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Application Notes TST

- Start up


TST LGB & TST FUxF -

A.480

Device Family:
TST FUxF

Topic:

This Application Note exclusively describes the use of TST LGB as sole protection device (protection level E), in the system with the door controller TST FUxF of FEIG ELECTRONIC and an electronic limit switch, the door controller can evaluate.

 This Application Note is valid only in connection with the assembly instructions of the light curtain

Wiring sample:

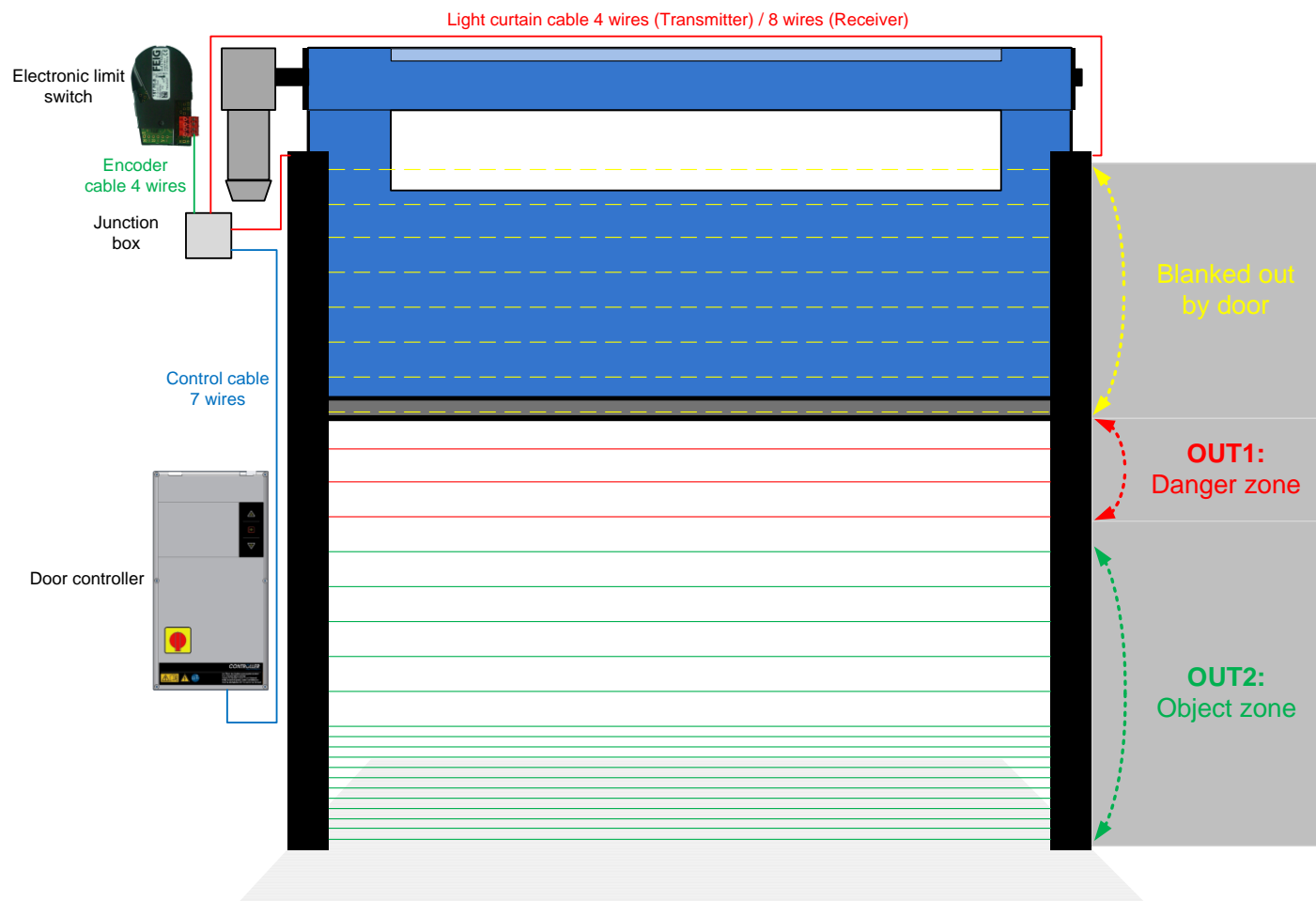


Figure 1: Wiring sample

Connection:

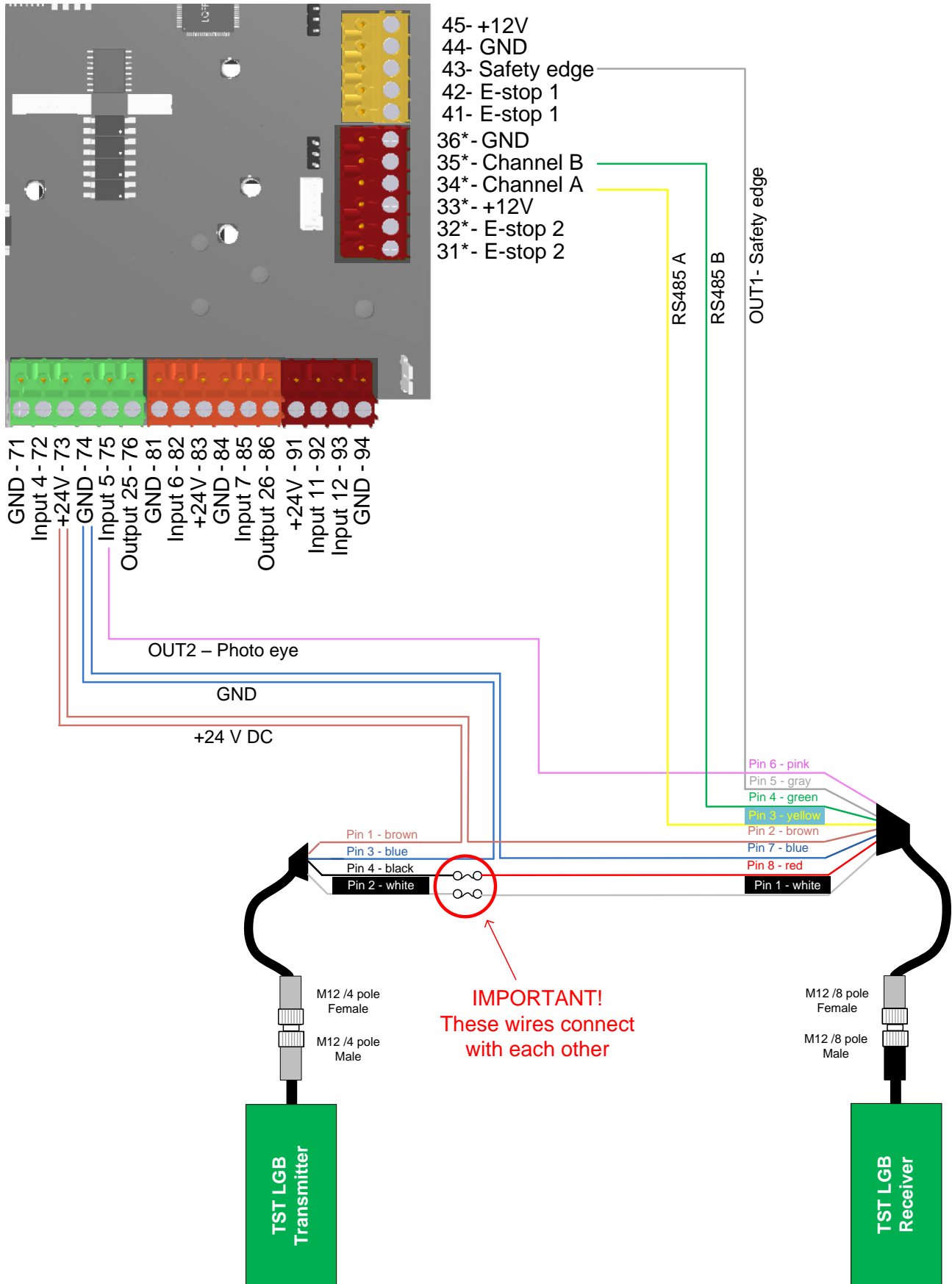


Abbildung 1: Anschluss

Start up:

Activation of the TST LGB Application

With this Application several for the function necessary parameters are set automatically.

