



Indicative image





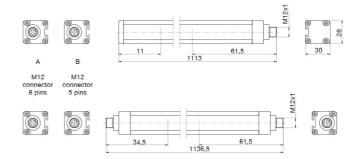
IEC 61496-2

• Compact housing (28 x 30 mm) and no dead zone on cap side

LIGHT CURTAINS TYPE 4 ACCORDING TO IEC 61496-1 AND

- 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	≤ 20m	
Resolution	90mm	
controlled height	1210mm	
number of rays	16	
Effective Aperture Angle	±5°	

Application

Function Principle Emitter + Receiver

Type	Available functions	Manual/Automatic Restart, EDM
SIL	Safety parameters	
PE	Туре	4
PEL e PFHU 1.20E-08 Deary 95,00% MTFH 100 OFF 80% Output 2 × PNF-NO (OSSD eatery output) Response time 4 ms Electrical data 4 ms Operating Voltage 10,2 28,8 Voc Load courent 2 400mA Time delay before availability 2s Interference to external light according to IEC 68496-2 Power Consumption - Receive 2W(no load) Power Consumption - Emitter 1W Equivation Resistive Load 2 60 Ω Capacitive Load 2 60 Ω Capacitive Inad 3 0.87 μF Cabel length (Power Supply/Output) < 100m Cabel length (Power Supply/Output) < 50lm Hechanical data 2 82 mm (front) x 20 nm Dimensions 28 mm (front) x 20 nm Connections M12-5 poles femitter) M12-8 poles (receiver) Operating temperature 10°C x +55°C (no condensation) Storage temperature 25°C x +70°C (no condensation) Tex	SIL	3
PFHd 1,20E-08 Dowg 95,00% MTTFd 100 CFF 80% Output type 2 x PNP-N0 (OSSD safety output) Response time 4ms Electrical data 4ms Operating Voltage 19,2 29,8 Vcc Load current ≤ 400mA Time delay before availability 2e Interference to external light according to IFC 61496-2 Power Consumption - Receiver 2W(no load) Power Consumption - Emitter 1W Equivatent Resistive Load ≥ 60 Q Capacitive Load ≥ 60 Q Capacitive Load ≥ 50 m Wechanical data 2 mm (front) x 30 mm Connections M12-6 poles (emitter) H12-8 poles (receiver) Operating temperature -10°C + ≠55°C (no condensation) Storage temperature -25°C + 70°C (no condensation) Test/Approvals CF, eUI us, TÜV EMC compatibility According to 2014/30/EU Directive	SILCL	3
Pack Pack	PL	е
MTFIEd 100 CFF 80% Output type 2 x PNP-NO (0SSD safety output) Response Itime Ams Electrical data Operating Valtaga 19,2 28,8 Voc Load current ≤ 400mA 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 ≥ 80 Ω Capacitive Load ≥ 80 Ω Cable Length (Power Supply/Output) < 100m Cable Length (Power Supply/Output) < 50m Neckanical data Dimensions 28mm (front) x 30mm Connections M12-6 poles (emitter) M12-8 poles (receiver) Operating temperature + 10°C+ +45°°C (no condensation) Storage temperature + 25°C + +70°C (no condensation) Numidity 95% (no condensation) Numidity 95% (no condensation) CE, ULus, TÜV </td <td>PFHd</td> <td>1,20E-08</td>	PFHd	1,20E-08
CFF 80% Output type 2 x PNP-NO (OSSD safety output) Response time 4ms Electrical data Operating Voltage 19,2 28,8 Voc Load current ≤ 400mA 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 ≥ 60 Ω Capacitive Load ≥ 0,82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length (Power Supply/Output) ≤ 50m Nechanical data Dimensions 28mm (front) x 30mm Connections M12-6 poles (emitter) M12-6 poles (receiver) Operating temperature -10°C x +55°C (no condensation) Storage temperature -25°C x +70°C (no condensation) Storage temperature -25°C x +70°C (no condensation) Test/Approvals CE, CULus, TÜV EMC compatibility According to 2014/30/EU Directive	Dcavg	95,00%
Output type 2 x PNP-ND (OSSD safety output) Response time 4ms Electrical data 4ms Operating Voltage 19.2 28.8 Vc Load current < 400m∆ Time delay before availability 2s Interference to external light according to IEC 81496-2 Power Consumption - Receiver 2W (no load) Power Consumption - Emitter 1W Equivalent Resistive Load ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabe I Length (Power Supply/Output) < 100m Cable Length for Master Slave Interconnections ≤ 50m Mechanical data Dimensions 28 mm (front) × 30 mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C + +55°C (no condensation) Storage temperature -25°C + +70°C (no condensation) Intert/Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	MTTFd	100
Cutput type 2 x PNP-NO (OSSD safety output) Response time 4ms Electrical data Formation of the position of	CFF	80%
Cutput type 2 x PNP-NO (OSSD safety output) Response time 4ms Electrical data Formation of the position of	Outputs	
Electrical data Operating Voltage Load current ≤ 400mA Time delay before availability 2s Interference to external light according to IEC 61496-2 Power Consumption - Receiver Power Consumption - Emitter 1W Equivalent Resistive Load ≥ 60 Ω Capacitive Load ≥ 0,82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections Mechanical data Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C ++55°C (no condensation) Storage temperature -25°C ++70°C (no condensation) Test/Approvals Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive		2 x PNP-NO (OSSD safety output)
Operating Voltage 19.2 28.8 Vcc Load current ≤ 400mA 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 ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections Interconnections 28mm (front) x 30mm Mechanical data Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C + +55°C (no condensation) Storage temperature -25°C + +70°C (no condensation) Interst/Approvals Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	Response time	4ms
