

# 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:**

20 bar (290 psi)

**Outlet pressure ranges:**

0,3 ... 10 bar (4 ... 145 psi),  
0,3 ... 4 bar (4 ... 58 psi) optional,  
0,7 ... 17 bar (10 ... 247 psi) optional

**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:**

125 dm<sup>3</sup>/s at port size: 1/2",  
inlet pressure 10 bar (145 psi),  
6,3 bar (91 psi) set pressure and  
a Δp: 1 bar (14,5 psi) droop from set.

**Ambient/Media temperature:**

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

**Atex:**

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

Ex II 2 GD

Ex h IIC T6 Gb


EX h IIIC T85°C Db

excluding all versions with  
electronic pressure sensor

**Materials:**

Body: Die cast aluminium  
Body covers: ABS  
Bonnet: POM/Aluminium  
Valve: PP  
Elastomers: NBR

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

Symbol	Port size	Pressure range (bar)	Adjustment	Integrated gauge (bar)	Weight (kg)	Model*)
	G3/8	0,3 ... 10	Knob	0 ... 10	0,59	R84G-3GK-RMG
	G1/2	0,3 ... 10	Knob	0 ... 10	0,59	R84G-4GK-RMG
	G3/4	0,3 ... 10	Knob	0 ... 10	0,59	R84G-6GK-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 colour 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 ... 10 bar  
(0 ... 145 psi, 0 ... 1.0 MPa)

##### Repeatability:

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

##### Accuracy:

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

##### Units:

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

##### Display:

1.44" full colour TFT LCD  
Text / background colours:  
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

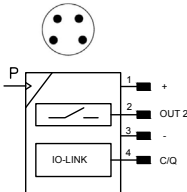
##### Min. cycle time:

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

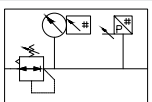
##### Switching output:

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 (bar)	Adjustment	Integrated gauge (bar)	Weight (kg)	Model*)
	G3/8	0,3 ... 10	Knob	0 ... 10	0,79	R84G-3GK-RME
	G1/2	0,3 ... 10	Knob	0 ... 10	0,79	R84G-4GK-RME
	G3/4	0,3 ... 10	Knob	0 ... 10	0,79	R84G-6GK-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 Norgren

**Option selector \*1)**
**R84G-★★★★-R★★**

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

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
0,3 ... 4 bar	F
0,3 ... 10 bar (standard)	M
0,7 ... 17 bar	S*2)

