INSTRUMENTATION PRODUCTS

Float level switches, Level Gauges, Pressure Switches, Thermostatic Plugs, Pressure gauges, Flow Meters



PASSION TO PERFORM



Technical Information

Seal Material to suit different fluids

| | Alkaline | Brake Fluid | Ammo- nia | Water | Air | Mineral Oil | Motor Oil | Diesel fuel | Petrol | Hydro- carbons | Haloge- nerated Solvent | Ethlene Glycol | Silicone | Max Ope- rating temp |
|----------------|----------|----------------|--------------|-------|-----------|----------------|--------------|----------------|--------|-------------------|-------------------------------|-------------------|-----------|-------------------------------|
| Nitrile | | | | | $\sqrt{}$ | V | V | V | | | | V | $\sqrt{}$ | 100°C |
| Viton | | | | √ | V | V | V | √ | V | √ | V | | V | 120°C |
| EPDM | V | V | V | √ | V | | | | | | | √ | V | 120°C |
| Neopro- ene | | | | V | V | | | | | | | V | V | 80 ₀ C |

Dimensions

All dimensions are in mm unless otherwise stated.

The data and information contained in this publication are provided only for the purpose of information.

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MG Series

RL Series

Rapid Level Series Level Switches

Single float level switch Resistant to contaminants Variable point options SPDT contacts

Features:

- The required length can be obtained simply by cutting the steel
 rod, (this can be achieved using an ordinary pipe cutter). The
 switching point can also be varied by using a float with a
 through hole allowing the required liquid control point to be
 modified whenever necessary.
- Can be used for dirty liquids, water, petroleum, cutting oils.
 Tolerates the presence of metal and ferrous particles, since the float does not hold a magnet and is integral with the rod.
- One float can operate just one Reed (min. or max. level), or two Reeds (min. and empty and extra max. level)
- Enhanced safety with the electrical part completely separate in the tank side and perfectly sealed by ultrasonic welding.
- Nylon-glass body is designed for strength and is highly resistant to chemicals. Ideal as an insulating container for the Reed contacts.
- Rods suitable for control of a max. measurement of 500 or 1000mm.
- Rod length cutting instructions supplied with each product
- The control rod can commutate the signal of 1 or 2 Reeds in sequence (with single or exchange contact).

Maximum Working Pressure

10Bar.

Connections

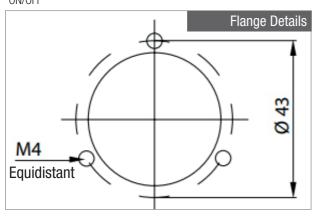
Flange diameter 55 O/D

Operating Temperature

-20 to +80°C - Standard Delrin Float

-20 to +120°C - Stainless steel float (Optional)

Output ON/OFF



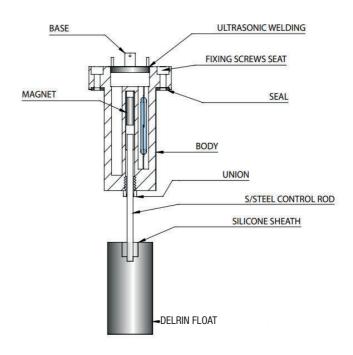
Specification

Glass filled nylon Stainless steel rod IP65 rating Connector to DIN 43650 Delrin float with silicone security joint LED Option available

Fluid Compatibility

Mineral Oils
Synthetic Oils
Phosphate Ethers
Water-based Emulsions
Water Glycols

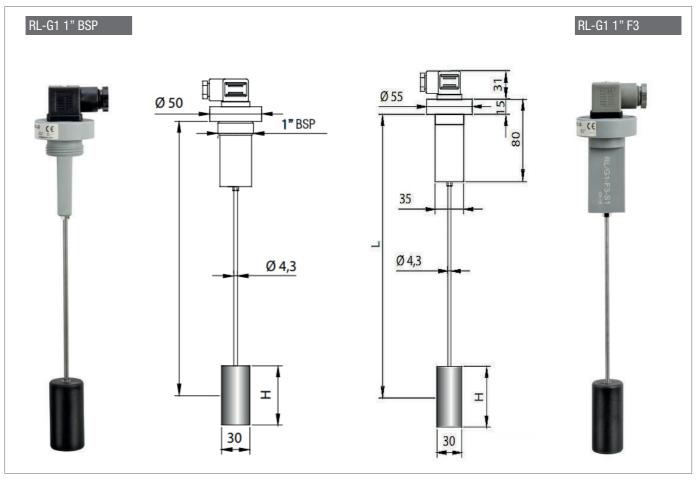
* For other fluids, please consult MP Filtri UK Ltd

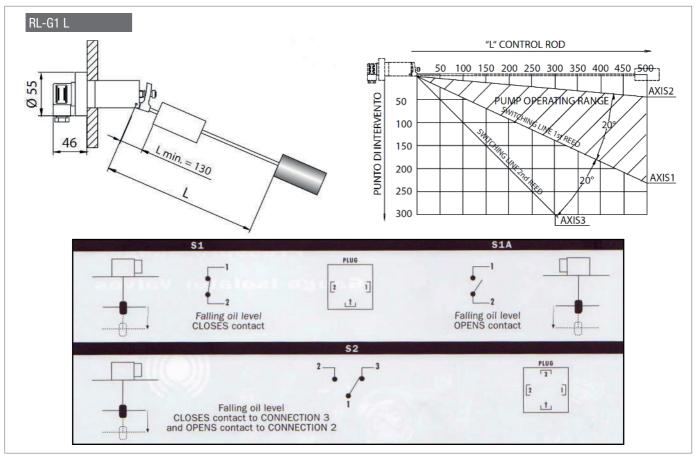


On request the float can be supplied with through hole and therefore be positioned in the required position without having to cut the rod (which can therefore be as long as the height of the tank).

If necessary, the liquid control point can be modfied as required by simply moving the float. Available on request with AISI 316 stop







RL-G2 Series

Double Float Rapid Level Float Switch Series

Two control points Resistant to contaminants Variable points SPST or SPDT contacts

Features:

- The RL/G2 range has a head which holds two control rods and two floats.
- Each control rod can communicate the signal of 1 or 2 reeds, either exchange or single signal. Therefore this double roded control switch can communicate up to 4 signals
- Flexibility to choose the most suitable system for each rod.
- In case of excessively dense liquids the two floats can be supplied independently from each other to prevent rod 1 from undergoing friction with the float of rod 2.
- The minimum distance between the two points to be controlled is 100mm.

Maximum Working Pressure

10Bar.

