

## R84G - Pressure regulators

### Excelon® Plus Modular System

- > Port size: 3/8" ... 3/4" (ISO G/PTF)
- > 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 pressure regulator

##### Medium:

Compressed air only

##### Maximum supply pressure:

290 psi (20 bar)

##### Outlet pressure ranges:

5 ... 145 psi (0.3 ... 10 bar),

5 ... 58 psi (0.3 ... 4 bar),

10 ... 247 psi (0.7 ... 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

##### 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) drop from set.

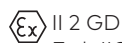
##### Ambient/Media temperature:

-4 ... +149°F (-20 ... +65°C)

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

##### Atex:

Regulators R84 are in conformity with Atex 2014/34/EU



Ex h IIC T6 Gb

EX h IIIC T85°C Db

excluding all versions with electronic pressure sensor

##### Materials:

Body: Die cast aluminum


Body covers: ABS

Bonnet: POM/Aluminum

Valve: PP

Elastomers: NBR

#### Technical data R84G - standard models with integrated flush mounted gauge

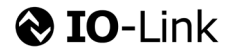
Symbol	Port size PTF	Pressure range psi (bar)	Adjustment	Integrated gauge psi (bar)	Weight lbs (kg)	Model*)
	3/8	5 ... 145 (0.3 ... 10)	Knob	0 ... 145 (0 ... 10)	1.30 (0.59)	R84G-3AK-RMG
	1/2	5 ... 145 (0.3 ... 10)	Knob	0 ... 145 (0 ... 10)	1.30 (0.59)	R84G-4AK-RMG
	3/4	5 ... 145 (0.3 ... 10)	Knob	0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

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

With flow direction right to left please use the online configurator [www.norgren.com/air-preparation-configurator](http://www.norgren.com/air-preparation-configurator) or contact Norgren

## 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



### Technical features electronic pressure sensor

#### Electrical parameters

##### Secondary pressure measurement range:

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

##### Repeatability:

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

##### Accuracy:

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

##### Units:

Pressure: bar, psi, MPa  
Temperature: °C, °F  
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 function:

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

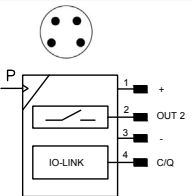
##### Min. cycle time:

20 ms

For product IODD file please use the online link <http://s.norgren.com/digital-gauge-iodd>

For a copy of the Quick Start Guide or comprehensive Operators manual please use the following online link [www.norgren.com/excelon-plus](http://www.norgren.com/excelon-plus)

### Electrical connection M8 x 1

	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

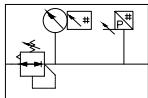
##### Switching output:

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

##### Load current:

100mA with short  
circuit protection

### Technical data R84G - standard models

Symbol	Port size	Pressure range psi (bar)	Adjustment	Integrated gauge psi (bar)	Weight lbs (kg)	Model*)
	3/8	5 ... 145 (0.3 ... 10)	Knob	0 ... 145 (0 ... 10)	1.74 (0.79)	R84G-3AK-RME
	1/2	5 ... 145 (0.3 ... 10)	Knob	0 ... 145 (0 ... 10)	1.74 (0.79)	R84G-4AK-RME
	3/4	5 ... 145 (0.3 ... 10)	Knob	0 ... 145 (0 ... 10)	1.74 (0.79)	R84G-6AK-RME

\*) All models shown here are supplied with integrated pressure sensor applicable for flow direction left to right.

With flow direction right to left please use the online configurator [www.norgren.com/air-preparation-configurator](http://www.norgren.com/air-preparation-configurator) or contact IMI Norgren

### Option selector \*1)

Port size	Substitute
3/8"	3
1/2"	4
3/4"	6
Thread form	Substitute
PTF	A
ISO G parallel	G
Adjustment	Substitute
Knob	K
T-bar	T*2)

**R84G-★★★-R★★**

Gauge	Substitute
With integrated digital pressure sensor *3)	E
With (fitted integrated gauge)	G
Without integrated gauge but with gauge port 1/8"	N
Pressure range *4)	Substitute
4 ... 58 psi (0.3 ... 4 bar)	F
4 ... 145 psi (0.3 ... 10 bar) (standard)	M
10 ... 247 psi (0.7 ... 17 bar)	S*2)

\*1) All models shown here are applicable for flow direction left to right.

