



Fluidsentry™
Monitored Valves

1/2" Monitored Pneumatic Valve

Patented Technology



PBM4-S

(Valve only – air service equipment not included)



SUITABLE FOR RISK CATEGORY 4 APPLICATIONS

As per AS4024.1-Part 1502 & 1502

SIL 3 as per IEC 61508 & EN ISO 13849-1

Applications Include:

*Pneumatic Presses
Pneumatic Guillotines
Automated Fixtures*

*Palletising Equipment
Packaging Machinery
Robot & Automated Cells*

*Pneumatic Pushers & Ejectors
Guard Access Preconditions
Pneumatic Strapping Machines*

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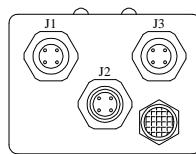
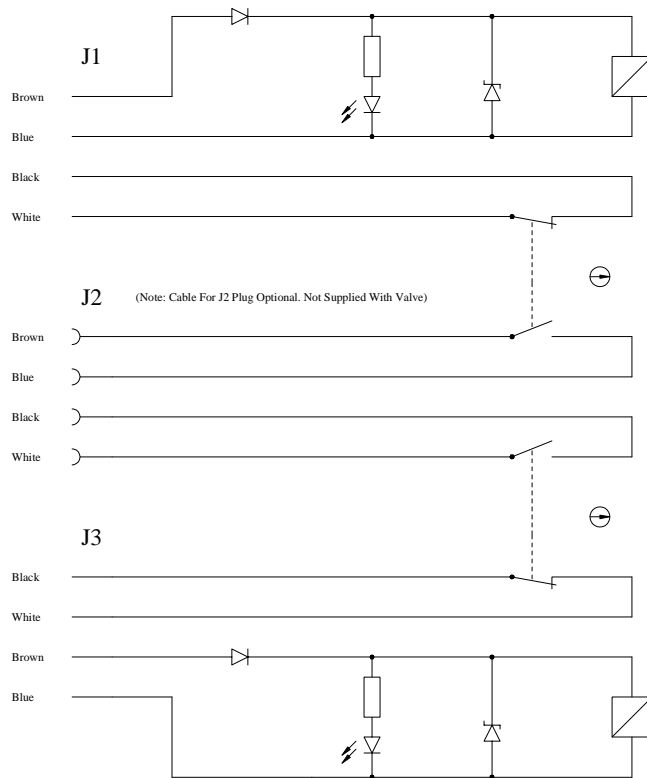
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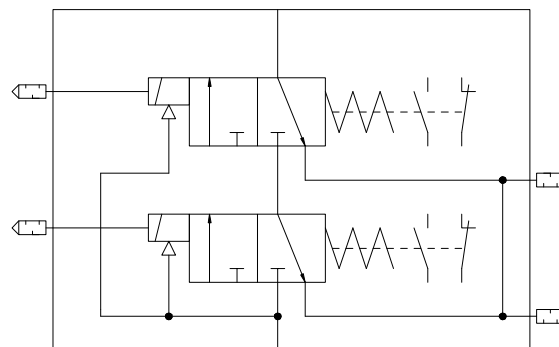
VALVE SPECIFICATIONS

Description:	Directional control valves for pneumatic safety applications in sliding spool type with static seals, configured for three port two position operation. Each valve incorporates a two-pole positive opening plunger type switch with positive opening contact. The model offered has certification to meet Australian & European machinery safety standards. The valve is 24VDC as standard.	
Model:	Dual series ported valves	PBM4-S (Suitable for Risk Category 4 applications)
Materials:	Main body, extension housing: Pilot housing: Spool: Return spring: Seals: Screws: Lubricant:	Aluminium Plastic Aluminium Zinc Plated Steel Nitrile rubber Cap Screws Silicon Grease
Switch:	Make: Model: Type: Approvals: Contacts:	Bernstein C2-U1Z (6008101001) Plunger EN 1088, EN 60947-5-1, EN 292, EN 60204-1 1 x Normally Closed (Safety Contact) 1 x Normally Open (Non Safe Contact)
Wiring:	Switch Terminals:	11 - 12 White – Black (NC), 21 - 22 Brown – blue (NO)
Coil:	Voltages available: Power Consumption DC: Features: Allowable Voltage:	24vdc 2W Blue LED and surge suppression -15% to + 10% Rated Voltage
Performance:	Valve working pressure range: Port connection: Medium: Operating temperature range: Cv (flow factor) Maximum Operating Frequency: Activation time: Deactivation time:	250 – 1000 kPa ½" BSP Compressed air filtered to 5 micron and/or lubricated Max +50 Celsius P to A 3.7 5Hz 19 Milliseconds 65 Milliseconds
Rating:	Protection:	IP 67
Approvals:	Low Voltage Directive: EMC Directive: Machinery Directives:	File No: R 9250033 File No: H/EMC 95000251-3 98/37/EC – EN 292-1, EN 292-2, EN 983, EN 954-1, EN 1050
Manual:	Manual Override:	Not Available
Silencers:	Pilot Exhaust: Main Exhaust:	1/8" BSP SMC Part No: AN101-01 1/2" BSP SMC Part No: AN40-04

PBM4-F-N-P-S Wiring



PNEUMATIC FUNCTION



CAUTION – IMPORTANT: The above drawings are a conceptual example and are intended for guidance purposes only. They have not been specifically drawn in relation to your plant. Failing to ensure professional installation of Fluidsentry equipment which has regard to the specific circuit design and operation of the plant on which it is being installed may create a safety hazard. Accordingly Fluidsentry is not liable for loss or injury, whether direct or indirect, resulting from the incorrect installation of this product.



