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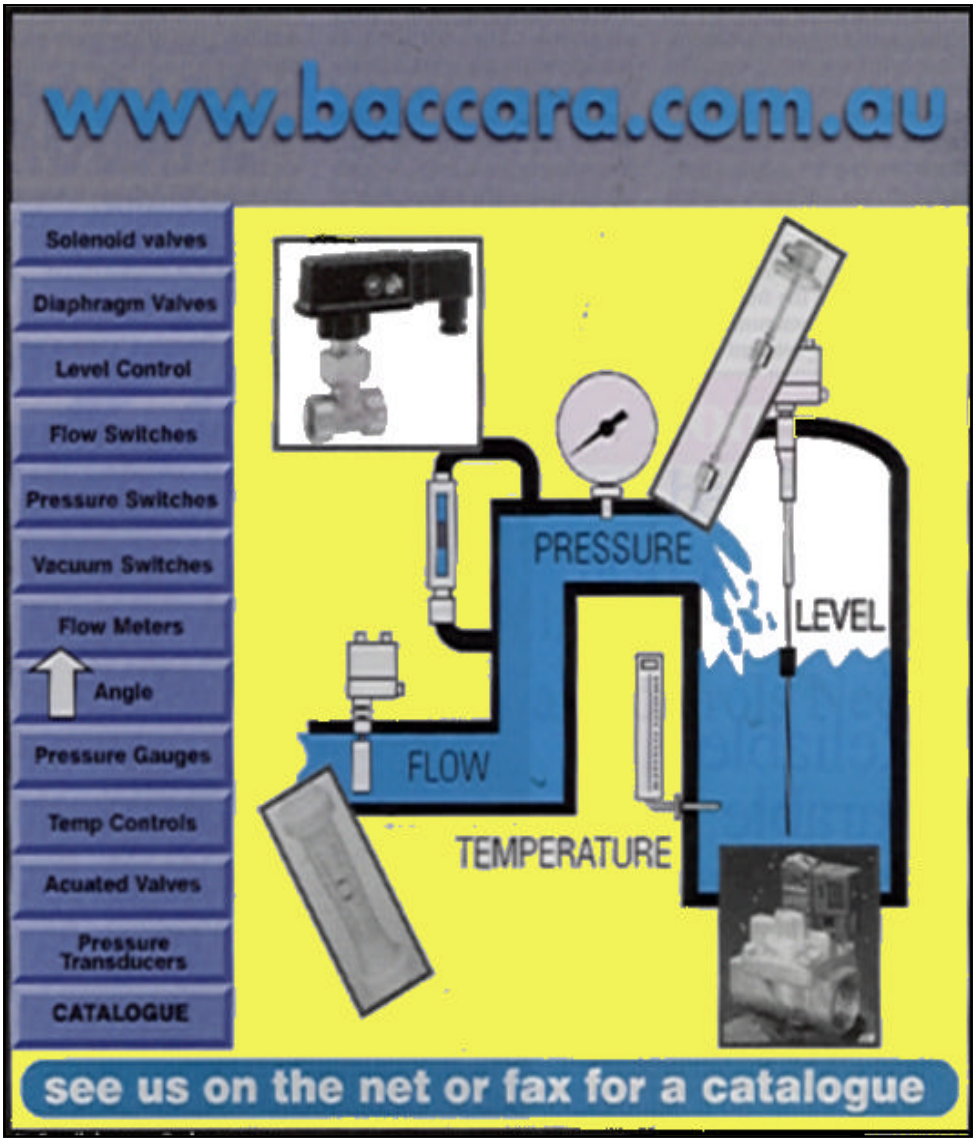
FLOW MEASURMENT AND CONTROL




# Catalogue

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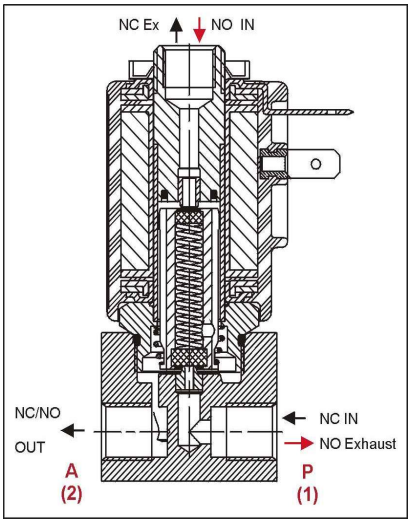
**Phone 61 3 9753 2811** **fax 61 3 9753 2840**

**E mail baccara @ relax.com.au**

# Contents

# Direct Operated 2/2 & 3/2 Way N.C or N.O Solenoid Valve


## General description

Gem-sol 2/2 & 3/2 Way N.C or N.O. Solenoid valves are recommended for heavy duty applications where high performances are required.
They can be used for industrial and irrigation control and automation systems
These valves are suitable to work with Air, Water, and Oil; for other fluids or gases
Please consult your local distributor.

## Notes

**1** Valves are inspected at general pressures of 12 bar or less (see table) Higher pressures are available upon request.

**2.** ADC valves are suitable to work with AC 8W or DC 10W Coils other wattages on request.

**3.** Latch valves are also available on request.

**4.**Valves can be manufactured to your specific requirements, please contact our technical **sales department for details.**

## HOW TO ORDER :

Example: Gem-A-21035N2-311

Is a 1/8" 3/2 N.C. valve 2.4mm orifice, NBR seals brass base slot manual override 24/50AC coil 8W plus connector, .

| GEM-A | Body | Port | Function | Orifice | Seals | M/O | Voltage | Power | Con |
|---|---|---|---|---|---|---|---|---|---|
| A=Standard | 1 = Mazak | 10 = 1/8"bsp | 1 = 2w NC | 1 = 0.8mm | N = NBR | 0 = None | 2 = 12 | 1=AC8W 50Hz | 0 = Without |
| M=Mini | 2 = Brass | 20 = 1/4"bsp | 2 = 2w NO | 3 = 1.6mm | V = VITON | 1 = Plastic | 3 = 24 | 3= DC10W | 1 = With |
| | 3 = St St | | 3 = 3w NC | 5 = 2.4mm | E = EPDM | 2 = Slot | 5 = 110 | 4= AC5.5W50 | 2 = LED |
| | | | 4 = 3w NO | 6 = 3.0mm | C =Neoprene | 3 = Knob | 8 = 240 | 7= DC5.5W | |
| | | | | | | | 9 = other | | |

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## Technical Specifications

| | |
|---|---|
| Function : | 2/2 - 3/2 NC & NO |
| Port Size: | 1/8" & 1/4" Bsp |
| Orifice : | See table |
| KV : | See table |
| Pressure range: | See table |
| Temperature range : | Fluid : max 80 ºC |
| | Ambient :- 10 ºC to 50 ºC |
| | **Main Valve** |
| Materials : | Mazak, Brass, |
| | or Stainless Steel 303 |
| | **Solenoid operator :** |
| | Stainless Steel 300 & 400 |
| | **seals :** |
| | NBR, VITON or EPDM |
| Weight (with coil ) : | 248 gr for Mazak valve |
| Media : | Air, water, oil |
| Coil Voltage | All Coil Voltages are ±10% |
| Coil Protection : | I P 65 |

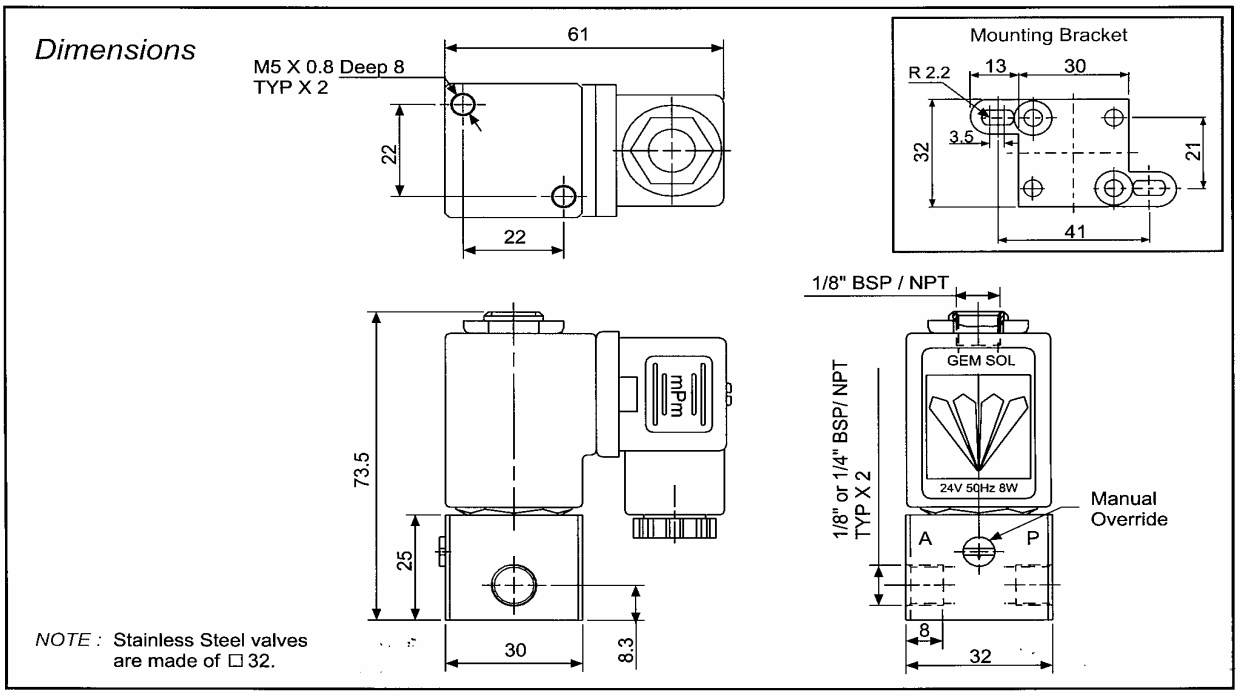
**Max Pressure (bar) 2 way & 3 way NC Table**

| Coil Current / Power | Orifice | | | |
|---|---|---|---|---|
| | 0.8mm | 1.6mm | 2.4mm | 3.0mm |
| ADC 3 Way | 23 | 15 | 8 | 5.5 |
| AC 8W or DC 10 W | 35 | 17 | 10 | 6 |
| AC 5.5W | 23 | 15 | 8 | 5.5 |
| ADC 2 Way | 60 | 35 | 15 | 10 |
| AC 8W or DC 10W | 80 | 60 | 30 | 18 |
| AC 5.5W | 60 | 40 | 20 | 15 |

**Max Pressure (bar) 2 way & 3 way NC Table**

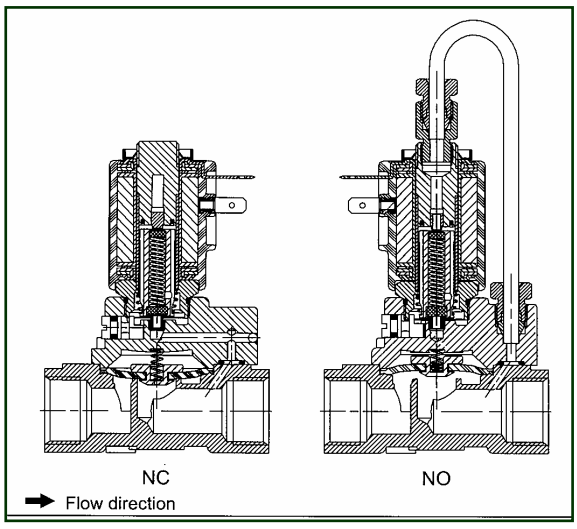
| Coil Current / Power | Orifice | | | |
|---|---|---|---|---|
| | 0.8mm | 1.6mm | 2.4mm | 3.0mm |
| ADC 3 Way | 25 | 15 | 8 | 6 |
| AC 8W or DC 10 W | 30 | 17 | 10 | 7 |
| AC 5.5W | 25 | 15 | 8 | 6 |
| ADC 2 Way | 25 | 25 | 15 | 10 |
| AC 8W or DC 10W | 0.5 | 1.4 | 3 | 3.5 |
| AC 5.5W | 0.6 | 1.7 | 3.5 | 4.5 |

*Dimensions*




*NOTE :* Stainless Steel valves are made of ☐ 32.

