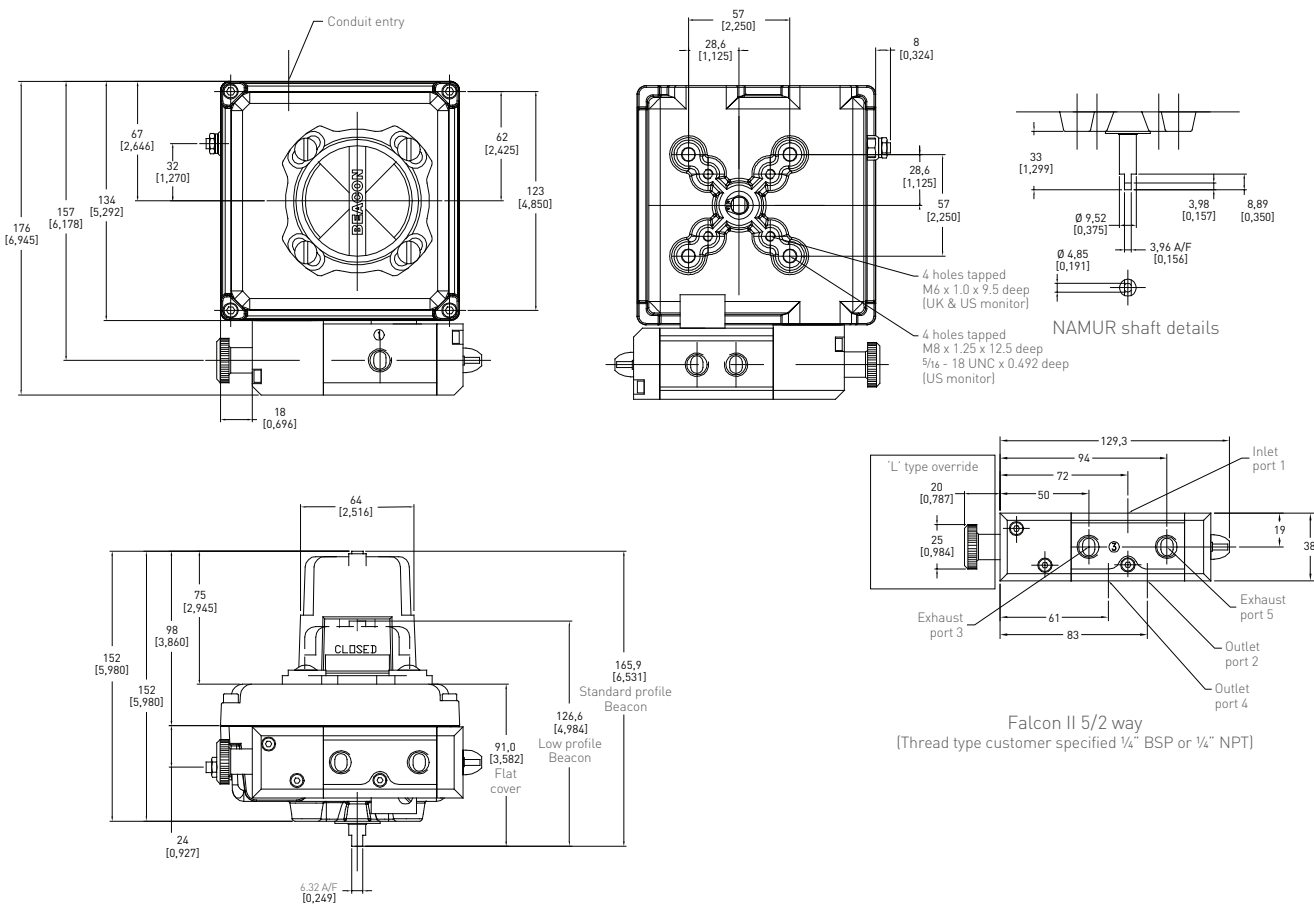
The Falcon range of solenoid valves allows you to choose the material, voltage, number of ports, number of coils and C_v to best suit your application. See the Falcon II data sheet for more information.

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



QUANTUM™ ROTARY CONTROL MONITORS
 INTRINSICALLY SAFE – ATEX/IEC

3600 SERIES ALUMINUM AND STAINLESS STEEL ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

TECHNICAL SPECIFICATIONS

Materials of construction

Enclosure	Aluminum with powder coat finish
	Stainless steel with electropolished finish
Shaft and hardware	Stainless steel
Bushing	PTFE (stainless steel)
	Oil impregnated bronze (aluminum enclosure)
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 model NJ2-V3-N
	V3 SPDT mechanical switches, with gold-plated contacts
	Magnum, SPDT (hermetically sealed proximity type) switches with rhodium contacts

