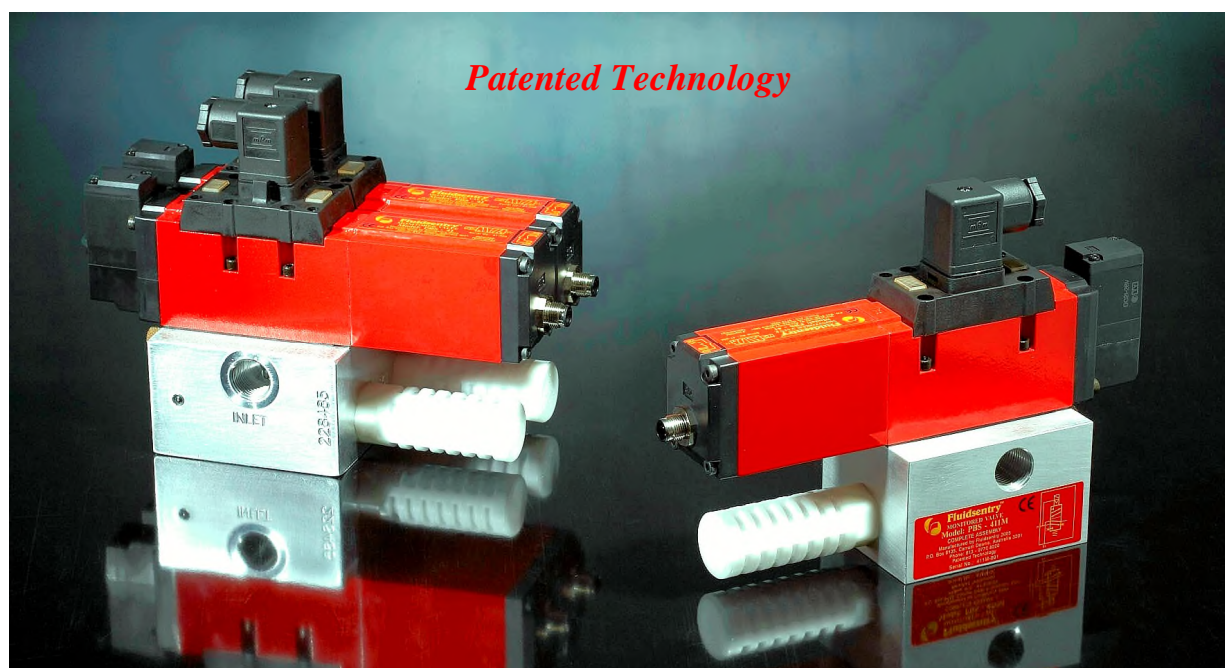




**Fluidsentry™**  
Monitored Valves

## *1/2" Monitored Pneumatic Valves On Series Ported Manifold*



**SUITABLE FOR RISK CATEGORY 4 APPLICATIONS**

*As per AS4024.1-Part 1502 & 1502*

*SIL 3 (Dual Valves) 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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**E-mail: [sales@fluidsentry.com](mailto:sales@fluidsentry.com)**

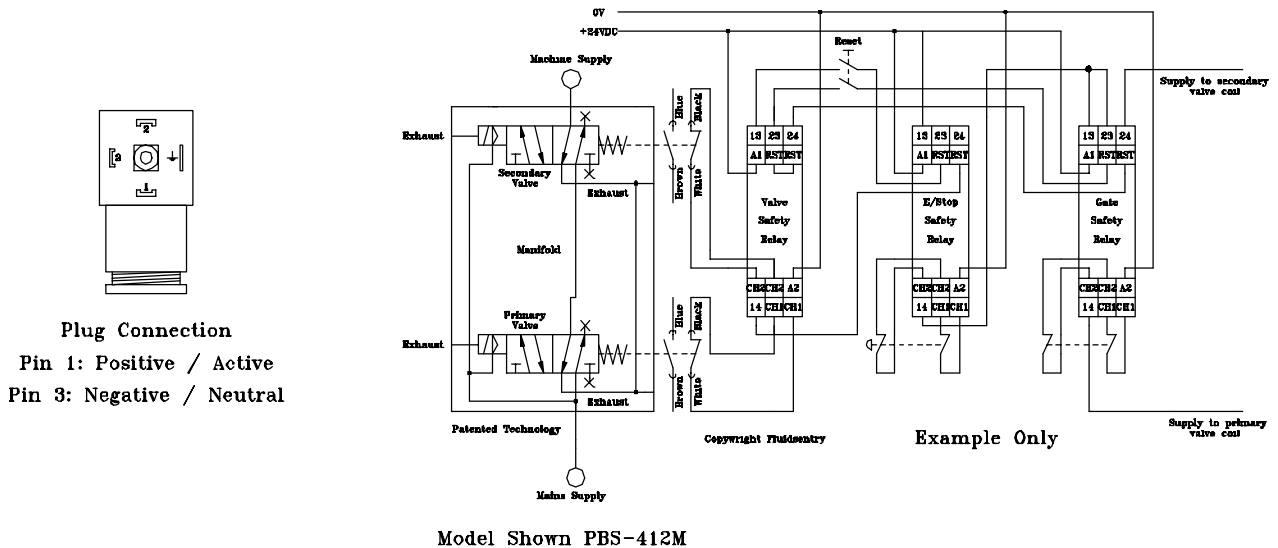
**[www.fluidsentry.com](http://www.fluidsentry.com)**

