

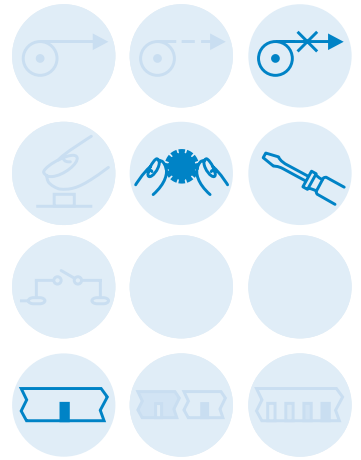
Contrast scanner with manual switching threshold adjustment

Industrial packaging processes are automated for the most part. Sensors are required for this, which can detect print marks on different films, cardboard packaging and wrapping materials quickly and reliably.

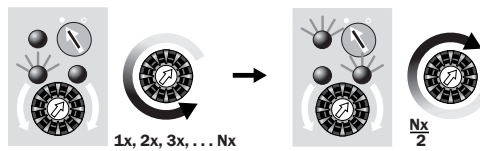
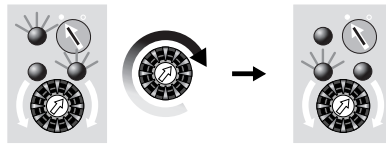
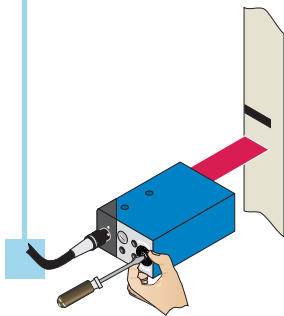
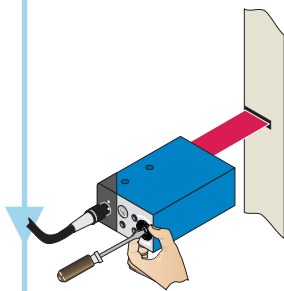
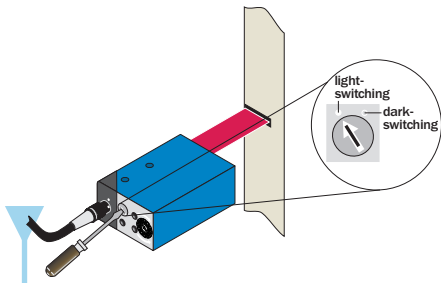
The KT 5G-2P/N__1 can resolve over 30 different contrast levels. This is the basic model of the KT 5 series. The gray value differentiation, switching sequence of 10 kHz and scanning ranges of optionally 10, 20 and 40 mm cover a wide range of applications in contrast detection. The switching threshold is adjusted manually with support from the status indicator as an adjustment aid. An optional release delay, which increases the impulse duration, optimizes detection reliability.



Easy to install too – through the 4-pin M12 plug connection, the comprehensive range of mounting accessories and the selectable light exit at the top or front of the housing.

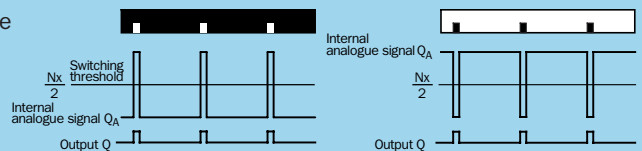


Setting switching threshold




Status

- The switching threshold is set manually in the middle between the background and the mark.



Notes

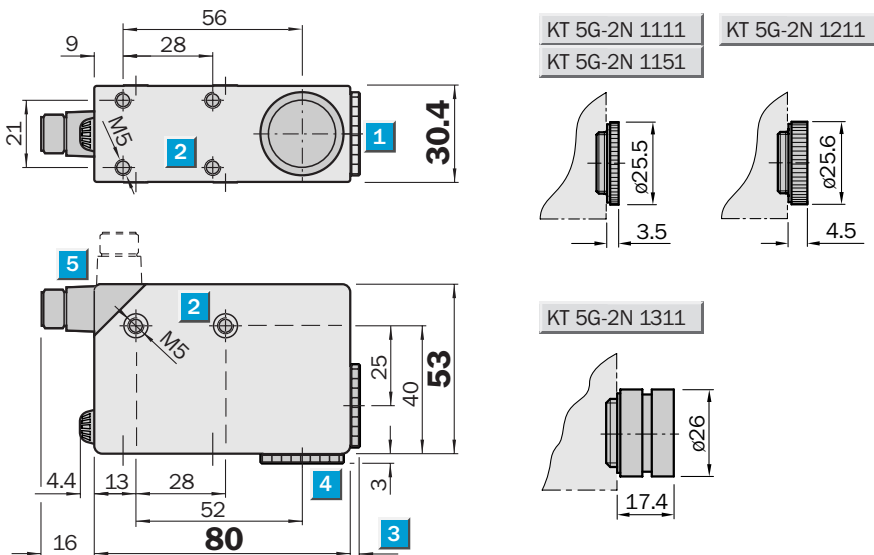
- The material speed must be zero (machine is idle).
- Turn the threshold adjustment knob until the status indicator just lights.
- Switching threshold setting at bright-switching analogue.


