

# Worcester Controls Product Catalog









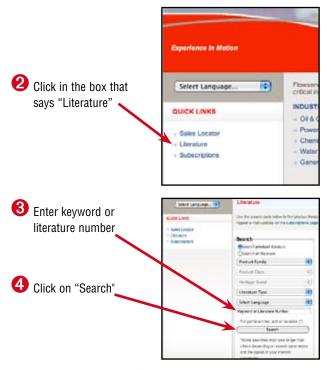


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Flowserve rotary valves offer easy maintenance and automation backed by market-friendly expertise and quality heritage brands





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#### Features

- 3 Piece Swing out design Ball Valve
- ASME class 600 design
- Meets ASME B16.34 requirements (consult Pressure/Temperature Charts)
- "Live loaded" stem seal design
- · Multiple soft and metal seat options
- Tight Shut off and Bi-Directional sealing
- Cavity Filled Designs
- Special Service Applications: UL, FM, USCG and other Special service approvals

#### Sizes

- 1/4" 2"
- Screwed end
- Socket weld
- Butt weld, Solder ends (Brass only)

#### Materials

- Carbon Steel
- Stainless Steel
- Brass
- Monel
- Alloy 20
- · Hastelloy-C

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11
- API 607 Fire Test

Get more information: Product catalog: WCABR1050

IOMs WCAIM2030

See pages 2.

#### Features

- 3 Piece Full Port Ball Valve:
- · ASME class 600 design

SERIES 59

- Meets ASME B16.34 requirements (consult Pressure/Temperature Charts)
- "Live loaded" stem seal
- Multiple soft and metal seat options
- · Tight Shut off and Bi-Directional Sealing
- Cavity Filled Designs
- Full Port design minimizes pressure drop across the valve and maintains a high efficiency, reducing pumping cost.

#### Sizes

- 1/4" 4"
- · Screwed end
- Socket weld
- Butt weld

#### Materials

- Carbon Steel
- · Stainless Steel

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11
- API 607 Fire Test

Get more information: Product catalog: WCABR1050

#### *IOMs*

WCENIM2030 (for Miser) WCENIM2046 (for large 59) WCENIM2054 (for FM)

See pages 2.

#### Features

- Large-diamater, 3 Piece Ball Valve
- ASME Class 300
- Three piece design allows valve to act as a valve and union
- Large diameter bore for O.E.M. equipment and packaging systems
- · Compact design with multiple options
- · Tight Shut off and Bi-Directional sealing
- · Cavity Filled Designs

#### Sizes

- 2-1/2", 3", 4", 6"
- Screwed end
- Socket weld
- Butt weld

#### Materials

- Carbon Steel
- Stainless Steel

#### Standards

- S.E. to ASME B 2.1
- S.W. to ASME B 16.11
- ASME B16.34
- API 607 Fire Test

Get more information: Product catalog: WCABR1050

IOMs WCENIM2046



#### Features

- Flanged Unibody Design
- ASME class 150/300
- Tight shut-off
- "Live loaded" stem seal
- Multiple soft and metal seat options
- Wide variety of Body, Seat and Seal materi als means dependable, high cycle control on Steam, Petroleum products, Chemicals and abrasive liquids
- Pre-drilled mounting holes for actuation
- Tight Shut off and Bi-Directional sealing
- Cavity Filled Designs

#### Sizes

- 1/2" 10" Flanged
- ASME 150# and 300# class

#### Materials

- Carbon Steel
- · Stainless Steel

#### Standards

- ASME B16.34
- API 607 Fire Test

Get more information: Product catalog: WCABR1013

*IOMs* 

WCENIM2014 (for small valves) WCENIM2015 (for large valves) WCENIM2054 (for FM)

See page 2.



#### Features

- Flanged Full-Port Unibody Design
- ASME class 150/300

**SERIES 82 & 83** 

AF 82 & 83

- Tight shut-off
- "Live loaded" stem seal
- · Multiple soft and metal seat options
- Full Port design minimizes pressure drop across the valve and maintains a high efficiency, reducing pumping cost.
- Wide variety of Body, Seat and Seal materials means dependable, high cycle control on Steam, Petroleum products, Chemicals and abrasive liquids
- · Firesafe by design

#### Sizes

- ½"/¾"/1"/1.5"/2.5"/10" For 2" and 3" to 8", See Series 818
- ASME 150# and 300# class

#### Materials

- Carbon Steel
- · Stainless Steel

#### Standards

- ASME B16.34
- API 607 Fire Test

Get more information: Product catalog: WCABR1016

*IOMs* 

WCENIM2047

See page 2.



