

»FOTOCELDA DE CORTINA MARCA FEIG MOD.TST LGD.

TST LGD

Light curtain

Operating manual**MANUAL DE INSTALACION**

1 Legal Notice

1.1 Manufacturer

FEIG ELECTRONIC GmbH
Industriestrasse 1A
35781 Weilburg
Germany
Website: www.feig.de
E-mail: info@feig.de
Phone: +49 (0) 6471 31090

2 Contents

1	Legal Notice	2
1.1	Manufacturer.....	2
2	Contents	3
2.1	Information on the document.....	5
2.1.1	Data protection and copy protection	5
2.1.2	Scope	5
2.2	Disclaimer of liability	5
2.3	Explanation of drawings	6
3	Safety instructions	6
3.1	Intended use	6
4	Product description	7
4.1	Identification plate.....	7
4.2	Product versions	8
4.3	Scope of delivery.....	9
4.4	Accessories	9
5	Product overview	10
5.1	Housing dimensions	10
5.2	Status LEDs	11
6	Installation	12
6.1	Installation instructions.....	12
7	Electrical connections	15
7.1.1	Connecting the light curtain to the door control via a distributor box	15
8	Commissioning	17

9	Advanced function settings	19
9.1	Resetting the light curtain	19
9.2	Individually adjusting the functions of the light curtain	20
10	Messages on the display	21
11	Maintenance and disposal	22
11.1	Maintenance.....	22
11.2	Product disposal.....	22
12	Technical data	23
12.1	Height of the light lines	24
13	Approvals	26
13.1.1	Declaration of Conformity	26
13.1.2	Type Examination Certificate.....	27

2.1 Information on the document

2.1.1 Data protection and copy protection

Translations of the original document

All non-German versions of this document are translations of the original German Operating manual.

Validity of the document

These instructions are only valid for the version of the product specified.

This edition replaces all earlier versions of the documents.

The information in these instructions is subject to change without notice.

Copyright

Full or partial photocopying or reproduction of these instructions, as well as translation into other languages, is not permitted without the prior written consent of FEIG ELECTRONIC GmbH. The full or partial storage of these instructions on modern information carriers for the purpose of subsequent processing on computers is also prohibited.

2.1.2 Scope

Product name: **TST LGD**

Product type: **Light curtain**

2.2 Disclaimer of liability

FEIG ELECTRONIC GmbH does not provide any guarantee for the correctness and completeness of the specifications in these instructions. In particular, FEIG ELECTRONIC GmbH cannot be made liable for subsequent damage resulting from erroneous or incomplete information.

The information contained in this document has been compiled according to the best of our knowledge and belief. Despite all efforts, it is never possible to completely exclude incorrect information. We are always welcome information or enquiries.

The installation recommendations contained in this document assume favourable general conditions. FEIG ELECTRONIC GmbH does not provide any guarantee for the faultless function of the product in third-party environments.

FEIG ELECTRONIC GmbH does not provide any guarantee that the information in this document is free from third-party intellectual property rights. In issuing this document, FEIG ELECTRONIC GmbH does not issue any licenses for company or third-party patents or other property rights.

Only the direct contracting parties are entitled to place warranty claims against FEIG ELECTRONIC GmbH; they are non-transferable. Any warranty provided only applies to the products supplied by FEIG ELECTRONIC GmbH. We do not accept any liability for the complete system.

The description of the products, their deployment, capabilities and performance specifications will not be considered as assured properties and are subject to technical changes.

2.3 Explanation of drawings



Refers to an important document or instruction which need to be read.



Outlines the specifications for product disposal

3 Safety instructions

Reading and storing the instructions

Read the document before using the product for the first time and store it for future reference.

WARNING

Risk of electric shock!

Improper commissioning at the door control may lead to serious injuries. Observe all of the instructions for the electrical connection to the control.

Commissioning by specialists

The product must be commissioned and decommissioned by qualified specialists.

The teach-in run for the door must be carried out by qualified specialists.

You must avoid unintentional commissioning or uncontrolled movement of the door.

3.1 Intended use

light curtain is an accessory from FEIG ELECTRONIC GmbH. It may only be operated with the permitted door controls. Use is restricted to the specifications in these instructions.

4 Product description

The **TST LGD Light curtain** is an accessory for door control systems from FEIG ELECTRONIC GmbH. It is a contact-free protection device for power-operated doors and gates that are used in the industrial or commercial sectors. It can be used as the sole safety device (protection level E) for motorised doors and gates.

The **TST LGD Light curtain** consists of a transmitter bar and a receiver bar and creates a light curtain of parallel light beams. It secures an area of up to 2500 mm in height. The **TST LGD** divides its detection area into a "hazard zone" and an "object protection zone", and therefore enables different braking behaviour when stopping the door.

The **Light curtain TST LGD** is connected to the door control system via a CAN interface. The release status are transmitted and ensured via CANopen Safety [CiA 304 Framework for safety-relevant communication].

The **TST LGD Light curtain** complies with the requirements of EN 12978.

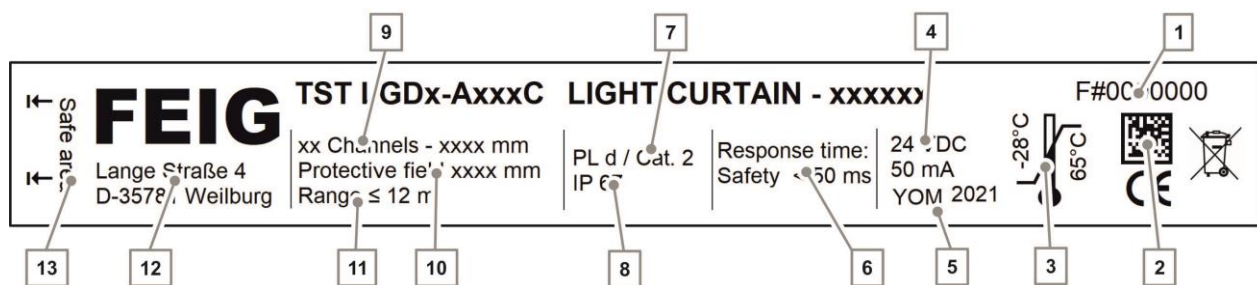
4.1 Identification plate

The identification plates for the transmitter bar and the receiver bar have the same specifications and only differ when it comes to colour.

