

Capacitive proximity sensors



Our capacitive proximity sensors detect liquid, powdery and solid materials precisely and reliably. They are equally suitable for the detection of metallic and non-metallic parts. Parts can also be detected through container walls or packaging.



 **di-soric**

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KNS EXTENDED

Our capacitive proximity sensors detect liquid, powdery and solid materials precisely and reliably, even through container walls or packaging. They are equally suitable for the detection of metallic and non-metallic parts. The sensitivity and NO/NC switching is adjusted using the Smart Sensor Profile. The sensors are available in the smallest sizes Ø 6.5mm, M8 and M12.



Technical data (typ.)	+20°C, 24 VDC
Sensitivity adjustment	via IO-Link or multiturn potentiometer
Operation modes	Standard (general applications)
	High Resolution (for detecting very small objects)
	Speed (reliable detection of fast-moving parts)
Installation instructions	flush / non-flush / virtually flush (see page 130)
For more information, visit	www.di-soric.com

Operation modes



Standard – General applications

- Switching frequency 100 Hz
- Normal interference immunity



High Resolution – For detecting very small objects

- Stable measured value
- Reduced switching frequency 10 Hz
- High interference immunity








Speed – Reliable detection of fast-moving parts

- Fast object detection
- Switching frequency 300 Hz
- Low interference immunity

	Housing design Size (mm)	Switching distance (mm)	flush (f) / non-flush (nf)	Switching output	Switching frequency (Hz) / mode	IO-Link adjustments	Potentiometer sensitivity adjustments	Housing material	Protection type	Cable material/length, Plug connector	Product description
KNS Extended with IO Link											
	Ø 6.5x37.6	2.0 ¹⁾ (0.2 to 3.0)	f	Push-pull, 100 mA, NO/NC	100 (Standard) 10 (High resolution) 200 (Speed)	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS D6.5KM 2B G3-2R
	Ø 6.5x45									M8	KNS D6.5KM 2B G3-T3
	Ø 6.5x40.6	3.0 ¹⁾ (0.2 to 4.0)	nf	Push-pull, 100 mA, NO/NC	100 (Standard) 10 (High resolution) 200 (Speed)	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS D6.5 KM 3N G3-2R
	Ø 6.5x48									M8	KNS D6.5 KM3N G3-T3
	M8 x 40.6	3.0 ¹⁾ (0.2 to 4.0)	nf	Push-pull, 100 mA, NO/NC	100 (Standard) 10 (High resolution) 200 (Speed)	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS M08KM 3N G3-2R
	M8 x 48									M8	KNS M08 KM 3N G3-T3
	M12 x 40	4.0 ¹⁾ (0.3 to 8.0)	f	Push-pull, 100 mA, NO/NC	100 (Standard) 10 (High resolution) 200 (Speed)	■		Brass, nickel-plated	IP 65, IP 67	2 m/PVC	KNS M12KM 4B G3-2R
	M12 x 45									M12	KNS M12KM 4B G3-B3
	M12 x 44	8.0 ¹⁾ (0.3 to 12)	nf	Push-pull, 100 mA, NO/NC	100 (Standard) 10 (High resolution) 200 (Speed)	■		Brass, nickel-plated	IP 65, IP 67	2 m/PVC	KNS M12KM 8N G3-2R
	M12 x 49									M12	KNS M12KM 8N G3-B3
	M8 x 37.5	2.0 ¹⁾ (0.2 to 3.0)	f	Push-pull, 100 mA, NO/NC	100 (Standard) 10 (High resolution) 200 (Speed)	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS M08KM 2B G3-2R
	M8 x 45									M8	KNS M08KM 2B G3-T3

¹⁾Switching distance adjustment via IO-Link

	Housing design Size (mm)	Switching distance (mm)	flush (f) / non-flush (nf)	Switching output	Switching frequency (Hz) / mode	IO-Link adjustments	Potentiometer sensitivity adjustments	Housing material	Protection type	Cable material/length, Plug connector	Product description
KNS Extended with potentiometer											
	Ø 6.5x52	2.0 (0.1 to 3.0)	f	Push-pull, 100 mA, NO/NC	100 Hz	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS D6.5M 02B G3-2R
	Ø 6.5x60									M8	KNS D6.5M 02B G3-T3
	Ø 6.5x52	3.0 (0.1 to 4.0)	nf	Push-pull, 100 mA, NO/NC	100 Hz	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS D6.5M 03N G3-2R
	Ø 6.5x60									M8	KNS D6.5M 03N G3-T3
	M8 x 52	3.0 (0.1 to 4.0)	nf	Push-pull, 100 mA, NO/NC	100 Hz	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS M8M 03N G3-2R
	M8 x 60									M8	KNS M8M 03N G3-T3
	M12 x 55	4.0 (0.1 to 8.0)	f	Push-pull, 100 mA, NO/NC	100 Hz	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS M12M 04B G3-2R
	M12 x 60									M12	KNS M12M 04B G3-B3
	M8 x 52	2.0 (0.1 to 3.0)	f	Push-pull, 100 mA, NO/NC	100 Hz	■		Stainless steel V2A	IP 65, IP 67	2 m/PVC	KNS M8M 02B G3-2R
	M8 x 60									M8	KNS M8M 02B G3-T3

