

B84G - General purpose filter/regulator Excelon® Plus Modular System



- > Port size: 3/8", 1/2", and 3/4" (ISO G/PTF)
- > Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- > 5 or 40 micron particle and high efficiency water removal (> 98%)
- > Double safety lock bowl
- > Air purity classes in accordance to ISO8573-1:2010: 7:8:4 (40µm) 6:8:4 (5µm)
- > Push to lock adjusting knob with built-in tamper-resistant feature
- > Metal bowl with prismatic liquid level indicator lens
- > Lightweight Polycarbonate bowl
- > Easy to read flush mounted gauge as standard, integrated electronic pressure sensor as option



Technical features filter/regulator

Medium:

Compressed air only

Maximum supply pressure:

Polycarbonate bowl: 145 psi (10 bar)

Metal bowl: 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)

Filter element:

5 µm & 40 µm

Port size:

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

1/2 PTF, 3/4 PTF

Gauge:

Integrated as standard

Gauge port 1/8 or electronic pressure sensor as option

Flow:

212 scfm 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. Filter element: 40 µm

Diaphragm Type:

Relieving / Non-relieving

Drain:

Manual or automatic

Automatic drain operating conditions (float operated):

Bowl pressure required to close drain: > 5 psi (0.35 bar)

Bowl pressure required to open drain: ≤ 2.9 psi (0.2 bar)

Minimum air flow required to close drain: 2 scfm (1 dm³/s)

Ambient/Media temperature:

Polycarbonate bowl:

+14 to +140°F (-10 to +60°C)

Metal bowl:

-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 B84 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 aluminum

Body covers: ABS

Bonnet: Acetal/ Aluminum

Valve: PP

Transparent Bowl : Polycarbonate with Polypropylene Guard.

Metal Bowl: Die cast Aluminum

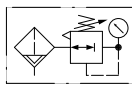
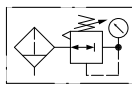
with PA liquid level indicator lens

Filter element: sintered PP

Bowl 'o'- ring: Chloroprene

Elastomers: NBR

Technical data B84G - standard models with integrated flush mounted gauge

Symbol	Port size (PTF)	Drain	Pressure range psi (bar)	Filter element (µm)	Bowl	Weight lbs (kg)	Model *1)
	3/8	Auto	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	1.61 (0.73)	B84G-3AK-AP3-RMG
	1/2	Auto	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	1.61 (0.73)	B84G-4AK-AP3-RMG
	3/4	Auto	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	1.61 (0.73)	B84G-6AK-AP3-RMG
	3/8	Auto	4 to 145 (0.3 to 10)	40	Metal with level indicator	1.94 (0.88)	B84G-3AK-AD3-RMG
	1/2	Auto	4 to 145 (0.3 to 10)	40	Metal with level indicator	1.94 (0.88)	B84G-4AK-AD3-RMG
	3/4	Auto	4 to 145 (0.3 to 10)	40	Metal with level indicator	1.94 (0.88)	B84G-6AK-AD3-RMG
	3/8	Manual	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	1.61 (0.73)	B84G-3AK-QP3-RMG
	1/2	Manual	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	1.61 (0.73)	B84G-4AK-QP3-RMG
	3/4	Manual	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	1.61 (0.73)	B84G-6AK-QP3-RMG
	3/8	Manual	4 to 145 (0.3 to 10)	40	Metal with level indicator	1.94 (0.88)	B84G-3AK-QD3-RMG
	1/2	Manual	4 to 145 (0.3 to 10)	40	Metal with level indicator	1.94 (0.88)	B84G-4AK-QD3-RMG
	3/4	Manual	4 to 145 (0.3 to 10)	40	Metal with level indicator	1.94 (0.88)	B84G-6AK-QD3-RMG

*1) 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 <https://www.norgren.com/en-us/support/technical-support/configurators/air-preparation-configurator> or contact IMI Norgren

B84G - Filter/regulator 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 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 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 <https://www.norgren.com/en-us/products/air-preparation/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

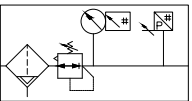
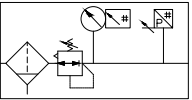
Switching output:

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

Load current:

