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

— ⟨Ex⟩ 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 dm³/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 dm³/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:
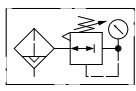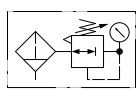Filter/regulators B84 are in conformity with Atex 2014/34/EU

⟨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: 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/en/support/configurators/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

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
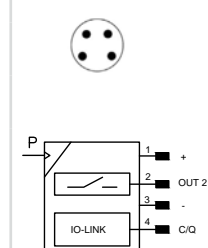
Min. cycle time:
20 ms

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:
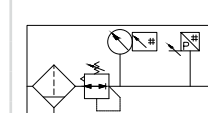According to EN 61000-6-2;
EN 61000-6-3
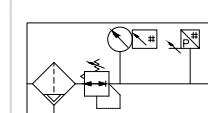
Switching output:
Configurable NPN / PNP / Push-Pull / NO / NC / hi-Z
Load current:
100mA with short circuit protection

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/en/support/configurators/air-preparation-configurator or contact Norgren

Option selector *1)

<center>B84G-★★★-★★★-★★★</center>

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/en/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.

*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
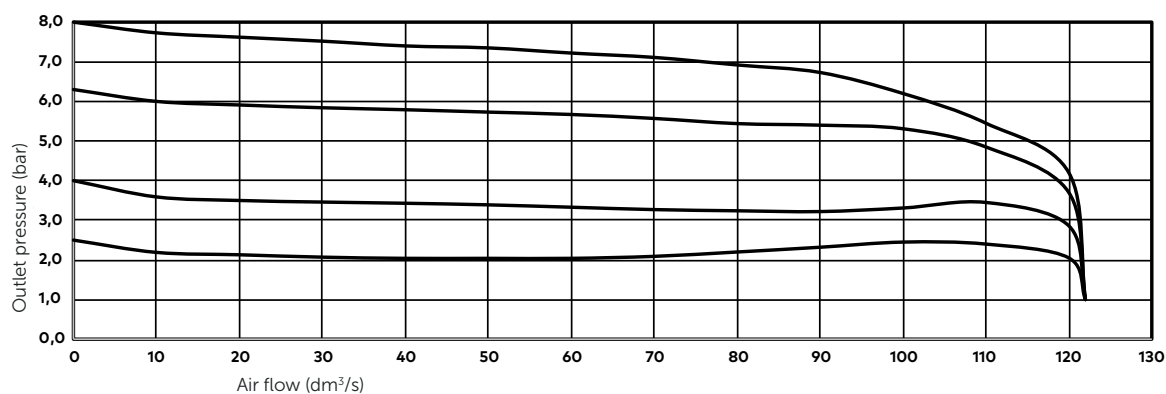
Inlet pressure: 10 bar (145 psi),
Outlet pressure range: 0,3 ... 7 bar (4 ... 101 psi)
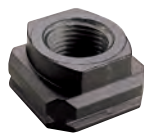Port size: 1/2", Filter: 40 micron
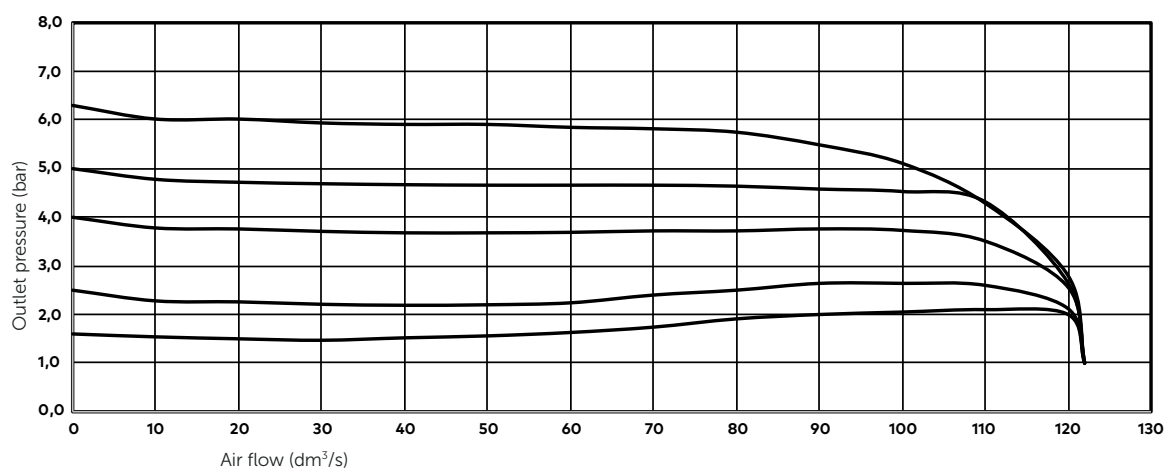
Inlet pressure: 10 bar (145 psi),
Outlet pressure range: 0,3 ... 4 bar (4 ... 58 psi)
Port size: 1/2", Filter: 40 micron