# GEM - SOL Pilot Operated 1/4", 3/8", 1/2" 2/2or 3/2 Way NC, NO




## General Description

Pilot Operated 2/2 way & 3/2 way valves NC/ NO Solenoid operated are recommended for applications where high flow at high pressure are required.

They can be used as on / off or as part of an automatic control system.

The typical applications are namely : fire Sprinklers, heating equipment, irrigation, industrial furnaces, car wash machines oil burners, compressor blow down timers.

## Notes

**1.** The working pressure is 12 bar but higher pressures up to 20 bar are available on request.

**2.** A minimum pressure differential of 0.5 bar is required for operation.

**3.** Valves can be manufactured to your Specific requirements subject to quantity for orders contact our technical sales dept.

**4.** Latch valves are available on request.

## HOW TO ORDER:

Example: Gem-S-2201N2-311

Is a 1/4" 2/2 N.C. valve
NBR seals brass base slot manual override
24/50AC coil 8W plus connector, .

| GEM-S | Body | Port | Function | Seals | M/O | Voltage | Power | Con |
|---|---|---|---|---|---|---|---|---|
| GEM - S | 2 = Brass | 20 = 1/4"bsp | 1 = 2w NC | N = NBR | 0 = None | 2 = 12 | 1=AC8W50hz | 0 = Without |
| | | 30 = 3/8"bsp | 2 = 2w NO | V = VITON | 1 = Plastic | 3 = 24 | 3= DC10W | 1 = With |
| | | 40 = 1/2"bsp | 3 = 3w NC | E = EPDM | 2 = Slot | 5 = 110 | 4=AC5.5W50 | 2 = LED |
| | | | 4 = 3w NO | | 3 = Knob | 8 = 240 | 7=DC5.5W | |
| | | | | C = NEOPRENE | | | 9= Other | |

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## Technical Specifications

Function : 2/2 3/2 N.C or N.O.
Port Size : 1/4" 3/8" & 1/2" bsp

Pressure and flow : See Table
Temperature range : Fluid : Max 85 ºC
Media Air, Oil Water, etc,

**Main Valve:**

Materials in contact with fluid : Brass - hot stamping, on request dezinc brass (CZ132)

**Solenoid operator :**

Stainless Steel 300 & 400 series

**Seals :**

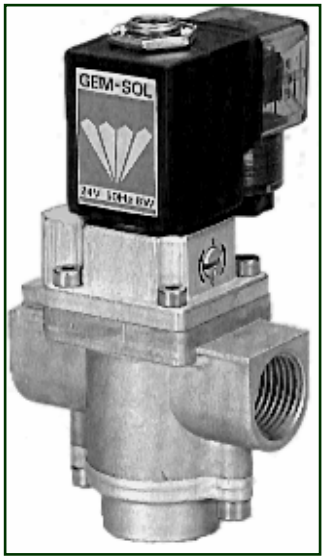
NBR,VITON and EPDM,

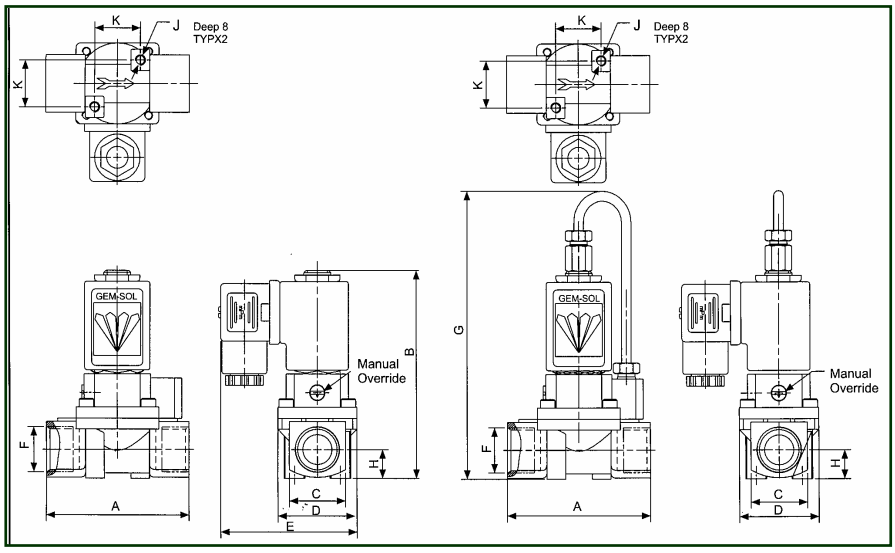
Voltages : all Coil voltages ± 10%
AC 8W
DC 10W

Electrical Protection I P 65

**Pressure and flow table 2 way**

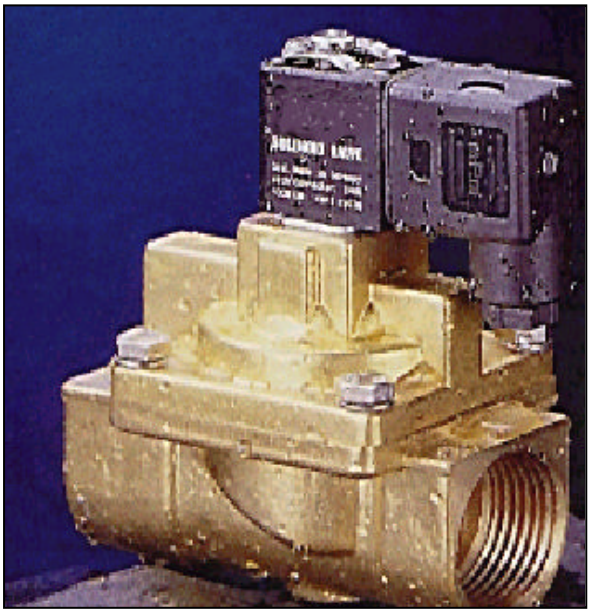
| Size | Orifice mm | Pressure | KV (l/min) |
|---|---|---|---|
| 1/4" | 8 | 0.5 - 20 | 12 |
| 3/8" | 8 | | 16 |
| 1/2" | 12 | | 35 |
| **Pressure and flow table 3 way** | | | |
| 1/4" | 8 | 0.8 - 12 | 18 |
| 1/2" | 12 | | 50 |

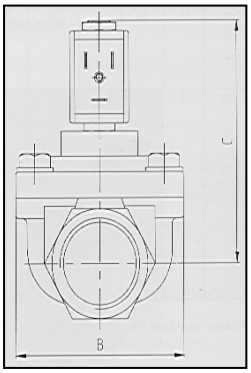


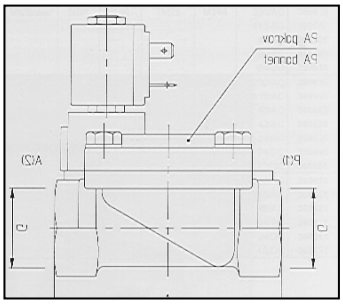




| Dimensions | | |
|---|---|---|
| size | 1/4 - 3/8 | 1/2" |
| A | 58 | 70 |
| B | 89 | 95 |
| C | 22 | 27 |
| D | 32 | 38 |
| E | 62 | 70 |
| F | Bsp | Bsp |
| G | 125 | 135 |
| H | 11 | 13.5 |
| J | M5xo.8 | M5x.0.8 |
| K | 22 | 22 |
| Weight | 466g | 562g |
| 3 way | 540g | 758g |

# Pilot Operated Diaphragm Valve 2/2 way N.C. 1/2" 3/4" and 1 " Bsp







## General Description

Pilot operated 2/2 way valves are recommended for applications where high flow and high pressures are required.

**Possible applications**

Fire protection, irrigation, and industrial laundries car wash machines, instrumentation, heating. and furnace equipment.

## Notes

**1.** The working pressure is up to 10 bar

**2.**A minimum pressure of 0.5 bar is required

**3.** Working pressure up to 16 bar on request

**4.**Max Temperature 85 ºC NBR other materials on request

**5.** Coil power AC 8.5/6.9 VA DC 5Watts

**6.**Use on Air, Oil, Water, & Low Pressure Steam, Subject to seal material suitability

## HOW TO ORDER:

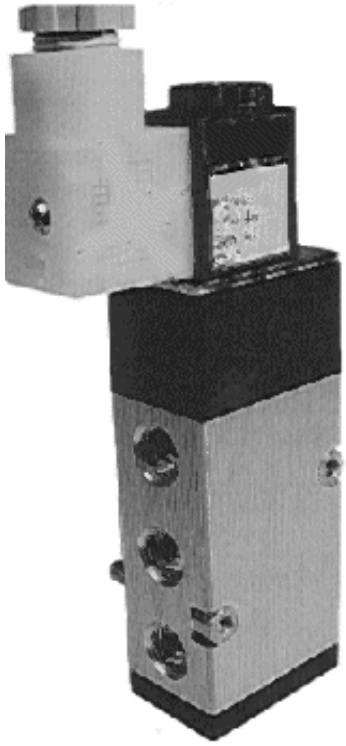
| Dimensions | | | |
|---|---|---|---|
| size | A | B | C |
| 1/2"Bsp | 64 | 41.5 | 91 |
| 3/4"Bsp | 81 | 51.5 | 96 |
| 1"Bsp | 91 | 61.5 | 100 |

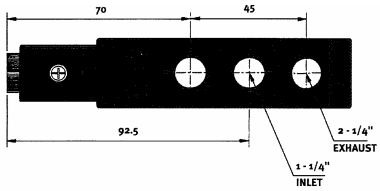
Example: Gem-D-2751N0-311

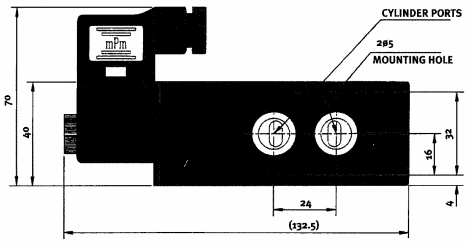
Is a 3/4" 2/2 N.C. valve
NBR seals brass base
24/50AC coil plus connector, .

| GEM-D | Body | Port | Function | Seals | M/O | Voltage | Power | Con |
|---|---|---|---|---|---|---|---|---|
| GEM - D | 2 = Brass | 50= 1/2" bsp<br>75 = 3/4" bsp<br>100= 1" bsp | 1 = 2w NC | N = NBR<br>V = VITON<br>E = EPDM<br>T = Teflon | 0 = None<br>M = Manual Override | 2 = 12<br>3 = 24<br>5 = 110<br>8 = 240<br>9 = Other | 1=AC5W 50Hz<br>3 =DC 5W | 0 = Without<br>1 = With<br>2 = LED |

# NAMUR MOUNT 3/2 & 5/2 Solenoid Valves For Pneumatic Actuation







## General Description

This type of solenoid valve can be easily mounted to any actuated process valve with this standard interface flange, valve shown is with 6mm orifice 1/4" bsp threaded ports

## Notes.

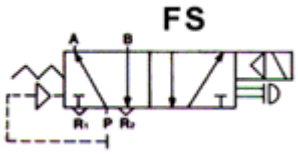
**1.** Easy assembly to process valve actuator

**2.** High Flow rate to 10 bar pressure

**3.** Can be supplied either single or dual solenoid

**4.** Can also be fitted with silencers or flow restrictors

**5.** A wide range of connectors are available ie,LEDs




## HOW TO ORDER:

Example: Gem-N-2206SM-311

is a 1/4" 5/2 . valve
slot manual override
24/50AC coil plus connector, .

| GEM-N | Body | Port | Function | Coils | M/O | Voltage | Power | Con |
|---|---|---|---|---|---|---|---|---|
| Gem - N | 2 = Aluminum | 20 = 1/4"Bsp | 3 = 3W NC | 0 = air pilot | M = Manual override standard | 2 = 12 | 1=ACW 50Hz | 0 = Without |
| | | | 6 = 5/2 W | S = single | | 3 = 24 | 3 =DC | 1 = With |
| | | | | D = double | | 5 = 110 | | 2 = LED |
| | | | | | | 8 = 240 | | |

# CFIS Field Adjustable pressure switch with adjustable differential

## General Description

The CFIS is a inline pressure switch field adjustable
ranges from 0.35 bar (5psi) to 420 bar (6000psi) depending on a combination of spring rate and actuator area ref to table opposite for further information.

