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 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**

> **Light weight 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: 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
0,7 ... 17 bar (2 ... 250 psi) optional
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:
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
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 ... +60ºC (+14 ... +140ºF)
Metal bowl:
-20 ... +65ºC (-4 ... +149ºF)
Air supply must be dry enough
to avoid ice formation at
temperatures below +2ºC (+35ºF).
Atex:
Filter/regulators B84 are in
conformity with Atex 2014/34/EU

⟨Ex⟩ II 2 GD
  Ex h IIC T6 Gb
  EX h IIIC T85ºC Db
excluding all versions with
electronic pressure sensor

Materials:
Body: Die cast aluminium
Body covers: ABS
Bonnet: Acetal/ Aluminium
Valve: PP
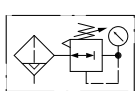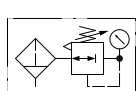Transparent Bowl : Polycarbonate with Polyproplyene Guard.
Metal Bowl: Die cast Aluminium with PA liquid level indicator lens
Filter element: sintered PP
Bowl 'o'- ring: Chloroprene
Elastomers: NBR

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 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

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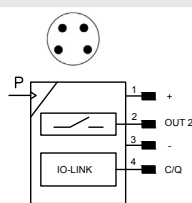User configurable identifier, pressure value, pressure units, user configurable message, menu

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

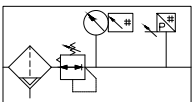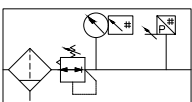**Electromagnetic compatibility:**
According to EN 61000-6-2; EN 61000-6-3

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-★★★-★★★-R★★

Port size	Substitute
3/8"	3
1/2"	4
3/4"	6

Thread form	Substitute
PTF	A
ISO G parallel (standard)	G

Adjustment	Substitute
Knob (standard)	K
T-bar	T*2)

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 *3)	E
With 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)

Element	Substitute
40 µm (standard)	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.

*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.

Flow characteristics

Inlet pressure: 10 bar (145 psi)
Port size: 1/2", 40 µm element
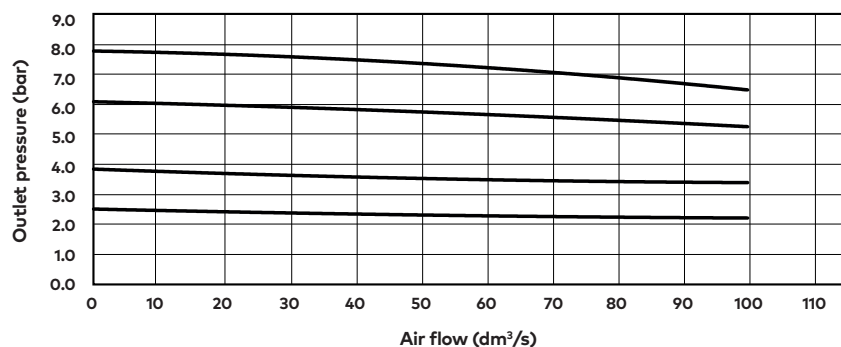
Inlet pressure: 10 bar (145 psi)
Port size: 3/8", 5 µm element
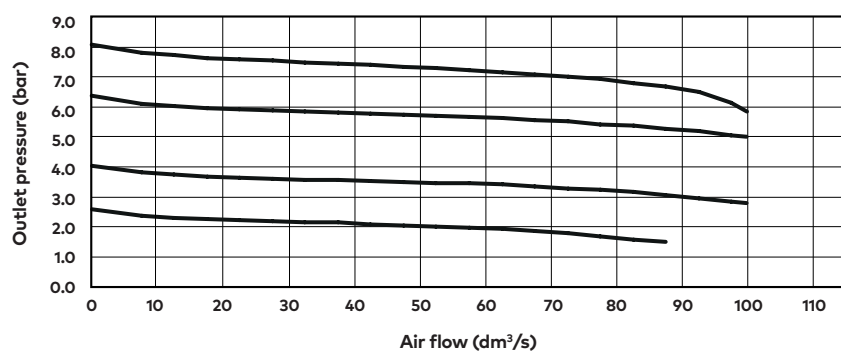
Inlet pressure: 10 bar (145 psi)
Port size: 3/8", 40 µm element
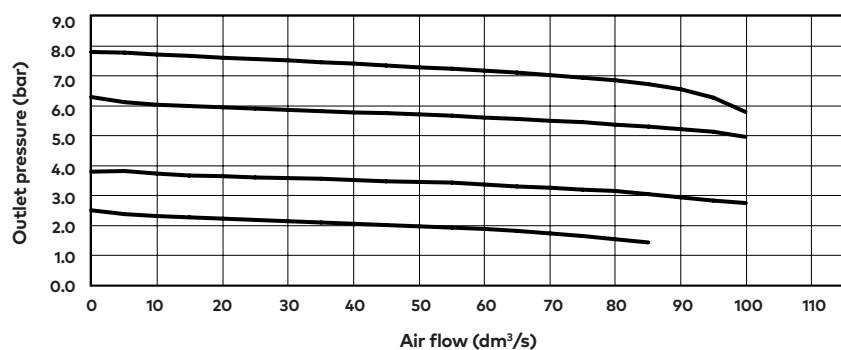
Accessories