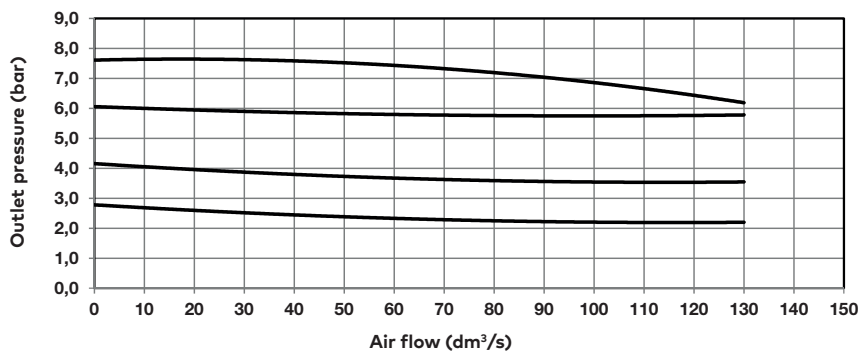
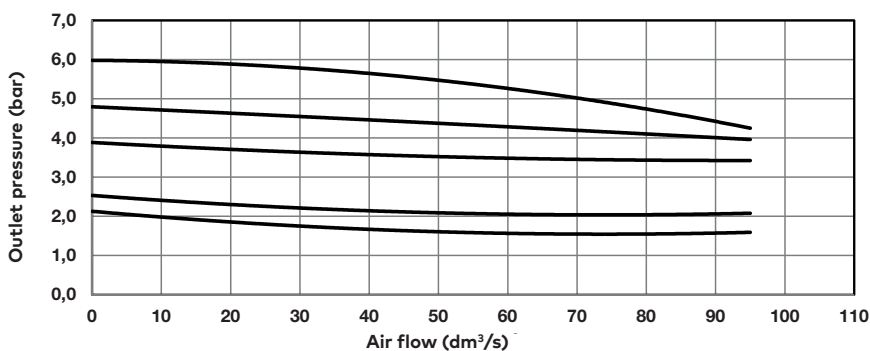
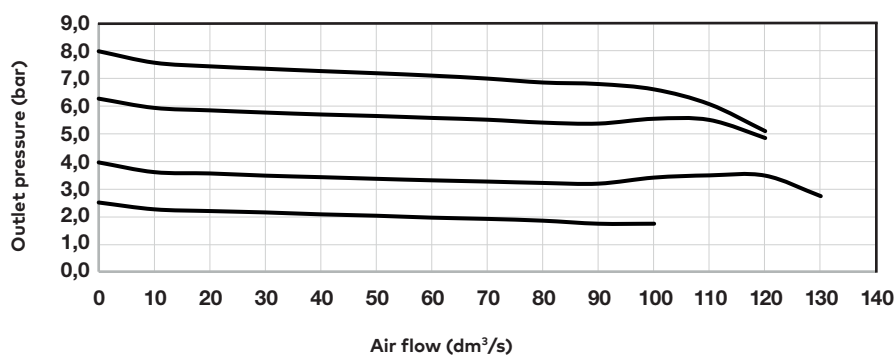
\*1) All models shown here are applicable for flow direction left to right.

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 17 bar outlet pressure range are available only with the T-bar adjustment. Not available in connection with integrated pressure sensor.

\*3) Only available with 10 or 4 bar 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: 10 bar (145 psi)**
**Port size: 1/2"**

**Inlet pressure: 7 bar (101 psi)**
**Port size: 1/2"**

**Inlet pressure: 10 bar (145 psi)**
**Port size: 3/8"**


**Accessories**

**Quikclamp®**



**Page 6**  
840014-51KIT

**Quikclamp® with bracket assembled**



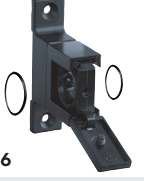
**Page 6**  
840014-52KIT

**Hybrid Quikclamp® \*1**



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



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\*1) To connect new Excelon Plus to old Excelon 74/73 units. Having the same hole centres 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**



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840048-89KIT

**Mounting bracket**



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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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**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) G1/4**



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**Pressure sensing block 1/4 PTF**



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**Pressure sensing block G1/4**



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**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**

