

- > 3/2 Smart solenoid poppet valves; 1/4 NPT ... 3/4 NPT, G1/4 ... G3/4
- > Partial Stroke Testing integrated into the ICO4 valve
- > Dramatically reduces engineering requirements
- > Up to 5 Cv removes need for additional QEV's and Pilot valves
- > Offers SIL 3 performance as 1oo1
- > Always gives maximum possible Diagnostic Coverage, thus facilitating maximum possible proof test intervals



Technical features

Medium:
Pneumatic – customer to specify and confirm compatibility

Operation:
Direct solenoid operated poppet valves with integral pressure transmitter

Operating pressure:
0 ... 10 bar (0 ... 145 psi)

Flow:
0,8 Cv (11,5 Kv) ... 5 Cv (72 Kv)

Port size:
1/4 NPT, 1/2 NPT, 3/4 NPT, G1/4, G1/2, G3/4

Mounting position:
Solenoid vertical

Ambient/media temperature:
1/4 ... 1/2 NPT resp. G1/4 ... 1/2 -40 ... +60°C (-40 ... +140°F)
3/4 NPT resp. G3/4 -40 ... +50°C (-40 ... +122°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:
Valve body, trim, coil housing and top cover: stainless steel 1.4404 (316 L)
O-rings seats & seals: NBR/FPM

Other seal materials available on request

Technical data - standard models

| Symbol | Port size | Cv | Conduit connection | Seal Material | Weight (kg) | (lbs) | Drawing No. | Model |
|--------|-----------|-----|--------------------|---------------|-------------|-------|-------------|-------------|
| | 1/4 NPT | 0,8 | 1/2 NPT | NBR | 6,7 | 14,8 | 1 | Y413AA1H2BS |
| | G1/4 | 0,8 | M20 x 1,5 | NBR | 6,7 | 14,8 | 1 | Y413AE1H1BS |
| | 1/2 NPT | 2,1 | 1/2 NPT | NBR | 6,9 | 15,2 | 2 | Y413AA3H2BS |
| | G1/2 | 2,1 | M20 x 1,5 | NBR | 6,9 | 15,2 | 2 | Y413AE3H1BS |
| | 3/4 NPT | 5 | 1/2 NPT | NBR | 9,0 | 19,8 | 3 | Y413AA5H2BS |
| | G3/4 | 5 | M20 x 1,5 | NBR | 9,0 | 19,8 | 3 | Y413AE5H1BS |

Other product and body material available for more information contact Maxseal technical service

Electrical details

| | |
|----------------------------|--|
| Voltage: | 24 V d.c., 110/115 V d.c., 125V d.c., 120V a.c. |
| Rating: | |
| Voltage tolerance | ±12,5% of Nominal* |
| Power consumption: | Charging (~4 Mins) 6,7 W (1/4"); 9,7 W (1/2"), 17,4 W (3/4")* Steady-State 5,7 W (1/4"); 8,7 W (1/2"), 16,4 W (3/4")* |
| Insulation class | Class H |
| Conduit connection | 1/2 NPT or M20 x 1,5 |
| IP-Protection class | IP66 |
| EN 60529 | |

*typical for 24VDC ICO4-PST, refer to specific product datasheet - contact sales. Thompson@imi-precision.com for further information

ATEX details

| | |
|-------------------------------------|--|
| Certification: | Ex db IIC T4/T6 |
| Model: | ICO4E |
| Ambient temperature: | T4: 1/4 ... 1/2 NPT resp. G1/4 ... 1/2 -40 ... +60°C (-40 ... +140°F) 3/4 NPT resp. G3/4 -40 ... +50°C (-40 ... +122°F) T6: -40 ... +43°C (-40 ... +110°F) |
| Additional Global Approvals: | In-Metro, TR CU, Class I Div 1 FM3600 / FM3615 / CSA 22.2 |

Option selector

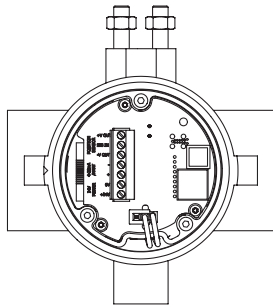
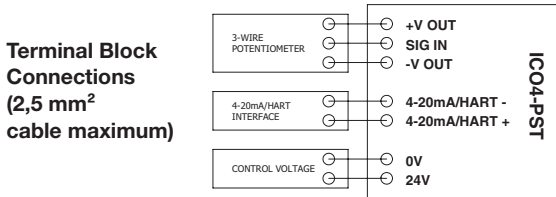
Y413***S**