Connections

Flange diameter 55, 11/4" BSP Thread

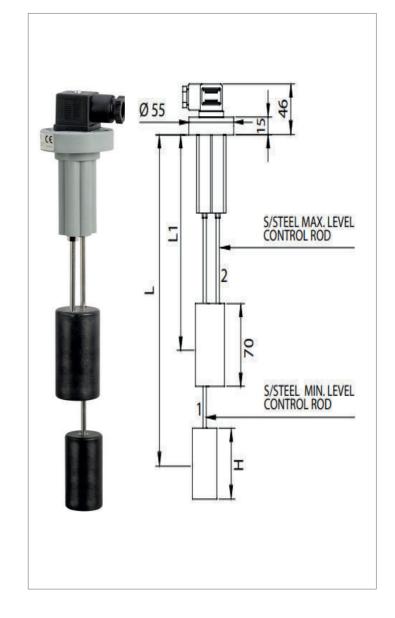
Operating Temperature

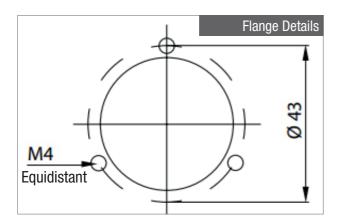
-20 to +80°C - Delrin Float

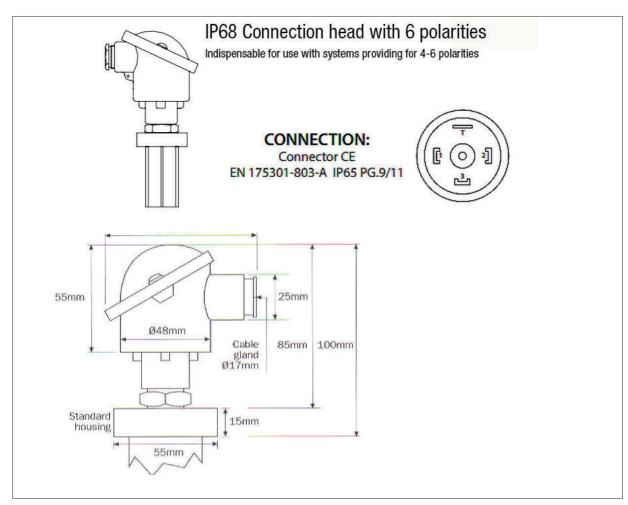
-20 to +120°C - Stainless Steel Float

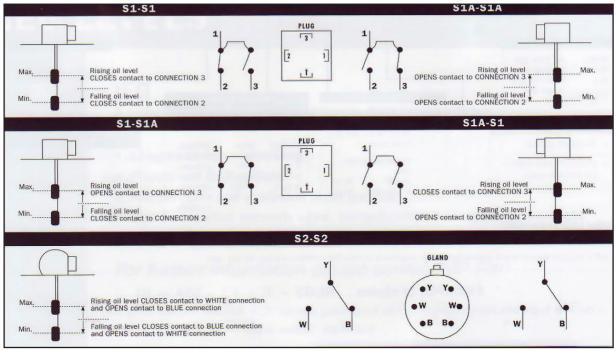
Output

ON/OFF

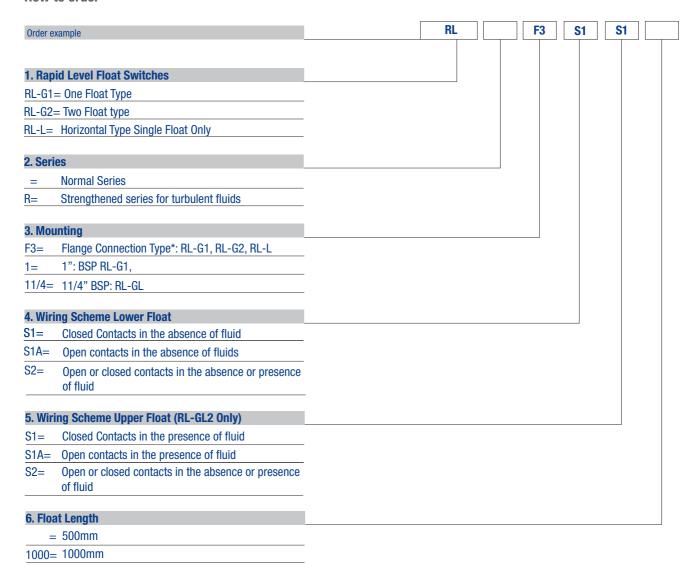








How to order



LED Visual Light Indicator

LED1 Supplied sepearately and is easily installed in conjunction with the DIN connector - AC/DC 24V

ORDER EXAMPLE

RL-G2 - R - F3 - S1A - S1

Two float levels with strengthing three-hole flange wiring scheme, S1A lower float and wiring scheme, S1for upper float length - 500mm



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RL-G1 Series

Rapid Level Series Level Switches

Visual float levels Resistant to contaminants Variable level

Features:

- The easiest way to visually monitor liquid level without having to drill the side of the tank.
- The float pushes the rod with an indicator at the top which clearly and accurately shows the level of the liquid.
- Rod protector supplied as standard.

Installation:

Adjustment is quick and practical:

- Remove the float that creates a pressure seal with a silicone sheath (version with NBR float)
- Cut the rod and centring tube with a pipe cutter
- Refit the float or it can be ordered already to size.

Maximum Working Pressure

10Bar.

Connections

Flange diameter 55, 1"1/4 BSP,

Operating Temperature

-20 to +80°C

Output

Only visual

Installation

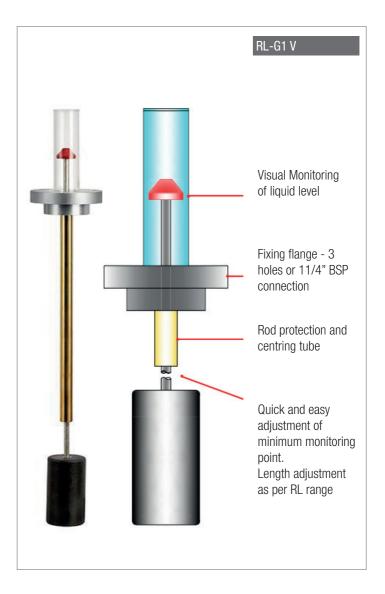
We recommend a 100 hole on the top face of the tank. Remove the float and reassemble it during the switch installation.