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0881300

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

**Page 8**

0860810

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


Q84G

**IO-Link cables**
**Connection cable M8x1 for intergated 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 port )

**Center back connection, white face  
(for full technical specification see datasheet 8.900.900)**

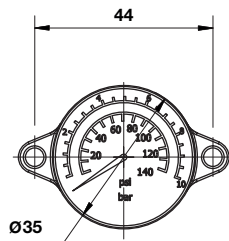
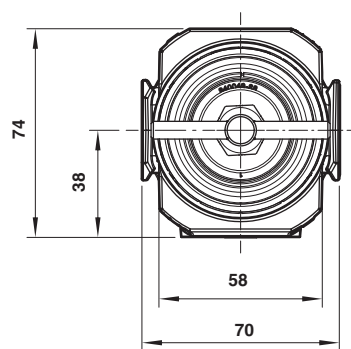
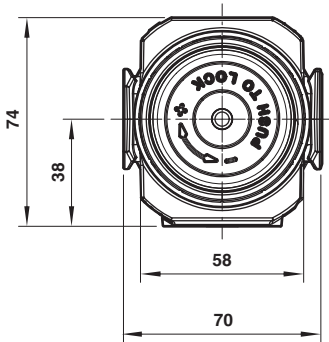
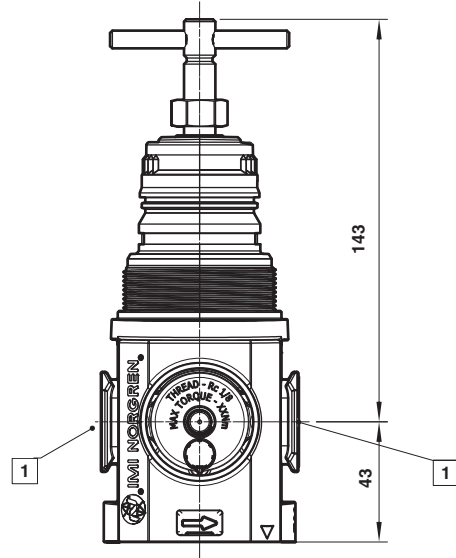
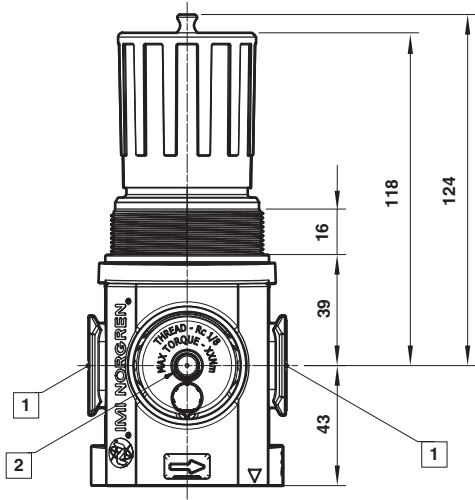

Pressure range (bar)*3) (MPa)	(psi)	∅	Thread size	Model
0 ... 6	0 ... 0,6	0 ... 84	40 mm R1/8	18-015-885
0 ... 10	0 ... 1	0 ... 145	40 mm R1/8	18-015-989
0 ... 25	0 ... 2,5	0 ... 362	40 mm R1/8	18-015-908

\*3) primary scale

**R84 / B84  
Elastomer Kit**

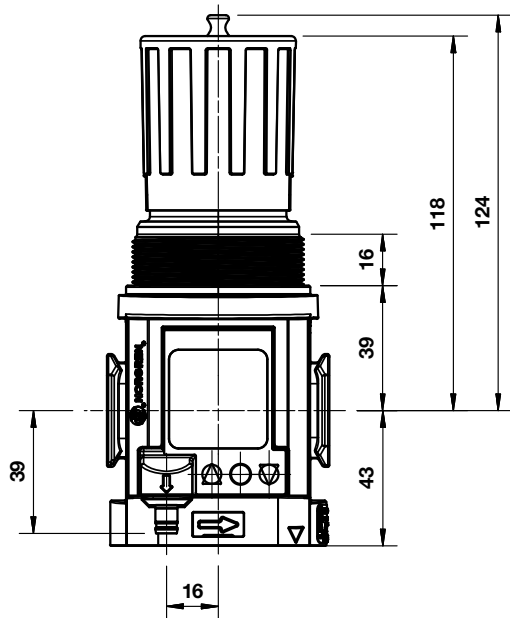
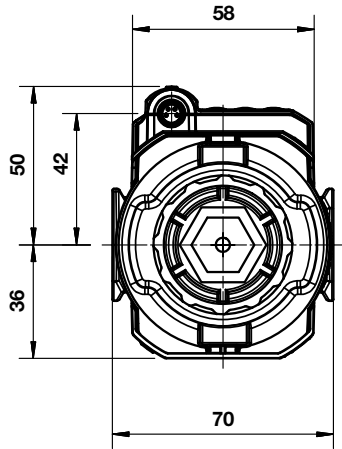