Load current ≤ 400mA 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 ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections ≤ 50m Mechanical data 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C + +55°C (no condensation) Storage temperature -10°C + +55°C (no condensation) Interconnections 0 (no condensation) Test/Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	Electrical data	
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 ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections ≤ 50m Mechanical data Dimensions Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C ÷ +55°C (no condensation) Storage temperature -25°C * +70°C (no condensation) Interest/Approvals CE, cULus, TŪV EMC compatibility According to 2014/30/EU Directive	Operating Voltage	19,2 28,8 Vcc
Interference to external light according to IEC 81496-2 Power Consumption - Receiver 2W (no load) Power Consumption - Emitter 1W Equivalent Resistive Load ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections 28mm (front) x 30mm Mechanical data Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C + +55°C (no condensation) Storage temperature -25°C + +70°C (no condensation) Test/Approvals Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	Load current	≤ 400mA
Power Consumption - Receiver 2W (no load) Power Consumption - Emitter 1W Equivalent Resistive Load ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections Interconnections 28mm (front) × 30mm Mechanical data Dimensions 28mm (front) × 30mm Connections M12-5 poles (emitter) M12-8 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	Time delay before availability	2s
Power Consumption - Emitter 1W Equivalent Resistive Load ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100 m Cable Length for Master Slave Interconnections ≤ 50 m Mechanical data 28mm (front) x 30mm Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 poles (receiver) Operating temperature -10°C ÷ +55°C (no condensation) Storage temperature -25°C ÷ +70°C (no condensation) humidity 95% (no condensation) Test/Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	Interference to external light	according to IEC 61496-2
Equivalent Resistive Load ≥ 0.02 Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) Cable Length for Master Slave Interconnections Mechanical data Dimensions 28mm (front) × 30mm Connections M12-5 poles (emitter) M12-8 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	Power Consumption - Receiver	2W(no load)
Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections ≤ 50m Mechanical data Dimensions 28mm (front) × 30mm Connections M12-5 poles (emitter) M12-8 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	Power Consumption - Emitter	1W
Cable Length (Power Supply/Output) Cable Length for Master Slave Interconnections Mechanical data Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 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	Equivalent Resistive Load	≥ 60 Ω
Cable Length for Master Slave Interconnections Mechanical data Dimensions 28mm (front) × 30mm Connections M12-5 poles (emitter) M12-8 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	Capacitive Load	≥ 0,82 µF
Interconnections Mechanical data Dimensions 28mm (front) × 30mm Connections M12-5 poles (emitter) M12-8 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	Cabel Length (Power Supply/Output)	≤100m
Dimensions 28mm (front) x 30mm Connections M12-5 poles (emitter) M12-8 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		≤ 50m
Connections M12-5 poles (emitter) M12-8 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	Mechanical data	
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	Dimensions	28mm (front) x 30mm
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	Connections	M12-5 poles (emitter) M12-8 poles (receiver)
humidity 95% (no condensation) Test/Approvals Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	Operating temperature	-10°C ÷ +55°C (no condensation)
Test/Approvals Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	Storage temperature	-25°C ÷ +70°C (no condensation)
Approvals CE, cULus, TÜV EMC compatibility According to 2014/30/EU Directive	humidity	95% (no condensation)
EMC compatibility According to 2014/30/EU Directive	Test/Approvals	
	Approvals	CE, cULus, TÜV
Shocks and vibrations according to IEC 61496-1	EMC compatibility	According to 2014/30/EU Directive
	Shocks and vibrations	according to IEC 61496-1

IP65, IP67

Degree of protection

Accessories

Supplied Accessories ST 204 6S

Generical Data

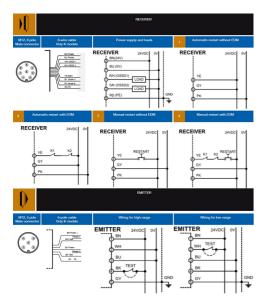
Dimensions 28mm (front) x 30mm

Operating Temperature $-10^{\circ}\text{C} \div +55^{\circ}\text{C}$ (no condensation)

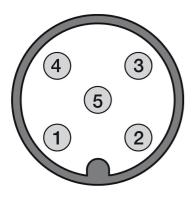
Humidity 95% (no condensation)

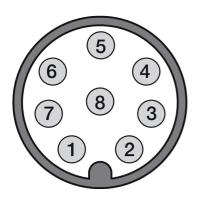
Mechanical Protection IP65, IP67

ELECTRICAL DIAGRAMS OF THE CONNECTIONS



CONNECTOR





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