

ELS 300

Technical data

FEATURES

- ▶ Type 2 light barrier suitable for Cat. 2 applications
- ▶ Compact dimensions
- ▶ Excellent detection capability even in harsh environmental conditions
- ▶ Very resistant to ambient light
- ▶ Integrated controller
- ▶ PNP or NPN output, light or dark switching available
- ▶ Various operating ranges available
- ▶ Multiple ELS 300 units connectable in a network with Y-switch



OPTICAL

| ELS type | Description | Operating range | Max. angle of paraxial detection |
|---------------|-----------------|--------------------------------|----------------------------------|
| ELS 300 Tx-NA | Narrow aperture | 0.2 ... 1.2 (with Rx- ... -NA) | ±2° at 1.2 m |
| ELS 300 Tx-N | Standard range | 0.5 ... 6.0 | ±5° at 3.0 m |
| ELS 300 Tx-L | Long range | 1.0 ... 12.0 | ±5° at 3.0 m |

| ELS type | Description | Response time | Max. angle of paraxial detection |
|------------------------|-------------------------------|---------------|----------------------------------|
| ELS 300 Rx-PNP/LO-N | Standard PNP, LO | < 20 ms | ±5° at 3.0 m |
| ELS 300 Rx-PNP/DO-N | Standard PNP, DO | < 20 ms | ±5° at 3.0 m |
| ELS 300 Rx-NPN/LO-N | Standard NPN, LO | < 20 ms | ±5° at 3.0 m |
| ELS 300 Rx-NPN/DO-N | Standard NPN, DO | < 20 ms | ±5° at 3.0 m |
| ELS 300 Rx-NPN/DO-NA | Narrow aperture NPN, DO | < 20 ms | ±2° at 1.2 m |
| ELS 300 Rx-NPN/LO-NA | Narrow aperture NPN, LO | < 20 ms | ±2° at 1.2 m |
| ELS 300 Rx-PNP/LO-NA-F | Narrow aperture PNP, LO, fast | < 5 ms | ±2° at 1.2 m |
| ELS 300 Rx-PNP/DO-NA-F | Narrow aperture PNP, DO, fast | < 5 ms | ±2° at 1.2 m |

GENERAL

| | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Temperature range | -40 °C ... +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 18650-1:2010, EN ISO 13849-1:2008, EN ISO 13849-2: 2008, IEC 61496-2:2006, EN 12453: 2000, EN 12978:2003 +A1:2009 |

ELECTRICAL

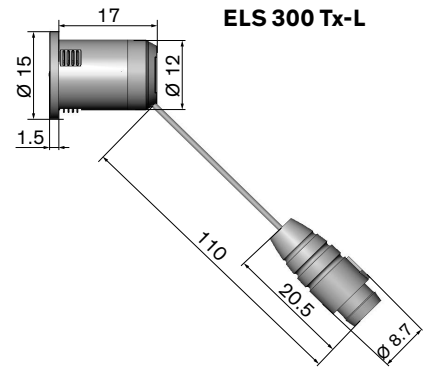
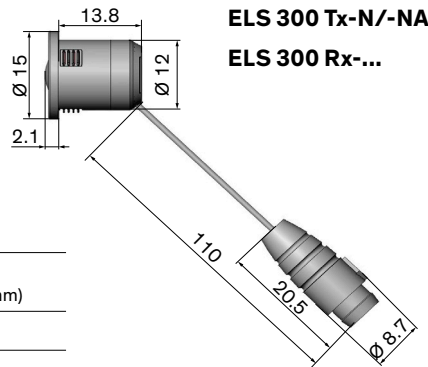
| | |
|---------------------------------|-------------------|
| Supply voltage U_{sp} | 10 ... 30 VDC |
| Output | PNP or NPN |
| Max. output current | 50 mA |
| Max. capacitive load | 100 nF |
| Output saturation voltage | < 4 V |
| Polarity protection | Yes |
| Curr. consumption Tx | < 10 mA at 30 VDC |
| Curr. consumption (Rx w/o load) | < 10 mA at 30 VDC |



CEDES AG is certified according to ISO 9001: 2015.

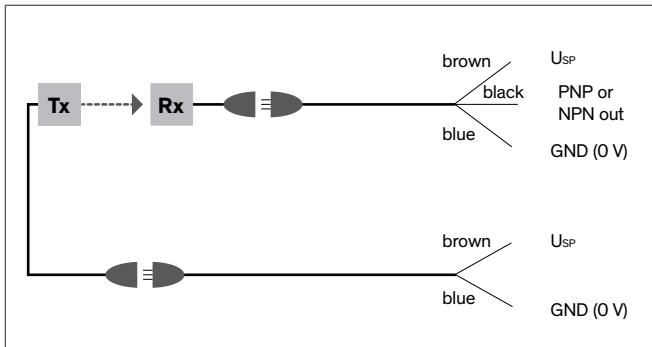
Dimensions

All dimensions in mm
Proportions not to scale

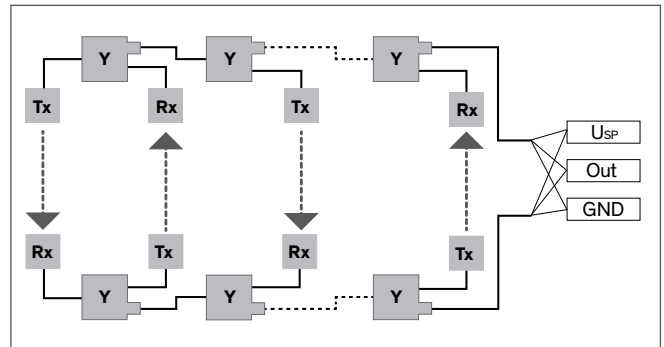


| Plate thickness (mm) | Mounting hole Ø 12.5 mm (±0.2 mm) |
|----------------------|--------------------------------------|
| > 1.25 | ✓ |

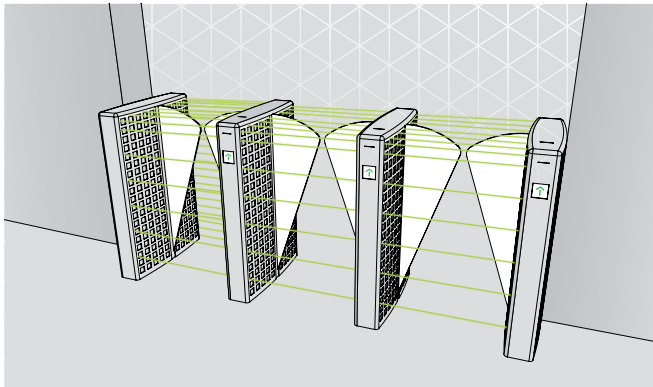
Connection diagram



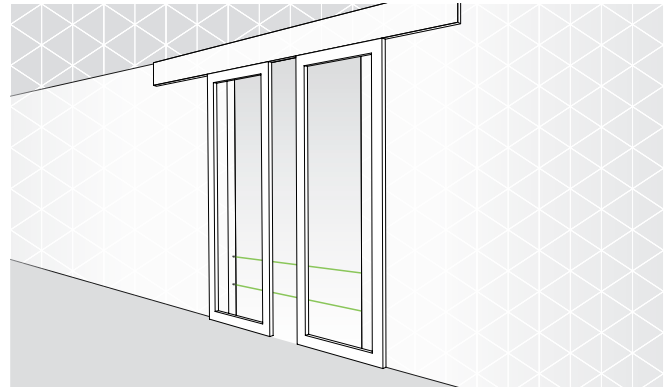
Connections with Y-switch



Applications



Personnel sluces



Sliding doors