



Multi-beam safety sensor

The F3S-TGR-K perimetrical guards are available in category 2 and category 4 with integrated muting function. They work as active/active guards with two, three or four beams and an operating range of up to 50 m.

- Sensing distance up to 50 m for active/active 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 (type 2)

Number of optical axes	Sensing distance	Beam pitch	Order code* ¹
2	0.5 to 25 m	500	F3S-TGR-SB2-K2SD-500 (MTL, MTX)
2	20 to 50 m	500	F3S-TGR-SB2-K2LD-500 (MTL, MTX)
3	0.5 to 25 m	400	F3S-TGR-SB2-K3SD-800 (MTL, MTX)
3	20 to 50 m	400	F3S-TGR-SB2-K3LD-800 (MTL, MTX)
4	0.5 to 25 m	300	F3S-TGR-SB2-K4SD-900 (MTL, MTX)
4	20 to 50 m	300	F3S-TGR-SB2-K4LD-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-K2SD-500MTL
F3S-TGR-SB2-K2SD-500MTX

F3S-TGR-SB4-K (type 4)

Number of optical axes	Sensing distance	Beam pitch	Order code* ¹
2	0.5 to 25 m	500	F3S-TGR-SB4-K2SD-500 (MTL, MTX)
2	20 to 50 m	500	F3S-TGR-SB4-K2LD-500 (MTL, MTX)
3	0.5 to 25 m	400	F3S-TGR-SB4-K3SD-800 (MTL, MTX)
3	20 to 50 m	400	F3S-TGR-SB4-K3LD-800 (MTL, MTX)
4	0.5 to 25 m	300	F3S-TGR-SB4-K4SD-900 (MTL, MTX)
4	20 to 50 m	300	F3S-TGR-SB4-K4LD-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-K2SD-500MTL
F3S-TGR-SB4-K2SD-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_ _ _ (MTL, MTX)	F3S-TGR-SB2-K_ _ _ (MTL, MTX)
Sensor type	Type 4	Type 2
Operating range	F3S-TGR-SB_ _K_SD 0.5 to 25 m F3S-TGR-SB_ _K_LD 20 to 50 m	
Beam pitch and number of beam	F3S-TGR-SB_ _K2_D 500 mm F3S-TGR-SB_ _K3_D 400 mm F3S-TGR-SB_ _K4_D 300 mm	
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)