B84G - General purpose filter/regulator 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
- 5 or 40 micron particle and high efficiency water removal (> 98%)
- Double safety lock bowl
- Air purity classes in ccordance to ISO8573-1:2010: 7:8:4 (40µm) 6:8:4 (5µm)
- Push to lock adjusting knob with built in tamper resistant feature
- Light weight Polycarbonate bowl
- Metal bowl with prismatic liquid level indicator lens
- High Corrosion resistance: Body and Metal bowl with electrophoretic paint finish
- Easy to read flush mounted gauge as standard, integrated electronic pressure sensor as option
- Relieving and Non-relieving options
- DoC in accordance with 2014/34/EU/ATEX

Technical features filter/regulator

Medium:
Compressed air only

Maximum supply pressure:
Polycarbonate bowl: 10 bar (145 psi)
Metal bowl: 20 bar (290 psi)

Outlet pressure ranges:
0,3 ...10 bar (4 ... 145 psi),
0,3 ... 4 bar (4 ... 58 psi) optional,
0,3 ... 7 bar (4 ... 101 psi) optional,
0,7 ... 17 bar (10 ... 247 psi) optional

Filter element:
5 µm & 40 µm

Port size:
G3/8, G1/2, G3/4,
3/8 PTF, 1/2 PTF, 3/4 PT

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

Flow:
100 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.
Filter element: 40 µm

Diaphragm Type:
Relieving and Non-relieving

Drain:
Manual or automatic

Automatic drain operating conditions (float operated):
Bowl pressure required to close drain: > 0,35 bar (5 psi)
Bowl pressure required to open drain: ≤ 0,2 bar (2.9 psi)
Minimum air flow required to close drain: 1 dm^3/s (2 scfm)

Ambient/Media temperature:
Polycarbonate bowl:
-10 ... +60°C (+14 ... +140°F)

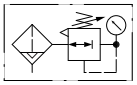
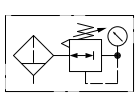
Metal bowl:
-20 ... +65°C (-4 ... +149°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Atex:
Filter/regulators B84 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: Acetal/ Aluminium
Valve: PP with Geolast seals
Transparent Bowl: Polycarbonate with Polyproplyene Guard.
Metal Bowl: Die cast Aluminium 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	Drain	Pressure range (bar)	Filter element (µm)	Bowl	Weight (kg)	Model *1)
	G3/8	Auto	0,3 ... 10	40	Guarded polycarbonate	0,73	B84G-3GK-AP3-RMG
	G1/2	Auto	0,3 ... 10	40	Guarded polycarbonate	0,73	B84G-4GK-AP3-RMG
	G3/4	Auto	0,3 ... 10	40	Guarded polycarbonate	0,73	B84G-6GK-AP3-RMG
	G3/8	Auto	0,3 ... 10	40	Metal with level indicator	0,88	B84G-3GK-AD3-RMG
	G1/2	Auto	0,3 ... 10	40	Metal with level indicator	0,88	B84G-4GK-AD3-RMG
	G3/4	Auto	0,3 ... 10	40	Metal with level indicator	0,88	B84G-6GK-AD3-RMG
	G3/8	Manual	0,3 ... 10	40	Guarded polycarbonate	0,73	B84G-3GK-QP3-RMG
	G1/2	Manual	0,3 ... 10	40	Guarded polycarbonate	0,73	B84G-4GK-QP3-RMG
	G3/4	Manual	0,3 ... 10	40	Guarded polycarbonate	0,73	B84G-6GK-QP3-RMG
	G3/8	Manual	0,3 ... 10	40	Metal with level indicator	0,88	B84G-3GK-QD3-RMG
	G1/2	Manual	0,3 ... 10	40	Metal with level indicator	0,88	B84G-4GK-QD3-RMG
	G3/4	Manual	0,3 ... 10	40	Metal with level indicator	0,88	B84G-6GK-QD3-RMG

*1) All models shown here are supplied with brackets and 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

B84G - Filter/regulator 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 integrated 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