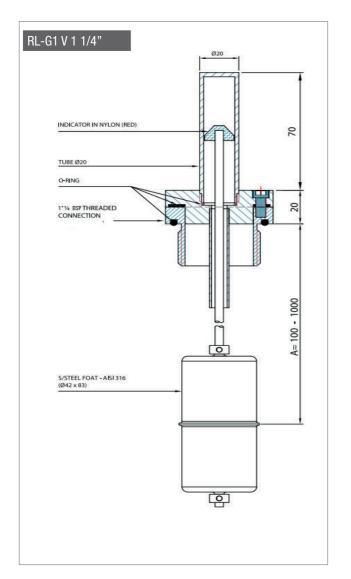
How to order

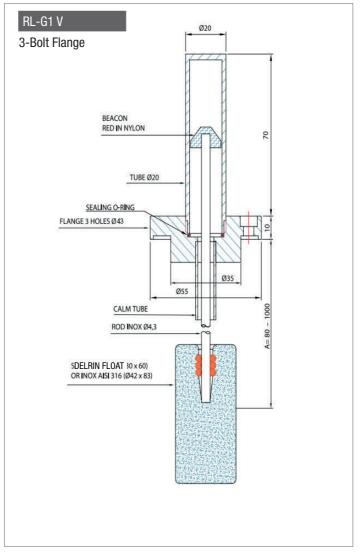
RL-GL-V1-1 1/4 1 1/4" BSP Flange

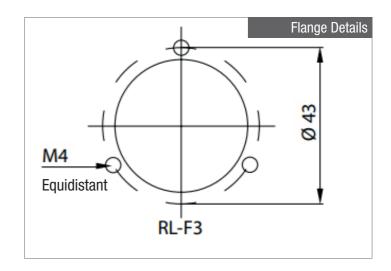
RL-G1-V-F3 3 Bolt Flange

Delrin Float as standard









LV Series

Visual level indicator with both minimum and maximum level detection

100mm to 4m lengths available Aluminium 'U' Protection One product, two functions One item to fit

Safe working with the electrical part completely separated from the fluid and insulated from the outside.

Features:

- Allows the liquid level to be checked in a clear and precise way at any time.
- The level gauges can be equipped with a tap that stops the flow of liquid from the tank to the gauge.
- C/C distances of 127 ÷ 500 mm are fully interchangable with all major level gauges.
- 'U' protection screen is normally fitted in order to ensure visibility on the front part of the level gauge, but if necessary it can be turned 90° to deliver visibility on the right or left.
- Minimum level signal which can be Normally Open, Normally Closed, or Exchange contacts on request.

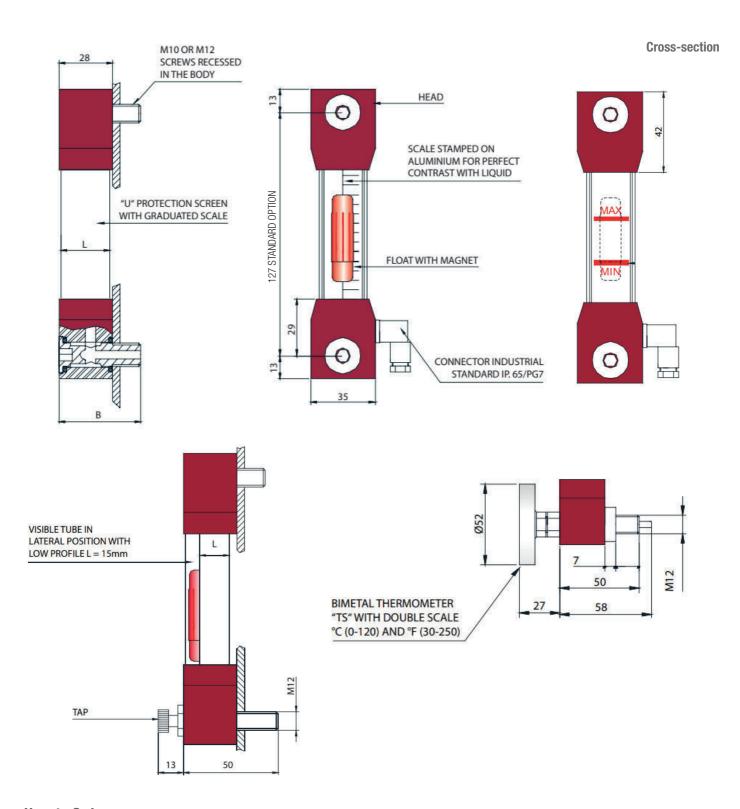
Maximum Working Pressure 10Bar

Maximum Tightening Torque 33NM



Electrical Connections

| LV/E1 | SPST - N.C. Without Fluid | SPST - NC With Fluid | SPDT |
|---------------------------------|---------------------------|----------------------|---------------|
| Electrical characteristics | 12 | 12 | 3 — 2 — 1 |
| Commutable Power (DC) | 20W | 20W | 20W |
| Commutable Power (AC) | | 20VA | 20VA |
| Strength of Current (AC and DC) | 1A | 1A | 1A |
| Commutable Voltage | 200V | 150V | 150V |
| Temp Range - Acrylic Tube | -20 to +70°C | -20 to +70°C | -20 to +70°C |
| Temp Range - Pyrex Tube | -20 to +100°C | -20 to +100°C | -20 to +100°C |



How to Order

Example 1:

LV/E1-500-M12-Exchange

Visual Level with minimum level signal and with bolt centres of 500mm, M12 bolts and exchange contacts

Example 2:

LV/E2-127-M10

Visual Level with minimum and maximum level signal and with bolt centres of 127mm, M10bolts



LV/M

Special Fluid Level Gauge - All Fluid Capability

Different polymeric materials used for the transparent tube, blocks and 0-ring

Stainless steel AISI 316 in the metallic parts in contact with the liquid

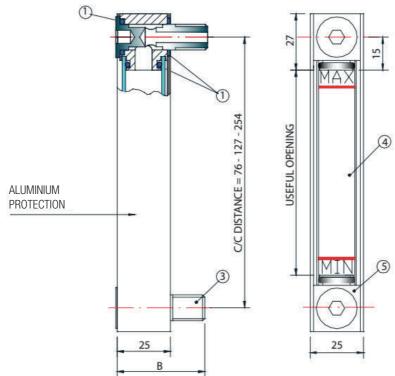
Features:

- Constant and continuous indication of the level of the liquid
- Protected from shocks by using a profle 'U' anodized aluminium
- 3 Centres option 76, 127, and 254mm

Maximum Working Pressure 10Bar

Maximum Tightening Torque 33NM





IEG

Single and Double Float Level Switches

Fixed length
Lengths to one metre
Flange and BSP options
Temperature and explosion proof options
Can be supplied Normally Open, Normally Closed or Exchange

Contact MP Filtri UK Ltd for further details



How to Order

LV/M Level Gauges and IEG Level Gauges

Please contact MP Filtri UK Ltd for further details.