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

Neck mounting bracket and panel nut

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 adaptor kit 1/8 PTF

840100-01KIT

Gauge adaptor kit R 1/8

840100-02KIT

Full flow porting block horizontal, 3/4 PTF

Page 7

840028-50KIT

Full flow porting block horizontal, G3/4

Page 7

840028-53KIT

Full flow porting block vertical, 3/4"PTF

Page 7

840028-68KIT

Full flow porting block vertical, G3/4"

Page 7

840028-69KIT

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

Page 8

0337717000000000

Pressure sensing block 1/4 PTF

Page 7

840016-50KIT

Pressure sensing block G1/4

Page 7

840016-51KIT

Port Adaptors
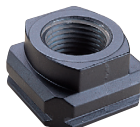
Page 8

3/8 PTF	840015-02KIT
1/2 PTF	840015-03KIT
3/4 PTF	840015-04KIT
G3/8	840015-10KIT
G1/2	840015-11KIT
G3/4	840015-12KIT

Padlock

840055-01KIT

Lockout device

840055-02KIT

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

Page 8

0881300

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

Page 8

0860810

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

Q84G

IO-Link cables

Connection cable M8x1 for intergated 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 standalone electronic pressure sensor module
   see http://s.norgren.com/digital-gauge-iodd for data-sheet 8.900.905.

Gauges

(For regulators with gauge port instead of integrated port)

