



Contamination indicator BCI 24-Dx

Filtration is an important component of condition monitoring in hydraulic and lubrication systems. Predictive filter maintenance, however, is only possible if monitoring the remaining life of the filter elements is indicated in a way so replacements do not cause unplanned downtimes.

The BCI series uses various electric signals whilst simultaneously suppressing viscosity-related effects for particularly efficient filter capacity use.

The BCI 24-Dx monitors the pressure difference in in-line filters and technically corresponds to a microprocessor-controlled pressure sensor with 2 switching outputs for advance warning (filter element nearly depleted) and cut-out (filter element full). At the same time the current pressure drop is output via 4-20 mA interface.

The BCI 24-Dx is alternatively available in a more affordable version, only available with IO-Link interface.

Connecting flange compatible with third-party products
G1/2 Hydac, G1/2 Stauff, M20x1.5 Filtration Group,
M20x1.5 Bosch Rexroth, G1/2 MP-Filtri or G1/2 Eaton

Continuous pressure drop measurement

2 fixed switching outputs for 75 % and 100 % contamination level

4-20 mA output for pressure drop (version 2S1A only)

Signal suppression for outputs during the cold start phase and temporary pressure peaks (version 2S1A only)

IO-Link version with 1 x programmable switching output



Technical Data

Technical Data BCI 24-Dx

Model	BCI 24-Dx3x0-2S1A	BCI 24-Dx3x7-1D1S
Operating pressure	max. 5802 psi	max. 5802 psi
Ambient temperature	-4 °F to +158 °F	-4 °F to +158 °F
Medium temperature	-40 °F to +185 °F	-40 °F to +185 °F
Material/Version		
Electronics housing	1.4305	Anodised aluminium
Flange G1/2, M20x1.5	1.4305, Viton	1.4305, Viton
Weight	0.79 lb	0.35 lb
Electrical data		
Input values	Pressure drop	Pressure drop
Principle of Measurement	Differential pressure piston with magnet and hall sensor	Differential pressure piston with magnet and hall sensor
Operating voltage	18 - 30 V DC	18 - 30 V DC
Power input	< 100 mA	< 100 mA
IP rating (with plug top)	IP67	IP67
Sum of all deviations	10 % from full range	10 % from full range
Output	4-20 mA + 2x switching output 200 mA Signal suppression for outputs in temperatures under 86 °F** and during temporary pressure peaks.	IO-Link* Signal suppression for outputs during temporary pressure peaks.

*in IO-Link mode 1 switching output, in SIO mode 2 switching outputs

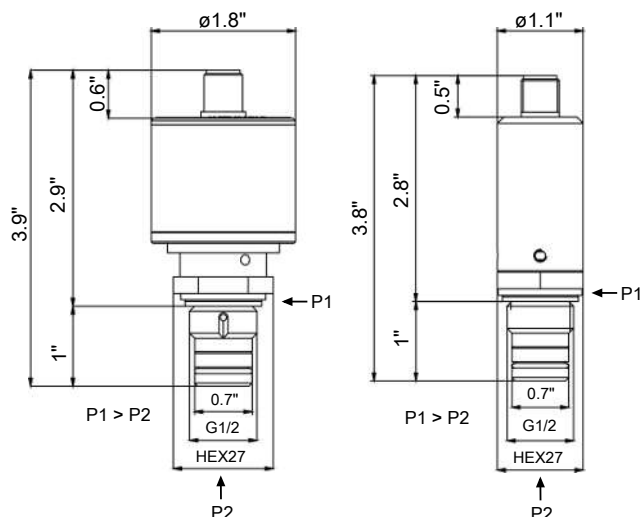
**Other temperatures available upon request.

