

# Mounting and installation manual

## Master / Slave combination TPS 20 for opposite sliding gates



TPS 20



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## GENERAL WARNING AND SAFETY NOTES

- These installation and operating instructions form an integral part of the product “sliding gate operator”. They have been specifically written for professional installers trained and skilled in the trade and should be carefully read in their full length before carrying out the installation. They describe the proper installation and operation of the sliding gate operator only, not of the overall device “automatic gate”. After the installation this manual has to be handed over to the user.
- Installation, connection, adjustments, putting into operation, and servicing may only be carried out by trained professionals in full accordance with these installation- and operating instructions.
- Before carrying out works at the gate-system, the power supply has to be turned off.
- The EU Machine Directive, laws and rules concerning the prevention of accidents, and laws and standards which are in force in the EU and in the individual countries have to be strictly followed.
- The TOUSEK Ges.m.b.H. cannot be held liable for any claims resulting from disregards of the laws and standards in force during the installation and operation.
- The packaging materials (cardboard, plastic, EPS foam parts and filling material etc.) have to be properly disposed of in accordance with the applying recycling- and environmental protection laws. They may be hazardous to children and therefore have to be stored out of children’s reach.
- The product is not suitable for installation in explosion-hazardous areas.
- The product may only be used in accordance with its original purpose, for which it has been exclusively designed, and which is described in these installation and operating instructions. The TOUSEK Ges.m.b.H. rejects any liability if the product is used in any way not fully conforming to its original purpose as stated herein.
- Children have to be instructed, that the gate facility as well as the belonging parts may not be used improperly, e.g. for playing. Furthermore handheld transmitters have to be kept in safe places and other impulse emitters as buttons and switches have to be installed out of children’s reach.
- Before beginning with the installation the installer has to make sure that all mechanical components of the gate facility, like carrier profile/rail, gate frame and panels, guiding elements etc. are sufficiently supportive and resistant for the purpose of gate automation.
- All electrical installations have to be made in full conformity with the applying rules and laws (e.g. using a fault current circuit breaker, proper grounding etc.).
- An all-pole disconnecting main switch with a contact opening-gap of minimum 3 mm has to be foreseen.
- The electric motor heats up during operation. Therefore the device should only be touched after it has cooled off.
- After installation the proper function of the gate facility and the safety devices has to be checked!
- The TOUSEK Ges.m.b.H. rejects any liability for claims resulting from usage of the product in combination with components or devices which do not fully conform to the applying safety laws and rules.
- Only original spare- and replacement parts may be used for repair of the product.
- The installer has to inform the user about all aspects of the automatic operation of the complete gate facility, as well as about emergency operation. The installer further has to supply to the user all instructions relating to the safe operation of the gate facility. The installation and operating instructions also have to be handed over to the user.
- **Please notice that the warranty will not be applicable if the label with the engine number has been removed or damaged.**



## Maintenance

- **Maintenance works may only be carried out by qualified personnel.**
- **Check the proper sensitivity setting of the ARS safety reverse system once a month.**
- **Check the proper function of the emergency release mechanism periodically.**
- **Check if all mounting screws are securely fastened periodically.**
- **Remove dirt deposits from the operator and gear rack periodically.**
- **Maintenance and servicing of the complete gate facility has to be carried out according to the gate builder’s/ installer’s instructions.**

### Characteristics TPS 20

- Suitable for heavy duty use (80% duty cycle)
- Large, illuminated LC-Display (2x16 characters)
- Clear text menu programmable via four buttons
- Operation mode is selectable (Impulse, Automatic, Deadman)
- Free adjustable partial opening for pedestrians or car/truck function
- Distance measurement made via speed sensor (without limit switches)
- Adjustable soft stop (distance and speed)
- Ramp shaped soft start (approx. 1s)
- ARS – Automatic Reversal System
- Mechanical brake for safe gate stop
- Permanent self-regulating force with boost function (increased start force)
- Electronic monitoring of emergency release
- Direct connection of four separate 8,2 kΩ safety contact edges
- Input for gate back area surveillance
- Status display for safety and button/switches inputs
- Self-monitoring of photocell
- Connection slot for radio receiver
- Optional, external gate status display (e.g. for concierge)
- Optional courtyard lamp module (230V, 100W)
- 2 x 130mm DIN rail for additional accessories
- Dimension (W x H x D): 616 x 532 x 211mm
- Height adjustable gear wheel: 99–166mm



TPS 20

### Technical data

Sliding gate operator TPS 20				
Control unit	integrated	Max. drive	30m	
Power supply	230V a.c., 50Hz	duty cycle in S3 mode	80%	
motor voltage	230V a.c.			
max. current consumption (excl. equipment)	4A	Ambient temperature	-20°C +50°C	
Gear wheel	Z15M4	Protection class	IP44	
Max. gate weight	2000kg	Torque sensor	■	
Speed	14m/min			
Torque	45Nm	Art.no.	Master	11110490
Increased starting torque	65Nm		Slave	11110500
Optional equipment	pluggable receiver • additional module für courtyard/control lamp • additional module for gate status • Traffic light control unit • radio transmission system TX 310 • inductive system TX 400i			



### General installation notes

Before installing the **tousek TPS 20** sliding gate operator we recommend checking the following points:

- **Checking the gate structure:**

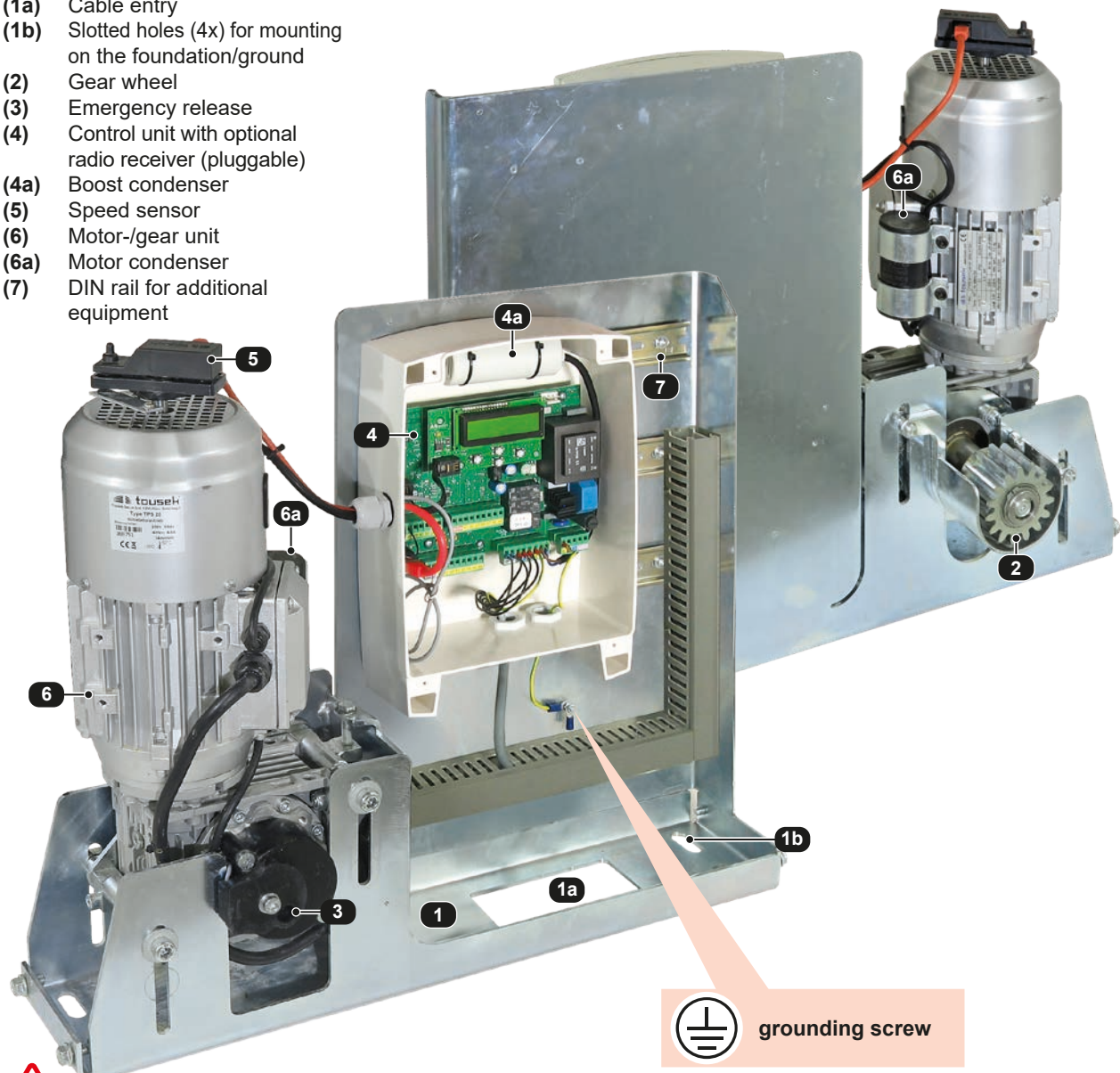
**On a gate which travels on floor rails please check the bottom rollers and the upper guide rollers and make sure that there is no undue friction or jamming.**

**On a cantilever gate please check if the gate can be moved out of its end-positions without undue effort.**

- The gate must travel in a stable manner without lateral movements of the gate panel.
- Make sure that the gate travels in a regular way without undue friction or jamming along the whole travel length.
- Make sure that there are stoppers at both ends of the track, preventing the gate from running over its travel limit.

### Technical layout TPS 20

- (1) Ground plate
- (1a) Cable entry
- (1b) Slotted holes (4x) for mounting on the foundation/ground
- (2) Gear wheel
- (3) Emergency release
- (4) Control unit with optional radio receiver (pluggable)
- (4a) Boost condenser
- (5) Speed sensor
- (6) Motor-/gear unit
- (6a) Motor condenser
- (7) DIN rail for additional equipment



### ATTENTION !

- **ATTENTION: Mechanical limits are necessary!**
- **ATTENTION: The sliding gate operator TPS 20 has been developed and designed for the automation of horizontally travelling sliding gates. Gates on sloping tracks (i.e. gates which follow an inclined, non-horizontal, travel path) must be automated with additional safety devices (which make sure that the gate cannot start moving on its own from any gate position).**

After installing the protection tubes (**check cable exit of operator (1a)**) and having finished the concrete foundation, the motor has to be bolted through the 4 slotted holes (**1b**) to the concrete foundation. It is particularly important that the operator is mounted parallel to the gate panel, and that the measurements given in the drawing are kept.