Transmitter: Black writing on a white background

Receiver: White writing on a black background

Explanation of the data on the identification plate (example)



1. FEIG serial number
2. FEIG Data Matrix Code serial number
3. Temperature range
4. Power supply/current consumption
5. Year of production
6. Reaction time
7. Performance level and category in accordance with EN 13849-1
8. IP Protection class
9. Number of channels
10. Protective field height
11. Range
12. Supplier designation and address
13. Start of the protection field

4.2 Product versions

The **Light curtain TST LGD** is available as a system (transmitter bar and receiver bar) in the following variants. They differ in terms of length and beam distance.

Product name	Lengths	Beam distance
TST LGD-A265C	2645 mm	45 mm
TST LGD-A230C	2285 mm	45 mm
TST LGD-A190C	1925 mm	45 mm
TST LGD-A155C	1565 mm	45 mm
TST LGD-A120C	1205 mm	45 mm

Product name	Lengths	Beam distance
TST LGD-B265C	2645 mm	<= 300 mm (Height): 45 mm > 300 mm (Height): 180 mm
TST LGD-B230C	2285 mm	<= 300 mm (Height): 45 mm > 300 mm (Height): 180 mm
TST LGD-B190C	1925 mm	<= 300 mm (Height): 45 mm > 300 mm (Height): 180 mm
TST LGD-B155C	1565 mm	<= 300 mm (Height): 45 mm > 300 mm (Height): 180 mm
TST LGD-B120C	1205 mm	<= 300 mm (Height): 45 mm > 300 mm (Height): 180 mm

4.3 Scope of delivery



Item	Description	Quantity
A	TST LGD light curtain transmitter bar and receiver bar	1

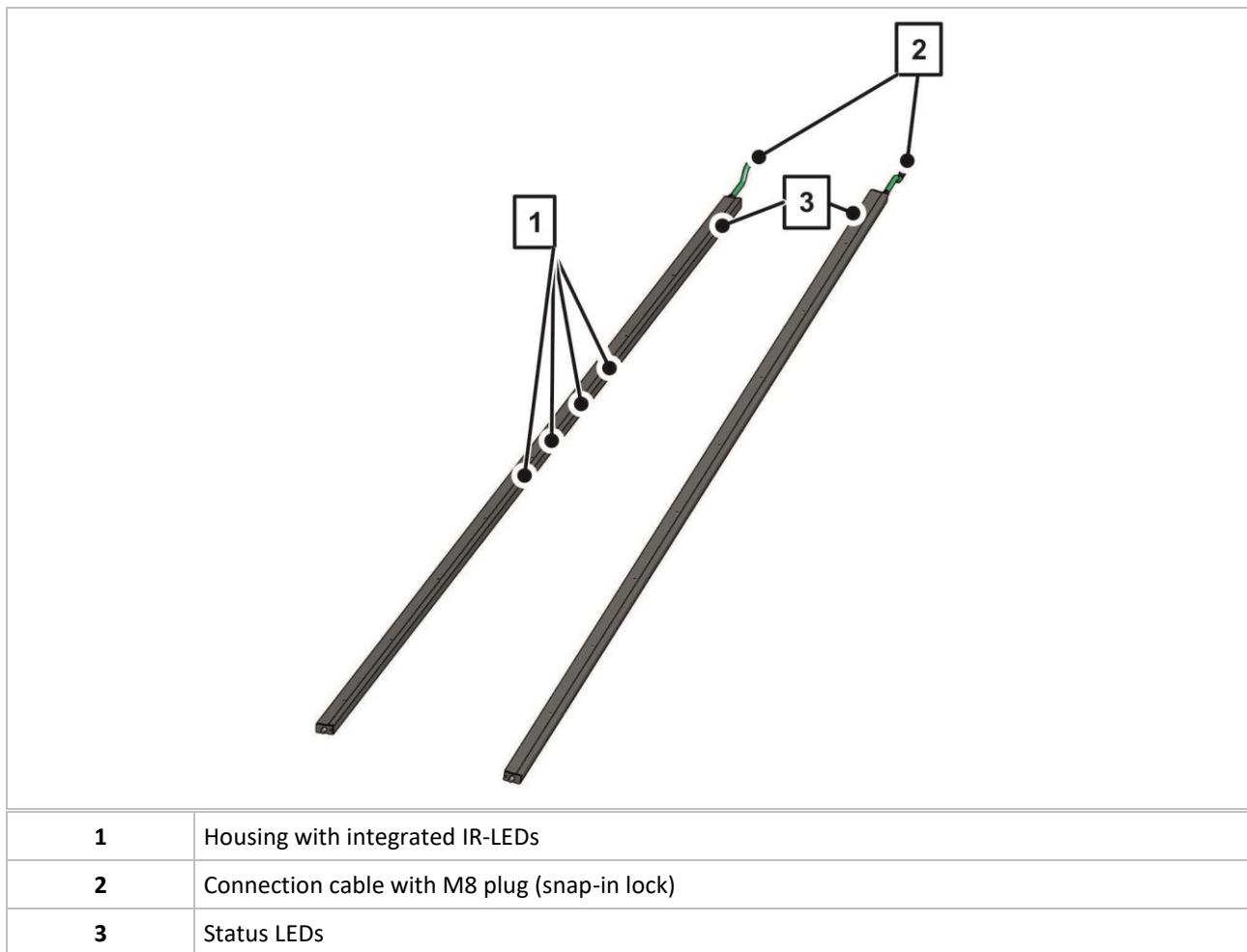
4.4 Accessories

The following accessories can be used with the **TST LGD** light curtain.

