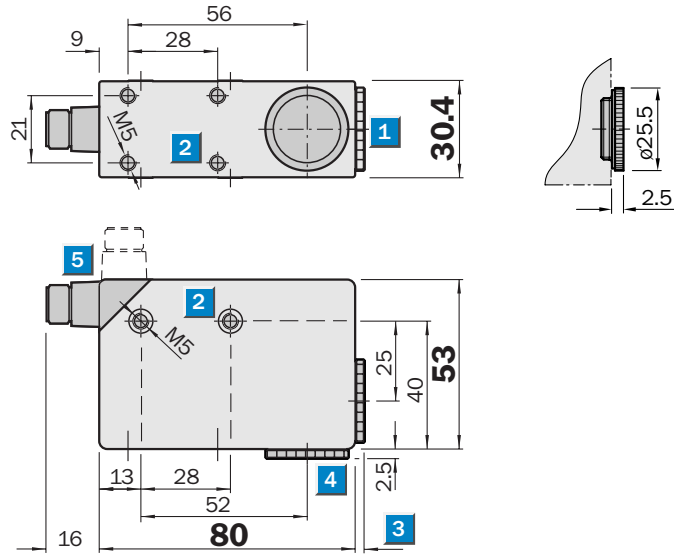
 **Scanning distance**  
12.5 mm/60 mm

**Color sensors**

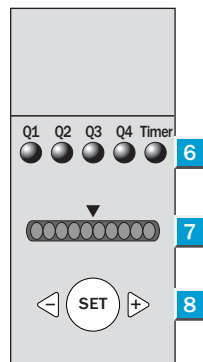
- Response time up to 85  $\mu$ s
- High colour resolution
- Quality of colour indicator via bar display
- High geometrical resolution
- Metal housing with 2 light exits (changeable)
- Reference channel - for constant detection

### Dimensional drawing



### Adjustments possible

All Types

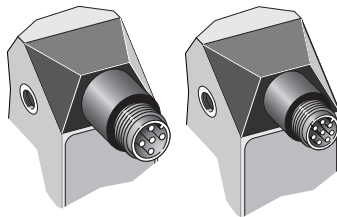


- 1 Lens (light transmission)
- 2 M5 mounting holes, 5.5 mm deep
- 3 See dimensional drawing of lens
- 4 Blind screw can be replaced by lens 1
- 5 5-pin, M12 x 1 plug (rotatable through 90°) or 8-pin, M12 x 1 plug (rotatable through 90°)
- 6 Function signal indicators (yellow)
- 7 Bar graph (green), Power on  $\cong$  left LED
- 8 Teach-in button/“+” and “-” button

### Connection type

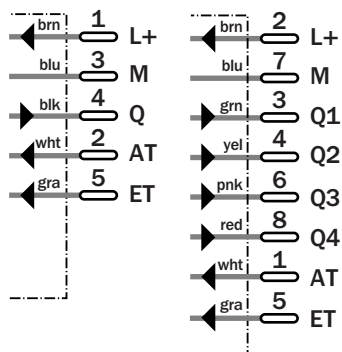
CS8-1

CS8-4



5-pin, M12

8-pin, M12



Technical data		CS8	1-P1112	1-P3612	4-P1112	4-P3612	1-N1112	1-N3612	4-N1112	4-N3612		
<b>Scanning distance,</b> from front edge of housing	12.5 ± 3 mm											
	60 ± 9 mm											
<b>Light spot size</b>	4 x 2 mm <sup>2</sup> (at 12.5 mm)											
	13 x 13 mm <sup>2</sup> (at 60 mm)											
<b>Light source<sup>4)</sup></b>	LED; red, green, blue											
Wave length (nm)	640, 525, 470											
Light spot direction	Longitudinal											
<b>Scanning range with PL80A reflector</b>	100 ... 250 mm											
	250 ... 1000 mm											
<b>Supply voltage V<sub>S</sub></b>	10 ... 30 V DC <sup>2)</sup>											
Residual ripple <sup>3)</sup>	< 5 V											
Current consumption <sup>4)</sup>	< 80 mA											
<b>Switching outputs</b>	PNP: HIGH = V <sub>S</sub> - < 2 V / LOW = 0 V											
	NPN: HIGH = V <sub>S</sub> / LOW = < 2 V											
Output current I <sub>A</sub> max.	< 120 mA											
<b>Switching frequency <sup>5)</sup></b>	Adjustable											
	1 kHz (0.5 ms); 3 kHz (160 μs); 6 kHz (85 μs)											
	0.5 kHz (1 ms); 1 kHz (500 μs); 3.5 kHz (145 μs)											
<b>Timer</b>	Off delay 20 ms adjustable											
<b>Output (Channel)</b>	1 colour											
	4 colours											
<b>Teach-in input ET</b> ET > 2ms	PNP: Teach > 10 V ... < V <sub>S</sub>											
	Run 0 V or unswitched											
	NPN: Teach 0 V Run V <sub>S</sub> or unswitched											
<b>Blanking input AT</b>	AT > 200 μs											
	Blanked PNP: AT > 10 V											
	Free running AT > 2 V or unswitched NPN: AT < 2 V AT > 10 V or unswitched											
<b>Retention time</b>	25 ms, non-volatile memory											
<b>Connection type</b>	M12 plug, 5-pin											
	M12 plug, 8-pin											
<b>VDE protection class <sup>6)</sup></b>	□											
<b>Circuit protection <sup>7)</sup></b>	A, B, C, D											
<b>Enclosure rating</b>	IP 67											
<b>Ambient temperature T<sub>A</sub></b>	Operation -10 ... +55 °C											
	Storage -25 ... +75 °C											
<b>Shock load</b>	To IEC 68											
<b>Weight</b>	Approx. 400 g											
<b>Housing material</b>	Cast zinc											