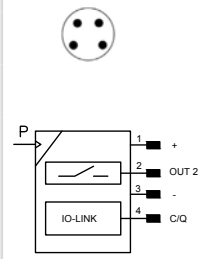
Display fields:
User configurable identifier, pressure value, pressure units, user configurable message, menu

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

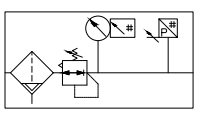
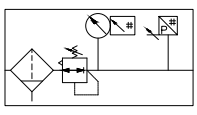


Pin-No.	Signal	Cable
1	L+ (24V)	brown
2	Out 2 (switching)	white
3	L- (0V)	blue
4	C/Q (IO-Link)	black

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 B84G - standard models with integrated electronic pressure sensor

Symbol	Port size	Drain	Pressure range (bar)	Filter element (µm)	Bowl	Weight (kg)	Model *)
	G3/8	Auto	0,3 ... 10	40	Guarded polycarbonate	0,93	B84G-3GK-AP3-RME
	G1/2	Auto	0,3 ... 10	40	Guarded polycarbonate	0,93	B84G-4GK-AP3-RME
	G3/4	Auto	0,3 ... 10	40	Guarded polycarbonate	0,93	B84G-6GK-AP3-RME
	G3/8	Auto	0,3 ... 10	40	Metal with level indicator	1,08	B84G-3GK-AD3-RME
	G1/2	Auto	0,3 ... 10	40	Metal with level indicator	1,08	B84G-4GK-AD3-RME
	G3/4	Auto	0,3 ... 10	40	Metal with level indicator	1,08	B84G-6GK-AD3-RME
	G3/8	Manual	0,3 ... 10	40	Guarded polycarbonate	0,93	B84G-3GK-QP3-RME
	G1/2	Manual	0,3 ... 10	40	Guarded polycarbonate	0,93	B84G-4GK-QP3-RME
	G3/4	Manual	0,3 ... 10	40	Guarded polycarbonate	0,93	B84G-6GK-QP3-RME
	G3/8	Manual	0,3 ... 10	40	Metal with level indicator	1,08	B84G-3GK-QD3-RME
	G1/2	Manual	0,3 ... 10	40	Metal with level indicator	1,08	B84G-4GK-QD3-RME
	G3/4	Manual	0,3 ... 10	40	Metal with level indicator	1,08	B84G-6GK-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 www.norgren.com/air-preparation-configurator or contact Norgren

Option selector *1)

B84G-★★★-★★★-★★★

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)
Drain	**Substitute**
Manual (standard)	Q
Auto drain (standard)	A
Bowl	**Substitute**
Metal with liquid indicator	D
Transparent with guard (standard)	P

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**
0,3 ... 4 bar	F
0,3 ... 7 bar	K
0,3 ... 10 bar (standard)	M
0,7 ... 17 bar	S*2)
Diaphragm Type	**Substitute**
Relieving	R
Non-relieving	N
Element	**Substitute**
40 µm (standard)	3
5 µm	1

*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 and only with metal bowl. Not available in connection with integrated pressure sensor.

*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.

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''.