Accessories

Quikclamp	Quikclamp with bracket assembled	Hybrid Quikclamp *1	Hybrid Quikclamp with bracket assembled *1
Page 9	Page 9	Page 9	Page 9
840014-51KIT	840014-52KIT	840014-61	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	Plastic panel mounting nut	Neck mounting bracket and metal panel nut	Metal panel mounting nut	Mounting bracket
Page 9	Page 9	Page 9	Page 9	Page 10
840068-51KIT	840048-89KIT	840068-50KIT	840048-01KIT	840024-50KIT

Integrated gauge 4 bar gauge	Integrated gauge 10 bar gauge	Integrated gauge 20 bar gauge	Gauge adaptor kit 1/8 PTF	Gauge adaptor kit R 1/8
840073-03KIT	840073-01KIT	840073-02KIT	840143-01KIT	840143-02KIT

Full flow porting block horizontal, 3/4 PTF	Full flow porting block horizontal, G3/4	Full flow porting block vertical, 3/4"PTF	Full flow porting block vertical, G3/4"	Pressure switch interface block (18D pressure switch) G1/4
Page 10	Page 10	Page 10	Page 10	Page 10
840028-50KIT	840028-53KIT	840028-68KIT	840028-69KIT	0337717000000000

Pressure sensing block 1/4 PTF	Pressure sensing block G1/4	Port Adaptors		
Page 10	Page 10	Page 10		
840016-50KIT	840016-51KIT	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	Lockout device
840055-01KIT	840055-02KIT

IMI

Pressure switch 18D (0,5 ... 8bar) *1	Digital pressure switch 51D (-1 ... 10 bar) *2	Electronic Pressure Sensor – stand alone version *3
Page 11	Page 11	
0881300	0860810	Q84G

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

*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.

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	Filter cartridge 40 micron	Auto drain kit with metal Nut - Imperial	Auto drain kit with metal Nut - Metric	R84 / B84 Elastomer kit, relieving
840038-50KIT	840038-51KIT	6000-61KIT	6000-60KIT	FRLB84-KIT

Spare parts

Filter Bowl (Guarded Poly bowl with auto drain 6 mm PIF)	Filter Bowl (Guarded Poly bowl with manual drain)	Filter Bowl (Metal with S/Glass & auto drain, 6 mm PIF)	Filter Bowl (Metal with S/Glass & manual drain)	R84 / B84 Elastomer kit, Non-relieving
840025-51KIT	840025-50KIT	**840003-51KIT**	840003-50KIT	FRLB84NR-KIT

Filter Bowl (Guarded Poly bowl with auto drain, 1/4 PIF)	Filter Bowl (Metal with S/Glass & auto drain, 1/4 PIF)
840025-53KIT	840003-56KIT

![IMI logo]