<sup>1)</sup> Average service life 100,000 h at T<sub>A</sub> = +25 °C  
<sup>2)</sup> Limit values  
<sup>3)</sup> May not exceed or fall short of V<sub>S</sub> tolerances

<sup>4)</sup> Without load  
<sup>5)</sup> With light/dark ratio 1:1  
<sup>6)</sup> Reference voltage 50 V DC

<sup>7)</sup> A = V<sub>S</sub> connection reverse-polarity protected  
 B = Output Q or Q<sub>1</sub> to Q<sub>4</sub> short-circuit protected

C = Interference pulse suppression  
 D = Output overcurrent and short-circuit protected

Order information	
Type	Order no.
CS81-P1112	1028224
CS81-P3612	1028225
CS84-P1112	1028226
CS84-P3612	1028227
CS81-N1112	1028228
CS81-N3612	1028229
CS84-N1112	1028230
CS84-N3612	1028231

Dimensional drawings and order Informations

SENSICK screw-in system M12, 8-pin, enclosure rating IP 67

Female connector M12, 5-pin, straight

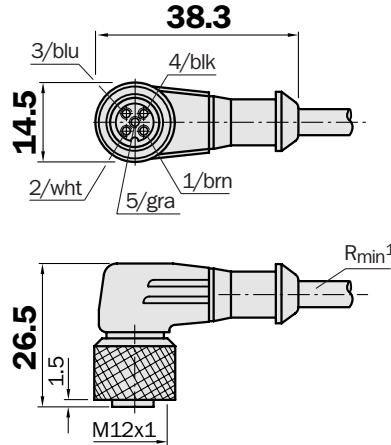
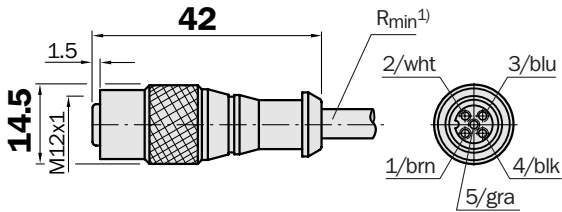
Diameter of cable 6 mm, 5 x 0,25 mm<sup>2</sup>, sheath PVC

Type	Order no.	Contacts	Cable length
DOL-1205-G02M	6008899	5	2 m
DOL-1205-G05M	6009868	5	5 m
DOL-1205-G10M	6010544	5	10 m

Female connector M12, 5-pin, right angle

Diameter of cable 6 mm, 5 x 0,25 mm<sup>2</sup>, sheath PVC

Type	Order no.	Contacts	Cable length
DOL-1205-W02M	6008900	5	2 m
DOL-1205-W05M	6009869	5	5 m
DOL-1205-W10M	6010542	5	10 m



<sup>1)</sup> Minimal bending radius in flexible motion  
R<sub>min</sub> = 20 x diameter of cable

SENSICK screw-in system M12, 8-pin, enclosure rating IP 67

Female connector M12, 8-pin, straight

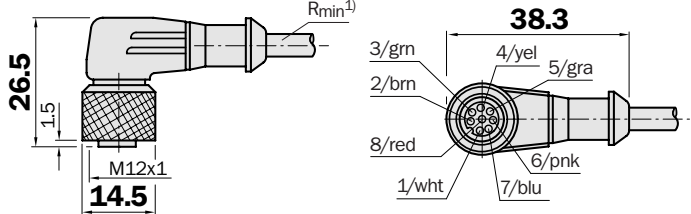
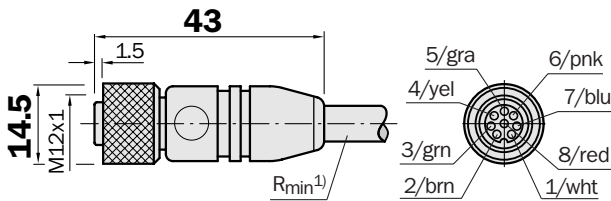
Female connector M12, 8-pin, straight

Type	Order no.	Contacts	Cable length
DOL-1208-G02MA	6020633	8	2 m
DOL-1208-G05MA	6020993	8	5 m
DOL-1208-GA10MA	6022152	8	10 m

Female connector M12, 5-pin, right angle

Diameter of cable 6 mm, 8 x 0,25 mm<sup>2</sup>, PVC

Type	Order no.	Contacts	Cable length
DOL-1208-W02MA	6020992	8	2 m
DOL-1208-W05MA	6021033	8	5 m



Reflectors, plastic design for temperatures up to 65 °C

Reflector 80 x 80 mm<sup>2</sup>

Type	Order no.
PL80A	1003865