FLU/P Series

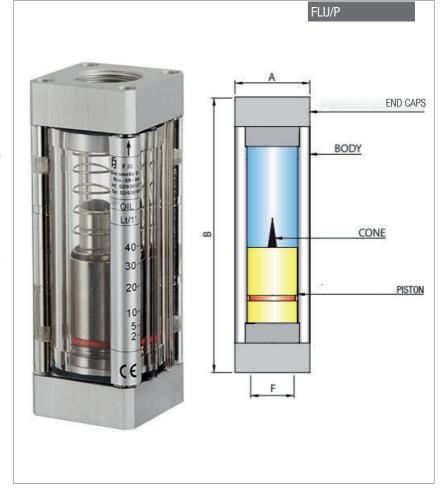
Visual Flowmeters

Flowmeter for liquids Mineral oil or water as standard BSP threads

Features:

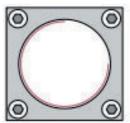
- Flowmeter offers exceptional visibility on each side and a clear and easy-to-read scale.
- Cone design ensures accuracy of measurement
- Threaded connection head: anodized aluminum.
- Body material: Grilamid[™] TR55 (PA Transparent) high resistance.
- O-Ring: NBR; Contact MP Filtri for options

Maximum Working Pressure 25Bar.



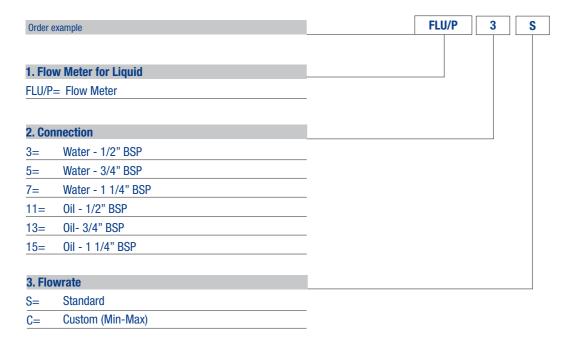
Please contact MP Filtri UK for more information

FLU/P



| Liquid | F | Flowrate Ltrs/Min | Max Pressure Bar | Material | А | В | С | Temp Range |
|--------|------------|----------------------|------------------------|---------------------------|-------|-----|----|----------------|
| Water | 1/2" BSP | 120 | 30 | | 40x40 | 150 | 57 | -20°C to +80°C |
| | 3/4" BSP | 536 | 25 | Cone and Shutter: PVC | 55x55 | 160 | 72 | -20°C to +80°C |
| | 1 1/4" BSP | 2095 | 25 | 1 10 | 55x55 | 160 | 72 | -20°C to +80°C |
| | 1/2" BSP | 116 | 30 | Cone and | 40x40 | 150 | 57 | -20°C to +80°C |
| Oil | 3/4" BSP | 530 | 25 | Shutter: Nickel-plated | 55x55 | 160 | 72 | -20°C to +80°C |
| | 1 1/4" BSP | 2080 | 25 | Brass | 55x55 | 160 | 72 | -20°C to +80°C |

How to order



FLU/P Series

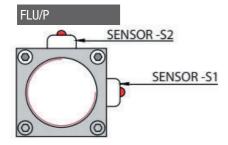
Flow Switches

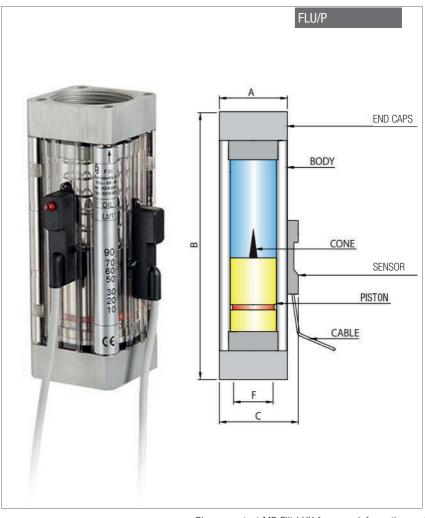
Flow Switch for liquids BSP threads Mineral oil or water as standard Two adjustable electrical contacts

Features:

- Flow Switch offers exceptional visibility on each side and a clear and easy-to-read scale.
- Cone design ensures accuracy of measurement
- FLU/P series can be equipped with 1 or 2 alarm sensors, giving a signal in the presence or absence of the predetermined flowrate
- Threaded connection head: anodized aluminum.
- Body material: Grilamid™ TR55 (PA Transparent) high resistance.
- O-Ring: NBR; Contact MP Filtri UK for more options.
- Electric Sensors: SPST, SPDT

Maximum Working Pressure 25Bar.

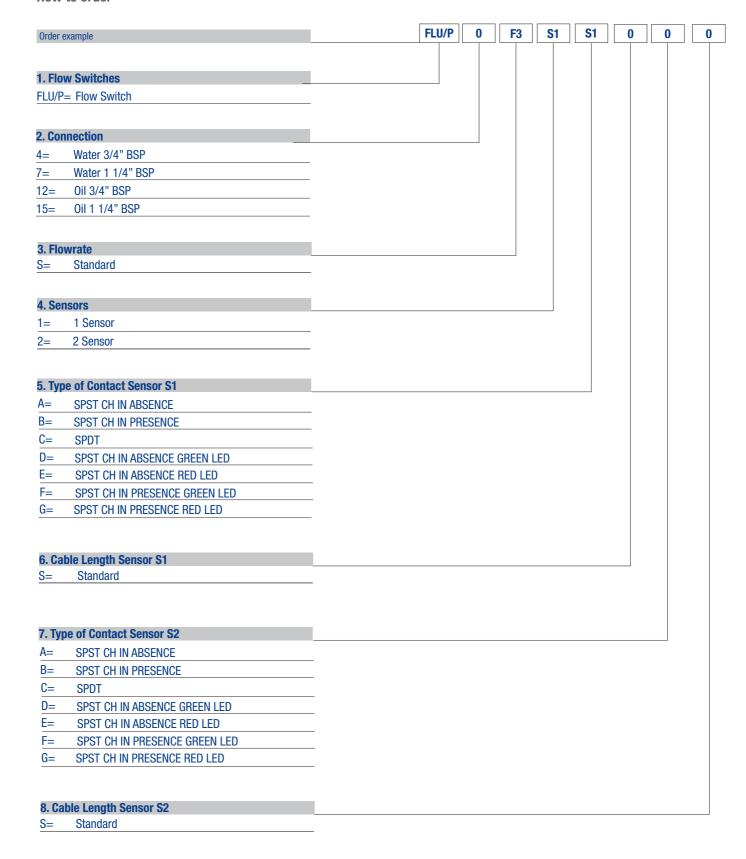




Please contact MP Filtri UK for more information and for other size and fluid options.