# Fluidsentry™

## VALVE SPECIFICATIONS

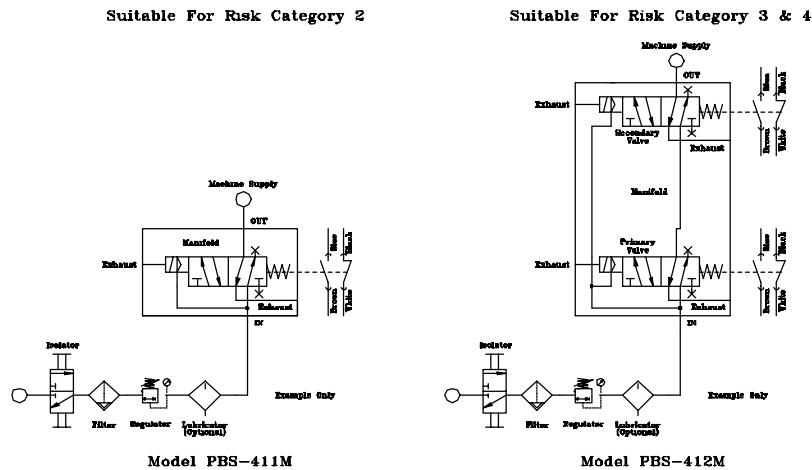
<b>Description:</b>	Directional control valves for pneumatic safety applications in five port two position sliding spool type with static seals, mounted on a safety manifold configured for three port two position operation. Each valve incorporates a two-pole positive opening plunger type switch with positive opening contact. The two models offered have certification to meet Australian & European machinery safety standards. Valves are supplied with 24VDC solenoid coils as standard unless otherwise specified.	
<b>Model:</b>	Dual series ported manifold valves Single manifold mounted valve: Single valve	<b>PBS-412M</b> (Suitable for Risk Category 4 applications) <b>PBS-411M</b> (Suitable for Risk Category 2 applications) <b>PBS-41</b>
<b>Materials:</b>	Main body, extension housing: Pilot housing: Spool: Return spring: Seals: Screws: Lubricant:	<b>Aluminium</b> <b>Plastic</b> <b>Aluminium</b> <b>Steel</b> <b>Nitrile rubber</b> <b>Cap Screws</b> <b>Diamond Grease</b>
<b>Switch:</b>	Make: Model: Type: Approvals: Contacts:	<b>Bernstein</b> <b>I88-U1Z w (608.6103.008)</b> <b>Plunger</b> <b>EN 1088, EN 60947-5-1, EN 292, EN 60204-1</b> <b>1 x Normally Closed (Safety Contact)</b> <b>1 x Normally Open (Non Safe Contact)</b>
<b>Wiring:</b>	Switch Terminals:	<b>11 - 12 White – Black (NC), 21 - 22 Brown – blue (NO)</b>
<b>Coil:</b>	Voltages available: Power Consumption DC: Features: Allowable Voltage: Apparent Power:	<b>240vac, 110vac, 24vac, 24vdc, 12vdc</b> <b>1.8W</b> <b>Indicator light and surge suppression</b> <b>-15% to + 10% Rated Voltage</b> <b>Inrush: 5.6VA / 50Hz 5.0VA / 60Hz</b> <b>Holding: 3.4VA (2.1W) 50Hz, 2.3VA (1.5W) 60Hz</b>
<b>Plug Wiring:</b>	Pin 1: Pin 3: Earth:	<b>Positive / Active</b> <b>Negative / Neutral</b> <b>Earth</b>
<b>Performance:</b>	Valve working pressure range: Port connection: Medium: Operating temperature range: Cv (flow factor) Maximum Operating Frequency: Activation time: Deactivation time:	<b>250 – 1000 kPa</b> <b>½" BSP</b> <b>Compressed air filtered to 5 micron and/or lubricated</b> <b>Max +50 Celsius</b> <b>P to A 3.7</b> <b>5Hz</b> <b>19 Milliseconds</b> <b>65 Milliseconds</b>
<b>Rating:</b>	Protection:	<b>IP 62</b>
<b>Approvals:</b>	Low Voltage Directive: EMC Directive: Machinery Directives:	<b>File No: R 9250033</b> <b>File No: H/EMC 95000251-3</b> <b>98/37/EC – EN 292-1, EN 292-2, EN 983, EN 954-1, EN 1050</b>
<b>Manual:</b>	Manual Override:	<b>Disabled Internally</b>
<b>Silencers:</b>	Pilot Exhaust: Main Exhaust:	<b>1/8" BSP SMC Part No: AN101-01</b> <b>1/2" BSP SMC Part No: AN403-04</b>