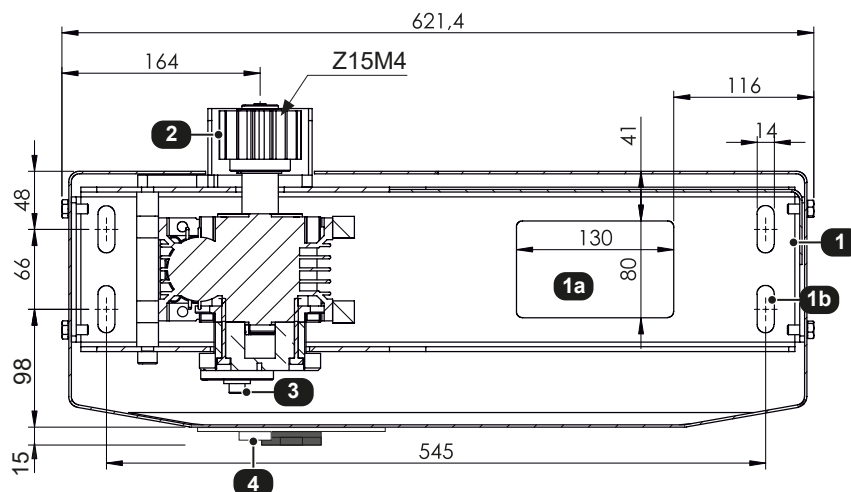
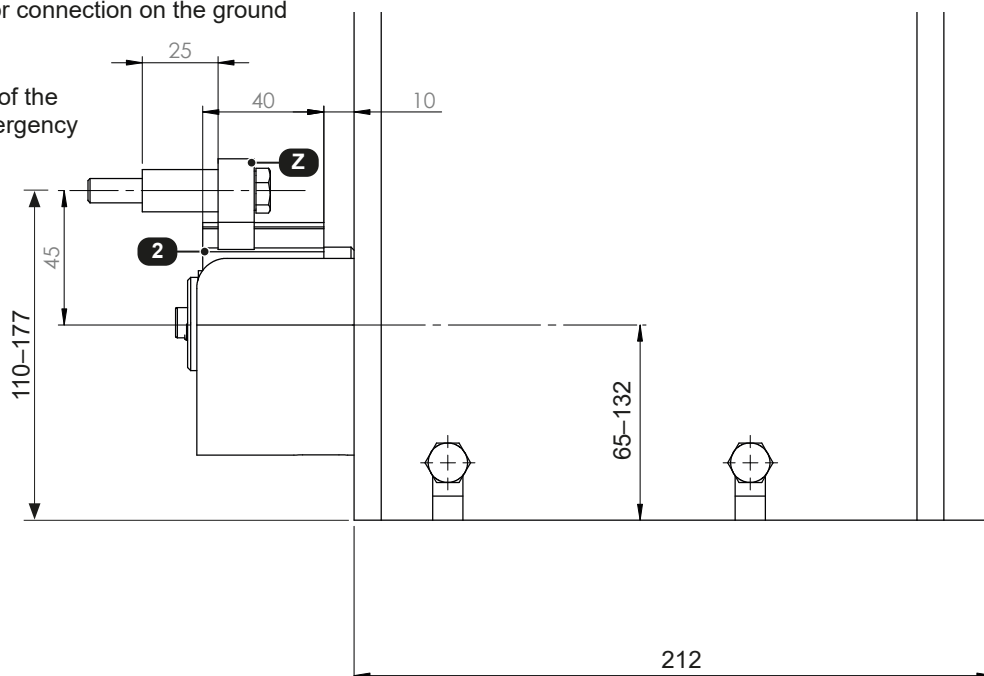


**NOTE concerning cable laying**

- The electric cables have to be laid in insulating sleeves which are suitable for underground usage. The insulating sleeves have to be lead into the inner of the operator housing (see picture).
- 230V cables and control lines have to be laid in separate sleeves.
- Only double-insulated cables, which are suitable for underground usage (e.g. E-YY-J) may be used.
- In case that special regulations require another type of cable, cables according to these regulations have to be used.

**Mounting dimensions TPS 20 (in mm)**

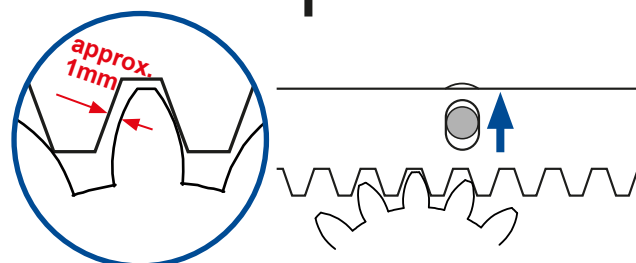
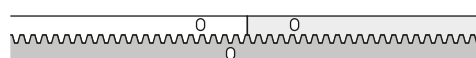
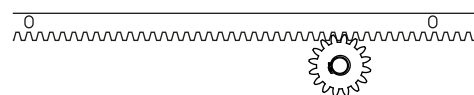
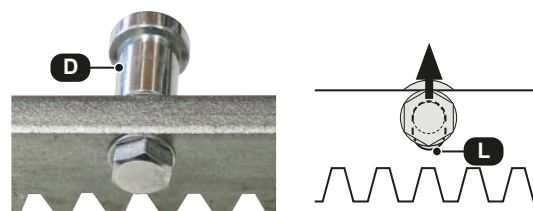
- (1) Ground plate
- (1a) Cable inlet
- (1b) Slotted holes (4x) for connection on the ground
- (2) Gear wheel
- (3) Emergency release
- (4) Profile half cylinder of the housing flap for emergency release
- (Z) Steel gear rack



## 2.2 Installation of the gear rack

## Installation

- Disengage the motor from the output drive pinion with the emergency release lever (see emergency release for instructions) and open the gate completely.
- Install the spacer tubes (D) with the help of the bolts and washers on the first meter of gear rack
- Make sure that the bolts/screws sit in the top end of the vertical slots (L), then tighten them.
- Place the first gear rack element on the drive pinion and fix it in place with a screw clamp.
- Move the gate by hand until reaching the end of the first gear rack element, then weld the first, second, and third spacer tube to the gate
- Proceed with the other gear rack elements in the same manner.
- **Before fixing the second meter of gear rack it is essential to place another gear rack element under the first and second gear rack elements, thereby making sure that the gearing module between the two gear rack elements will be exactly kept (see illustration).**
- After installation of the gear rack please loosen the fastening bolts slightly and rise the gear rack a little along the vertical slots, creating a **distance of approx. 1 mm between the flank of the drive pinion and the gear rack.**
- The gear rack elements can also be installed without welding, i.e. by screwing them to the gate frame together with the spacer tubes. Apart from that the gear rack elements have to be installed in the same manner.



### Attention

- Do not weld the individual gear rack elements together!
- With a gate weight of >1000 kg we recommend using racks in a wider version.



In case of a power failure or other defect the drive pinion can be disengaged from the gearmotor as follows:

- **Switch off power supply !**



For emergency release of the TPS 20 the housing flap, which can be locked with a profile half cylinder, must first be opened! You will find the emergency release key packed together with the installation manual.

- Turn the lock cover **(3a)** in counter-clockwise direction, until the emergency release key **(3b)** can be inserted. Now turn the key **(3b)** counter-clockwise to the stop, until you hear a click and it reaches the unlocked position.
- Now the gate can be opened and closed by hand.

*Re-engaging the emergency release mechanism:*

*To return to normal motor operation please turn back the key to its original position.*



### Important

- **After the key has been turned back, slowly move the gate manually in its travel direction until you can hear that the gearing has re-engaged!**

**Remove the key afterwards.**

*With next command the motor searches the open position (a new learning of end positions is not necessary).*



## 2.4 Dismantling

The dismantling of motor is made the other way around of mounting.



**Before dismantling please plug off power supply of motor !**

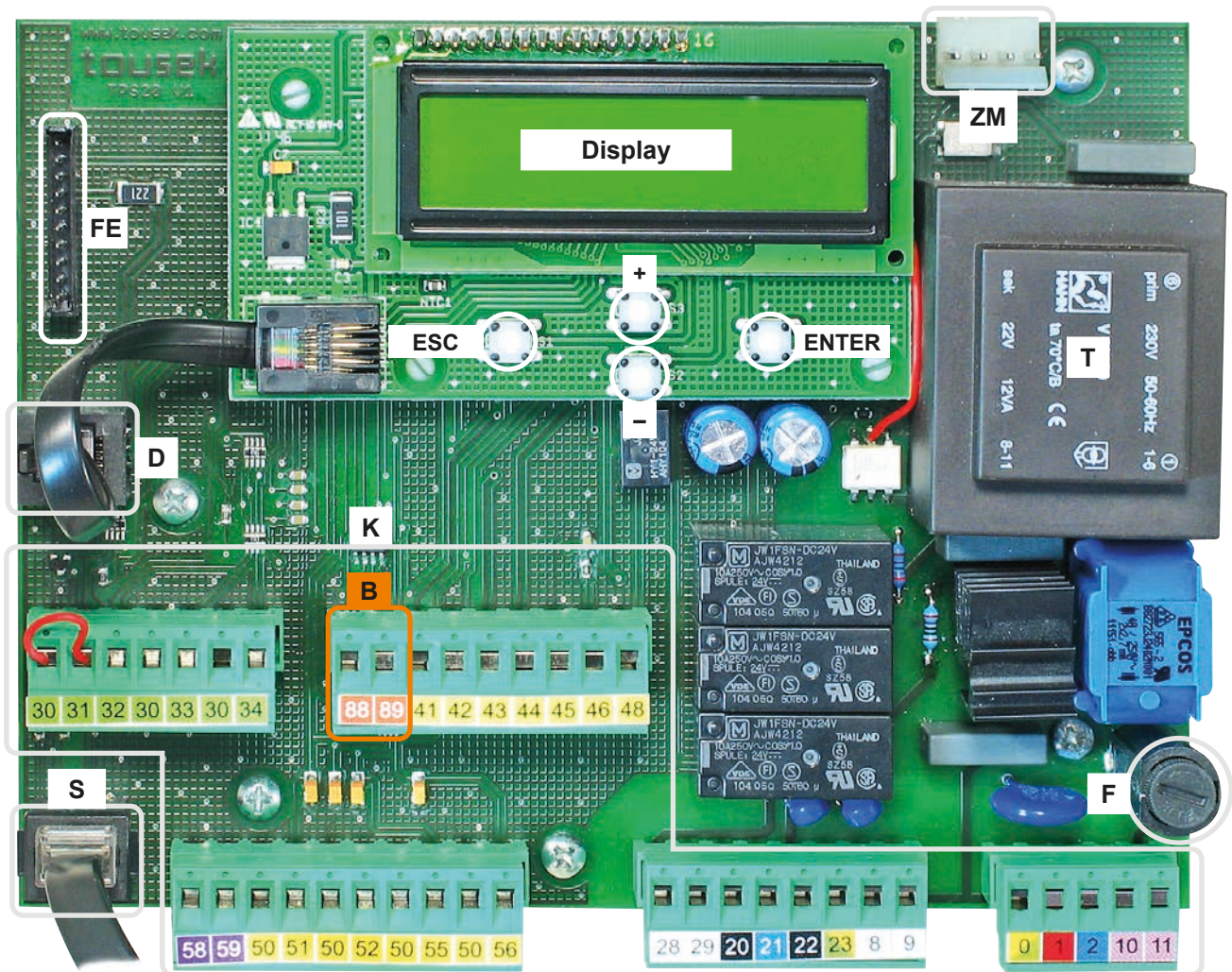


#### Overview of the control unit



#### Attention

During connection, adjustment and maintenance works please take care, that the electronic circuit board won't be damaged by moisture (rain).