With flow direction right to left please use the online configurator [www.norgren.com/air-preparation-configurator](http://www.norgren.com/air-preparation-configurator) or contact Norgren

\*2) Units with 247 psi outlet pressure range are available only with the T-bar adjustment. Not available in connection with integrated pressure sensor.

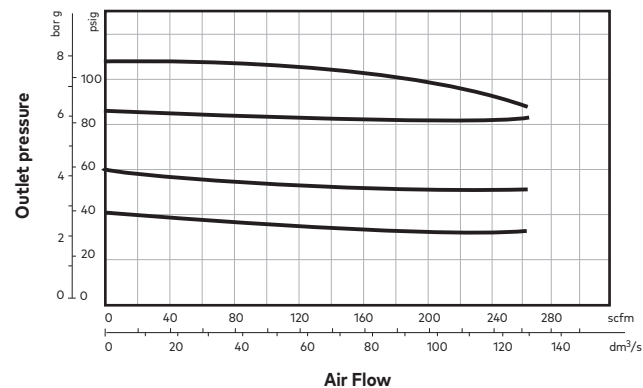
\*3) Only available with 145 or 58 psi pressure range

\*4) 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

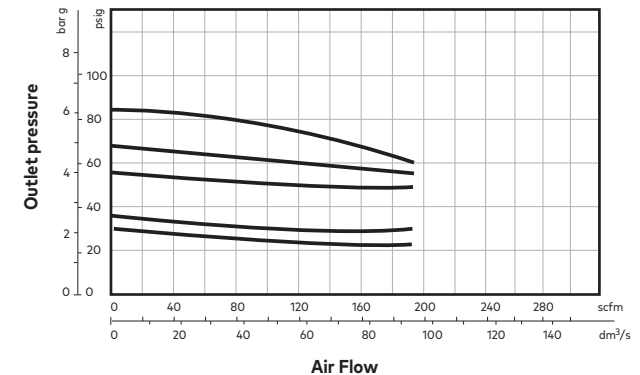
**Inlet pressure: 145 psi (10 bar)**

**Port size: 1/2"**



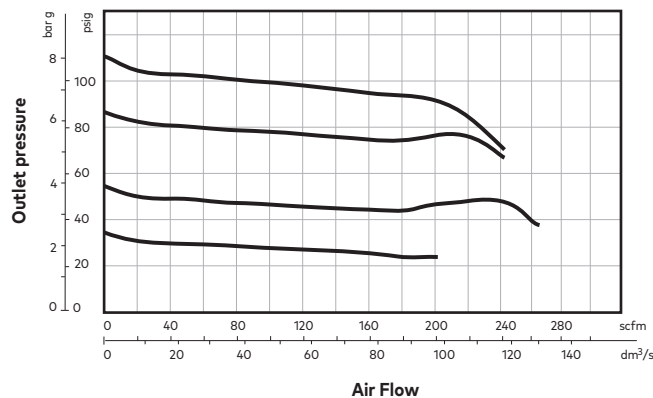
**Inlet pressure: 101 psi (7 bar)**

**Port size: 1/2"**



**Inlet pressure: 145 psi (10 bar)**

**Port size: 3/8"**



## Accessories

### Quikclamp®



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840014-51KIT

### Quikclamp® with bracket assembled



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840014-52KIT

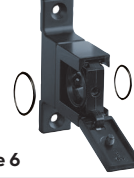
### Hybrid Quikclamp® \*1



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840014-61

### Hybrid Quikclamp® with bracket assembled \*1



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840014-62

\*1) To connect new Excelon Plus to old 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 140 psi gauge



840073-01KIT

### Integrated gauge 300 psi 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

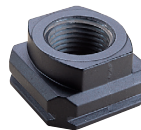
### Pressure sensing block G1/4



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840016-51KIT

### Port Adaptors



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3/8 PTF 840015-02KIT

1/2 PTF 840015-03KIT

3/4 PTF 840015-04KIT

G3/8 840015-10KIT

G1/2 840015-11KIT

G3/4 840015-12KIT

### Padlock



840055-01KIT

### Lockout device



840055-02KIT

**Pressure switch 18D  
(0.5 ... 8bar) \*1**

**Page 8**

0881300000000000

**Digital pressure switch  
51D (-1 ... 10 bar) \*2**

**Page 8**

0860810000000000

**Electronic Pressure Sensor  
– stand alone version \*3**


Q84G

**IO-Link cables**
**Connection cable M8x1 for integrated electronic pressure sensor**


Description	Cable length (m)	Model
M8 female to M12 male	0.6	NC-084FS-124MS-A
	1.0	NC-084FS-124MS-1
	2.0	NC-084FS-124MS-2
	5.0	NC-084FS-124MS-5
M8 female to free end	3.0	NC-084FS-00000-3