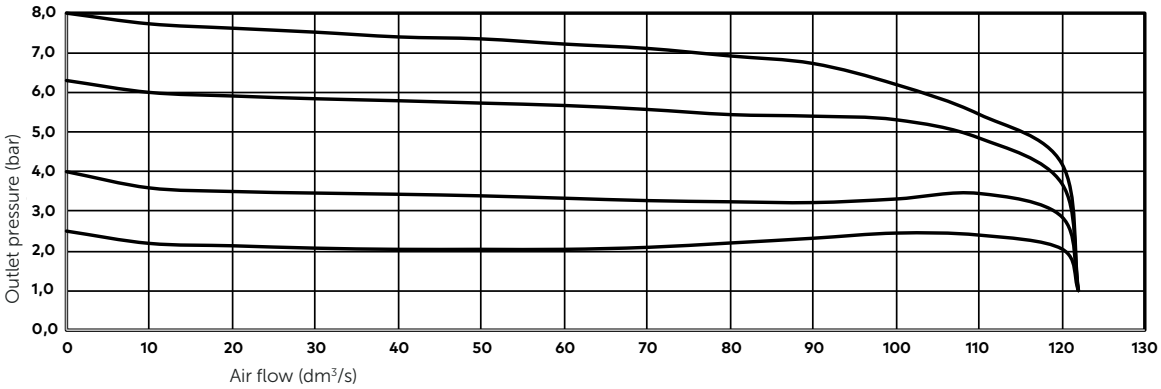
II 2 GD

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

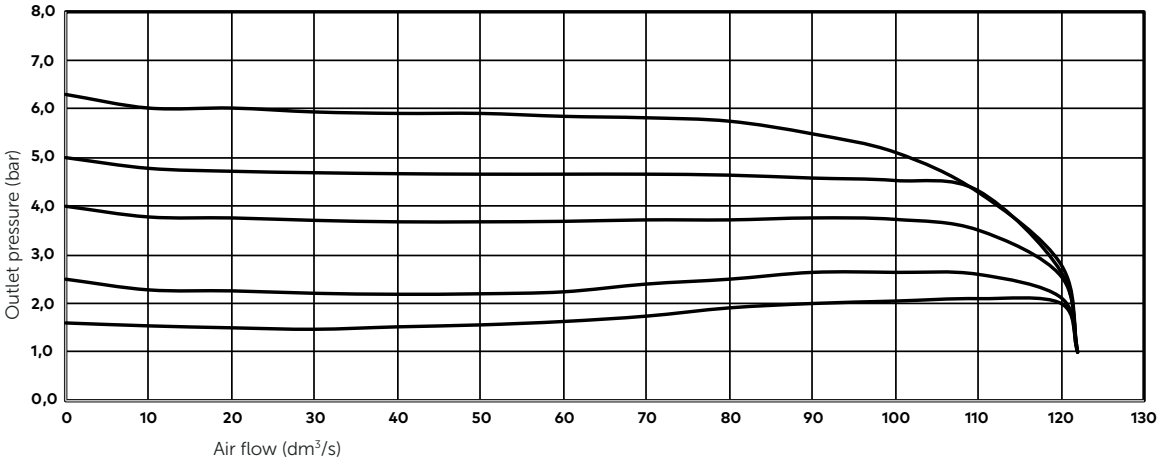
For a copy of the Declaration of Conformity (DoC) please use the link http://cdn.norgren.com/pdf/IM_Excelon_Plus_EN_final.pdf

Flow characteristics

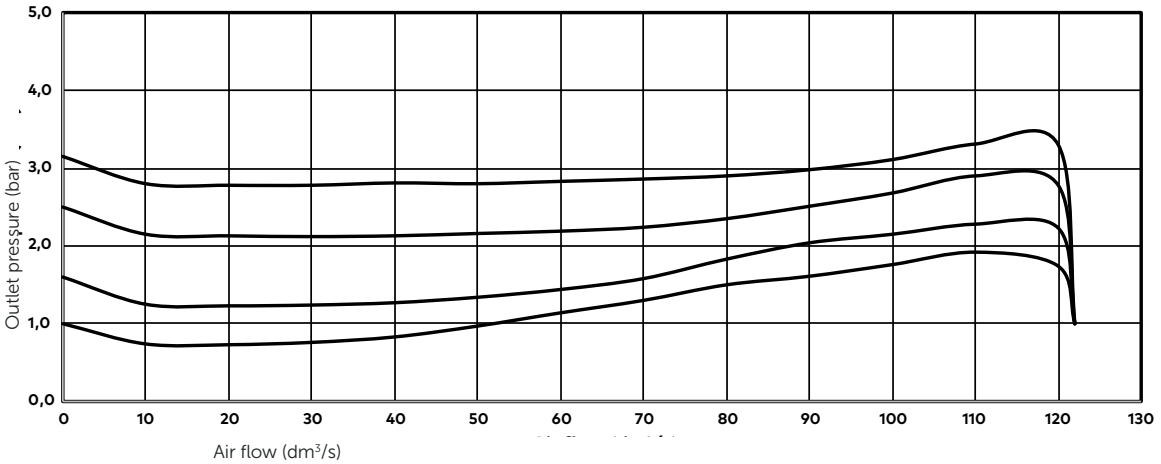
Inlet pressure: 10 bar (145 psi),
Outlet pressure range: 0,3 ... 10 bar (4 ... 145 psi)
Port size: 1/2", Filter: 40 micron



