

R84G - Pressure regulators Excelon® Plus Modular System

- Port size: 3/8" to 3/4" (PTF/ISO G)
- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- Push to lock adjusting knob with built in tamper resistant feature
- Easy to read flush mounted gauge as standard, integrated electronic pressure sensor as option



Technical features

Medium:

Compressed air only

Maximum supply pressure:
290 psi (20 bar)

Outlet pressure ranges:
4 to 58 psi (0.3 to 4 bar),
4 to 102 psi (0.3 to 7 bar),
4 to 145 psi (0.3 to 10 bar),
10 to 247 psi (0.7 to 17 bar)

Gauge:

Integrated as standard
Gauge port 1/8 or electronic
pressure sensor as option

Port size:

G3/8, G1/2, G3/4, 3/8 PTF,
1/2 PTF, 3/4 PTF

Diaphragm Type:

Relieving / Non-relieving

Flow:

265 scfm (125 dm³/s) at
port size: 1/2", inlet pressure
145 psi (10 bar), 91 psi (6.3 bar)
set pressure and a Δp: 14.5 psi
(1 bar) droop from set.

Ambient/Media temperature:

-4 to +149°F (-20 to +65°C)
Air supply must be dry enough
to avoid ice formation at
temperatures below +35°F (+2°C).

Atex:

Filter/regulators R84 are in
conformity with Atex 2014/34/EU

II 2 GD

Ex h IIC T6 Gb

EX h IIC T85°C Db
excluding all versions with
electronic pressure sensor

Materials:

Body: Die cast aluminum


Body covers: ABS

Bonnet: POM/Aluminum

Elastomers: NBR

Valve: PP

Technical data R84G - standard models *1)

Symbol	Port PTF	Pressure range psi (bar)	Adjustment	Integrated gauge psi (bar)	Weight lb (kg)	Model*1)
	3/8	5 to 145 (0.3 to 10)	Knob	0 to 145 (0 to 10)	1.30 (0.59)	R84G-3AK-RMG
	1/2	5 to 145 (0.3 to 10)	Knob	0 to 145 (0 to 10)	1.30 (0.59)	R84G-4AK-RMG
	3/4	5 to 145 (0.3 to 10)	Knob	0 to 145 (0 to 10)	1.30 (0.59)	R84G-6AK-RMG

*1) All models shown here are supplied with integrated gauge applicable for flow direction left to right.

Other models can be configured using the option selector below or by visiting <https://imipic.com/industrial-automation>

R84G - Pressure regulators with integrated electronic pressure sensor

- > Electronic monitoring of secondary pressure
- > 1.44" full color graphic display. Excellent Visual Management.
- > Parameter Adjustment via front screen Buttons or Accessed Via IO-Link
- > Configurable switching output
- > Adjustable settings:
 - Setpoint,
 - Tolerance,
 - Hysteresis,
 - Pressure Units,
 - Temperature Units,
 - Screen Orientation,
 - Digital Output Type (NPN, PNP, Push-Pull),
 - Digital Output State (Normally High, Normally Low)
- > Install as a standard electronic pressure sensor or a pressure transducer with IO-Link

 **IO-Link**



Technical features integrated electronic pressure sensor electrical parameters

Secondary pressure measurement range:

0 to 145 psi
(0 to 10 bar, 0 to 1.0 MPa)

Repeatability:

≤ 0.1% of full scale (FS)
at stable temperature

Accuracy:

≤ 1.5% of full scale (FS)
of detected pressure
(+32 to +122°F, 0 to +50°C)

Units:

Pressure: psi, bar, MPa
Temperature: °F, °C
Voltage: V

Display:

1.44" full color TFT LCD
Text / background colors:
white/green: pressure in range
white/red: pressure out of range
white/amber: error
black/white: setting mode

Display fields:

User configurable identifier,
pressure value, pressure units,
user configurable message, menu

IO-Link smart functions:

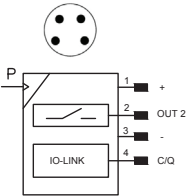
Pressure information
Pressure out of range warnings
Temperature diagnostic
Supply voltage diagnostic
Operating time diagnostic

Min. cycle time:

20 ms

For the Quick Start Guide, Operations Manual, and IODD files, please visit:

<https://imiplc.com/industrial-automation>

	Pin-No.	Signal	Cable
	1	L+ (24V)	brown
	2	Out 2 (switching)	white
	3	L- (0V)	blue
	4	C/Q (IO-Link)	black

Electrical connection:

M8 x 1

Power supply:

18 ... 30 V d.c.

Current consumption:

20 mA

Electromagnetic compatibility:

According to EN 61000-6-2;
EN 61000-6-3

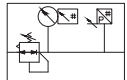
Switching output:

Configurable NPN / PNP /
Push-Pull / NO / NC / hi-Z

Load current:

100mA with short
circuit protection

Technical data R84G - standard models

Symbol	Port size PTF	Pressure range psi (bar)	Adjustment	Integrated gauge psi (bar)	Weight lb (kg)	Model *1)
	3/8	4 to 145 (0.3 to 10)	Knob	0 to 145 (0 to 10)	1.74 (0.79)	R84G-3AK-RME
	1/2	4 to 145 (0.3 to 10)	Knob	0 to 145 (0 to 10)	1.74 (0.79)	R84G-4AK-RME
	3/4	4 to 145 (0.3 to 10)	Knob	0 to 145 (0 to 10)	1.74 (0.79)	R84G-6AK-RME

*1) All models shown here are supplied with integrated gauge applicable for flow direction left to right.

Other models can be configured using the option selector below or by visiting <https://imiplc.com/industrial-automation>

Option selector

R84G-★★★★-★★★★

Port size	Substitute
3/8"	3
1/2"	4
3/4"	6
Thread form	Substitute
PTF	A
ISO G parallel	G
PTF (right to left flow)	J
ISO G parallel (right to left flow)	L
Adjustment	Substitute
Knob	K
T-bar	T*1)
Knob (down)	U
T-bar (down)	Y

*1) Units with 247 psi (17 bar) outlet pressure range are available only with the T-bar adjustment; therefore substitute T at the 7th position and S at the 9th position. T-bar handle only available with 247 psi (17 bar) option.

Gauge	Substitute
With integrated electronic pressure sensor *2)	E
With integrated gauge	G
Without integrated gauge but with gauge port 1/8"	N
Pressure range *3)	Substitute
4 to 58 psi (0.3 to 4 bar)	F
4 to 102 psi (0.3 to 7 bar)	K
4 to 145 psi (0.3 to 10 bar)	M
10 to 247 psi (0.7 to 17 bar)	S*1)
Diaphragm Type	Substitute
Relieving	R
Non-relieving	N

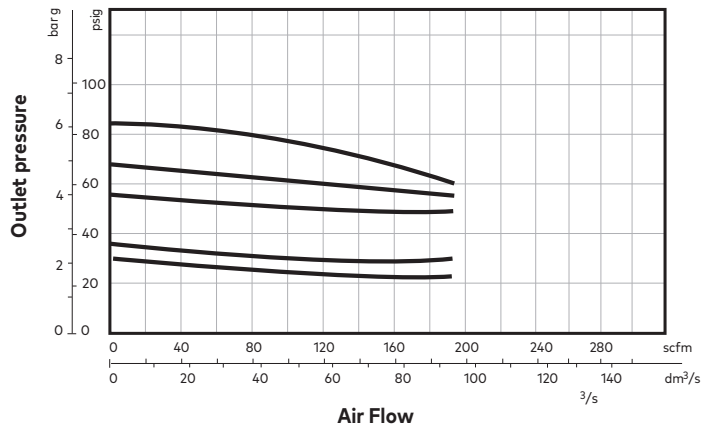
*2) Not available with 17 bar pressure range