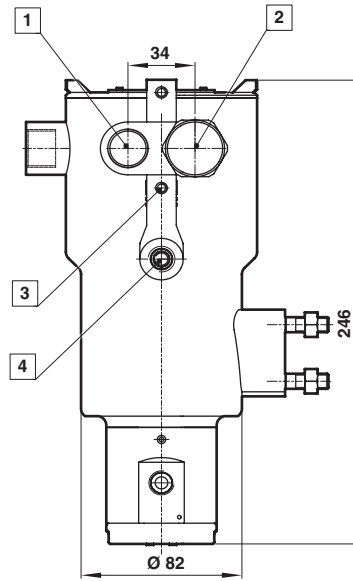
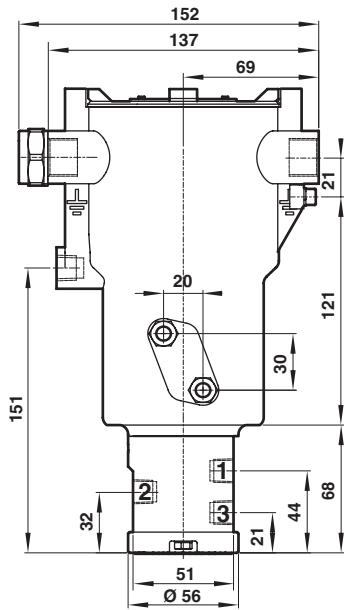
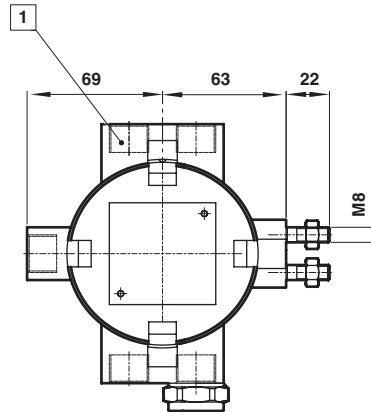
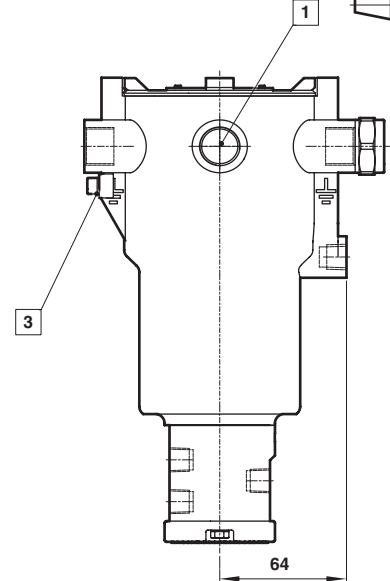
| Operation | Substitute |
|---------------------------|------------|
| Automatic | A |
| Push button, Manual reset | P |
| Remote manual reset | J |
| Port size | Substitute |
| 1/4 NPT | A1 |
| G1/4 | E1 |
| 1/2 NPT | A3 |
| G1/2 | E3 |
| 3/4 NPT | A5 |
| G3/4 | E5 |

| Voltage | Substitute |
|-----------------------------------|------------|
| 24 V d.c. | B |
| 125 V d.c. | E |
| 110 V a.c. | J |
| 110/115 V d.c. | R |
| 120 V a.c. | T |
| Conduit connection | Substitute |
| M20 x 1,5 mm | 1 |
| 1/2 NPT | 2 |
| M20x1,5 with local HART Interface | 3 |
| 1/2 NPT with local HART Interface | 4 |
| Seat/seal material | Substitute |
| NBR | H |
| FPM | V |

Wiring diagram 24 V d.c.

For 100-125V specific wiring diagrams see operating manual MI0588.