Inlet pressure: 10 bar (145 psi),
Outlet pressure range: 0,3 ... 7 bar (4 ... 101 psi)
Port size: 1/2", Filter: 40 micron



Inlet pressure: 10 bar (145 psi),
Outlet pressure range: 0,3 ... 4 bar (4 ... 58 psi)
Port size: 1/2", Filter: 40 micron



Accessories

Quikclamp

Page 9

840014-51KIT

Quikclamp with bracket assembled

Page 9

840014-52KIT

Hybrid Quikclamp *1

Page 9

840014-61

Hybrid Quikclamp with bracket assembled *1

Page 9

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 9

840068-51KIT

Plastic panel mounting nut

Page 9

840048-89KIT

Neck mounting bracket and metal panel nut

Page 9

840068-50KIT

Metal panel mounting nut

Page 9

840048-01KIT

Mounting bracket

Page 10

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

Page 10

840028-50KIT

Full flow porting block horizontal, G3/4

Page 10

840028-53KIT

Full flow porting block vertical, 3/4"PTF

Page 10

840028-68KIT

Full flow porting block vertical, G3/4"

Page 10

840028-69KIT

Pressure switch interface block (18D pressure switch) G1/4

Page 10

0337717000000000

Pressure sensing block
1/4 PTF

Page 10

840016-50KIT

Pressure sensing block
G1/4

Page 10

840016-51KIT

Port Adaptors

Page 10

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 11

0881300

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

Page 11

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 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	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	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