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

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

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

1/4 Turn Manual Drain
With knob

Automatic Drain

1/4 Turn Manual Drain
With T-bar
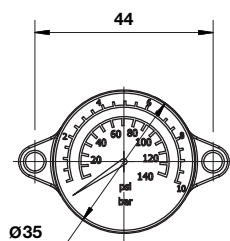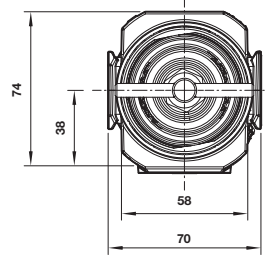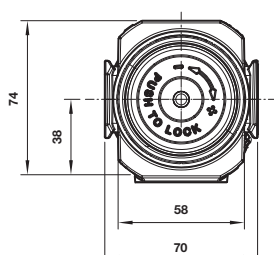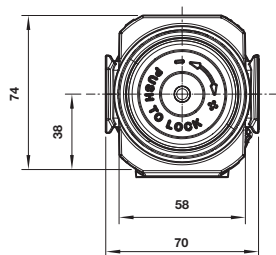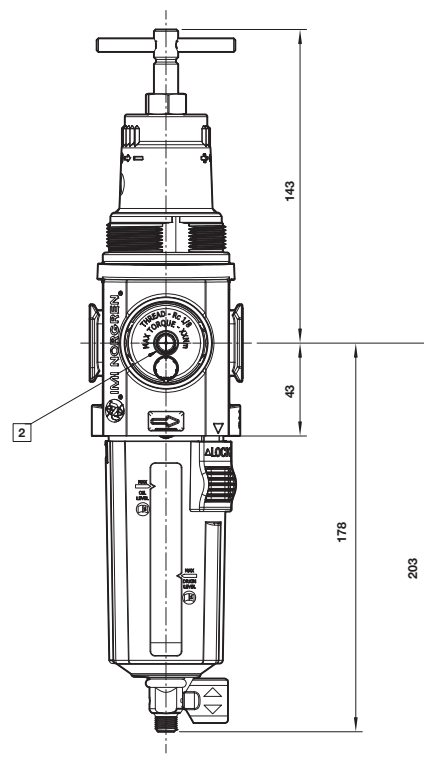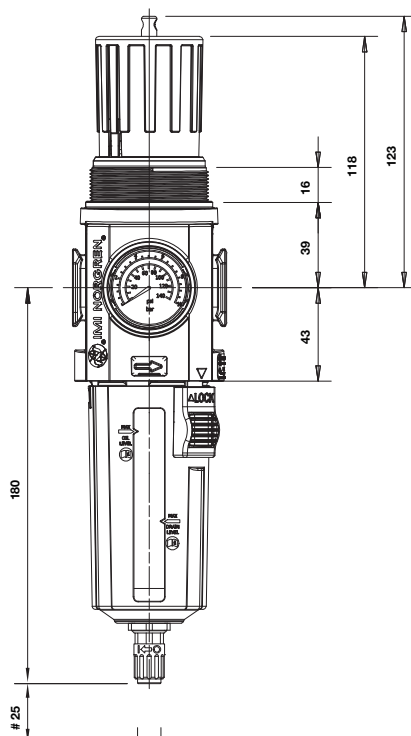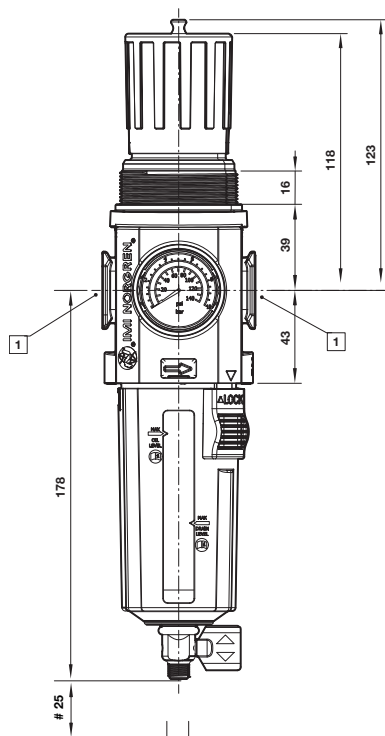
\# Minimum clearance for bowl removal

1 Main ports 3/8", 1/2" or 3/4"
(ISO G/PTF)

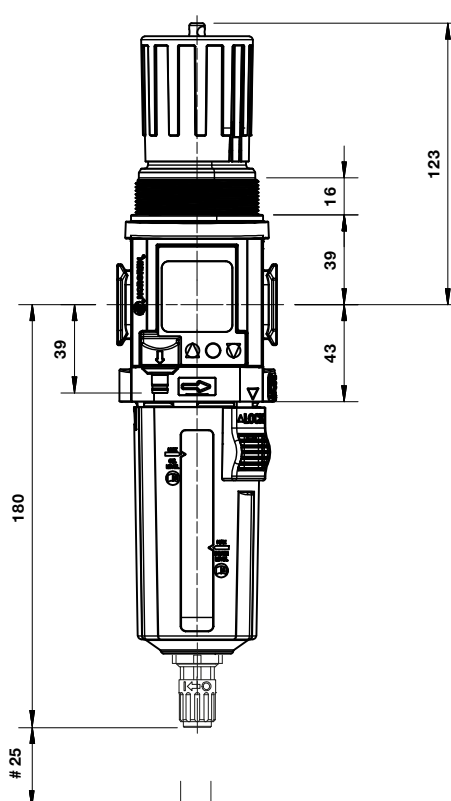2 Gauge port Rc 1/8 for ISO G and
1/8 PTF for PTF main ports
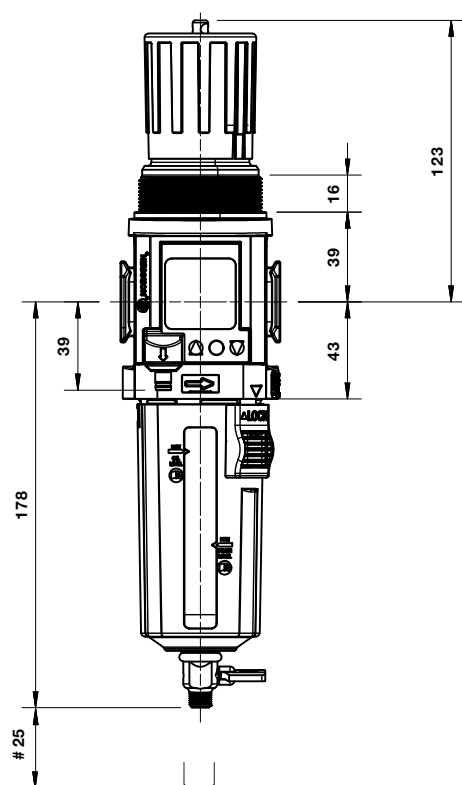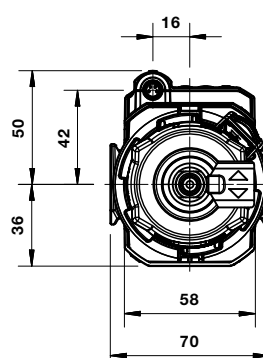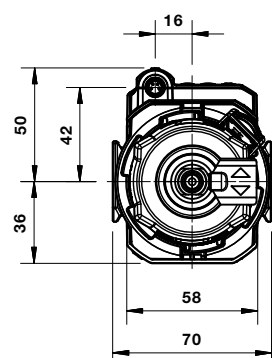
Dimensions B84G- General Purpose Filter Regulator