FRLB84-KIT

**Dimensions**

 Dimensions in mm  
 Projection/First angle


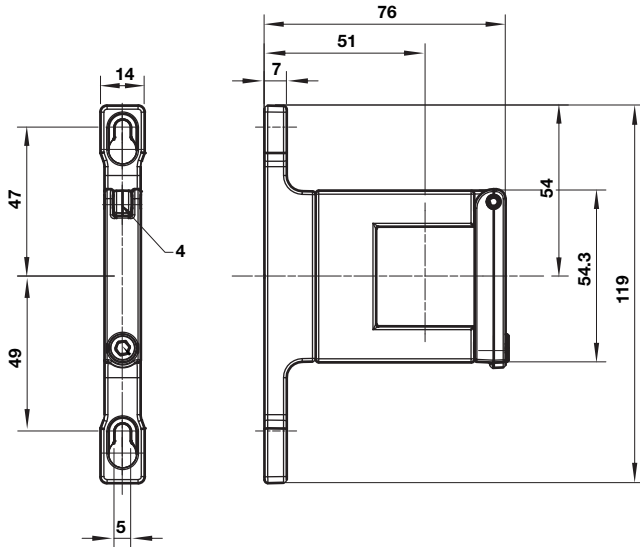
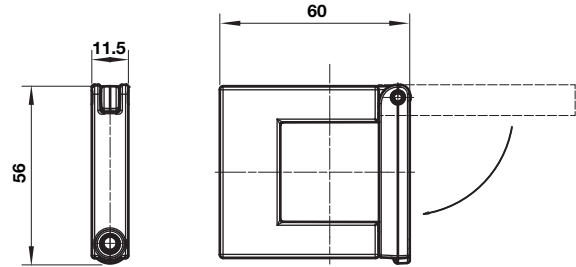
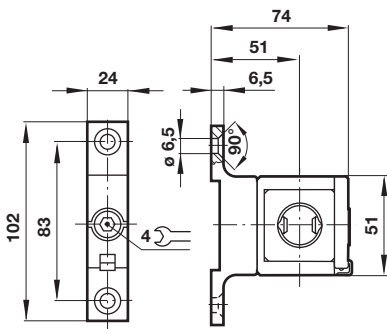
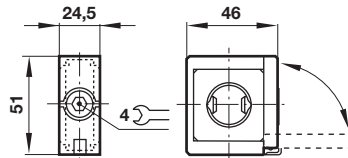
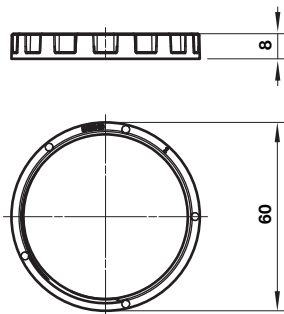
- 1 Main ports 3/8", 1/2" or 3/4" (ISO G/PTF)
- 2 Gauge Port Rc 1/8 for ISO G and 1/8 PTF for PTF main ports

**Dimensions**
**R84G-  
General Purpose Regulator**

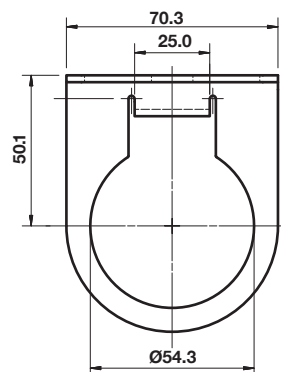
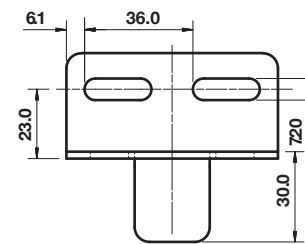
 Dimensions in mm  
 Projection/First angle


