



ST4

Type 4 · PLe · SIL3

Cascadable thru-beam sensors

Features

■ Series connection of six sets of sensor heads to one controller

The concept of connecting six sets of sensor heads to one controller in series offers you maximum flexibility to solve your safety application.

■ Beam axis alignment and operation confirmation

The beam interruption indicator is incorporated in both the emitter and receiver. This indicator can be used not only to confirm operation but also to align the beam axis.

■ Compact sensor head saves space

The size of this type 4 long sensing range type is similar to general purpose photoelectric sensors.

■ IP67 (IEC)

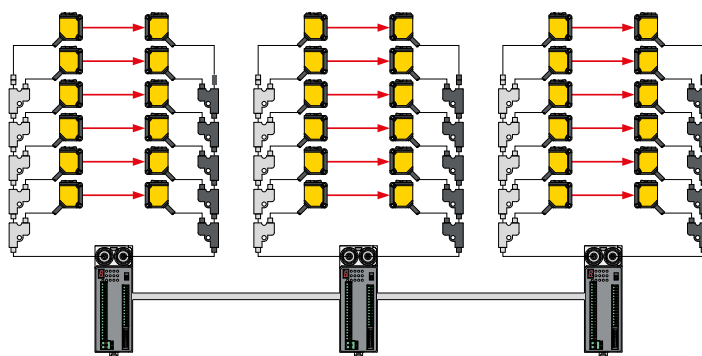
The sensor heads can be used safely even in rough production environments.

■ Interference prevention

The emission amount adjuster can be used to prevent interference to the surrounding sensors.

■ Supports both PNP and NPN polarities

A single unit supports both PNP and NPN polarities, easing stock management.



Connection of up to 3x6 units

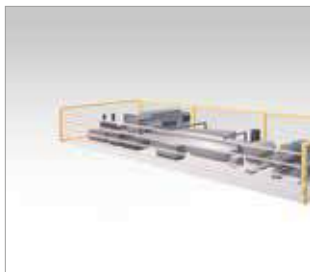


Emission amount adjustment function

Typical applications

Protection for long sensing ranges

Guard areas up to 15m in length, for example where protective fences are difficult to install.



Protection for small openings

For small openings where light curtains do not fit, ST4 sensor heads ensure safety.



Protection against non-authorized entry

Sensor heads can be mounted flexibly and muting control implemented easily.



Technical specifications

Sensor heads

Type	Cable length 0.2m		Cable length 1.0m	
	–	With sensitivity adjuster	–	With sensitivity adjuster
Model no.	ST4-A1-J02	ST4-A1-J02V	ST4-A1-J1	ST4-A1-J1V
Safety category	Type 4, PLe, SIL3			
Cascading	Up to 6 pieces to one controller			
Power supply	Supplied from controller (ST4-C11 or ST4-C12EX)			
Sensing range	0 to 15m			
Object to be sensed	Min. ø 9mm (opaque)			
Emitting element	Infrared LED			
Protection	IP67 (IEC)			
Ambient temperature	–10 to +55°C			
Material	Enclosure: PBT/Cover: acrylic			
Connection method	Cable with connector enclosed, 0.2m		Cable with connector enclosed, 1.0m	
Dimensions (HxWxD)	31x14x28mm			

Control device

Type	Standard	High-functional
	ST4-C11	ST4-C12EX
Safety category	Type 4, PLe, SIL3	
Power supply	24VDC +10% / –15%	
Control outputs	OSSD1 and OSSD2 (2x PNP or 2x NPN transistor outputs with open collector, switchable, max. 200mA)	
Response time	ON → OFF: max. 25ms, OFF → ON: max. 140ms	
Current consumption	Max. 100mA (excluding sensor heads)	Max. 120mA (excluding sensor heads)
Protection	Enclosure: IP40 (IEC), Terminal: IP20 (IEC)	
Ambient temperature	–10 to +55°C	
Material	Enclosure: ABS	
Connection method	Connector (sensors), terminal block	
Dimensions (HxWxD)	130x46x80mm	

Note: For a system configuration, please contact your sales office or service hotline: +49 89 45354-2737

IO-Link
Sensors

Photoelectric
Sensors

Fiber-optic
Sensors

Standard Fibers

Fiber Sensors
Communication
Units

Mark Sensors

Laser Sensors

Safety Sensors

Pressure &
Flow Sensors

Inductive
Proximity
Sensors

Measurement
Sensors

Ionizers/
Electrostatic
Sensors

Accessories

ST4