A proven elastomer 'cushion 'support diaphragm is used on all switches where system pressure exceed
35 bar (500psi) this is a proven concept which

prevents any extrusion of the elastomer diaphragm Even at pressures up to 545 bar
(8000psi).

## Notes

**1.** Differential range from 10 to 25% of full set range.
**2.** Over pressure to 600 bar (9000psi)

**3.** All switches are CE compliant.

**4.** Can be supplied with pneumatic switch for Hazardous areas

**5.** The rate of pressure rise especially in press type applications can adversely effect the switch life cycle expectancy. In this type of application it is recommended that a snubber be fitted.

**6.**VITON has a much reduced mechanical life.

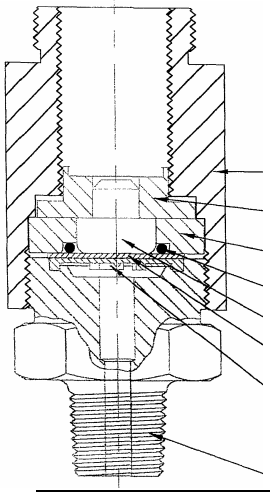
## How to Order.

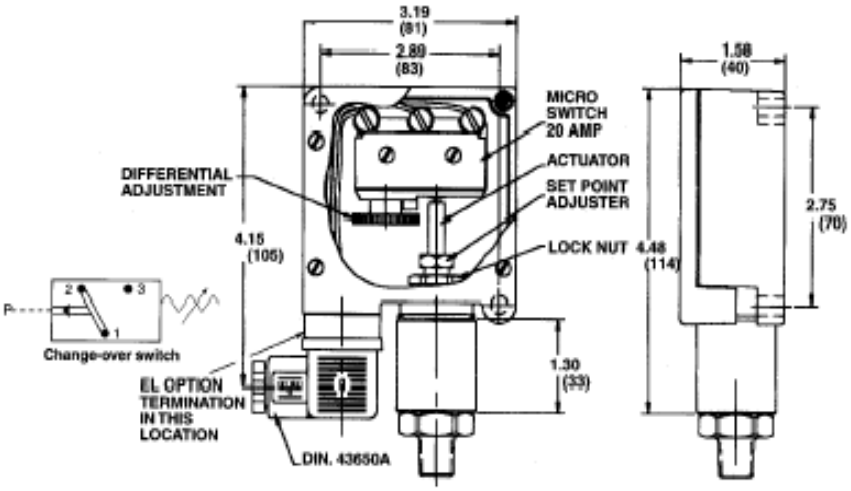
**CFIS 2 - 4G - C - HC**
this is model CFIS range 2 with 1/4 bsp Male Con change-over contacts and Din connector.

| CFIS | 2 | - | 4G | - | C | - | HC | - | |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| CFIS | See table | | 4G = 1/4 bsp Male<br>4BS= 1/4 bsp Female Stainless Steel<br>4B = 1/4 bsp Female Steel | | C = Change-over | | HC = Din 43650A<br>HN = Din 43650A<br>1/2 Conduit ( Female) | | 1 = VITON<br>2 = EPDM |

baccara **Technical Specifications**

# CFIS




| | |
|---|---|
| Electrical | 20 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambient & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,000000 at 70 bar (1000 psi) Nit rile |
| Diaphragm material | Nit rile Standard (optional EPDM & VITON ) |
| Housing material | Switch housing - reinforced plastic / Cartridge housing - steel |
| Maximum overpressure | 600 bar (9000psi) |
| Repeatability | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.45KG (1.0lbs) |

### Adjustment Ranges

| Model | Adjustment range PSI | Adjustment range BAR | Average differential | Wetted parts |
|---|---|---|---|---|
| **1A** | **15 > 75** | **1 > 5** | Model **CFIS** has a Adjustable differential From approximately **10 to 25%** **Of the full set range** | **Nit rile** And **Zinc plated steel** |
| **1** | **15 > 70** | **3.5 > 10** | | |
| **2** | **150 > 650** | **10 > 45** | | |
| **3** | **150 > 650** | **35 > 120** | | |
| **4A** | **500 > 1750** | **70 > 240** | | |
| **4** | **1000 > 3500** | **175 > 420** | | |
| **5** | **2500 > 6000** | **0.35 > 1.7** | | |

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | DIN 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

### How to adjust pressure switch settings

**1.** Adjust clockwise set point adjustment screw indicated above to increase set point, and counter clockwise to decrease.
**2.** Adjust differential thumb wheel clock wise to increase Dead band and counter clock wise to decrease the dead band
**3.** Repeat steps 1 & 2 until desired set point and dead band is achieved

# PDCA/PDCM Field Adjustable pressure switch with fixed differential

## General Description

The PDCA is a inline pressure switch field adjustable ranges from 0.35 bar (5psi) to 420 bar (6000psi) depending on a combination of spring rate and actuator area ref to table opposite for further information.
A proven elastomer 'cushion 'support diaphragm is used on all switches where system pressure exceed 35 bar (500psi) this is a proven concept which prevents any extrusion of the elastomer diaphragm even at pressures up to 545 bar (8000psi).

**PDCM**. Is a manifold mount version of this switch

## How to Order.

**PDCA 2 - 4G - C - HC - 7**

this is model PDCA range 2 with 1/4 bsp Male Con change-over (gold) contacts and din connector.

## Notes

**1.** Differential range from 15% to 20% of full set range.
**2.** Over pressure to 600 bar (9000psi)

**3.** All switches are CE compliant.

**4.** Can be supplied with Gold Contacts for use with PLCs or where( less than 12volts and 20 milliamp ) switching is required.

**5.** The rate of pressure rise especially in press type applications can adversely effect the switch life cycle expectancy. In this type of application it is recommended that a snubber be fitted.

**6.** VITON has a much reduced mechanical life.

| PDCA | 2 | > | 4G | > | C | > | HC | > | 7 |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| **PDCA** | See table | | 4G = 1/4bsp Male | | C = Change-over | | HC = Din 43650A | | 1 = VITON |
| **PDCM** | | | 4B = 1/4 bsp female | | | | cable connection | | 2 = EPDM |
| | | | 4BS= 1/4 bsp Female SS | | | | HN = Din 43650A | | 7 = Gold |
| | | | 00 = Manifold mount PDCM only | | | | 1/2 Conduit (female) | | Contacts |

other port thread sizes and options available on request

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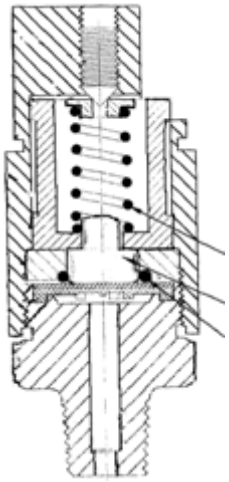
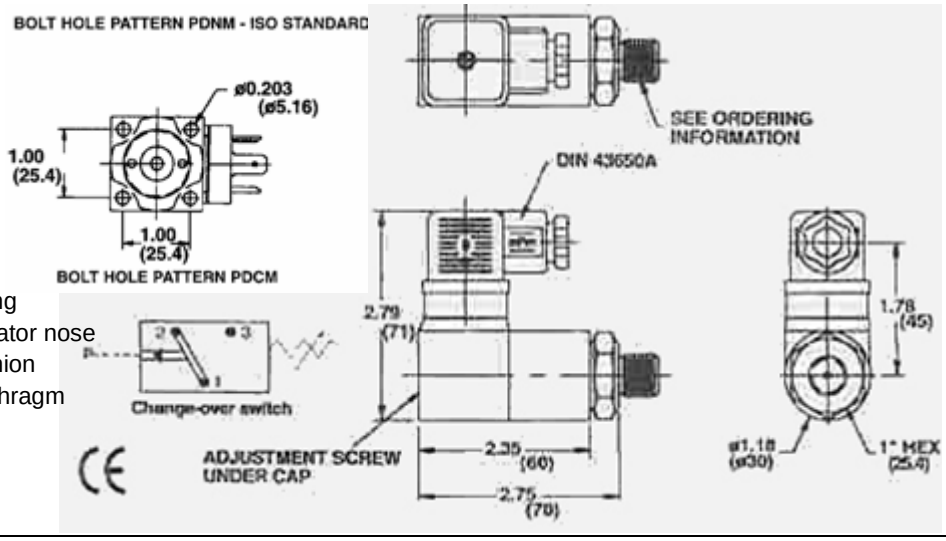
## Technical Specifications

# PDCA/PDCM



Spring
Actuator nose
Cushion
Diaphragm




| | |
|---|---|
| Electrical | 5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambient & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,000000 at 70 bar (1000 psi) Nitrile |
| Diaphragm material | Nitrile Standard (optional EPDM & Viton ) |
| Housing material | Steel - Zinc plated standard (optional 316SS) |
| Maximum overpressure | 600 bar (9000psi) |
| Repeatability | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.23KG (0.5.0lbs) |

### Adjustment Ranges

| Model | Adjustment range PSI | Adjustment range BAR | Average differential | Wetted parts |
|---|---|---|---|---|
| **1** | **5 > 25** | **0.35 > 1.7** | Model **PDCA** has a Fixed differential From approximately **10 to 20%** **Of the full set range** | **Nitrile** And **Zinc plated steel** |
| **2** | **15 > 70** | **1 > 5** | | |
| **2A** | **50 > 150** | **3.5 > 10** | | |
| **3** | **150 > 650** | **10 > 45** | | |
| **4A** | **500 > 1750** | **35 > 120** | | |
| **4** | **1000 > 3500** | **70 > 240** | | |
| **5** | **2500 > 6000** | **170 > 420** | | |

*PDCM = ISO standard manifold mount switch

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | DIN 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

### How to adjust pressure switch settings

**1.** Adjusting screw > remove flip top cover .
1/8" Allen adjustment screw underneath.
**2.** Adjust clockwise set point adjustment to increase set point and counter clockwise to decrease,
**3.** Replace cap when adjustment is set.

