

## **VALVE CONTROL MONITOR**

## **ATEX (INTRISICALLY SAFE)**

### **MONOSTABLE**

PneuLINK™ linear system is manufactured from 316 stainless steel and brass materials. The ergonomic design ensures an easy set up, trouble free installation and maintenance free operation. The PneuLINK™ dynamic mechanism is both self-compensating and self-aligning, with minimal backlash and hysteresis, for high repeatability and total reliability.

The Valve Control Monitor (VCM) acts as an integral junction box, which facilitates a single multi-core cable for the discrete inputs (DI), and the low power solenoid discrete output (DO), reducing site cabling and installation costs. PneuLINK™ linear Valve Control Monitor system offers total installation flexibility and can be fitted in various pre-selected positions (refer page 3 & 4).



### Ex II 1GD Ex ia IIC T6..T4 IP6X

## **FEATURES AND BENEFITS**

- For use within potentially explosive atmospheres.
  - Ex II 1G Ex ia IIC T6 to T4 Ga
  - Ex tb IIIC T135°C Da IP6X
  - Temperature rating: -20°C ≤ Tamb ≤ +60°C
- IP66/67 316 stainless steel enclosure ensures both strength and corrosion resistance for installation in harsh environments.
- Beacon shaped visual indication provides 360° visual feedback of valve OPEN (Black) or CLOSED (Yellow) positions.
- Black / Yellow colours, as a visual indicator, offers high visibility integrity, and is colour Impaired friendly.
- Touch set cams are hand adjustable, spring loaded and self-locking, providing quick calibration of position switches and sensors.
- NAMUR inductive proximity switches or SPDT REED switches
- Switch centralization plate allows for the accurate setting of switches, improved repeatability, and minimises hysteresis.
- NAMUR VDI/VDE standard mounting arrangement.

- Quick release design of terminal strip bracket allows removal of the terminal strip, which is pre-wired and numbered, to aid field wiring at commissioning and installation stage.
- M20 conduit entries fitted with ATEX certified, IP rated plugs as standard to avoid ingress during site storage and transportation prior to installation.
- Extra conduit entry for easy field wiring as standard.
- SOV with red pneumatic indicator as standard.
- Solenoid coil integrated within the VCM housing, and is available with a choice of coil voltages.
- 316 stainless steel solenoid valve, in 3 or 5 way configurations.
- Optional Cv ratings of 1.1 or 3.5
- Exhaust port flow regulators fitted as standard.



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### **TECHNICAL SPECIFICATION**

The **V**alve **C**ontrol **M**onitor contains two switches to indicate the fully open and closed positions of the valve—refer below options

### STANDARD P&F NJ2-V3-N Inductive Sensors

Solid state NAMUR inductive proximity sensor

Switching element : NAMUR normally closed

Nominal voltage : 8V DC

Output polarity : NAMUR

Switching frequency : 0...1000Hz

Electrical Parameters : Ci = 40nF / Li = 50µH

**Current consumptions:** 

Target present  $: \leq 1 \text{mA}$ Target absent  $: \geq 3 \text{mA}$ 

# N / N0 1/BN L+ 2/BU L-

#### **OPTION 1**

### Magnum XT-90 Switches SPDT

Magnum XT-90 hermetically sealed proximity switch

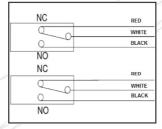
Single Pole Double Throw—Form C

**Rhodium Contacts** 

#### **Resistive Loads**

0.2A @ 120VAC

1.0A @ 24VDC



Refer Dr Pneuton for guidance!

# (240 mm Clearance)

### OPTIONS Switches & Transmitters

P&F cylindrical inductive proximity sensors—types NC.... & NJ....

P&F SN sensors—type NJ....

P&F slot-type indicators—types SJ.... & SC....

Resistive position transmitters (RS)

Current position transmitters (CS), 2 wire loop powered, 4-20mA DC

Conduit entry options: M25 x 1.5, 1/2" NPT or 3/4" NPT

Note: Consult the ATEX certificate for guidance on area classifications and maximum

permitted ambient, when different devices are fitted!

Refer **Dr Pneuton** for guidance!