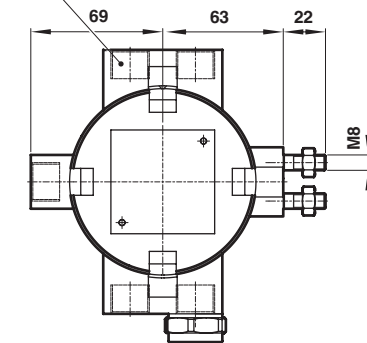
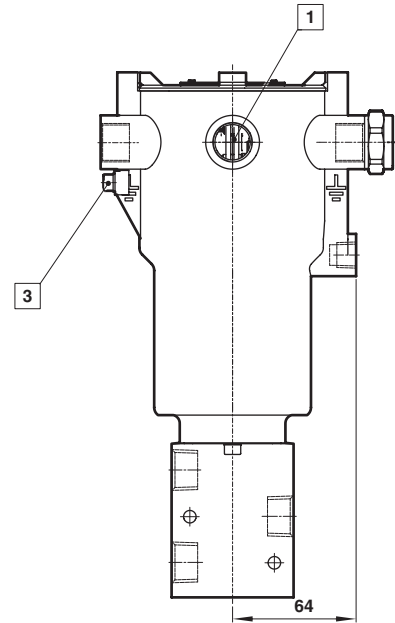
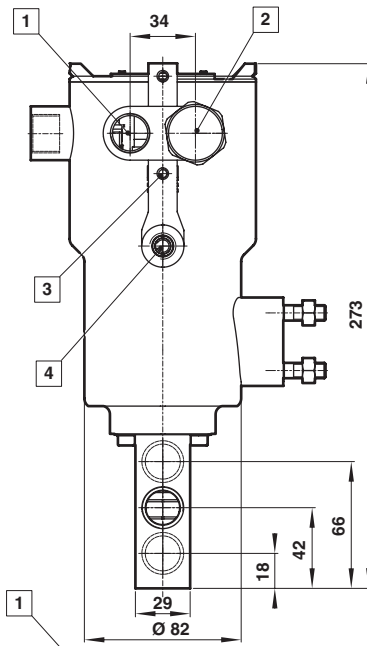
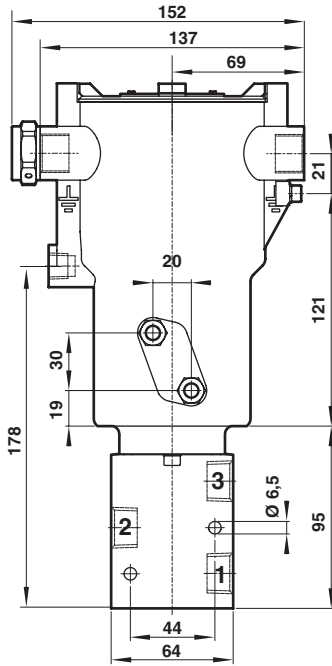
Dimensions
1

 Dimensions shown in mm
 Projection/First angle


- 1 Conduit connection
M20 x 1,5 or 1/2 NPT
- 2 Ex d Breather
- 3 External Earth
- 4 Pressure sensor port 1/4 NPT

Dimensions

2

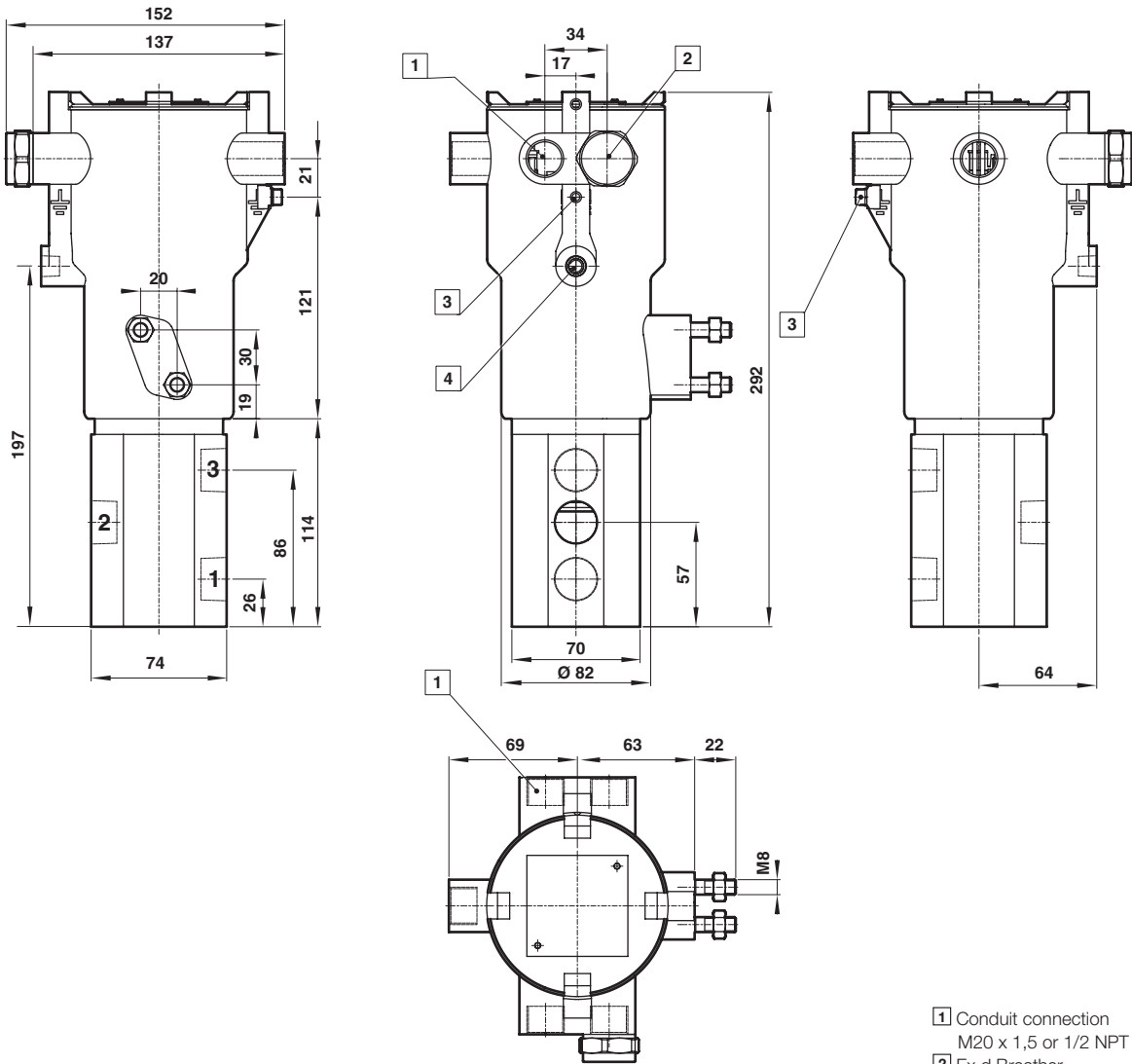
Dimensions shown in mm
 Projection/First angle