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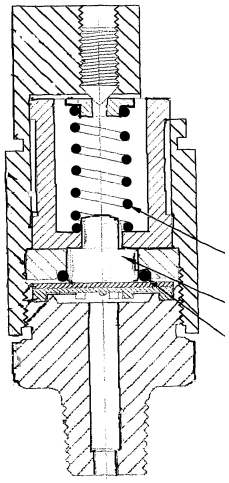
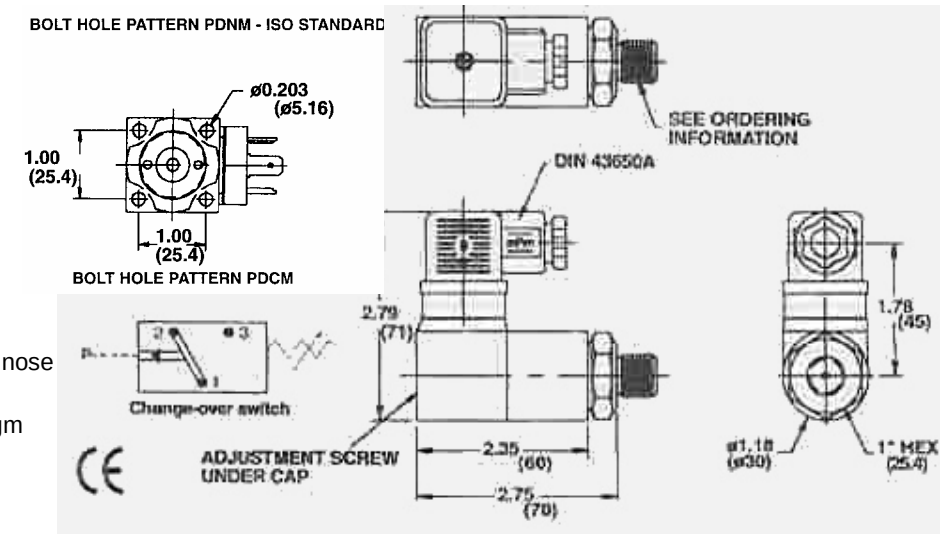
## Technical Specifications

# PDCA/PDCM



Spring
Actuator nose
Cushion
Diaphragm




| | |
|---|---|
| Electrical | 5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambient & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,000000 at 70 bar (1000 psi) Nitrile |
| Diaphragm material | Nitrile Standard (optional EPDM & Viton ) |
| Housing material | Steel - Zinc plated standard (optional 316SS) |
| Maximum overpressure | 600 bar (9000psi) |
| Repeatability | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.23KG (0.5.0lbs) |

### Adjustment Ranges

| Model | Adjustment range PSI | Adjustment range BAR | Average differential | Wetted parts |
|---|---|---|---|---|
| **1** | **5 > 25** | **0.35 > 1.7** | Model **PDCA** has a Fixed differential From approximately **10 to 20%** **Of the full set range** | **Nitrile** And **Zinc plated steel** |
| **2** | **15 > 70** | **1 > 5** | | |
| **2A** | **50 > 150** | **3.5 > 10** | | |
| **3** | **150 > 650** | **10 > 45** | | |
| **4A** | **500 > 1750** | **35 > 120** | | |
| **4** | **1000 > 3500** | **70 > 240** | | |
| **5** | **2500 > 6000** | **170 > 420** | | |

*PDCM = ISO standard manifold mount switch

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | DIN 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

### How to adjust pressure switch settings

**1.** Adjusting screw > remove flip top cover .
1/8" Allen adjustment screw underneath.

**2.** Adjust clockwise set point adjustment to increase set point and counter clockwise to decrease,

**3.** Replace cap when adjustment is set.

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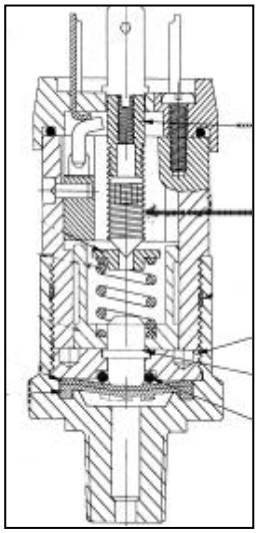
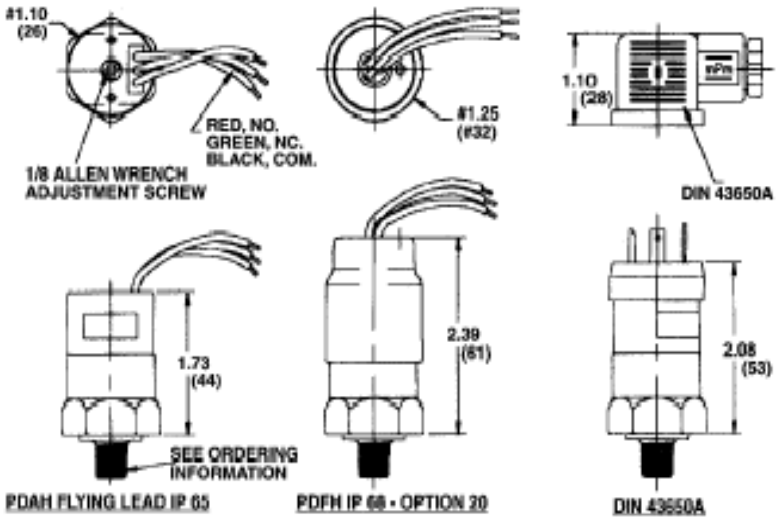
Technical Specifications

# PDAH




| | |
|---|---|
| Electrical | 5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambient & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,000000 at 70 bar (1000 psi) Nit rile |
| Diaphragm material | Nit rile Standard (optional EPDM & VI-TON ) |
| Housing material | Steel - Zinc plated standard (optional 316SS) |
| Maximum overpressure | 600 bar (9000psi) |
| Repeatability | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.23KG (0.5.0lbs) |

**Adjustment Ranges**

| Model | Adjustment range PSI | Adjustment range BAR | Average differential | Wetted parts |
|---|---|---|---|---|
| **1** | **5 > 25** | **0.7 > 2** | Model **PDAH** has a Fixed differential From approximately **10 to 20%** **Of the full set range** | **Nit rile** And **Zinc plated steel** |
| **2** | **15 > 70** | **1.5 > 5** | | |
| **3** | **50 > 150** | **4 > 20** | | |
| **4** | **150 > 650** | **17 > 70** | | |
| **5** | **1000 > 3000** | **70 > 210** | | |
| **6** | **2500 > 5000** | **170 > 350** | | |

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | DIN 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

**How to adjust pressure switch settings**

**1.** Adjusting screw > remove plug remove brass center screw. 1/8" Allen screw underneath.

**2.** Adjust clockwise set point adjustment to increase set point and counter clockwise to decrease,

**3.** Replace brass center screw and plug when switch adjustment is achieved

# PDA/FDA Field Adjustable pressure switch with fixed differential

## General Description

The PDA is a inline pressure switch field adjustable ranges from 0.2 bar (3psi) to 10 bar(150psi) depending on a combination of spring rate and actuator area refer, to table opposite for further information.

The FDA switch is constructed of FDA approved Materials except for a zinc plated steel outer support housing to enable it to withstand the higher working pressure without distortion.

## Notes

**1.** Differential range from 10% to 20% of full set point range.
**2.** PDA Over pressure to 35 bar (500psi)
FDA over pressure to 25 bar (350 psi)
**3.**All switches are CE compliant.

**4.** Can be supplied with Gold Contacts for use with PLCs or where ( less than 12 volts and 20 milliamp ) switching is required.

**5.** The rate of pressure rise especially in press type applications can adversely effect the switch life cycle expectancy. In this type of application it is recommended that a snubber be fitted.

**6.** VITON has a much reduced mechanical life.

## How to Order.

**PDA 2 - 4G - C - HC**

This is model PDA range 2 with 1/4 bsp Male Con change-over contacts and din connector.

| PDA | 2 | > | 4G | > | C | > | HC | > | |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| PDA<br>FDA | See table | | 4G = 1/4 bsp Male<br>4B = 1/4 bsp female<br>4BS= 1/4 bsp Female | | C = Change-over | | HC = DIN 43650A cable connection<br>HN = DIN 43650A 1/2 Conduit (female) | | 1 = VITON<br>2 = EPDM<br>3 = 316 SS<br>7 = Gold Contacts |

Other port thread sizes and options available on request

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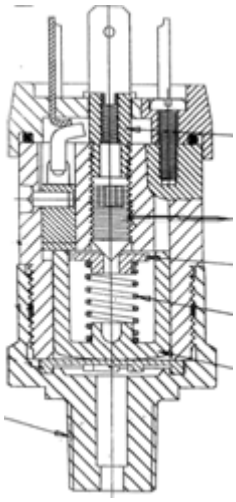
Technical Specifications

# PDA/FDA

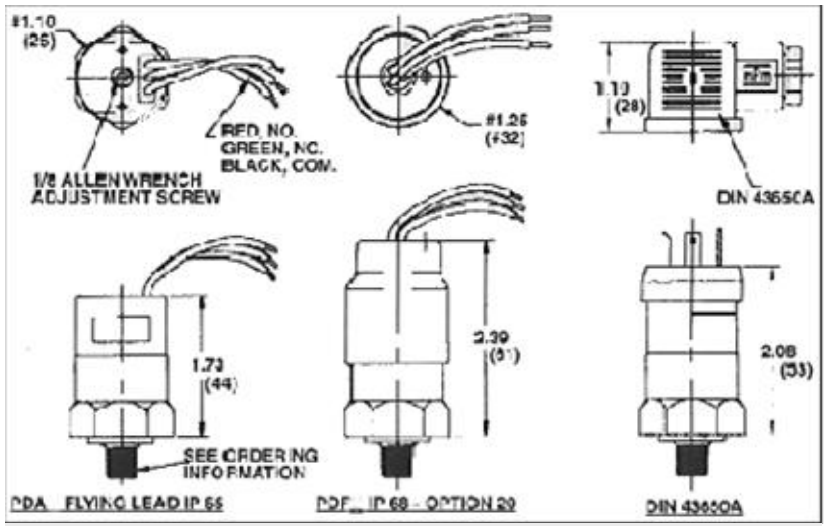


Brass screw

Adjustment screw

Spring

Piston




| | |
|---|---|
| Electrical | 5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambient & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,000000 at 2 bar (70 psi) Nit rile |
| Diaphragm material | Nit rile Standard (optional EPDM & VITON ) |
| Housing material | Brass Standard (optional 316SS) |
| Maximum overpressure | 25 bar (350psi) 6: 1 Safety factor |
| Repeatability | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.14kg (0.3lbs) |

**Adjustment Ranges**

| Model | Adjustment range | | Differential | Wetted parts |
|---|---|---|---|---|
| | PSI | BAR | | |
| **1** | **3 - 7** | **0.2 - 0.5** | Model **PDA** has a Fixed differential From approximately **10 to 15% Of full set range** | **Nit rile** And **Brass or St ST** |
| **2** | **5 - 30** | **0.35 - 2** | | |
| **4** | **25 - 100** | **1.5 - 7** | | |
| **New** | | | | |
| **6** | **70 - 130** | **5 - 8.5** | | |

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | din 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

**How to adjust pressure switch settings**

**1.** Adjusting screw > remove plug remove brass centre screw. 1/8" Allen screw underneath.

**2.** Adjust clockwise set point adjustment to increase set point and counter clockwise to decrease,

**3.** Replace brass center screw and plug when set point is achieved

# PMLA/PMHA Field Adjustable pressure switch with fixed differential

**PMHA** as above with adjustable ranges from
0.35 bar (5 psi) to 210 bar (3000 psi)
A proven elastomer 'cushion 'support diaphragm is used on all switches where system pressure exceed 35 bar (500psi) this is a proven concept which prevents any extrusion of the elastomer diaphragm Even at pressures up to 545 bar (8000psi).

## How to Order.

**PMHA 2 - 4G - B - SP**

This is model PDHA range 2 with 1/4 bsp Male Con Normally Closed contacts and spade Terminals.

## General Description

The PMLA is a inline pressure switch field adjustable ranges from 0.15 bar (2psi) to 10 bar (150psi) depending on a combination of spring rate and actuator area ref to table opposite for further information. Diaphragm material Kapton only.

## Notes

**1.** Differential range is less than 5% of full set range.
**2.** Over pressure PMLA to 35 bar (500psi) PMHA to 600 bar (9000 psi)
**3.**All switches are CE compliant.

**4.**Can be supplied with Gold Contacts for use with PLCs or where (less than 12volts and 20 milliamp ) switching is required.

**5.**The rate of pressure rise especially in press type applications can adversely effect the switch life cycle expectancy. In this type of application it is recommended that a snubber be fitted.