**Accessories**

 Dimensions in mm  
 Projection/First angle

**Quikclamp® with wall bracket**

**Quikclamp®**

**Hybrid-Quikclamp® with wall bracket**

**Hybrid-Quikclamp®**

**Panel mounting nut**


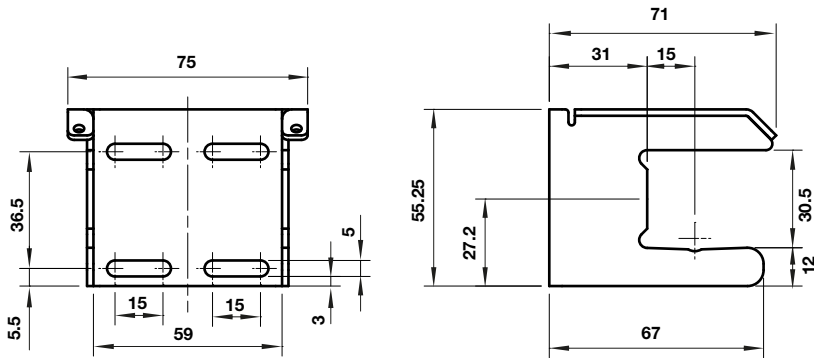
Recommended panel hole size:  
 ø 55 mm ... 57 mm  
 Panel thickness:  
 2 ... 6 mm

**Neck mounting bracket**




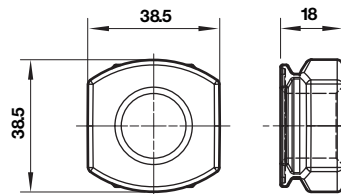
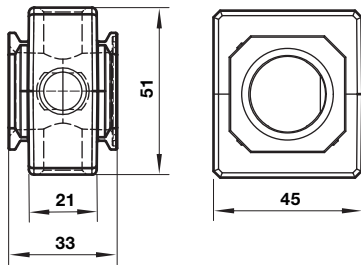
### Mounting bracket

Dimensions in mm  
Projection/First angle



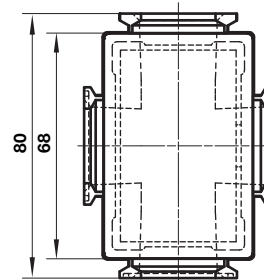
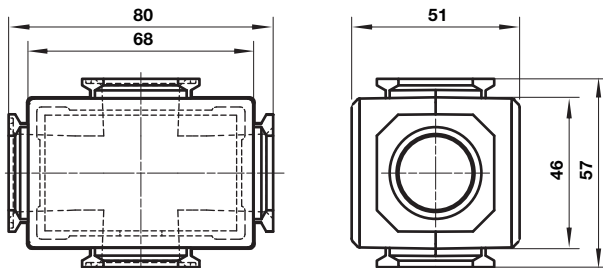
### Pressure sensing block

### Pipe adaptor

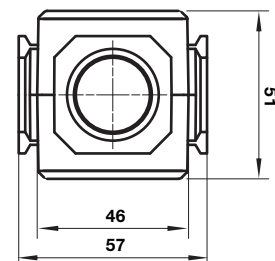
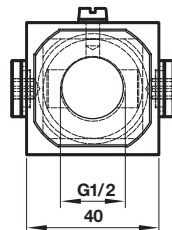
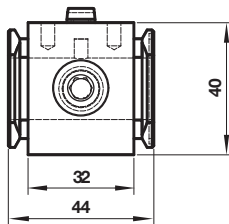