100mA with short
circuit protection

Technical data B84G - standard models with integrated electronic pressure sensor

Symbol	Port size (PTF)	Drain	Pressure range psi (bar)	Filter element (µm)	Bowl	Weight lbs (kg)	Model *)
	3/8	Auto	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	2.05 (0.93)	B84G-3AK-AP3-RME
	1/2	Auto	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	2.05 (0.93)	B84G-4AK-AP3-RME
	3/4	Auto	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	2.05 (0.93)	B84G-6AK-AP3-RME
	3/8	Auto	4 to 145 (0.3 to 10)	40	Metal with level indicator	2.38 (1.08)	B84G-3AK-AD3-RME
	1/2	Auto	4 to 145 (0.3 to 10)	40	Metal with level indicator	2.38 (1.08)	B84G-4AK-AD3-RME
	3/4	Auto	4 to 145 (0.3 to 10)	40	Metal with level indicator	2.38 (1.08)	B84G-6AK-AD3-RME
	3/8	Manual	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	2.05 (0.93)	B84G-3AK-QP3-RME
	1/2	Manual	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	2.05 (0.93)	B84G-4AK-QP3-RME
	3/4	Manual	4 to 145 (0.3 to 10)	40	Guarded polycarbonate	2.05 (0.93)	B84G-6AK-QP3-RME
	3/8	Manual	4 to 145 (0.3 to 10)	40	Metal with level indicator	2.38 (1.08)	B84G-3AK-QD3-RME
	1/2	Manual	4 to 145 (0.3 to 10)	40	Metal with level indicator	2.38 (1.08)	B84G-4AK-QD3-RME
	3/4	Manual	4 to 145 (0.3 to 10)	40	Metal with level indicator	2.38 (1.08)	B84G-6AK-QD3-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 <https://www.norgren.com/en-us/support/technical-support/configurators/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)
Drain	Substitute
Manual	Q
Auto drain	A
Bowl	Substitute
Metal with liquid indicator	D
Transparent with guard	P

B84G-★ ★ ★-★ ★ ★-★ ★ ★

*1) All models shown here are applicable for flow direction left to right. With flow direction right to left please use the online configurator <https://www.norgren.com/en-us/support/technical-support/configurators/air-preparation-configurator> or contact Norgren

*2) Units with 17 bar outlet pressure range are available only with the T-bar adjustment and only with metal bowl. Not available in connection with integrated pressure sensor.

Gauge	Substitute
With integrated electronic pressure sensor *3)	E
With integrated gauge	G
Without integrated gauge but with gauge port 1/8"	N
Pressure range *4)	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*2)
Diaphragm	Substitute
Relieving	R
Non-relieving	N
Element	Substitute
40 µm	3
5 µm	1

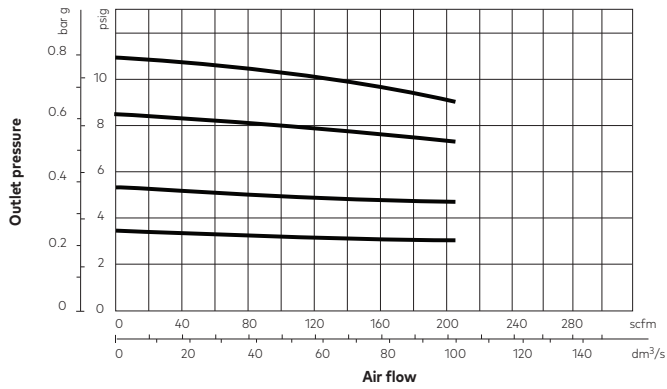
*3) Only available with 10 or 4 bar pressure range

*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

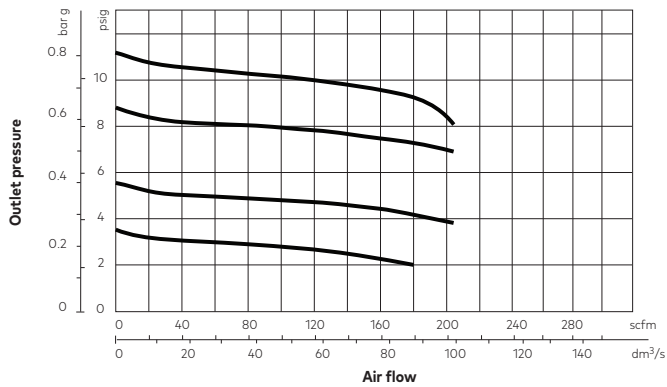
Inlet pressure: 145 psi (10 bar)

