Fluidcontrol

IO-Link

Contamination indicator BCI 24-Dx

Filtration, and the monitoring thereof, are important components of condition monitoring in hydraulic and lubrication systems. Condition-based filter maintenance, however, is only possible if monitoring the remaining service life of the filter elements is indicated in such a way that replacements do not cause unplanned downtimes.

Through continuous monitoring of filter capacity using various electric signals, the BCI Series ensures ultra-efficient filter use.

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

IO-Link is integrated as standard in all versions to enable the simplest possible integration into existing systems.

- Connecting flange compatible with third-party products G1/2 Hydac, G1/2 Stauff, M20x1.5 Filtration Group, M20x1.5 Hengst, G1/2 MP-Filtri or G1/2 Eaton
- Continuous pressure drop measurement
- 2 adjustable switching outputs for 75% and 100% contamination level
- 4-20 mA output for pressure drop (version 1D1A only)
- Continuous filter monitoring for optimised service planning
- IO-Link for easy integration into existing systems

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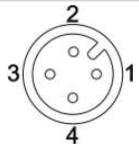
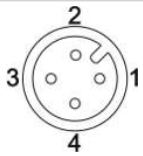
Technical Data

Technical Data BCI 24-Dx	
Operating pressure:	max. 400 bar
Operating fluids:	Hydraulic fluids (fluids in group 2 of EU Directive 2014/68/EU, Article 13). Note material resistance.
Ambient temperature:	-20 °C to +70 °C
Medium temperature*:	-40 °C to +85 °C
Measuring range:	0.3...3 bar/0.6...6 bar, depending on the version
Material/version	
Housing material:	Anodised aluminium (3.2315)
Material in contact with media:	Anodised aluminium (3.2315), spring steel, bright steel, NBR
Weight:	70 g
Electrical data	
Input value:	Pressure drop
Measuring principle:	Differential pressure piston with magnet and hall sensor
Operating voltage:	18–30 V DC
Power input:	< 100 mA
IP rating (with plug top):	IP67
Output:	IO-Link (in SIO mode - switching output)
	Additional: Switching output for version 1D1S or analog signal 4...20 mA for version 1D1A
Measuring accuracy:	5% of the final value (type)
Repeatability:	0.5% of the final value
Switching point accuracy**:	1% of the final value

*Other temperatures available upon request.

**with factory setting.

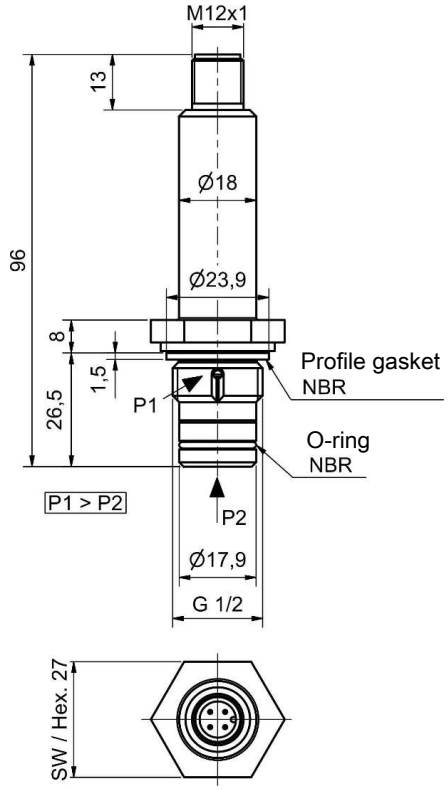
Pin assignment

Version	1D1A	1D1S
Plug	M12 4-pin	M12 4-pin
Connection schematic		
Pin		
1	+24 V DC	+24 V DC
2	OUT2, 4...20 mA	S2 (PNP), max. 200 mA
3	GND	GND
4	C/Q (IO-Link)/S1	C/Q (IO-Link)/S1
	S1 = HnC 75% → 2.0 bar or 4.1 bar OUT2 = 4...20 mA → 0...3 / 6 bar adjustable via IO-Link	S1 = HnC 75% → 2.0 bar or 4.1 bar S2 = HnC 100% → 2.8 bar or 5.5 bar adjustable via IO-Link

Dimensions

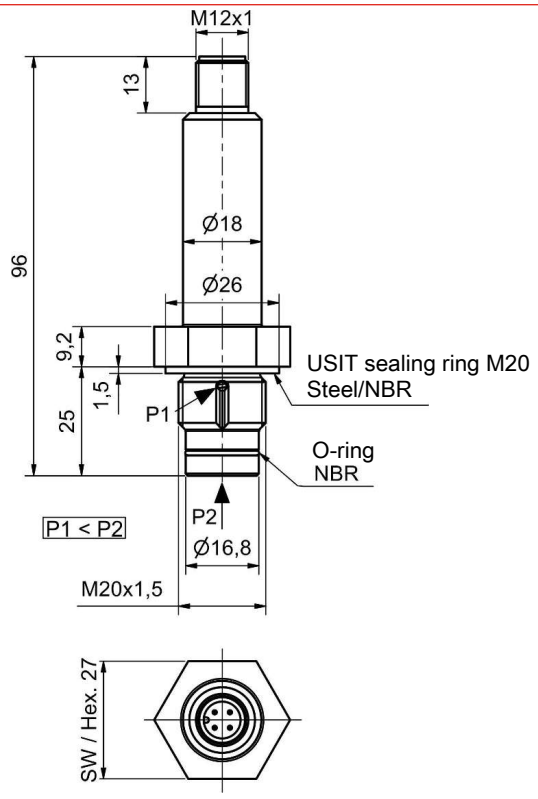
Connecting flange compatible with third-party product Hydac / Stauff