#### Features

- Split Body, Full-Port Design
- Full Port Design
- ISO 5211 mounting
- Full Port design minimizes pressure drop across the valve and maintains a high efficiency, reducing pumping cost.
- Wide variety of Body, Seat and Seal materials means dependable, high cycle control on Steam, Petroleum products, Chemicals and abrasive liquids
- · Cavity Filled Designs

#### Sizes

- 2", 3"- 8"
- ASME 150# and 300# class

#### Materials

Carbon Steel Stainless Steel

#### Standards

- API 6D
- API 607 4th Edition
- NACE MRO1-75
- BS 5500 Pressure Vessel Code

Get more information: Product catalog: WCABR1015

#### 10Ms

WCENIM2020 (for std. valve) WCENIM2057 (for fugitive emission)



#### Features

- Wafer Design
- Designed for light weight.
- Symmetrically balanced to avoid side loads from actuation 40-60% less weight than conventional ball valves
- Suitable for Steam processes including vegetable peelers, Steam ejectors, Distilleries, and more.

#### Sizes

- 3", 4", 6"
- ASME 150# and 300# class
- · Rated at 720 CWP

#### Materials

- Bronze
- · Ductile ironl

Get more information: Product catalog: WCABR1041

IOMs WCENIM2015

See page 2.



#### Features

- Multi-port Diverter Valves
- Three-piece or flanged design
- · Bottom entry or side entry
- Full port or standard port
- 90 or 180 degree operation
- The D51 cast flanged have similar operations as the D44/D4 but for larger sizes
- The D44/D4 3-piece diverter valve is designed to accept media through a bottom inlet port and direct it to either of two outlet ports
- ASME 150 flanges
- The 18/19 Series is extremely adaptive
- . Up to 5 ports
- . multiple seat and body materials
- . standard or full port
- . Optional fugitive emission design
- . Class 150 or 300
- . Screwed, socket or butt weld and slip-on flanges

#### Sizes

 $\frac{1}{2}$ " - 2" for D44/D4 3-piece valve For 2" - 8" for D51 Flanged valve 1" - 6" for Series 18 & 19 valve

#### Materials

Carbon Steel Stainless Steel

#### Standards

ASME B16.34 API 607 Fire Test

Get more information: Product catalog: WCABR1052

IOMs WCENIM2030 (for Miser) WCENIM2015 (for large valves)

See page 2.



#### Features

- Specially designed to control and minimize fugitive Emissions.
- Outstanding performance on high-cycle applications, where no stem leakage is allowed
- Double "live loaded" Stem seal design
- High Vacuum capability
- · High cycle capability
- Suitable for Category M services
- Pressure classes to ASME 600

#### Sizes

- ½" 2" 3 piece design
- Screwed end
- Socket weld
- Butt weld
- ½" to 8" Flanged design

#### Materials

- · Carbon Steel
- Stainless Steel
- · Hastelloy-C trim option

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11
- API 607 Fire Test

Get more information: Product catalog: WCABR1023

10Ms

WCENIM2003 (for std. valve) WCENIM2057 (for fugitive emission)



## Series CL94, CL44, CL 51/52



#### Features

- Special for Chlorine Service
- · Liquid and gas
- Relief vent in ball vents to the high pressure side
- Constructed in accordance with the recommendations of the Chlorine Institute including special testing, cleaning and packaging
- Available with 94 FEM stem design
- · Assembled in Class 1000 clean room
- Pressure classes to ASME 600

#### Sizes

- 1/2" 2" 3 piece design
- · Screwed end
- · Socket weld
- Butt weld
- 1/2" to 4" Flanged design

#### Materials

Carbon Steel/Monel Trim

#### Standards

- ASME B16.34
- Chlorine Institute Pamphlet 6
- MSS-SP-72, B31.1, B31.3

Get more information: Product catalog: WCABR1039

*IOMs* 

WCENIM2009 (for series 94) WCENBR2014 (for small 51/52) WCENBR2015 (for large 51/52) WCENBR2030 (for Miser)

See page 2.