DECLARATION OF CONFORMITY

Valves manufactured by FLUIDSENTRY Pty Ltd conform to the requirements of the following European and Australian Standards.

Low Voltage Directive: 73/23/EEC – EN 60204, IEC 1010, IEC 950.

EMC Directive: 89/336/EEC – EN 55014, EN 50081-2, EN 50082-1, EN 50082-2

Machinery Directive: 98/37/EC – EN 292-1, EN 292-2, EN 983, BS EN60204

EN ISO 13849 Date: 14th April, 2013 MTTFd - 30 Years

Note: The products must be used in accordance with the installation instructions and operating conditions in the relevant data sheet, which has been produced to support the requirements of the harmonised standard EN ISO 13849. Additionally, for products intended to be sold in European Economic Area: „Safety devices“ or other safety functions mentioned in any product literature are not necessarily „safety components“ as defined by the Machinery Directive 2006/42/EC, unless otherwise stated together with the CE Mark and specific reference to said directive.

AUSTRALIAN STANDARDS- AS4024.1

Part 1501 – Design of Safety Related Parts of Control Systems – General Principles
Part 1502 - Design of Safety Related Parts of Control Systems – Validation

Fluidsentry herewith declares that the supplied Fluidsentry™ model of:

VALVE: MODEL - PBM4-S (Dual Valve System)

TYPE: DUAL MONITORED PNEUMATIC

**Comply with all applicable Directives and Harmonized Standards for Pneumatic Fluid Power Systems and their components and are qualified to bear the CE mark.
Melbourne Australia 14th April 2013.**

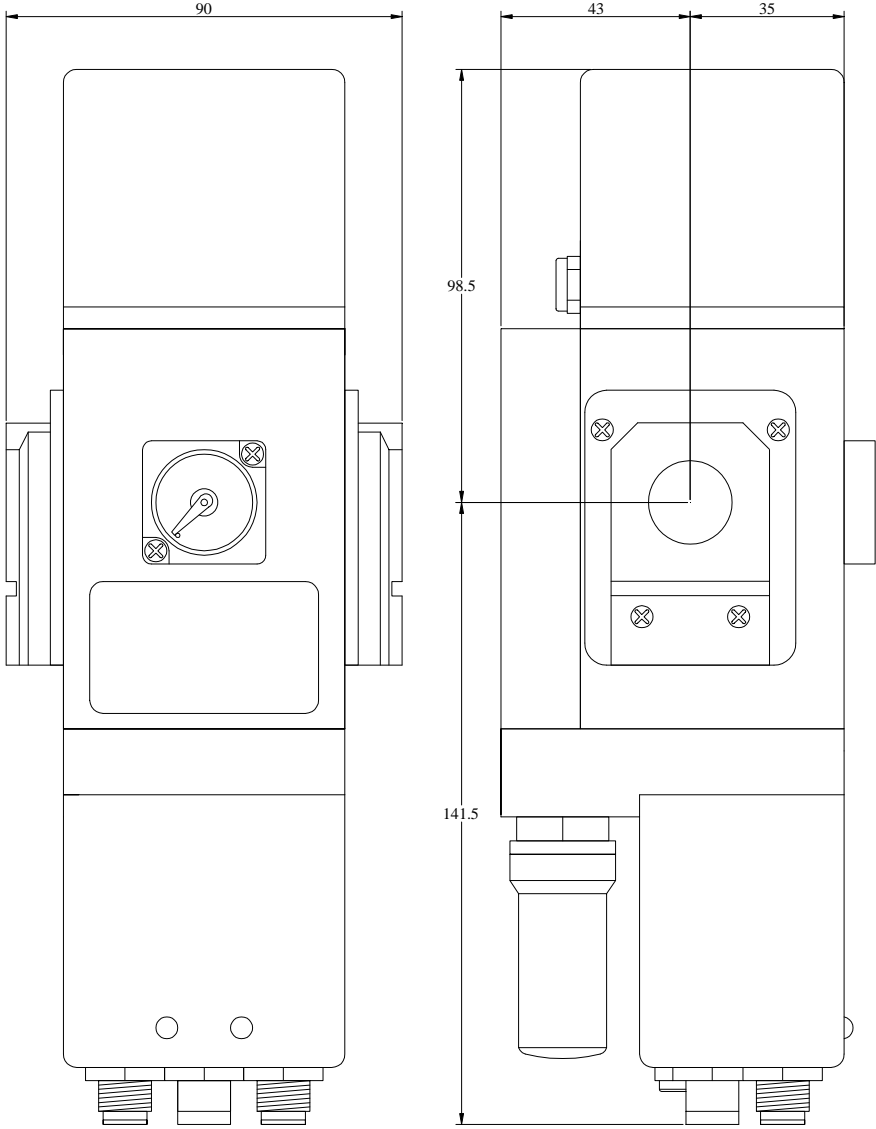
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Email: sales@fluidsentry.com

