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**
- **High Corrosion resistance: Metal body with electrophoretic paint finish**
- **Relieving and Non-relieving options**
- **DoC in accordance with 2014/34/EU/ATEX**

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 and Non-relieving
Flow:
125 dm^3/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
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 with Geolast seals
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 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

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)

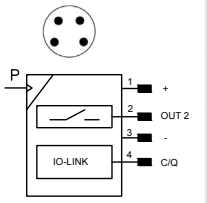
Units:
Pressure: bar, psi, MPa
Temperature: °C, °F
Voltage: V

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

Electrical connection M8 x 1

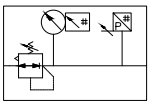


Pin-No.	Signal	Cable
1	L+ (24V)	brown
2	Out 2 (switching)	white
3	L- (0V)	blue
4	C/Q (IO-Link)	black

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 or contact Norgren

Option selector *1)

R84G-★★★-★★★

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)
Diaphragm Type	**Substitute**
Relieving	R
Non-relieving	N

*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 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.

Excelon Plus adheres to the following harmoised standard and technical specifications:

2014/34/EU Equipment and protective systems intended for use in potentially explosive atmospheres.
The following harmonised standards and technical specifications have been applied ISO 4414:2010 – Pneumatic fluid power – General rules and safety requirements for systems and their components; ISO 80079-36:2016 – Explosive atmospheres – Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements; ISO 80079-37:2016 – Explosive atmospheres
Part 37: Non-electrical equipment for explosive atmospheres – Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k".

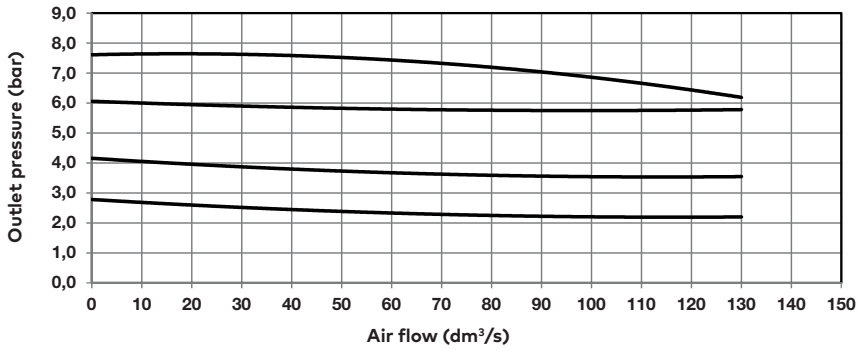
II 2 GD

Ex h IIC T6 Gb
Ex h IIIC T85°C Db
ATEX Certification No.: NORGREN 18.0001X

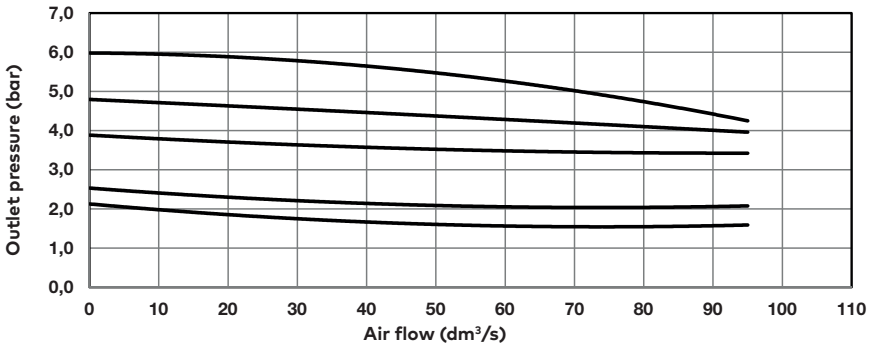
For a copy of the Declaration of Conformity (DoC) please use the link http://cdn.norgren.com/pdf/IM_Excelon_Plus_EN_final.pdf

