

SICK
Sensor Intelligence.



Technical data overview

Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm
Sensing distance	20 mm ¹⁾ 10 mm ¹⁾ 40 mm ¹⁾ 50 mm ¹⁾ 200 mm ¹⁾ Dependent on the fiber-optic cable
Type of light	LED ²⁾ RGB LED ²⁾ Redgreen LED ²⁾ Green LED ²⁾ White
Switching output	NPN PNP (depending on type)
Connection type	Male connector M12, 5-pin Male connector M12, 4-pin (depending on type)

¹⁾ From leading edge of lens.
²⁾ Average service life: 100,000 h at T_U = +25 °C.

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Product description

KT5-2 contrast sensors are ideal for high-precision contrast detection, such as detecting marks on high-gloss materials. Thanks to the 3-color LED, the sensors are able to activate the best-possible emitted light source for each contrast. The device also offers various possibilities for adapting the switching point to the application via teach-in process or potentiometer. The sensor defines all necessary parameters automatically. The sensor then determines the ideal switching threshold from the two gray values detected. High-precision contrast detection, automatic gloss adaptation for highly reflective objects, a sensing distance of 10 mm, 20 mm and 40 mm, switching frequency of 10 kHz and individual alignment and mounting options make the device suitable for a wide range of tasks. Simple mounting is also ensured – the M12 plug connection can be rotated 90°.

At a glance

- Best contrast resolution thanks to RGB LED technology
- Intuitive 10-segment bar display indicates the detection reliability
- Dynamic or static teach-in method or manual potentiometer
- Switching frequency of 10 kHz
- Automatic gloss adjustment for highly reflective materials
- Various sensing distances and light spot directions
- M12 plug can be rotated 90°

Your benefits

- Able to process all packaging materials (yellow mark/white background), resulting in high machine throughput
- Reliable operation, even with jittering and high gloss materials
- High positioning accuracy improves packaging quality
- Simple teach-in and highly visible light spot ensure easy setup
- A range of sensing distances, light spot directions and 90° rotatable plug enables optimal integration
- Interchangeable lenses for maximum mounting flexibility

Ordering information

Other models and accessories → www.sick.com/KT5

- **Housing design:** rectangular
- **Sensing distance:** ≤ 20 mm
- **Light emission:** Long and short side of housing, exchangeable

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
NPN	1.5 mm x 5.5 mm	Horizontal	Male connector M12, 4-pin	KT5G-2N2211	1015991
		Vertical	Male connector M12, 4-pin	KT5G-2N1211	1015985
				KT5G-2N1251	1022582
			Male connector M12, 5-pin	KT5G-2N1212	1016719
				KT5G-2N1214	1017871
				KT5W-2N1213	1016716
				KT5W-2N1216	1019022
				KT5W-2N1216D	1026580
				KTH5W-2N1216D	1028250
PNP	1.2 mm x 4.2 mm	Horizontal	Male connector M12, 5-pin	KT5W-2P2216	1019020
	1.5 mm x 5.5 mm	Horizontal	Male connector M12, 4-pin	KT5G-2P2211	1016010
				KT5G-2P2221	1016011
		Vertical	Male connector M12, 4-pin	KT5G-2P1211	1015999
				KT5G-2P1221	1016001
				KT5G-2P1251	1016196
			Male connector M12, 5-pin	KT5G-2P1212	1016718
				KT5G-2P1214	1017870
				KT5W-2P1213	1016715
				KT5W-2P1216	1018586
				KT5W-2P1216D	1026577
				KTH5W-2P1216D	1028249

- **Housing design:** rectangular
- **Sensing distance:** ≤ 10 mm
- **Light emission:** Long and short side of housing, exchangeable

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
NPN	1.2 mm x 4.2 mm	Round	Male connector M12, 4-pin	KT5G-2N3151	1018039
		Horizontal	Male connector M12, 4-pin	KT5G-2N2111	1015990
			Male connector M12, 5-pin	KT5G-2N2112	1018164
				KT5W-2N2113	1018042
				KT5W-2N2116D	1026583
		Vertical	Male connector M12, 4-pin	KT5G-2N1111	1015981
				KT5G-2N1121	1015983
				KT5G-2N1151	1016385
				KT5M-2N1111	1048489
			Male connector M12, 5-pin	KT5G-2N1112	1016717
				KT5G-2N1114	1017000
	1.2 mm x 4.2 mm	Vertical	Male connector M12, 5-pin	KT5G-2N1116	1019352
				KT5G-2N1122	1017977
				KT5W-2N1113	1016630
				KT5W-2N1116	1018045
				KT5W-2N1116D	1026540
				KT5W-2N1126D	1026582
PNP	1.2 mm x 4.2 mm	Horizontal	Male connector M12, 4-pin	KT5G-2P2111	1016008
				KT5G-2P2121	1016009
				KT5G-2P2151	1017809
			Male connector M12, 5-pin	KT5G-2P2112	1017956
				KT5G-2P2114	1018309

