



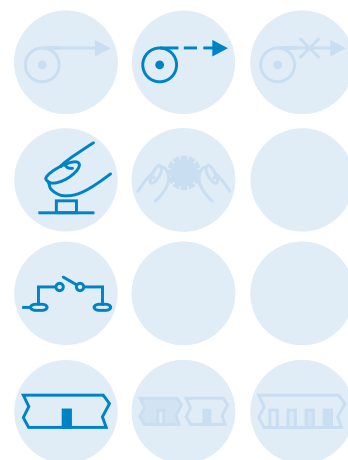
Dynamic, convenient, excellent: Contrast Scanners with dynamic Teach-in

The new KT 3 contrast scanner is small in price and design, but big in detecting contrasts in standard applications. With scanning ranges to 12.5 mm and switching sequences up to 10,000/s, the mark sensor is predestined for use in packaging machines, for example.

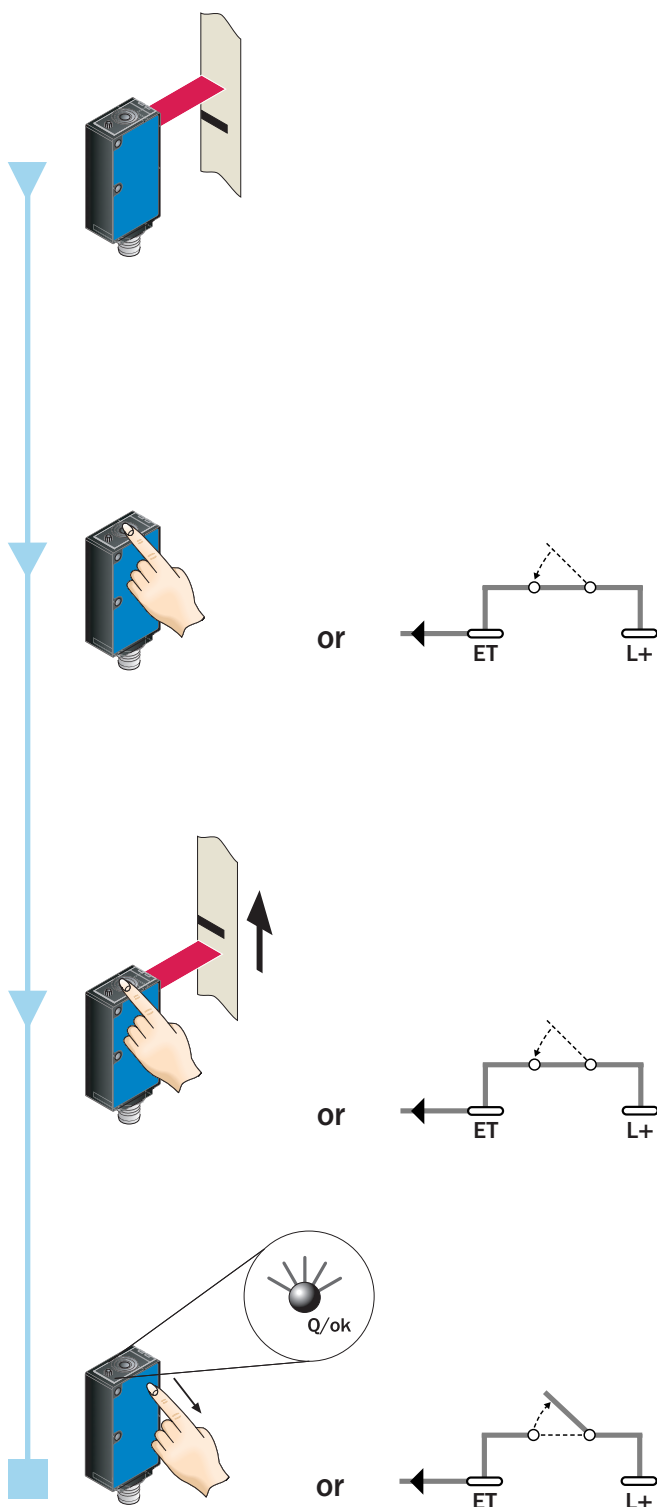
Features such as integrated tuning of switching thresholds for high-gloss objects and dynamic Teach-in make the KT 3 easy to both commission and use. Depending on the existing contrast, the KT 3 selects the optimum transmission colour (red, green or blue). And thanks to the miniature design, the KT 3 is especially well suited for cramped quarters.



Contrasts do not need expensive technology, but instead simply the KT 3.

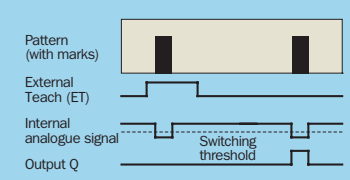


Teach-in: setting switching threshold




Notes

- The switching threshold is in the middle between the reception signals from the background and mark and is stored permanently.
- The optimum transmission light was selected automatically.