| Liquid | F | Flowrate Ltrs/Min | Max Pressure Bar | Material | А | В | С | Temp Range |
|--------|------------|----------------------|------------------------|---------------------------|-------|-----|----|----------------|
| Water | | | | | | | | |
| | 3/4" BSP | 524 | 25 | Cone and Shutter: PVC | 55x55 | 160 | 72 | -20°C to +80°C |
| | 1 1/4" BSP | 2095 | 25 | 1 100 | 55x55 | 160 | 72 | -20°C to +80°C |
| | | | | Cone and | | | | |
| Oil | 3/4" BSP | 520 | 25 | Shutter: Nickel-plated | 55x55 | 160 | 72 | -20°C to +80°C |
| | 1 1/4" BSP | 2080 | 25 | Brass | 55x55 | 160 | 72 | -20°C to +80°C |

How to order



IP/IPN Series

Piston-operated Pressure Switches

Max working pressure: 6-630 bar Available as standard in two sizes BSP and CETOP adaptors available

Features:

- A range of piston-operated fixed differential, electro-hydraulic pressure switches with exchange electrical contacts.
- Mountable in any direction
- DIN 43650 connector as standard
- Non-standard switches available on request for use with special fluids and high-temperature operations
- When pre-set pressure is achieved, actuates an electrical microswitch
- Exceptional stability and repeatability (±1%)

Installation:

- The pressure switches type IPH can be mounted in any position
- Fluid to be used: hydraulic oil in compliance with DIN 51524 rules, viscosity between 30 and 100 mm2/s (cSt) at 40°C
- Recommended filtration of 25µ absolute to Beta 1000
- Hydraulic fluid temperature: from -20° to +75°C



| Voltage | 125AC 250AC | | 30DC | 150DC | | |
|------------------------------------|---------------------------|-------------------------|------------------------|----------|--|--|
| Max Current (resistive load) | 7 Amp | 5 Amp | 5 Amp | 0.2 Amp | | |
| Max Current (Inductive Load) | 4 Amp | 2 Amp | 3 Amp | 0.02 Amp | | |
| Connection Frequency | Max 120 cycles per minute | | | | | |
| Protection | | IP- | 65 | | | |
| Direct Current with inductive load | | It is suggested to prov | ide an arching contact | | | |
| Contact Resistence 15 $m\Omega$ | | | | | | |

How to Order

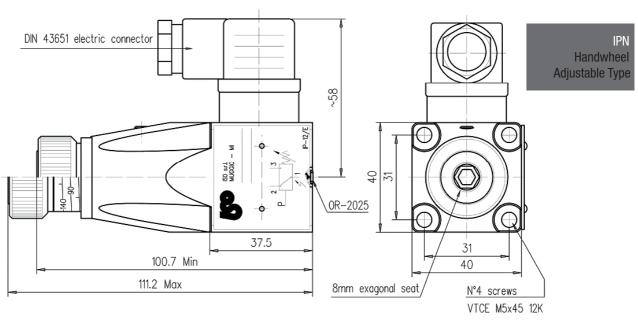
ID _ ***/

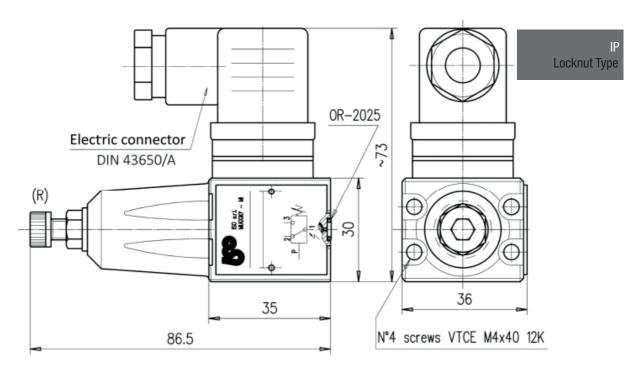
IA = electric contacts type A IE = electric contacts type E

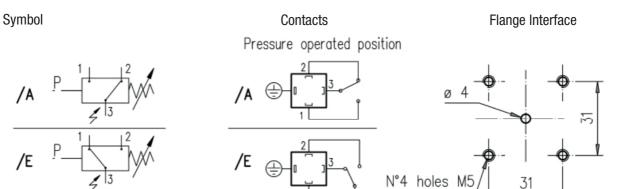
Pressure Setting: **035**=6-35bar **150**=12-150bar **250**=15-250bar **350**=30-350bar **630**=50-630bar

Pressure Switch

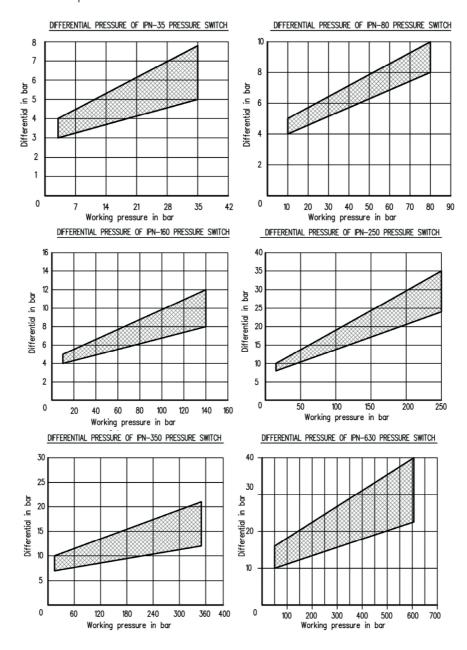
Cross-section



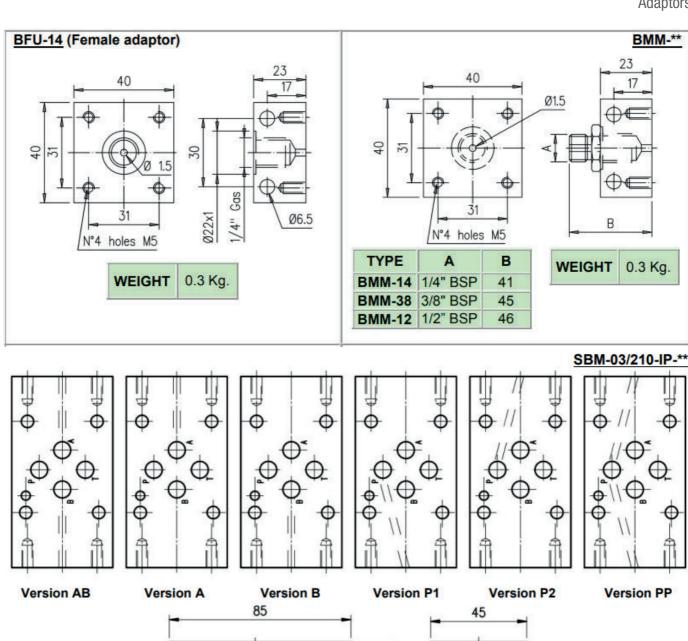


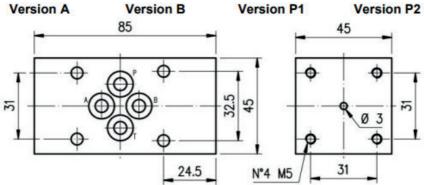


Switch Pressure Differential Graphs



Adaptors





IPH Series

Piston-operated Pressure Switches

Max working pressure: 6-630 bar Available as standard in two sizes BSP and CETOP adaptors available