KDC STANDARD

Capacitive proximity sensors in the KDC series are available in stainless steel and plastic housings. They are particularly suited for the detection of liquid, powdery and solid materials, as well as metallic and non-metallic parts. They are available in different sizes from M18 to M30 and Ø 50 mm.



Technical data (typ.)

+20 °C, 24 VDC

Sensitivity adjustment Using multiturn potentiometer or auto-teach key

Installation instructions flush / non-flush / virtually flush (see page 130)

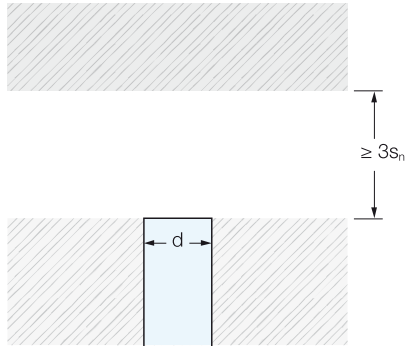
For more information, visit www.di-soric.com

	Housing design Size (mm)	Switching distance (mm)	flush (f) / non-flush (nf)	Switching output	Potentiometer sensitivity adjustments Auto-teach key	Housing material	Protection type	Cable material/length, Plug connector	Product description
KDC Standard									
	Ø 6.5 x 55	2.0 (0.1 to 3.0)	f	Push-pull, 150 mA, NO/NC	■	Stainless steel V2A	IP 65, IP 67	2 m / PUR	KDCT 6.5 V 02 G3-3
								2 m / PUR	KDCT 6.5 V 02 G3-4
	Ø 6.5 x 60	2.0 (0.1 to 3.0)	f	Push-pull, 150 mA, NO/NC	■	Stainless steel V2A	IP 65, IP 67	M8 3-pin	KDCT 6.5 V 02 G3-T3
								M8 4-pin	KDCT 6.5 V 02 G3-T4
	M8 x 52	2.0 (0.1 to 3.0)	f	Push-pull, 150 mA, NO/NC	■	Stainless steel V2A	IP 65	2 m / PUR	KDCT 08 V 02 G3-3
									KDCT 08 V 02 G3-4
	M8 x 60	2.0 (0.1 to 3.0)	f	Push-pull, 150 mA, NO/NC	■	Stainless steel V2A	IP 65	M8	KDCT 08 V 02 G3-T3
									KDCT 08 V 02 G3-T4
	M8 x 60	3.0 (0.1 to 4.0)	nf	Push-pull, 150 mA, NO/NC	■	Stainless steel V2A	IP 65	M8	KDCT 08 V 03 G3-T3
									KDCT 08 V 03 G3-T4
	M12 x 60	4.0 (0.1 to 6.0)	f	Push-pull, 150 mA, NO/NC, switchable	■	Stainless steel V2A	IP 65	2 m / PUR	KDCT 12 V 04 G3-4
								M12	KDCT 12 V 04 G3-B4

¹⁾ Front side ²⁾ Back side

INSTALLATION INSTRUCTIONS FOR CAPACITIVE PROXIMITY SENSORS

Flush installation (f)

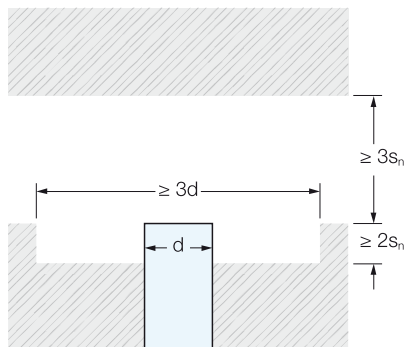


These proximity switches can be installed in all materials (metals / non-metals) such that the active sensor surface lines up flush with the surrounding material on the front side.

They have the following advantages:

- Flush installation in conductive materials (metals)
- Protection of the sensing surface prior to mechanical damage
- Less influence from external interference fields
- Less distance to the next proximity switch on the side

Non-flush installation (nf)



These proximity switches are allowed to be installed non-flush in conductive materials.

They have the greatest possible switching distance. Special installation instructions apply to these proximity switches.

Flush installation in nonconductive materials is permitted.