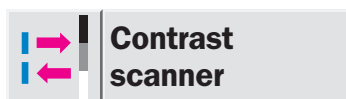
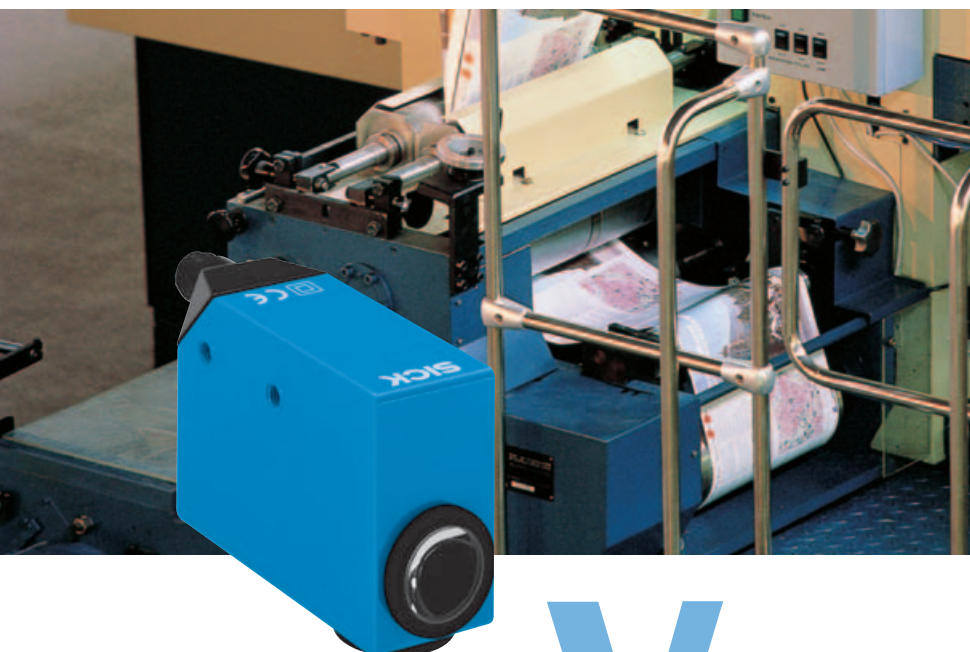


KT 10-2: for high-speed applications



Very high speeds, poor contrasts and reflective materials put high demands on a sensor. When you need precise positioning, the KT 10-2 is the right choice.

Simple operation is a focus in the 2nd generation of the KT 10. During the teach-in procedure, the sensor selects the emission colour, which fits the existing contrast best. If print marks are to be detected on shiny foils, the sensor is automatically set for them. Thanks to the automatic drift cor-

rection, the KT 10-2 adjusts its switching threshold during operation. Consequently, changing environmental conditions cannot influence the performance of the sensor.

The optional light exits provide flexibility for many installation situations. The robust metal housing ensures long service life.

The very short and constant response time of 20 μ s is the basis for high speed applications. The precise light spot provide high reproducibility and a high geometric resolution. Consequently, accurate positioning is ensured.

The reliability of detection is displayed on the bar display. If the print quality during production deteriorates, this also can be visualised by the KT 10-2.

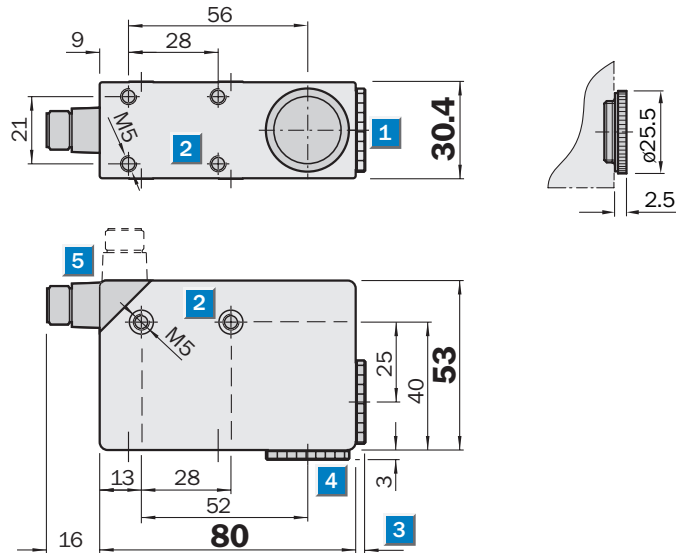
In addition, up to five sensor parameters for different contrasts can be stored in the sensor and retrieved when required.