- 1 Conduit connection
M20 x 1,5 or 1/2 NPT
- 2 Ex d Breather
- 3 External Earth
- 4 Pressure sensor port 1/4 NPT

Dimensions

 Dimensions shown in mm
 Projection/First angle

3


- 1 Conduit connection
M20 x 1,5 or 1/2 NPT
- 2 Ex d Breather
- 3 External Earth
- 4 Pressure sensor port 1/4 NPT

ICO4-PST Push Button Manual Reset (PBMR)

Dimensions shown in mm
 Projection/First angle

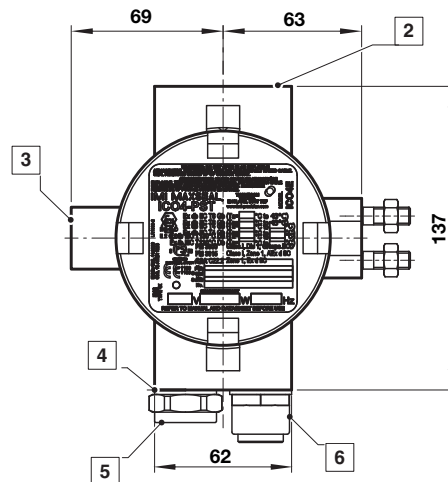
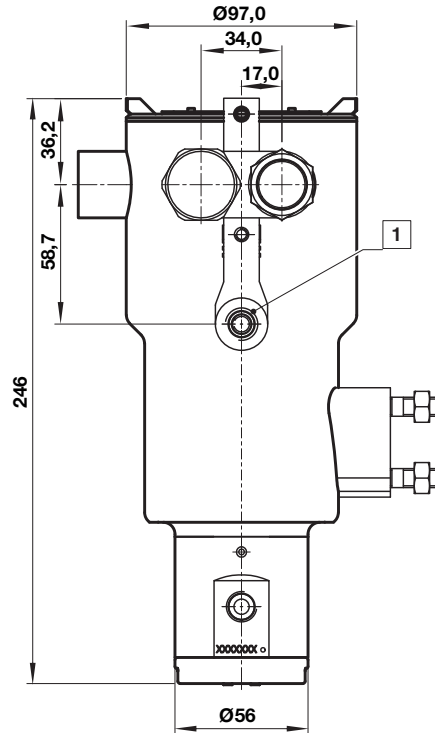


Description:

The ICO4-PST PBMR is an electronic solution to providing push button manual reset functionality to the ICO4-PST. It is an optional addition to the ICO4-PST – refer to option selector for part numbering details. The ICO4-PST PBMR requires connection of correct supply voltage followed by actuation of the push button in order for the valve and electronics to operate. Once the valve has been operated by actuation of the push button it will stay open until the supply voltage is removed, at which point the valve will close in the same manner as the standard automatic ICO4-PST. The ICO4-PST PBMR can also be used in Remote Manual Reset (RMR) mode. For further details on ICO4-PST PBMR and RMR versions refer to manual MI0588.