Accessories not included in the scope of delivery and must be ordered separately.

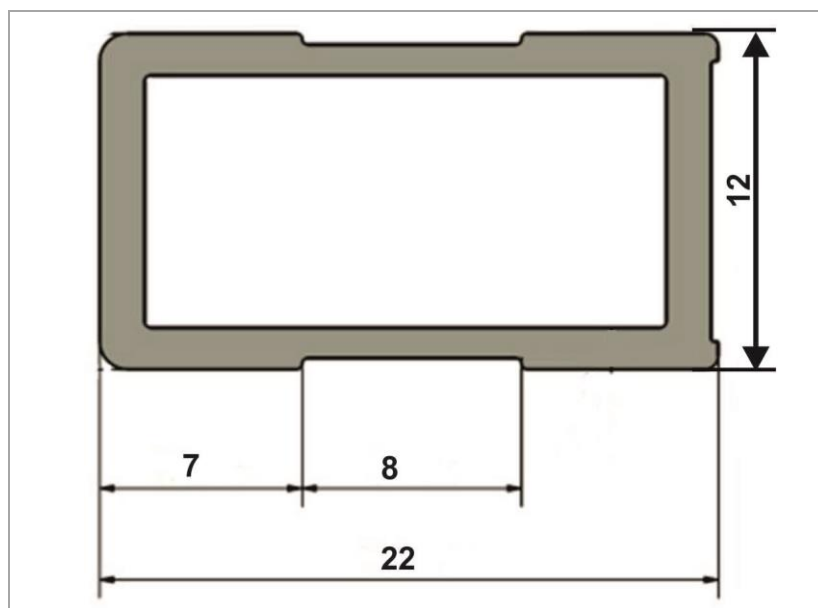
- TST KCANxA distributor box and connection cables
- TST LGxASK light curtain bracket set; 8 pcs

5 Product overview



5.1 Housing dimensions

Housing profile dimensions in mm



5.2 Status LEDs

The status of the light curtain is displayed in each case via the two LEDs on the transmitter bar and receiver bar.

Transmitter bar

Status	Yellow LED 	Green LED 
Off	Light curtain without errors	Transmitter bar without power supply
On	Not defined	Power supply on, faulty bar
Flashes slowly (0.5 Hz)	External error	Light curtain ready to use
Flashes rapidly (2 Hz)	Device assignment, selected light curtain detected	Device assignment, selected light curtain detected
Flashes very rapidly (5 Hz)	Internal error	

Receiver bar

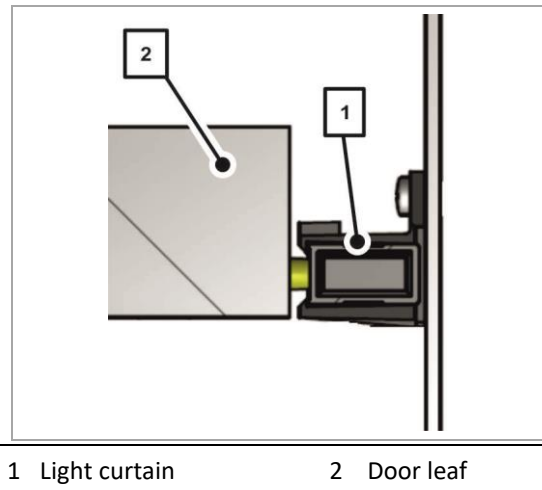
Status	Blue LED 	Red LED 
Off	Receiver bar without power supply	Light curtain without errors
On	Power supply on, faulty bar	Hazard zone or object protection zone occupied
Flashes slowly (0.5 Hz)	Light curtain ready to use	External error
Flashes rapidly (2 Hz)	Device assignment, selected light curtain detected	Device assignment, selected light curtain detected
Flashes very rapidly (5 Hz)		Internal error

6 Installation

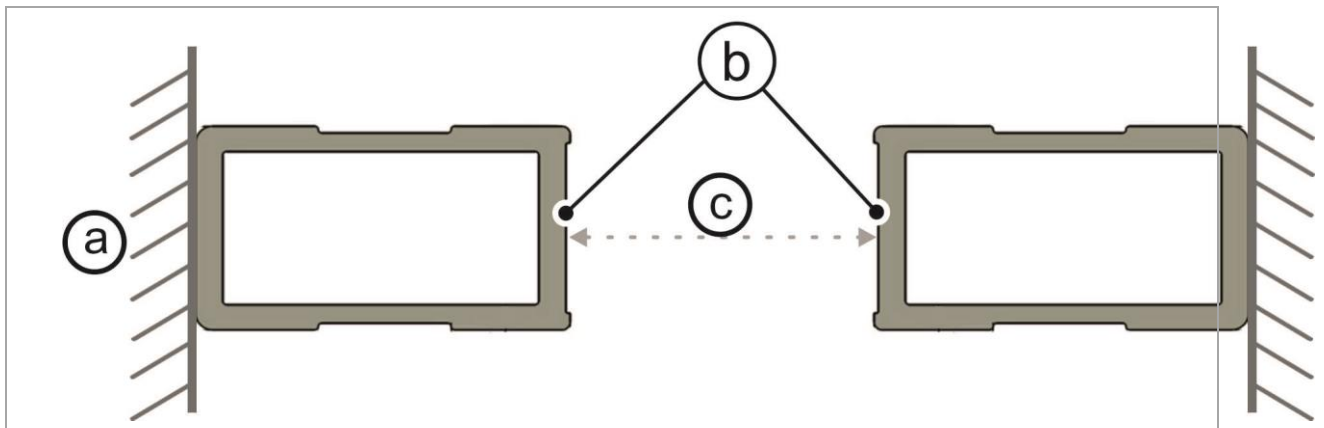
6.1 Installation instructions

The following instructions must be observed when installing the light curtain:

