

ELS 300 product family

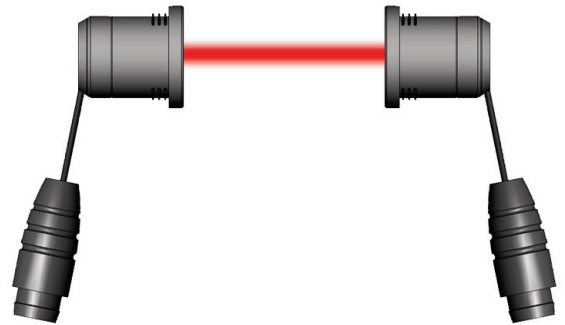
... safeguards indoors and outdoors!



IEC 61496-2



EN 13849-1



Features

- Type 2 sensor suitable for Cat. 2 applications
- Integrated controller
- Standard, long-range and narrow versions available
- PNP or NPN output, light or dark switching available
- Very resistant to ambient light
- For indoor or outdoor applications
- Excellent detection capability even in harsh conditions
- Small and sleek design with plug-and-play concept
- Various mounting adapters available
- Simple mounting: snap into a 12.5 mm diameter drill-hole
- Comprehensive range of cables
- Multiple ELS 300 connectable to a network using Y-switch

Technical data

Device type	Description	Operating range (m)	Max. angle of paraxial detection
ELS 300 Tx-NA	Narrow aperture	0.2 ... 1.2 (with Rx- ... -NA)	$\pm 2^\circ$ @ 1.2 m
ELS 300 Tx-N	Standard range	0.5 ... 6.0	$\pm 5^\circ$ @ 3.0 m
ELS 300 Tx-L	Long range	1.0 ... 12.0	$\pm 5^\circ$ @ 3.0 m

Device type	Description	Response time	Max. angle of paraxial detection
ELS 300 Rx-PNP/LO-N	Standard PNP, LO	< 20 ms	$\pm 5^\circ$ @ 3.0 m
ELS 300 Rx-PNP/DO-N	Standard PNP, DO	< 20 ms	$\pm 5^\circ$ @ 3.0 m
ELS 300 Rx-NPN/LO-N	Standard NPN, LO	< 20 ms	$\pm 5^\circ$ @ 3.0 m
ELS 300 Rx-NPN/DO-N	Standard NPN, DO	< 20 ms	$\pm 5^\circ$ @ 3.0 m
ELS 300 Rx-NPN/DO-NA	Narrow aperture NPN, DO	< 20 ms	$\pm 2^\circ$ @ 1.2 m
ELS 300 Rx-NPN/LO-NA	Narrow aperture NPN, LO	< 20 ms	$\pm 2^\circ$ @ 1.2 m
ELS 300 Rx-PNP/LO-NA-F	Narrow aperture PNP, LO, fast	< 5 ms	$\pm 2^\circ$ @ 1.2 m
ELS 300 Rx-PNP/DO-NA-F	Narrow aperture PNP, DO, fast	< 5 ms	$\pm 2^\circ$ @ 1.2 m

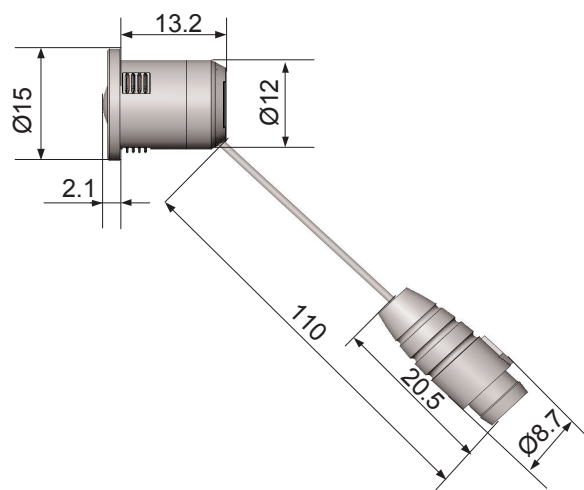
Electrical data	
Supply voltage U_{sp}	10 ... 30 VDC
Ripple @ U_{sp}	$\pm 10\%$
Output	PNP or NPN
Max. output current	50 mA
Max. capacitive load	100 nF
Output saturation voltage	< 4 V
Polarity protection	Yes
Curr. consumption Tx	< 10 mA @ 30 VDC
Curr. consumption (Rx w/o load)	< 10 mA @ 30 VDC

