BALLUFF

Sensors with Advanced Smart Level Technology

LEVEL DETECTION IN A YOGURT TANK

Capacitive sensors are an outstanding choice for all kinds of level detection. They allow level limits to be precisely determined either in media contact or through a non-metallic container wall.

The benefits

- Reliable detection of levels of highly conductive and liquid, sticky food products
- Can be taught in-process and adjusted to changing process parameters
- Fittings conformal with EHEDG specifications for hygienic adaptation to your containers
- Withstands autoclave applications for an hour up to 140 °C
- FDA approved housing material: 1.4404 stainless and PEEK
- M12 connection, up to IP69K with the appropriate connector
- Outstanding compensation properties with respect to deposits and foaming
- IO-Link version available

Capacitive immersion sensor

Adapter

Perfect for milk production in every respect

Modern steel tanks, common in yogurt and curd cheese production, first need to be prepared for hygienic sensor installation. Appropriate adapters from the Balluff accessories line ensure their function. Simply screw in with the prescribed tightening torque and the CIP-capable sensors are ready to use. The IP69K fitting allows use even with high pressure cleaning operations.

Thanks to their very good product buildup compensation, our solutions offer high processability and reliable operation. IO-Link versions of the sensors also permit perfect integration into the sensor controller.
An added benefit: By reading out the process data from the sensor, the degree of buildup can be determined in order to quickly take any needed countermeasures.

CAPACITIVE IMMERSION SENSOR


PNP, NO		BCS011F		BCS011M
PNP, normally closed		BCS011H		BCS011N
IO-Link, PNP/NPN and NO/NC can be coded			BCS011E	
Size		G½"	G½"	G½"
Installation type		non-flush	non-flush	non-flush
Rated switching distance s_n		Level teachable	Level teachable	Level teachable
Supply voltage U_S		12…30 V DC	18…30 V DC	12…30 V DC
Voltage drop U_d at I_e		≤ 2 V	≤ 2 V	≤ 2 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		50 mA	50 mA	50 mA
No-load supply current I_0 max.		15 mA	15 mA	15 mA
Polarity reversal protected/transposition protected/ short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a /media temperature		–40...+85 °C/105 °C	–40...+85 °C/105 °C	–10...+85 °C/105 °C
Switching frequency f		5 Hz	5 Hz	5 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP68 10 bar/IP69K	IP68 10 bar/IP69K	IP68 10 bar/IP69K
Special properties		Autoclave compatible	Autoclave compatible	Autoclave compatible
Approvals		CE, cULus	CE, cULus	CE, cULus
Material	Housing	1.4404 stainless steel	1.4404 stainless steel	1.4404 stainless steel
	Sensing surface	PEEK	PEEK	PEEK
	O-ring	EPDM	EPDM	FKM, ölbeständig
Connection		M12 connector, 4-pin, A-coded	M12 connector, 4-pin, A-coded	M12 connector, 4-pin, A-coded

ADAPTER



Can be welded		BAM0294		
Thread-in			BAM0292	
Dairy coupling per DIN 11851				BAM0295
Version		G½" → Ø 29 mm	G½" → G¾"	G½" → DN25
Use		for hygienic processes with BCS capacitive immersion sensor	for hygienic processes with BCS capacitive immersion sensor	for hygienic processes with BCS capacitive immersion sensor
Weight		105 g	70 g	170 g
Material	Housing	1.4404 stainless steel	1.4404 stainless steel	1.4404 stainless steel
Connection	Sensor	G½"	G½"	G½"
	Process	Ø 18,5 mm	G¾"	DN25

Function principle

Whatever milk products you produce, Advanced Smar Level technology enables reliable sensor operation with almost any medium.

The Teach line provides for quick and reliable adaptation. Even the already good buildup compensation has been further improved, so now even non-conducting media such as oils, powders or granulates can be identified.

Balluff GmbH · Schurwaldstrasse 9 · 73765 Neuhausen a. d. F. · Germany · Phone +49 7158 173-0 · Fax +49 7158 5010 · balluff@balluff.de

Doc. No. 930102 · EN · D21 · Replaces H17 · Subject to modification.