- If the light curtain is the only protection device on the door (protection level E), it must be installed vertically, parallel to the course of the door leaf. (See figure)



- If multiple light curtains are installed, the following points must be observed so that the light curtains cannot interfere with or influence each other:
 - If there are two light curtains, install the transmitter bar and the receiver bar in reverse on the respective door frame. Both transmitter bars must not be installed in the same transmission direction on the same side of the door.
 - If more than two light curtains are installed, two sender bars can have the same transmission direction. In this case, the synchronisation time must be adapted in each case for the light curtains with the same orientation. The time at which the respective light curtain should trigger is set via a parameter that is described in the parameter description for the respective door control.
- The light curtain must be set on firm and level ground so that the lowest light beam is at 39 mm (measured from the ground). For different ground surfaces, ensure that the lowest light beam is not above 46 mm.
- The transmitter bar and receiver bar are installed vertically on the respective installation surface (e.g. door frame). Ensure that:
 - The respective connection cable points upwards.
 - The respective front panel is aligned parallel to the opposite front panel. (See figure). The front panel is identified by the two grooves on the profile edge.
In order to guarantee functionality, transmitters or receivers must not be installed staggered. Max. $\pm 2^\circ$ is permissible in the event of twisting.
 - The receiver bar is not installed on the same door side as the drive. It must be opposite the drive.
 - The receiver bar is installed in such a way that it is protected against direct sunlight.



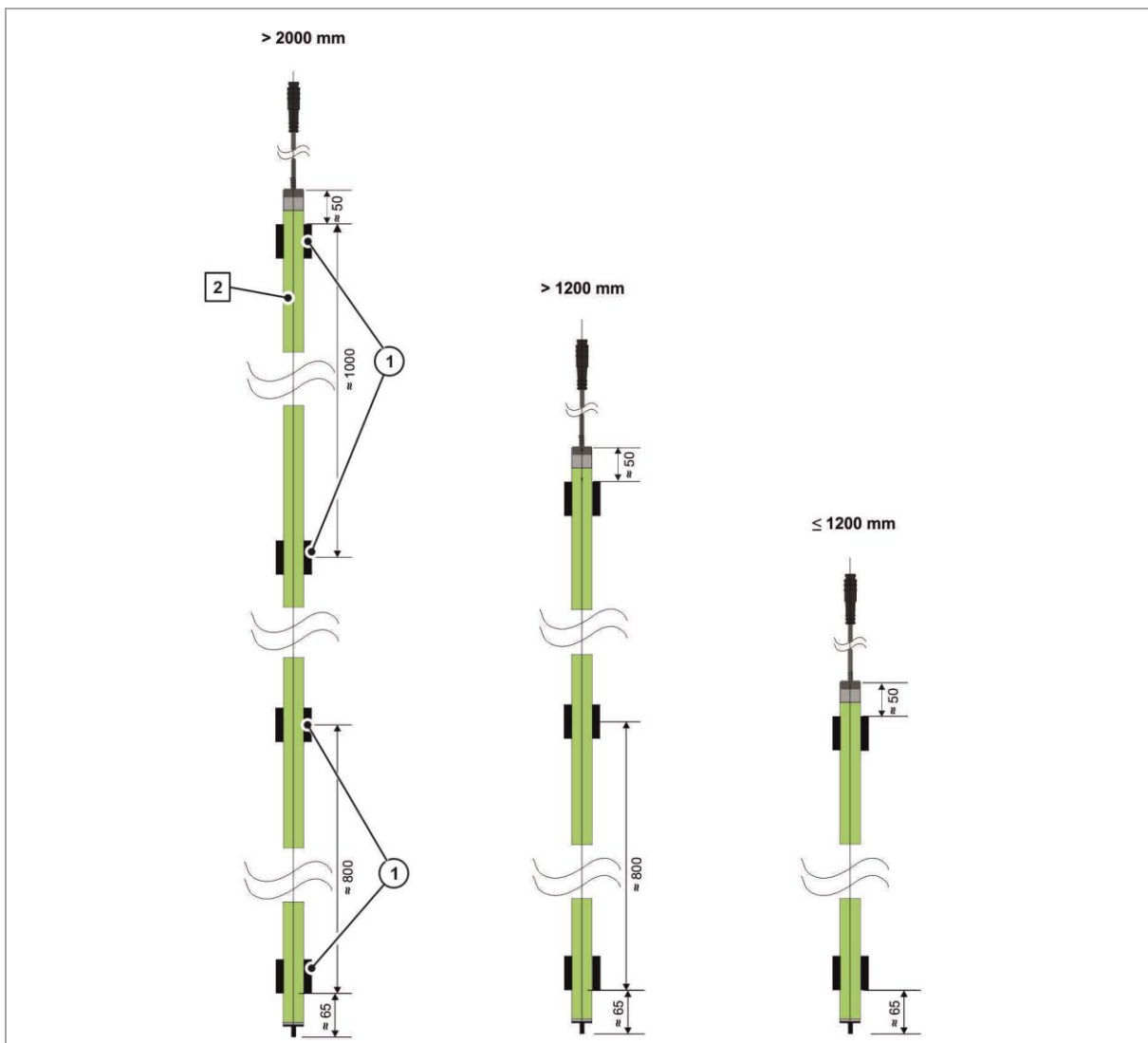
a Installation surface

b Front panel (housing)

c Light beam direction

- If the light curtain is clamped for fastening, ensure that the housing profile is not deformed.
- When using brackets, ensure that the housing profile is not bent or twisted.