Flow characteristics

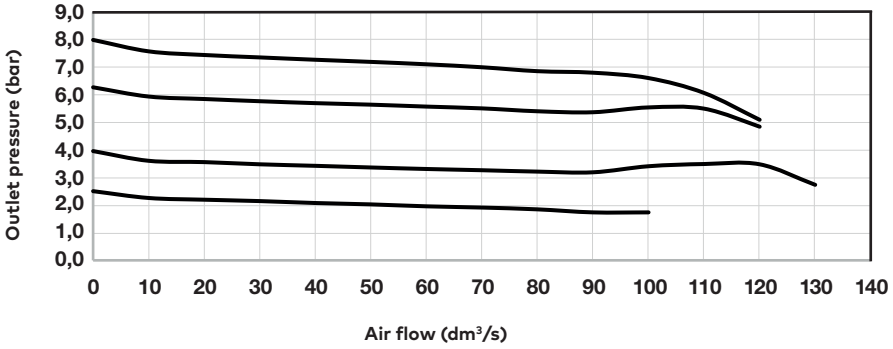
Inlet pressure: 10 bar (145 psi)
Port size: 1/2"



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



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



Accessories

Quikclamp®

Page 8

840014-51KIT

Quikclamp® with bracket assembled

Page 8

840014-52KIT

Hybrid Quikclamp® *1

Page 8

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 centres as 74 series mounting bracket.
A Quikclamp adds 13.6 mm to the overall width of a combination unit

Neck mounting bracket and plastic panel nut

Page 8

840068-51KIT

Plastic panel mounting nut

Page 8

840048-89KIT

Neck mounting bracket and metal panel nut

Page 8

840068-50KIT

Metal panel mounting nut

Page 8

840048-01KIT

Mounting bracket

Page 9

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) G1/4

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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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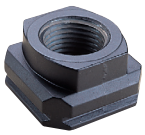
840016-51KIT

Port Adaptors



Page 9

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

Padlock

840055-01KIT

Lockout device

840055-02KIT

Pressure switch 18D (0,5 ... 8bar) *1

Page 10

0881300

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

Page 10

0860810

Electronic Pressure Sensor – stand alone version *3

Q84G

*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 stand alone electronic pressure sensor module
see http://s.norgren.com/digital-gauge-iodd for data-sheet 8.900.905.

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	5,0	NC-084FS-00000-5

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)	ø	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, relieving