\*1) Flanged version. For other pressure ranges, please see data sheet 5.11.001

\*2) For other pressure ranges, please see data sheet 5.11.385

\*3) Q84G standalone electronic pressure sensor module see <http://s.norgren.com/digital-gauge-iodd> for data-sheet 8.900.905.

**Gauges**

(For regulators with gauge port instead of integrated gauge)

**Center back connection, white face**


Pressure range		(psi)	ø	Thread size	Model
(bar)*3	(MPa)				
0 ... 6	0 ... 0.6	0 ... 84	40 mm	R1/8	18-015-885
0 ... 10	0 ... 1	0 ... 145	40 mm	R1/8	18-015-989
0 ... 25	0 ... 2.5	0 ... 362	40 mm	R1/8	18-015-908

\*3) primary scale

**Center back connection, black face**


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

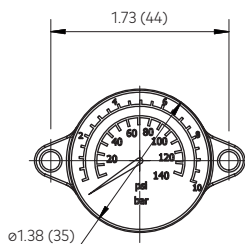
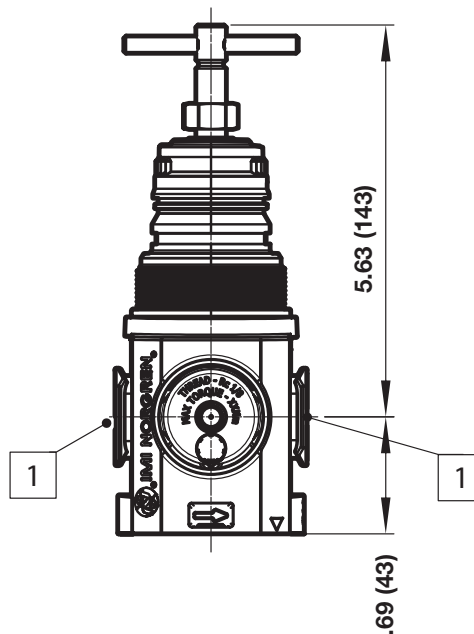
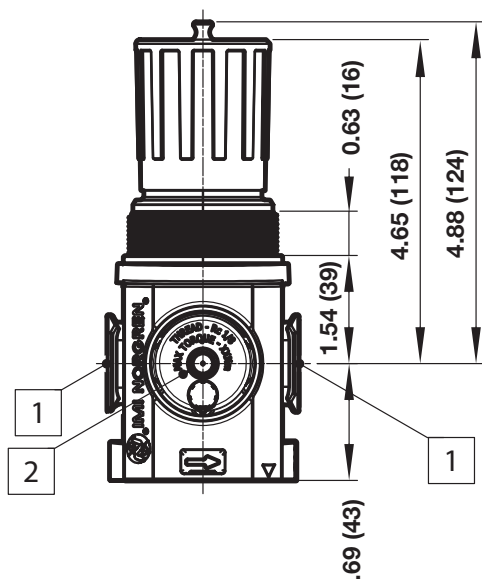
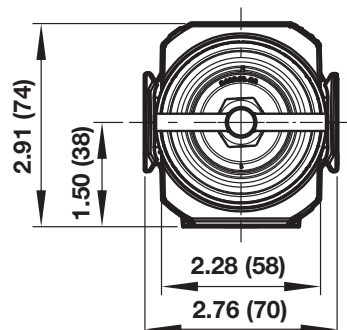
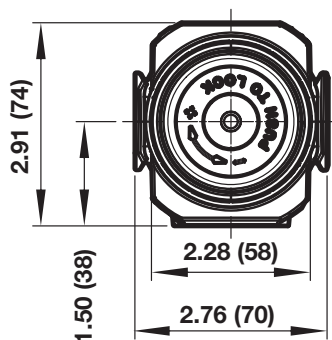
\*3) primary scale