*3) Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

Flow characteristics

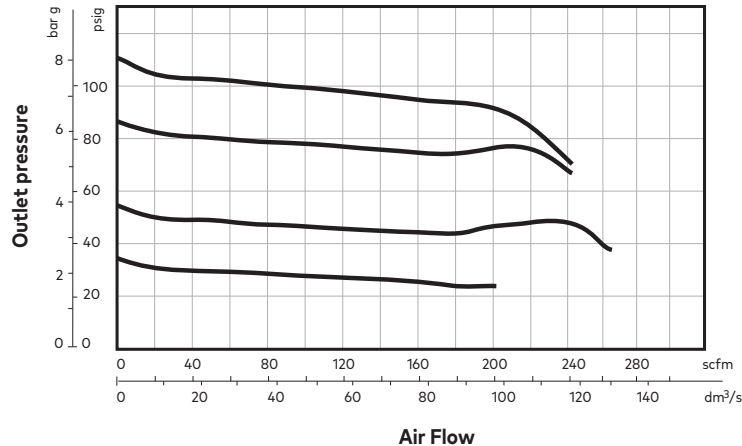
Inlet pressure: 101 psi (7 bar)

Port size: 1/2"



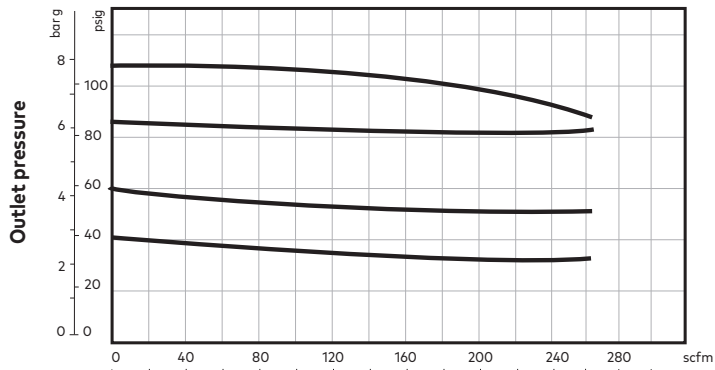
Inlet pressure: 145 psi (10 bar)

Port size: 3/8"



Inlet pressure 145 psi (10 bar)

Port size: 1/2"



Accessories

Quikclamp®



Page 6

840014-51KIT

Quikclamp® with bracket assembled



Page 6

840014-52KIT

Hybrid Quikclamp® *1



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840014-61

Hybrid Quikclamp® with bracket assembled *1



Page 6

840014-62

*1) To connect new Excelon Plus to Excelon 74/73 units. Having the same hole centers as 74 series mounting bracket. A Quikclamp adds 13.6 mm to the overall width of a combination unit

Neck mounting bracket and panel nut



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840068-51KIT

Panel mounting nut



Page 6

840048-89KIT

Mounting bracket



Page 6

840024-50KIT

Integrated gauge 10 bar gauge



840073-01KIT

Integrated gauge 20 bar gauge



840073-02KIT

Gauge adaptor kit 1/8 PTF



840100-01KIT

Gauge adaptor kit R 1/8



840100-02KIT

Full flow porting block horizontal, 3/4 PTF



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840028-50KIT

Full flow porting block horizontal, G3/4



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840028-53KIT

Full flow porting block vertical, 3/4" PTF



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840028-68KIT

Full flow porting block vertical, G3/4"



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840028-69KIT

Pressure switch interface block (18D pressure switch) G1/2



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Pressure sensing block 1/4 PTF



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840016-50KIT

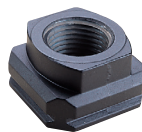
Pressure sensing block G1/4



Page 7

840016-51KIT

Port Adaptors



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1/4 PTF	840015-01KIT
3/8 PTF	840015-02KIT
1/2 PTF	840015-03KIT
3/4 PTF	840015-04KIT
G1/4	840015-09KIT
G3/8	840015-10KIT
G1/2	840015-11KIT
G3/4	840015-12KIT

