



Active/passive multi-beam safety sensor

The F3S-TGR-KxC perimetrical guards are available in category 2 and category 4 with integrated muting function. They work as active/passive guards with two, three or four beams and an operating range of up to 12 m.

- Sensing distance up to 12 m for active/passive type
- Muting function included (no additional controller needed)
- Two muting connection boxes for easy muting applications
- Automatic and manual restart function included
- Category-2 and -4 sensor complying with EN 61496-1

Ordering information

Safety multi beam sensors

F3S-TGR-SB2-K_C mirror reflection type (type 2)

Number of optical axes	Sensing distance	Beam pitch	Order code ^{*1}
2	0.5 to 6 m	500	F3S-TGR-SB2-K2CSD-500 (MTL, MTX)
2	0.5 to 12 m	500	F3S-TGR-SB2-K2CLD-500 (MTL, MTX)
3	0.5 to 5 m	400	F3S-TGR-SB2-K3CSD-800 (MTL, MTX)
4		300	F3S-TGR-SB2-K4CSD-900 (MTL, MTX)

^{*1} For muting applications with transport in one direction, please add the MTL behind the model name. For muting applications with muting sensor arrangement in X-shape, please add the MTX behind the model name.
Examples: F3S-TGR-SB2-K2CSD-500MTL
F3S-TGR-SB2-K2CSD-500MTX

F3S-TGR-SB4-K_C mirror reflection type (type 4)

Number of optical axes	Sensing distance	Beam pitch	Order code ^{*1}
2	0.5 to 6 m	500	F3S-TGR-SB4-K2CSD-500 (MTL, MTX)
2	0.5 to 12 m	500	F3S-TGR-SB4-K2CLD-500 (MTL, MTX)
3	0.5 to 5 m	400	F3S-TGR-SB4-K3CSD-800 (MTL, MTX)
4		300	F3S-TGR-SB4-K4CSD-900 (MTL, MTX)

^{*1} For muting applications with transport in one direction, please add the MTL behind the model name. For muting applications with muting sensor arrangement in X-shape, please add the MTX behind the model name.
Examples: F3S-TGR-SB4-K2CSD-500MTL
F3S-TGR-SB4-K2CSD-500MTX

Flexible muting connector box

SLC connection type	Other connection	Order code
M12 8pin connector without cable	4× muting sensor connection (4pin)	F39-TGR-SB-CMB1
M12 8pin connector with 100 mm cable	1× muting lamp M12 (4pin) 1× override/Test input M12 (4pin) 1× cabinet connection M12 (8pin)	F39-TGR-SB-CMB2

Specifications

Safety sensors

Item	F3S-TGR-SB4-K_C-___ (MTL, MTX)	F3S-TGR-SB2-K_C-___ (MTL, MTX)
Sensor type	Type 4	Type 2
Operating range	F3S-TGR-SB_-K2CSD 0.5 to 6 m F3S-TGR-SB_-K2CLD 0.5 to 12 m F3S-TGR-SB_-K3CSD/K4CSD 0.5 to 5 m	
Beam pitch and number of beam	F3S-TGR-SB_-K2CSD and F3S-TGR-SB_-K2CLD 500 mm 2 beam with mirror F3S-TGR-SB_-K3CSD 400 mm 3 beam with mirror F3S-TGR-SB_-K4CSD 300 mm 4 beam with mirror	
Effective aperture angle (EAA)	Within ±2.5°	Within ±5°
Light source	Infrared LED (880 nm)	
Supply voltage (Vs)	24 VDC ±20%	
OSSD	Two PNP transistor outputs, load current 500 mA max	
Output operation mode	Light - ON	
Test functions	Self-test (after power ON and during operation, one cycle during response time)	
Protection	Output short-circuit protection	
Response time	ON to OFF 16 ms max	
Ambient temperature	Operating: -10°C +55°C (with no icing or condensation)	
Degree of protection	IP65 (IEC 60529)	
Size (cross section)	38x48 mm	

Muting connection box

Supply voltage (Vs)	24 VDC ±20%
Ambient temperature	Operating: -10 to +55°C (with no icing or condensation)
Safety light curtain connector	M12 8 pins female
Cabinet connector	M12 8 pins male
Sensor connector	4× M12 4 pins female
Muting sensor connector	M12 4 pins female
Test/override connectors	M12 4 pins female
Degree of protection	IP65 (IEC60529)