BCI 24-DHxxx



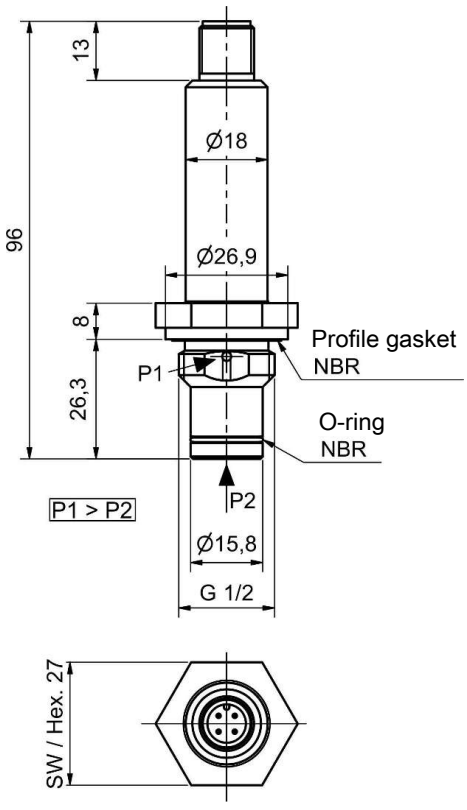
Connecting flange compatible with third-party product Filtration Group / Hengst

BCI 24-DMxxx



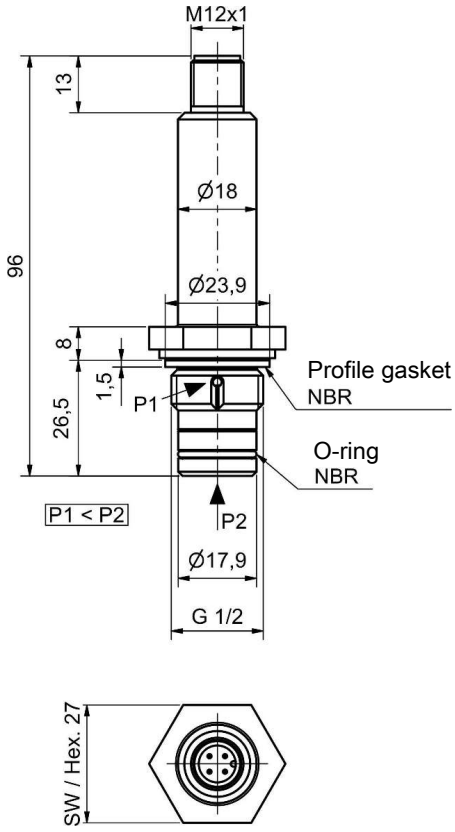
Connecting flange compatible with third-party product MP-Filtri

BCI 24-DFxxx



Connecting flange compatible with third-party product Eaton

BCI 24-DCxxx



Model key

BCI 24 - D □ 3 □ □ - □ □ □ □ - 4

Type designation
BCI contamination indicator

Process connection
compatible with third-party products

H Hydac/Stauff G1/2
M Filtration Group/Hengst M20x1.5
F MP-Filtri G1/2
C Eaton G1/2

Options/outputs
7 - 1D1A 1x analog / IO-Link
7 - 1D1S 1x switching output / IO-Link

Pressure drop range
3 max. 3 bar
6 max. 6 bar

Item numbers

1331237740	BCI24-DH337-1D1S-4	Hydac / Stauff G1/2	3 bar	1D1S
1331267740	BCI24-DH367-1D1S-4		6 bar	
1331237840	BCI24-DH337-1D1A-4		3 bar	1D1A
1331267840	BCI24-DH367-1D1A-4		6 bar	
1331137740	BCI24-DM337-1D1S-4	Filtration Group / Hengst M20x1.5	3 bar	1D1S
1331167740	BCI24-DM367-1D1S-4		6 bar	
1331137840	BCI24-DM337-1D1A-4		3 bar	1D1A
1331167840	BCI24-DM367-1D1A-4		6 bar	
1331437740	BCI24-DF337-1D1S-4	MP-Filtri G1/2	3 bar	1D1S
1331467740	BCI24-DF367-1D1S-4		6 bar	
1331437840	BCI24-DF337-1D1A-4		3 bar	1D1A
1331467840	BCI24-DF367-1D1A-4		6 bar	
1331637740	BCI24-DC337-1D1S-4	Eaton G1/2	3 bar	1D1S
1331667740	BCI24-DC367-1D1S-4		6 bar	
1331637840	BCI24-DC337-1D1A-4		3 bar	1D1A
1331667840	BCI24-DC367-1D1A-4		6 bar	

Accessories

Item no.	Type
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
9146100158	Straight cable socket M12x1 5-pin

*LED cable not compatible with active IO-Link communication or 4...20 mA signal. Only use in SIO mode.