Data sheet

LUTS-UBF1G1115AA10

LUTS/LUTX

LUMINESCENCE SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
LUTS-UBF1G1115AA10	1144389

Other models and accessories ➜ www.sick.com/LUTS_LUTX

Detailed technical data

Features

Housing design	Middle
Dimensions (W x H x D)	26 mm x 62 mm x 67 mm
Light source	LED, Ultraviolet light [1]
Light emission	Long side
Light spot size	10 mm x 14 mm [2]
Light spot direction	Vertical [3]
Receiving filters	≤ 420 nm [4]
Wave length	365 nm
LED risk group marking	1
Working range	75 mm ... 250 mm
Sensing distance	90 mm ... 150 mm
Adjustment	Teach-in button, External teach-in, cable, IO-Link
Teach-in mode	Single value teach-in Two Value Teach-in
Scaling	0.5 / 1 / 2 / 4
Output function	Light switching [5]

[1] Average service life: 100,000 h at T_U = +25 °C.

[2] Depends on the sensing distance.

[3] In relation to long side of housing.

[4] Filter blocks shorter wavelengths to blank out background luminescence.

[5] Factory setting.

	Dark switching
Switching threshold	Continuous: 1 ... 999

[1] Average service life: 100,000 h at T_U = +25 °C.
[2] Depends on the sensing distance.
[3] In relation to long side of housing.
[4] Filter blocks shorter wavelengths to blank out background luminescence.
[5] Factory setting.

Interfaces

IO-Link	✓
Digital output	Q_1, Q_2
Number	2
Digital input	In_1
Number	1

Electronics

Supply voltage	10.8 V DC ... 30 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Current consumption	< 110 mA [3]
Power consumption	< 1.2 W
Switching frequency	16 kHz / 8 kHz / 2.5 kHz / 0.5 kHz / 0.25 kHz / adjustable (IO-Link)
Response time	31 µs / 62 µs / 200 µs / 1,000 µs / 2,000 µs / adjustable (display)
Jitter	15 µs / 31 µs / 100 µs / 500 µs / 1,000 µs
Switching output	Push-pull: PNP/NPN
Switching output (voltage)	Push-pull: PNP/NPN HIGH = U_V - 3 V/LOW ≤ 3 V
Output current $I_{max.}$	100 mA [4]
Input, teach-in (ET)	U_V ≥ 18 V, Teach-in: 15 V ≤ U_{IN} ≤ U_V, Run: U_{IN} ≤ 5 V U_V < 18 V, Teach-in: U_{IN} > 0.83 * U_V, Run: U_{IN} ≤ 0.28 V
Input, blanking input (AT)	U_V ≥ 18 V, Blanked: 15 V ≤ U_{IN} ≤ U_V, Free: U_{IN} ≤ 5 V U_V < 18 V, Blanked: U_{IN} > 0.83 * U_V, Free: U_{IN} ≤ 0.28 V
Time delay	Switch-off delay, 0 ms ... 999 ms Switch-off delay, 0 ms ... 30,000 ms via IO-Link (0 ms = default)
Protection class	III
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	
	Plug, M12, 5-pin
Pinouts for Supply voltage & I/O	
BN 1	+ (L+)
WH 2	Q Push-Pull
BU 3	- (M)

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not fall below or exceed U_V tolerances.
[3] Without load.
[4] Total current of all Outputs.

BK 4	Q/C
GY 5	In_1

[1] Limit values when operated in short-circuit protected network: max. 8 A.
[2] May not fall below or exceed U_V tolerances.
[3] Without load.
[4] Total current of all Outputs.

Mechanics

Housing material	VISTAL®
Optics material	Glass
Weight	Approx. 68 g

Ambient data

Ambient operating temperature	–20 °C ... +60 °C
Ambient temperature, storage	–25 °C ... +75 °C
Shock load	According to IEC 60068-2-27 (30 g/11 ms)
Enclosure rating	IP67
UL File No.	E181493

