Info card

Multicolour Touch Sensor

This info card serves as a supplement to the main position sensors catalogue and to the individual data sheets. For further information and contact addresses please visit **www.ifm.com**.

Functions and features

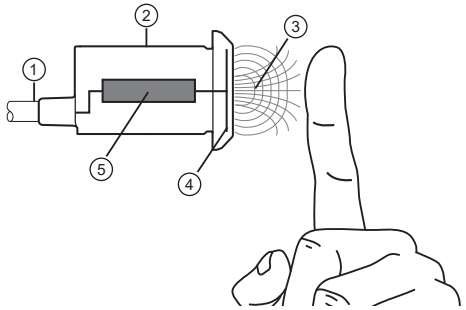
While in use the products are exposed to influences which may have an effect on function, life, quality and reliability of the product.

It is the customer's responsibility to ensure that the products are suitable for the intended application. This applies in particular to applications in hazardous areas and with adverse environmental influence such as pressure, chemicals, temperature fluctuations, moisture and radiation as well as mechanical stress, especially if the products are not installed properly.

Using the products in applications where the safety of people depends on the function of the product is not permitted. If the instructions are not adhered to, death or severe injury may occur.

Operating principle of a capacitive touch sensor

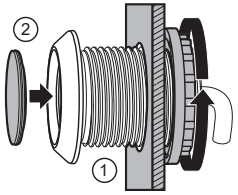
An electric field is generated in front of the electrode of the sensor. This field can be influenced by liquid and solid, conductive and non-conductive media.The change in capacitance which is converted into a switching signal is detected. The capacitance depends on the distance, size and material properties (dielectric conductivity) of the medium to be detected.



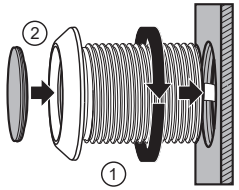
① connection
② housing
③ alternating electric field = active zone
④ electrode system
⑤ evaluation electronics

Installation

Installation with nut



Installation without nut



1. Install sensor
2. Clip symbol disc into place (snap-fit once only, cannot be removed)
3. Connect sensor to electrical system

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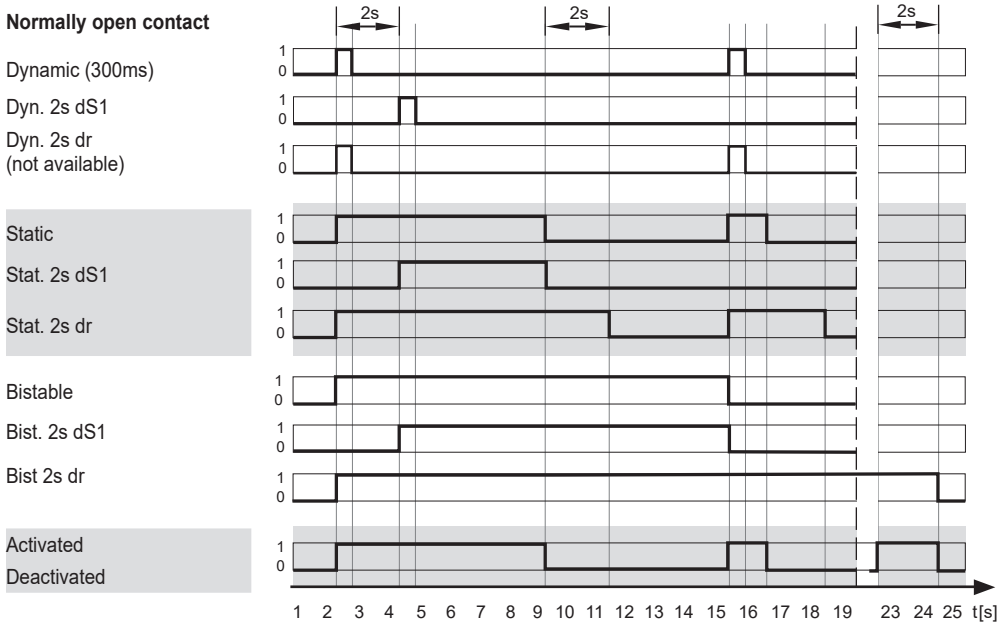
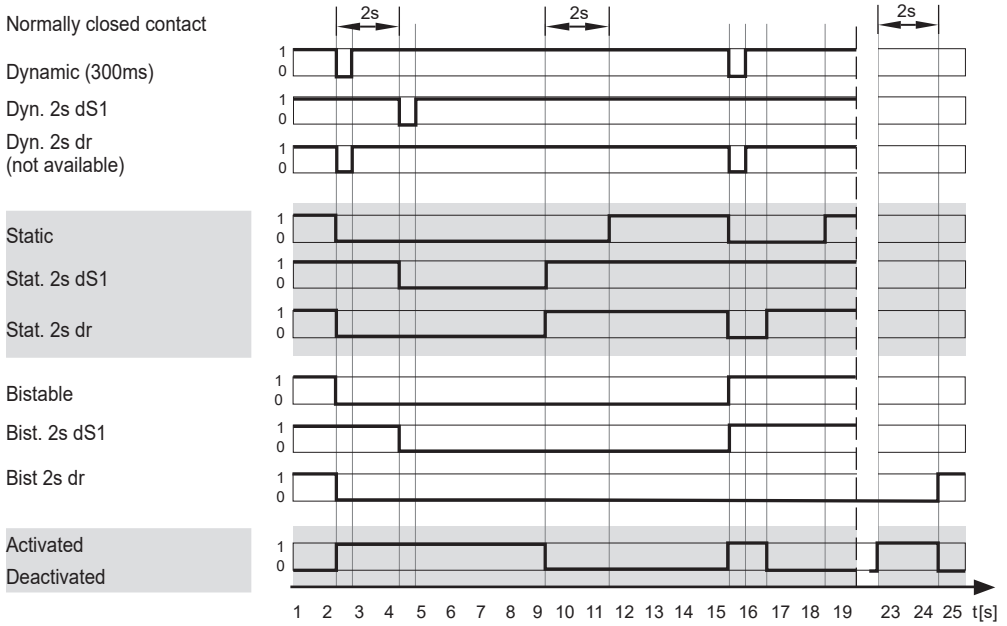
Response with switch-on and switch-off delay