**R84 / B84  
Elastomer Kit**


FRLB84-KIT

## Dimensions

Dimensions in inches (mm)  
Projection/Third angle

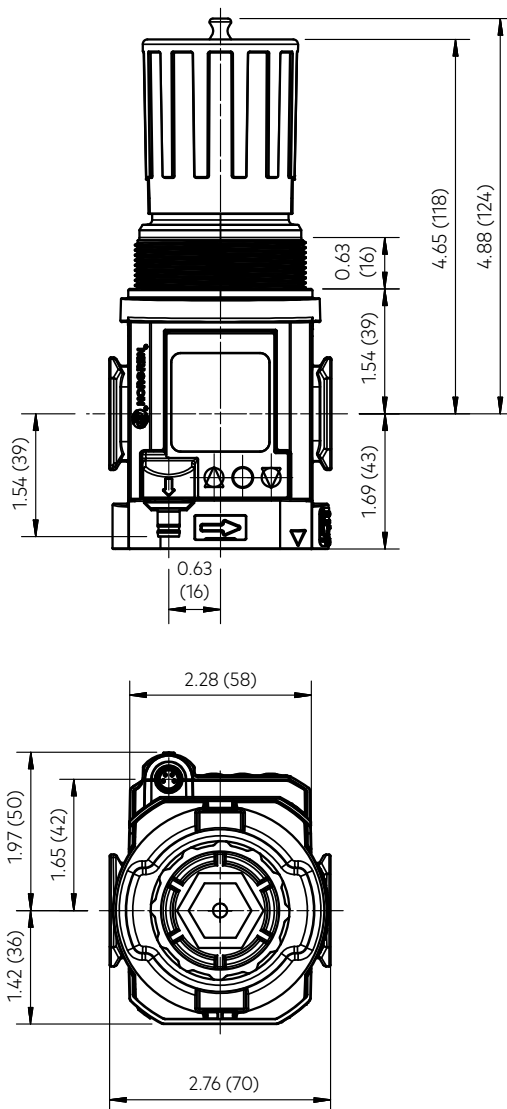


- ① Main ports 3/8", 1/2" or 3/4"  
(ISO G/PTF)
- ② Gauge Port Rc 1/8 for ISO G and  
1/8 PTF for PTF main ports

## Dimensions

### R84G- General Purpose Regulator

Dimensions in inches (mm)  
Projection/Third angle

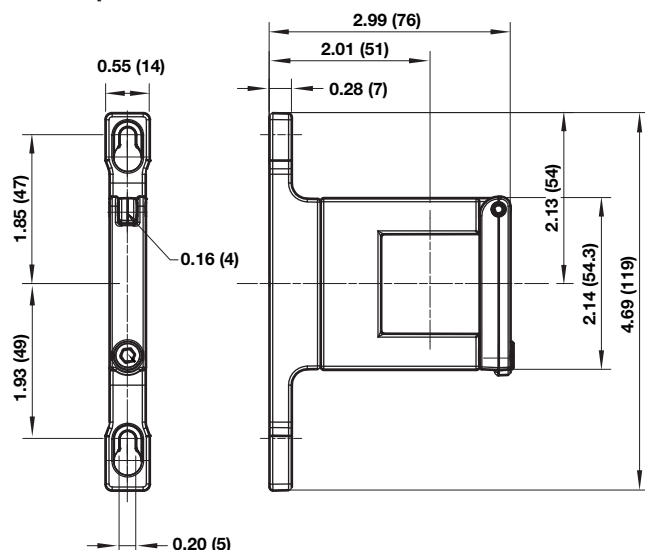


## Accessories

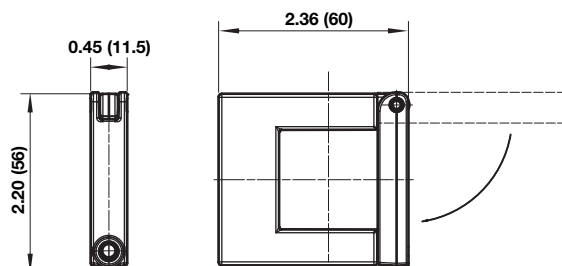
Dimensions in inches (mm)  
Projection/Third angle