**6.**Viton has a much reduced mechanical life.

| **PMHA** | **2** | **>** | **4G** | **>** | **B** | **>** | **SP** | **>** | **2** |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| **PMLA** **PMHA** | 1 = 2- 10 Psi<br>2 = 7 - 25 Psi<br>3 = 20 - 60 Psi<br>4 = 50 - 150 Psi | | 2G = 1/8bsp Male<br>4G = 1/4 bsp male | | A = N.O.<br>B = N.C. | | SP = Spade Terminals<br>FL = Flying leads | | 1 = VITON<br>2 = EPDM<br>7 = Gold Contacts<br>30= rubber |

SEE Table for PMHA  Other port thread sizes and options available on request

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## Technical Specifications

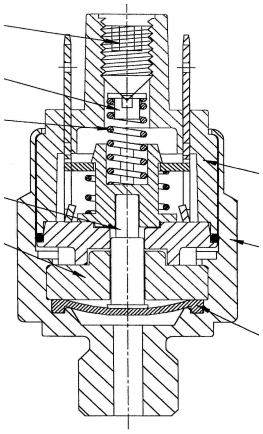
# PMLA/PMHA

Adjustment Screw

Spring Guide------
Compression Spring ---

Actuator ----------

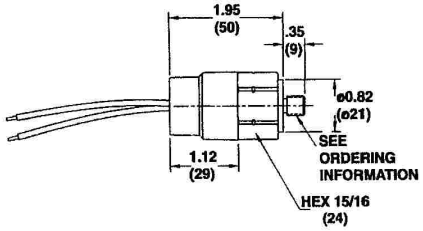
Gland ----------

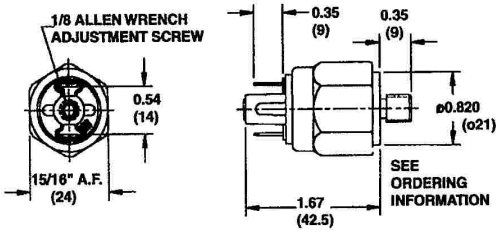


N.O Sub - Assembly

Housing

Diaphragm




| | |
|---|---|
| Electrical | Working Voltage 100Va Max Voltage 42VDC |
| Protection | Spade Terminals = 00 / Sealed optional = - IP65 |
| Temperature range | PMLA Ambiant & Media - 40ºF to + 250 ºF (- 40º to +120 ºC) |
| Mechanical Life | 10,000000 PMLA at 5 bar (75) PMHA at 70 bar (1000 psi) Nitrile |
| Diaphragm material | PMLA Kapton / PMHA Nitrile Standard (optional EPDM & Viton ) |
| Housing material | PMLA = Brass/ PMHA zinc plated Steel standard (optional 316SS) |
| Maximum overpressure | PMLA 35 bar (500 psi) / PMHA 600 bar (9000 Psi ) |
| Repeatedility | ± 5% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.06KG (0.14.0lbs) |

**Adjustment Ranges**

| **Model PMHA** | **Adjustment range** | | **Average differential** | **wetted materials** |
|---|---|---|---|---|
| | **PSI** | **Bar** | | |
| **1** | **10 - 30** | **0.7 - 2** | Both Models have a fixed differential | **Brass Kapton Nit rile and Zinc Plated Steel** |
| **2** | **25 - 75** | **1.5 - 5** | | |
| **3** | **65 - 300** | **4 - 20** | | |
| **4** | **500 - 1250** | **35 - 85** | **Less than 5%** of **Full Set Point Range.** | |
| **5** | **1000 - 3000** | **70 - 210** | | |

***Option = 30 Rubber boot Electrical protection Cover**
***Option 7 may be required for less than 12VDC and 20 Milliamps**

| Model PMLA | Adjustment range | |
|---|---|---|
| | Bar | Psi |
| 1 | 0.15/.7 | 2/10 |
| 2 | 0.5/1.7 | 7/25 |
| 3 | 1.4/4 | 20/60 |
| 4 | 3.5/10 | 50/150 |

**How to adjust pressure switch settings**

**1.**adjust clockwise set point adjustment to increase set point and counter clockwise to decrease,

# PJDA Field Adjustable Differential pressure switch

## General Description

The PJDA is a differential pressure switch ranges from 1.0 bar (15psi) to 3 bar (45psi)
depending on the spring rating and actuator area ref to table opposite for further information.
A proven elastomer 'cushion 'support diaphragm is used on all switches where system pressure exceed 35 bar (500psi) this is a proven concept which prevents any extrusion of the elastomer diaphragm Even at pressures up to 545 bar (8000psi).

## Notes

**1.** Average Switch Differential ranges
range from 15% to 20% of full set point range.
**2.** Over pressure to 35 bar (500psi)

**3.**All switches are CE compliant.

**4.**Can be supplied with Gold Contacts for use with PLCs or where (less than 12volts and 20 milliamp) switching is required.

**5.**VITON has a much reduced mechanical life.

**6.**typical applications monitor differential pressure Across oil filters to indicate dirty or blocked elements **ect.**

## How to Order.

**PJDA 2 - 4G/4B - C - HC**

This is model PJDA range 2 with 1/4 Bsp Male / 1/4" Bsp female Connections .
Change-over Contacts and Din Plug.

| **PJDA** | **2** | **>** | **4G** | **>** | **C** | **>** | **HC** | **>** | **2** |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| PJDA | See table | | Low side4G = 1/4bsp Male<br>Hi side4B = 1/4 bsp female | | C = Change-over | | HC = DIN 43650A cable connection<br>HN = DIN 43650A 1/2 Conduit (female) | | 1 = VITON<br>2 = EPDM<br>7 = Gold Contacts |

other port thread sizes and options available on request

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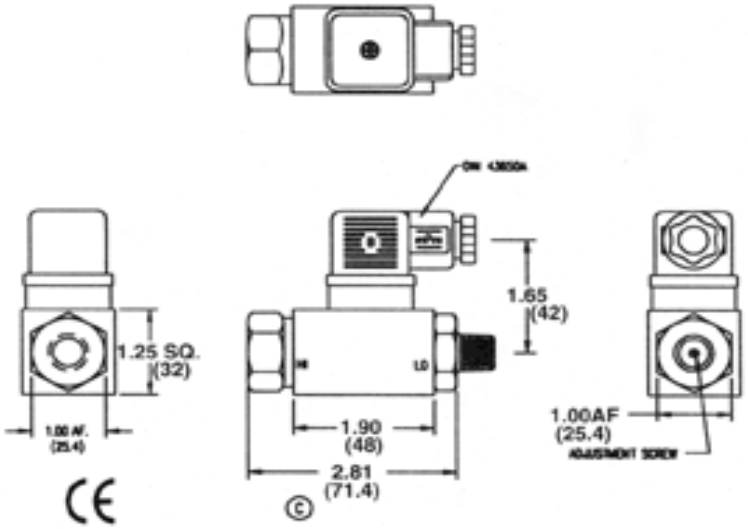
## Technical Specifications

# PJDA




| | |
|---|---|
| Electrical | 5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambiant & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,000000 at 70 bar (1000 psi) Nitrile |
| Diaphragm material | Nitrile Standard (optional EPDM & Viton ) |
| Housing material | aluminum AL2024 anodized Black |
| Maximum overpressure | 35 bar (500psi) |
| Repeatedility | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.35KG (0.75.0lbs) |

**Adjustment Ranges**

| Model | Adjustment range | | Average differential | wetted materials |
|---|---|---|---|---|
| | PSI | BAR | | |
| **1** | **15 - 25** | **1.0 - 1.7** | **10%** to **20%** of **Full Set Point Range.** | **Nit ile and Zinc plated steel** |
| **2** | **20 - 45** | **1.3 - 3** | | |

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | din 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

**How to adjust pressure switch settings**

**1.** Connect High pressure port to pressure source and. adjust with 1/8" Allen screw through center of low port.

**2.** Adjust clockwise set point adjustment to increase set point and counter clockwise to decrease,

**3.** Connect low port to outlet side of filter etc.

# VDMA Field Adjustable Vacuum switch with fixed differential

## General Description

The VDMA is a inline Vacuum switch field adjustable ranges from 16 Kpa (5"hg) to 1 bar (30" Hg) depending on a combination of spring rate and actuator area ref to table opposite for further information.

## Notes

**1.** Differential range from 10% to 20% of full set range.
**2.** Over pressure to 35 bar (500psi)

**3.**All switches are CE compliant.

**4.** Can be supplied with Gold Contacts for use with PLCs or where (less than 12volts and 20 milliamps ) switching is required.

**5.** VITON has a much reduced mechanical life.

## How to Order.

**VDMA 2 - 4G - C - HC**

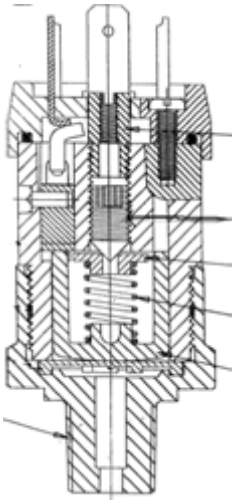
This is model VDMA range 2 with 1/4 Bsp Male Connection, change-over contacts
Din Electrical Connector

| VDMA | 2 | > | 4G | > | C | > | HC | > | 2 |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| VDMA | See table | | 2G = 1/8 bsp Male<br>4G = 1/4 bsp Male | | C = Change-over | | HC = DIN 43650A cable connection<br>HN = DIN 43650A 1/2 Conduit (female) | | 1 = VITON<br>2 = EPDM<br>3. 316 SS<br>7. Gold Contacts |

other port thread sizes and options available on request

## Technical Specifications

# VDMA

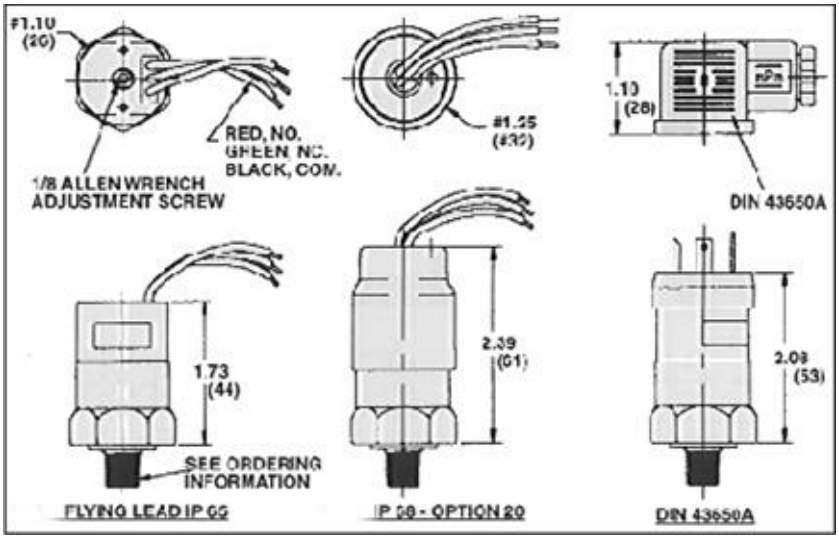


Brass screw

Adjustment screw

Spring

Piston




| | |
|---|---|
| Electrical | 5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | DIN 43650A - IP65 |
| Temperature range | Ambiant & Media - 40ºF to + 180 ºF (- 40º to +80 ºC) |
| Mechanical Life | 10,00000 at cycle rate 60/min. zero to 25" Hg (850Millibar) |
| Diaphragm material | Nit rile Standard (optional EPDM & VITON ) |
| Housing material | zinc plated steel Standard (optional brass or 316SS) |
| Maximum overpressure | 35 bar (500psi) 6: 1 Safety factor |
| Repeatedility | ± 2% of full set point range @ 20 ºC (70 ºF) |
| Weight | 0.25kg (0.5lbs) |