When securing the brackets, comply with the clearances as shown in the following figure. (Shown based on the length of the respective light curtain)



1 Bracket

2 Light curtain

- It is recommended that an infrared-impermeable cover with a height of 48 mm be installed on the underside of the door leaf.
- The transmitter bar, receiver bar and status LEDs must not be covered.
- Following installation, the protective film must be removed from the transmitter bar and receiver bar.

Installation on a sectional door

- If the light curtain is installed on a sectional door, the TST LGxASK light curtain brackets (see accessories) are to be used.
- The TST LGxASK brackets are secured to the respective door frame using the enclosed screws. The transmitter bar and receiver bar are carefully pushed into the brackets until they click into place.

7 Electrical connections

DANGER

Risk of electric shock!

Before connecting the accessory: Switch off the door control's power supply!

- Only switch the door control's power supply back on once the installation of the accessory is complete, the door control is sealed and no live parts can be touched.

CAUTION

Malfunctions on devices!

Hot plugging may lead to device malfunctions.

- Only make connections for the peripheral devices or changes when disconnected from the power supply.

CAUTION

CAN communication fault

Only use shielded cables for the CAN lines if they are routed in the same cable duct as the motor line.

The shielded cable of the CAN line has to be connected to GND at the controller.



Depending on the connection situation, up to four light curtains can be connected to the door control.

7.1.1 Connecting the light curtain to the door control via a distributor box

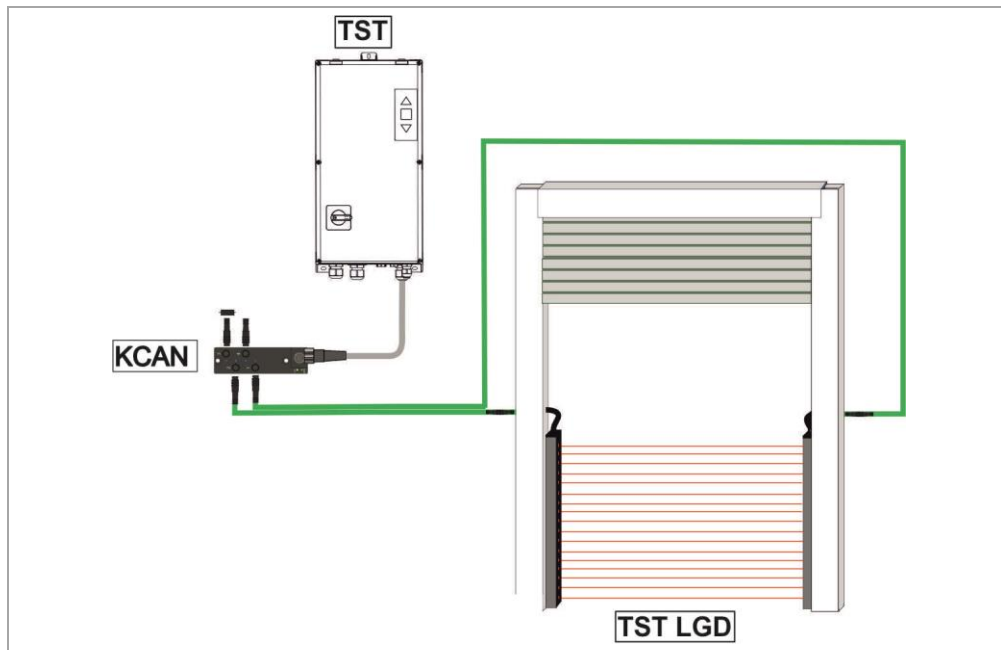
The **Light curtain TST LGD** is connected to the door control via a CAN distributor box.



You can find information about the connections in the corresponding instructions for the TST KCAN distributor box.

NOTES

- Note the numbering of the ports on the CAN distributor box. Plug the light curtain into the next, free port. The sequence of the transmitter bar and receiver bar can be freely selected.
- Do not route the CAN and supply line together with other, fault-prone signals.
- We recommend routing the motor line through a ferrite sleeve instead of a split ferrite. (e.g. low-frequency EMI ferrite sleeve from Laird Technologies Corporate)

Complete overview of the connections to the CAN distributor box (diagram)

Note the following cable lengths:

- Between the door control and the distributor box: Max. 30 m
- Total line length from the door control to the light curtain: see information in manual KCANx

8 Commissioning

Light curtains that are used to monitor the closing edge are put into operation via the parameter setting on the respective door control.

Prerequisites:

- A position sensor is connected.
- The light curtain's detection area is not blocked by an obstruction. An obstruction leads to an error message during commissioning.
- The following steps are carried out:
 1. The basic settings are set. (See the operating instructions for the door control)
 2. The light curtain is connected to the door control via the CAN distributor box.
 3. The door control is switched on.
 - ↳ The green LED flashes on the transmitter bar; the red and blue LEDs flash alternately on the receiver bar.
 4. The access level is set to password 1 or higher. (See the operating instructions for the door control)



- *If the light curtain is connected to the door control, the light curtain is automatically detected and activated. Parameter L.201 can be used to check this. If a serial number is stored as a value, the light curtain is detected.*
- *The application parameter A.480 automatically requests that the door end positions are set. They do not have to be set separately.*

NOTE:

After the basic settings have been set at the door control and the light curtain has been detected, the indicator “Cal” or “Calibrate” automatically appears on the display.

1. Press the  and  buttons at the same time.

↳ The parameter setting has been initiated.