Port size: 1/2", 40 µm element



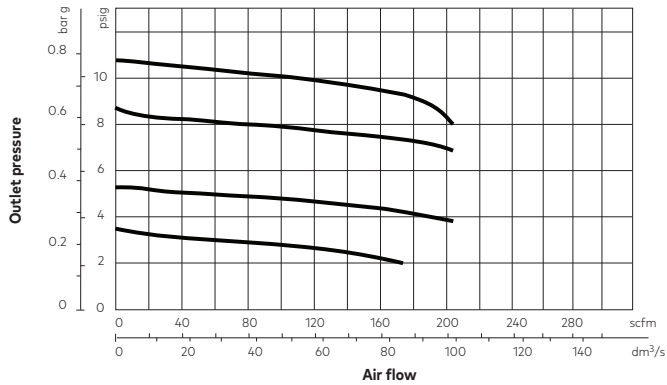
Inlet pressure: 145 psi (10 bar)

Port size: 3/8", 5 µm element



Inlet pressure: 145 psi (10 bar)

Port size: 3/8", 40 µm element



Accessories

Quikclamp®



Page 6

840014-51KIT

Quikclamp® with bracket assembled



Page 6

840014-52KIT

Hybrid Quikclamp® *1



Page 6

840014-61

Hybrid Quikclamp® with bracket assembled *1



Page 6

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



Page 6

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 adapter kit 1/8 PTF



840100-01KIT

Gauge adapter 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



Page 7

840028-53KIT

Full flow porting block vertical, 3/4" PTF



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840028-68KIT

Full flow porting block vertical, G3/4"



Page 7

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

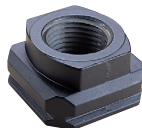
Pressure sensing block G1/4



Page 7

840016-51KIT

Port Adapters



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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

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



Page 8

0881300000000000

Digital pressure switch 54D (-1 ... 10 bar) *2



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54D-V110G-DD0-AA

Padlock



840055-01KIT

Lockout device



840055-02KIT

Electronic Pressure Sensor – stand alone version *3



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

Gauges

(For regulators with gauge port instead of integrated port)

Center back connection, white face



Pressure range (bar)*3	(psi)	(MPa)	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

Center back connection, white face



Pressure range (bar)*3	(psi)	(MPa)	Ø	Thread size	Model
0 ... 6	0 ... 0.6	0 ... 84	50 mm	R1/8	18-015-012
0 ... 10	0 ... 1	0 ... 145	50 mm	R1/8	18-015-013
0 ... 25	0 ... 2.5	0 ... 362	50 mm	R1/8	18-015-014

Center back connection, black face



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

*3) primary scale

IO-Link cables

Connection cable M8x1 for integrated digital 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

Maintenance/Service

Filter cartridge 5 micron



840038-50KIT

Filter cartridge 40 micron



840038-51KIT

Auto drain kit with metal Nut - Imperial



6000-61KIT

Auto drain kit with metal Nut - Metric



6000-60KIT

R84 / B84 Elastomer Kit



FRLB84-KIT

Spare parts

Filter Bowl (Guarded Poly bowl with auto drain 6 mm PIF)



840025-51KIT

Filter Bowl (Guarded Poly bowl with manual drain)



840025-50KIT

Filter Bowl (Metal with S/ Glass & auto drain, 6 mm PIF)



840003-51KIT

Filter Bowl (Metal with S/ Glass & manual drain)



840003-50KIT

Filter Bowl (Guarded Poly bowl with auto drain, 1/4 PIF)



840025-53KIT

Filter Bowl (Metal with S/ Glass & auto drain, 1/4 PIF)