Series: AF 44, FZ 44, AF 51/52, FZ 51/52, FM 51/52, AF 94, FZ 94 AF 818/828, EAF 818/828



#### Features

- · Fire-Safe Valves
- Ensure operational integrity before, during, and after a fire.
- Tight Shut off, Anti static, no external leakage
- Available with 94 FEM stem design
- Pressure classes to ASME 600

#### Sizes

- ½" 2"3 piece design
- Screwed end
- Socket weld
- Butt weld
- ½" to 10" Flanged design

#### Standards

- ASME B16.34
- API 607 Fire Test
- EXES 3-14-1-2A
- BS 6755-PT2
- FM 7440

Get more information: Product catalog: WCABR1029

#### *IOMs*

WCENIM2003 (for series 94)
WCENIM2014 (for small 51/52) WCENIM2015
(for large 51/52 & 151/301)
WCENIM2020 (for series 818/828)
WCENIM2030 (for Miser)
WCENIM2047 (for series 82/83)
WCENIM2052 (for 51/52 FM)
WCENIM2054 (for 0&G shutoff FM)
WCENIM2057 (for fugitive emissions)

See page 2.

## Series C4, C44, and C51



#### Features

- Cryogenic Services
- High-performance, shutoff valves for intermittent and continuous flow applications with temperatures to -425°F
- · Positive Ball/Cavity relief with V3 vent hole
- · Zero Leak packing
- Effective Bonnet Extensions
- Valves designed for low thermal stress, automation and Fire Safety
- Assembled in Class 1000 clean room
- Pressure classes to ASME 600

#### Sizes

- ½" 2"3 piece design
- · Screwed end
- Socket weld
- Butt weld
- 1/2" to 6" Flanged design

#### Materials

- Brass
- · Stainless Steel

#### Standards

- ASME B16.34
- API 607 Fire Test

Get more information: Product catalog: WCABR1040

#### *IOMs*

WCENIM2006 (for R12/R6 or earlier) WCENIM2038 (for std. valve)

## WK44 HIGH PURITY VALVES

### WK74 HIGH PURITY VALVES

## WK70 HIGH PURITY VALVES





#### Features

- High Purity, Cast 316L
- · Class 100 Clean Room Assembly
- 30Ra interior surface finish
- · Diverter and Three-way porting
- Aseptic purge connections
- Quick disconnect & Extended weld ends

#### **Specifications**

- Size Range: ½" 2.0"
- Body Styles: 2-way and 3-way

#### Materials:

- ASTM A351-CF3M, ASTM A479
- Interior Surface Finish: 30Ra std, 15Ra electropolished
- Seats/Seals: PTFE, UHMWPE, Polyfill

#### Agengy Approvals

• FDA(21CFR), USDA, USP

#### **Applications**

 Sterile steam, cosmetics and creams, oils, detergents, food processing

Get more information: Product catalog: WCABR1035

IOMs WCAIM2030

See page 2.

#### Features

- High Purity, Cast 316L Tube bore
- Class 100 Clean Room Assembly
- · 20Ra interior surface finish
- Controlled ferrite <5%
- · Controlled sulfer for orbital welding
- CMTRs standard

#### Specifications

- Size Range: ½" 4.0"
- Body Styles: 2-way and 3-way

#### Materials:

- ASTM A351-CF3M, ASTM A479
- Interior Surface Finish: 20Ra std, 10Ra electropolished
- Seats/Seals: PTFE, TFM, Polyfill

#### Agengy Approvals

 ASME BPE, FDA(21CFR), USP Class 6, USDA

#### **Applications**

 High purity and aseptic processes, sterile steam, high purity water, fermentation, lyophilization, food processing

Get more information: Product catalog: WCABR1037

IOMs WCAIM2018

See page 2.

#### Features

- High Purity, Forged F316L Tube bore
- · Class 100 Clean Room Assembly
- 20Ra interior surface finish
- Controlled ferrite <5% (<1% optional)
- · Controlled sulfur for orbital welding
- CMTRs

#### Specifications

- Size Range: ½" 4.0" (6.0" optional)
- Body Styles: 2-way and 3-way

#### Materials: ASTM A182 F316L, ASTM A479

- Interior Surface Finish: 20Ra std, 10Ra electropolished
- Seats/Seals: PTFE, TFM, Polyfill

#### Agengy Approvals

 ASME BPE, FDA(21CFR), USP Class 6, USDA

#### **Applications**

 Pharmaceutical/Biotech, microelectronics, steam distribution and distillation, fermentation, lyophilization, food and beverage