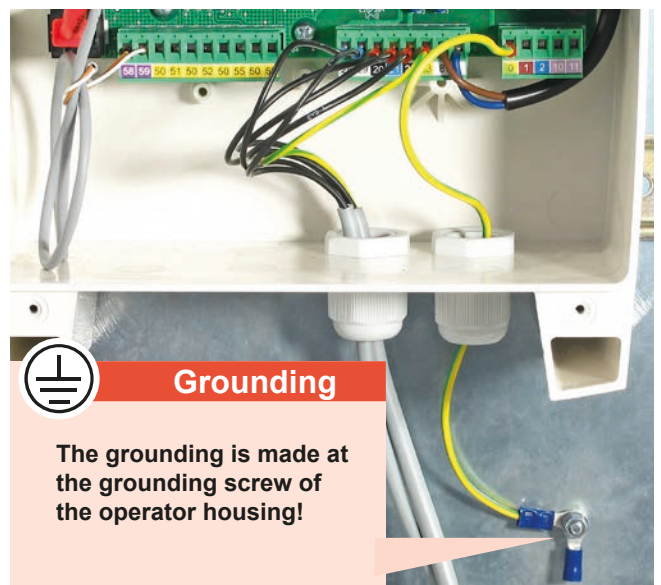
#### Important

The optional „tousek-connect“ or the „tousek service interface“ must be connected with socket (D)!



#### Elements of control board

- (K) **Terminal blocks**
- (B) bus system terminals 88/89 (connection Master/Slave)
- (S) Sensor plug
- (D) Display plug or TC-/TSI-connection (optional „tousek-connect“ / „tousek service Interface“)
- (FE) Slot for optional radio receiver ([☞ page 24 for connection](#))
- (ZM) Connection slot for optional module ([☞ page 21](#))
- (F) Primary fuse T 6,3A
- (T) Transformer



#### Grounding

The grounding is made at the grounding screw of the operator housing!



The stop input (t.30/31) has no emergency stop function! - In order to ensure the emergency stop function, provide the supply line with an all-pole disconnecting emergency stop switch, that locks after actuation!

#### Master central unit

#### Terminal assignment

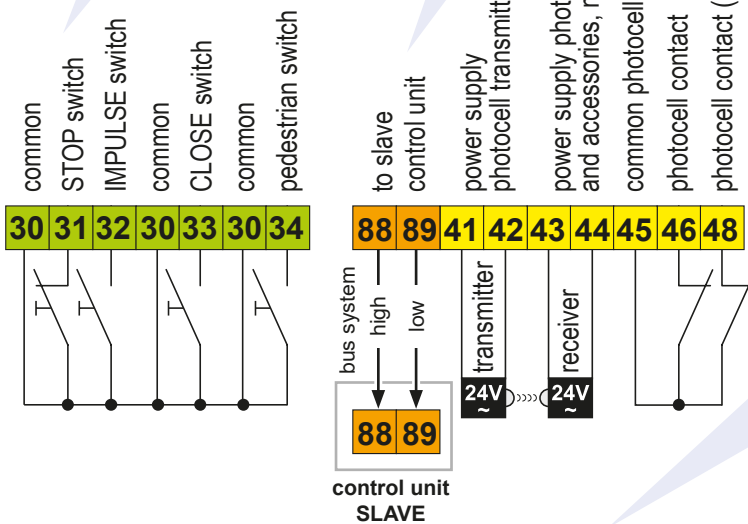


#### Connection Master-Slave central unit

- In order to connect the master to the slave control unit the terminals 88 and 89 of the bus system have to be connected to each other.
- The max. cable length between the sliding gate openers is 25m.
- Cable type: eg: PVC control cable YSLY 2 x 1mm<sup>2</sup> or equivalent.

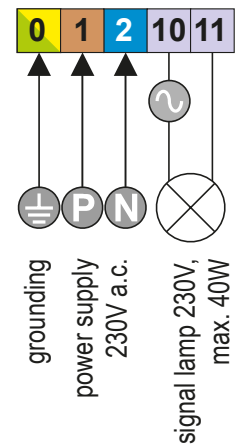
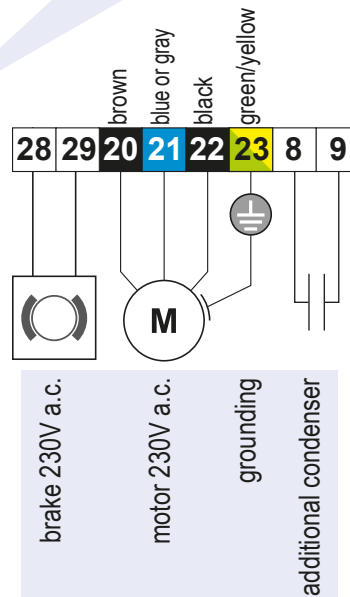
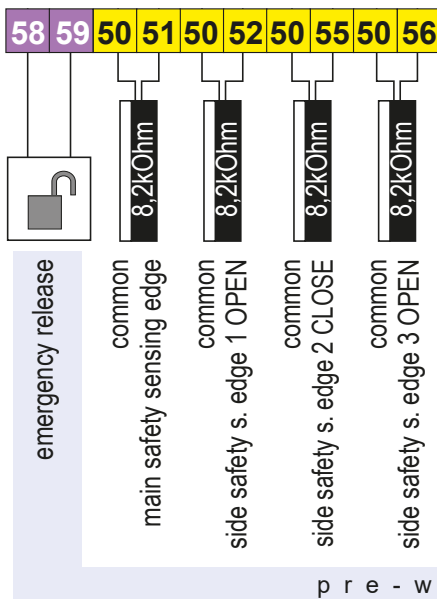
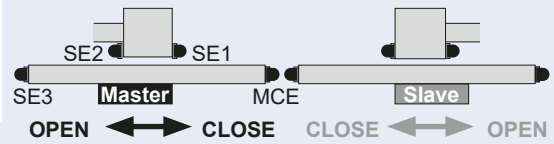


If no stop switch is connected, terminals 30/31 have to be wire-bridged (the jumper is set in the factory).



*Function main safety sensing edge (MCE):*  
Safety during closing

*Function side safety sensing edges (SE):*  
Safety during opening: SE1, SE3  
Safety during closing: SE2

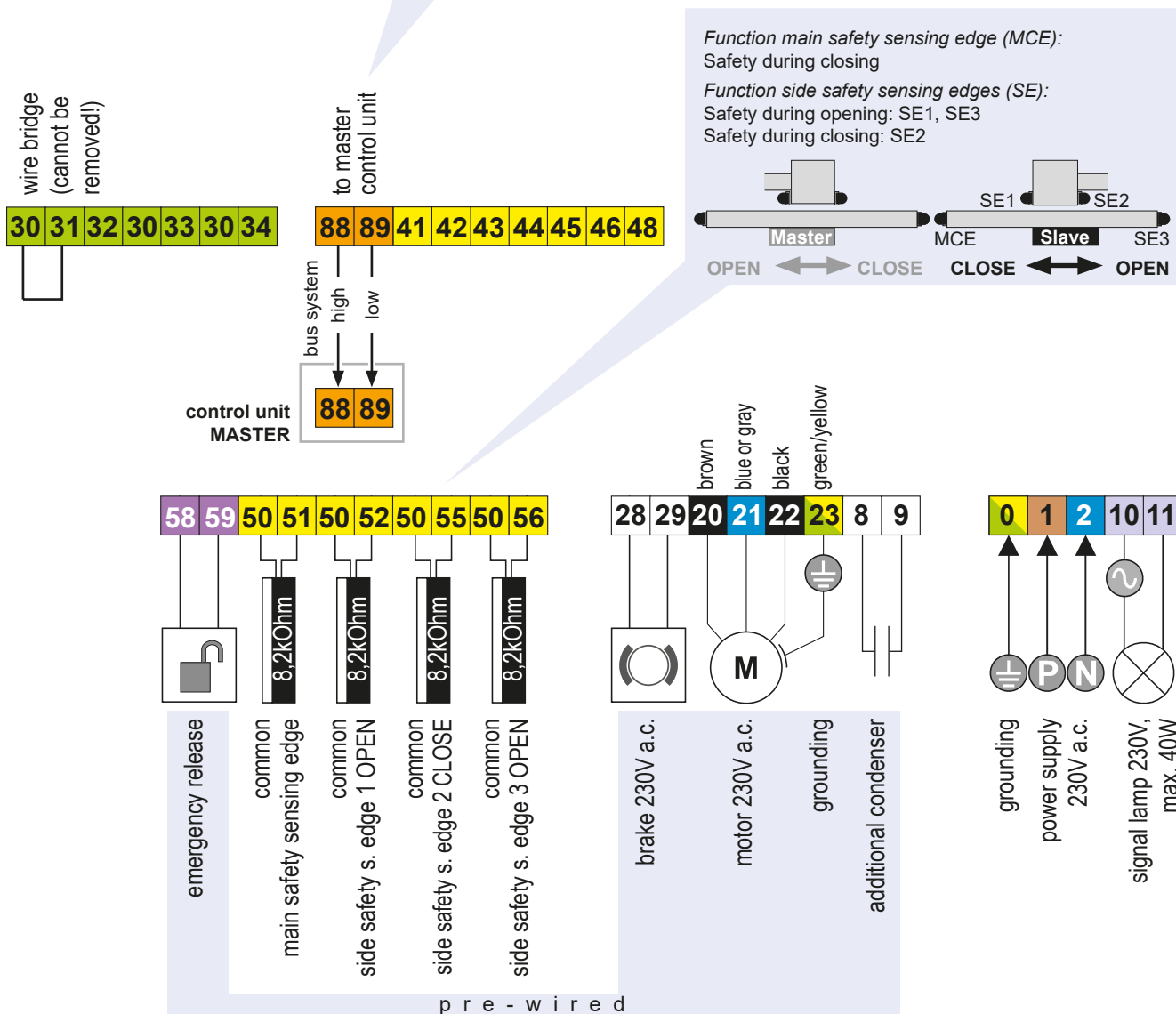


pre-wired



### Connection Master- Slave central unit

- For the connection of the master control unit to the slave one the terminals 88 and 89 of the bus system have to be connected to each other.
- The max. cable length between the sliding gate motors is 25m
- Cable type: eg: PVC control cable YSLY 2 x 1mm<sup>2</sup> or equivalent.