*3) primary scale

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,
relieving

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

R84 / B84
Elastomer kit,
Non-relieving

FRLB84NR-KIT

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

840025-53KIT

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

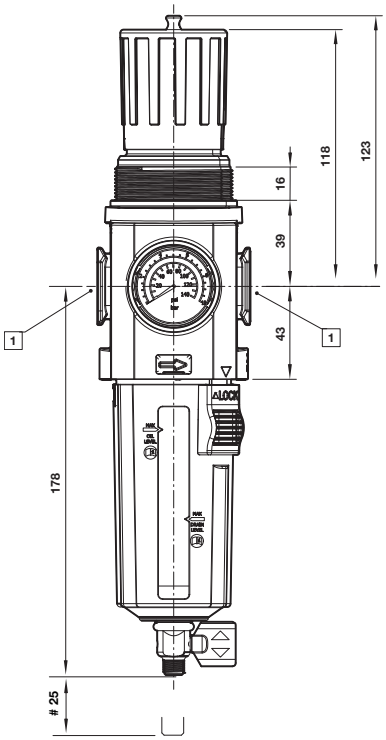
840003-56KIT

Dimensions

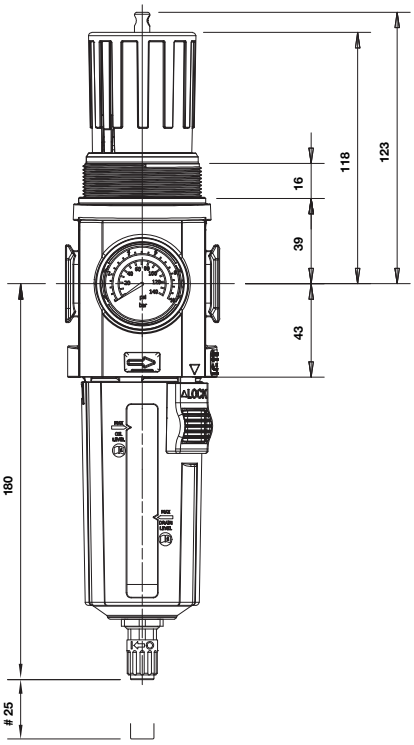
Dimensions in mm
Projection/First angle

1/4 Turn Manual Drain

With knob

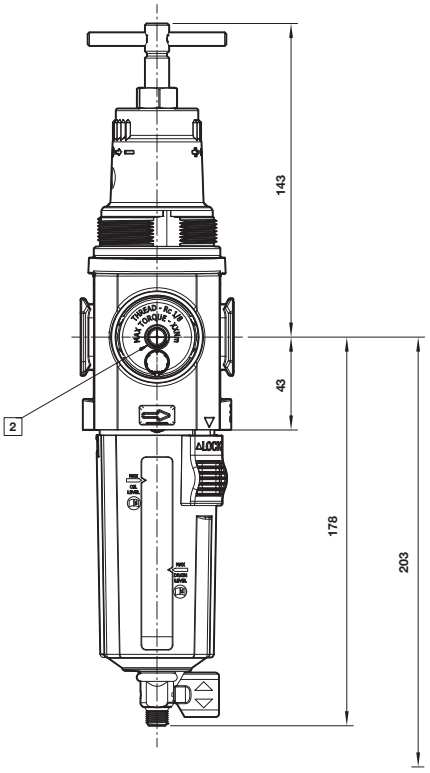


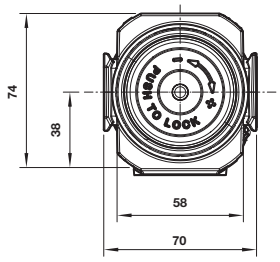
Automatic Drain

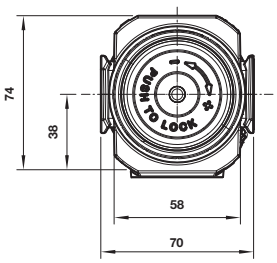


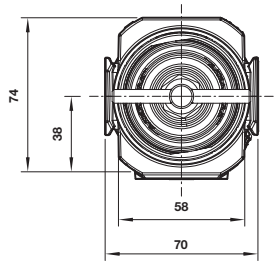
1/4 Turn Manual Drain

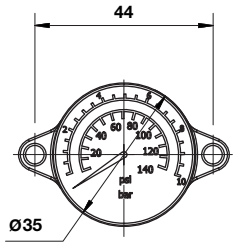
With T-bar











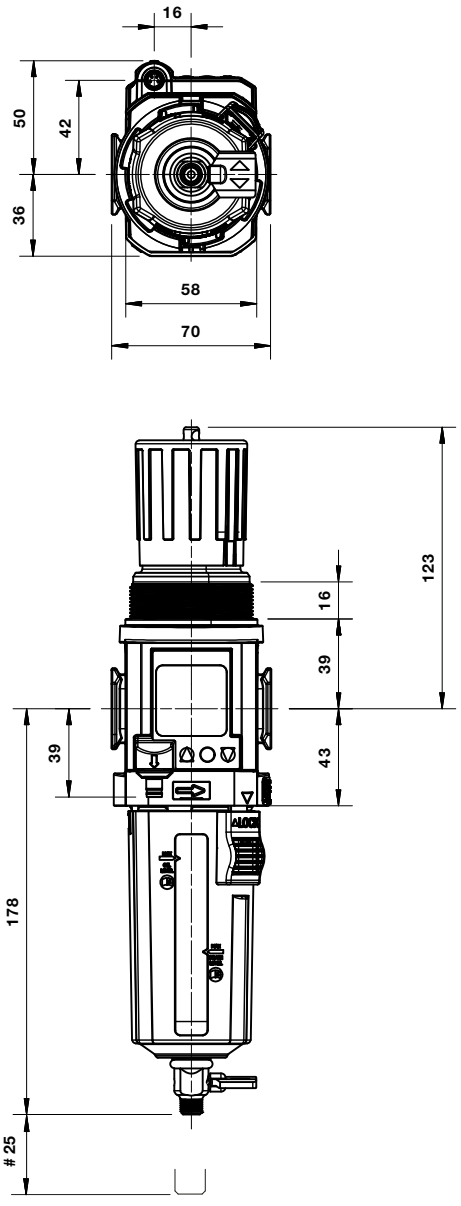
Minimum clearance for bowl removal
1 Main ports 1/4", 3/8"(ISO G/PTF)
2 Gauge Port Rc 1/8 for ISO G and 1/8 PTF for PTF main ports