Get more information: Product catalog: WCABR1036

IOMs WCAIM2018



## Series: 4, H44,PT High-per Mizer H71 Hvdromizer



#### Features

- High-Pressure Valves
- · Resilient seated valves for High pressure and
- High Temperature applications
- Pressures above ASME 600 to 5000 psi and
- ASME Class 2500 (Consult Brochure for PT curves and limitations)
- Used in Steam, Hydraulics, gasses and fluids, CNG and Subsea

#### Sizes

- ½" 2"3 piece design
- Screwed end
- · Socket weld, Butt weld
- ½" to 6" Flanged design
- Wafer 3"-6"

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11 (Consult product catalog)

Get more information: Product catalog: WCABR1051

*IOMs* WCENIM2015 (for large 51/51) WCENIM2024 (for std. valve) WCENIM2030 (for Miser)

See page 2.

### TANK BOTTOM VALVES



#### Features

- Flush, Tank-bottom Drain valve
- For Biotech, Pharmaceutical, Food, Chemical and Cosmetic Processing
- · Worcester 3 pc design advantages with a tank bottom end piece design.
- · Available prepared for O2 and vacuum services
- Pressure classes to ASME 600

#### Sizes

- 1" 4" 3 piece design
- Screwed end
- · Socket weld, Butt weld

Get more information: Product catalog: WCENBR1028

Installation instructions: WCENIM2001

See page 2.

## SERIES CPT CONTROL VALVE



#### Features

- The CPT is a characterized seat Control Valve with a revolutionary design
- · Precision Control, high capacity
- Zero external leakage
- High Cycle Capacity
- Custom-cut Characterized Seats
- High Rangeability
- · Efficient Shearing Action

#### Sizes

- ½" 2" 3-piece design
- · Screwed end
- · Socket and Butt weld
- ½" to 4" Flanged design Wafer 3"-6"
- Pressure classes to ASME 600 (Consult Literature)

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11 (Consult product catalog)

Get more information: Product catalog: WCABR1001

WCENIM2009 (for series 94) WCENIM2040 (for series 44)

## SERIES 36 ELECTRIC ACTUATOR



#### Features

- · Compact size
- Permanently Lubricated and sealed gear train
- Thermal overload protection
- Simple mounting and installation
- Additional output switch
- Solid-State timer option for automatic cycling

#### Torque Range

• 150 in-lb and 550 in-lb output torques

#### Temperature Range

 0 deg F to 150 deg F maximum ambient

#### Supply Voltage

• 120 VAC 50/60, 240 VAC 50/60

#### Standards

• Type 1, 4 and 4X

#### **Applications**

· Industrial quarter-turn ball valves

#### **OEM** installations

- Air Drying Equipment
- Sampling systems
- Compressor installations
- Condensate draining
- · Tank draining

Get more information: Product catalog: WCABR1006 or WCABR1007

*IOM* 

WCAIM2007

See page 2.

## SERIES 75 ELECTRIC ACTUATOR



#### Features

- Two Year Warranty
- Baked Epoxy Coated
- Permanently Lubricate Gear Train
- Mannual override
- Thermal Overload Protection
- · Reversable Rotary Operation

#### **Optional Features**

- Extended Duty Cycle Motors
- Fail Safe Capability
- Positioners and P.I.D. Controllers
- · RTU Solar Power Interface

#### Torque Range

• 150 - 3000 in-lbs

#### Temperature Range

• -40 F to 150 F

#### Supply Voltage

• 120 & 240 VAC, 12 & 24 VDC

#### Standards

- Type I, 4, 4X
- · Class 1, Div 1, Groups C, D

#### **Applications**

- Process control for rotary valves, dampers and multi-turn chokes
- · Boiler feed water
- Temperature control (steam, thermal fluid)
- Chemical, Power, Water/Waste Water, Food & Beverage, HVAC

Get more information: Product catalog: WCABR1014

IOM

WCAIM2013

See page 2.