1/4 Turn Manual Drain

With knob

Automatic Drain

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 - 9217c) © 2020 Norgren Ltd

02/21

Accessories

Quikclamp® with wall bracket
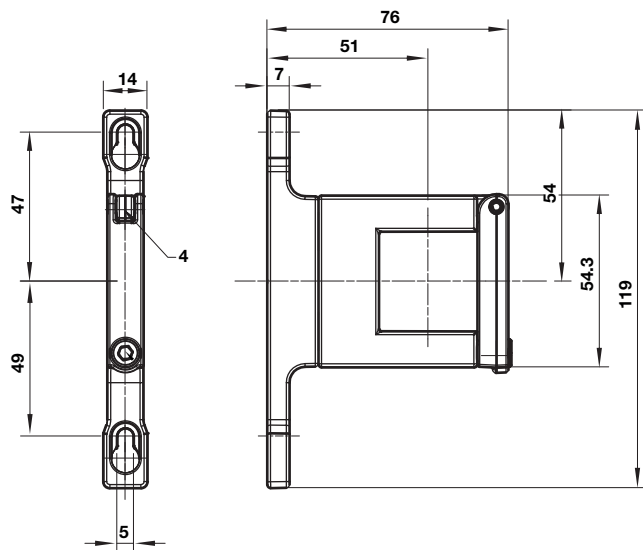
Quikclamp®
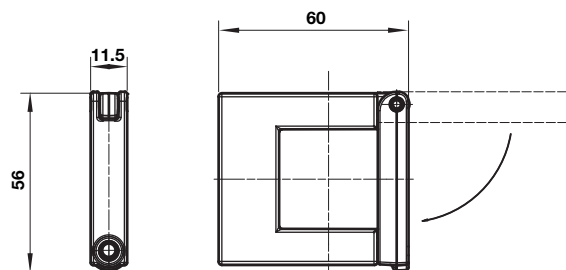
Hybrid-Quikclamp® with wall bracket
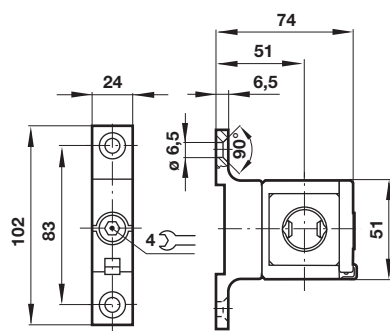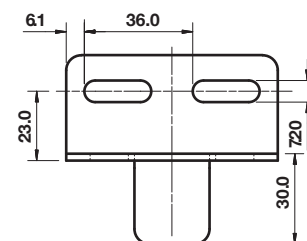