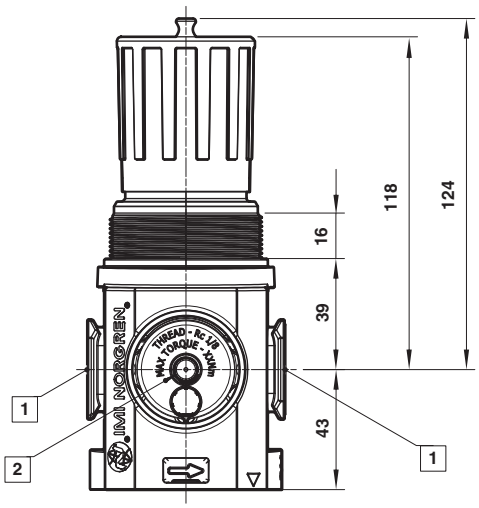
FRLB84-KIT

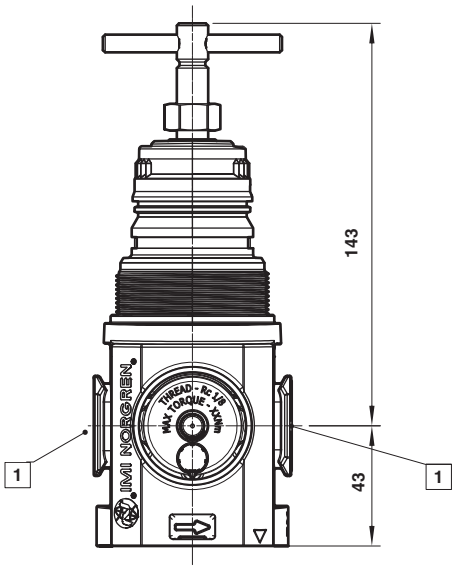
R84 / B84 Elastomer kit, Non-relieving

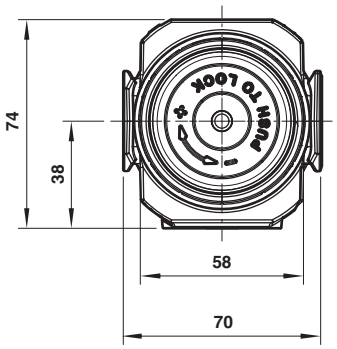
FRLB84NR-KIT

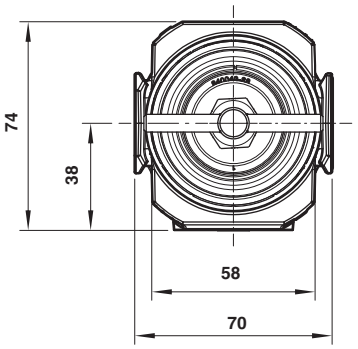
Dimensions

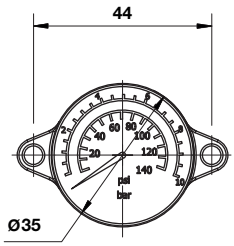
Dimensions in mm
Projection/First angle









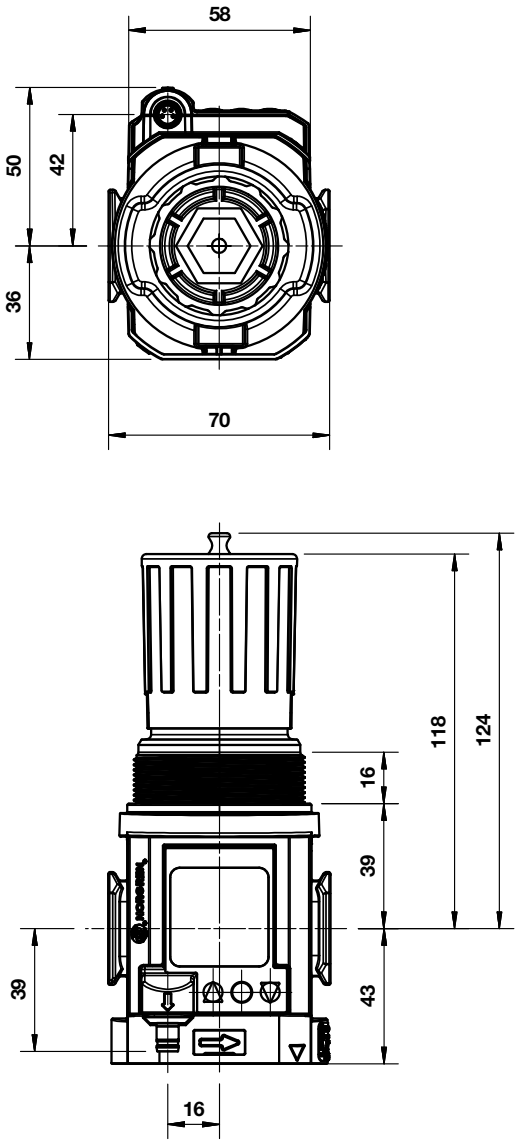


1 Main ports 3/8", 1/2" or 3/4" (ISO G/PTF)
2 Gauge Port Rc 1/8 for ISO G and 1/8 PTF for PTF main ports

Dimensions

Dimensions in mm
Projection/First angle

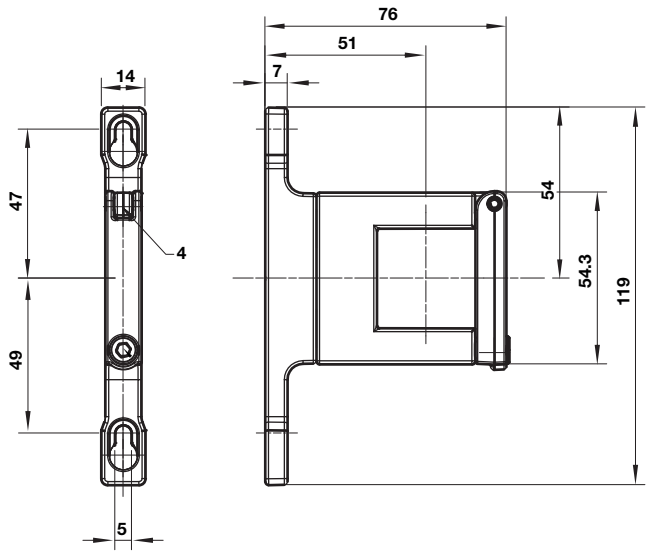
R84G-
General Purpose Regulator



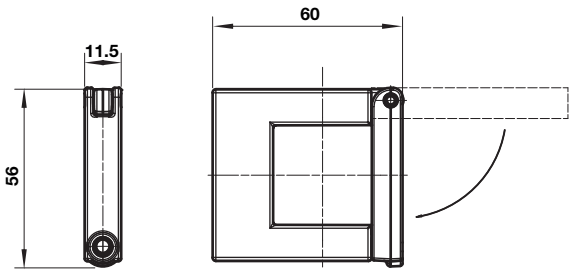