## SERIES 72 ELECTRO-HYDRAULIC ACTUATOR



#### Features

- Fail-safe on power failure
- Fast moving valve closure
- Long operational life
- No hydraulic reservoir- mounts in any position
- No clutches, battery packs or clock springs
- Simple 2-wire control
- Two Year Warranty
- · FM Approved
- · Cost-effective

#### Torque Range

• Up to 900 in-lbs (end of spring)

#### Temperature Range

• 0 F to 150 F

#### Supply Voltage

• 120 & 240 VAC. 24 VDC

#### Standards

- Type 4, 4X
- Class 1, Div 1, Groups B,C,D

#### **Applications**

- Oil & Gas Safety Shut Off
- Tank Farms
- Water/Waste Water
- Burner Management
- Oil Field Steam Generators
- · Dampers

Get more information: Product catalog: WCABR1025

IOM

WCAIM2049



# SERIES 34 PNEUMATIC ACTUATOR



#### Features

- · Compact Scotch-Yoke design
- · Baked epoxy coating
- Minimum air consumption
- Adjustable speed control
- · Single external air and electrical connections
- Fail-safe spring return option
- Built-in solenoid air pilot
- · High temperature option

#### Torque Range

• Up to 1000 in-lbs @ 100 psi input

#### Temperature Range

• -25 F to 160 F, Optional to 250 F

#### Supply Voltage

• 24,120, 240, 480 VAC; 12,24VDC

#### Standards

- Type1, 4, 4x
- . Class1, Div1, Groups A,B,C,D

#### **Applications**

- Industrial Qtr-Turn valve automation
- Automative, OEM, Chemical & Water

Get more information: Product catalog: WCENBR1004

IOM WCAIM2008

See page 2.

## SERIES 39 PNEUMATIC ACTUATOR



#### Features

- High Performance, High Cycle Design
- · Two-Year warranty
- Twin piston, double rack & pinion
- Extruded, anodized aluminum body
- NAMUR, ISO mounting
- Polished stainless steel guide rods
- Multi-spring force transfer
- · Dual male output shafts
- End cap air supply ports
- End mount solenoid/switch accessories

#### Torque Range

•Up to 60,000 in-lbs @ 120 psi input

#### Temperature Range

• -40 F to 212 F; (high temp option 300F)

#### Pressure Range

• 30-120psi DA, 40-120psi SR

#### Standards

- Type1, 4, 4x
- Class1, Div1, Groups A,B,C,D

#### Applications

- · Chemical, Petrochemical & Refining,
- · Power, Oil & Gas, Food & Beverage

Get more information: Product catalog: WCABR1003

*IOM* 

WCAIM2036

See page 2.

# ACCESS ACTUATOR PNEUMATIC ACTUATOR with PROCESS INTERFACE



#### Features

- Integral solenoid & position switch
- Single electrical connection
- · High flow spool valve
- Manual override and speed control
- No mounting brackets
- Diagnostic LED circuit board
- · Digital Fieldbus networks

#### Torque Range

• Up to 60,000 in-lbs

#### Enclosure

- Type 4, 4X; U.L.; CSA approved
- · Class1, Div1, Groups B,C,D
- Intrinsically Safe, NRTL/C approved

#### **Position Switch**

• SPDT/DPDT, Gold Contact, Proximity

#### Temperature Range

• 0 F to 160 F

#### Supply Voltage

• 12, 24 VDC, 24,120, 240 VAC

#### Pressure Range

• 40 to 120 psi

#### Standards

• 4, 4x, 7, 9 and 12

#### **Applications**

- Digital Fieldbus Netowrks, Chemical,
- Petrochemical & Refining, Oil & Gas,
- Food & Beverage, Pharmaceutical

Get more information: Product catalog: WCABR1024

IOM WCA

WCAIM2027 WCAIM2028 WCAIM2023

WCAIM2032
See page 2.

www.flowserve.com

## SERIES ELK39 END MOUNT POSITION SWITCH



#### Features

- End mount versus top mount
- Reduced assembly height
- Reduced installation envelope
- · Eliminates mounting kits
- Multiple switch options
- Aluminum enclosure
- U.L., CSA & FM Approvals

#### **Enclosure**

· Die cast aluminum, epoxy coated

#### Standards

- Type 4, 4X; U.L.; CSA approved
- Class1, Div1, Groups C,D
- · Class1, Div2, Groups E,F, G

#### **Position Switch**

• SPDT/DPDT, Gold Contact, Proximity

#### Temperature Range

• 0 to 160 F

#### Switch Ratings

- SPDT-15 Amp, 125, 250, 480 VAC; 1/2A, 24VDC
- DPDT-10Amp, 125, 250 VAC; 0.3A,125VDC
- Proximity Sensor (5-200mA, 20-140VAC, 10-140VAC, UL listed, CSA Certified)

#### **Applications**

- Remote position indication
- Relay device for pumps
- · Alarms and indicator lights
- Industrial, Chemical, Petrochemical installations

Get more information: Product catalog: WCABR1027

IOM \WCAIM2051

See page 2.