Certification:

ATEX/IECEX
 Ex II G D
 Ex db IIC T4/T6 Gb
 Ex db IIIC T130°C Db
 T4 Ta +60°C (¼", ½")
 T4 Ta +50°C (¾")
 T6 Ta +43°C (All)
 IP66



- 1 Pressure sensor port 1/4 NPT
- 2 2 x conduit entry on this face
- 3 1 x conduit entry on this face
- 4 2 x conduit entry on this face
- 5 Enclosure breather
- 6 Ex d push button for manual reset function

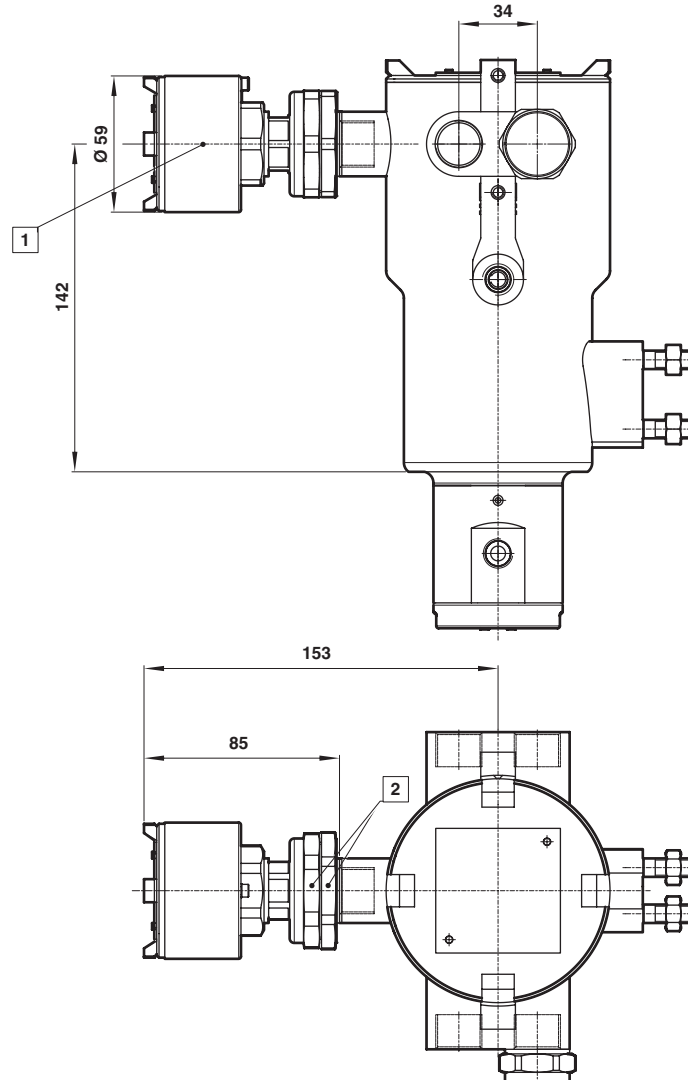
Local HART Interface dimensions
Description:

The Local HART Interface is an optional extra for the ICO4-PST which provides an Intrinsically Safe connection to the HART electrical interface on the ICO4-PST flameproof (Ex d) solenoid valve. This allows a local HART connection to be established with the ICO4-PST with in a hazardous (explosive atmospheres) environment whilst maintaining the ATEX protection of the ICO4-PST. See ICO4-PST Manual MI0588 for further details.

Certification:

ATEX
 Ex II 2 G D
 Ex db mb [ib] IIC T4 Gb
 Ex mb tb [ib] IIIC T135°C Db
 T4 Ta (-40°C to +60°C)
 IP66

Additional Global Approvals:
 Class I Div 2
 CSA 22.2 No 60079
 ANSI / ISA-60079

 Dimensions shown in mm
 Projection/First angle

Authorised Distributor:


46, Jalan SS 22/21, Damansara Jaya,
 47400 Petaling Jaya,
 Selangor Darul Ehsan, Malaysia.

Email: ampmech@ampmech.com
 Website: www.ampmech.com

1 Local HART Interface
 2 46

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features/data**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, Thompson Valves Ltd.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products. For further information please see Functional Safety Manual MI0560.