1. **Application Parameter A.480:** set to „1“.
2. **Automatical Querying for Range:** Put in the real distance between Transmitter and Receiver by Parameter P.44A in steps of 0.5 m.

The range must be set in accordance with the door width

3. Open SYNC-Mode by briefly pressing the STOP key..
4. Move the door to the OPEN position with the membrane keypad OPEN and

! Synchron. ! I615 LL angef.	I* 6 15
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**If the door moves in the incorrect direction: incorrect motor rotary field, change Parameter P.130 from 1 to 0 (Change rotary field).
If the door does not move, the motor lacks power. The power to the motor can be increased by using the Boost option (increased power at low speed), if necessary, check that the brake was released**

5. save by pressing the STOP key for approx. 3 seconds.

Zur Aufpos. → 0 Übern. mit	5* 4* E* 0*
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6. Info Message: Quality test of light lines

LGx Qual. Test	5* 4* E* 0*
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7. Start automatical teach in of Door CLOSE Position with membrane key CLOSE

! Synchron. ! 0 Start mit	5* 4* E* 0*
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8. Display during Closing

Suche Si-Leiste -xxx Auto Zu	5* 4* C* L*
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9. Message when Door CLOSE position is recognised

FEIG ELECTRONIC I.610 LL Abgl. OK	I . 6 10
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The pre-limit switches and ramps are automatically adjusted by the subsequent travel of the door in automatic mode.

10. Display in Door CLOSE Position

FEIG ELECTRONIC I.555 Lern Fahrt	I . 5 5 5
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11. Briefly press , the door moves up and is now taught in its position.

Tor öffnet I.555 Lern Fahrt	I . 5 5 5
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12. Display in Door OPEN position

Offenh= xxs I.515 Korr. Fahrt	- * E 0 -
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- 13.. The Door will close automatically after the hold open time has count down and moves up and down by itself until the correction drive has finished. (Message I.510 = OK)

Tor schließt I.515 Korr. Fahrt	I . 5 1 5
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14. Message Correctio drive finished.

I.510 Korrek. OK	I . 5 1 0
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15. Display during Opening.

Tor öffnet	0 A U F
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16. Display during Closing.

Tor schließt	2 * U F 0
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Parameter:

P.	[Unit] Range	Function	Description/ Note
A.480	0 ... 1	Application	This parameter activates the Light curtain and automatically sets all the necessary parameters and input functions. 0: Light curtain deactivated 1: Light curtain activated
P.433 ---ww	0 ... 5	Light curtain mode	This parameter activates the light curtain. 0: Deactivated 5: Light curtain with Smart Blanking by door position. The use as the sole safety is possible with this.
P.449 ---ww	0 ... 1	OUT 1 of TST LGB	With this parameter the mode of the output 1 of the light curtain TST LGB is settable: 0: Analog (Tristate) 1: Digital
P.44A -wwww	0,5 ... 10,0	Range	This parameter sets the beam intensity or the door width in increments of 0.5 m.
P.44B ---ww	[10 mm] 0 ... 1180	Blanking from above	Starting from the top, this parameter specifies the number of lines of light that will be blanked. In addition, the distance from the top is shown in millimetres.
P.44C ---ww	[10 mm] 0 ... 2500	Blanking from below	Starting from the bottom, this parameter specifies the number of lines of light that will be blanked. In addition, the distance from the top is shown in millimetres.
P.44E ---ww	0 ... 1	Second learning cycle of light curtain	Activates the second learning cycle of the light curtain at normal driving speed. Required if the position values between slow and normal speed are different. 0: Deactivated 1: Activated
P.931 rrrr		Software version transmitter	Shows the software version of the transmitter.
P.932 rrrr		Software version receiver	Shows the software version of the receiver.
P.933 -rrrr		Serial number transmitter	Displays the serial number of the transmitter.
P.934 -rrrr		Serial number receiver	Displays the serial number of the receiver.
P.935 -rrrr	[Digits]	Error bit transmitter	Display the "System error bitmask" of transmitter.
P.936 -rrrr	[Digits]	Error bit receiver	Display the "System error bitmask" of receiver.
P.937 -wwww		Aligning mode	Activation of the alignment mode in the light curtain (LED flashing codes). 0: Alignment mode deactivated. 1: Alignment mode activated.
P.938 -rrrr		Light line quality	Diagnostic display for commissioning as alignment aid or for troubleshooting purposes. Requires activation of P.937.
P.93C zwwww		Error counter RS485	The number of faulty protocols of the RS485 interface between the transmitter and the receiver of the light curtain is displayed.