Features:

- A range of piston-operated fixed differential, electro-hydraulic pressure switches with exchange electrical contacts.
- Mountable in any direction
- DIN 43650 connector as standard
- Non-standard switches available on request for use with special fluids and high-temperature operations
- When pre-set pressure is achieved, actuates an electrical microswitch
- Exceptional stability and repeatability (±1%)

Installation:

- The pressure switches type IPH can be mounted in any position
- Fluid to be used: hydraulic oil in compliance with DIN 51524 rules, viscosity between 30 and 100 mm2/s (cSt) at 40°C
- Recommended filtration of 25µ absolute to Beta 1000
- Hydraulic fluid temperature: from -20° to +75°C



| Voltage | 125AC | 250AC | 30DC | 150DC | | | | |
|------------------------------------|-------|---------------------------|------------------------|----------|--|--|--|--|
| Max Current (resistive load) | 7 Amp | 5 Amp | 5 Amp | 0.2 Amp | | | | |
| Max Current (Inductive Load) | 4 Amp | 2 Amp 3 Amp | | 0.02 Amp | | | | |
| Connection Frequency | | Max 120 cycles per minute | | | | | | |
| Protection | | IP- | 65 | | | | | |
| Direct Current with inductive load | | It is suggested to prov | ide an arching contact | | | | | |
| Contact Resistence | | 15 mΩ | | | | | | |

How to Order

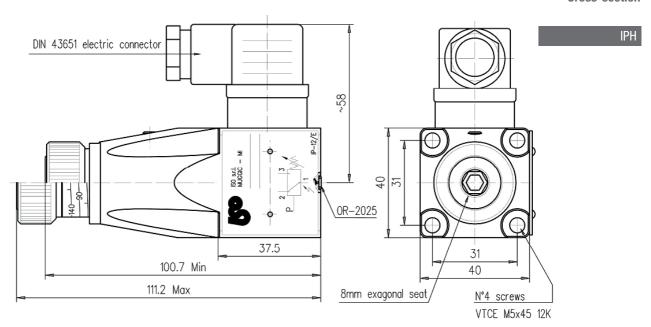
IPH- ***/*

IA = electric contacts type A IE = electric contacts type E

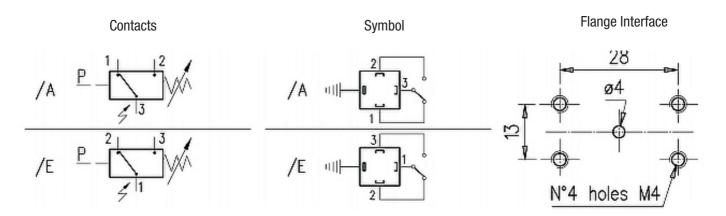
Pressure Setting: **035**=6-35bar **150**=12-150bar **250**=15-250bar **350**=30-350bar **630**=50-630bar

Pressure Switch

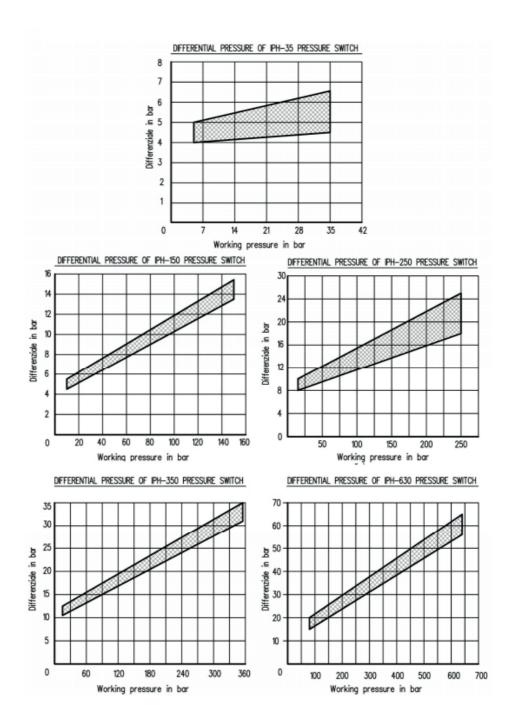
Cross-section



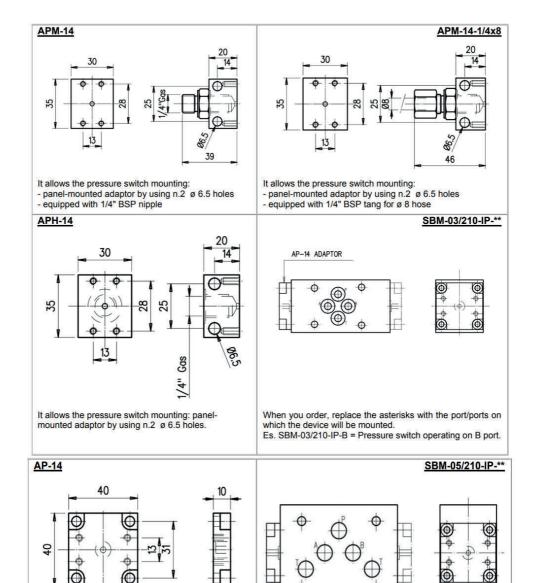
Connections



Switch Pressure Differential Graphs



Adaptors





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It allows the pressure switch mounting:

- as a replacement of pressure switches type IP

- together with modular subplate type SBM (see on

(MPALTRI

AP-14 ADAPTOR

which the device will be mounted.

When you order, replace the asterisks with the port/ports on

Es. SBM-05/210-IP-B = Pressure switch operating on B port.