SICK

	Scanning distance 12.5 mm Lens (10 mm)
Contrast scanner	

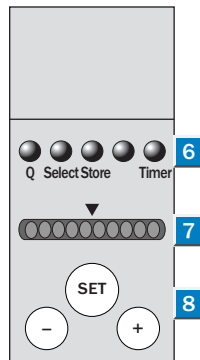
- 20 μ s response time (jitter < 10 μ s) for fast applications
- Precise light spot for high repeatability
- RGB emission LED (automatic selection)
- 2 light exits (changeable)
- 5 bank memory
- Automatic drift correction

Dimensional drawing



Adjustments possible

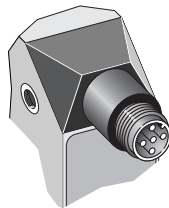
All types



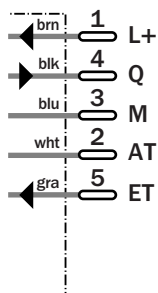
- 1 Lens (light transmission)
- 2 M5 mounting holes, 5.5 mm deep
- 3 See dimensional drawing of lens
- 4 Blind screw can be replaced by lens
- 5 5-pin, M12 x 1 plug (rotatable trough 90°)
- 6 Function signal indicators (yellow)
- 7 Bar display
- 8 Teach-in button/„+“ and „-“ button

Connection types

All types



5-pin, M12



Technical data		KT10W-2-	P1115	N1115									
Scanning distance	10 ± 3 mm												
from front edge of the lens													
Light source ¹⁾	LED; red, green, blue												
Wave length (nm)	640, 525, 470												
Light spot dimensions	4 x 0.8 mm												
Light spot position	Longitudinal												
Supply voltage V_S	10 ... 30 V DC ²⁾												
Residual ripple ³⁾	< 5 V												
Current consumption ⁴⁾	< 80 mA												
Switching outputs	PNP: HIGH = V _S - < 2 V / LOW = 0 V												
	NPN: HIGH = V _S / LOW = < 2 V												
Output current I _A max.	< 100 mA												
Output logic	Light/dark via teach-in procedure (default)												
(Adjustable)	Light switching; dark switching												
Switching frequency max. ⁵⁾	25000/s												
Response time ⁶⁾	20 µs												
Jitter	< 10 µs												
Teach-in input ET	PNP: Teach > 10 V ... < V _S												
	Run 0 V or unswitched												
	NPN: Teach 0 V												
	Run V _S or unswitched												
Teach-in procedure	Dynamic teach-in (default)												
(Adjustable)	2-point-teach-in												
Timer deactivation delay	None (default)												
(Adjustable)	20 ms												
Blanking input AT													
Blanked	PNP: AT > 10 V												
Free running	AT > 2 V or unswitched												
Blanked	NPN: AT < 2 V												
Free running	AT > 10 V or unswitched												
Retention time	25 ms non-volatile memory												
Connection type	M12 plug, 5-pin												
VDE protection class ⁷⁾	□												
Circuit protection ⁸⁾	A, B, C, D												
Enclosure rating	IP 67												
Ambient temperature T_A	Operation -10 ... +55 °C												
	Storage -25 ... +75 °C												
Shock load	To IEC 68												
Weight	Approx. 400 g												
Housing material	Cast-zinc												