Dimensions B84G- General Purpose Filter Regulator

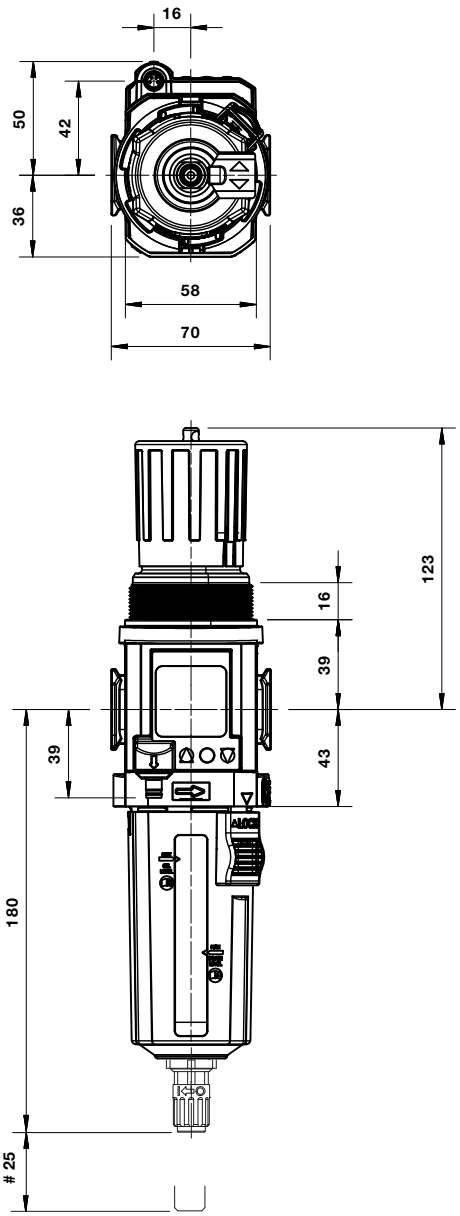
Dimensions in mm
Projection/First angle

1/4 Turn Manual Drain

With knob



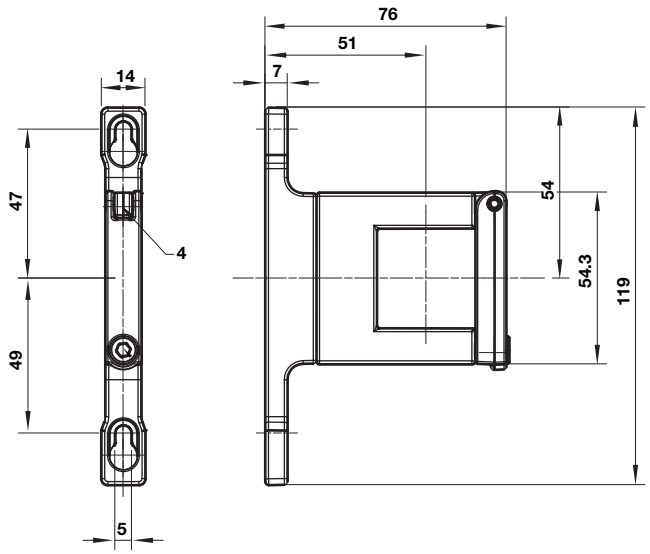
Automatic Drain



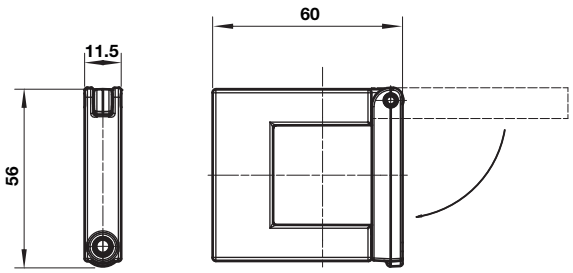
Accessories

Dimensions in mm
Projection/First angle

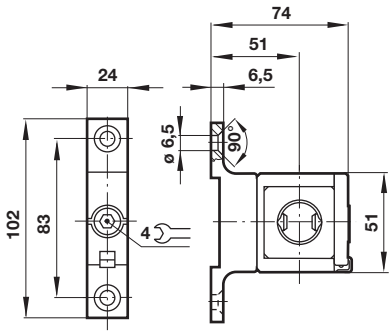
Quikclamp with wall bracket



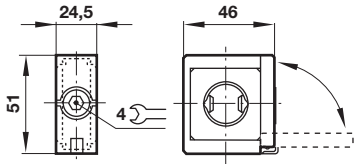
Quikclamp



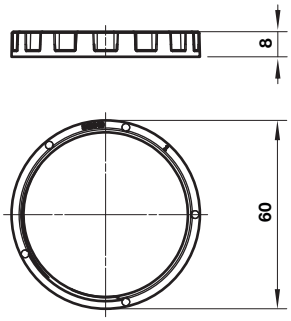
Hybrid-Quikclamp with wall bracket