Pneumatic pressure switch 18D (7 to 120 psi) *1



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0881300000000000

Digital pressure switch 54D (-14.5 ... 145 psi) *2



Page 8

54D-V110G-DD0-AA

Padlock



840055-01KIT

Lockout device



840055-02KIT

Electronic Pressure Sensor – stand alone version *3



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Q84G

*1) For other pressure ranges, please see 18D data sheet

*2) For other pressure ranges, please see 54D data sheet

*3) For Q84G standalone electronic pressure sensor module, see Q84G data sheet

IO-Link cables

Connection cable M8x1 for integrated digital pressure sensor



Description	Cable length (ft)	Model
M8 female to M12 male	2.0	NC-084FS-124MS-A
	3.3	NC-084FS-124MS-1
	6.6	NC-084FS-124MS-2
	16.4	NC-084FS-124MS-5
M8 female to free end	9.8	NC-084FS-00000-3

Service kits

R84 / B84
Elastomer kit



FRLB84-Kit

Gauges (For regulators with gauge port instead of integrated gauge)

Center back connection, white face



Pressure range					
(psi)	(bar) *3)	(MPa)	ø	Thread size	Model
0 to 84	0 to 6	0 to 0.6	2"	R1/8	18-015-885
0 to 145	0 to 10	0 to 1	2"	R1/8	18-015-989
0 to 362	0 to 25	0 to 2.5	2"	R1/8	18-015-908

*3) primary scale

Center back connection, black face

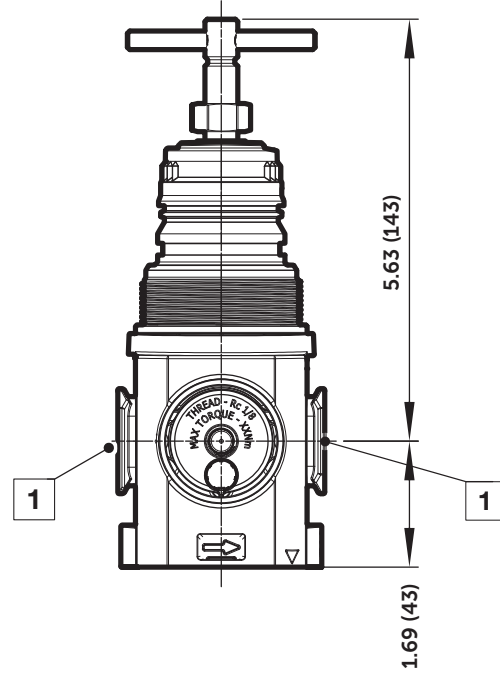
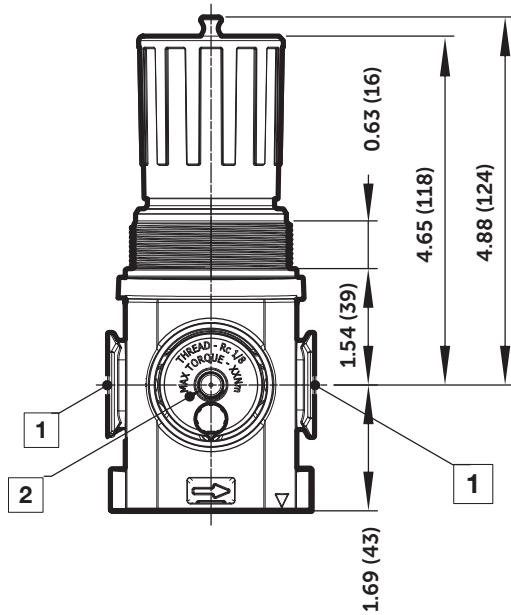
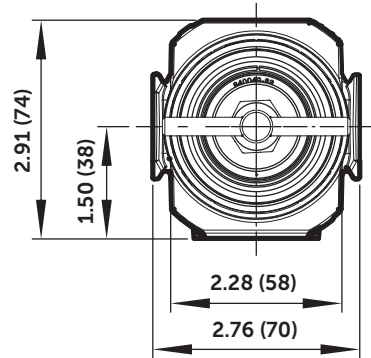
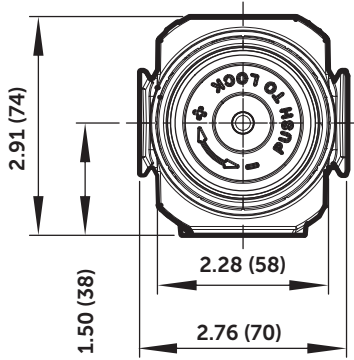