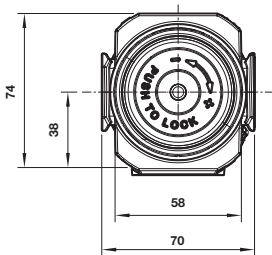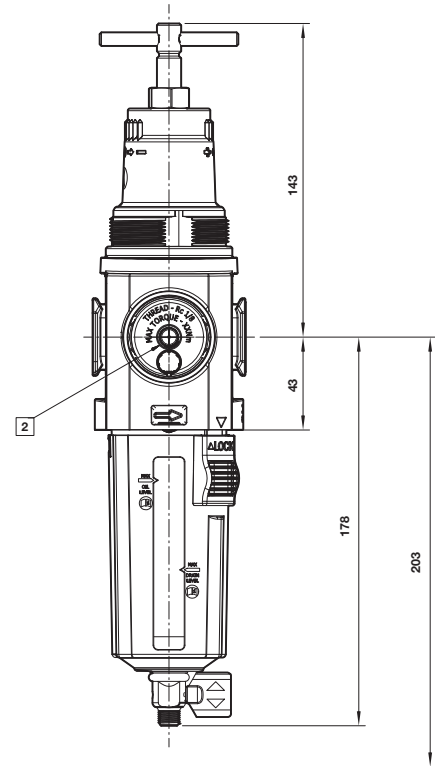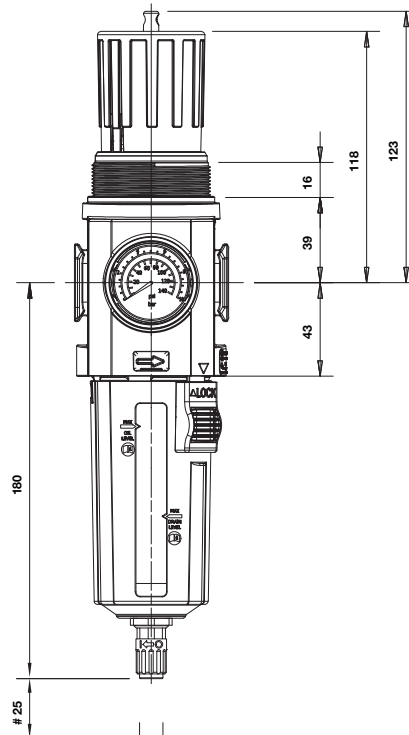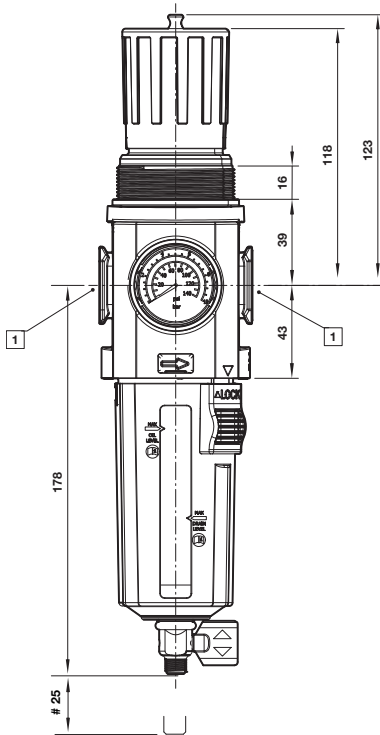## Dimensions