### Warning notes

- Before removing the control cover, the main switch must be turned off!
- If the control is power supplied, its inner part is under voltage.
- In order to avoid electrical strokes, the safety regulations have to be kept.
- The device may only be connected by trained professionals.
- The product is not suitable for installation in explosion-hazardous areas.
- An all-pole disconnecting main switch with a contact opening gap of min. 3 mm has to be foreseen. The gate facility has to be secured according to the valid safety regulations!
- **IMPORTANT:** The control lines (sensor, buttons, radio, photocells, etc.) have to be laid separately from the 230V lines (supply line, motors, signal lamp).





## Programming buttons

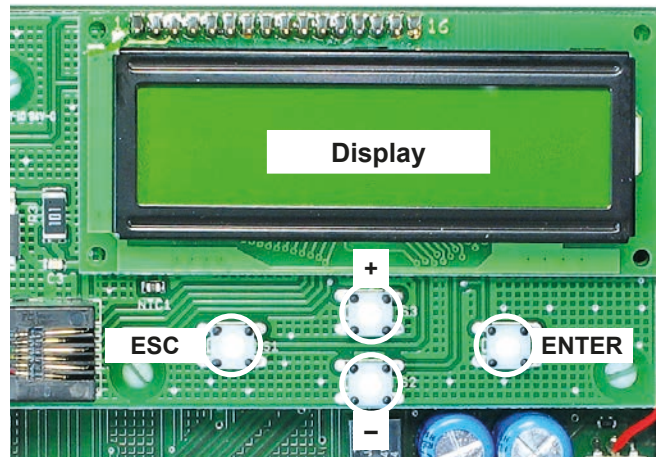
## Adjustments - overview



- Before starting the programming, please choose the language. Use the buttons **+** or **-** to choose menu language and confirm with **ENTER**.
- The setting of the language must be done in the master and the slave controller.

**Note:** Language selection can also be chosen by pressing the **ESC** button for 5s, from any position in menu.

- The text display informs about behaviour, chosen menus and adjustment of different settings.
- The programming of the control is carried out with the help of four buttons (**+**, **-**, **ENTER** und **ESC**).
- Scrolling through the available menu points (up/down) or the adjustment of a parameter (value increase/decrease) is carried out with buttons **+** and **-**. **AUTO-COUNT:** when holding one of the buttons the value changes automatically.
- When pressing the **ENTER**-button a confirmation for entering the shown menu point, resp. for accepting the shown value of a parameter is given.
- When pressing the **ESC**-button you return to the superior menu point. Possibly changed adjustments of a parameter are rejected with this button (the former values will remain).
- **AUTO-EXIT:** if no button is pressed during 1 min. then the menu switches automatically to the "ready" menu (without saving changed parameters)



## Programming menu

## Adjustments - overview



- The program menu is divided into "BASIC SETTINGS" and "MENU CONTROL"

BASIC SETTINGS

- **When entering the programming of the control unit for the first time you will see the BASIC SETTINGS** (➔ „Putting into operation“ page 25).
- Here the necessary adjustments which are necessary for the use of the operator/gate can be set quickly.
- For advanced settings/programming please choose the menu point "menu control".

MENU CONTROL

- For further programming you will reach immediately the MENU (CONTROL) (Basis settings are skipped)
- The main menu contains all possible settings. In the slave control unit you can select only a part of the menu options described in the menu structure (marked with "M / S"). **All other functions are taken over by the master control!**



The different menu points are indicated as follows:

○ = selectable settings    ⊙ = factory settings    ⇄ = status display

➔ shows the menu points which are in the "BASIC SETTINGS"

Note: some adjustments regarding function or operating logic can only be executed if gate is closed and if the display shows „ready“.



Main layer		Sub layer	Settings/adjustments
buttons/switches ➔ page 14	M	impulse button	<input type="radio"/> OPEN/STOP/CLOSE <input type="radio"/> OPEN/CLOSE/OPEN <input type="radio"/> OPEN <input type="radio"/> DEAD MAN
	M	pedestrian button	<input type="radio"/> OPEN/STOP/CLOSE <input type="radio"/> OPEN/CLOSE/OPEN <input type="radio"/> OPEN <input type="radio"/> DEAD MAN ?
	M	motor partial opening	<input type="radio"/> Master <input type="radio"/> Slave <input type="radio"/> Master and Slave
safety ➔ page 16	M	photocell	<input type="radio"/> active <input type="radio"/> not active
	M	PHC- back area	<input type="radio"/> not active <input type="radio"/> active
	M	PHC-function	<input type="radio"/> when closing reverse <input type="radio"/> stop - after release open <input type="radio"/> during closing stop, then close
	M	PHC- pause time	<input type="radio"/> no influence of photocell <input type="radio"/> abort pause time <input type="radio"/> re-start of pause time <input type="radio"/> immediate close after opening
	M	PHC- self test	<input type="radio"/> active <input type="radio"/> not active
safety edges ➔ page 18	M/S	Main clos. edge	<input type="radio"/> active <input type="radio"/> radio edge <input type="radio"/> TX 400 <input type="radio"/> not active
	M/S	Side edge 1 OPEN	<input type="radio"/> active <input type="radio"/> not active
	M/S	Side edge 2 CLOSE	<input type="radio"/> active <input type="radio"/> not active
	M/S	Side edge 3 OPEN	<input type="radio"/> active <input type="radio"/> radio edge <input type="radio"/> TX 400 <input type="radio"/> not active
	M/S	SE-status display	↔ status display of safety sensing edges
motor ➔ page 20	M/S	max. force	<input type="radio"/> 25...100% [ increment 5 ] ⊙ = 70%
	M/S	incr.start.force	<input type="radio"/> OFF, 0,5...3,0 [ increment 0,5 ] ⊙ = 2,0
	M/S	ARS-response time	<input type="radio"/> 0,15...0,95s [ increment 0,05 ] ⊙ = 0,50s
	M/S	speed	<input type="radio"/> 40...100% [ increment 5 ] ⊙ = 100%
	M/S	soft way	<input type="radio"/> 0...2m [ increment 0,1 ] ⊙ = 0,5m
	M/S	soft speed	<input type="radio"/> 30...60% [ increment 5 ] ⊙ = 50%
	M/S	end position OPEN	<input type="radio"/> 0...-30 [ increment 1 ] ⊙ = -5
operating mode ➔ page 20	M	impulse mode	<input type="radio"/> Stop, start of pause time <input type="radio"/> impulse suppression when opening <input type="radio"/> pause time extension
	M/S	opening direction	<input type="radio"/> <<<- left <input type="radio"/> ->>> right
	M	operating mode	<input type="radio"/> impulse mode <input type="radio"/> automatic 1...255s [ increment 1 ]
	M	partial opening	<input type="radio"/> 10...100% [ increment 1 ] ⊙ = 30%
	M	automatic mode	<input type="radio"/> complete/partial opening <input type="radio"/> only complete opening <input type="radio"/> only partial opening
	M	pause time logic	<input type="radio"/> no influence <input type="radio"/> always open in automatic mode
	M	additional module	<input type="radio"/> courtyard lamp/control lamp <input type="radio"/> status display 1 <input type="radio"/> status display 2
lights/lamps ➔ page 22	M	prewarning OPEN	<input type="radio"/> OFF, 1...30s ⊙ = OFF
	M	prewarning CLOSE	<input type="radio"/> OFF, 1...30s ⊙ = OFF
	M	courtyard lamp <sup>1)</sup>	<input type="radio"/> OFF, illum. time 5...950s ⊙ = OFF
	M	control lamp <sup>1)</sup>	<input type="radio"/> illuminates when opening/closing <input type="radio"/> blinks slowly / illuminates / blinks <input type="radio"/> illuminates in open position
diagnosis ➔ page 23	M/S	status display	↔ status display of all inputs
	M	delete positions	<input type="radio"/> NO <input type="radio"/> YES
	M	factory setting	<input type="radio"/> NO <input type="radio"/> YES
	M/S	software version	↔ show software version
	M/S	serial number	↔ show serial number
	M/S	protocol	↔ show protocol notes
	M/S	status sensor	↔ show sensor

\*) if impulse button is set to DEADMAN, then the pedestrian and close button are also set automatically to DEADMAN mode. (not selectable under „pedest.-button“)

<sup>1)</sup> The menu points courtyard lamp and control lamp will only appear on display if in menu „Additional module“ ⊙ courtyard lamp/control lamp is selected.



tousek®

DIGITAL



ESC




ENTER

integrated control board for sliders TPS 20 / Master-Slave



## Warning

- Before removing the control cover, the main switch must be turned off! 
- If the control is power supplied, its inner part is under voltage.
- In order to avoid electrical strokes, the safety regulations have to be kept.
- The device may only be connected by trained professionals.
- The product is not suitable for installation in explosion-hazardous areas.
- An all-pole disconnecting main switch with a contact opening gap of min. 3 mm has to be foreseen. The gate facility has to be secured according to the valid safety regulations!
- **IMPORTANT:** The control lines (sensor, buttons, radio, photocells, etc.) have to be laid separately from the 230V lines (supply line, motors, signal lamp).

the menu points selectable in the master control (= **M**) or in the master and slave control (= **M/S**) are indicated as follows:



○ = selectable setting    ⊙ = factory settings    ⇌ = status display  
 [G] shows the menu points which are in the "BASIC SETTINGS" of the Master control.

Furthermore, possible notes about connection and similar are assigned as follows:

**M**

=concerns the master central unit,

**M/S**

= concerns the master and slave central unit

## Buttons / switches

## Connections and adjustments

Impulse button (terminals **M** 30/32)

**M**

## Buttons/switches

- ⊙ **OPEN/ STOP / CLOSE impulse repetition (factory settings):** After a command of the impulse switch the motor starts an open or close movement. If the impulse switch is pressed again during this movement, the motor stops. With the next command, the motor drives in the opposite direction of the last gate movement.
- **OPEN / CLOSE / OPEN impulse repetition:** After a command of the impulse switch the motor starts an open or close movement. If the impulse switch is pressed again during this movement, the motor reverses.



- In this operation mode it is not possible to stop the motor with the impulse switch – it always travels until reaching an end position. (Opened or closed position).
- for the function OPEN/CLOSE/OPEN we strongly suggest the installation of a photocell!