Dimensions

Connecting flange compatible with third-party product Hydac

BCI 24-DH3x0-2S1A

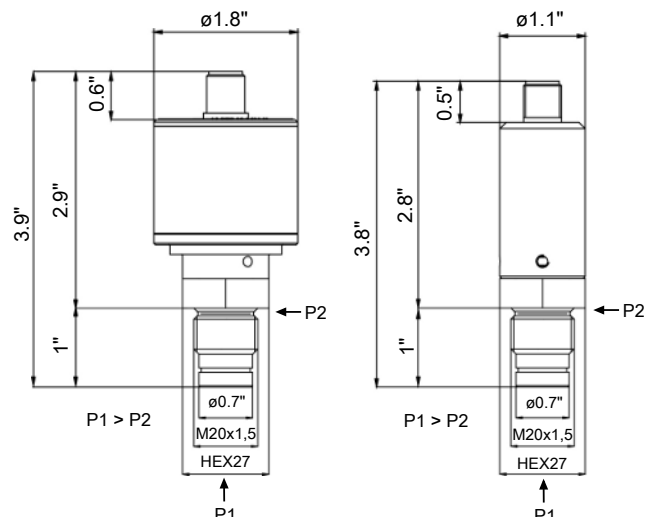
BCI 24-DH3x7-1D1S



Connecting flange compatible with third-party product Filtration Group

BCI 24-DM3x0-2S1A

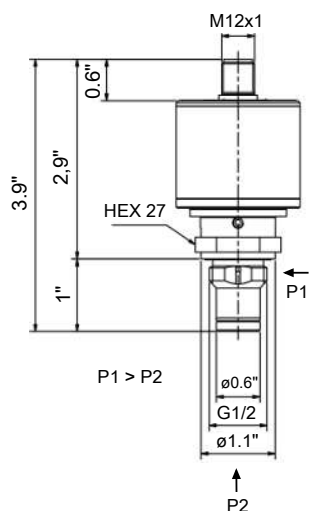
BCI 24-DM3x7-1D1S



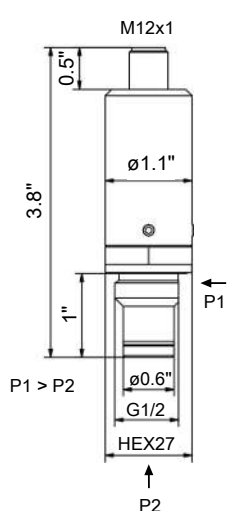
Connecting flange compatible with
third-party product MP-Filtri

Connecting flange compatible with
third-party product Eaton

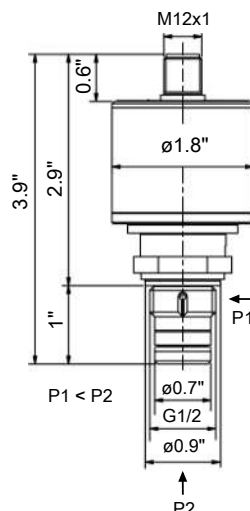
BCI 24-DF3x0-2S1A



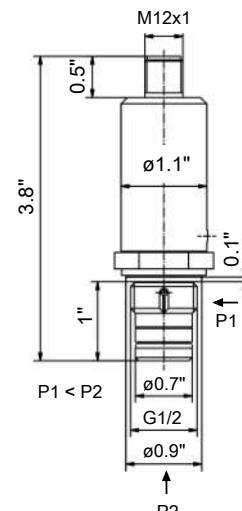
BCI 24-DF3x7-1D1S



BCI 24-DC3x0-2S1A



BCI 24-DC3x7-1D1S



Pin assignment

Version	1D1S	2S1A
Plug	M12 4-pin	M12 8-pin
Connection schematic		
Pin		
1	+24 V DC	+24 V DC
2	S2 (PNP), max. 200 mA	GND
3	GND	PNP OUT1, max. 200 mA
4	C/Q (IO-Link)/S1	NC
5		Analog OUT4 - 20 mA
6		PNP OUT2, max. 200 mA
7		NC
8		NC
	S1 = HnC 75 % S2 = HnC 100 % adjustable via IO-Link	OUT1 = HnC 75 % OUT2 = HnC 100 % not adjustable

Model key

BCI 24 - D 3 -

Type designation

BCI Contamination indicator

Process connection

compatible with third-party products

H Hydac/Stauff G1/2

M Filtration Group/Bosch Rexroth M20x1,5

F MP-Filtri G1/2

C Eaton G1/2

Options/outputs

0 - 2S1A 2 x switching output / 1 x analog

7 - 1D1S 1 x switching output / IO-Link

Pressure drop range

3 max. 3 bar (44 psi)

6 max. 6 bar (87 psi)

Ordering examples:

BCI 24-DH350-2S1A: BCI 24 compatible with third-party product Hydac process connection, 6 bar (87 psi) pressure drop range, 2 switching outputs and 1 analog output 4-20 mA

BCI 24-DM357-1D1S: BCI 24 compatible with third-party product Filtration Group process connection, 6 bar (87 psi) pressure drop range, IO-Link output

Accessories

Item no.:	Model
9144050031	M12x1 4-pin LED * 5.0 m connection
9144050047	M12x1 4-pin 5.0 m connection
9144050010	M12x1 4-pin 1.5 m connection
9144050033	M12x1 8-pin 5.0 m connection
9144050048	M12x1 8-pin 1.5 m connection
9146100158	Straight cable socket M12x1 5-pin

*LED cable not compatible with active IO-Link communication. Only use in SIO mode.