Status

- The material speed during the Teach-in procedure must be slower than 10 m/minute when there are smaller marks.
- Only teach-in one mark if possible.
- If the Teach-in procedure was unsuccessful, the output switches at approx. 3.5/s and the yellow LED display blinks. The reception signal was too weak, too strong (possibly due to shiny reflectance) or the contrast difference was too slight.

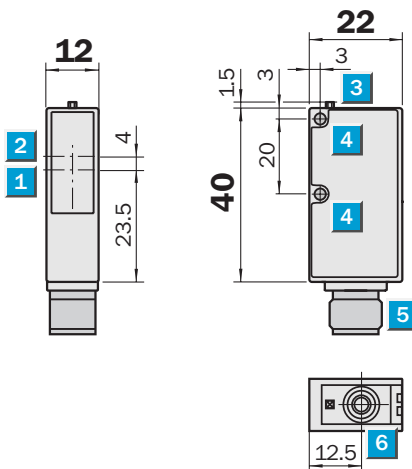
 **Scanning distance**
12.5 mm

Contrast scanners

- Light source green or red, green, blue
- Integrated switching threshold adjustment for detection of extremely shiny objects
- Dynamic Teach-in via control panel or control wire while machine is running
- Switching frequency 10,000/s

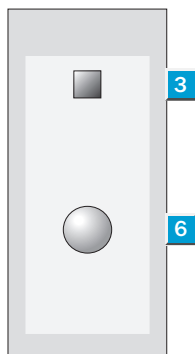
Dimensional drawing

All types



Adjustments possible

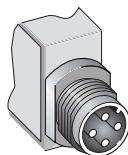
All types



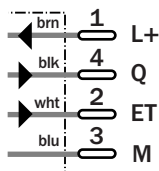
- 1 Axis of the sender optics
- 2 Axis of the receiver optics
- 3 LED signal strength indicator
- 4 Mounting hole
- 5 Plug M12, 4-pin
- 6 Teach-in button

Connection type

All types



4-pin, M12



See chapter Accessories

Cables and connectors

Mounting systems

Technical data		KT 3	W-P 1115	W-N 1115								
Scanning distance	12.5 mm											
from front edge of lens												
Scanning distance tolerance	± 2 mm											
Light spot dimensions	1.5 x 6.5 mm											
	1.5 x 3.5 mm											
Light source¹⁾; light type;	LED; red, green, blue;											
Wavelength (nm)	640, 525, 470											
Supply voltage V_s	24 V DC ± 20%											
Residual ripple ²⁾	< 5 V _{pp}											
Current consumption ³⁾	< 35 mA											
Switching outputs	NPN: HIGH = V _s / LOW = < 2 V											
	PNP: HIGH = V _s - < 2 V / LOW = approx.											
Output current I _A max.	100 mA											
Response time ⁴⁾	50 μs											
Switching frequency ⁵⁾	To 10000/s											
Time delay optional	20 ms											
Teach-in input ET	PNP: Teach > 10 V...< V _s											
	NPN: Teach 0 V											
Connection type	Plug 4-pin, M12											
VDE protection class⁶⁾	□											
Enclosure rating	IP 67											
Circuit protection⁷⁾	A, B, C											
Ambient temperature T_A	Operation -10 ... +55 °C											
	Storage -20 ... +75 °C											
Shock load	To IEC 68											
Weight	Approx. 80 g											
Housing	ABS											
Switching threshold adjustment/ Teach-in	Dynamic Teach-in											

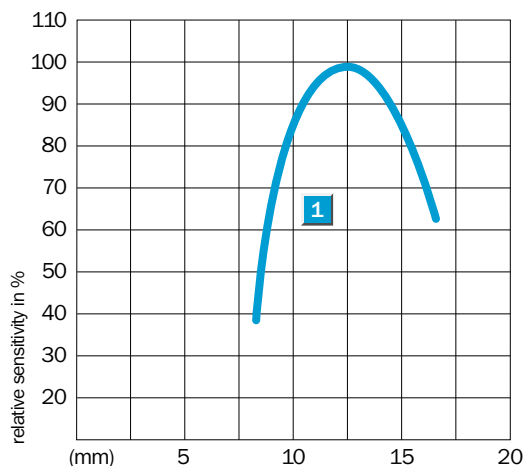
¹⁾ Average service life 100,000 h at T_A = +25 °C
²⁾ May not exceed or fall short of V_s tolerances

³⁾ Without load
⁴⁾ Signal transit time with resistive load
⁵⁾ With light/dark ratio 1:1
⁶⁾ Reference voltage 50 V DC

⁷⁾ A = V_s connections reverse-polarity protected
 B = Outputs short-circuit protected
 C = Interference pulse suppression

Scanning distance

1 Scanning distance 12.5 mm



Order information

Preferred type ^{*)}	Order no.
KT 3W-P 1115	1 025 326
KT 3W-N 1115	1 025 325

^{*)} Further types on request