Accessories

Dimensions in mm
Projection/First angle

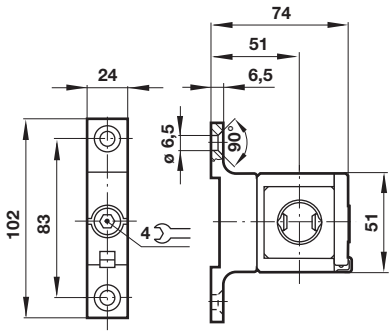
Quikclamp® with wall bracket



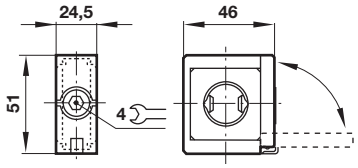
Quikclamp®



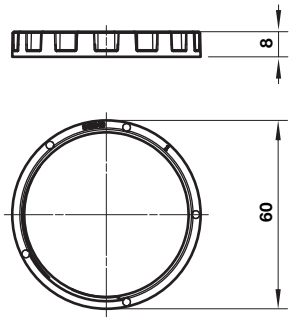
Hybrid-Quikclamp® with wall bracket



Hybrid-Quikclamp®



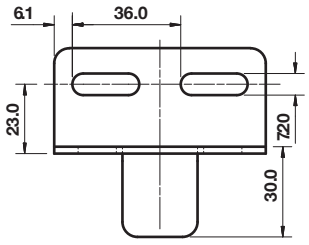
Panel mounting nut

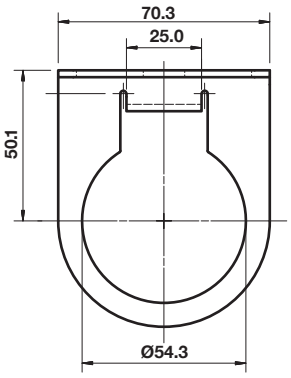


Recommended panel hole size:
ø 55 mm ... 57 mm

Panel thickness:
2 ... 6 mm

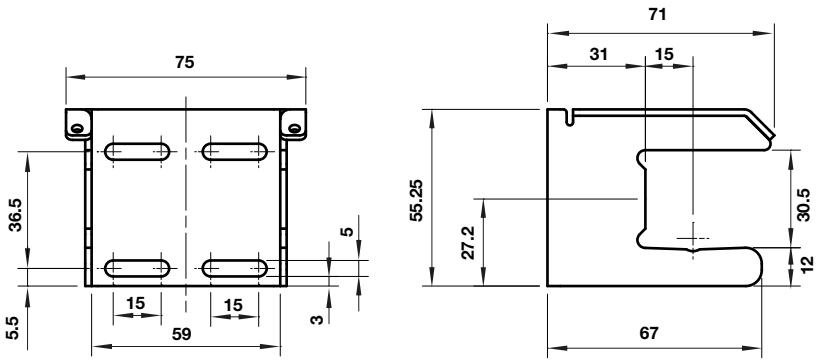
Neck mounting bracket



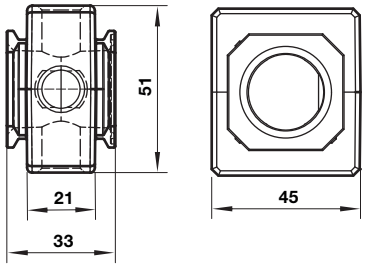


Mounting bracket

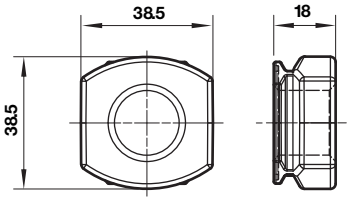
Dimensions in mm