# FLOWSERVE

## ACCESS Actuator END MOUNT POSITION SWITCH



#### Features

- Integral solenoid & position switch
- · Single electrical connection
- · High flow spool valve
- Manual override and speed control
- . No mounting brackets
- Diagnostic LED circuit board
- · Digital Fieldbus networks

#### Enclosure

· Die cast aluminum, epoxy coated

#### Standards

- Type 4, 4X; U.L.; CSA approved
- . Class1, Div1, Groups B,C,D
- Class1, Div2, Groups E,F, G
- Intrinsically Safe, NRTL/C approved

#### **Position Switch**

· SPDT/DPDT, Gold Contact, Proximity

#### Temperature Range

•0 to 160 F

#### Switch Ratings

- SPDT 15 Amp, 24,120,240 VAC; 1/2A, 24VDC
- DPDT 10 Amp, 24,120,240 VAC; 1/2A, 24VDC
- I.S.- (Gold Contacts), 1 Amp, 120 VAC, 1 Amp, RES (0.5A IND) 24 VDC
- Proximity Sensor (5-200mA, 20-140VAC 10-140VAC, UL listed, CSA Certified)

#### **Applications**

- · Digital Fieldbus Netowrks, Chemical,
- · Petrochemical & Refining, Oil & Gas,
- Food & Beverage, Pharmaceutical

Get more information: Product catalog: WCABR1024

IOM WCAIM2027 (standard) WCAIM2028 (intrisically safe) WCAIM2023 (DeviceNet) WCAIM2032 (AS-i)

See page 2.

## UltraSwitch WGL Series TOP MOUNT POSITION SWITCH



#### Features

- Pharos visual position indicators for high contrast, wide angle viewing
- Compliance to NAMUR VDI/VDE 3845 mounting specifications eliminates coupler and maximizes interchangeability
- · Captive stainless steel cover screws
- Prewired multipoint terminal strip
- Quick-Set spring loaded cams are extra wide and splined to permit tool-free limit switch calibration
- Extensive switch offering for a wide range of applications including mechanical, proximity, solid state sensor options

#### Description

 Provides a compact and economical package for NEMA 4 visual and remote electrical indication of valve position

#### Housing Material

 Die cast aluminum; electrostatic powder coated

#### Standards

• NEMA 4, 4x

#### Hazardous Area Classifications

- Class I, Division 2, Groups A, B, C, D approvals when supplied with hermetically sealed magnetic proximity switches.
- ATEX II 2G EEx me II T4-T6 with Phazer II and BRS switches.
- Class II Division 2 Groups F&G

Get more information: Product catalog: WCENBR1057

Product Specification WCENPS1054

IOM WCENIM2075

## UltraSwitch WPL Series TOP MOUNT POSITION SWITCH



#### Features

- UltraDome visual position indicators for high contrast, wide angle viewing
- Compliance to NAMUR VDI/VDE 3845 mounting specifications eliminates coupler and maximizes interchangeability
- · Captive stainless steel cover screws
- Prewired multipoint terminal strip
- Quick-Set spring loaded cams are extra wide and splined to permit tool-free limit switch calibration
- Extensive switch offering for a wide range of applications including mechanical, proximity, solid state, and analog feedback options

#### Description

 Engineered resin enclosure provides excellent protection for harsh corrosive environments

#### Housing Material

· Non-metallic engineered resin

#### Standards

• NEMA 4, 4x

#### Hazardous Area Classifications

- Class I, Division 2, Groups A, B, C, D approvals when supplied with hermetically sealed magnetic proximity switches Atex II 2 G EEx me II T4-T6 with Phazer II and BRS switches.
- · Class II Division 2 Groups F&G

Get more information: Product catalog: WCENBR1057

Product Specification WCENPS1055

IOM WCENIM2075

See page 2.