Hybrid-Quikclamp®
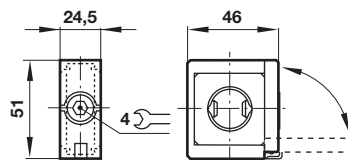
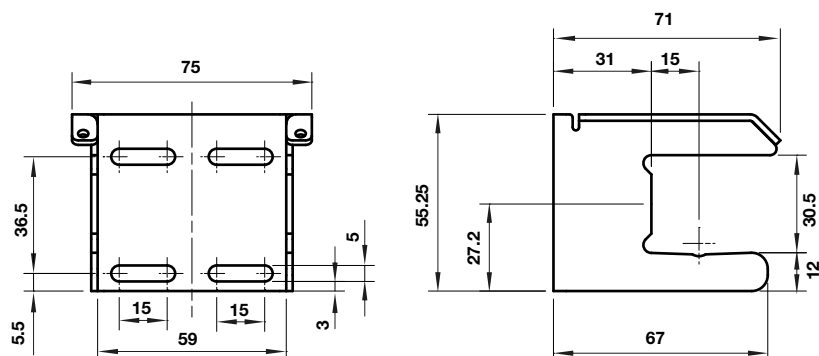
Panel mounting nut
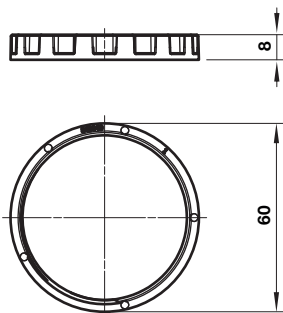
Recommended panel hole size:
ø 55 mm ... 57 mm

Panel thickness:
2 ... 6 mm

Neck mounting bracket
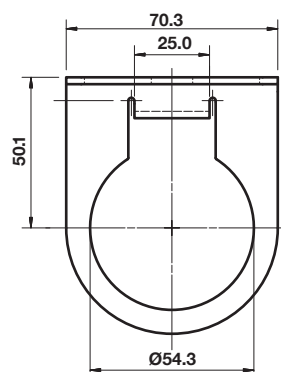
Mounting bracket
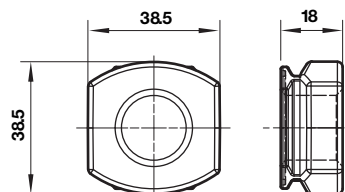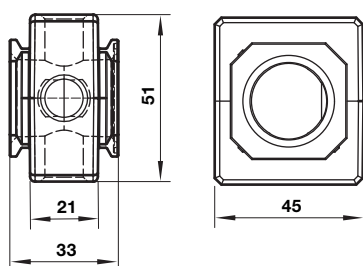
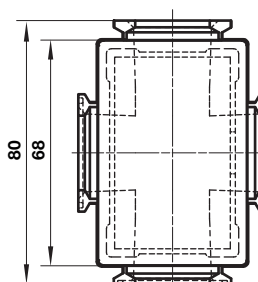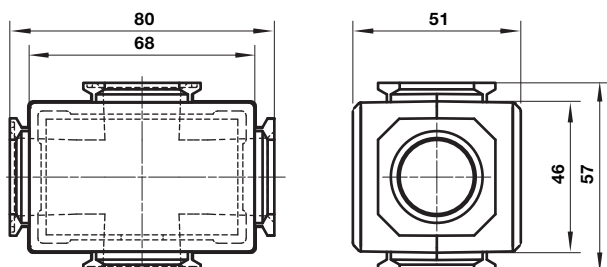Dimensions in mm
Projection/First angle

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
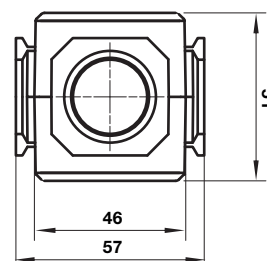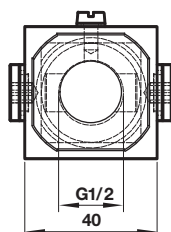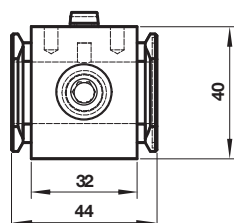
18D Porting block and
18D assembled