### SOV Characteristics

Pneumatic Porting : G1/4" (standard) or G1/2"

**Operating Pressure** : 3.1–8.3 bar (g)

2 x M20 Cable Entries

150 mm

Air Quality : ISO 8573-1 Class 5

Flow Rate : 1100 Nl/min (standard) or 3500 Nl/min

Coil Class Insulation : H

Duty Rating : 100%

Coil Resistance : 390Ω @ 20°C

**Safety Parameters** : Ui = 31V / Ii = 0.67A / Pi = 2.98W

 $Ci = 0\mu F \& Li = 0mH$ 

Current Consumption: 33mA @ 12V DC (0.4W)

with approved barrier

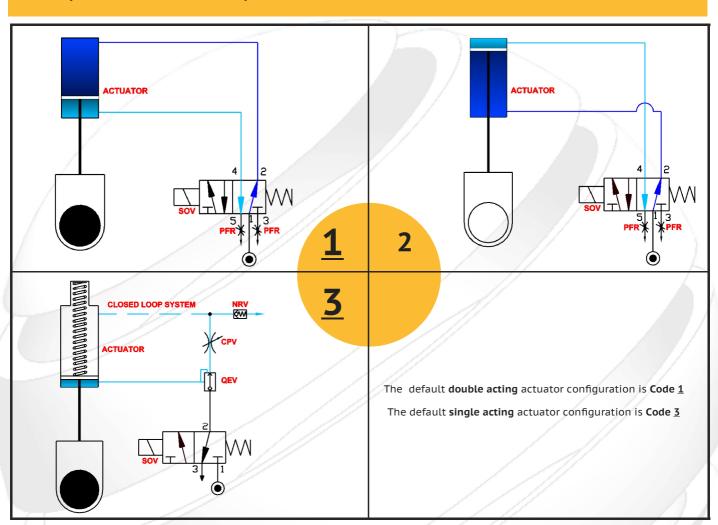
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### **LOGIC SELECTOR**



Note: Typical standard logic applications illustrated, refer Dr Pneuton for any alterative requirements!

Option	Loss of air	Loss of power
1	Fail Last *	Fail Close with Motive Power
2	Fail Last *	Fail Open with Motive Power
3	Fail Close or Open Depending on Spring	Fail Close or Open Depending on Spring
	Configuration, with closed loop breather system†	Configuration

\* Valves in the fully open / closed position , with actuator vertically installed, may drift in the absence of motive power!

† Select the closed loop breather system for arduous environments or potentially explosive atmospheres to refresh the non-pressurised side of the actuators piston on the spring strokes negative displacement, to prevent ingress.

Refer **Dr Pneuton** for guidance!



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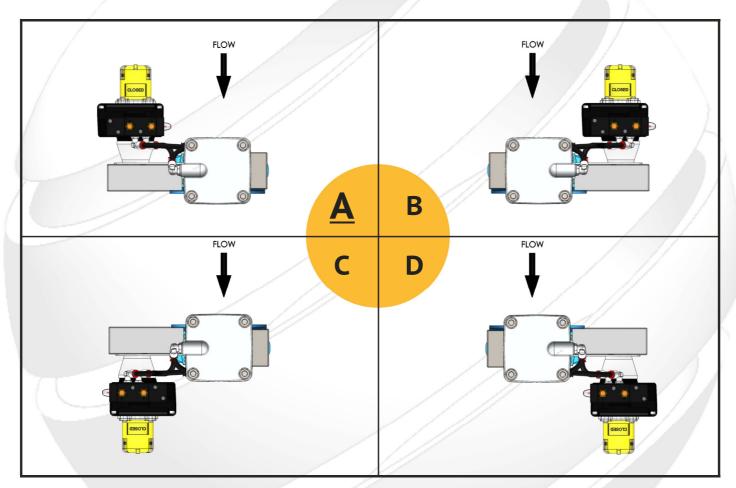
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### **CONFIGURATOR**

The default VCM configuration is  $Code \underline{A}$ .

It is important that the preferred configuration is defined at point of order.

Refer to optional configurations illustrated below.



Images shown from actuator end view



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