



Indicative image

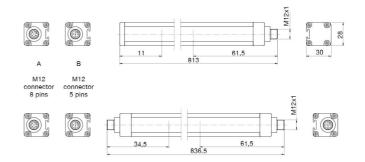






LIGHT CURTAINS TYPE 4 ACCORDING TO IEC 61496-1 AND IEC 61496-2

- Compact housing (28 x 30 mm) and no dead zone on cap
- 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	50mm	
controlled height	760mm	
number of rays	20	
Effective Aperture Angle	±5°	

Application

Function Principle

Safety parameters Type 4 SIL 3 SILCL 3 PL e PFHd 1.11E-08 Deavg 95,20% MTTFd 100 CFF 80% Output yoe Response time 4,5ms Electrical data 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 Mechanical data Impressions Unreposions 28mm(freath x 30mm)	Available functions	Manual/Automatic Restart, EDM
Type 4 SIL CL 3 PL e PFHd 1.11E-08 Dcavg 95,20% MTTFd 100 CFF 80% Output type Cutput type 2 × PNP-ND (OSSD safety output) Response time 4,5ms Electrical data Operating Voltage 19,2 28,8 Vcc Load current ≤ 400mA Time delay before availability 2s Interference to external light according to IEC 61486-2 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 Kechanical data	Safety parameters	
SILCL 3 PL e PFHd 1.11E-08 Deavg 95,20% MTTFd 100 CFF 80% Output type 0 utput type 2 x PNP-NO (OSSD safety output) Response time 4,5ms Electrical data 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 TW Equivalent Resistive Load ≥ 60 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Mechanical data ≤ 50m		4
PL e PFHd 1.11E-08 Dcavg 95,20% MTTFd 100 CFF 80% Output S Output type 2 x PNP-NO (OSSD safety output) Response time 4,5ms 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 Cable Length (Power Supply/Output) ≤ 100m Mechanical data	SIL	3
PFHd 1,11E-08 Deavg 95,20% MTTFd 100 CFF 80% Output Output type 2 x PNP-NO (OSSD safety output) Response time 4,5ms Electrical data 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 Mechanical data	SILCL	3
Deavy 95,20% MTTFd 100 CFF 80% Outputs Output type 2 x PNP-NO (OSSD safety output) Response time 4,5ms Electrical data 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 ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections Mechanical data	PL	е
MTTFd 100 CFF 80% Outputs Output type 2 × PNP-NO (OSSD safety output) Response time 4,5ms 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 ≥ 80 Ω Capacitive Load ≥ 0.82 μF Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave Interconnections Mechanical data	PFHd	1,11E-08
CFF 80% Output spe 0 utput type 2 x PNP-N0 (OSSD safety output) Response time 4,5ms Electrical data 0 perating 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 ≤ 50m Mechanical data	Dcavg	95,20%
Output type Output type 2 x PNP-NO (OSSD safety output) Response time 4.5ms Electrical data 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 ≤ 50m Mechanical data	MTTFd	100
Output type 2 × PNP-NO (OSSD safety output) Response time 4,5ms Electrical data 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 ≤ 50m	CFF	80%
Output type 2 × PNP-NO (OSSD safety output) Response time 4,5ms Electrical data 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 ≤ 50m	Outputs	
Electrical data 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		2 x PNP-NO (OSSD safety output)
Operating Voltage $19,228,8\text{Vcc}$ Load current $\leq 400\text{mA}$ Time delay before availability $2s$ Interference to external light according to IEC 61496-2 Power Consumption - Receiver $2W (\text{no load})$ 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 $\leq 50\text{m}$	Response time	4,5ms
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	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 $\geq 60 \Omega$ Capacitive Load $\geq 0.82 \mu F$ Cabel Length (Power Supply/Output) $\leq 100 m$ Cable Length for Master Slave Interconnections $\leq 50 m$	Operating Voltage	19,2 28,8 Vcc
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 $\geq 0.82 \mu F$ Cabel Length (Power Supply/Output) $\leq 100 m$ Cable Length for Master Slave Interconnections	Load current	≤400mA
Power Consumption - Receiver $2W \text{ (no load)}$ 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 $\leq 50 \text{m}$	Time delay before availability	2s
Power Consumption - Emitter $1W$ Equivalent Resistive Load $\geq 60 \Omega$ Capacitive Load $\geq 0,82 \mu F$ Cabel Length (Power Supply/Output) $\leq 100 m$ Cable Length for Master Slave Interconnections $\leq 50 m$	Interference to external light	according to IEC 61496-2
Equivalent Resistive Load $ \geq 60 \Omega $ Capacitive Load $ \geq 0.82 \mu F$ Cabel Length (Power Supply/Output) $ \leq 100 m $ Cable Length for Master Slave Interconnections $ \leq 50 m $ Mechanical data	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	Power Consumption - Emitter	1W
Cabel Length (Power Supply/Output) ≤ 100m Cable Length for Master Slave	Equivalent Resistive Load	≥ 60 Ω
Cable Length for Master Slave Interconnections ≤ 50m Mechanical data	Capacitive Load	≥ 0,82 µF
Interconnections Mechanical data	Cabel Length (Power Supply/Output)	≤ 100m
		≤50m
Nimensions 28mm/frontly 30mm	Mechanical data	
201111111111111111111111111111111111111	Dimensions	28mm (front) x 30mm
Connections M12-5 poles (emitter) M12-8 poles (receiver)	Connections	M12-5 poles (emitter) M12-8 poles (receiver)
Operating temperature -10°C ÷ +55°C (no condensation)	Operating temperature	-10°C ÷ +55°C (no condensation)
Storage temperature -25°C ÷ +70°C (no condensation)	Storage temperature	-25°C ÷ +70°C (no condensation)
humidity 95% (no condensation)	humidity	95% (no condensation)
Test/Approvals	Test/Approvals	
Approvals CE, cULus, TÜV	Approvals	CE, cULus, TÜV
EMC compatibility According to 2014/30/EU Directive	EMC compatibility	According to 2014/30/EU Directive
Shocks and vibrations according to IEC 61496-1	Shocks and vibrations	according to IEC 61496-1

IP65, IP67

Degree of protection

Supplied Accessories ST 204 4S

Generical Data

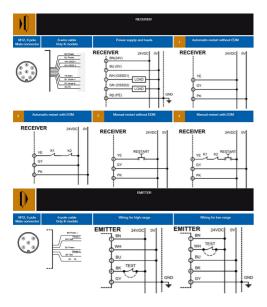
Dimensions 28mm (front) x 30mm

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

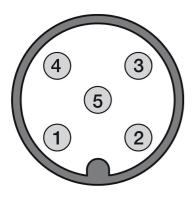
Humidity 95% (no condensation)

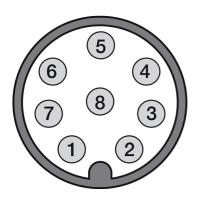
Mechanical Protection IP65, IP67

ELECTRICAL DIAGRAMS OF THE CONNECTIONS



CONNECTOR





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