## UltraSwitch WXCL Series TOP MOUNT POSITION SWITCH



#### Features

- UltraDome visual position indicators for high contrast, wide angle viewing
- Compliance to NAMUR VDI/VDE 3845 mounting specifications eliminates coupler and maximizes interchangeability
- · Captive stainless steel cover screws
- Prewired multipoint terminal strip
- Quick-Set spring loaded cams are extra wide and splined to permit tool-free limit switch calibration
- Extensive switch offering for a wide range of applications including mechanical, proximity, solid state, and analog feedback options

### Description

 Provides a heavy-duty and rugged globally-certified explosion-proof package for visual and remote electrical indication of valve position

#### Housing Material

• Die cast aluminum; dichromate conversion undercoat; electrostatic powder top coat

#### Standards

• NEMA 4, 4x, 7 and 9, IP65, IP67

#### Hazardous Area Classifications

- Explosion-Proof (UL/CSA/ATEX) mechanical switch options
- · Class I, Divisions 1, Groups C and D
- · Class II, Divisions 1, Groups E, F and G
- ATEX II 2 G EEx d IIB T5
- Explosion-Proof (UL/CSA/ATEX) proximity/ solid state switch options (except NJ)
- · Class I, Division 1, Groups C and D
- Class I, Division 2, Groups A, B, C and D with select hermetically sealed proximity switches
- Class II, Divisions 1 and 2, Groups E, F and G
- ATEX II 2 G EEx d IIB T5

Get more information: Product catalog: WCENBR1057

Product Specification WCENPS1056

IOM WCENIM2076

See page 2.

# Aviator Integrated Valve Controller TOP MOUNT POSITION



#### Description

 Designed for use with pneumatic rotary industrial valve actuators in hazardous locations. With the same features as the UltraSwitch, the Aviator provides actuator/ valve control by receiving a direct solenoid voltage signal. Also provides remote indication of open and closed valve positions by completing separate electrical circuits

#### Housing Material

- Aluminum (XV and CV models)
- Engineered Resin (WR model)

#### Standards

- NEMA 4, 4x, 7, 9 IP66/IP67 (XV model)
- ATEX EEx d IIB (CV model)
- NEMA 4, 4x (WR model)

#### Hazardous Area Classifications

- Class I, Division 1, Groups C, D
- · Class II, Division 1, Groups E, F, G
- Class II, Division 2 Groups F&G
- · Class I, Division 2, Groups A, B, C and D
- ATEX II 2 G EEx d IIB T4-T6
- ATEX II 3 G EEx nC II T4-T6 with R4 P1,PP and B4 switch options.

Get more information: Product catalog: WCENBR1057

## BUSwitch Integrated Valve Controller TOP MOUNT POSITION



#### Description

Designed for use with pneumatic rotary industrial valve actuators in hazardous locations with digital fieldbus communications. With the same features as the Aviator, the BUSwitch provides actuator/valve control by receiving a direct solenoid voltage signal. Also provides remote indication of open and closed valve positions by completing separate electrical circuits. Available in the following fieldbus protocols: AS-i, DeviceNet, Foundation Fieldbus and PROFIBUS DP.

#### Housing Material

- · Aluminum (XV and CV models)
- Engineered Resin (WR model)

#### Standards

- NEMA 4, 4x, 7, 9 IP66/IP67 (XV model)
- ATEX EEx d IIB (CV model)
- NEMA 4, 4x (WR model)

#### Hazardous Area Classifications

- · Class I, Division 1, Groups C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2, F&G
- Class I, Division 2, Groups A, B, C and D
- Class I, Divisions 1 and 2, Groups A, B, C and D Intrinsically safe for Foundation Fieldbus protocol only
- ATEX II 2 G EEx d IIB T4-T6
- ATEX II 3 G EEx nC II T4-T6 with Foundation Fieldbus only

Get more information: Product catalog: AXENBR0006 Installation instructions: AXENIM0032 or for non-metallic AXENIM0097

Product specification: AXENPS0059 or for non-metallic AXENPS0098

Installation instructions: AXENIM0087 for AS-i protocol

Installation instructions: AXENIM0048 for FOUNDATION Fieldbus protocol

Installation instructions: LML0012 for PROFIBUS DP protocol See page 2.