- **OPEN:** Only open commands are accepted of the impulse switch. Closing the gate with the impulse switch is not possible.
- **DEAD-MAN:** The motor opens as long as the impulse switch is pressed – closing the gate with the impulse switch is not possible. As soon as the switch is released, the gate stops. **If hold to run operating mode is selected, the radio receiver slot (FE) is set out of order for reasons of safety.**



**Positioning / initial operation with impulse button (**M** terminal 30/32) in deadman mode:**

**IMPORTANT:** Press and hold the impulse button until the operator moves the gate in open and close position and the display shows „ready“.

After carrying out an emergency release or after a power failure, press and hold the impulse button until the gate is in open position and the display shows „gate open“.

[G] Putting into operation page 25)



As impulse emitters pushbuttons or key switches as well as external radio receivers with potential free make contacts can be used.



## Pedestrian button (terminals **M** 30/34)

**M**

Buttons / switches

- ⊙ **OPEN/ STOP / CLOSE impulse repetition:** An impulse through the pedestrian button-while the gate is in motion causes gate stopping. If the gate is within the pedestrian area, then an impulse through the pedestrian button causes inversion of the direction.  
If the gate is in complete open position an impulse through the pedestrian button causes a movement in CLOSE direction and the gate stops at pedestrian OPEN position.
- **OPEN / CLOSE / OPEN impulse repetition:** If the gate is within the pedestrian area, then an impulse through the pedestrian button causes inversion of the direction.  
If the gate is in complete open position an impulse through the pedestrian button causes a movement in CLOSE direction and the gate stops at pedestrian OPEN position.



- In this operation mode it is not possible to stop the motor with the pedestrian button – it always travels until reaching an end position. (Opened or closed position).
- for the function OPEN/CLOSE/OPEN we strongly suggest the installation of a photocell!

- **OPEN:** Only open commands are accepted of the pedestrian opening button. Closing the pedestrian entry with the button is not possible.
- **DEADMAN:** The motor opens as long as the pedestrian button is pressed – closing the gate with the pedestrian button is not possible. As soon as the switch is released, the gate stops. **If hold to run operating mode is selected, the radio receiver slot (FE) is set out of order for reasons of safety.**



The DEAD MAN setting cannot be actively selected, but it gets automatically selected when the impulse button is set on DEAD MAN.



- As pedestrian button you can use pushbuttons or key switches as well as external radio receivers with potential free make contacts can be used.

## Motor partial opening

**M**

Buttons / switches

- ⊙ **Master:** partial opening by Master operator.
- **Slave:** partial opening by Slave operator.
- **Master and Slave:** partial opening by both operators.

## CLOSE-button (terminals **M** 30/33)

Buttons / switches

- A command with the CLOSE-switch engages closing of gate. In deadman mode the gate closes as long as the CLOSE-switch is pressed/switched.  
As soon as switch is released the gate movement stops.



As CLOSE-buttons you may use pushbuttons or key switches as well as external radio receivers with potential free make contacts can be used.

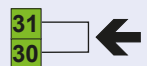
## STOP-button (terminals **M** 30/31)

Buttons / switches

- when pressing the stop button the gate stops in any desired position.



As stop button a break contact has to be used.  
If no stop button is connected, terminals 30/31 have to be wire-bridged.



The stop input has no emergency stop function! - In order to ensure the emergency stop function, provide the supply line with an all-pole disconnecting emergency stop switch, that locks after actuation!

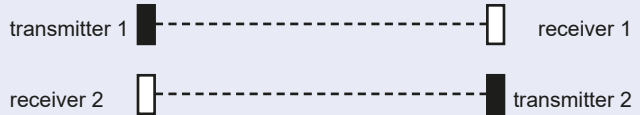


### Important: Photocells notes

- The control unit has a power supply connection for a 24V a.c. photocell (LS):  
supply LS-transmitter: terminals 41/42 / supply LS-receiver: terminals 43/44  
Note: in „gate closed“ position the terminals 41/42 are being switched into energy saving mode (no current) (only, if no TX 310 system is used) !
- The contact has to be closed when using powered and positioned photocells (opening contact).  
Connection of the photocell contact: terminals 45/46, photocell back area contact: terminals 45/48

- When using two pairs of photocells please do not install both photocell transmitters/receivers on the same side (to eliminate interference between both) !

Standard:

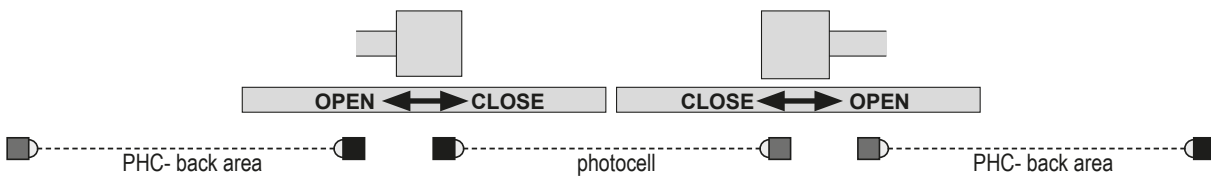


With SYNC-function:



Exception: photocells with SYNC function allow the installation of both photocell transmitters/receivers on the same side without causing interference to each other.

- **Photocell self-test function:** The control unit has a monitoring function for the connected photocells. A test is triggered by each impulse and will be checked if the receiver of the photocell responds to the signal from the photocell transmitter. If there is no communication between the photocell receiver and transmitter the control unit responds with an error.  
 The deactivation of the self-test function is only allowed if the safety installations correspond to the category 3 !
- The exact function of the photocells depend on the programming of the control unit.  
Photocell function please see menu point SAFETY / photocell function or photocell with pause time
- you will find detailed information in the corresponding photocell manual.



#### Photocell (contact: terminals 45/46) M

Safety

- ⊙ **active:** to be selected, if photocell should be triggered.
- **not active:** to be selected, if photocell should not be triggered..

#### ▶ PHC- back area (contact: terminals 45/48) M

Safety

- ⊙ **not active:** No monitoring by PHC-back area.
- **active:** To be selected, if the back area of the gate has to be protected by a photocell during the opening movement. An interruption of the photocell during the opening movement causes the motor to get stopped and remain stopped as long as the photocell is interrupted. After releasing the photocell, the gate opens.

#### ▶ PHC-function (only photocell at terminals 45/46 is concerned) M

Safety

- ⊙ **when closing reverse:** an interruption of the photocell during closing makes the gate reverse (open). In automatic mode the gate closes as soon as the pause time has run out. In impulse operation another closing command has to be given.
- **stop, after release open:** an interruption of the photocell beam during opening or closing makes the motor stop as long as the photocell stays interrupted. After release of the photocell, the gate opens. In automatic mode the gate closes as soon as the pause time has run out, in impulse operation another closing command has to be given.
- **during closing stop then close:** an interruption of the photocell during closing makes the motor stop as long as the photocell stays interrupted. After release of the photocell, the gate closes.





### PHC- pause time (only photocell at terminals 45/46 is concerned)

M

Safety

- ⊙ **no influence of photocell:** the photocell doesn't have any influence on the pause time in automatic mode.
- ⊙ **abort pause time:** in automatic mode an interruption of the photocell during pause time shortens the pause time. After release of the photocell the gate starts closing.
- ⊙ **restart pause time:** in automatic mode an interruption of the photocell during pause time, restarts the pause time. As soon as the pause time has run out, the gate closes.
- ⊙ **immediate close after opening:** If the photocell is interrupted during the opening movement or in position open, the gate starts closing as soon as it reached end position open after release of the photocell.

### PHC- self test

M

Safety

- ⊙ **active:** photocell self-test is executed with an opening impulse (switch, button) in gate position „closed“.
- ⊙ **not active:** photocell self-test is not executed.

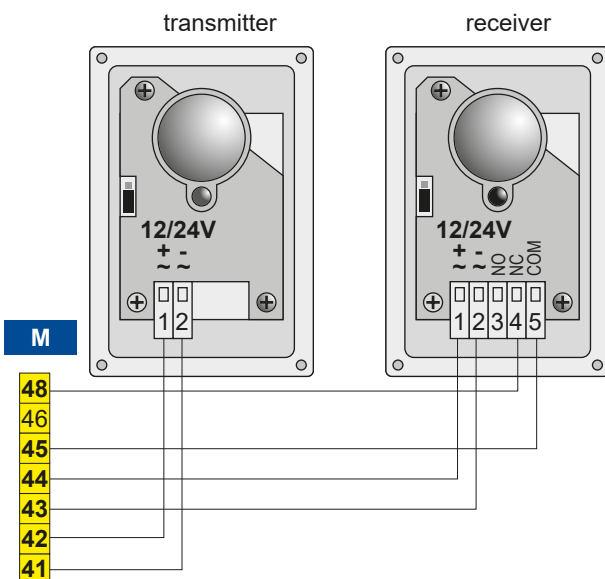


### Attention

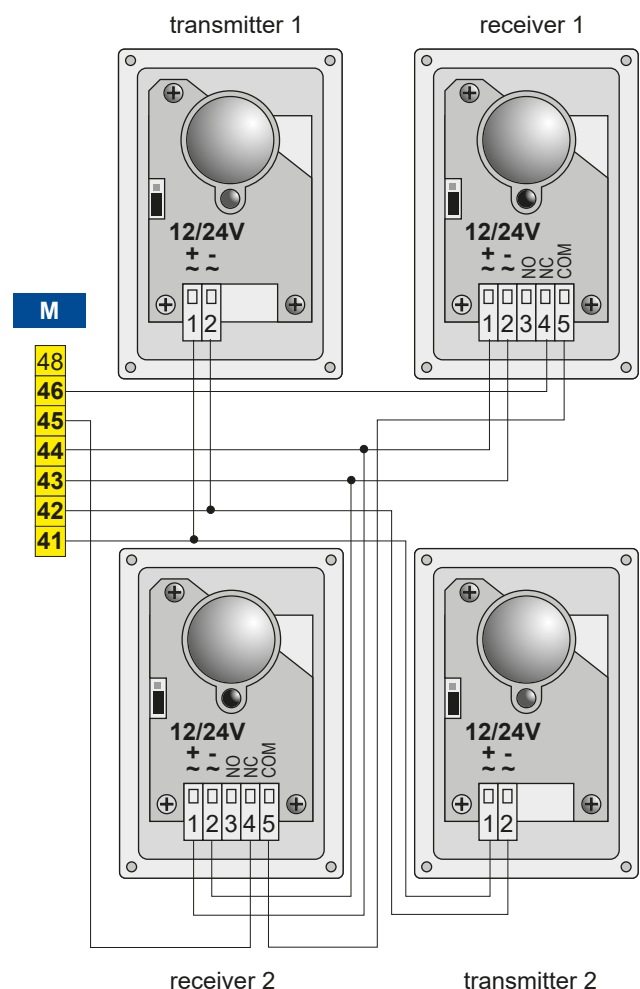
- The photocell self-test can only be deactivated by selecting „not active“.
- The deactivation of the self-test function is only permitted if the safety installations correspond to the category 3 !

