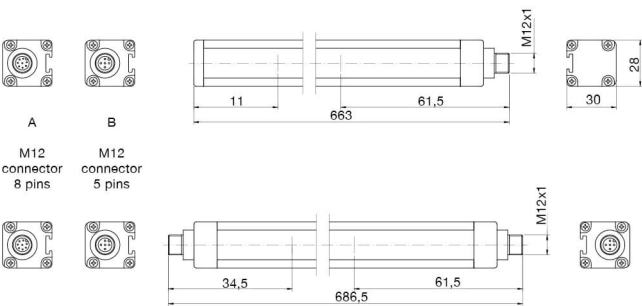




Indicative image



- LIGHT CURTAINS TYPE 4 ACCORDING TO IEC 61496-1 AND IEC 61496-2**
- Compact housing (28 x 30 mm) and no dead zone on cap side
  - Resolution 14 mm for finger protection, 20, 30 , 40 mm for hand protection, 50, 90 mm for presence control and 2, 3, 4 beams for body protection/access control
  - Controlled distance up to: 3, 4, 6, 10, 12 m
  - Base, Standard versions and Master, Slave version to connect up to 3 sets in cascade configuration
  - Selectable Automatic/Manual Restart and EDM integrated functions (Standard models)
  - Selectable controlled distance
  - IP69K protection models (LS4\_K) and models with integrated heating system to reach -25°C operating temperature (LS4\_H)
  - Standard M12 da 5 and 8 poles connectors



**Detection properties**

|                          |       |
|--------------------------|-------|
| Nominal sensing distance | ≤ 12m |
| Resolution               | 30mm  |
| controlled height        | 610mm |
| number of rays           | 31    |
| Effective Aperture Angle | ±5°   |

**Application**

|                    |                                        |
|--------------------|----------------------------------------|
| Function Principle | Emitter + Receiver (final slave model) |
|--------------------|----------------------------------------|

## Safety parameters

|       |          |
|-------|----------|
| Type  | 4        |
| SIL   | 3        |
| SILCL | 3        |
| PL    | e        |
| PFHd  | 1,06E-08 |
| Dcavg | 97,30%   |
| MTTFd | 100      |
| CFF   | 80%      |

## Outputs

|                                  |                                                                            |
|----------------------------------|----------------------------------------------------------------------------|
| Output type                      | 2 x PNP-N0 (OSSD safety output)                                            |
| Response time                    | 9ms                                                                        |
| Response Time (Master + Slave)   | $T = [0,11 \cdot (T_{slave} + T_{master}) + 0,9376] \cdot 2$               |
| Response Time (Master + 2 Slave) | $T = [0,11 \cdot (T_{slave1} + T_{slave2} + T_{master}) + 1,0508] \cdot 2$ |

## Electrical data

|                                                |                          |
|------------------------------------------------|--------------------------|
| Operating Voltage                              | 19,2 ... 28,8 Vcc        |
| Load current                                   | $\leq 400\text{mA}$      |
| Time delay before availability                 | 2s                       |
| Interference to external light                 | according to IEC 61496-2 |
| Power Consumption - Receiver                   | 2W (no load)             |
| Power Consumption - Emitter                    | 1W                       |
| Equivalent Resistive Load                      | $\geq 60 \Omega$         |
| Capacitive Load                                | $\geq 0,82 \mu\text{F}$  |
| Cabel Length (Power Supply/Output)             | $\leq 100\text{m}$       |
| Cable Length for Master Slave Interconnections | $\leq 50\text{m}$        |

## Mechanical data

|                       |                                              |
|-----------------------|----------------------------------------------|
| Dimensions            | 28mm (front) x 30mm                          |
| Connections           | M12-5 poles (emitter) M12-5 poles (receiver) |
| Operating temperature | -10°C ÷ +55°C (no condensation)              |
| Storage temperature   | -25°C ÷ +70°C (no condensation)              |
| humidity              | 95% (no condensation)                        |

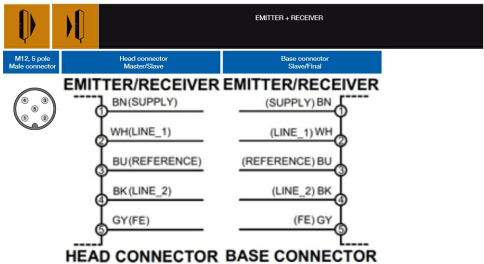
## Test/Approvals

|                       |                                   |
|-----------------------|-----------------------------------|
| Approvals             | CE, cULus, TÜV                    |
| EMC compatibility     | According to 2014/30/EU Directive |
| Shocks and vibrations | according to IEC 61496-1          |
| Degree of protection  | IP65, IP67                        |

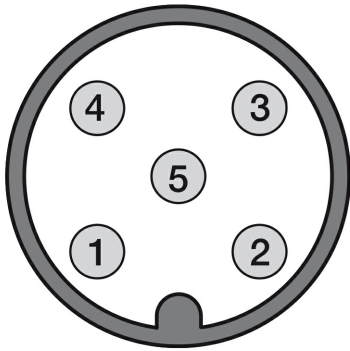
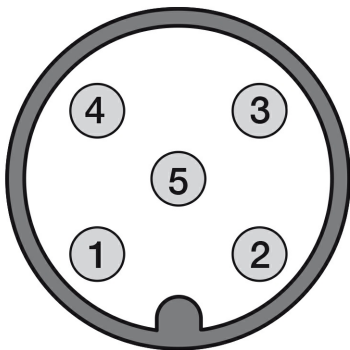
Accessories

|                       |                                 |
|-----------------------|---------------------------------|
| Supplied Accessories  | ST 204 4S                       |
| Generical Data        |                                 |
| Dimensions            | 28mm (front)x 30mm              |
| Operating Temperature | -10°C ÷ +55°C (no condensation) |
| Humidity              | 95% (no condensation)           |
| Mechanical Protection | IP65, IP67                      |

ELECTRICAL DIAGRAMS OF THE CONNECTIONS



CONNECTOR



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