

Monitor flow using a switching function

THERMAL FLOW CONTROLLERS

Continuous monitoring of process media on machines and equipment contributes greatly to process security. In addition to pressure and temperature, flow is also something that always needs to be kept an eye on.

The thermal flow controllers from Balluff let you detect the flow of liquid media in direct contact, such as in machine tools, on pumps and compressors. This is how our rugged flow controllers ensure the proper function of your machine.

By detecting a reduction in the flow, they can, for example, alert you to a failure of the flow pump, a clogged filter or a leak in the hose system. Or in machining centers, they continuously monitor the flow of the cooling lubricant to protect and ensure full-service life of the tools.

Our flow controllers also stand out when it comes to monitoring other aqueous media, such as cooling water, making them indispensable in a wide range of applications.

Features

- Directly detect liquid media
- No moving parts, making them resistant to soiling
- Threaded or in-line versions, depending on the flow amount and tube diameter
- Simple to integrate, rugged M12 connector
- Visualize flow with LED line or display



CALORIMETRIC
IMMERSION SENSOR
WITH LEDS



PNP	BFF0001	BFF0002	BFF0003
Process connection	G1/2"	G1/2"	NPT1/2"
Measuring range water	1...150 cm/s	1...150 cm/s	1...150 cm/s
Probe length	31 mm	48 mm	40 mm
Ambient temperature	-20...+80 °C	-20...+80 °C	-20...+80 °C
Medium temperature	-20...+80 °C	-20...+80 °C	-20...+80 °C
Reaction time	1...13 s	1...13 s	1...13 s
Pressure resistance	100 bar	100 bar	100 bar
Approvals/conformity	CE, cULus	CE, cULus	CE, cULus

CALORIMETRIC
INLINE SENSOR
WITH LEDS



PNP	BFF0007		
Process connection	G1/2"		
Measuring range water	2...25 l/min		
Ambient temperature	0...+60 °C		
Medium temperature	0...+80 °C		
Reaction time	0.5...10 s		
Pressure resistance	20 bar		
Approvals/conformity	CE, cULus		

CALORIMETRIC
PROBE

RELAY VIA SIGNAL CONVERTER	BFF0004	BFF0005	BFF0006
Process connection	G½"	G½"	NPT½"
Measuring range water	1...150 cm/s	1...150 cm/s	1...150 cm/s
Probe length	31 mm	48 mm	40 mm
Ambient temperature	-20...+80 °C	-20...+80 °C	-20...+80 °C
Medium temperature	-20...+80 °C	-20...+80 °C	-20...+80 °C
Reaction time	1...13 s	1...13 s	1...13 s
Pressure resistance	100 bar	100 bar	100 bar
Approvals/conformity	CE	CE	CE

CALORIMETRIC
INLINE SENSOR
WITH DISPLAY

2 × PNP PROGRAMMABLE	BFF000A	BFF0008	BFF0009
Process connection	G¼"	G½"	G½"
Measuring range water	0.1...2 l/min	1...10 l/min	2...20 l/min
Ambient temperature	0...+60 °C	0...+60 °C	0...+60 °C
Medium temperature	0...+60 °C	-10...+80 °C	-10...+80 °C
Reaction time	0.5...10 s	0.5...10 s	0.5...10 s
Pressure resistance	10 bar	20 bar	20 bar
Approvals/conformity	CE	CE	CE

ACCESSORIES



	BAE00ZZ	BAE00TR
Description	Signal converter for calorimetric probe, relay, NO, -20...+60 °C, IP40	Heartbeat power supply with IO-Link, 60 W, 24 V, 2.5 A, IP20

CONNECTORS



	BCC032F	BCC032H	BCC032J
Description	M12 female, 5-pole, straight, 2 m cable PUR, number of conductors 4, IP68	M12 female, 5-pole, straight, 5 m cable PUR, number of conductors 4, IP68	M12 female, 5-pole, straight, 10 m cable PUR, number of conductors 4, IP68