Normally open contact



Normally closed contact



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Unit parameters IO-Link

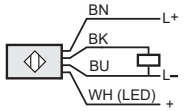
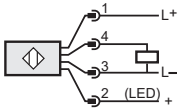
Parameter	Value	Explanation	Factory setting
ModE	Dynamic	Setting of the operating mode: Sensor switches for 300 ms as soon as the sensing face is damped.	Dynamic
	Static	The sensor switches as long as the sensing face is damped.	
	Bistable	The sensor switches as soon as the sensing face is damped and remains switched on until the face is damped again.	
P-n	PnP, nPn	Setting of the output polarity of the switching outputs.	PnP
SSC Config Logic		Setting of the switch-point logic / logic for detected object:	High active
	High active	normally open (NO)	
	Low active	normally closed (NC)	
dS1	0…360 s	Adjustable switching delay.	0 s
dr1	0…360 s	Adjustable switch-off delay.	0 s
SSC counter	0…2147483647	Number of switching operations, reset after reboot or via reset button via IO-Link.	0
SSC totaliser	0…2147483647	Number of switching operations since delivery, no reset possible.	0
LED mode	BTN / Pushbutton	By means of this setting the LED can be activated (via pin 2 or via IO-Link pin 4): LED cannot be activated.	BTN_HI_ACT / Pushbutton / Input (high active)
	BTN_HI_ACT / Pushbutton / Input (high active)	LED is activated via PIN 2 (WH) as NO.	
	BTN_LO_ACT / Pushbutton / Input (low active)	LED is activated via PIN 2 (WH) as NC.	
	PDOUT / PDOut	LED can be activated via PIN 4 (BK, IO-Link).	
LED brightness	Normal / Normal Bright / Bright	Setting of the LED brightness.	Normal / Normal
LED colour. Operating	Off / Blue / Green / Red / Magenta / Yellow / White / Orange	LED colour in non-active state.	Off
LED colour Active		LED colour in active state.	Green
LED colour Input		LED colour with direct control via pin 2 (WH).	Red
Sensitivity	Lo / Low Mid / Medium Hi / High	Setting of the sensor sensitivity to touching.	Mid / Medium
Switch-on operations	0…2000000	Number of switch-on operations since delivery.	0

Operating hours	0…2000000 h	Number of operating hours since delivery.	0

Electrical connection

The unit must be connected by a qualified electrician.

- ▶ Disconnect power.
- ▶ Connect the unit as follows:

Cable device		Plug unit	
BK: black BN: brown BU: blue WH: white	 BK: OUT / IO-Link		 Pin 4: OUT / IO-Link

- ▶ Restart the unit after connection and installation to suppress the environmental conditions.

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