## ***ELECTRICAL INTERLOCKING / INTERFACING***



**Plug Connection**  
 Pin 1: Positive / Active  
 Pin 3: Negative / Neutral

## ***PNEUMATIC CONNECTION***



**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.



**Fluidsentry**<sup>™</sup>  
**Monitored Valves**

## EN ISO 13849 Data Sheet

<b>Valve Type</b>	PBS-41, PBS-411M, PBS-412M
<b>Date</b>	April 2011
<b>Revision</b>	A
<b>MTTFd</b>	30 Years
<b>Vibration</b>	Vibration in line with spool axis < 5g

### 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 harmonized 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.



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**EC MACHINERY DIRECTIVE 98/37/EC**  
**ASSESSMENT OF CONFORMITY**  
**FOR SAFETY COMPONENT IN ACCORDANCE WITH ANNEX IIC**

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Report No. : 021005

Machine/equipment : Fluidsentry pneumatic monitored valves

Models : PBS412M (suitable for up to Category 4)  
PBS411M (suitable for up to Category 2)

Manufacturer : Fluidsentry Pty Ltd

Assessment Date : September 2005

Relevant Standards : Essential Health and Safety Requirements,  
EN 292-1, EN 292-2, EN 1050, EN 60204  
EN 954.1, EN 983.

Based on the inspection of the valve and evidence presented in the Technical Construction File, RiskPlant Consultants Pty Ltd (EC Conformity Assessment Body No. 929) certify that the valve identified above conforms with the requirements for safety components in accordance with Annex II c of the EC Machinery Directive 98/37/EC.

NATA Authorised signatory:

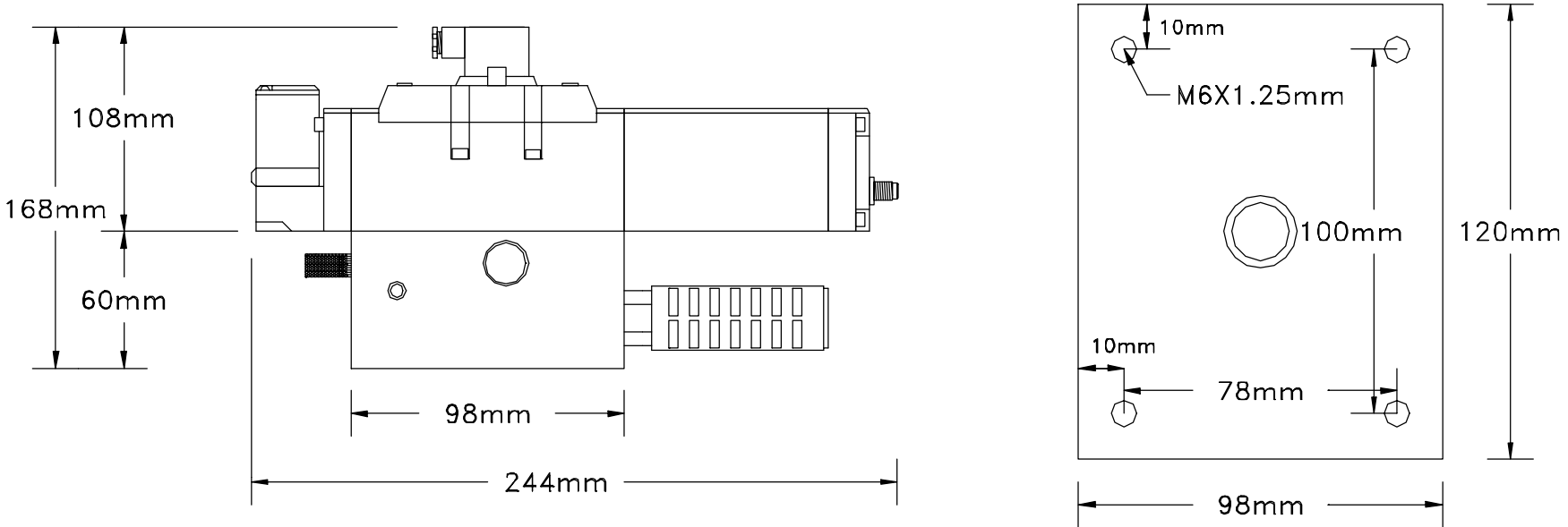


**ROGER LIM**, MIEAust, CPEng, MSLA  
Principal Consulting Engineer

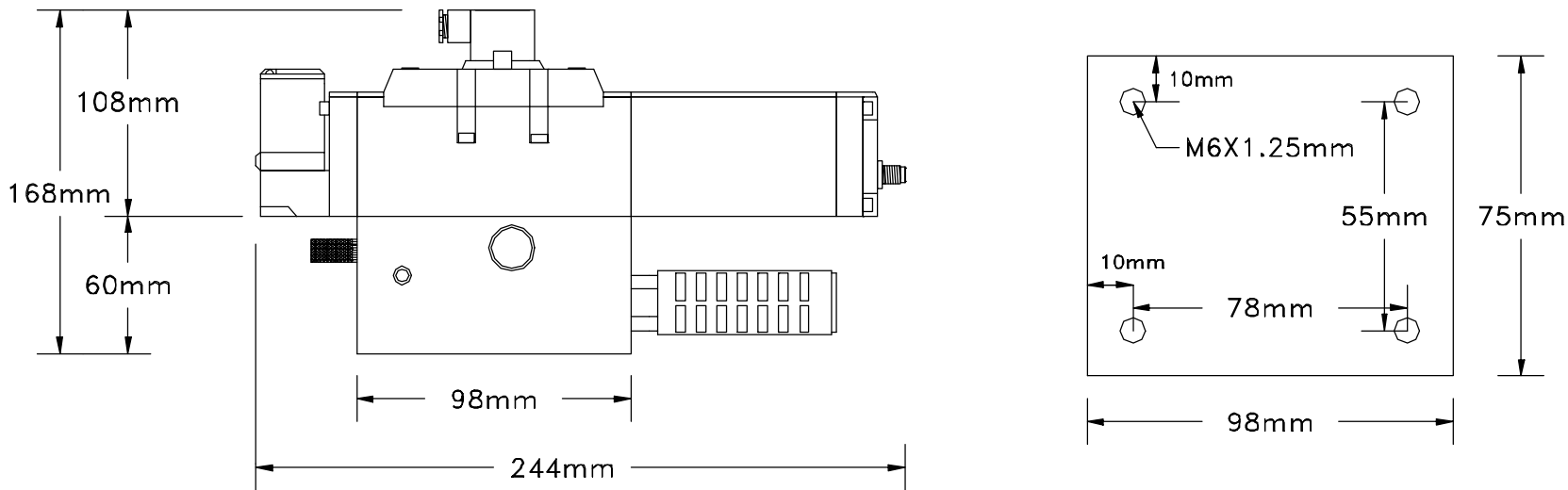


NATA Accredited (No. 14155)  
Inspection Service  
EC Designated Conformity Assessment Body (No. 929)

Issued date: 2 October 2005



# *PBS-412M Dual Valve System Dimensions*



***PBS-411M Single 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'.

The person who designs the pneumatic or hydraulic 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 and hydraulic equipment is the responsibility of the person who designs the pneumatic and hydraulic 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 and hydraulically operated machinery and equipment.**

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair of pneumatic and hydraulic 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 stored energy in the system.
3. Before machinery/equipment is re-started, take measures to prevent quick extensions of the cylinder piston rod etc.

### 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.

# Precautions



## Selection

### Warning

#### 1. Confirm specifications

Products represented in this data sheet are designed for use in compressed air and hydraulic 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 data sheet 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 (pneumatic)

### Warning

#### 1. Operation fluid

Compressed Air

#### 2. Install an air dryer, after cooler 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 auto drain 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 and hydraulic 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

Do not take the product apart