General data	
Temperature range storage	-40 ... +85°C
Temperature range operation	-40 ... +60°C
Max. ambient light	100,000 Lux
Cable Rx	Gray with 4-pin M8 Connector, male, 0.15 m pig-tail
Cable Tx	Black with 4-pin M8 Connector, male, 0.15 m pig-tail
Cable material	PVC
LEDs	Green (rear), Tx: Indicates power, Rx: Indicates output
Enclosure rating	IP65
Safety category	DIN 18650-1:2005, EN ISO 13849-1:2006, EN ISO 13849-2:2003, IEC 61496-2:2006, EN 12453:2000, EN 12978:2003

Dimensions

ELS 300 Tx-N/-NA

ELS 300 Rx-...



ELS 300 Tx-L

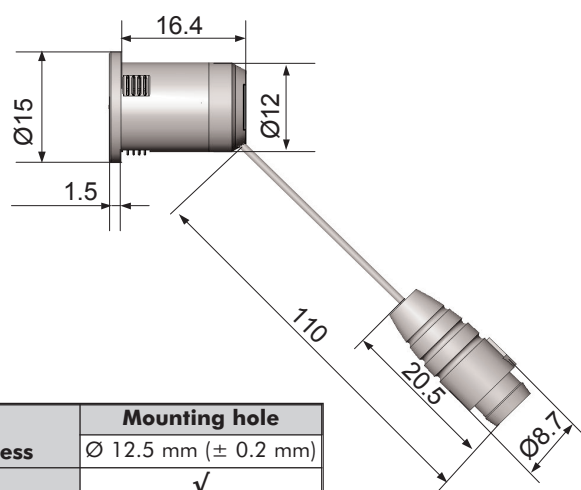


Plate thickness	Mounting hole
	Ø 12.5 mm (± 0.2 mm)
> 1.25 mm	✓

(All dimensions in mm)

Ordering information

Part no.	Type	Description
Emitters		
105 925	ELS 300 Tx-NA	Narrow aperture
105 728	ELS 300 Tx-N	Standard range
105 729	ELS 300 Tx-L	Long range
Receivers		
105 730	ELS 300 Rx-PNP/LO-N	Standard PNP, LO
105 731	ELS 300 Rx-PNP/DO-N	Standard PNP, DO
105 732	ELS 300 Rx-NPN/LO-N	Standard NPN, LO
105 733	ELS 300 Rx-NPN/DO-N	Standard NPN, DO
105 736	ELS 300 Rx-NPN/DO-NA	Narrow aperture NPN, DO
105 755	ELS 300 Rx-NPN/LO-NA	Narrow aperture NPN, LO
106 214	ELS 300 Rx-PNP/LO-NA-F	Narrow aperture PNP, LO, Fast
109 280	ELS 300 Rx-PNP/DO-NA-F	Narrow aperture PNP, DO, Fast

Accessories

103 716	Rx-Cable-5 m-M8	Receiver cable 5 m, gray, with M8 Connector, AWG26
104 688	Rx-Cable-10 m-M8	Receiver cable 10 m, gray, with M8 Connector, AWG26
104 567	Rx-Cable-20 m-M8	Receiver cable 20 m, gray, with M8 Connector, AWG26
103 717	Tx-Cable-5 m-M8	Emitter cable 5 m, black, with M8 Connector, AWG26
104 689	Tx-Cable-10 m-M8	Emitter cable 10 m, black, with M8 Connector, AWG26
104 568	Tx-Cable-20 m-M8	Emitter cable 20 m, black, with M8 Connector, AWG26
103 721	Y-Switch	Y-Switch, M8 Connector, without LED
105 141	Y-Switch LED, PNP	M8 Connector, with LED (for ELS 300 PNP-types only)
103 720	Interconnection m-f	M8 Connector, AWG26, 250 mm
104 195	Interconnection m-f	M8 Connector, AWG26, 3 m
106 108	ELS 300 M18 Adapter cpl.	M18 Adapter for ELS 300
103 602	Relay module	Interface module for sensors with semi-conductor outputs
106 666	Power line converter	85 ... 265 VAC, for 24 V sensors with up to 250 mA current consumption

Other configurations on request

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