Scanning distance
 10/20/40 mm

Contrast scanners

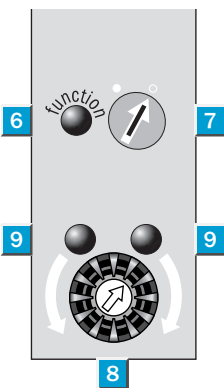
- Green light
- Manual switching threshold adjustment
- Adjustment switch
- Optional time delay
- Switching frequency 10 000/s

Dimensional drawing



Adjustments possible

All types

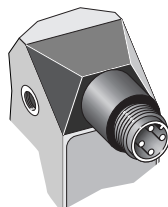


- 1 Lens (light transmission), can be replaced by item 4
- 2 M5 mounting holes, 5.5 mm deep
- 3 See dimensional drawing of lens
- 4 Blind screw, can be replaced by item 1
- 5 4-pin, M12 x 1 plug (rotatable through 90°)
- 6 Function signal indicator (yellow)
- 7 Operating mode selector switch
- Light-switching
- Dark-switching
- 8 Switching threshold adjustment
- 9 Adjustment indicators (green)

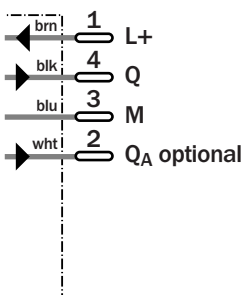


Connection type

All types



4-pin, M12



Accessories

Cables and connectors
Mounting systems
Lens

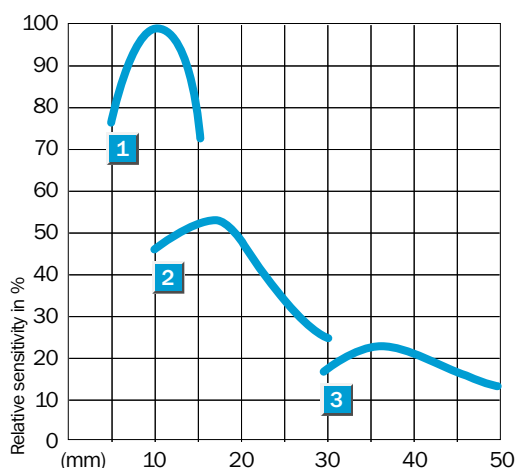
Technical data KT 5G-2 | N1111 | N1151 | N1211 | N1311

Scanning distance	10 ± 3 mm				
from front edge of lens	20 ± 3 mm				
	40 ± 3 mm				
Light spot dimension	1.2 x 4.2 mm				
	1.5 x 5.5 mm				
	1.1 x 4.2 mm				
Light spot position	Longitudinal				
Light source⁴⁾; light type;	LED; green light;				
Wavelength (nm)	520				
Supply voltage V_s	10 ... 30 V DC ²⁾				
Residual ripple ³⁾	< 5 V _{pp}				
Current consumption ⁴⁾	< 80 mA				
Switching outputs	Light-/dark-switching, selectable				
	NPN: HIGH = V _s /LOW = < 2 V				
Output current I _A max.	100 mA				
Response time ⁵⁾ ; switching frequency ⁶⁾	50 μs; 10 000/s				
Time delay	No timing element				
Analogue output Q_A	0.3 ... 10 mA				
Switching threshold	adjustable (standard type)				
Connection type	Plug 4-pin, M12				
VDE protection class⁷⁾	□				
Enclosure rating	IP 67				
Circuit protection⁸⁾	A, B, C				
Ambient temperature T_A	Operation -10 ... +55 °C				
	Storage -25 ... +75 °C				
Shock load	To IEC 68				
Weight	Approx. 400 g				
Housing	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
 7) Reference voltage 32 V DC
 8) A = V_s connections reverse-polarity protected
 B = Outputs short-circuit protected
 C = Interference pulse suppression

Scanning distance

- 1 Scanning distance 10 mm
- 2 Scanning distance 20 mm
- 3 Scanning distance 40 mm



Order information

Preferred type ^{*)}	Order no.
KT 5G-2N 1111	1 015 981
KT 5G-2N 1151	1 016 385
KT 5G-2N 1211	1 015 985
KT 5G-2N 1311	1 015 988

^{*)} Further types on request