

BODF

Oval Gear Flow Sensor



OVERVIEW

Operation

Bass Instruments BODF series Compact oval gear flow meters are ideal measuring oils, for hydraulic fluids, engine, Fuel, Diesel or lubrication oil, and are used for flow measurement and batching in engine test applications. Bass Instruments BODF series Compact Oval Gear Flow meter uses two fine-toothed meshed gears that are oval in shape and engage each other in a precision machined body. This fluid is transferred sequentially from the inlet to the outlet and one or two pulses are transmitted for each revolution of the gear. Embedded within the gear, a pair of chemically resistant magnets provide the external signals. Detection of the rotation uses either a reed switch or a Hall effect sensor on the outside of the fluid housing.

Application

- Hydraulic, fluids, engine
- Fuel, diesel, lubrication oil
- Oil

Features

- Very compact size
- Low flow capability with high resolution output
- Meter accuracy is verified by a factory calibration check after which an individual metrology report is issued.
- Solid state Hall Effect Sensor/Reed combination
- Low pressure drop allows for economical pump selection or gravity flow applications
- Meter design minimises the number of wearable and replaceable parts and extends product life
- IP65 protection
- Flexibility of installation options (e.g. can be mounted horizontally or vertically; no flow conditioning required)



OPERATING DATA

Working Pressure

35 bar max.

Temperature Limit

-30...+80°C

Accuracy

±1 % of reading

Enclosure

IP65

MATERIALS

Body

Aluminum

Gear And Shaft

Aluminum

ELECTRICAL DATA

Signal Output

Pulse (push-pull)
4...20 mA or NPN on request

Power Supply

5-24 VDC



OPTIONS, ELECTRONIC

BAB212

Selectable Inputs

4-20 mA, 0-10VDC, 0-5VDC, Pulse (PNP, NPN)

Operating Media

Liquids

Selectable Outputs

4-20 mA , 0-10VDC and Pulse

Communication

RS485-MODBUS (HART on request)

Analog Input Resolution

10 bit

Digital Input Speed

10 KHz max

Display

TFT, 4.3" 480x272 pixel resistive touchscreen

Power Supply

24 VDC, $\pm 10\%$

Dimensions

144 x 144 mm (front) , 134 x 134 mm (rear),
depth 100 mm



Digital Output Speed

50 Hz max

Humidity

%10 ... 85 non-condensate

Power Consumption

3 W

Enclosure

IP65 (front) , IP66, IP67 on request

MEASURING RANGE

Type	Size	l/min.	Body
BODF.015.P1.AL.P	1/2"	2...30	Aluminum
BODF.020.P1.AL.P	3/4"	4...60	
BODF.025.P1.AL.P	1"	10...120	
BODF.040.P1.AL.P	1 1/2"	15...235	
BODF.050.P1.AL.P	2"	30...450	
BODF.015.P1.PM.P	1/2"	2...30	POM
BODF.015.P1.PM.P	3/4"	4...60	



ORDERING

Model	
BODF	Oval Gear Flowmeter

Type	
XX	Please look at the measuring range table for code

Material	
AL	Aluminum
SS	Stainless steel

Output	
P	Pulse
420	4-20 mA
N	NPN

Display	
N	None
B	BAB212 (Remote)
LCD	Compact Display