Murray Andrew Hodges

Name and signature of
Authorized person.

Valve Serial No.

Tested /...../.....



PBM4-S Dual Valve System Dimensions



Safety Instructions

These safety instructions are general in nature, and intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard by labeling 'Caution' 'Warning' or 'Danger'. To ensure safety, be sure to observe ISO4414 Note 1, JIS B 8370 Note 2 and other safety practices.

The person who designs the pneumatic system or decides its specification must also refer to the specific Safety Instructions supplied for individual components which can be found in each Product Series brochure.



Caution: Operator error could result in injury or equipment damage.



Warning: Operator error could result in serious injury or loss of life.



Danger: In extreme conditions, there is a possibility of serious injury or loss of life.



Warning

1. **The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications.**

Since the products specified here are used in various operating conditions, their compatibility with the specific pneumatic system must be based on specifications or after analysis and/or tests to meet your specific requirements.

2. **Only trained personnel should operate pneumatically operated machinery and equipment.**

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair or pneumatic systems should be performed by trained and experienced operators.

3. **Do not service machinery/equipment or attempt to remove components until safety is confirmed.**

1. Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for the equipment and exhaust all residual compressed air in the system.
3. Before machinery/equipment is re-started, take measures to prevent quick extensions of the cylinder piston rod etc. (Bleed air into the system gradually to create back pressure)

4. **Contact Fluidsentry if the product is to be used in any of the following conditions:**

1. Conditions and environments beyond the given specifications, or if product is used outdoors.
2. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

Note 1) ISO4414: Pneumatic fluid power – Recommendations for the application of equipment to transmission and control systems.

Note 2) JIS B 8370: Pneumatic systems axiom.

Precautions



Selection

Warning

1. **Confirm specifications**

Products represented in this catalogue are designed for use in compressed air applications only, unless otherwise indicated. Do not use the products outside their design parameters.

Installation

Warning

1. **Do not install unless the safety instructions have been read and understood.**

Keep this catalogue on file for future reference.

2. **Maintenance**

When installing the products, please allow access for maintenance.

3. **Tightening Torque**

When installing the products, please follow the listed torque specifications

Piping

Caution

1. **Before Piping**

Make sure that all debris, cutting oil, dust, etc. are removed from the piping.

2. **Sealant Tape**

When installing piping or fitting into a port, ensure that sealant material does not clog up the pressure port. When using sealant tape, leave the first 1.5 to 2 thread turns exposed at the end of the pipe/fitting.

Air Supply

Warning

1. **Operation fluid**

Compressed Air

2. **Install an air dryer, aftercooler etc.**

Excessive condensate in a compressed air system may cause valves and other pneumatic equipment to malfunction. Installation of an air dryer, after cooler, etc. is recommended.

3. **Drain**

If condensate in the drain bowl is not emptied on a regular basis, the bowl will overflow and allow the condensate to enter the compressed air lines. If the drain is difficult to check and remove, it is recommended that a drain bowl with the autodrain option be installed.

4. **Use clean air**

If the compressed air supply is contaminated with chemicals, synthetic materials, corrosive gas, etc., damage to the pneumatic equipment may occur.

Environment

Warning

1. **Do not use in an environment where the product is directly exposed to corrosive gases, chemicals, salt water, water or steam.**

2. **Do not expose the product to direct sunlight for an extended period of time. If the product has to be mounted in an area where exposure to direct sunlight cannot be avoided, the use of a protective cover is recommended.**

3. **Do not mount the product in a location where it is subject to strong vibrations and/or shock.**

4. **Do not mount the product in a location where it is exposed to radiant heat**

Maintenance

Warning

1. **Maintenance**

If handled improperly, compressed air can be dangerous. Assembly, handling and repair of pneumatic systems should be performed by qualified personnel only.

2. **Drain**

Remove condensate from the filter bowl on a regular basis.

3. **Shut-down before maintenance**

Before attempting any kind of maintenance make sure the supply pressure is shut off and all residual air pressure is released from the system to be worked on.

4. **Start-up after maintenance**

Apply operating pressure and power to the equipment and check for proper operation and possible air leaks. If operation is abnormal, please verify product set-up parameters.

5. **Do not make any modification to the product**

6. **Do not take the product apart**