1/4 Turn Manual Drain

Automatic Drain

1/4 Turn Manual Drain

With knob

With T-bar
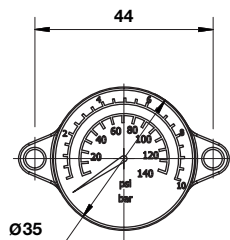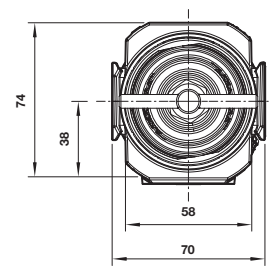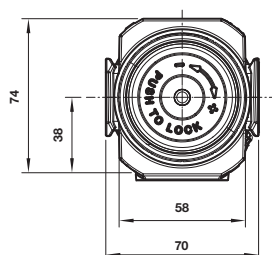
Minimum clearance for bowl removal
1 Main ports 1/4", 3/8"(ISO G/PTF)
2 Gauge Port Rc 1/8 for ISO G and 1/8 PTF for PTF main ports
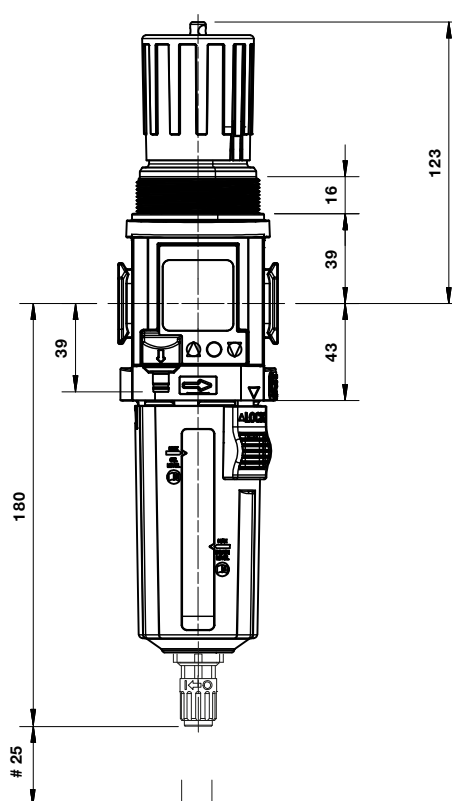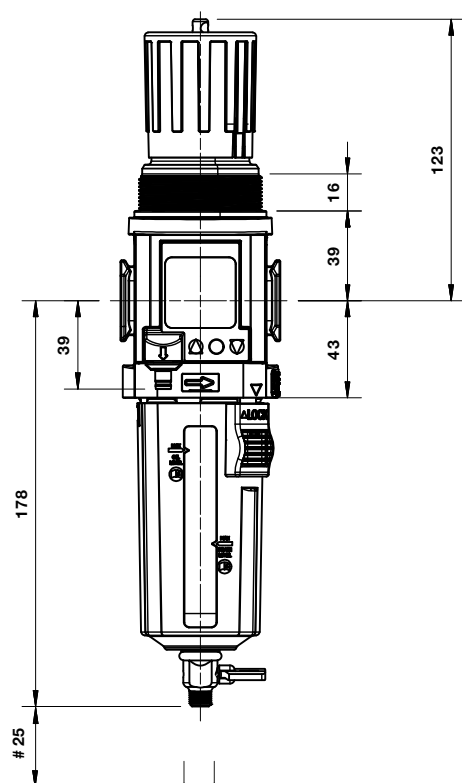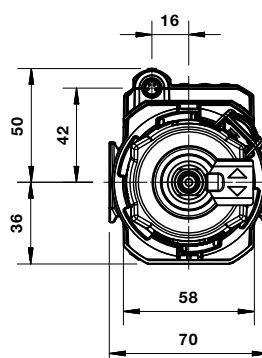
en 8.200.350.07

Dimensions B84G- General Purpose Filter Regulator

1/4 Turn Manual Drain

Automatic Drain

With knob
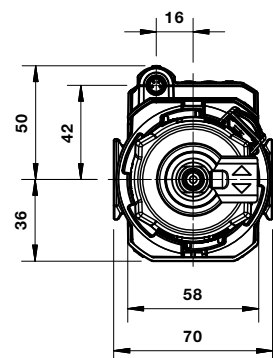
Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2017 - 9217e) © 2020 Norgren Ltd

Accessories

Quikclamp with wall bracket

76
51
7
14
47
4
49
5
54
54.3
119

Quikclamp

11.5
56
60

Hybrid-Quikclamp with wall bracket

74
51
6,5
24
ø 6,5
90°
102
83
4
51

Hybrid-Quikclamp

24,5
46
51
4

Panel mounting nut

8
60
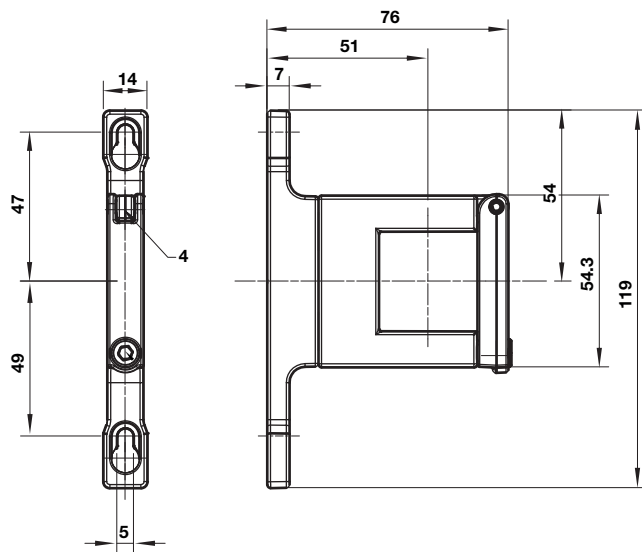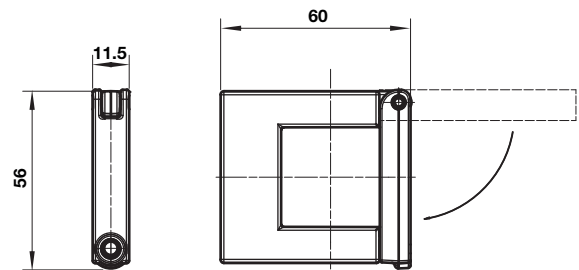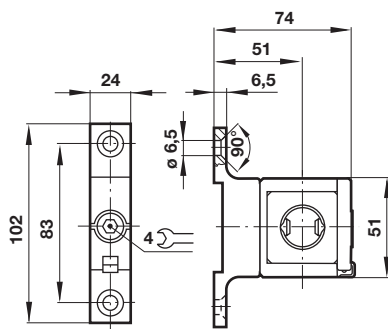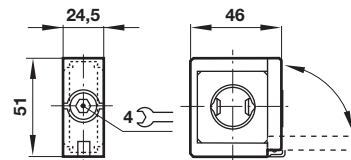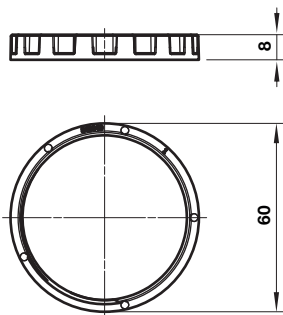
Recommended panel hole size:
ø 55 mm ... 57 mm
Panel thickness:
2 ... 6 mm