**Adjustment Ranges**

| Model | Adjustment range | | | | Average differential | wetted materials |
|---|---|---|---|---|---|---|
| | IN HG | | MilliBar | | | |
| **1** | **5** | **- 15** | **160** | **- 500** | Fixed Differential 10 to 20% Full Set Point Range. | **Nit rile and zinc platedsteel** |
| **2** | **12** | **- 30** | **400** | **- 1000** | | |
| | | | | | | |

| Standard Electrical Circuit | | |
|---|---|---|
| Wire Colour | din 43650 number | C Circuit |
| Black | 1 | Common |
| Green | 2 | N. Closed |
| Red | 3 | N. Open |

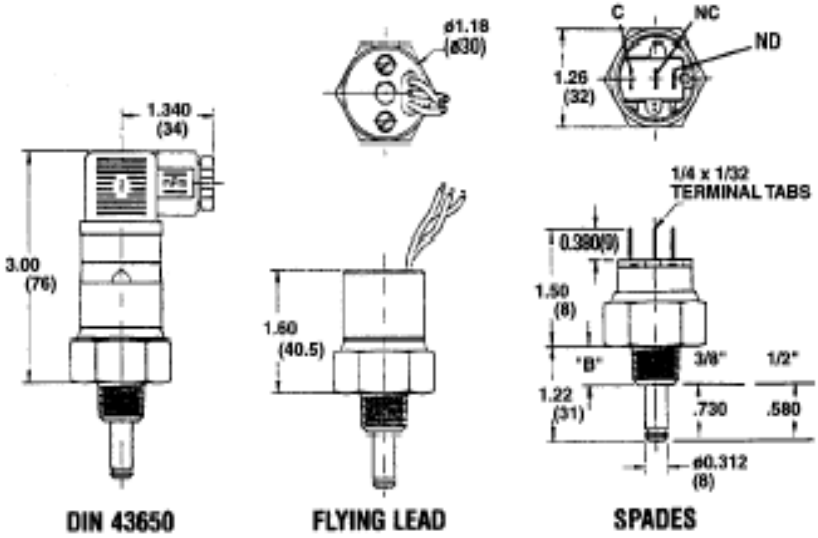
**How to adjust pressure switch settings**

**1.** Adjusting screw > remove plug remove brass center screw. 1/8" Allen screw underneath.

**2.** Adjust clockwise set point adjustment to decrease set point and counter clockwise to decrease,

**3.** Replace brass screw and din plug when set point is achieved

# PDTF Factory set temperature switch with fixed differential




## General Description

The PDTF is a factory set temperature alarm switch for protection of all types of internal combustion engines , pumps, compressors, gear boxes, hydraulic reservoirs, marine and industrial power plants.

## How to Order.

**PDTF 100ºC R - 6M - C - HC**

This is model PDTF set at 100ºC with 3/8 Npt Male Connection change over contacts
Din Electrical Connector

Electrical 5AMP resistive / 2AMP Inductive

## Notes

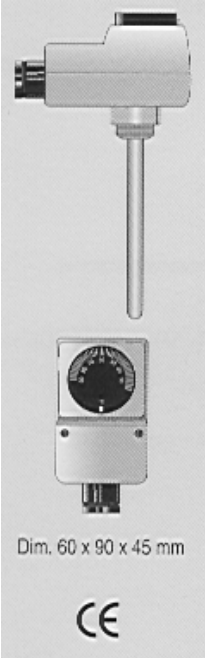
**1.** Differential range from 9ºC (19ºF) average

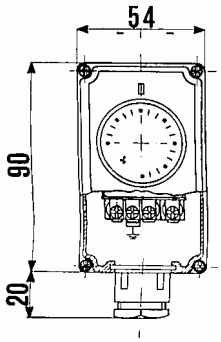
**2.** Pressure to 25 bar (350psi)

**3.**All switches are CE compliant.

| PDTF | 2 | > | 4G | > | C | > | HC | > | |
|---|---|---|---|---|---|---|---|---|---|
| Model | Range | | Medium Connection | | Switch | | Electrical Connections | | Options |
| PDTF | Set Point Rising or Falling | | 6M = 3/8Npt Male<br>8M = 1/2 Npt Male | | C = Change-over | | SP = Spade terminals<br>HC = Din 43650A cable connection<br>HN = Din 43650A 1/2 Conduit (female) | | |

# BTC1 Industrial tank thermostat adjustable insertion type




## General Description

This type of Temperature switch is designed to monitor the temperature of air and liquids in HVAC and process applications the sensing element ensures rapid response and accurate switching differentials throughout the range,

**1.**Can be used as High or low temperature protection

**2.** Unit is supplied with a copper pocket for simple installation

**3.** Installation in any position

| | |
|---|---|
| Electrical | 2.5 AMP - 12/24 VDC - 125/250 VAC |
| Protection | Cable Gland - IP40 |
| Contacts | Change-Over |
| Mechanical Life | 100.000 at cycles |
| Differential | 5 ºC |
| Housing material | Plastic housing max ambient temp 60ºC |
| Maximum over temperature | 125ºC |
| Temperature Range | 25ºC to 90 ºC |
| Weight | 0.4 kg (0.9lbs) |

**Adjustment Ranges**

| Model | Adjustment range | | Average differential | wetted materials |
|---|---|---|---|---|
| | degrees C | degrees f | | |
| | | | Fixed Differential | |
| 1 | 25º > 90º | 55º > 185º | 5 ºC | Copper Pocket |
| | | | | 100 mm |

| BTC1 | 1 | > | 8G | > | C | > | HC | > | |
|---|---|---|---|---|---|---|---|---|---|

| Model | Range | Medium Connection | Switch | Electric Connections |
|---|---|---|---|---|
| BTC1 | 25ºC > 90ºC | 8G = 1/2 bsp | C = Change-over | G8 gland |

# VH Series Flow switches

**General Description**

The flow of the fluid impinges on the sensing disc fixed to the end of the paddle system.
A permanent magnet on the other end of the paddle system. Is actuating a reed Switch, which is adjustably positioned outside the flow medium.
The reed switch signal can be delayed by use of a relay with a built in time delay
We strongly recommend use of relays in conjunction with all flow switches to avoid excess switch current

Note.

**1.** Minimal pressure drop across switch

**2.** Reliable and simple worning device

**3.** High repeatability

**4.** Optimal price performance

**5.** Over 500 different types for almost any application

**6.** Line sizes from 8mm to 200 mm

## How to Order.

**VH320 B R FL**

This is model VH3 With 3/4" Bsp brass pipe Tee
Reed switch Contact and flying lead

| VH3 | 20 | > | B | > | R | > | HC | > | |
|---|---|---|---|---|---|---|---|---|---|
| Model | Line size mm | | Medium Connection | | Switch | | Electrical Connections | | Options |
| VH3 | 08 = 1/4 Bsp<br>10 = 3/8 Bsp<br>15 = 1/2 Bsp<br>20 = 3/4 Bsp<br>25 = 1" Bsp<br>32 = 11/4 Bsp<br>40 = 11/2 Bsp<br>insertion type<br>05 = 1/2 Bsp ( 2 > 6" )<br>06 = 1/2 Bsp ( 4 > 8" ) | | B = Brass screwed<br>C = Copper brazed<br>S = St Steel<br>P = PVC | | R = Reed Switch | | HC = Din Connector<br>FL = Flying lead | | NP = Electroless Nickel Plated<br>T = Teflon Coated |

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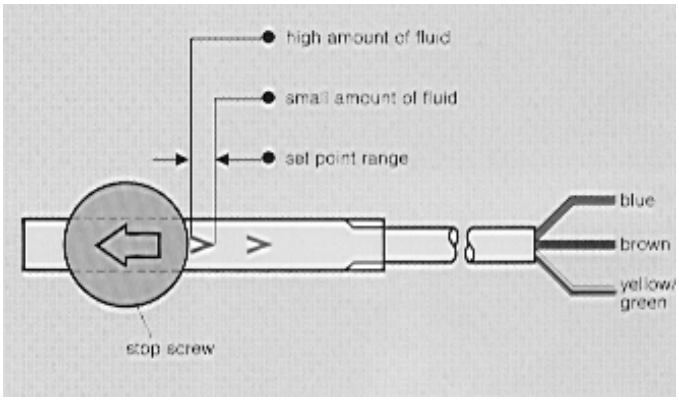
Technical Specifications

# VH Series Flow switches

## Adjusment




**Red arrow N.O. Range Blue arrow N.C. range**

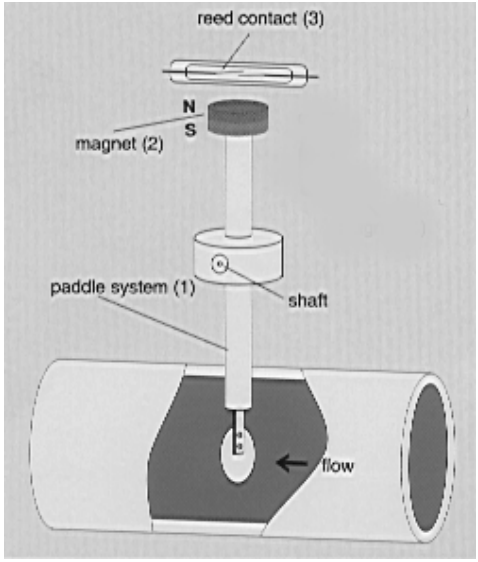
| | |
|---|---|
| Electrical | Working Voltage 230VAC 48VDC |
| Protection | CableSealed = - IP65 |
| Temperature range | Media 10ºF to + 225ºF (- 10ºC to +110 ºC) |
| Max switching current | 1Amp 26 VA or 20Watts |
| Set point tolerance | 15% |
| Cable length | 1.0 Mtrs Standard |
| Maximum working pressure | Brass 25 Bar / PVC 10 Bar (20ºC ) |

**Adjustment Ranges**

| Model | line size | Adjustment range L/min H2o | | | | | |
|---|---|---|---|---|---|---|---|
| VH | | Increasing flow | | | Decreasing flow | | |
| 308 | 1/4" | 2.5 | > | 4 | 2 | > | 3.5 |
| 310 | 3/8" | 3 | > | 4.5 | 2.5 | > | 4 |
| 315 | 1/2" | 4 | > | 6 | 3.5 | > | 5.5 |
| 320 | 3/4" | 8 | > | 11 | 6.5 | > | 10 |
| 325 | 1" | 14 | > | 18 | 12.5 | > | 16.5 |
| 332 | 11/4" | 19 | > | 23.5 | 17.5 | > | 22.5 |
| 340 | 11/2" | 34 | > | 42 | 32.5 | > | 41 |

| | line size | Adjustment range M3/Hr H2O | | | | | |
|---|---|---|---|---|---|---|---|
| 305 | 2" | 3 | > | 3.7 | 2.6 | > | 3.5 |
| | 3" | 9.3 | > | 11 | 8.6 | > | 10 |
| | 4" | 13 | > | 16 | 12 | > | 15 |
| | 6" | 33.5 | > | 36 | 31 | > | 35.5 |
| 306 | line size | Increasing flow | | | decreasing flow | | |
| | 4" | 5.5 | > | 6.8 | 4.2 | > | 6.2 |
| | 6" | 12 | > | 17 | 10 | > | 14 |
| | 8" | 23 | > | 32 | 20 | > | 28 |

## Basic Principles



# VISI-Rate Series Flow Meters & Indicators


## How to Order.

**VRB - B V 05**

This is model VRB With 1/2" Npt brass
Threaded connection scale range 5 - 20 L/Min
Verticle and horizontal Flow Direction

**General Description**

Compact and rugged the VISI- RATE is made from tough polysulphon Construction and measures less than 125mm ( 5" l) in length,
Suitable for permanent instalation in lubrication, cooling irrigation or water treatment systems.
The transparent body permits visual inspection of fluid contamination.
IE Fluid discoloration.

Note.