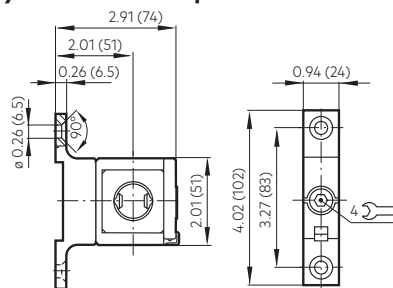
### Quikclamp® with wall bracket



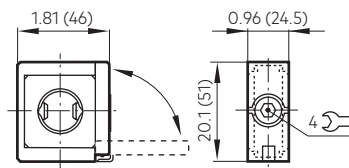
### Quikclamp®



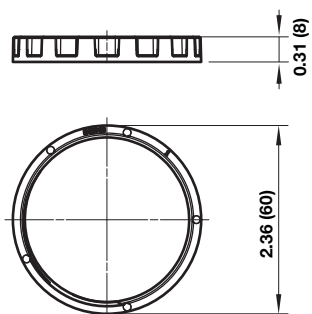
### Hybrid-Quikclamp® with wall bracket



### Hybrid-Quikclamp®

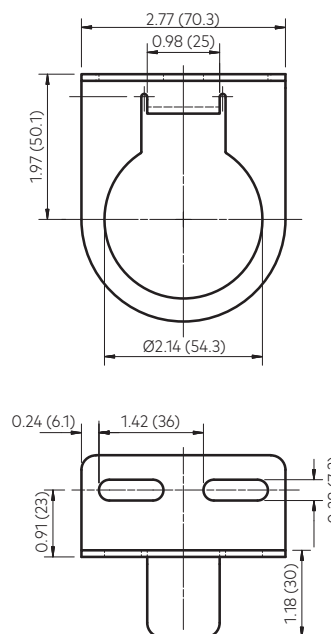


### Panel mounting nut



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

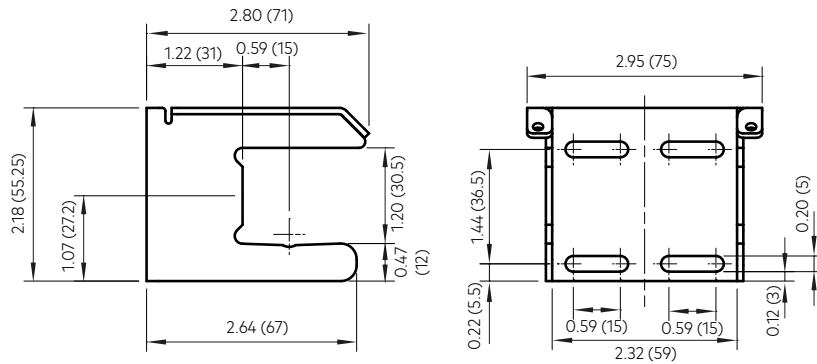
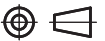
### Neck mounting bracket



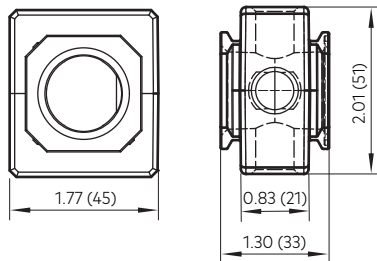


## Mounting bracket

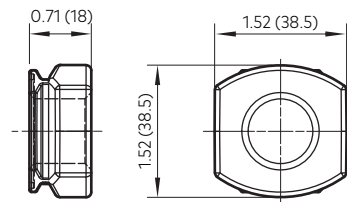
Dimensions in inches (mm)  
Projection/Third angle