### Photocell - connection examples

#### Back area photocell Tousek LS 45/2 as safety device



#### 2 Photocells Tousek LS 45/2 as safety device



### Important

- as the LS 45/2 has no SYNC-function, both photocell transmitters and receivers must be mounted on different sides!

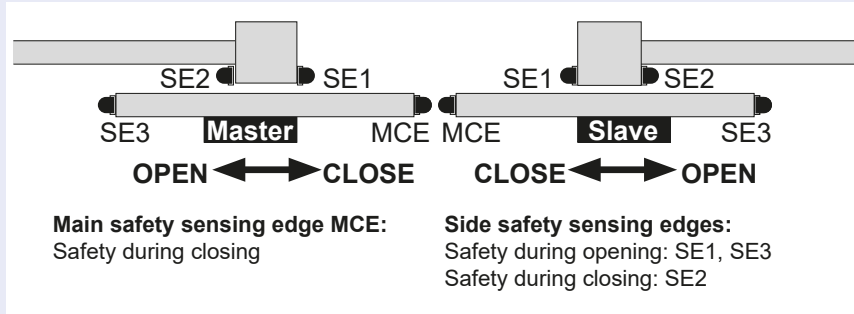


Safety sensing edges (main and side edges)

M/S

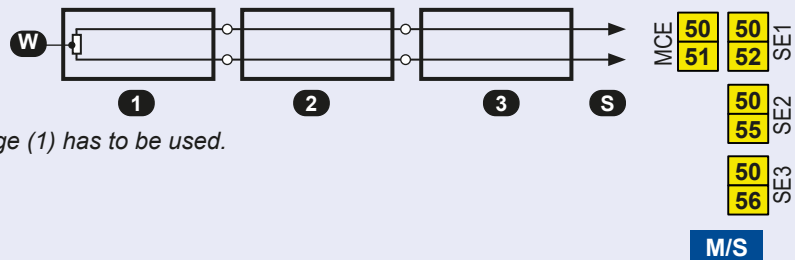
• **OBSTACLE DETECTION:**

When a contact strip is triggered/activated then a change of direction is effected for 1 second. After that the gate stops.



If more safety sensitive edges are required, as shown in the figure above, (e.g. second guide column), these have to be connected in series to the respective terminals SE1 and SE2.

**Example:** W 8,2kΩ final resistance  
1 final edge  
2+3 passage edge  
S to control board



When connecting one safety edge a final edge (1) has to be used.



**Important**

- After giving the impulse to program the end positions, no other impulse must be given. Also the safety devices mustn't be triggered. This would lead to an interruption of the programming process.
- Therefore, the mechanical stops must be set so that the existing contact strips cannot be triggered.

name in menu	short name / status display	active in direction	terminals	choice
Main clos. edge	MCE	CLOSE	50/51	<input type="radio"/> active <input type="radio"/> not active <input type="radio"/> radio edge TX <input type="radio"/> TX 400
Side edge 1 OPEN	SE1	OPEN	50/52	<input type="radio"/> active <input type="radio"/> not active
Side edge 2 CLOSE	SE2	CLOSE	50/55	<input type="radio"/> active <input type="radio"/> not active
Side edge 3 OPEN	SE3	OPEN	50/56	<input type="radio"/> active <input type="radio"/> not active <input type="radio"/> radio edge TX <input type="radio"/> TX 400

### Main closing edge (terminals 50/51)

M/S

Safety edges

- ⊙ **active:** to be selected if the contact strip (8,2kOhm) of main closing edge should be evaluated.
- **Radio edge:** to be selected if the contact strip (8,2kOhm) of main closing edge should be evaluated **with the radio transmission system TX 310.**
- **TX 400:** to be selected if if the contact strip (8,2kOhm) of main closing edge should be evaluated **with the system TX 400i.**
- **not active:** to be selected if the contact strip (8,2kOhm) of main closing edge should NOT be evaluated

### Side edge 1 OPEN (terminals 50/52)

M/S

Safety edges

- ⊙ **active:** to be selected if the contact strip (8,2kOhm) of side edge 1 OPEN should be evaluated.
- **not active:** to be selected if the contact strip (8,2kOhm) of side edge 1 OPEN should NOT be evaluated.

### Side edge 2 CLOSE (terminals 50/55)

M/S

Safety edges

- ⊙ **active:** to be selected if the contact strip (8,2kOhm) of side edge 2 CLOSE should be evaluated.
- **not active:** to be selected if the contact strip (8,2kOhm) of side edge 2 CLOSE should NOT be evaluated.

### Side edge 3 OPEN (terminals 50/56)

M/S

Safety edges

- ⊙ **active:** to be selected if the contact strip (8,2kOhm) of side edge 3 OPEN should be evaluated.
- **Radio edge:** to be selected if the contact strip (8,2kOhm) of side edge 3 OPEN should be evaluated **with the radio transmission system TX 310.**
- **TX 400:** to be selected if the contact strip (8,2kOhm) of side edge 3 OPEN should be evaluated **with the system TX 400i**
- **not active:** to be selected if the contact strip (8,2kOhm) of side edge 3 OPEN should NOT be evaluated

### SE-Statusanzeige

M/S

Safety edges

- ⇒ Status dsplay of safety sensing edges
- |            |                   |            |                   |
|------------|-------------------|------------|-------------------|
| <b>MCE</b> | main closing edge | <b>SE2</b> | side edge 2 CLOSE |
| <b>SE1</b> | side edge 1 OPEN  | <b>SE3</b> | side edge 3 OPEN  |



status: not triggered



status: triggered

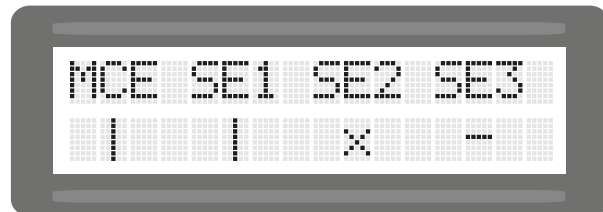


status: contact strip not connected or defect



status: contact strip deactivated in menu

e.g.



### Important

- During programming of motor the contact safety edges should not be triggered as this leads to an error message - the limit stops have to be placed correspondingly.



### Radio transmission system TX 310

- Connection and detailed information of radio transmission system TX 310 see according manual..



### Inductive system TX 400i

- Connection and detailed information of inductive system TX 400i see according manual..

**Max. force** ☉ 70% (factory setting)

M/S

Motor

- 25–100% adjustable [increment 5]: determines the max. possible motor force.

**Increased starting force** ☉ 2,0 (factory setting)

M/S

Motor

- OFF, 0,5–3,0 adjustable [increment 0,5]: determines the increased starting force.

**ARS response time** ☉ 0,50s (factory setting)

M/S

Motor

- 0,15–0,95s adjustable [increment 0,05]: determines, in which time the AR-System responds. The lower the value, the more sensitive the sensor will react.

**Speed** ☉ 100% (factory setting)

M/S

Motor

- 40–100% adjustable [increment 5]: determines the speed of motor.

**Soft way** ☉ 0,5m (factory setting)

M/S

Motor

- 0–2m adjustable [increment 0,1]: determines the distance of soft run.

**Soft speed** ☉ 50% (factory setting)

M/S



soft start fixed: approx. 1s

- 30–60% adjustable [increment 5]: determines the speed during soft run. If the entered value for soft speed is higher than normal speed the value will be rejected and automatically set to a value that is 5% below the set value for normal speed.

**End position OPEN** ☉ -5 (factory setting)

M/S

Motor

- 0...-30 adjustable [increment 1]: for readjustment of the automatically detected OPEN limit position of gate (e.g. for safety sensing barriers). With adjustment 0 the motor runs to the previously learned open position. For a diminished drive distance the value can be extended to up to -30.

This adjustment is ONLY adopted in CLOSED-position.

Deleting the end positions by selecting „diagnosis / delete positions“ effects the reset of this setting.

**End position CLOSE** ☉ -5 (factory setting)

M/S

Motor

- 0...-30 adjustable [increment 1]: for readjustment of the automatically detected CLOSE limit position of gate (e.g. for safety sensing barriers). With adjustment 0 the motor runs to the previously learned close position. For a diminished drive distance the value can be extended to up to -30.

This adjustment is ONLY adopted in CLOSED-position.

Deleting the end positions by selecting „diagnosis / delete positions“ effects the reset of this setting.

**Attention**

With force adjustment the valid safety regulations and standards have to be strictly followed !

## Operating mode

## Connections and adjustments

**Impulse mode**

M

Operating mode

- **Stop (at opening) - start of pause time:** An impulse during the opening movement stops the gate and starts pause time in automatic operation. When the pause time has run out, the gate closes automatically.
- **Impulse suppression when opening:** Commands received during the opening movement are suppressed, commands during closing are accepted.
- **Pause time extension:** A command during pause time restarts the pause time. If this menu point is chosen, an impulse suppression during opening is active at the same time.

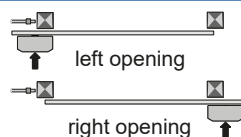
**Opening direction**

M/S

Operating mode

- <<<< **left:** gate opens to the left side (seen from inside)
- ->>> **right:** gate opens to the right side (seen from inside)

This adjustment is ONLY adopted in CLOSED-position.

**Operating mode**

M

Operating mode

- **Impulse mode:** Impulse through impulse switch/button or CLOSE-button to start closing of gate.
- **Automatic mode, pause time 1-255s adjustable [increment 5]:** gate closes automatically after the adjusted pause time (Exception: see adjustment „Automatic mode“ / „only complete opening“).







### Partial opening ☉ 30% (factory setting) M

Operating mode

- **10–100% adjustable [increment 1]:** value defines the partial opening based on the total opening. This adjustment is ONLY adopted in CLOSED-position.

### Automatic mode M

Operating mode

- ☉ **complete/partial opening:** either with complete as well as partial opening, the gate closes automatically after the adjusted pause time.
- **only complete opening:** only after complete opening, the gate closes automatically after the adjusted pause time. Exception: If the gate is in partial open position and an impulse for complete opening arrives then the gate opens completely and after the pause time it returns to partial opening position.
- **only partial opening:** only after partial opening the gate closes automatically after the the adjusted pause time.

### Pause time logic M

Operating mode

- ☉ **no influence**
- **always open in automatic mode:** If this function is activated, the control unit changes from automatic mode into impulse mode for this cycle. Giving an impulse in gate open position effects the end of the automatic mode and the gate remains open. The next impulse changes back the impulse mode into the automatic mode and the gate closes. With this function e.g. the entrance to a company site can remain open during the day (1st impulse in gate open position) and closed in the evening (2nd impulse). The control board switches back to automatic mode (autom. opening and closing of gate).  
**Note:** Pressing the pedestrian button in the open position, doesn't lead to a „remaining open“, instead the gate moves to the pedestrian opening.  
If the gate is in partial open position and „permanent open in automatic mode“ is selected, so it is possible to adjust permanent partial open for this cycle by giving an impulse via **pedestrian button**. Permanent partial open can be finished analogous to the above described method.