NOTES

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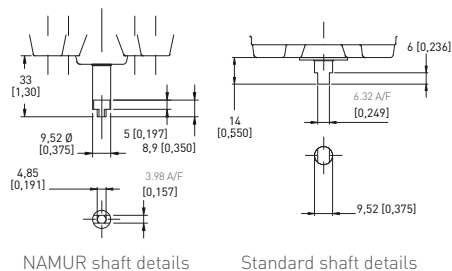
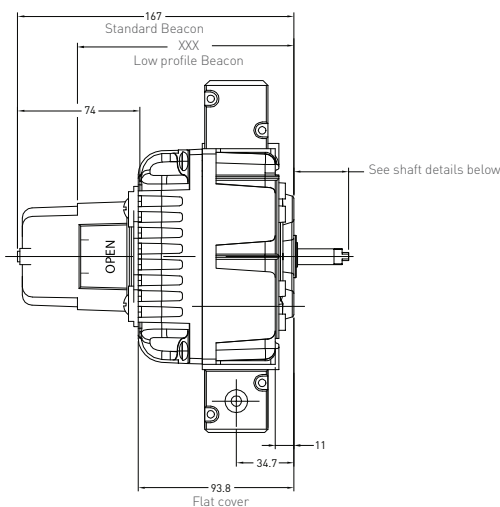
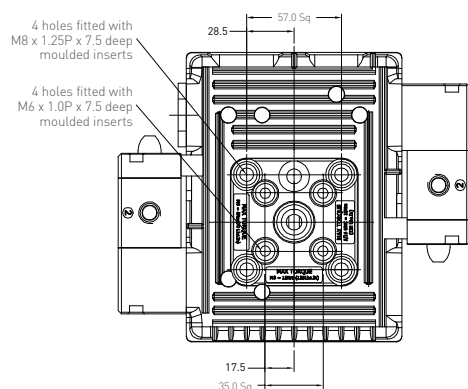
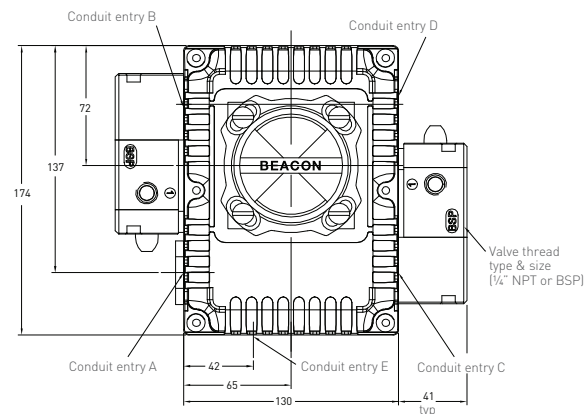
SOLENOID VALVES

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 II data sheet for more information.



INTRINSICALLY SAFE – ATEX/IEC

8600 SERIES RESIN ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

TECHNICAL SPECIFICATIONS

Materials of construction

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

Drive shaft

Westlock standard	Double-D with ¼" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

Available switches

	Pepperl + Fuchs model NJ2-V3-N
	V3 SPDT mechanical switches, with gold-plated contacts
	Magnum, SPDT (hermetically sealed proximity type) switches with rhodium contacts

NOTES

1. See selection guide for standard conduit entries
2. See switches & sensors data sheet for further information
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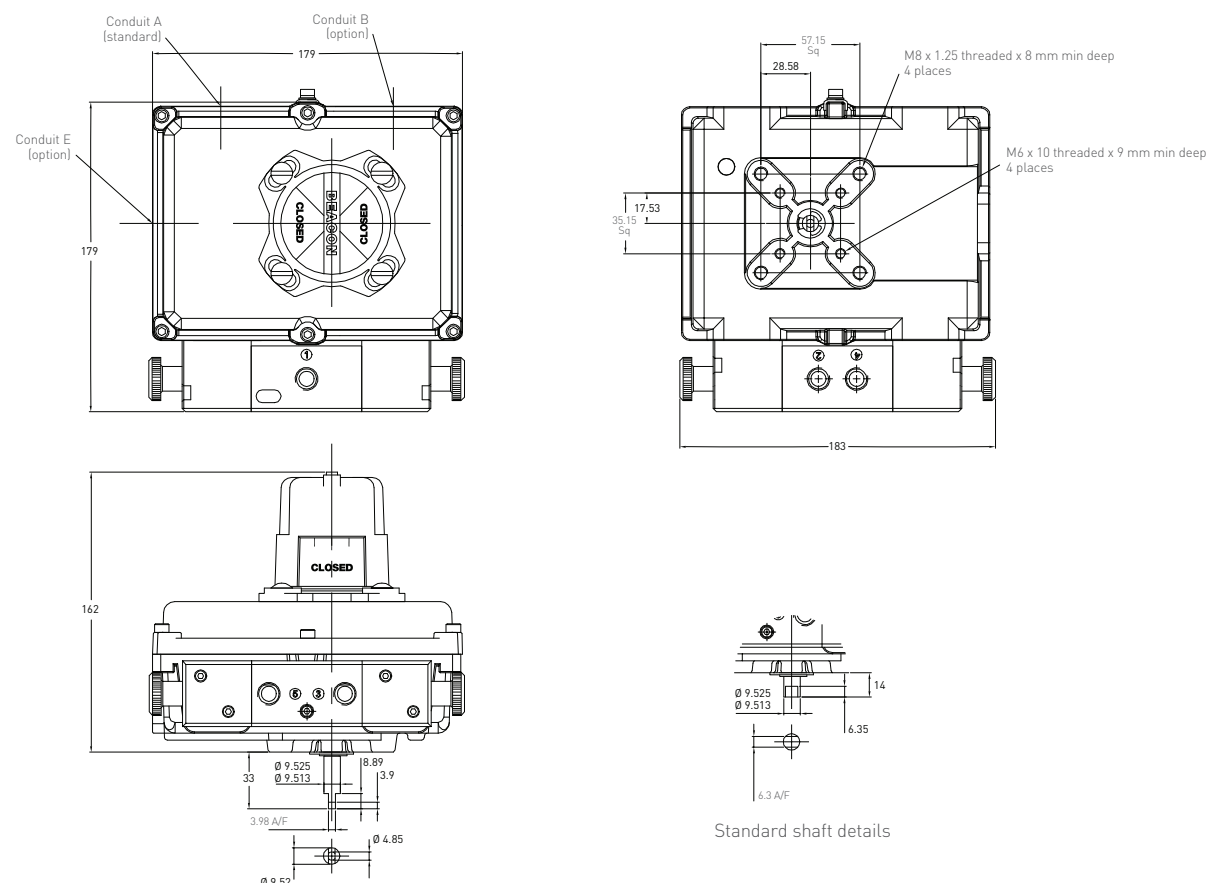
SOLENOID VALVES