18D Pressure switch

Dimensions in mm
Projection/First angle

18D Porting block and 18D assembled:
G 1/4
40
57
40
32
44

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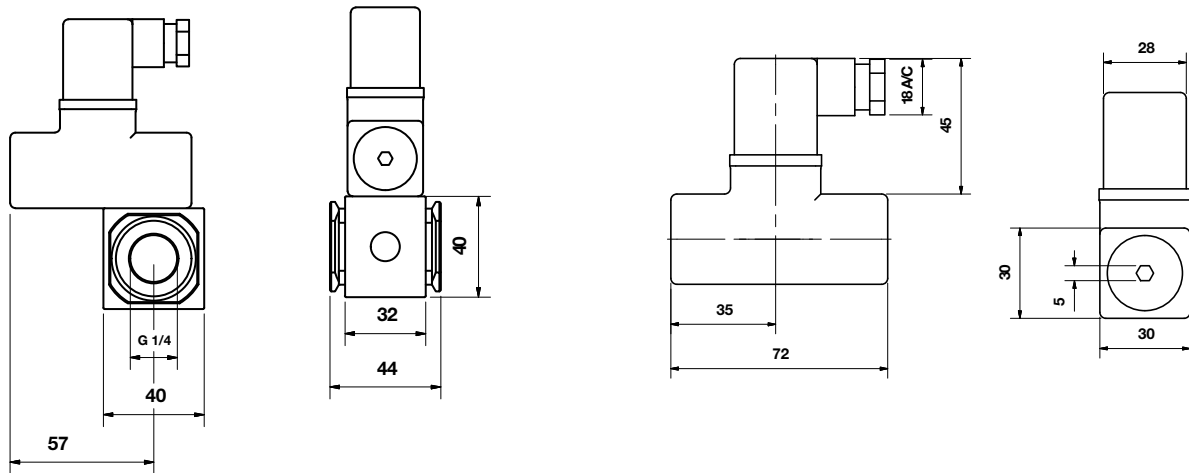
51D Pressure switch - digital

31
31
36,5
G1/8
~30
~300
OUT1 OUT2
SET

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
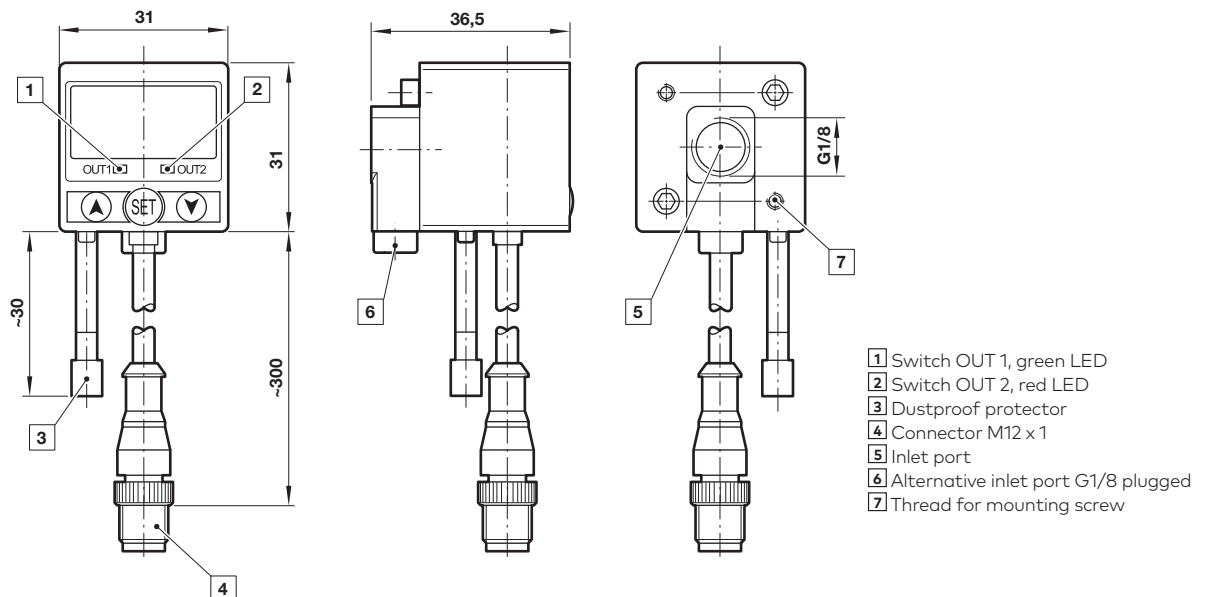
Warning

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.