↳ The display shows:

2. Use the  and/or  buttons to select application parameter A.480.

3. Briefly press the  button.

4. Use the  button to enter value 3.

Note: The value applies to all standard FEIG door controls. A different value may be required for individual, customer-specific door controls. Please contact the FEIG support in this regard.

5. Press and hold the  button for three seconds.

↳ The value is saved.

6. Briefly press the  button.

↳ The light curtain is synchronised with the position sensor.

Indicator display	
7-segment	Real text display
P.000	P:Door Cycles 000
A.480	A:APPLGx 480=

I*615 SYNC	! Synchron. ! I615 LL req.
---------------	-------------------------------

7. Press and hold the  button until the door is fully open and the light curtain's detection area is clear.

↳ The display shows:

E*05o*	To open pos. 
SYNC	Stop-Keypad
	To open pos. 0 Top. with
S*Y*E*O*	Open Limit Set
S*Y*E*O*	LGx Quality Test
S*Y*E*u*	! Synchron. ! 0 Start with 

8. Press and hold the  button for three seconds.

↳ The OPEN end position is set.

↳ The quality test is carried out automatically by synchronising the light beams individually.

When the process has ended, the display shows:

9. Briefly press the  button.

↳ The door automatically moves to the CLOSED end position.

During the process, different messages are shown on the display.

↳ The door control automatically saves the CLOSED end position.

When the process has ended, the display shows:

I.515	!Auto Calibrate! xxxx Start with 
-------	---

10. Briefly press the  button.

↳ The door opens. The teach-in process starts automatically.

The door opens and closes automatically until the teach-in process ends. During the process, the message I.515 is shown on the display.

The pre-limit switch and limit switch are set automatically.

↳ When the process has ended, the display shows:

	IA22 SA Init
2*UF`	The door closes

↳ The door closes automatically.

The second teach-in process starts.

↳ When the process has ended, the display shows:

	I.510 Correc. OK IA21 Init. OK
EU	FEIG ELECTRONIC xxxx cycles

➤ The light curtain is set and ready to use.

The display shows:

9 Advanced function settings

The advanced function settings allow you to implement individual settings on the light curtain.



You can find additional parameter settings for the door control in the "Parameter description" document for the respective door control.

NOTE

When setting the parameters, note how many light curtains are connected to the door control. The parameter's initial number is assigned to the respective light curtain. The first, connected light curtain always starts with 2.

For example: First light curtain = parameter L.2XX, second light curtain = parameter L.3XX

The following settings are described for connecting one light curtain.

9.1 Resetting the light curtain

The respective light curtain must be reset if changes are made to the door that lead to the light curtain changing position.



The resetting of the door end positions is also automatically requested.

Prerequisite:

Parameter setting is initialised; a parameter is displayed. (See the operating instructions for the respective door control)

1. Use the   buttons to select parameter 210.

2. Briefly press the  button.
3. Use the  button to enter value 5.
4. Press and hold the  button for three seconds.

✎ The value is saved.

5. Briefly press the  button.
 6. Press and hold the  button for approx. five seconds.
- The parameter setting is exited.

The door control automatically switches to the synchronisation process (see "Commissioning", page 17) and the light curtain must be reset (starting from step 9).

Indicator display	
7-segment	Plain text display
P.210	P:New Limits W 210= 0 #

9.2 Individually adjusting the functions of the light curtain

Different basic functions are preset once the light curtain is commissioned. Profile parameter L.x1F can be used to subsequently adjust the preset values. Different basic functions are stored for the respective light curtain in each profile.

Prerequisite:

- Parameter setting is initialised; a parameter is displayed. (See the operating instructions for the respective door control)
- Access level is set to password 2. (See the operating instructions for the door control)
- The light curtain has been successfully commissioned. (see "Commissioning", page 17)

1. Use the   buttons to select parameter L.21F.

Indicator display	
7-segment	Plain text display
L.21F	L:SAI Slot2 21F= 0

2. Briefly press the  button.
3. Use the  button to select the value.

The following values must be selected depending on how many light curtains are connected:

Profile	Value	Description
Door line profile (one light curtain)	201	TST LGD activated
Stack profile (as of two light curtains)	301	Activates the TST LGD as an additional light curtain with door blanking. Additional light curtains can be installed above or parallel to a door line light curtain in order to extend the monitoring height or monitoring depth.
Additional light curtain inside	401	Activates the TST LGD as a comfort light curtain. Synchronisation point 1.
Additional light curtain outside	402	Activates the TST LGD as a comfort light curtain. Synchronisation point 2.

4. Press and hold the  button for three seconds.
 The value is saved.
5. Briefly press the  button.
6. Press and hold the  button for approx. five seconds.
 The parameter setting is exited.
- The profile for the light curtain has been set.

10 Messages on the display

The following messages may appear on the display of the door control after the light curtain has been successfully commissioned.

Indicator	Description	Possible cause	Corrective measure
I . A×4	The receiver receiving level is too low	- The front panel (LEDs) of the light curtain is dirty. - The protective film has not been removed.	- Clean the light curtain. - Remove the protective film.
I . A01	The value for the permissible CAN error has been exceeded	Motor or connection cables of the light curtain are not shielded correctly.	

11 Maintenance and disposal

11.1 Maintenance

To ensure perfect functionality of the light curtain, the areas emitting light beams must always be free from dirt.

If the information message I.A24 is displayed on the door control display, this indicates a low signal quality of the light curtain. This is usually an indication of contamination.

It is recommended that the front panels of the transmitter bar and receiver bar be cleaned at least once per door maintenance interval.

Cleaning cloths are used for cleaning, in order not to scratch the front panels.

Do not use any chemical or corrosive cleaning agents.

It is recommended that the door control be restarted after cleaning, which will also restart the light curtain.

11.2 Product disposal



At the end of its service life, dispose of the product in accordance with the valid legal specifications.