## FLOWSERVE

## PM15 & PM15E Positioner Pneumatic & Electropneumatic



#### Features

- Simple calibration
- Modular design
- External I/P module
- · High gain, high capacity spool valve
- Gold plated spool valve
- Stainless internals
- · Gauge ports
- · Multiple feedback accessories
- NAMUR output shaft
- ISO mounting

#### Enclosure

· Die cast aluminum, epoxy paint

#### Ingress Protection

• IP66, NEMA 4

#### **Approvals**

- ATEX EExd, EEx ia, EEx nl
- CSA Class1, Div1, Groups BCDEFG I.S. - Class1, Div1, Group A,B,C,D
- FM Class1, Div1, Groups B,C,D I.S. - Class1, Div1, Group A,B,C,D

#### Temperature Range

•-40F to 185F

#### Accessories

· Position indication, fail freeze, remote mount

#### **Applications**

 Accurate and reliable control of linear and rotary pneumatic actuators for modulating control

#### Industires served: All

Get more information:

Product catalog:

WCABR1032

#### IOM

WCAIM2016 WCAIM2017

See page 2.

## L93 Pulsair Positioner Analog and Digital



#### Features

- · Linear and rotary actuator control
- · Loop powered, microprocessor design
- · Simple user interface
- · High visability graphic display
- Auto calibration
- Two-stage air delivery
- Piezoelectric low power control
- · "Zero" air bleed design
- · Digital communication options
- · NAMUR output, ISO mounting

#### Enclosure

· Die cast aluminum, expoxy paint

#### **Ingress Protection**

• IP66, Type 4x

#### **Approvals**

- ATEX EExd, EEx ia, EEx nl
- CSA Class1, Div1, Groups BCDEFG I.S. - Class1, Div1, Group A,B,C,D
- FM Class1, Div1, Groups B,C,DI. I.S. - Class1, Div1, Group A,B,C,D

#### Temperature Range

•-22F to 185F

#### Accessories

Position indication, fail freeze, remote mount

#### **Applications**

 High performance digital process control for linear and rotary actuators for modulating control

#### Industires served: All

Get more information:

Product catalog:

WCABR1019

IOM

WCAIM2055

## AF17 Positioner Positioners - Electric Actuation



#### Features

- · Solid-state circuit board
- · Multiple signal inputs
- LED calibration
- · Deadband control
- · Direct and reverse acting
- · Position feedback

#### Enclosure

· Die cast aluminum, epoxy paint

#### Supply Voltage

120VAC, 240VAC, 12VDC, 24VDC

#### Standard Inputs

• 1-5mA, 4-20mA, 10-50mA, 0-135 ohm 0-1000 ohm, 0-5 VDC, 0-10 VDC

#### Temperature Range

•-40F To 150F

#### Accessories

· Analog output module

#### **Applications**

 Position control for rotary electric actuators to control valves and dampers.

#### Industries served: All

Get more information: Product catalog: WCABR1027

*IOM* 

WCAIM 2031 WCAIM2050

See page 2.

## DFP17 - DataFlo Positioner Positioners - Electric Actuation



#### Features

- Microprocessor control
- Pushbutton calibration
- Speed control
- · Electronic travel stops
- Adjustable dead band
- Multiple I/O options
- · Digital network communications
- 20 programmable functions

#### Enclosure

· Die cast aluminum, epoxy paint

#### Supply Voltage

• 120VAC, 240VAC, 12VDC, 24VDC

#### Standard Inputs

• 1-5mA, 4-20mA, 10-50mA, 0-135 ohm, 0-1000 ohm, 0-5 VDC, 0-10 VDC

#### Temperature Range

•-40F To 150F

#### Accessories

· Analog output module

#### **Applications**

 High performance control for Qtr-turn and Multi-turn rotary electric actuators for modulating control of valves and dampers.

#### Industries served: All

Get more information: Product catalog: WCABR1024

#### IOM

WCAIM2037

See page 2.

## DFC17 - DataFlo Controller Controllers - Electric Actuation



#### Features

- · Microprocessor PID control
- Autotuning
- · Local process control
- · Pushbutton calibration
- · Performance monitoring
- Mulitple I/O options
- Modbus network communications
- RS485 network communications
- · Desk top software

#### Enclosure

• Die cast aluminum, epoxy paint

#### Supply Voltage

• 120VAC, 240VAC, 24VDC

#### Standard Inputs

• 4-20mA, RTD, Thermocouple

#### Temperature Range

•-40F To 150F

#### Accessories

· Analog output, 24VDC power supply

#### **Applications**

Direct process control (P.I.D.) for flow, temperature, pressure, level and Ph applications.
 Primary industires: Food & beverage, OEM, Industrial & Automotive

Get more information: Product catalog: WCABR1024

IOM

WCAIM2026





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