

BFM[®] Guidelines - Proximity Sensors

Proximity sensors are used to shut equipment down if the BFM connector is removed from the spigot. The choice of which sensor is used is largely dependent on the type of equipment control system.

We would recommend sensors from Balluff. We have tested the Balluff 6.5mm diameter Normally Closed (NC), Flush Mounted, Shielded Capacitive Sensor.

There are a number of options, please visit the Balluff website for a comprehensive catalogue and a local contact www.balluff.com.

<p>BCS G06T4E1-POM15C-EP02 Ordering code: BCS001M Capacitive sensor</p>	<p>Cable: PUR Working range 0,1...1,5 mm Output signal PNP, Normally closed (NC) Flush (shielded)</p>	<p>BALLUFF <i>sensors worldwide</i></p>
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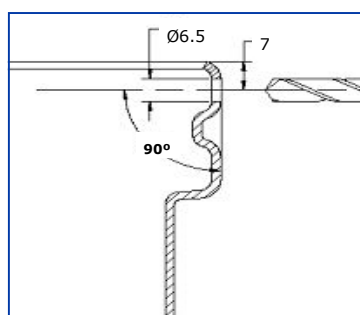
1) Active surface, 2) Housing, 3) Top cover, 4) Pot, 5) LED function indicator

<p>Characteristic data</p> <table border="0"> <tr><td>Technology</td><td>Standard</td></tr> <tr><td>Special properties</td><td>Small housing</td></tr> <tr><td>Short-circuit protected</td><td>Yes</td></tr> <tr><td>Protected against reverse connection</td><td>Yes</td></tr> </table> <p>Electrical data</p> <table border="0"> <tr><td>Electrical version</td><td>DC, direct current</td></tr> <tr><td>Operating voltage</td><td>11...30 V DC</td></tr> <tr><td>Effective operating current Ie</td><td>50 mA</td></tr> <tr><td>Rated insulation voltage Ui</td><td>75 V DC</td></tr> <tr><td>No-load current I0 damped</td><td>10 mA</td></tr> <tr><td>Voltage drop static max.</td><td>2 V</td></tr> <tr><td>Ripple max. (% of Ue)</td><td>10 %</td></tr> <tr><td>Switching freq. f max.</td><td>100 Hz</td></tr> <tr><td>Hysteresis H max. (in % of Sr)</td><td>15 %</td></tr> </table> <p>Mechanical data</p> <table border="0"> <tr><td>Rated operating distance Sn</td><td>1,5 mm</td></tr> </table>	Technology	Standard	Special properties	Small housing	Short-circuit protected	Yes	Protected against reverse connection	Yes	Electrical version	DC, direct current	Operating voltage	11...30 V DC	Effective operating current Ie	50 mA	Rated insulation voltage Ui	75 V DC	No-load current I0 damped	10 mA	Voltage drop static max.	2 V	Ripple max. (% of Ue)	10 %	Switching freq. f max.	100 Hz	Hysteresis H max. (in % of Sr)	15 %	Rated operating distance Sn	1,5 mm	<table border="0"> <tr><td>Number of conductors</td><td>3</td></tr> <tr><td>Conductor cross-section</td><td>0,14 mm²</td></tr> <tr><td>Temp. drift max. (% of Sr)</td><td>15</td></tr> <tr><td>Ambient temperature</td><td>-10...70 °C</td></tr> <tr><td>Housing material</td><td>1.4301</td></tr> <tr><td>Sensing surface material</td><td>PTFE</td></tr> <tr><td>Cable jacket material</td><td>PUR</td></tr> <tr><td>Cover material</td><td>POM</td></tr> <tr><td>Repeat accur. R max. (% of Sr)</td><td>2 %</td></tr> </table> <p>Basic data</p> <table border="0"> <tr><td>Degree of protection as per IEC 60529</td><td>IP65</td></tr> <tr><td>Basic standard</td><td>IEC 60947-5-2</td></tr> <tr><td>Utilisation category</td><td>DC 13</td></tr> </table> <p>Remarks</p>	Number of conductors	3	Conductor cross-section	0,14 mm ²	Temp. drift max. (% of Sr)	15	Ambient temperature	-10...70 °C	Housing material	1.4301	Sensing surface material	PTFE	Cable jacket material	PUR	Cover material	POM	Repeat accur. R max. (% of Sr)	2 %	Degree of protection as per IEC 60529	IP65	Basic standard	IEC 60947-5-2	Utilisation category	DC 13
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		LISTED IND. CONT. EQ. 0112 for use in the secondary of a class 2 source of supply
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These sensors are mounted in the centre of the top ring on the BFM spigot.

We advise using a food grade electrical or cable gland (Hummel Gland) which can be welded directly onto the outside of the spigot. Another option is to weld a threaded nut to the spigot for a gland to be screwed into.



BFM Global Ltd
 PO Box 66-087
 Beach Haven, Auckland 0749, New Zealand
 Email: sales@BFMfitting.com
www.BFMfitting.com

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