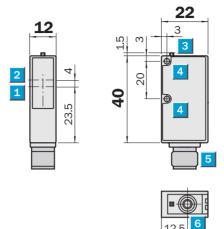


- Light source green or red, green, blue
- Integrated switching threshold adjustment for detection of extremely shiny objects
- Static two point Teach-in to mark and background via control cable or control panel on unit
- Switching frequency 10000/s

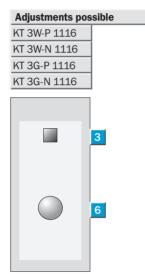
# **Dimensional drawing**







| Accessories      |  |
|------------------|--|
| Connectors       |  |
| Mounting systems |  |

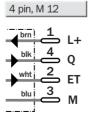


- 1 Axis of the sender optics
  - Axis of the receiver optics
- 3 LED signal strength indicator
- Mounting hole
- 5 Plug M 12, 4 pin
- 6 Operating components

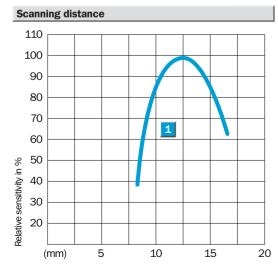
# **Connection type**

| KT 3W-P 1116 |
|--------------|
| KT 3W-N 1116 |
| KT 3G-P 1116 |
| KT 3G-N 1116 |





| Technical data   | KT 3  | W-P  | W-N                  | G-P             | G-N                                |     |          |  |  |
|--|---|------|----------------------|-----------------|------------------------------------|-----|----------|--|--|
|  |   | 1116 | 1116                 | 1116            | 1116                               |     | <u> </u> |  |  |
| Scanning distance  | 12.5 mm   |      |                      |                 | 1                                  | 1   |          |  |  |
| from front edge of lens  | 12.3 111111   |      |                      |                 |                                    |     |          |  |  |
| Scanning distance tolerance  | ± 2 mm  |      | 1                    | 1               |                                    | 1   |          |  |  |
| Light spot dimensions  | 1.5 x 6.5 mm  |      |                      |                 |                                    |     |          |  |  |
| Light spot unifonsions   | 1.5 x 3.5 mm  | J    |                      |                 |                                    | 1   |          |  |  |
| Light source 1), light type  | Red, green, blue  |      |                      |                 |                                    |     |          |  |  |
| Light source 7, light type   | Green   | J    |                      |                 | 1                                  | 1   |          |  |  |
| Supply voltage V <sub>s</sub>  | 24 V DC ± 20 %  |      |                      |                 |                                    |     |          |  |  |
| Ripple <sup>2)</sup>   |   |      |                      |                 |                                    |     |          |  |  |
| Current consumption <sup>3)</sup>  | < 5 V <sub>PP</sub> < 35 mA   |      |                      |                 |                                    |     |          |  |  |
| Switching outputs  | NPN: HIGH = $V_s$ / LOW = < 2 V   |      |                      |                 |                                    |     |          |  |  |
| Switching outputs  |   |      | _                    |                 | $\overline{}$                      |     |          |  |  |
| Outro to compare to the control of t | PNP: HIGH = $V_S$ < 2 V/ LOW = approx. 0 V  |      | _                    |                 |                                    | 1   |          |  |  |
| Output current I <sub>A</sub> max.   | 100 mA  |      |                      |                 |                                    |     |          |  |  |
| Response time 4)   | 50 μs   |      |                      |                 | <u> </u>                           |     |          |  |  |
| Switching frequency <sup>5)</sup>  | To 10 000/s   |      |                      |                 |                                    |     |          |  |  |
| Time delay optional  | 20 ms   |      |                      |                 | -                                  |     |          |  |  |
| Teach-in input ET  | PNP: Teach > 10 V < V <sub>s</sub>  |      | _                    |                 |                                    | 1   |          |  |  |
|  | NPN: Teach 0 V  |      |                      |                 |                                    |     |          |  |  |
| Connection type  | Plug 4 pin, M 12  |      |                      |                 |                                    |     |          |  |  |
| VDE protection class <sup>6)</sup>   |   |      |                      |                 | ļ                                  |     |          |  |  |
| Enclosure rating   | IP 67   |      |                      |                 | ļ                                  |     |          |  |  |
| Circuit protection <sup>7)</sup>   | A, B, C   |      |                      |                 |                                    |     |          |  |  |
| Ambient temperature  | Operation – 10 + 55 °C  |      |                      |                 |                                    |     |          |  |  |
|  | Storage − 20 + 75 °C  |      | ļ                    | ļ               | ļ                                  |     |          |  |  |
| Shock load   | To IEC 68   |      |                      |                 | <u> </u>                           |     |          |  |  |
| Weight   | Approx. 80 g  |      |                      |                 | <u> </u>                           |     |          |  |  |
| Housing material   | ABS   |      |                      |                 |                                    |     |          |  |  |
| <sup>1)</sup> Average service life 100,000 h at $T_A = +25$ °C <sup>2)</sup> May not exceeded or fall short of   | 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) Personne veltage 50 V DC | B=   | protected<br>Outputs | d<br>short-circ | verse-pol<br>uit protec<br>suppres | ted |          |  |  |



1 Scanning distance 12.5 mm

 $V_{\rm S}$  tolerances

# **Static Teach-in**

<sup>6)</sup> Reference voltage 50 V DC

## Static Teach-in KT 3 via control panel:

- 1. Place mark in light spot.
- 2. Press the Teach-in button on the equipment for longer than 1 s, and then trigger the first Teach-in procedure.

C = Interference pulse suppression

3. Place the light spot on the background, and then trigger the second Teach-in procedure.

#### Teach-in via control wire:

- 1. Place mark in light spot.
- 2. Trigger the first Teach-in procedure via the control
- 3. Place the light spot on the background, and then trigger the second Teach-in procedure via the control wire.

The KT 3W selects transmission light from among red, blue and green automatically.

### **Confirmation:**

After the first Teach-in procedure, the red transmitter light blinks with the KT 3W and the green with the KT 3G, and the status indicator blinks slowly and signals that a second Teach-in procedure must be triggered.

LED and status indicator blink rapidly = contrast insufficient. LED and status indicator do not blink = Teach-in procedure completed.

| Order information |           |  |  |  |  |
|-------------------|-----------|--|--|--|--|
| Туре              | Part no.  |  |  |  |  |
| KT 3W-P 1116      | 1 019 338 |  |  |  |  |
| KT 3W-N 1116      | 1 019 337 |  |  |  |  |
| KT 3G-P 1116      | 1 019 446 |  |  |  |  |
| KT 3G-N 1116      | 1 019 445 |  |  |  |  |