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
	4.2 mm x 1.2 mm			KT5W-2P2113	1018043
				KT5W-2P2116D	1026584
				KT5W-2P2156S42	1057643
		Vertical	Male connector M12, 4-pin	KT5G-2P1111	1015993
				KT5G-2P1121	1015997
				KT5G-2P1151	1016195
				KT5G-2P1161	1016400
				KT5M-2P1151	1044400
			Male connector M12, 5-pin	KT5G-2P1112	1016628
				KT5G-2P1114	1016999
				KT5G-2P1116	1022090
				KT5G-2P1122	1017976
				KT5W-2P1113	1016629
				KT5W-2P1116	1018044
				KT5W-2P1116D	1026538
				KT5W-2P1123	1017810
				KT5W-2P1126	1018587
				KT5W-2P1126D	1026579
				KT5W-2P1156S41	1053258
		Horizontal	Male connector M12, 5-pin	KT5W-2P2116	1022312
PNP, NPN	1.2 mm x 4.2 mm	Vertical	Male connector M12, 4-pin	KT5W-2B1116	1043006

- **Housing design:** rectangular
- **Sensing distance:** ≤ 40 mm
- **Light emission:** Long and short side of housing, exchangeable

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
NPN	1.1 mm x 4.2 mm	Horizontal	Male connector M12, 4-pin	KT5G-2N2311	1015992
				KT5G-2N2351	1018068
		Vertical	Male connector M12, 4-pin	KT5G-2N1311	1015988
				KT5G-2N1351	1016728
			Male connector M12, 5-pin	KT5G-2N1314	1023121
				KT5W-2N1316	1022678
				KT5W-2N1316D	1026581
PNP	1.1 mm x 4.2 mm	Horizontal	Male connector M12, 4-pin	KT5G-2P2311	1016012
				KT5G-2P2321	1016013
				KT5G-2P2351	1018067
			Male connector M12, 5-pin	KT5W-2P2323	1022165
		Vertical	Male connector M12, 4-pin	KT5G-2P1311	1016003
				KT5G-2P1321	1016005
				KT5G-2P1351	1016197
			Male connector M12, 5-pin	KT5G-2P1312	1018584
				KT5G-2P1314	1018988
				KT5W-2P1316	1018961
				KT5W-2P1316D	1026578
				KT5W-2P1323	1018808

- **Housing design:** rectangular
- **Sensing distance:** ≤ 10 mm

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
NPN	1.2 mm x 4.2 mm	Vertical	Male connector M12, 4-pin	KT5RG-2N1116	1027394
PNP	1.2 mm x 4.2 mm	Vertical	Male connector M12, 4-pin	KT5RG-2P1116	1027393
				KT5RG-2P1126	1027396

- **Housing design:** rectangular
- **Sensing distance:** ≤ 50 mm
- **Light emission:** Long and short side of housing, exchangeable

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
NPN	1.1 mm x 4.2 mm	Vertical	Male connector M12, 4-pin	KT5G-2N1411	1018041

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
PNP	1.1 mm x 4.2 mm	Vertical	Male connector M12, 4-pin	KT5G-2P1411	1018040
			Male connector M12, 5-pin	KT5G-2P1414	1018519

- **Housing design:** rectangular
- **Sensing distance:** ≤ 200 mm
- **Light emission:** Long and short side of housing, exchangeable

Switching output	Light spot size	Light spot direction	Connection type Detail	Type	Part no.
PNP	10 mm x 35 mm	Vertical	Male connector M12, 4-pin	KT5G-2P1251S29	1023002

- **Housing design:** rectangular

Switching output	Connection type Detail	Type	Part no.
NPN	Male connector M12, 4-pin	KTL5G-2N11	1016295
		KTL5G-2N51	1016951
		KTL5G-2P14	1022091
		KTL5G-2P24	1019162
	Male connector M12, 5-pin	KTL5W-2N13	1019661
		KTL5W-2N16	1025995
PNP	Male connector M12, 4-pin	KTL5G-2P11	1016294
		KTL5G-2P51	1016950
	Male connector M12, 5-pin	KTL5W-2P13	1027562
		KTL5W-2P16	1026006
		KTL5W-2P23	1019551

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com