Neck mounting bracket
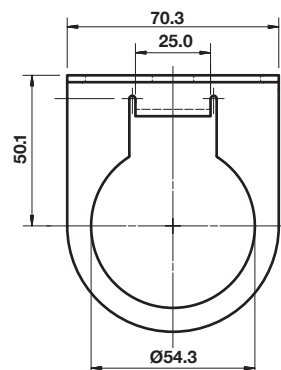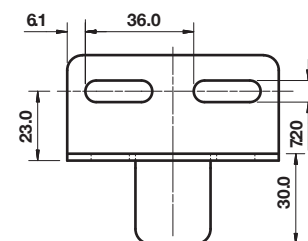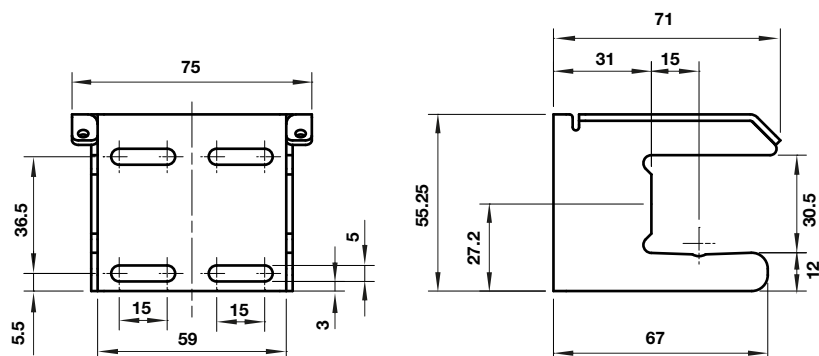
6.1
36.0
23.0
7.20
30.0

70.3
25.0
50.1
Ø54.3

en 8.200.350.09

Mounting bracket

75
36.5
5
15
15
59
5.5
3
71
31
15
55.25
27.2
30.5
12
67

Pressure sensing block

51
21
33
45

Pipe adaptor

38.5
38.5
18

Full flow porting block horizontal
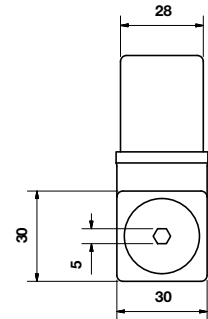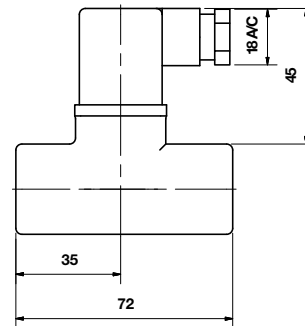
80
68
51
46
57