840003-56KIT

Dimensions

Dimensions in inches (mm)
Projection/Third angle



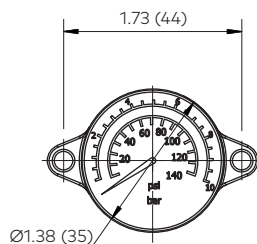
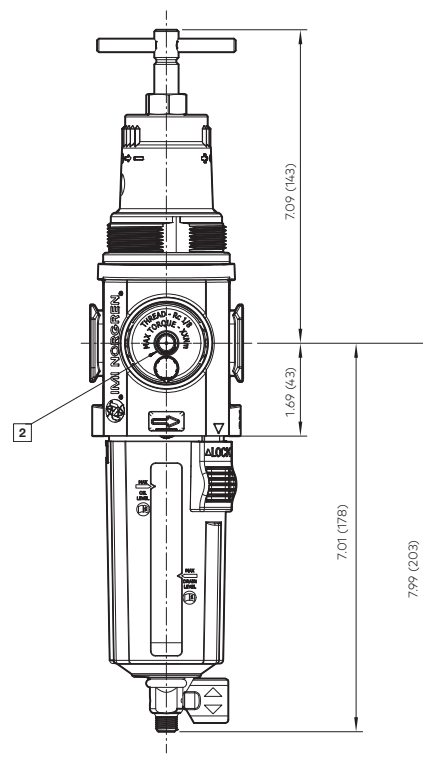
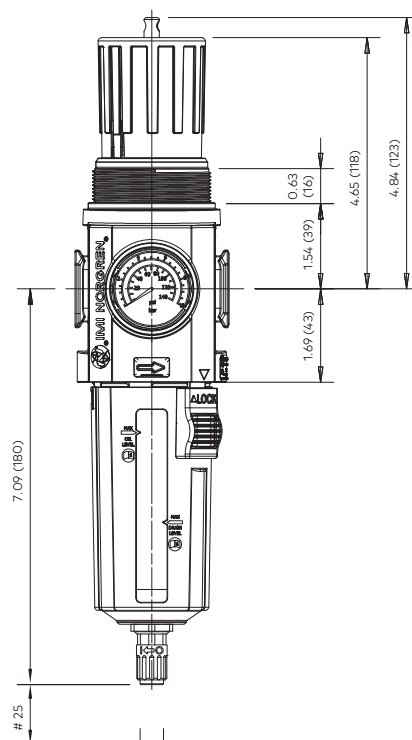
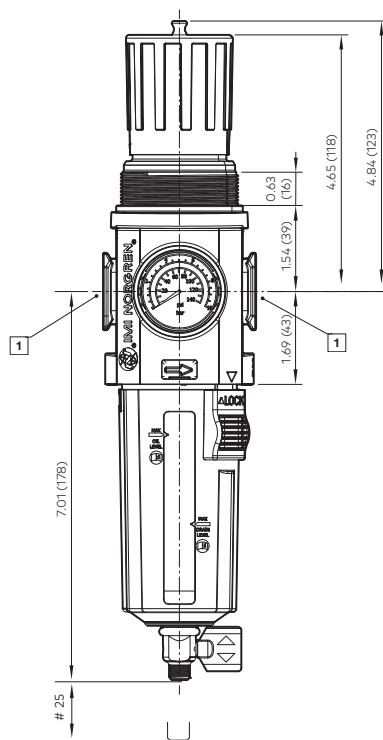
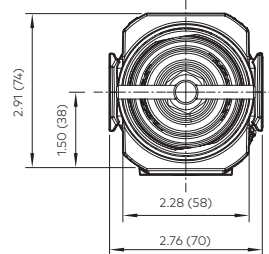
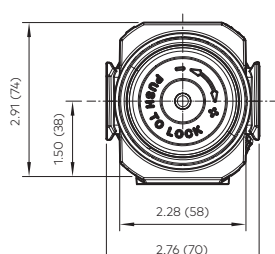
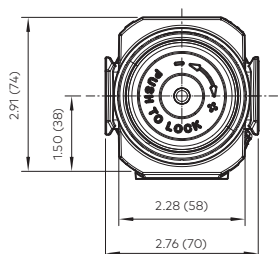
1/4 Turn Manual Drain

With knob

Automatic Drain

1/4 Turn Manual Drain

With T-bar



Minimum clearance for bowl removal

- 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 B84G- General Purpose Filter Regulator

