

# Bühler Metal Detector BMD



Fluidcontrol

## Metal residue monitor in lubricating and hydraulic oils

Iron particles in particular are undesired parameters in hydraulic and lubricating systems and can cause considerable system damage, particularly to the gearbox area.

The Bühler BMD-100 metal detector was designed specifically to monitor ferrous particles in oil. Continuously monitoring the fluid for ferritic particles allows extending the oil change intervals, thus considerably reduce maintenance costs. This makes the Bühler BMD-100 metal detector an essential part of your condition monitoring system.

The BMD-100 is a smart sensor and based on the inductive measuring system to properly sort the ferritic particles in the respective fluid. It can distinguish between fine and coarse ferromagnetic particles. It has analog and digital output signals.

The BMD-100 features an automatic cleaning process.



### BMD-100

4-20 mA and CAN bus output

Use in the main or auxiliary circuit

Continuous particle monitoring for detailed analysis of machine conditions

Compact, tough housing also suitable for demanding applications

G1" process connection

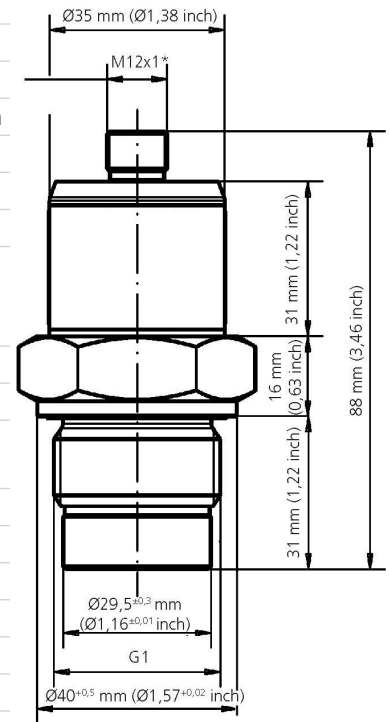
Automatic cleaning process




Technical Data

<b>BMD-100-000-1DC1A</b>	<b>1DC1A</b>
Version:	Compact unit
Process connection:	G1"
Fastening torque:	50 ±5 Nm
Material in contact with media:	aluminium, polyamide (PA6GF30), HNBR, epoxy resin
Medium temperature:	-40 °C to +85 °C
Ambient temperature:	-40 °C to +85 °C
Pressure resistance:	20 bar
Compatible fluids:	mineral oils (H, HL, HLP, HLPD, HVLP), synthetic esters (HETG, HEPG, HEES, HEPR), polyalkylene glycol (PAG), zinc- and ash-free oils (ZAF), poly-alpha-olefins (PAO)
Weight:	190 g
<b>Input value</b>	
Flow rate:	max. 1 m/s min. 0.05 m/s for automatic cleaning
Operating voltage (U <sub>B</sub> ):	22 – 33 V DC
Power input:	max. 0.5 A
<b>Measuring range</b>	
Fine particles:	0...100 %
Coarse particles:	1...10
Additional secondary measurands:	Temperature (inside device), operating hours
1D output:	RS232/CANopen
1A output:	4-20 mA clocked

Dimensions



Standard pin assignment

Plug connection	M12 (base)
Number of pins	8-pin
Voltage	max. 33 V DC
IP rating with IP67 cable box attached	IP67
Version	1DC1A
Connection schematic	
1	L+
2	L-
3	TxD, CAN low [OUT]
4	RxD, CAN high [IN]
5	not connected
6	not connected
7	Analog output, 4...20 mA
8	Signal earth
Shield	-

**Model key****BMD - 100 - 000 - 1DC1A****Type designation**

BMD Bühler Metal Detector

**Version**

100 Standard compact unit

**Outputs**

1DC1A

1x RS232/CAN

1x analog signal 4...20 mA

Item no.	Model
1540001000	BMD-100-000-1DC1A

**Accessories**

Item no.	Description
9144050033	Connecting cable, 8-pin, 5 m
1590001001	RS232 data cable
1590001002	USB/RS232 adapter
1590001003	Power supply