Full flow porting block vertical

80
68
51
46
57
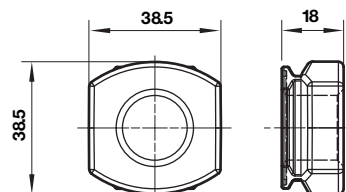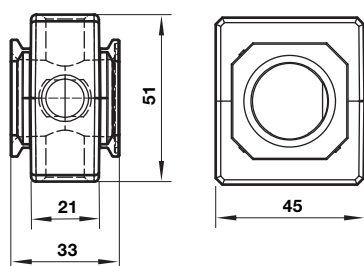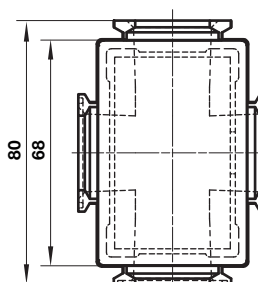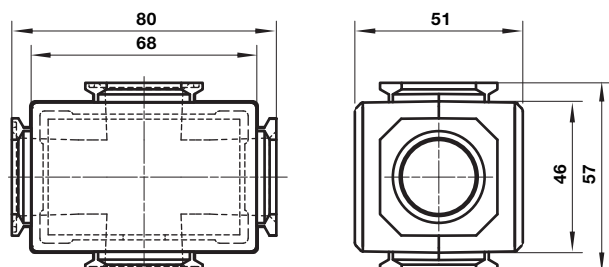
Porting block for 18D pressure switch

40
32
44
G1/2
40

![IMI logo]
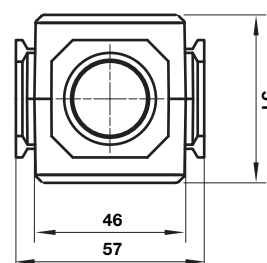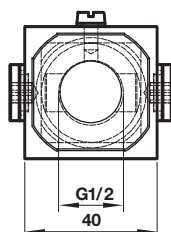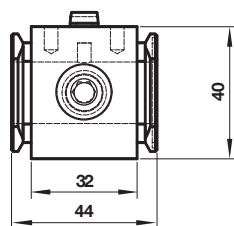
18D Porting block and 18D assembled

18D Pressure switch

G 1/4
40
57
40
32
44

18A/C
45
35
72
28
30
5
30
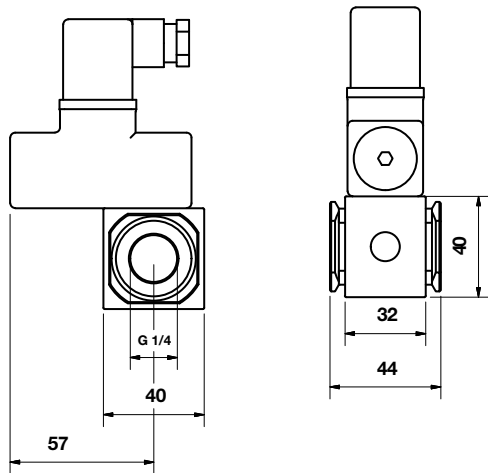
51D Pressure switch - digital

31
31
~30
~300
1
2
3
4

36,5
6

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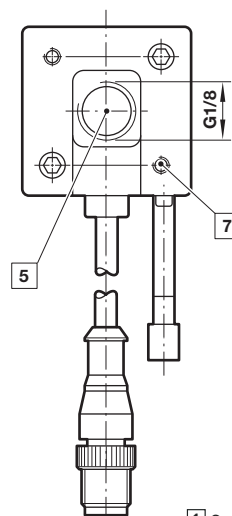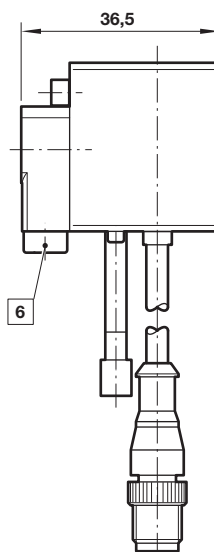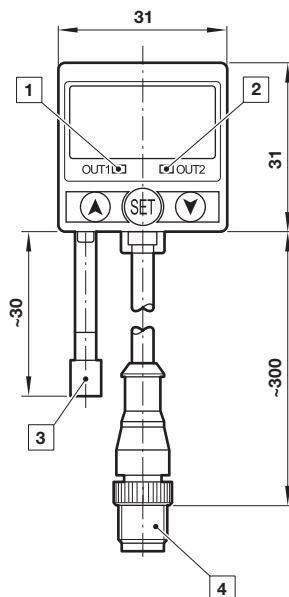
1 Switch OUT 1, green LED
2 Switch OUT 2, red LED
3 Dustproof protector
4 Connector M12 x 1
5 Inlet port
6 Alternative inlet port G1/8 plugged
7 Thread for mounting screw

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.