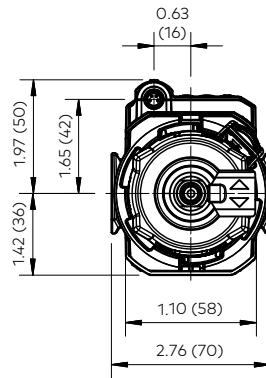
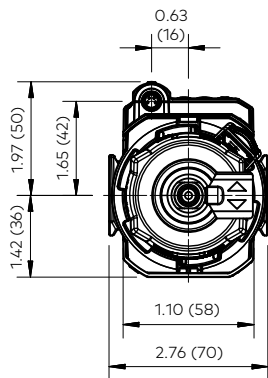
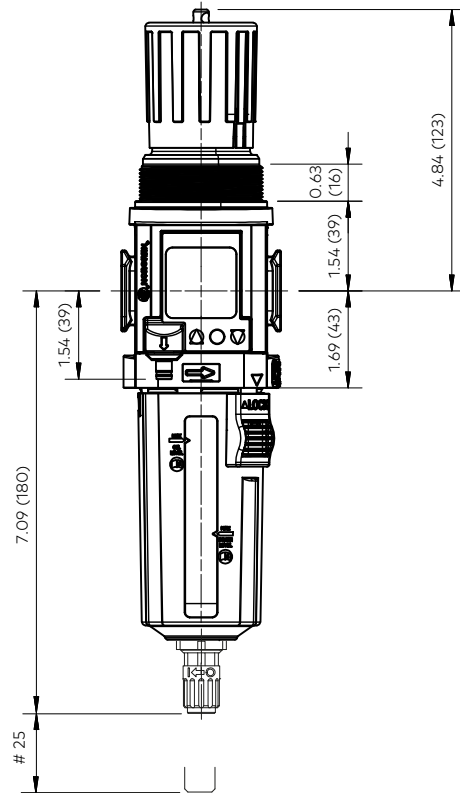
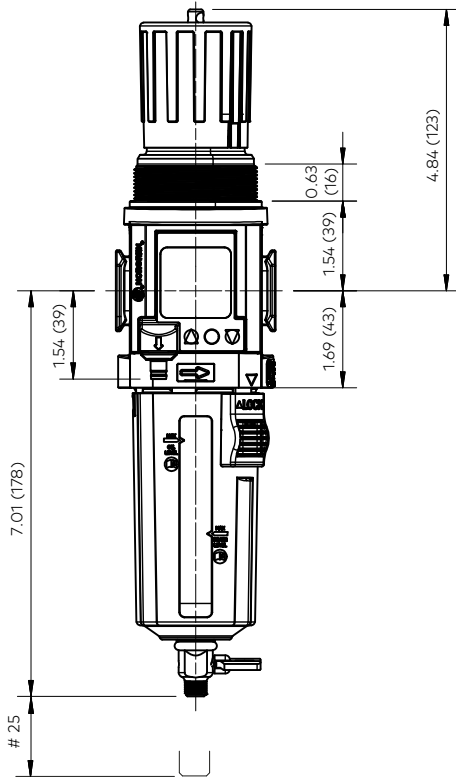
1/4 Turn Manual Drain

Automatic Drain

Dimensions in inches (mm)
Projection/Third angle



With knob

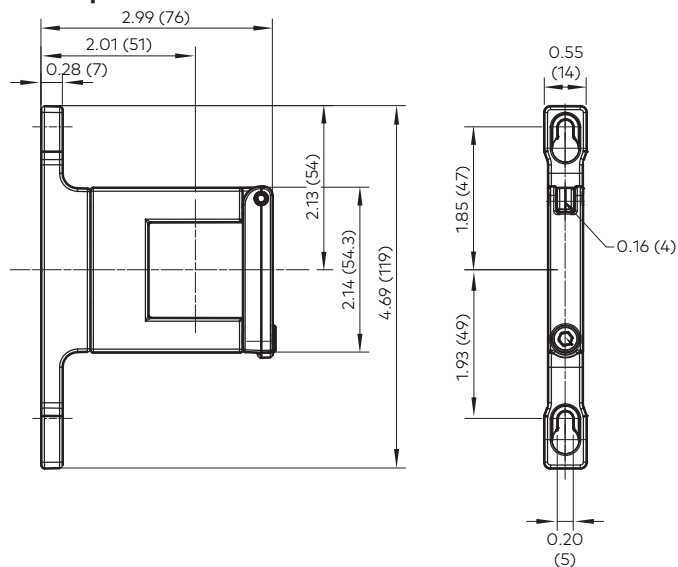


Accessories

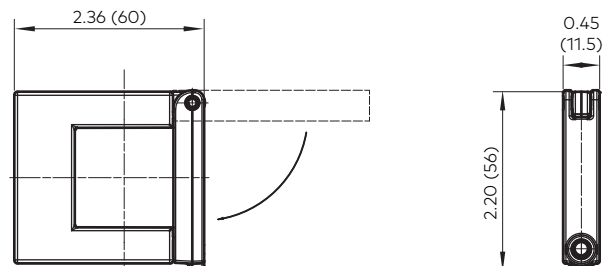
Dimensions in inches (mm)
Projection/Third angle