**1.** Extra long flow rate scale (90mm**)**

**2.** Dual scale L/min amd ( US gals /Min )

**3.** Better than 95% accuracy of actual flow rates - even with variable fluid paramitors

**4.** Optimal price performance

**5.** Can be mounted in any position

**6.** Pressures up to 200 PsI Temp to 120 ºC

| **VRB** | > | **B** | > | **R** | > | | > | **5** |
|---|---|---|---|---|---|---|---|---|
| Model | | Medium Connection | | scale reading | | | | Ranges |
| VRB<br>flow Meter<br>VRI<br>Flow indicator only | | B = 1/2 " Npt<br>C = 3/4 " Npt<br>D = 1 " Npt | | V = Vertical up and Horizontal<br>Pipe mount<br>H = Horizontal and Verical Down<br>Pipe Mount | | | | 05 = 5 >20L/m<br>10 = 10>35L/m<br>15 = 15>55L/m<br>30 = 30>110L/m |

# VISI RATE Flow Meters

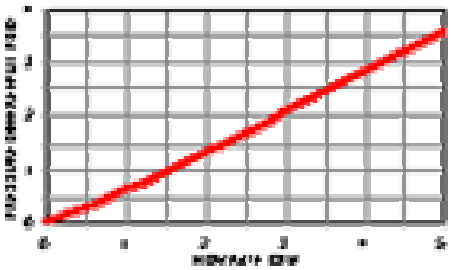

## Operating Theory

The VISI RATE flow meter has a low mass axel turbine which is urged towards zero flow rate by a precision torsion spring. As fluid flows past the turbine blades, a rotational torque is imposed onto the turbine and spring causing the turbine to rotate to a position where the spring's return force equils the fluid torque, flow rate is measured by corrilating turbine rotational displacement to flow rate.

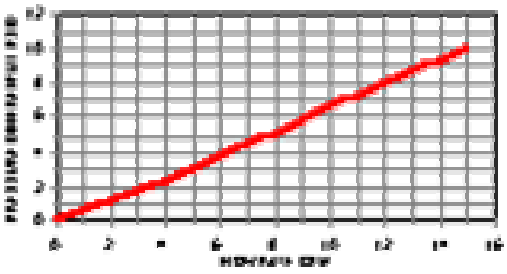
The VISI RATE flow indicator operates without the torsion spring, allowing the turbine to spin freely within the fluid stream.

| | |
|---|---|
| Materials of construction | polysulphone brass, stainless steel, teflon, and buna-N |
| Measuring accuracy | ± 5% of full scale |
| Measuring repetability | ±1% of Full scale |
| Maximum operating pressure | 200 PSIG |
| Maximum operating temperature | 120 ºC |
| Minimum flow detection VRI indicators | 1 l/min |
| Filtration required | Min 37 micron |

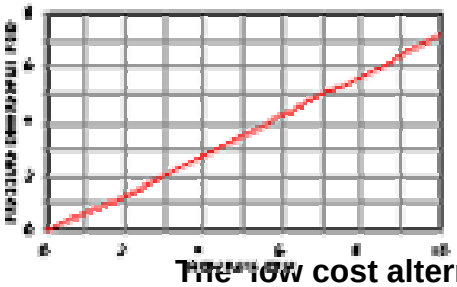
### -05 Flowmeters



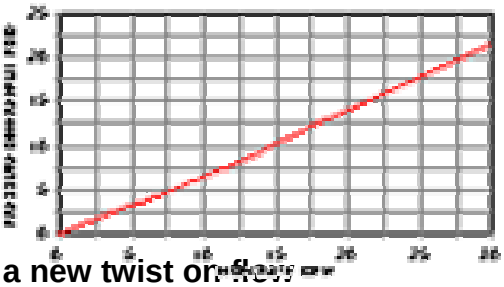
### -15 Flowmeters



### -10 Flowmeters



### -30 Flowmeters



**The low cost alternative putting a new twist on flow**

# Flow Monitors From Lake

**General Description**

Compact and rugged the flow meter is made from quality material Construction and measures approximately 167mm ( 7" I) to 182mm (71/2) in length, Suitable for permanent installation in lubrication, cooling irrigation or water treatment systems.
This Solid metal body enables easy flow reading regardless of fluid condition I IE Fluid discoloration.

Note.

**1.** Monitors liquid flows up to 150 G/Min

**2.** Dual scale L/min amd ( US gals /Min )

**3.** Pressures up to 6000 Psi (420 bar)

**4.** Temperatures up to 600 ºF(315ºC)

**5.** Can be mounted in any position

6. Good viscosity stability

**7.** No flow straighteners needed

**8.** Opaque or clear fluids

## How to Order.

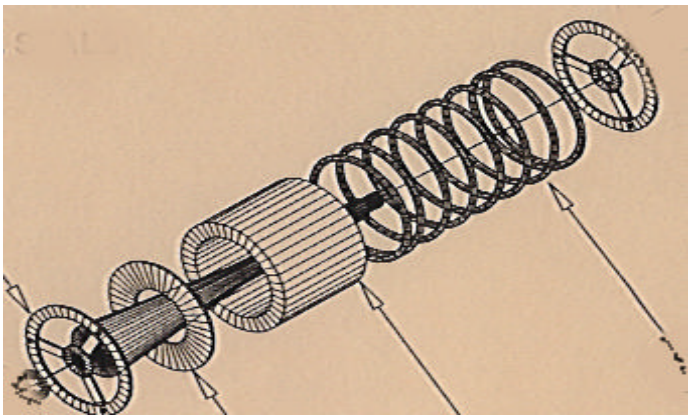
**B3B 6WT 05**

This is Basic flow meter Brass Body for water 1/2 Bsp Connections max pressure 3500 Psi flow range 2 - 20 L/min

| **B** | **3** | **B** | **>** | **6** | **W** | **T** | **>** | **0.5** |
|---|---|---|---|---|---|---|---|---|
| Model | Meter Size | Body Material | Pressure Rating | Media | Connection | | | Ranges |
| B = Basic | | | | | | | | 01 = 5 L/m |
| G = Pneumatic | 3 = 1/4 > 1/2" | A = Alum | 4 = 600 Psi | A = Air | T = 1/2" | Bsp | | 02 = 8 L/m |
| M = with switch | 4 + 3/4 > 1" | B = Brass | 6 = 3500Psi | W = Water | U = 3/4" | Bsp | | 05 = 20L/m |
| N = with 2 switches | 5 = 11/4 > 11/2" | S = St St | 7 = 6000Psi | H = Oil | V = 1" | Bsp | | 10 = 35L/m |
| T = Test unit | | | | | W = 11/4" | Bsp | | 15 = 55L/m |
| J = Hi Temp unit | | | | | | | | 20 = 75L/m |
| | | | | | | | | 25 = 95L/m |
| | | | | | | | | 30 = 110L/m |
| | | | | | | | | 40 = 150L/m |
| | | | | | | | | 50 = 200L/m |
| | | | | | | | | 75 = 280L/m |

# Sharp Edge Orifice Plate flow Meter

(1



(4)

(2) (3)

## Internal cartridge

**1. Guide Disk**

**2. Floating orifice disk**

**3. Transfer magnet**

**4. Return spring**

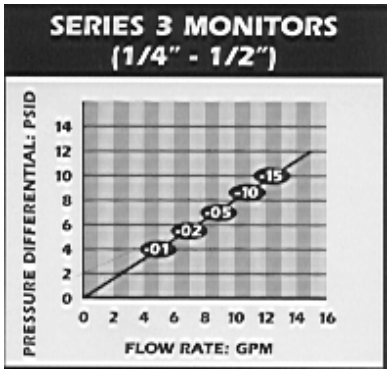
$$F3 = \frac{1}{Sp\ Gr}$$

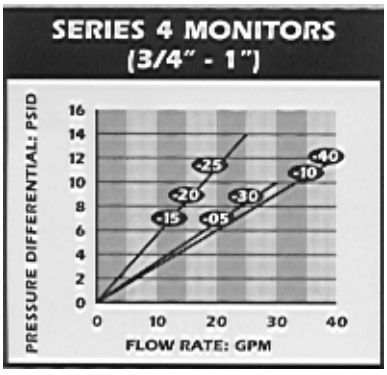
SG Correction factor = F3

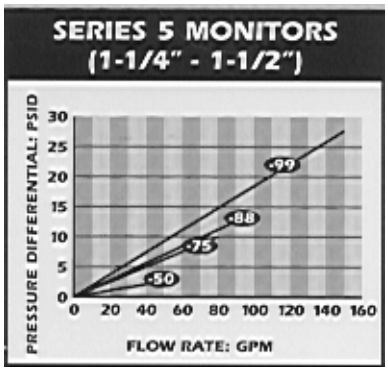
| | |
|---|---|
| Materials of construction | Aluminum brass, stainless steel, Lexen outer sleeve |
| Measuring accuracy | ± 2.5% through middle 1/3 of scale 4% within full scale |
| Measuring repeatability | ± 1% of Full scale |
| Maximum operating pressure | 600 PSIG For Air & Gases/ liquids Aluminum and brass 3500Psi |
| Maximum operating temperature | 120º C ( 250 ºF) Standard on request up to 315ºC ( 600 ºF) |
| Minimum flow detection | 0.5 l/min |
| Filtration required | Min 37 micron |

**Operating Theory**

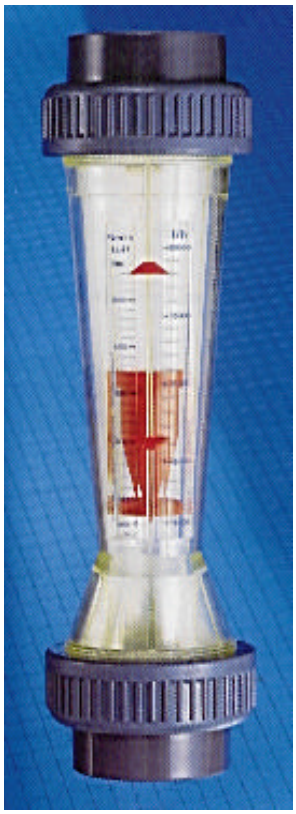
Enclosed in a high pressure casing a high strength magnet(3) in tandem with a sharp edge orifice disk (2) is pressed towards the zero flow position by a linear compression spring (4) a tapered metering pin is positioned concentrically within the annular orifice disk and provides a Variable area opening that increases by the square of linear displacement of the orifice disk. Fluid flow creates pressure differential across the orifice disk pressing the duo against the compression spring. Flow rate is read by aligning the magnetically coupled magnet follower with the graded scale located inside the lexen outer clear sleeve. This type of unit is also available with single or double switches or 4 - 20ma output



# BVA Series Flow Meters



**BVA 2000 SW P 00**

This is model BVA, 2000 L/hr, PVDF float connection PVC solvent weld ends

**General Description**

Based on the float Principle with the float moving freely without friction in the measuring tube.
With the measurement taken at the top of the float, the standard scale is for water at 20ºC
The Measuring tubes are available In PVC, Trog amid, or Polysulphon, Floats are PVDF or St St
PVC Union Ends solvent weld standard threaded optional

Note.