Pressure range					
(psi) *3)	(bar)	(MPa)	ø	Thread size	Model
0 to 60	0 to 4	0 to 0.4	2"	1/8" NPT	18-015-202
0 to 160	0 to 11	0 to 1.1	2"	1/8" NPT	18-015-204
0 to 300	0 to 20	0 to 2.1	2"	1/8" NPT	18-015-205

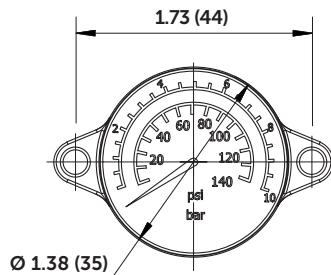
*3) primary scale



Dimensions



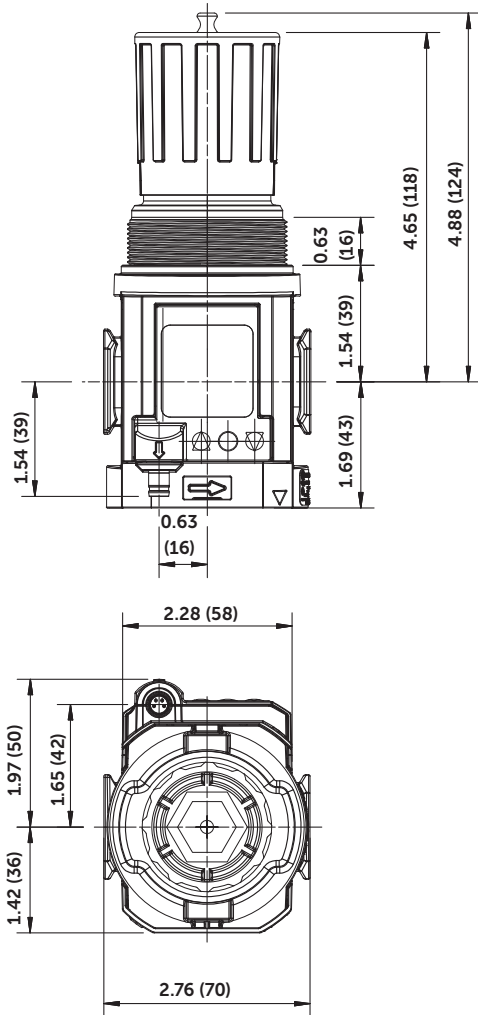
- 1 Main ports 3/8", 1/2" or 3/4" (ISO G/PTF)
- 2 Gauge Port Rc 1/8 for ISO G and 1/8 PTF for PTF main ports