12 Technical data

General	Overall lengths (H x W x D) [mm] without cable	approx. (1200 to 2650) * x 12 x 22 * in 4 x 45 mm *(restrictive constraints apply)
	Connection length	142 mm
	Connector plugs	2 x M8 6-pole
	Temperature range	Operation: -28 to +65°C
		Storage: -40 to +70°C
	Air humidity	up to 90% non condensing
	Level of protection	IP 67
Detection	Weight 265 version/per unit	approx. 800 g
	Range	0.8 m to 12 m
	Reaction time	Safety <= 50 ms Comfort <= 100 ms
	Max. door shutting speed	1.6 m/s, at min. 2 increments per 10 mm
Electronic data	Resolution	45 mm
	Voltage	24 V DC ±10%
	Typ. current consumption 265 version	Transmitter: 50 mA Receiver: 50 mA
Optical system	Short circuit and reverse polarity protection	Yes
	Wavelength	850 nm
	Opening angle (EAA)	± 5°
	Ambient light immunity	>= 100 kLUX
I/O	Safety of the eyes in accordance with ISO IEC EN 62471:2008	Safety of the eyes for operators given, risk group 0
	Interface	CAN
	Safety outputs	CAN
	Status indicator	LED + text in door control
	Parametrisation via	Door control
	Diagnostics via	TST FUxF
	Testing via	TST FUxF
Standards applied/ directives for	Update via	TST FUxF
	2006/42/EC – Machinery Directive	
	2014/30/EU – EMC Directive	

declaration of conformity	20011/65/EU – RoHS2 Directive	
	DIN EN 13849-1:2015	Cat 2/ PL d
	DIN EN 12978:2009-10	
	EN 61000-6-1:2007-10	
	EN 61000-6-2:2005 / AC 2005	
	EN 61000-6-3:2012-11	
	EN 61000-6-4:2011-09	
	EN 60529:2000-09	IP 67
	DIN EN 12453: 2017-11	Protection level E

12.1 Height of the light lines

The following table shows the heights of the light lines for the respective variant (measured from the ground for a floor-standing light curtain)

The status LEDs are each 45 mm above the top light line.

Variant/ light line	TST LGD- A265C-	TST LGD- A230C-	TST LGD- A190C-	TST LGD- A155C-	TST LGD- A120C-
Total length	2645 mm	2285 mm	1925 mm	1565 mm	1205 mm
56 (top light line)	2514 mm				
55	2469 mm				
54	2424 mm				
53	2379 mm				
52	2334 mm				
51	2289 mm				
50	2244 mm				
49	2199 mm				
48	2154 mm	2154 mm			
47	2109 mm	2109 mm			
46	2064 mm	2064 mm			
45	2019 mm	2019 mm			
44	1974 mm	1974 mm			
43	1929 mm	1929 mm			
42	1884 mm	1884 mm			
41	1839 mm	1839 mm			
40	1794 mm	1794 mm	1794 mm		
39	1749 mm	1749 mm	1749 mm		
38	1704 mm	1704 mm	1704 mm		

37	1659 mm	1659 mm	1659 mm		
36	1614 mm	1614 mm	1614 mm		
35	1569 mm	1569 mm	1569 mm		
34	1524 mm	1524 mm	1524 mm		
33	1479 mm	1479 mm	1479 mm		
32	1434 mm	1434 mm	1434 mm	1434 mm	
31	1389 mm	1389 mm	1389 mm	1389 mm	
30	1344 mm	1344 mm	1344 mm	1344 mm	
29	1299 mm	1299 mm	1299 mm	1299 mm	
28	1254 mm	1254 mm	1254 mm	1254 mm	
27	1209 mm	1209 mm	1209 mm	1209 mm	
26	1164 mm	1164 mm	1164 mm	1164 mm	
25	1119 mm	1119 mm	1119 mm	1119 mm	
24	1074 mm	1074 mm	1074 mm	1074 mm	1074 mm
23	1029 mm	1029 mm	1029 mm	1029 mm	1029 mm
22	984 mm	984 mm	984 mm	984 mm	984 mm
21	939 mm	939 mm	939 mm	939 mm	939 mm
20	894 mm	894 mm	894 mm	894 mm	894 mm
19	849 mm	849 mm	849 mm	849 mm	849 mm
18	804 mm	804 mm	804 mm	804 mm	804 mm
17	759 mm	759 mm	759 mm	759 mm	759 mm
16	714 mm	714 mm	714 mm	714 mm	714 mm
15	669 mm	669 mm	669 mm	669 mm	669 mm
14	624 mm	624 mm	624 mm	624 mm	624 mm
13	579 mm	579 mm	579 mm	579 mm	579 mm
12	534 mm	534 mm	534 mm	534 mm	534 mm
11	489 mm	489 mm	489 mm	489 mm	489 mm
10	444 mm	444 mm	444 mm	444 mm	444 mm
9	399 mm	399 mm	399 mm	399 mm	399 mm
8	354 mm	354 mm	354 mm	354 mm	354 mm
7	309 mm	309 mm	309 mm	309 mm	309 mm
6	264 mm	264 mm	264 mm	264 mm	264 mm
5	219 mm	219 mm	219 mm	219 mm	219 mm
4	174 mm	174 mm	174 mm	174 mm	174 mm
3	129 mm	129 mm	129 mm	129 mm	129 mm
2	84 mm	84 mm	84 mm	84 mm	84 mm
1 (bottom light line)	39 mm	39 mm	39 mm	39 mm	39 mm

13 Approvals

13.1.1 Declaration of Conformity

FEIG

FEIG ELECTRONIC GmbH
Lange Straße 4
D- 35781 Weilburg

EG-Konformitätserklärung nach EG-Maschinenrichtlinie 2006/42/EG, Anhang II A

Hiermit erklären wir, dass nachstehendes Sicherheitsbauteil

Bezeichnung	Torlinien-Lichtgitter / Sicherheitseinrichtung
Typ/Handelsbezeichnung	TST LGD
Artikel:	TST LGD-xxx-xx

den einschlägigen Bestimmungen folgender Richtlinie entspricht:

Maschinenrichtlinie	2006/42/EG
EMV-Richtlinie	2014/30/EG
RoHS 2 Richtlinie	2011/65/EU

Angewandte Normen:

EN ISO 13849-1:2015	Sicherheit von Maschinen – Sicherheitsbezogene Teile von Steuerungen
EN 12978:2003+A1:2009	Türen und Tore – Schutzeinrichtungen für kraftbetätigte Türen und Tore – Anforderungen und Prüfverfahren
EN 61000-6-1:2007-10	EMV: Fachgrundnorm – Störfestigkeit (Wohnbereich)
EN 61000-6-2:2005 / AC 2005	EMV: Fachgrundnorm – Störfestigkeit (Industriebereich)
EN 61000-6-3:2007 / A1:2011 / AC:2012	EMV: Fachgrundnorm – Störaussendung (Wohnbereich)
EN 61000-6-4:2011-09	EMV: Fachgrundnorm – Störaussendung (Industriebereich)
EN 60529:1991 + A1:2000 + A2:2013	Schutzarten durch Gehäuse (IP-Code)

Angewandte nationale technische Spezifikationen:

EN 12453:2017 / Abschn.5.2.1.7	Nutzungssicherheit kraftbetätigter Tore – Anforderungen Kapitel 5.2.1.7 Berührungslos wirkende Schutteinrichtung für ein Mindestschutzniveau E.
--------------------------------	---

Bevollmächtigter für die Zusammenstellung der relevanten technischen Unterlagen:



Weilburg, den 21. August 2020

Dirk Schäfer, Technischer Leiter VTM

Eine Prüfung des Maschinentyps auf Übereinstimmung mit den Anforderungen der EG-Maschinenrichtlinie erfolgte durch die

TÜV NORD CERT GmbH
Langemarckstraße 20, D-45141 Essen
Notified Body ID. No.: 0044 - Reg.-No.: 44 205 13 413499

Diese Prüfstelle ist zuständig im Sinne von Anhang XI der EG-Maschinenrichtlinie!

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, beinhaltet jedoch keine Zusicherung von Eigenschaften. Die mitgelieferte Produktdokumentation und insbesondere die darin enthaltenen Sicherheitshinweise sind zu beachten.

Die Inbetriebnahme des TST LGB wird so lange untersagt, bis dieses an eine FEIG ELECTRONIC Torsteuerung oder äquivalente Sicherheit angeschlossen und an ein Tor angebaut wurde und dieses Tor den Bestimmungen der EG-Maschinenrichtlinie entspricht.

13.1.2 Type Examination Certificate



EG-Baumusterprüfbescheinigung EC type-examination certificate

Hiermit wird bescheinigt, dass das unten beschriebene Produkt der Firma
This certifies that the product mentioned below from company

FEIG ELECTRONIC GmbH
Lange Straße 4
45781 Weilburg / Waldhausen
Deutschland

die Anforderung des Anhangs 1 der Maschinenrichtlinie 2006/42/EG als eine Grundlage für die EG-Konformitätserklärung erfüllt.
meets the requirements of Annex 1 of the Directive 2006/42/EC as a basis for the EC declaration of conformity.

Geprüft nach: **EN ISO 13849-1:2015 (PL d, Kat. 2)**
Tested in accordance with: **EN ISO 13849-2:2012**
EN 12978:2003+A1:2009
EN 12453:2017

Beschreibung des Produktes: **Lichtgitter für automatische Tore**
(Details s. Anlage 1) **Light curtains for automatic doors**
Description of product:
(Details see Annex 1)

Typenbezeichnung: **TST LGD**
Type Designation:

Bemerkungen: **Das Lichtgitter erfüllt die Anforderungen gemäß EN ISO 13849-1:2015 (Kat. 2/PL d) und**
Remarks: **EN 12453:2017 (berührungslos wirkende Schutzeinrichtung für ein Mindestschutzniveau E).**
The light curtain fulfils the requirement according to EN ISO 13849-1:2015 (Cat. 2/PL d)
and EN 12453:2017 (sensitive protective equipment for a minimum level of safeguarding E).

Registrier-Nr. / *Registered No.* 44 205 13132623
Prüfbericht Nr. / *Test Report No.* 3527 2353
Aktenzeichen / *File reference* 8003011934

Gültigkeit / *Validity*
von / *from* 2020-07-15
bis / *until* 2025-07-14


TUV NORD CERT GmbH Essen
Zertifizierungsstelle Maschinen
Certification Body Machinery
Benannte Stelle 0044 / *Notified Body 0044*

Essen, 2020-07-15

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.de technology@tuev-nord.de

Bitte beachten Sie auch die umseitigen Hinweise
Please also pay attention to the information stated overleaf

FEIG
ELECTRONIC



ADS AUTOMATIC
DOOR
SPECIALIST

Puertas & Portones Automaticos, S.A. de C.V.

¡Nuestra pasión es la Solución!....

»FOTOCELDA DE CORTINA MARCA FEIG MOD.TST LGD.

SENSORS

FEIG
ELECTRONIC

ADS AUTOMATIC
DOOR
SPECIALIST

Puertas & Portones Automaticos, S.A. de C.V.

¡Nuestra pasión es la Solución!....

(229) 461-7028



portonesautomaticos@adsver.com.mx
ads.portonesautomaticos@outlook.com



MEMBER

IDA
International Door Association



V05.26

ADS

www.adsver.com.mx

(229) 927-55107, 167-8080, 167-8007, 151-7529