The counter can be reset by holding the Stop button pressed.

Error messages:

Faults can be acknowledged provided they are not reset automatically.



WARNING The cause of the fault must be resolved first before the corresponding message is acknowledged. Therefore keep the STOP button kept pressed for approx 5 seconds

No.	Description	Possible reason for error
F.601	Bad Light curtain reception quality	Poor reception quality when the light curtain is started <ul style="list-style-type: none"> • Light curtain dirty • Protection foil not removed • bad aligned • wrong Range set.
F.610	Light curtain light line alignment	Light line alignment has not been done. <ul style="list-style-type: none"> • Too less Increments
F.611	Light curtain light line position values not plausible	Position values stored by the light curtain do not match door movement <ul style="list-style-type: none"> • Objects in the door area during teach in
F.612	External RS-485	RS-485 communication failure between Receiver and Door Controller <ul style="list-style-type: none"> • Insufficient valid position data • A and B wires twisted • wrong connection.
F.613	Internal RS-485	RS-485 communication error between Transmitter and Receiver <ul style="list-style-type: none"> • A and B wires twisted • wrong connection
F.615	Internal error Light curtain transmitter	Internal transmitter error <ul style="list-style-type: none"> • RAM test fail • ROM test fail • Program run error • Sync error • Addressing module defective • Dark test fail • D/A converter defective • Replace hardware!
F.616	Internal error Light curtain receiver	Internal receiver error <ul style="list-style-type: none"> • RAM test fail • ROM test fail • Program run error • Sync error • Addressing module defective • Dark test fail • D/A converter defective • Watchdog not triggered or hangs • Replace hardware!
F.617	Light curtain incompatibility	Transmitter and receiver are not compatible. <ul style="list-style-type: none"> • modified Transmitter serial number • incompatible Hardware version / revision level • incompatible Software version.
F.619	Light curtain Parameters	Parameter settings not plausible.
F.621	Light curtain test error (transmitter)	test error for the internal transmitter system test
F.622	Light curtain test error (receiver)	test error for the internal receiver system test

Application Notes TST

- Start up TST LGB & TST FUxF -

Page 6 / 6

No.	Description	Possible reason for error
F.626	Light curtain test error (Out 1)	Test / wiring error of output 1
F.627	Light curtain test error (Out 2)	Test / wiring error of output 2
F.628	Light curtain dark test error	Dark test error <ul style="list-style-type: none"> • external light source • uncontrolled transmissions • defective receiver

Information messages:

No.	Description	Explanation
I.610	Light curtain light line alignment OK	Light line alignment completed successfully.
I.615	Light curtain light line alignment start	Light line alignment requested.
I.616	Second light line alignment	The second light line alignment with normal drive speed is active
I.620	Light curtain masking at top	Door in OPEN position when syncing but some light lines are still masked. Adjust P.446 door masking in OPEN position!
I.621	Light curtain position encoder resolution too low	The resolution of the installed position encoder is too low to maintain robust light curtain operation. More increments are required per door move . (Message only occurs when DIP-Switch is ON.)