**1.** Extra long flow rate scale

**2.** Scale L/min, Meters 3, or Percentage

**3.** Better than 4% accuracy of actual Flow or Class 4 to VDI 3513 part 2

**4.** Must be mounted vertically

**5.** Good corrosion resistance

**6.** Visual media contamination

| **BVA** | **1000** | **>** | **SW** | **>** | **P** | **>** | |
|---|---|---|---|---|---|---|---|
| Model | Scale reading | | Medium Connection | | Float | | Limit switch |
| BVA flow Meter | range L/min | | SW = Solvent weld<br>TH = threaded | | P = PVDF Standard<br>S = St St<br>M = with magnet | | L1 = 1 low flow switch<br>H1 = 1 High flow switch<br>D2 = Hi & low Switches |

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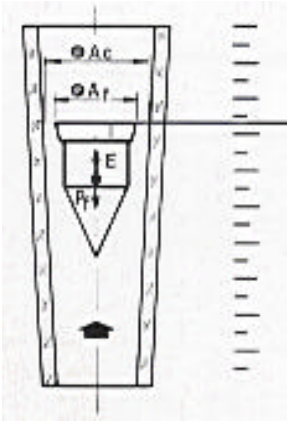
Technical Specifications

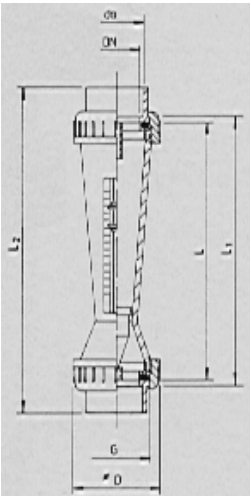
# BVA Flow Meters




## Operation Principle

The fluid flows up through the tapered tube forcing the float to a position with sufficient free area to enable the flow to pass this free area is related to the flow rate, the weight of the float and the density and the viscosity of the fluid.
The pressure drop across the flow meter remains constant over the entire flow range, due to the velocity of the fluid, and the area of the flow increasing as the flow rate increases.

| Part N'o | Measuring range Ltrs / Hr H2O | | da | DN | L | L1 | L2 | D |
|---|---|---|---|---|---|---|---|---|
| **BVA 24** | 3 | > 24 | 15 | 10 | 165 | 172 | 199 | 43 |
| **BVA 60** | 5 | > 60 | 20 | 15 | 170 | 176 | 199 | 43 |
| **BVA 100** | 10 | > 100 | 20 | 15 | 170 | 176 | 199 | 43 |
| **BVA 150** | 15 | > 150 | 20 | 15 | 170 | 176 | 199 | 43 |
| **BVA 250** | 25 | > 250 | 25 | 20 | 185 | 191 | 229 | 60 |
| **BVA 400** | 40 | > 400 | 25 | 20 | 185 | 191 | 229 | 60 |
| **BVA 600** | 60 | > 600 | 32 | 25 | 185 | 191 | 229 | 60 |
| **BVA 1000** | 100 | > 1,000 | 32 | 25 | 185 | 191 | 229 | 60 |
| **BVA 1500** | 150 | > 1,500 | 32 | 25 | 185 | 191 | 403 | 60 |
| **BVA 2000** | 200 | > 2,000 | 50 | 40 | 335 | 341 | 417 | 83 |
| **BVA 3000** | 300 | > 3,000 | 50 | 40 | 335 | 341 | 417 | 83 |
| **BVA 6000** | 600 | > 6,000 | 63 | 50 | 335 | 341 | 457 | 103 |
| **BVA 10000** | 1000 | > 10,000 | 63 | 50 | 335 | 341 | 457 | 103 |
| **BVA 15000** | 1500 | > 15,000 | 75 | 65 | 350 | 356 | 444 | 122 |
| **BVA 25000** | 2,500 | > 25,000 | 75 | 65 | 350 | 356 | 444 | 122 |
| **BVA 50000** | 10,000 | > 50,000 | 75 | 65 | 350 | 356 | 444 | 122 |

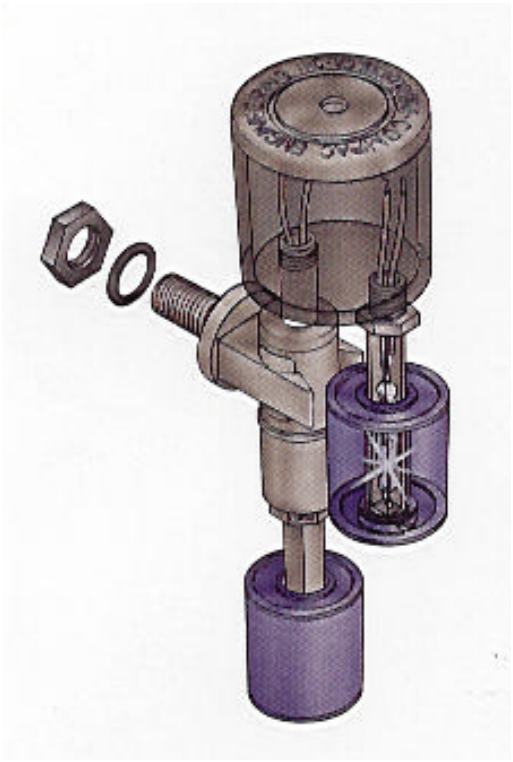


**Limit Switch Operation**

**Maximum flow:**
On increasing flow the contact closes when the float reaches the height of the alarm sensor . And remains closed while the float is above the sensor.
It opens again when the flow reduces and the float returns to below the sensor.

**Minimum Flow:**
on reducing flow, the contact closes when the float reaches the height of the alarm sensor. It remains Closed while the float is below the sensor.
It opens again when the flow increases and the float rises above the sensor

# BLC ERECTA Series Level Switches



**General Description**

Based on the Meccano building block system and the float principle, and with the float moving freely without friction in the reservoir
The reeding is taken at the middel of the float, can be used for vertical High or low switching or alarms supplied in kit form, or fully assembled constructed from Polypropylene Acetal or Kynar (PTFE)

Note.

**1.** Easy to assemble

**2.** No glue required O' ring seals or screw together componants

**3.** Multiple options available

**4.**Must be mounted vertically

**5.**Good corrosion resistance

**6.**Easy installation

## How to Order.

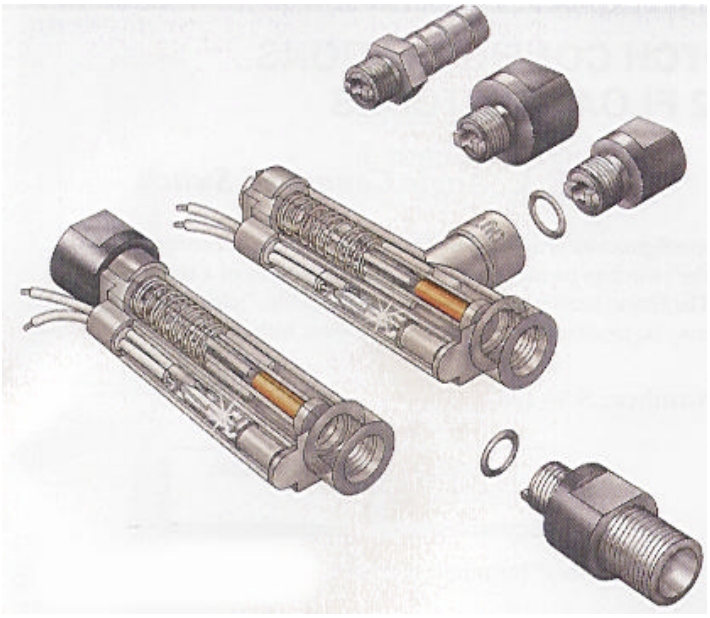
**BLC 20-1000-2 - P JB**

This is model BLC, 1 mtr long, Polypropylene float
2 switches And electrical junction box

| BLC20 | 1000 | > | SW | > | P | > | JB |
|---|---|---|---|---|---|---|---|

| Model | Length (MM) | Number of Switches | Material | Electrical Housing |
|---|---|---|---|---|
| 20 | 1000 | 2 | P = Poly Standard<br>A = Acetyl<br>K = Kynar (PTFE) | CH = Control Head<br>JB = Junction Box<br>HC = Hershman Connector |

# BFS ERECTA Flow Switches



**General Description**

Based on the Meccano building block system and the float principle, This low flow switch system is available in three materials
The plastic body is fitted with a titanium spring and Viton O'rings for high integrity operation in corrosive and none-corrosive applications.
constructed from Polypropylene
Acetyl or Kynar (PTFE)

Note.

**1.** Easy to assemble

**2.** No glue required O' ring seals or screw together components

**3.** Multiple options available

**4.**Can be used on liquids or gases

**5.**Good corrosion resistance

**6.**Easy installation

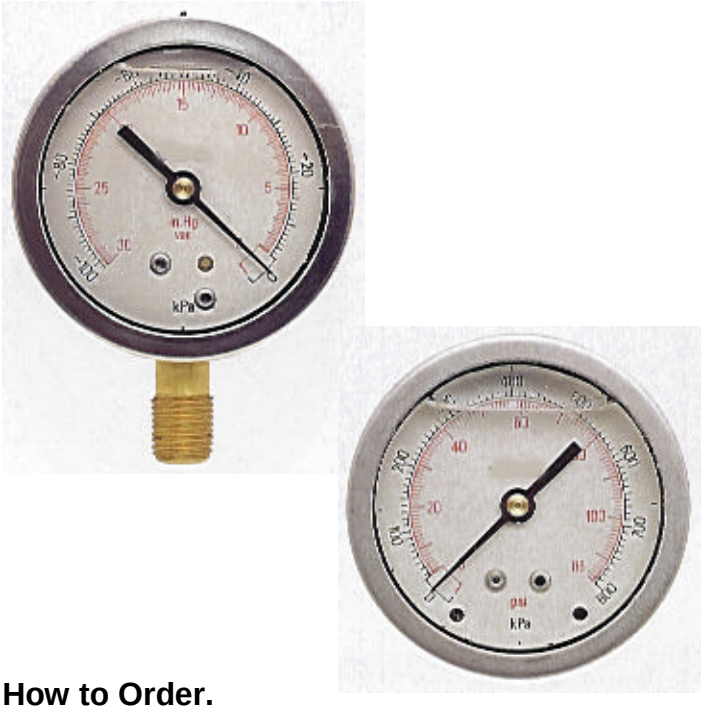
## How to Order.

**BFS5 20-P-3 - 08- JB**

This is model BFS, series 5, Inline body Polypropylene switch set 0.5 G/min 1/2 Nptm ends And electrical Junction Box

| BFS5 | 20 | > | P | > | 3 | > | 8 | | JB |
|---|---|---|---|---|---|---|---|---|---|
| Series | Model | | Material | | Set point G/Min | | End fittings | | Options |
| 5 | 19<br>20<br>21 | | P = Poly Standard<br>A = Acetyl<br>K = Kynar (PTFE) | | 1 = 0.10<br>2 = 0.25<br>3 = 0.50<br>4 = 0.75<br>5 = 1.00 | | 02 = 1/8 Npt<br>04 = 1/4 Npt<br>08 = 1/2 Nptm<br>10 = 1/2 Hose | | LF= Low Flow Trim<br>VI= Visual Indicator<br>JB= Junction Box<br>AL= Built in Alarm |

# BPG Heavy Duty pressure gauges



**General Description**

Process gauges suitable for heavy duty service, Available in a veriety of materials and Dial sizes both dry and liquid filled designed for OEM applications where reliability and cost mater.
Gauge movements are precision machined to ensure high accuracy and reliability
This modern design serves well for modular construction system, bringing quality and reliability to a peak.

## How to Order.

**BPG 2B-LM-10B-D-L**

This is model BPG, 21/2" Dial, Brass internals Bottom Entry 0 to 10Bar range Direct mount Liquid filled

Note.

**1.** High reliability and long service life

**2.** Accuracy class 1.0

**3.** Copper alloy measuring system

**4.**Overload capacity 1.3 x

**5.**Application up to end scale value

**6.**Easy installation

| **BPG2** **B** | **>** | **LM** | **>** | **10B** | **>** | **D** | | **L** |
|---|---|---|---|---|---|---|---|---|
| Size mm | | Internals | | Connection | | Pressure Range | Style | Options |
| 63 mm = 2<br>100 mm = 4<br>150 mm = 6 | | Brass = B<br>St St = S<br>Monel = M | | Back = CB<br>Bottom = LM | | duel Scale =D<br>KPA =K<br>Bar = B<br>PSI = P<br>State max pressure Range | D = Direct Mount<br>P = Panel Mount | L = Liquid Filled<br>S = Snubber |

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# Flow Switches

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