Certificates

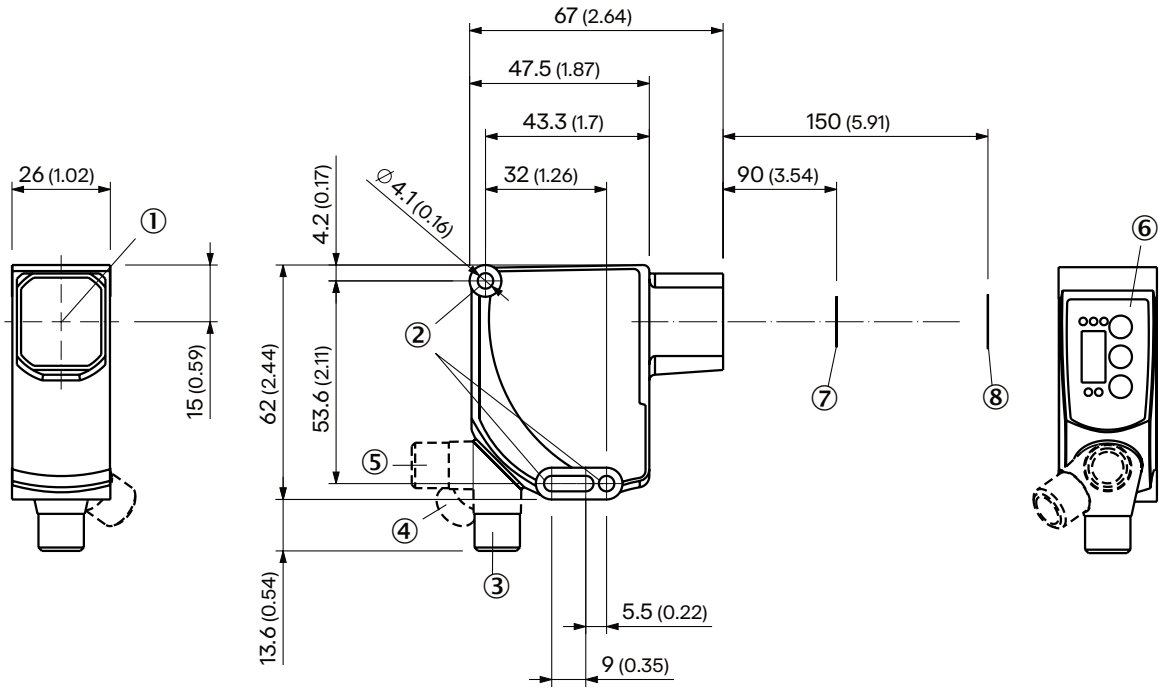
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
IO-Link certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27270908
ECLASS 5.1.4	27270908
ECLASS 6.0	27270908
ECLASS 6.2	27270908
ECLASS 7.0	27270908
ECLASS 8.0	27270908
ECLASS 8.1	27270908
ECLASS 9.0	27270908
ECLASS 10.0	27270908
ECLASS 11.0	27270908
ECLASS 12.0	27270908
ETIM 5.0	EC001822
ETIM 6.0	EC001822
ETIM 7.0	EC001822

ETIM 8.0	EC001822
UNSPSC 16.0901	39121528

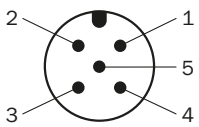
Dimensional drawing, sensor



Dimensions in mm (inch)
① Optical axis
② fixing hole
③ M12 male connector, delivery state
④ M12 male connector, end stop right
⑤ M12 male connector, end stop left
⑥ display and adjustment elements
⑦ light spot size at sensing distance 90 mm
⑧ light spot size at sensing distance 150 mm

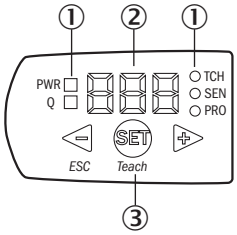
Light spot size (sensing distance)		
Device variant	Light spot size at sensing distance 90 mm	Light spot size at sensing distance 150 mm
LUTx-**B**xx**1G**xxxxxxxx	4.7 mm x 11.2 mm	4.6 mm x 13.6 mm
LUTx-**U**xx**1G**xxxxxxxx	10 mm x 14 mm	5.8 mm x 15.3 mm
LUTx-**U**xx**AG**xxxxxxxx	Ø 13.5 mm	Ø 14.5 mm

Pinouts, see table Technical data: Electronics



Male connector, M12, 5-pin, A-coded

display and adjustment elements



① LEDs (status display)
② 7-segment display
③ Plus/minus button

Recommended accessories

Other models and accessories ➜ www.sick.com/LUTS_LUTX

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Adapter plate for LUT1 • **Material:** Aluminum • **Details:** Aluminum	BEF-AP-LUTS	4108373
connectors and cables			
	• **Description:** Unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1205-G	6009719
	• **Description:** Unshielded • **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For field bus technology	STE-1205-G	6022083
	• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A15-050VB5XLEAX	2096240
	• **Description:** Unshielded • **Connection type head A:** Male connector, M12, 4-pin, A-coded • **Connection type head B:** Female connector, M12, 4-pin, A-coded • **Connection type head C:** Female connector, M12, 4-pin, A-coded • **Cable:** 0.11 m, PVC	SYL-1204-G0M11-X1	6055011
network devices			
		IOLA2US-01101 (SiLink2 Master)	1061790

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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