Hybrid-Quikclamp

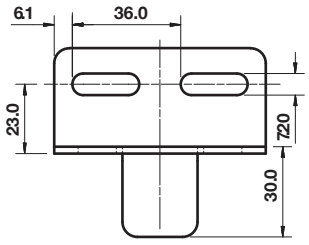


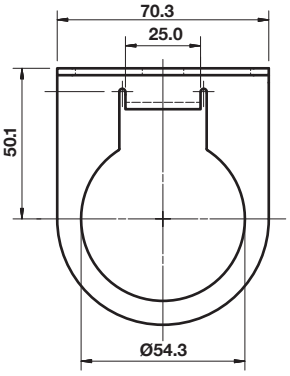
Panel mounting nut



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

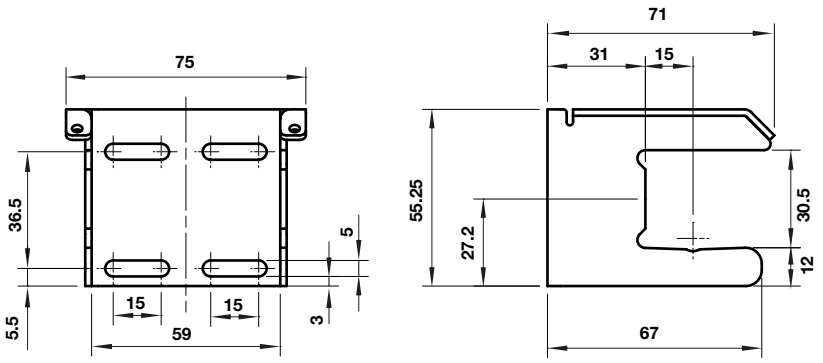
Neck mounting bracket



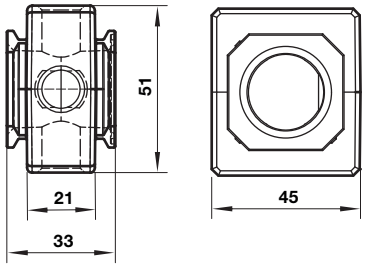


Mounting bracket

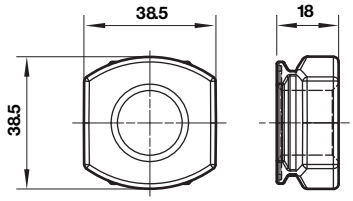
Dimensions in mm
Projection/First angle



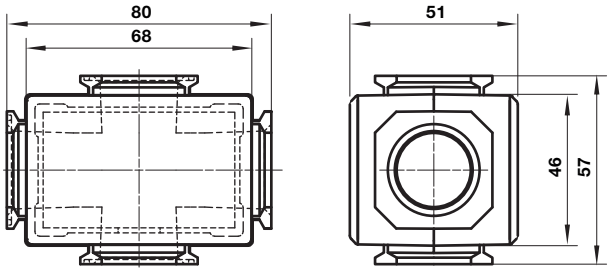
Pressure sensing block



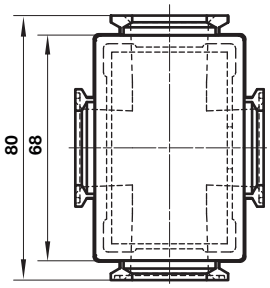