¹⁾ Average service life 100,000 h
at T_A = +25 °C

²⁾ Limit values

³⁾ May not exceed or fall short of
V_S tolerances

⁴⁾ Without load

⁵⁾ Signal transit time with resistive load

⁶⁾ With light/dark ratio 1:1 and deactivated
automatic drift correction

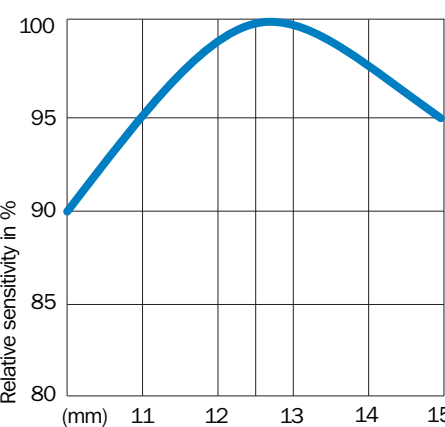
⁷⁾ Reference voltage 50 V DC

⁸⁾ A = V_S connections reverse-polarity
protected

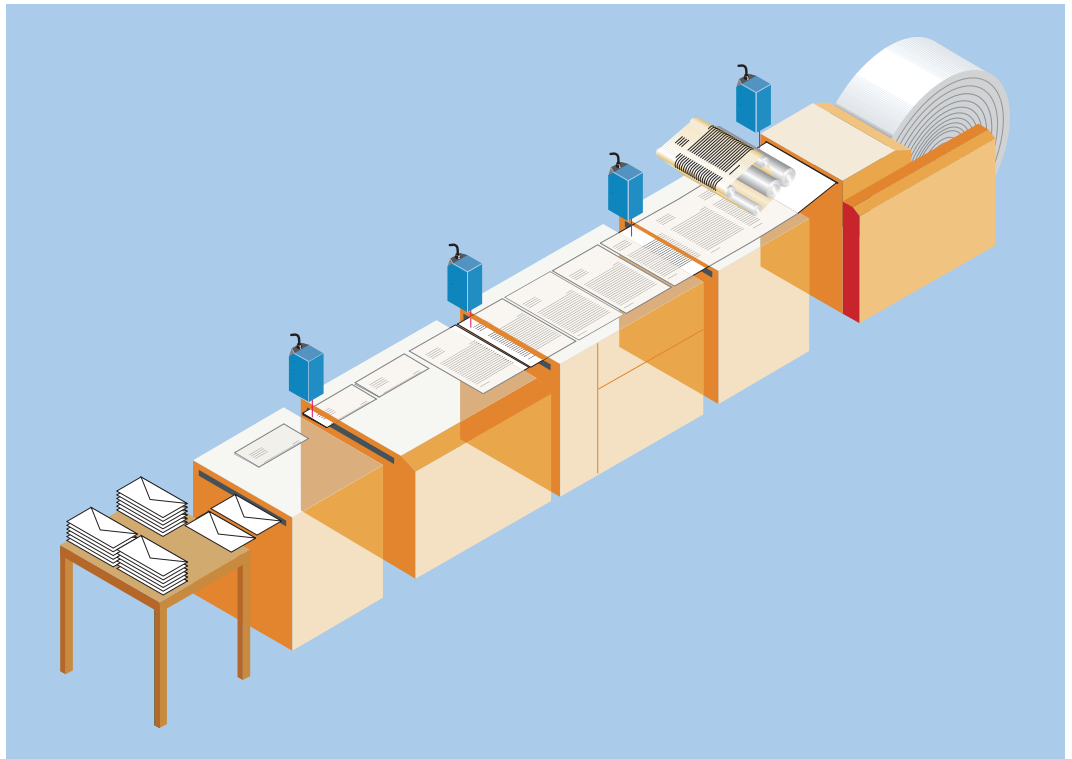
B = Outputs Q and Q short-circuit
protected

C = Interference pulse suppression

D = Outputs overcurrent and
short-circuit protected

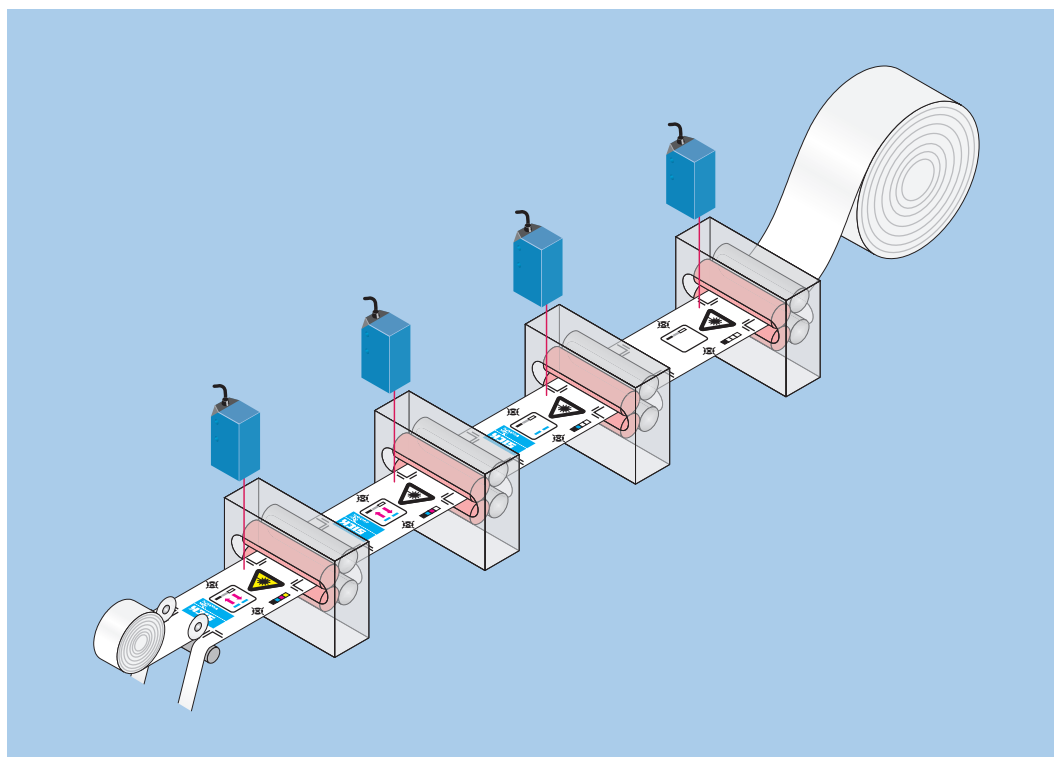
Scanning distance		Order information	
		Type	Order no.
		KT10W-2P1115	1 028 232
		KT10W-2N1115	1 028 233

► Controlling cutting, folding and inserting into envelopes



Precise detection of printing, folding and reference marks as well as high processing speed is a matter of course for the contrast scanner, as is the great reproducibility required in printing machines, high performance copiers and in continuous form systems for printing, cutting, folding and inserting letters into envelopes. Of course, the contrast scanner can also be used for other applications, i.e. packaging, which place great demands on contrast detection and speed.

▼ Synchronization of a printing process



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