

At a glance:

- Robust universal devices
- Long operating distances
- High switching frequency: 1,000 Hz / 250 Hz*
- Reflex sensors using autocollimation principle
- Glass window, therefore scratch resistant and easy to clean
- The PBTP (Crastin) housing provides exceptional resistance to environmental influences
- Sensitivity adjustment by means of a built-in potentiometer with calibration scale and reduction gearbox
- High degree of protection: IP 67

Construction

The devices are built into a housing of glass-fiber reinforced PBTP/polybutyleneterephthalate (Crastin). For fixing purposes, a number of through holes suitable for M5 screws are provided. The distance between the holes has been chosen for maximum compatibility with the most commonly available sensors on the market.

Sensitivity setting

The sensitivity can be very finely adjusted by means of the built-in potentiometer with calibration scale and reduction gearbox. The potentiometer cannot be turned too far. Turning clockwise increases the sensitivity.

Protection

The switches are protected against overloads, short-circuits and all possible wire reversals. Furthermore, protection against overvoltages caused by inductive loads on the output and against voltage spikes on the power supply lines are built in. Appropriate technology prevents malfunctions or destruction caused by electrostatic discharges, fast transients, or HF fields.

LED

The yellow LED lights up when the light-ON output is switched. The green LED indicates that sufficient light is available for reliable operation (approx. 80% of the maximum operating distance); at the same time, the corresponding output (if available) is switched.

Connection

As standard, the devices are delivered with 4-pole or 5-pole S12 connector, or screw terminal. Suitable connecting cables are listed on page 146.

Reflectors

A range of suitable reflectors for the reflex sensors is listed on page 113.

Test input

The built-in test input (optional for some models) provides the possibility of an extra system control.

Excess-gain control

The built-in excess-gain circuit simplifies alignment and adjustment of the sensors. Eventual dirt is recognized in time, and can be removed easily.

Technical data:

(according to IEC 60947-5-2)

Hysteresis	10 % typ.
DC supply voltage range U_B	10 ... 36 VDC
UC supply voltage range U_B	20 ... 265 VAC
	20 ... 320 VDC
Max. ripple content**	20 %
Output current**	200 mA max.
Output voltage drop**	2.0 V max.
	at 200 mA
Max. switching frequency**	1000 Hz / 250 Hz*
Switching time** (↑ and ↓)	0.5 msec / 2 msec*
Max. ambient light:	
halogen	5,000 Lux
sun	10,000 Lux
Ambient temperature range	-5 ... +55 °C (+23 ... +131 °F)
Degree of protection	IP 67
EMC protection:	
IEC 60255-5	1 kV
IEC 61000-4-2	Level 3
IEC 61000-4-3	Level 3
IEC 61000-4-4	Level 3

* Diffuse sensor with background suppression
** DC models (UC see data sheet)

Power-ON reset

Operation of the output is inhibited until the power supply requirements are met. This prevents unwanted switching of the output during power-ON.

Background suppression

The diffuse sensor with background suppression uses electronic distance setting. A PSD (Position-Sensitive Device) serves as the light receiver. Operating distance adjustment is carried out by means of a potentiometer, using infra-red light as the source. At a distance of 1 m, the light spot has a diameter of approx. 30 mm.

Timer

The timer (optional) allows selection of switch-on delay, switch-off delay, or pulses; adjustable from 0.01 ... 1 s (UC models 0.1 ... 10 s).

Data sheets

Detailed data sheets with additional technical information are available for all models. These may be retrieved from the CONTRINEX website (www.contrinex.com), or ordered cost-free from our sales offices.

Drawings

The mechanical drawings may be downloaded as data files from the CONTRINEX website, and imported directly into construction drawings.

Delivery package

Proximity switch, instructions.

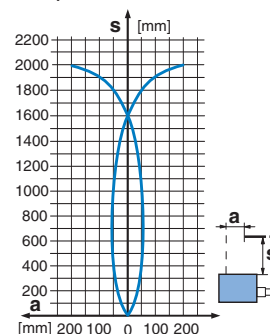
□ 65x83

Diffuse sensor, energetic

2,000 mm



Response curve:



Operating distance	2,000 mm
Standard target	400 x 400 mm white
No-load supply current DC / voltage UC	20 mA / 2 VA typ.
Emitter	IR LED 880 nm
Weight	100 g
Part ref.: (bold : preferred types)	
DC NPN / connector S12	LTS-6080-101*
DC NPN / screw terminal	LTT-6080-101
DC NPN timer*** / connector S12	LTS-6080-151**
DC NPN timer*** / screw terminal	LTT-6080-151
DC PNP / connector S12	LTS-6080-103*
DC PNP / screw terminal	LTT-6080-103
DC PNP timer*** / connector S12	LTS-6080-153**
DC PNP timer*** / screw terminal	LTT-6080-153
UC relay / connector S12	LTS-6080-115
UC relay / screw terminal	LTT-6080-115
UC relay / timer*** / connector S12	LTS-6080-165
UC relay / timer*** / screw terminal	LTT-6080-165
Suitable connecting cables (page 146)	M, N (**with test input: O, P)
Wiring (pages 114 - 115)	2 (LTS-...*) / 3 (LTS/LTT-...) / 5 (UC)