Pipe adaptor



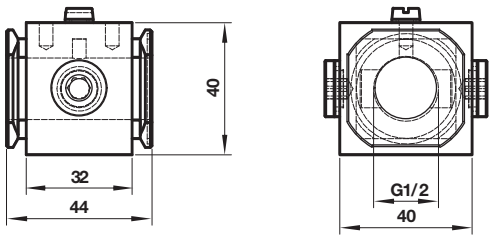
Full flow porting block horizontal

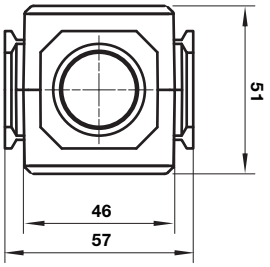


Full flow porting block vertical

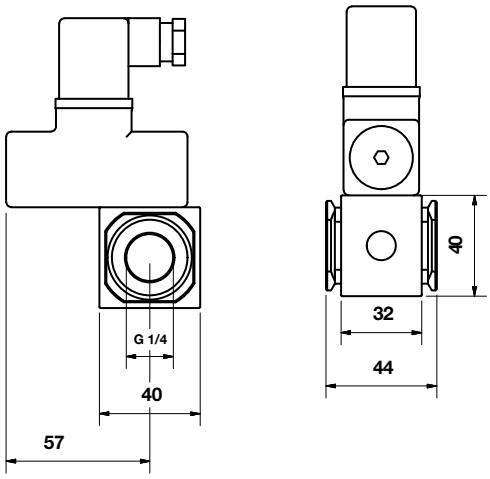


Porting block for 18D pressure switch



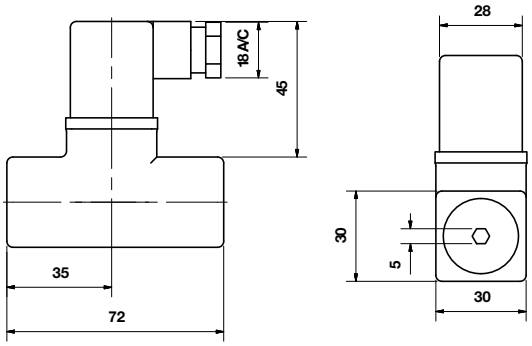


18D Porting block and 18D assembled

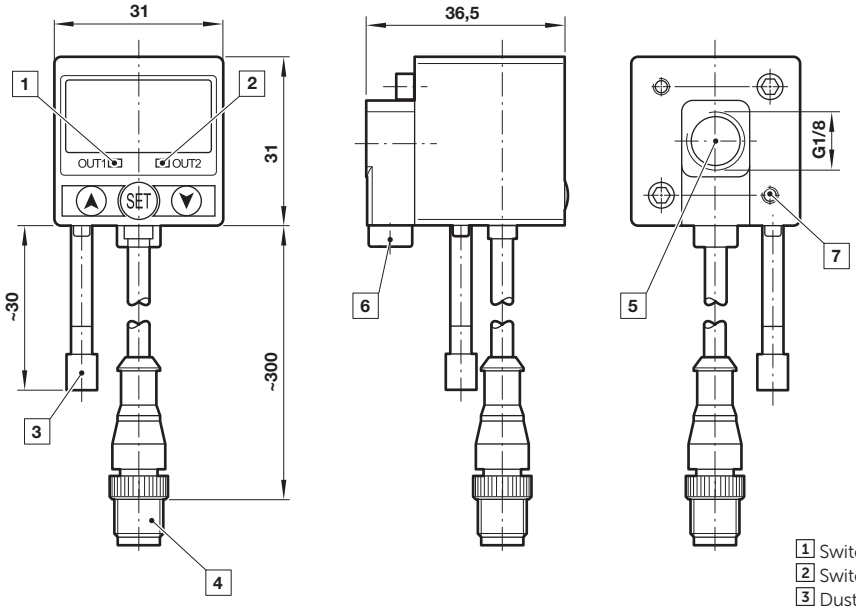


18D Pressure switch

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 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.