### Additional module M

Operating mode

- ☉ **courtyard lamp/control lamp:** the menu points courtyard lamp and control lamp are ready for adjustment (that means if not selected, these menu points will not be shown on the display)
- **status display 1:** with the two potential-free signal contacts K1 and K2, the gate end positions (limits) can be evaluated.
- **status display 2:** with the two potential-free signal contacts K1 and K2, the gate end positions (limits), the gate movement as well as a gate stop outside of the end positions can be evaluated.

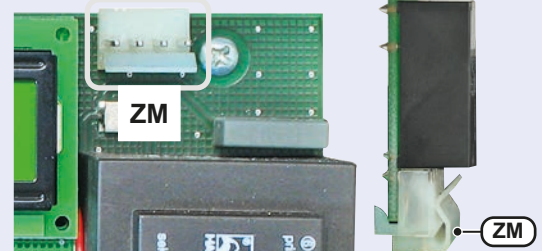


### optional module (Courtyard-/Control lamp or Gate status display) M

- **Turn off power supply before plugging in the additional module!**
- Depending on which device, e.g. a **courtyard-/Control lamp** is chosen or **evaluation of gate status** should be effected, the corresponding module (Z) has to be plugged to the according slot/plug (ZM) of control board.
- Additionally the corresponding value has to be selected in menu point „Additional module“.



control TPS 20 Master



#### Additional module Courtyard lamp/ Control lamp

- On the terminals 12/13 a Courtyard lamp (H) can be connected: **230V, max. 100W**
- On the terminals 70/71 a control lamp (K) can be connected: **24Vd.c., max. 2W**

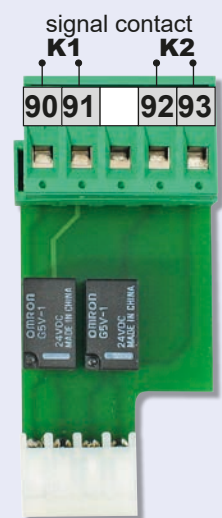


#### Additional module Gate status display

- with potential free signal contacts K1 (KI. 90/91) and K2 (KI. 92/93) the gate statuses can be evaluated in two ways (see menu point „Additional module“).
- Contact load: **24Va.c./d.c., max. 10W**

		Function		K1	K2
Gate status display	1	Gate in CLOSE-Position	1	0	
		Gate in OPEN-Position	0	1	
2	2	Gate in CLOSE-Position	0	0	
		Gate opens or closes	0	1	
		Gate stopped or fault (Gate not in end position)	1	0	
		Gate in OPEN-position	1	1	

signal contact: 0 = open, 1= closed





## Warning

- Before connection works please turn off the main power switch !
- Safety rules please [☞ page 14 !](#)


**Prewarning OPEN** (Signal lamp:terminals 10/11)

M

Lights / Lamps

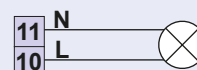
- ⊙ switched off
- **1–30s adjustable:** Before each opening movement the signal lamp/ flashing light is activated for the adjusted time.



## Signal lamp

M/S

- a signal lamp can be connected to the terminals 10/11 (230V, max. 100W).


**Prewarning CLOSE** (Signal lamp: term. 10/11)

M

- ⊙ switched off
- **1–30s adjustable:** Before each closing movement the signal lamp/ flashing light is activated for the adjusted time.

The following two menu points can only be selected if the menu point additional menu is adjusted to „Courtyard-/Control lamp“ (hence shown on display).

**Courtyard lamp** (Description add. modules [☞ page 21](#))

M

Lights / Lamps

- ⊙ switched off
- **5–950 adjustable:** at the courtyard lamp output an external lamp can be connected (e.g. garden lamp), which can be turned on for each opening command for the duration of adjusted time.

**Control lamp** (Description add. modules [☞ page 21](#))

M

Lights / Lamps

- ⊙ **Illuminates when opening/closing:** The pilot lamp output is activated during opening- and closing movement.
- **blinks slowly / illuminates / blinks:** The pilot lamp output is activated as follows: During opening the pilot lamp flashes slowly. During pause time, in opened position or when the gate stops it is illuminated. During the closing movement it flashes rapidly. If the gate is closed, the pilot lamp expires
- **Illuminates in open position:** Pilot lamp is illuminated as soon as the gate has reached end position open.

Status display

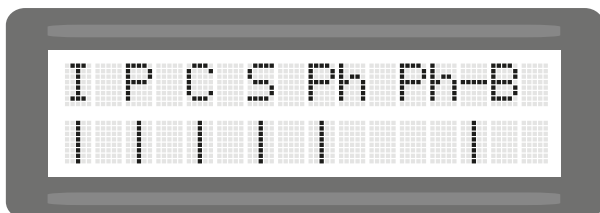
M/S

Diagnosis

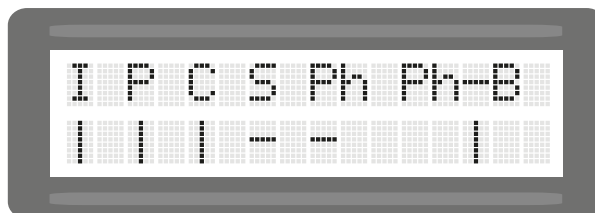
➔ Status display for inputs as photocell, stop button, impulse switch ...

I	impulse button	█	status: not triggered
P	pedestrian entry	█	status: triggered
C	CLOSE-button	█	status: triggered
S	STOP-button	█	status: triggered
Ph	photocell contact	○	status: photocell deactivated in menu
Ph-B	photocell contact back area	○	status: photocell deactivated in menu

for example



All inputs okay.



STOP button and photocell are triggered.  
All other inputs are not triggered.

Delete positions

M

Diagnosis

- ⊙ NO: does not delete the end positions "gate closed" and "gate open"
- YES: the determined end positions are being deleted.  
Note: the end positions will be determined after new impulse.



The mechanical stops have to be placed so that possibly existing safety contact edges can not be triggered, as this would lead to an error message.



If for any reason only one of the two control units gets replaces, run first the command „delete positions „, at the menu point „Diagnosis“, in order to avoid a fatal system crash!

Factory setting

M

Diagnosis

- ⊙ NO: no reset back to factory settings
- YES: reset back to factory settings



Note: The factory settings of the single menu points are marked with ⊙ in this manual.

Software version

M/S

Diagnosis

➔ shows the software version on display

Serial number

M/S

Diagnosis

➔ shows the serial number on display

Protocol

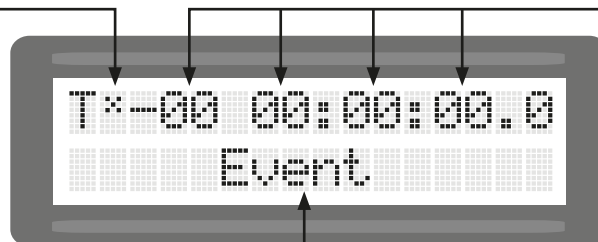
M/S

Diagnosis

➔ shows the protocol list on display: all events that take place are protocollod in this list. with the buttons + and - the single events can be seen:

With \* the protocolle beginning hence the end is shown

Time since the last event:  
DAYS HOURS : MINUTES : SECONDS



Status Sensor

M/S

Diagnosis

➔ Degree and signal strenght of rotation speed sensor is shown on display.

- Turn off power supply.

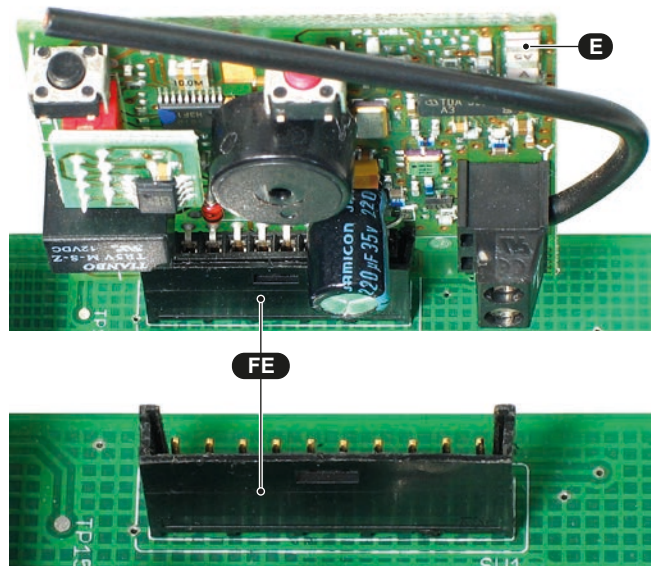
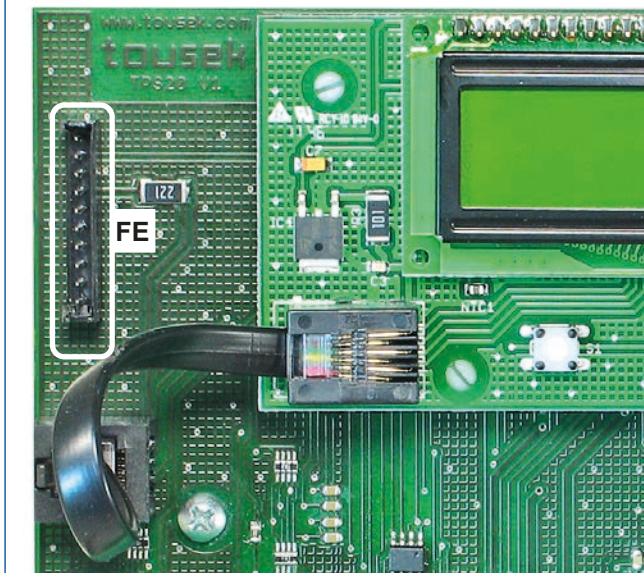


- Plug-in the receiver printed circuit board (E) RS433/868-STN1 (1-channel) or RS433/868-STN2 (2-channels) into the corresponding slot (FE) as shown in the picture.
- To increase the range an external antenna FK433 or FK868 can be connected.



### Important

- With the use of the 2-channel-receiver the second channel takes over the function of the pedestrian entry mode switch.
- For programming of receiver please *see manual for radio receiver*.