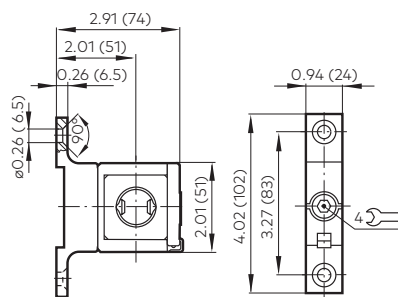
Quikclamp® with wall bracket



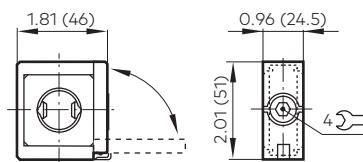
Quikclamp®



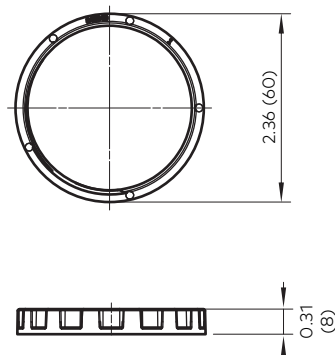
Hybrid-Quikclamp® with wall bracket



Hybrid-Quikclamp®

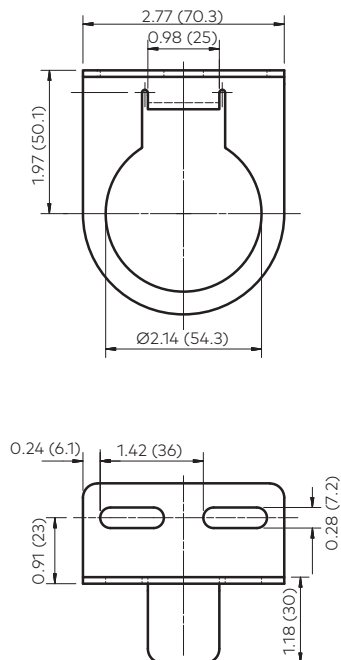


Panel mounting nut



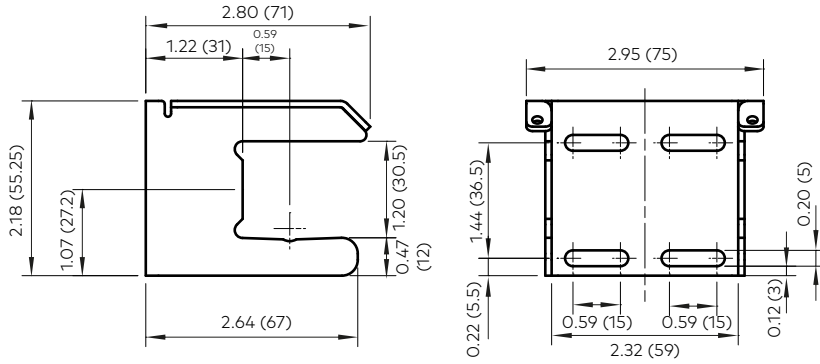
Recommended panel hole size:
ø 55 mm ... 57 mm
Panel thickness:
2 ... 6 mm

Neck mounting bracket



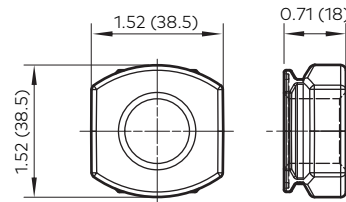
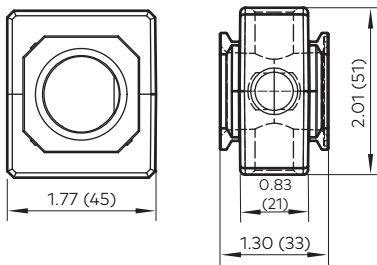
Mounting bracket