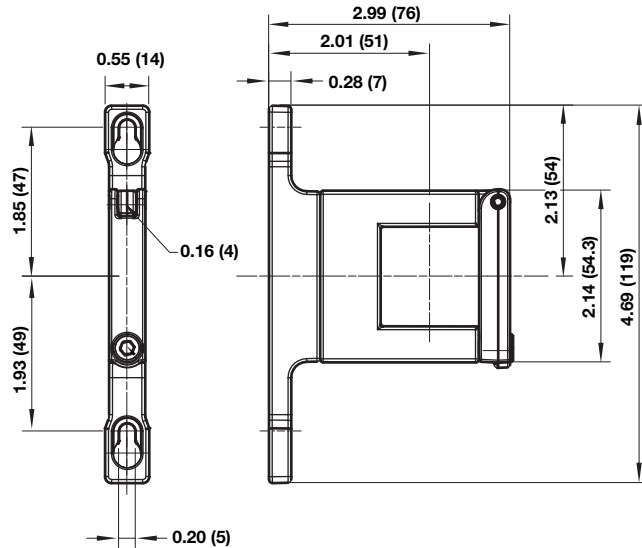
Dimensions

R84G-General Purpose Regulator

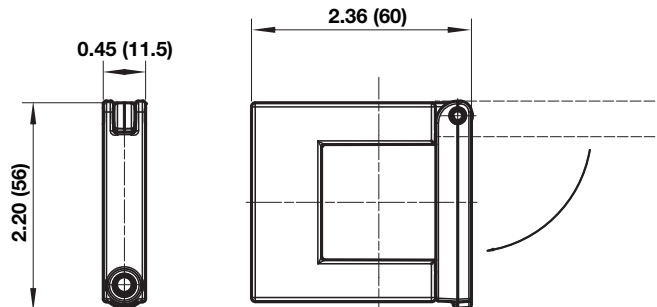


Accessories

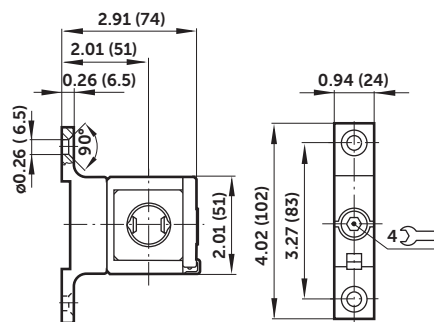
Quikclamp® with wall bracket



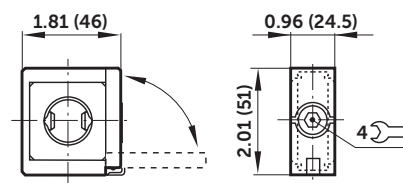
Quikclamp®



Hybrid-Quikclamp® with wall bracket

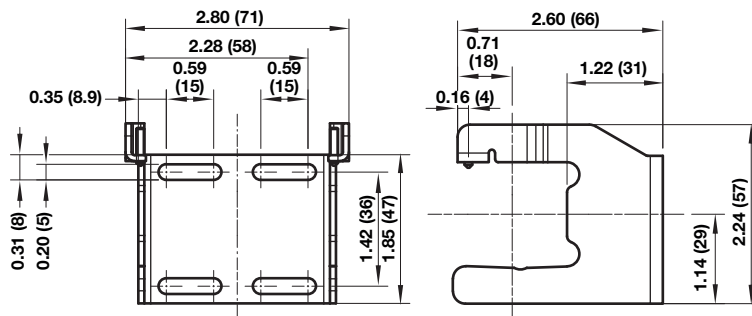


Hybrid-Quikclamp®



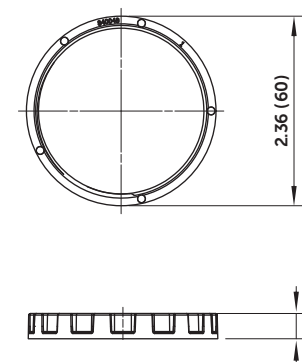


Mounting bracket

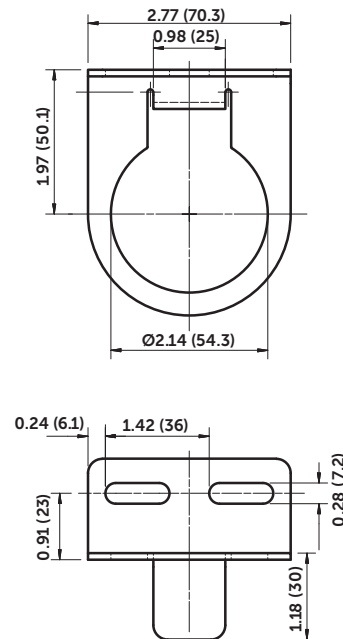


Neck mounting bracket

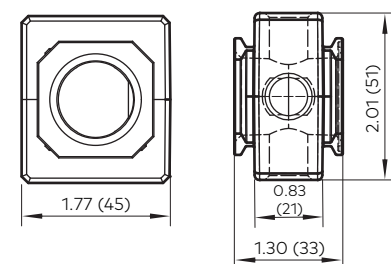
Panel mounting nut



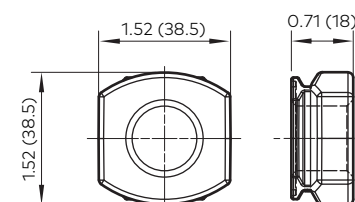
Recommended panel hole size:
ø 55 mm ... 57 mm
Panel thickness:
2 ... 6 mm