27N

Diaphragm Pressure Switch

Electric Contacts: Silver

Electrical Condition: SPDT (exchange contact)

Electrical Characteristics: 4(2)A / 24 Vdc 6(2)A / 250 Vac

Max Fluid Temperature: (depending on diaphragm) 80°C to 120°C

Mechanical Working Life: 10⁶ operations

Max Over Pressure Limit: Zinc plated steel - 300 bar Brass - 80 bar

Max Working Pressure: Zinc plated steel - 300 bar Brass - 40 bar

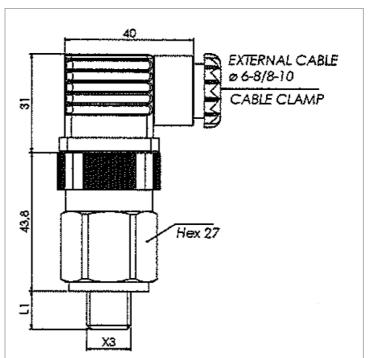
Protection Rating: IP65

Hysteresis: 10-50% adjustable (Avg 30%)

Weight: 130g

How to Order See Page 30





28N

Piston Pressure Switch

Electric Contacts: Silver

Electrical Condition: SPDT (exchange contact)

Electrical Characteristics: 4(2)A / 24 Vdc 6(2)A / 250 Vac

Max Fluid Temperature: 80°C

Mechanical Working Life: 10⁶ operations

Max Over Pressure Limit: 800bar

Max Working Pressure: 450bar

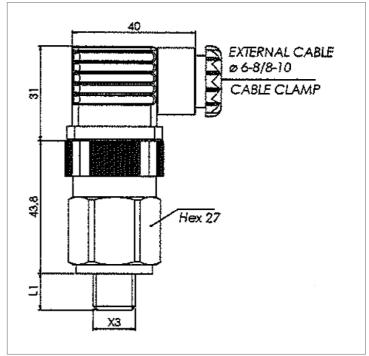
Protection Rating: IP65

Hysteresis: 30-50% adjustable (Avg 40%)

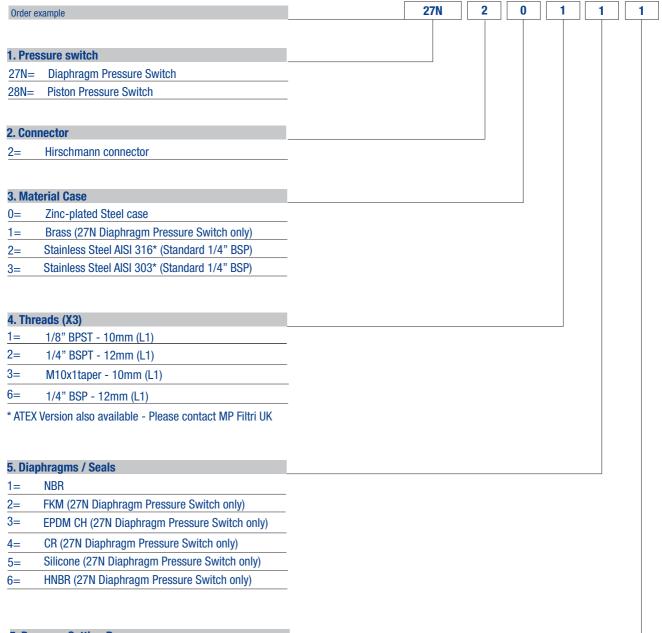
Weight: 140g

How to Order See Page 30





How to order



5. Pressure Setting Range

| | Setting range bar | Tolerance at 20°C | Model |
|----|-------------------|-------------------|-------|
| 1= | 0-3 - 1.5 | ±0.2 | 27N |
| 2= | 1-5 | ±0.3 | 27N |
| 3= | 1-10 | ±0.5 | 27N |
| 4= | 10-50 | ±2 | 27N |
| 5= | 10-100 | ±3 | 27N |
| 6= | 50-200 | ±2-10 | 28N |
| 7= | 100-400 | ±5-15 | 28N |

AS28N

Pressure Switches

For Mobile Applications IP67 Protection Rating

Features:

Connector:

Deutsch DT04-3P with W-3P Pin Deutsch 1060-16-0122

Setting:

TBC

Tolerance to 20°C:

±5bar

Maximum Overpress Limit:

800bar

Maximum Fluid Temperature:

80°C

Mechanical Working Life:

10⁵ Operations

Switched Voltage:

24Vdc

Maximum Switched Current:

2 (1) A

Action Type:

1B

Pollution Situation:

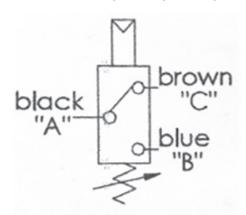
Normal

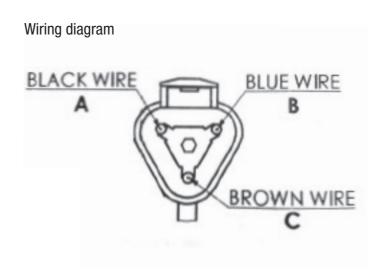
Ordering Example:

Please contact MP Filtri UK for more information.



Electric connections (without pressure)





TDP53

Thermostatic Plugs

For Mobile and Industrial Fluid Applications
Temperature trip control - various settings
Full range of thread sizes
Aluminium housing
Suitable for: System temperature control, Pump and
motor overheat protection, Oil tank temperature control,
Cold start protection

Features:

Case:

OT58 Brass/Aluminium

Differential:

10%

Intervention tolerance:

±5%

Voltage:

12V-Current 10A, 24V-Current 10A, 120V-Current 15A,

240V-Current 10A

Number of Cycles:

100,000

Temperature Range Rate:

1-2% per minute

Minimum Current:

200 mA

Din43650 Connector Standard

Ordering Options:

Temperature Trips:

40°C, 50°C, 60°C, 70°C, 80°C, 90°C

Sizes:

1/4" BSP, 3/8" BSP, 1/2" BSP, 3/4" BSP

Contacts:

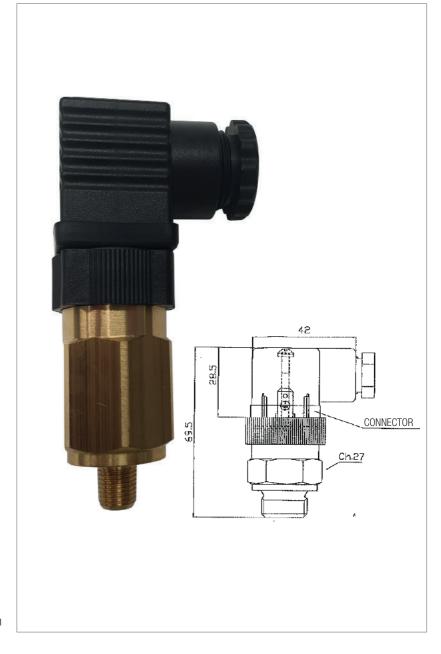
N.O. - Normally Open

N.C. - Normally Closed

How to Order

TDP53 - 3/4 - 70°C - N.O.

3/4" BSP Threaded Plug, 70°C Temperature Limit, with Normally Open Contacts.