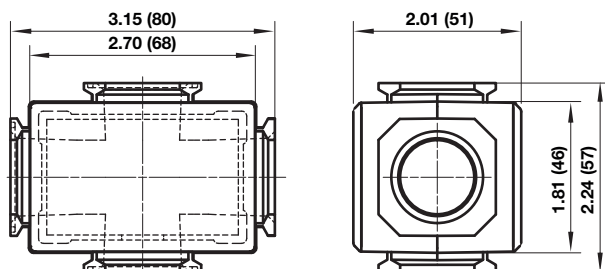
## Pressure sensing block



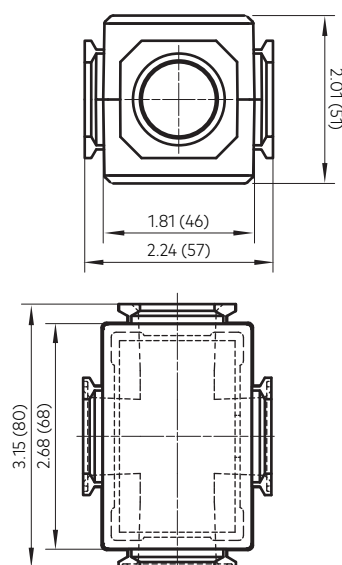
## Pipe adapter



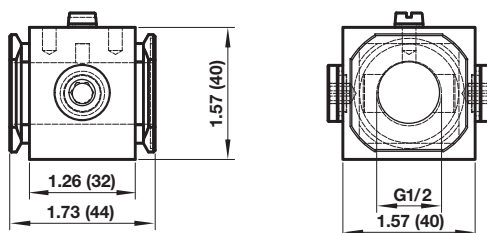
## Full flow porting block horizontal



## Full flow porting block vertical



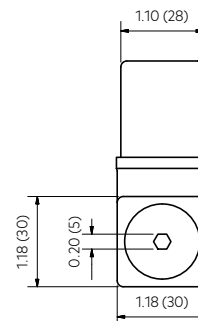
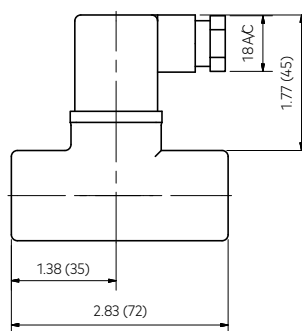
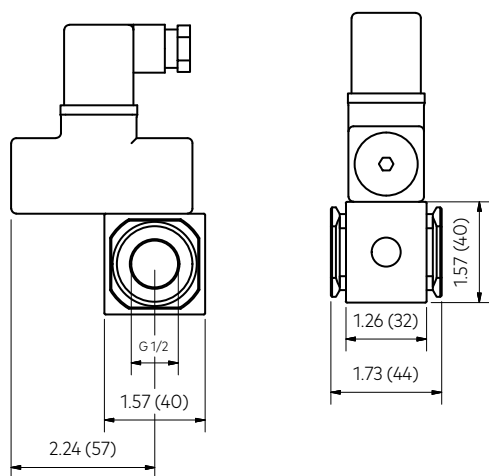
## Porting block for 18D pressure switch



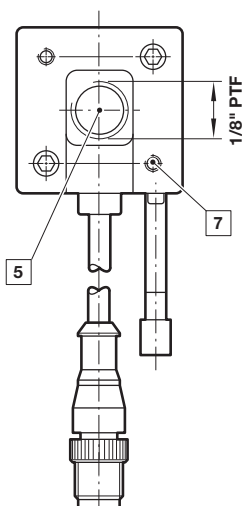
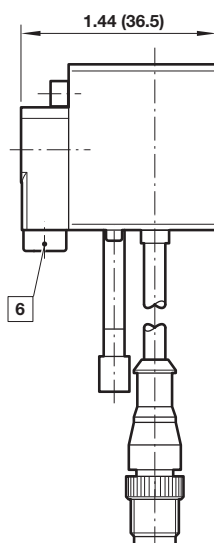
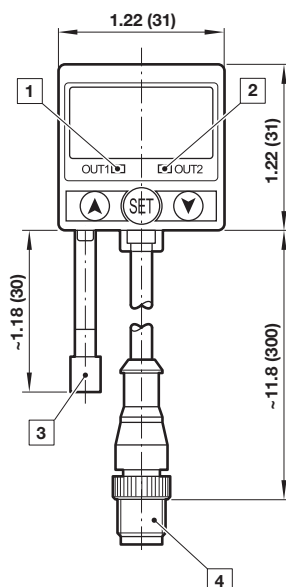
## 18D Porting block and 18D assembled

## 18D Pressure switch

Dimensions in inches (mm)  
Projection/Third angle



## 51D Pressure switch - digital



- 1 Switch OUT 1, green LED
- 2 Switch OUT 2, red LED
- 3 Dustproof protector
- 4 Connector M12 x 1
- 5 Inlet port
- 6 Alternative inlet port G1/8 plugged
- 7 Thread for mounting screw

### 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, Norgren 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.