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INTRINSICALLY SAFE – ATEX/IEC

8600 SERIES ALUMINUM AND STAINLESS STEEL ENCLOSURE DIMENSIONS



Dimensions in mm, imperial dimensions (inches) in parenthesis

TECHNICAL SPECIFICATIONS

Materials of construction

Enclosure	Aluminum with powder coat finish Stainless steel with electropolished finish
Shaft and hardware	Stainless steel
Bushing	PTFE (stainless steel) Oil impregnated bronze (aluminum enclosure)
Beacon visual indicator	Co-polyester

Drive shaft

Westlock standard	Double-D with ¼" A/F
NAMUR standard	NAMUR standard VDI/VDE 3845

Available switches

	Pepperl + Fuchs model NJ2-V3-N
	V3 SPDT mechanical switches, with gold-plated contacts
	Magnum, SPDT (hermetically sealed proximity type) switches with rhodium contacts

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 II data sheet for more information.

NOTES

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QUANTUM™ INTRINSICALLY SAFE ROTARY CONTROL MONITORS

3600/8600 SERIES SELECTION GUIDE

Housing

363600 (single coil)

868600 (single and dual coil)

Cover style

4With Beacon

6Flat cover

Switch type

5Microswitch SPDT gold plated contacts

7Inductive NAMUR sensor

9Magnum XT90 rhodium contact switch

0No switches fitted

Material

AAluminum

REngineered resin

SStainless steel

Beacon type and color

BYBlack/Yellow

LYBlack/Yellow (low profile)

ARANSI Red/White

GRGreen/Red

00No Beacon fitted

B1BM3-1 pattern 90°

B3BM3-3 pattern 90°

B5BM3-5 pattern 90°

B7BM3-7 pattern 180°

B9BM3-9 pattern 180°

Drive shaft type

SWestlock standard – ¼" A/F (6.32 mm)

NNAMUR standard shaft – VDI/VDE 3845

*Non-standard (consult sales office)

Solenoid body material

AAnodized aluminum

EStainless steel

Solenoid coil voltage

C24 V DC

Solenoid valve specification

{¼" BSP entry; 1.1 Cv}

K3/2 way - fail closed

L3/2 way - fail open

Q5/2 way - fail closed

S5/2 way – dual coil fail last

{½" NPT entry; 1.1 Cv}

U3/2 way - fail closed

V3/2 way - fail open

15/2 way - fail closed

35/2 way - dual coil fail last

Switch/sensor quantity

0No switch/sensor fitted

1One switch/sensor

2Two switches/sensors

3Three switches/sensors

4Four switches/sensors

Conduit entries supplied

2Two entries

3Three entries

4Four entries

Unit specification

AAAStandard build- M25 conduit entries

ADZ¾" NPT conduit entries

DAVM25 conduit entries

FAN½" NPT conduit entries

***Non-standard material

Certification

AATEX & IECEx

*Other options

Revision

R*Internal revision #

86

4

7

A

BY

N

A

C

K

2

2

AAA

A

R1

= Model number **8647ABYNACK22AAA-AR1**

NOTES

- Please contact your sales office for guidance on selecting the best possible combination for your control and monitoring requirements.
- See Hazardous area classification technical bulletin for further information on global standards.



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