### Full flow porting block horizontal

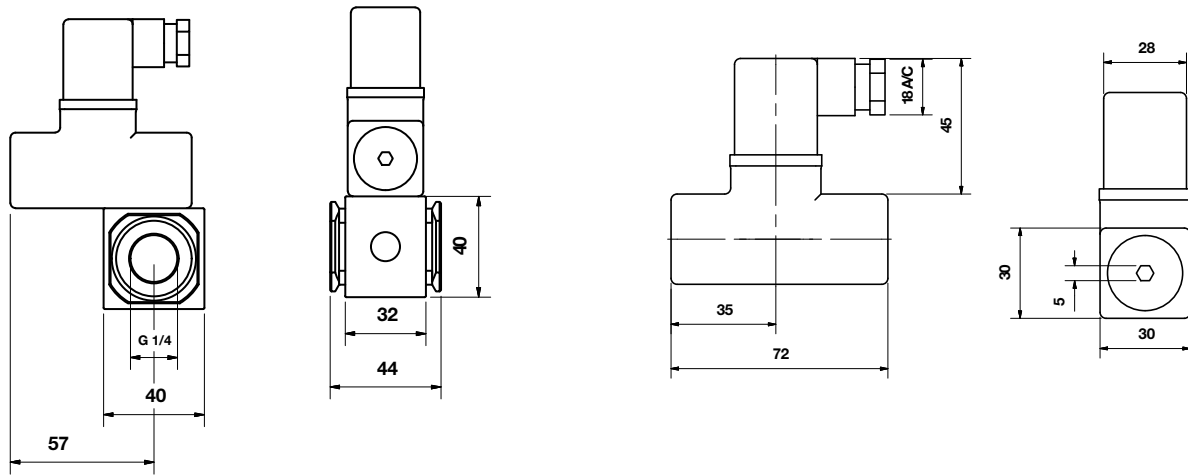
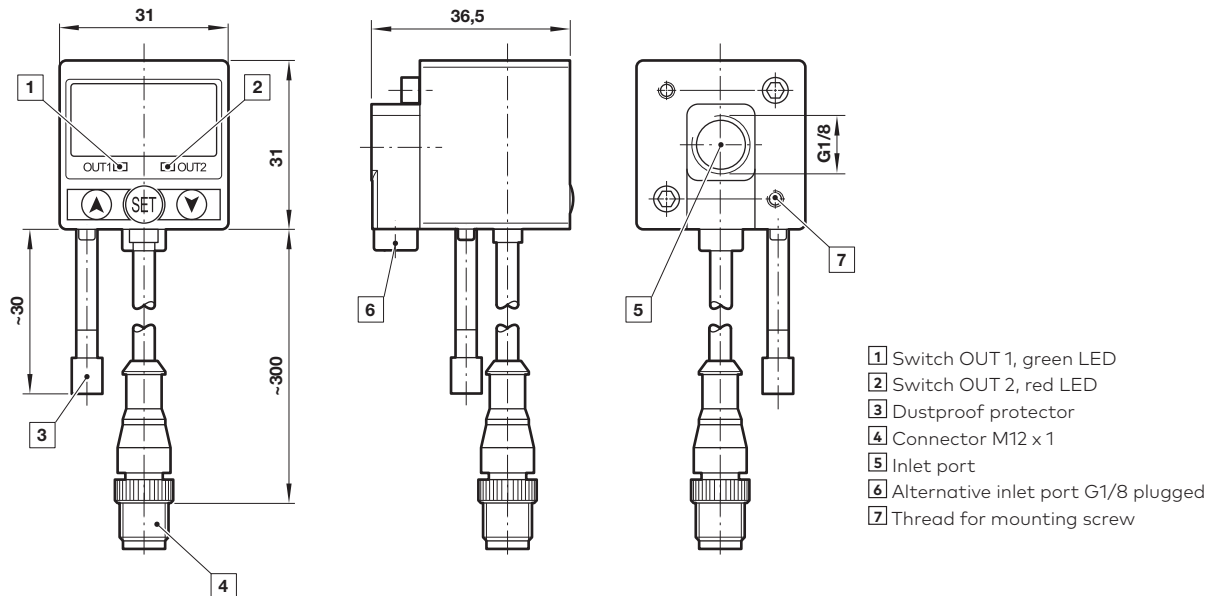
### Full flow porting block vertical



### Porting block for 18D pressure switch



**18D Porting block and  
18D assembled**
**18D Pressure switch**

 Dimensions in mm  
 Projection/First angle

**51D Pressure switch - digital**

**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.