Projection/First angle



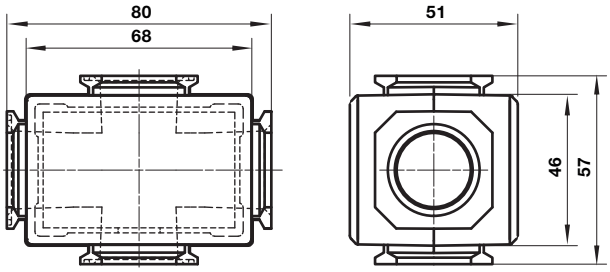
Pressure sensing block



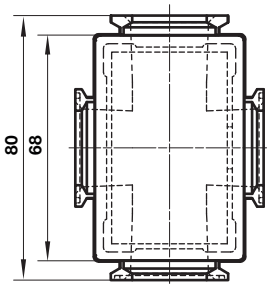
Pipe adaptor



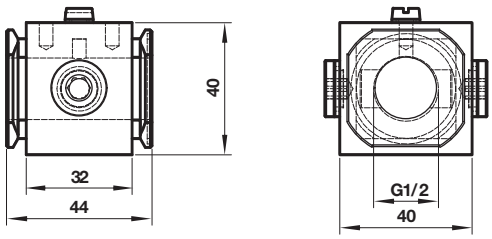
Full flow porting block horizontal

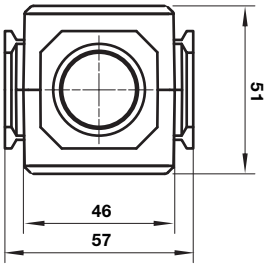


Full flow porting block vertical

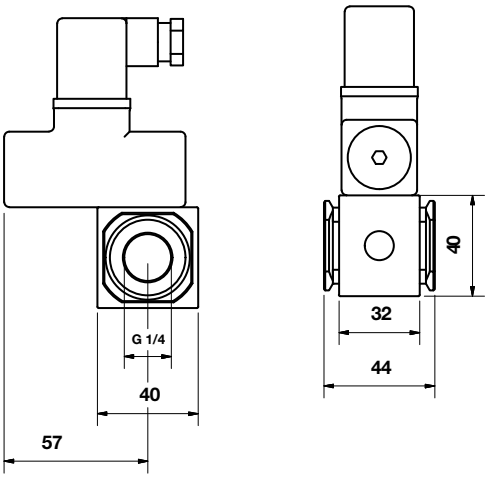


Porting block for 18D pressure switch



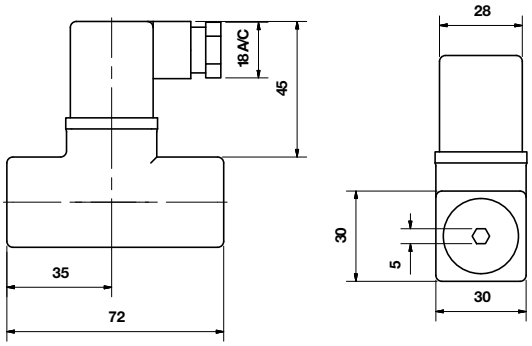


18D Porting block and 18D assembled

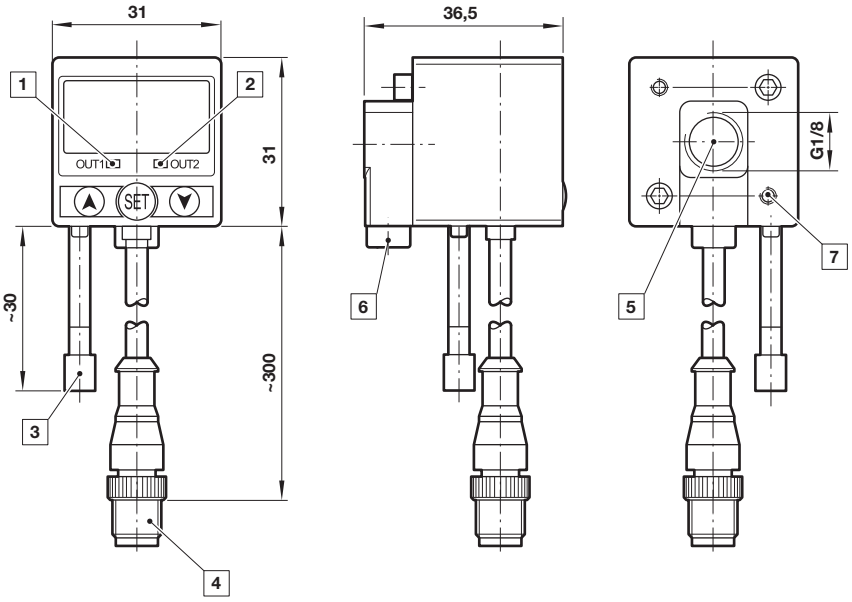


18D Pressure switch

Dimensions in mm
Projection/First angle



51D Pressure switch - digital



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.