TT4

Temperature transmitter

For temperature applications
Proportional output signal
Choice of Nickle plated or Stainless Steel AlSI316L body
Available with an extension to intercept fluid in the tank
Special electrical connection options
Choice of measurement pressure ranges
M3 and M12 models available

Features:

Working temperature:

 0°C to $+100^{\circ}\text{C}$

Non linearity + hysteresis:

 ${<}5\%$ of the end of the scale at 20°C

Zero Thermic Drift:

<3% of the end of the scale from 0°C to +70°C

Weight: 0.07kg Body:

Nickle plated brass

Wetted parts in nickle plated brass and integral seal in NBR Stainless Steel AlSI316L body (TT4X)

Electrics:

Power Supply standard executions: $4\text{-}20\text{mA} \rightarrow 2$ wires: from 12 to 24 VDC 0-10 V \rightarrow 3 wires: from 12 to 24 VDC Electric connection: DIN43650(M3) Electric connection: IEC60947-5-2 (M12)

Electric protection: CEI EN 60529, IP65 (M3 and M12)

Please contact MP Filtri UK for options and information

How to Order TT4 -200-2-M3



| Туре | Temperature measurement range | Pressure max | Hydraulic connection | Execution type | Electric Connection | Power Supply |
|------|-------------------------------------|-----------------|---|--|--|---|
| TT4 | 0 - 100° C | 200 bar | 1 - 1/2" BSP-M 2 - 3/4" BSP-M 3 - M22x1.5-M | 0-12V execution If omitted it means standard execution is: 4-20mA | M3 Connector 30x30 connector M12 Connector Connection M12x1 (Female connector excluded) | 12V Power Supply 10- 15 V If omitted it means standard execution is 15-28VDC |

MG Series

Pressure Gauges

Glycerine Filled 0-600 Bar ranges Dual Scale (Bar/PSI)

Features:

Accuracy: EN837 - Class 1.6 to 2.5 DSMG B40 - 1 - Grade B

Sizes:

63mm (1/4" BSP) 100mm (1/2"BSP)

Operating Temperature: $\pm 60^{\circ}\text{C}$

Materials:

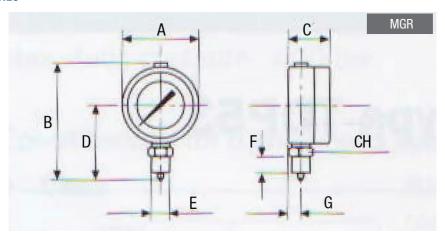
Case: Stainless Steel - 304

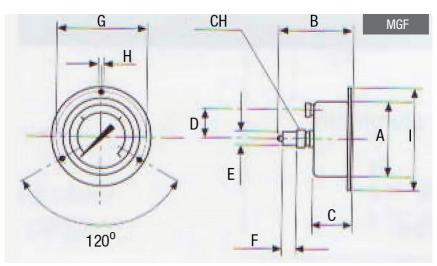
Tube and connection: Stainless Steel - 304

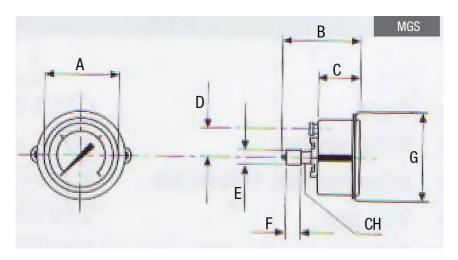
Movement: Brass Window: Glass



Dimensions - MG63 Size

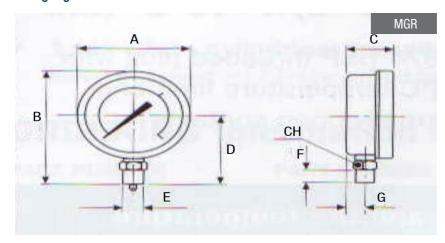


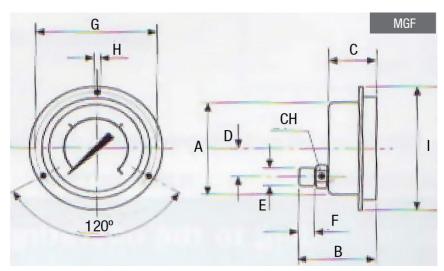


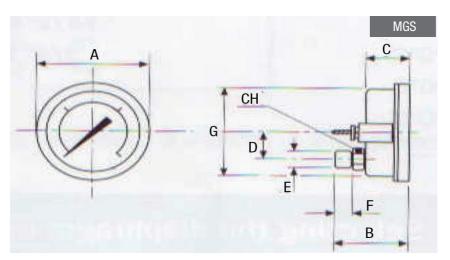


| TYPE | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | l mm | CH mm | WEIGHT g |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-------------|
| MGR 63 | 63 | 84.5 | 37 | 53 | 1/4" | 12 | 12 | - | - | 14 | 300 |
| MGF 63 | 63 | 58.5 | 69.5 | 24 | ` 1/4" | 12 | 75 | 3.6 | 85 | 14 | 300 |
| MGS 63 | 63 | 60 | 37 | 24 | 1/4" | 12 | 68 | - | - | 14 | 300 |

Dimensions - Note: 100mm gauges- 60 bar and under are 3/8" BSP connection

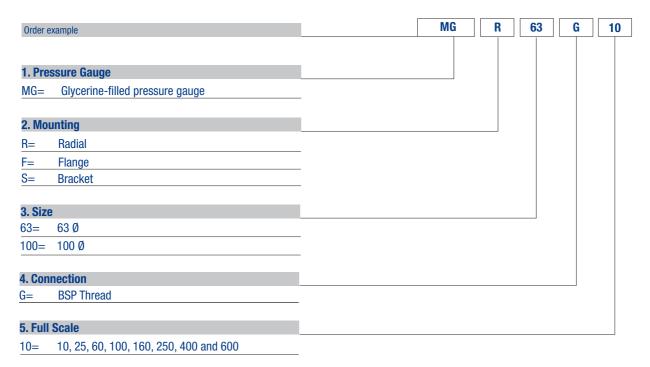






| TYPE | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | l mm | CH mm | WEIGHT g |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-------------|
| MGR 100 | 100 | 137 | 49 | 87 | 1/2" | 20 | 135 | - | - | 22 | 1200 |
| MGF 100 | 100 | 75.5 | 49 | 30 | `1/2" | 20 | 116 | 4,8 | 132 | 22 | 1200 |
| MGS 100 | 100 | 77 | 50 | 30 | 1/2" | 20 | 100 | - | - | 22 | 1200 |

How to order



The data and information contained in this publication are provided only for the purpose of information.

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PASSION TO PERFORM