SERIES 6080

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Diffuse sensor with background suppression

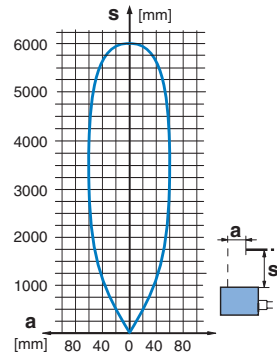
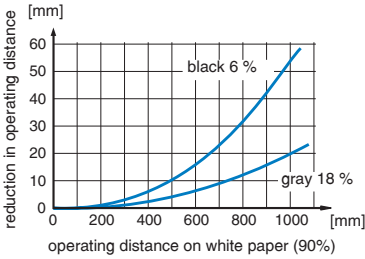
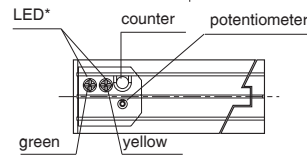
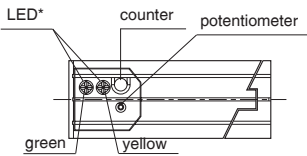
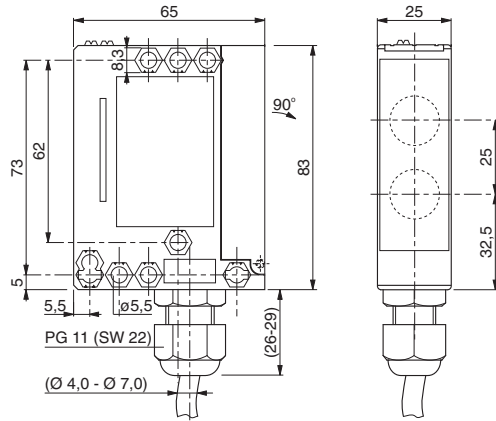
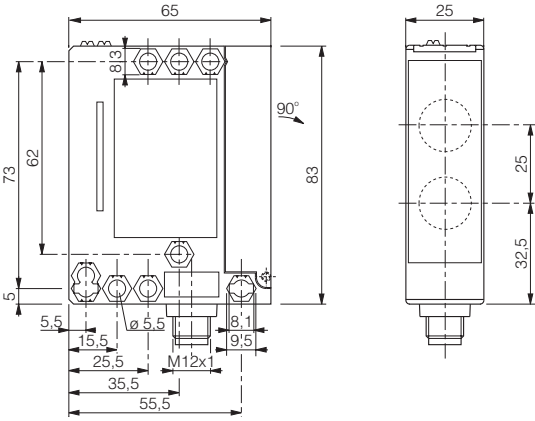
Reflex sensor

Through-beam sensor

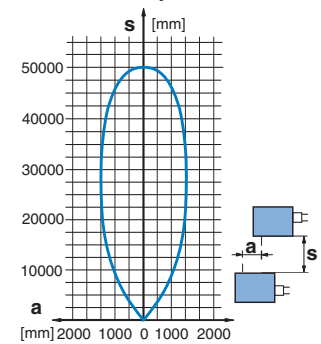
50 ... 1,000 mm

6,000 mm

50,000 mm



* receiver only



50 ... 1,000 mm

200 x 200 mm white

50 mA / 3 VA typ.

IR LED 880 nm

100 g

6,000 mm

Reflector type 3

30 mA / 2 VA typ.

LED red polarized 660 nm

100 g

50,000 mm

-

30 mA / 2 VA typ.

IR LED 880 nm

200 g (R and E)

LHS-6080-101*

LHT-6080-101

LHS-6080-151**

LHT-6080-151

LHS-6080-103*

LHT-6080-103

LHS-6080-153**

LHT-6080-153

LHS-6080-115

LHT-6080-115

LHS-6080-165

LHT-6080-165

M, N (**with test input: O, P)

2 (LHS-...*) / 3 (LHS/LHT-...*) / 5 (UC)

LRS-6080-102*

LRT-6080-102

LRS-6080-152**

LRT-6080-152

LRS-6080-104*

LRT-6080-104

LRS-6080-154**

LRT-6080-154

LRS-6080-115

LRT-6080-115

LRS-6080-165

LRT-6080-165

M, N (**with test input: O, P)

2 (LRS-...*) / 3 (LRS/LRT-...*) / 5 (UC)

(R) receiver / (E) emitter

LLS-6080-002 (R) / LLS-6080-000 (E)

LLT-6080-002 (R) / LLT-6080-000 (E)

LLS-6080-052 (R) / LLS-6080-000 (E)

LLT-6080-052 (R) / LLT-6080-000 (E)

LLS-6080-004 (R) / LLS-6080-000 (E)

LLT-6080-004 (R) / LLT-6080-000 (E)

LLS-6080-054 (R) / LLS-6080-000 (E)

LLT-6080-054 (R) / LLT-6080-000 (E)

LLS-6080-015 (R) / LLS-6080-010 (E)

LLT-6080-015 (R) / LLT-6080-010 (E)

LLS-6080-065 (R) / LLS-6080-010 (E)

LLT-6080-065 (R) / LLT-6080-010 (E)

M, N

2 (LLS/LLT-...*) / 4 (E) / 5 (UC)