Dimensions in inches (mm)
Projection/Third angle



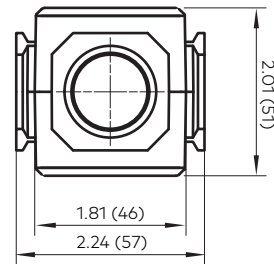
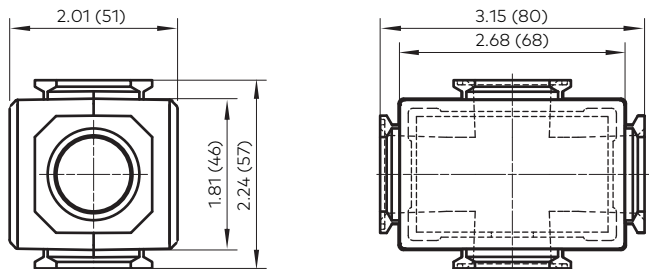
Pressure sensing block

Pipe adapter

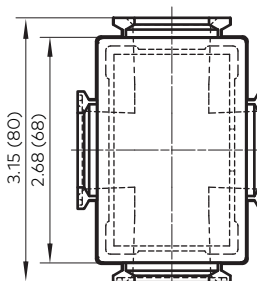
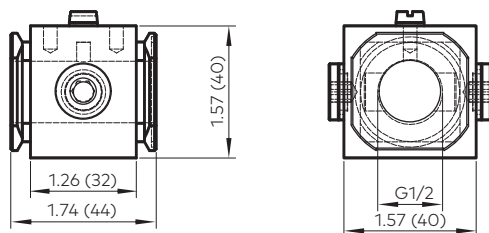


Full flow porting block horizontal

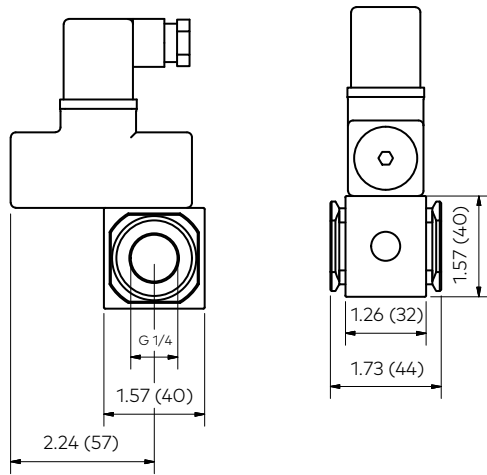
Full flow porting block vertical



Porting block for 18D pressure switch

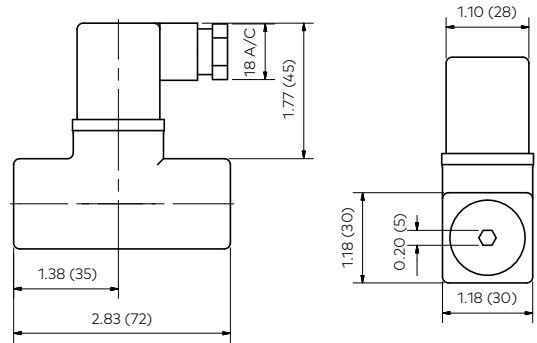
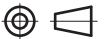


18D Porting block and 18D assembled

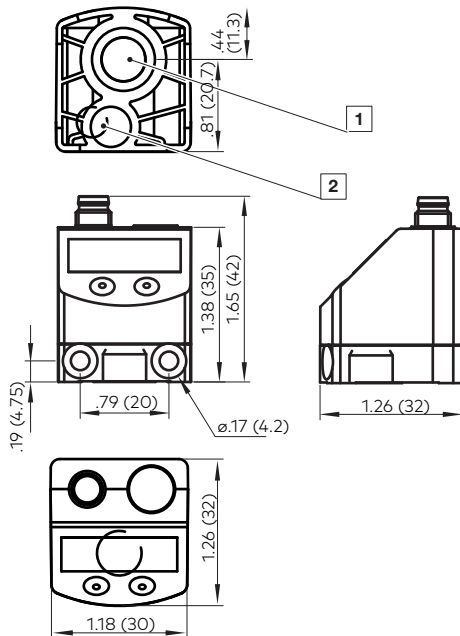


18D Pressure switch

Dimensions in inches (mm)
Projection/Third angle



54D Pressure switch - digital



- 1 Main pressure connection (G1/8)
- 2 Auxiliary pressure connection for differential pressure sensing (M5)

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.