Pressure sensing block

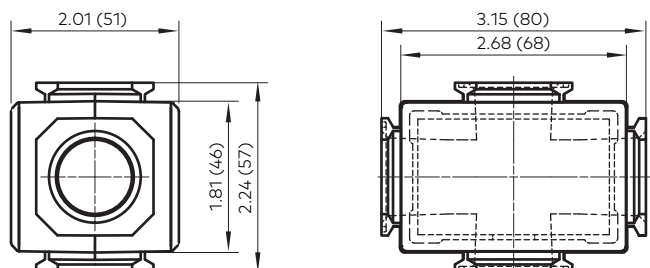


Pipe adaptor

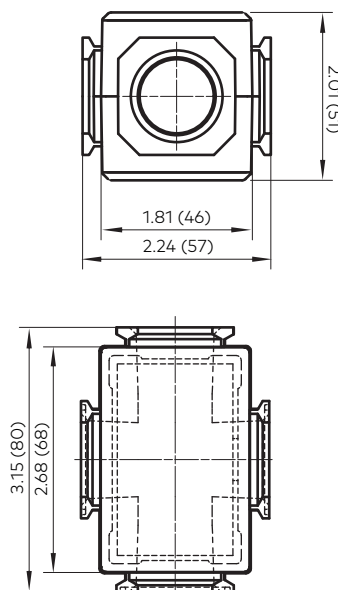




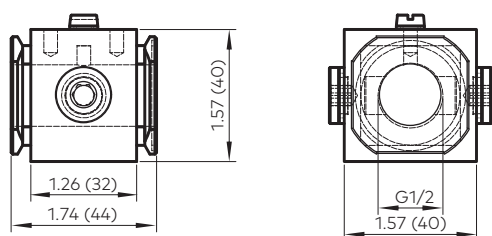
Full flow porting block horizontal



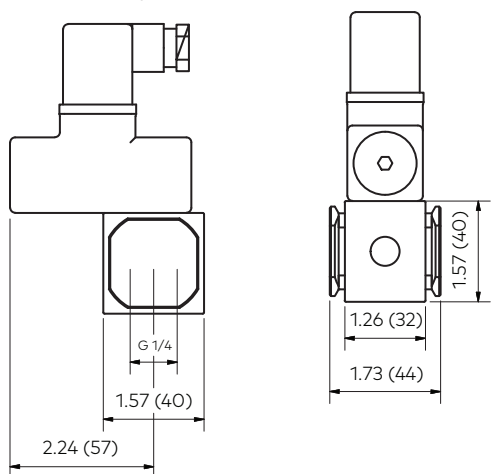
Full flow porting block vertical



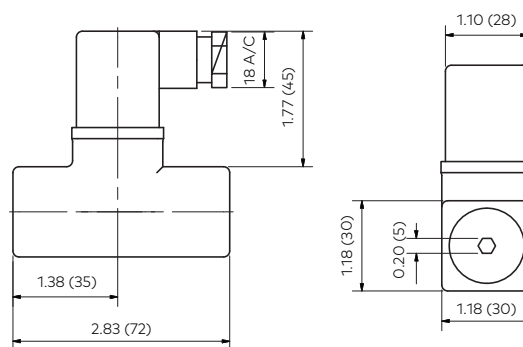
Porting block for 18D pressure switch



18D Porting block and 18D assembled

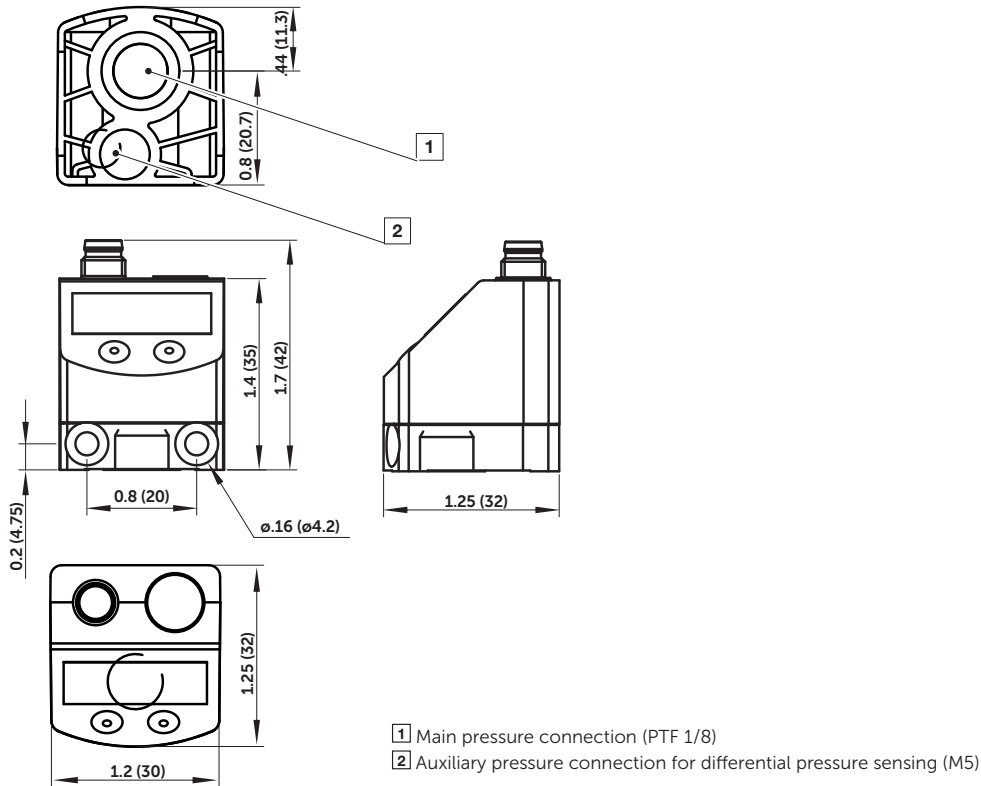


18D Pressure switch





54D Pressure switch - digital



Warning

Improper selection, misuse, age or malfunction of components used in systems can cause failure in various modes. The system designer is warned to consider the failure modes of all component parts and to provide adequate safeguards to prevent personal injury or damage to equipment or property in the event of such failure modes. System designers and end users are cautioned to consult instruction sheets and specifications available from the factory. The system designer/end user is responsible for verifying that all requirements for the application are met.

Warranty

The products described herein are warranted subject to seller's Standard Terms and Condition of Sale, available at seller's website.

Proposition 65: These products may contain chemicals known to the state of California to cause cancer, or birth defects, or other reproductive harm.