### Important notes after installation

- Installation, connection, adjustments, putting into operation, and servicing may only be carried out by trained professionals in full accordance with these installation- and operating instructions.
- The packaging materials (cardboard, plastic, EPS foam parts and filling material etc.) have to be properly disposed of in accordance with the applying recycling and environmental protection laws. They may be hazardous to children and therefore have to be stored out of children's reach.
- The product is not suitable for installation in explosion-hazardous areas.
- The product may only be used in accordance with its original purpose, for which it has been exclusively designed, and which is described in these installation and operating instructions (**especially children have to be instructed**). **The TOUSEK Ges.m.b.H. rejects any liability if the product is used in any way not fully conforming to its original purpose as stated herein.**
- Die elektrische Anlage ist nach den jeweils geltenden Vorschriften, wie z.B. mit Fehlerstromschutzschalter, Erdung etc. auszuführen.
- An all-pole disconnecting main switch with a contact opening-gap of minimum 3 mm has to be foreseen. The electric motor heats up during operation. Therefore the device should only be touched after it has cooled off.
- After installation the proper function of the gate facility and the safety devices have to be checked!
- The installer has to inform the user about all aspects of the automatic operation of the complete gate facility, as well as about emergency operation. The installer further has to supply to the user all instructions relating to the safe operation of the gate facility. The installation and operating instructions also have to be handed over to the user.



### Important: preparation works

- Connect the master control devices, safety equipment and motors according to the safety rules.

**Achtung:** If no stop button is connected to the master or slave, the terminals 30/31 of the corresponding control unit (master and / or slave) have to be bridged (factory-provided inserted bridge).

- The mechanical limits have to be placed so that contact edges are not triggered, as this would lead to an error message.
- Unlock emergency release of operator and set gate to half-opened position. Then lock the operator again.
- Switch on the operator (correct connection necessary).
- During initial operation the choice of language is made first (Master and Slave), then in the "Basic settings" (Master control) the adjustment of most important operator settings are done and after the system test, the automatic detection of limit positions of gate is made. In Slave control the system test is done after choice of language.
- After a successful system test, the gate end positions are automatically detected (after giving an impulse to the master control unit).

**Note:** during the operation, with a basic setting for the end positions OPEN / CLOSE (= -5), the mechanical stops don't get reached completely (only if you bring this value to 0).



### Important ( by replacement of the central unit)

- If for any reason only one of the two control units gets replaces, run first the command „delete positions „ at the menu point „Diagnosis“, in order to avoid a fatal system crash!

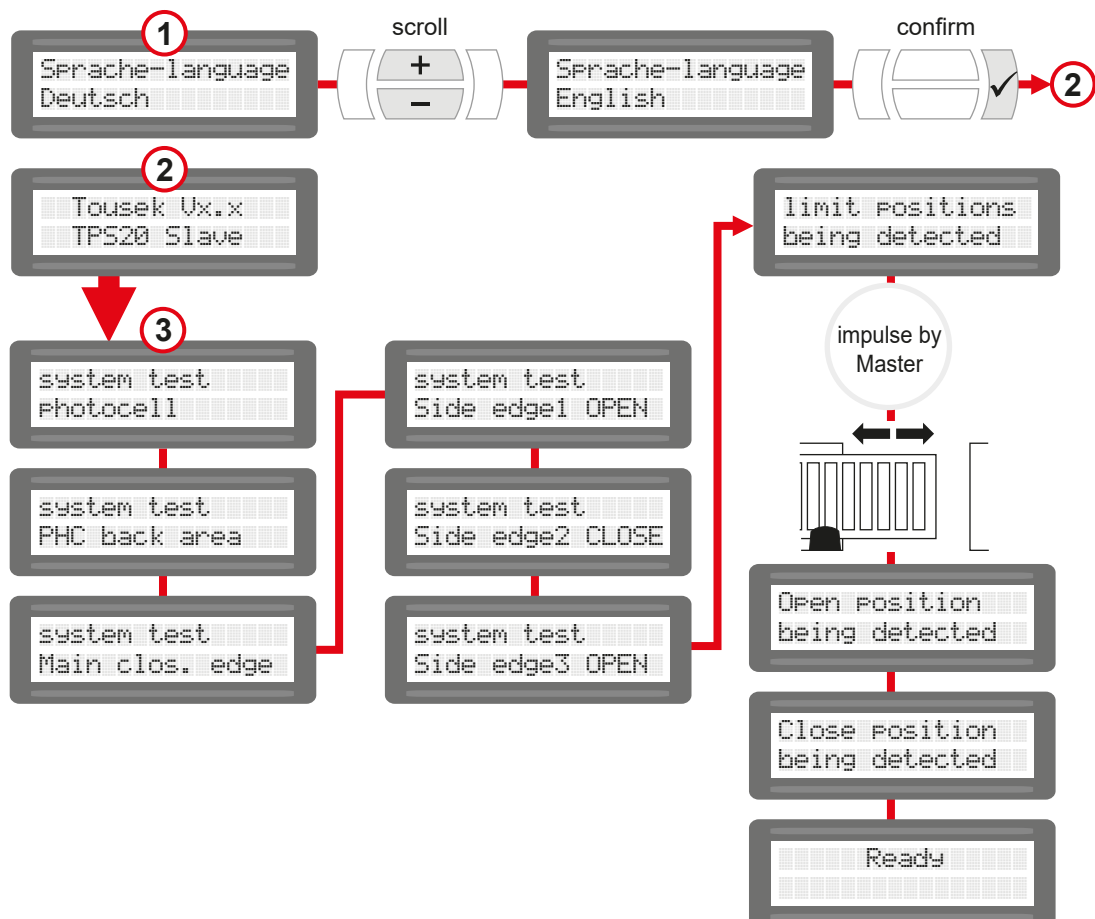
### Slave-central unit

S

### Putting into operation

#### LANGUAGE SELECTION

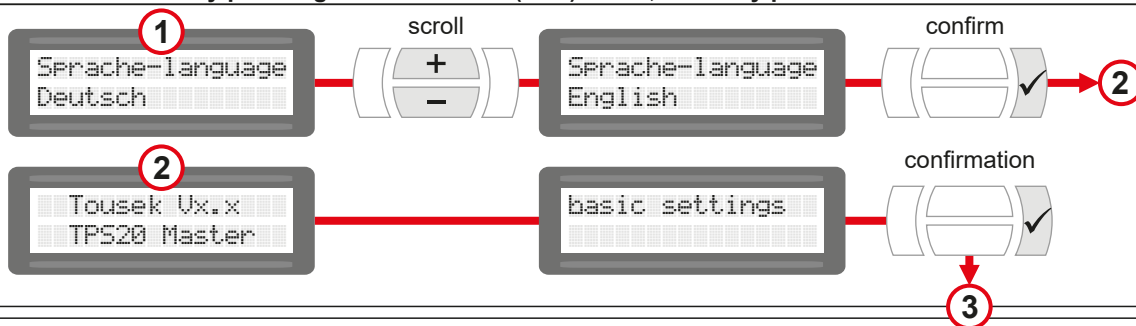
- Can be selected during initial operation (hence after reset to factory settings).
- Can be also chosen by pressing the ESC button (ESC) for 5s, from any position in menu.





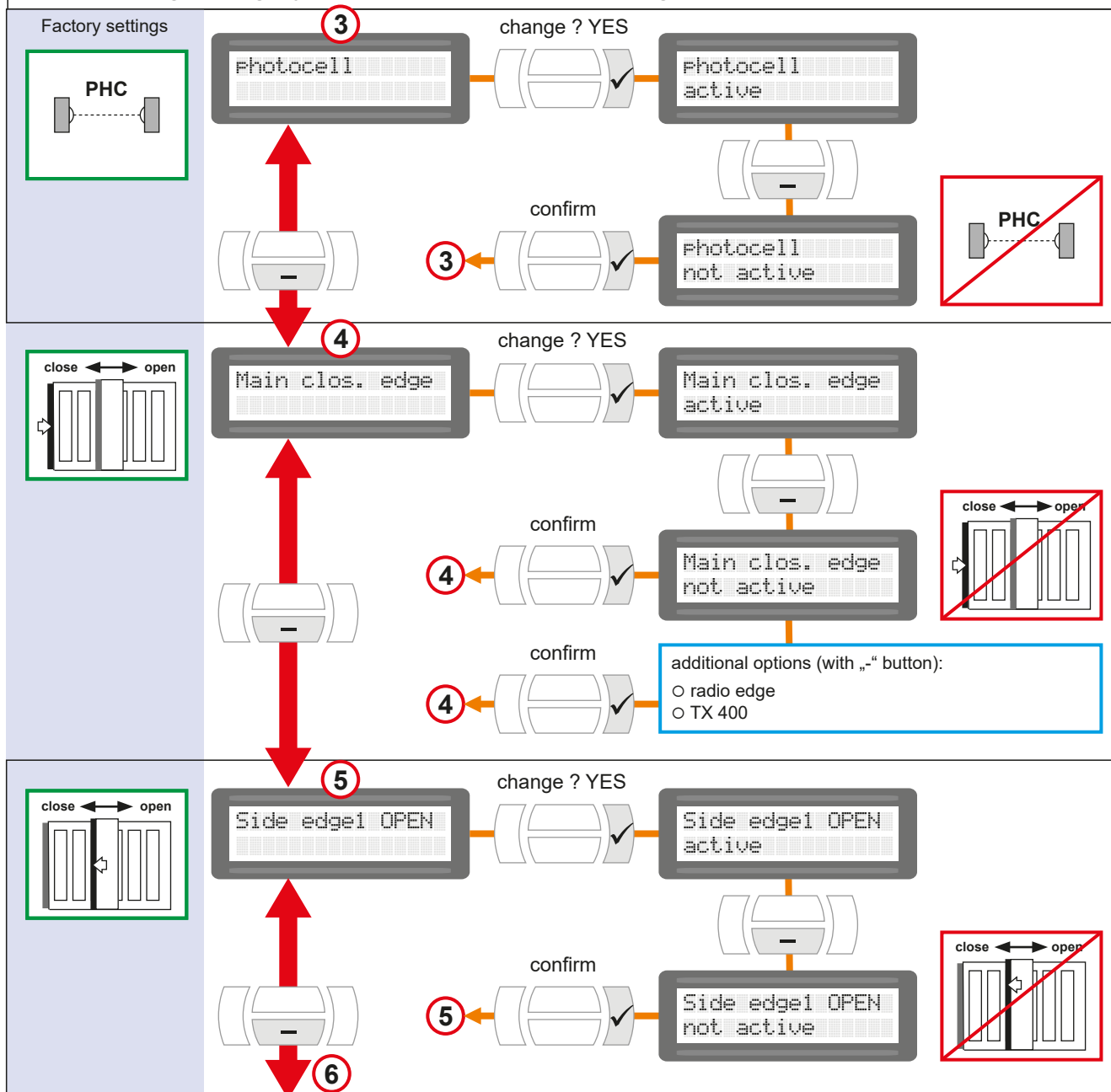
**LANGUAGE SELECTION**

- Can be selected during initial operation (hence after reset to factory settings).
- Can be also chosen by pressing the ESC button (ESC) for 5s, from any position in menu.

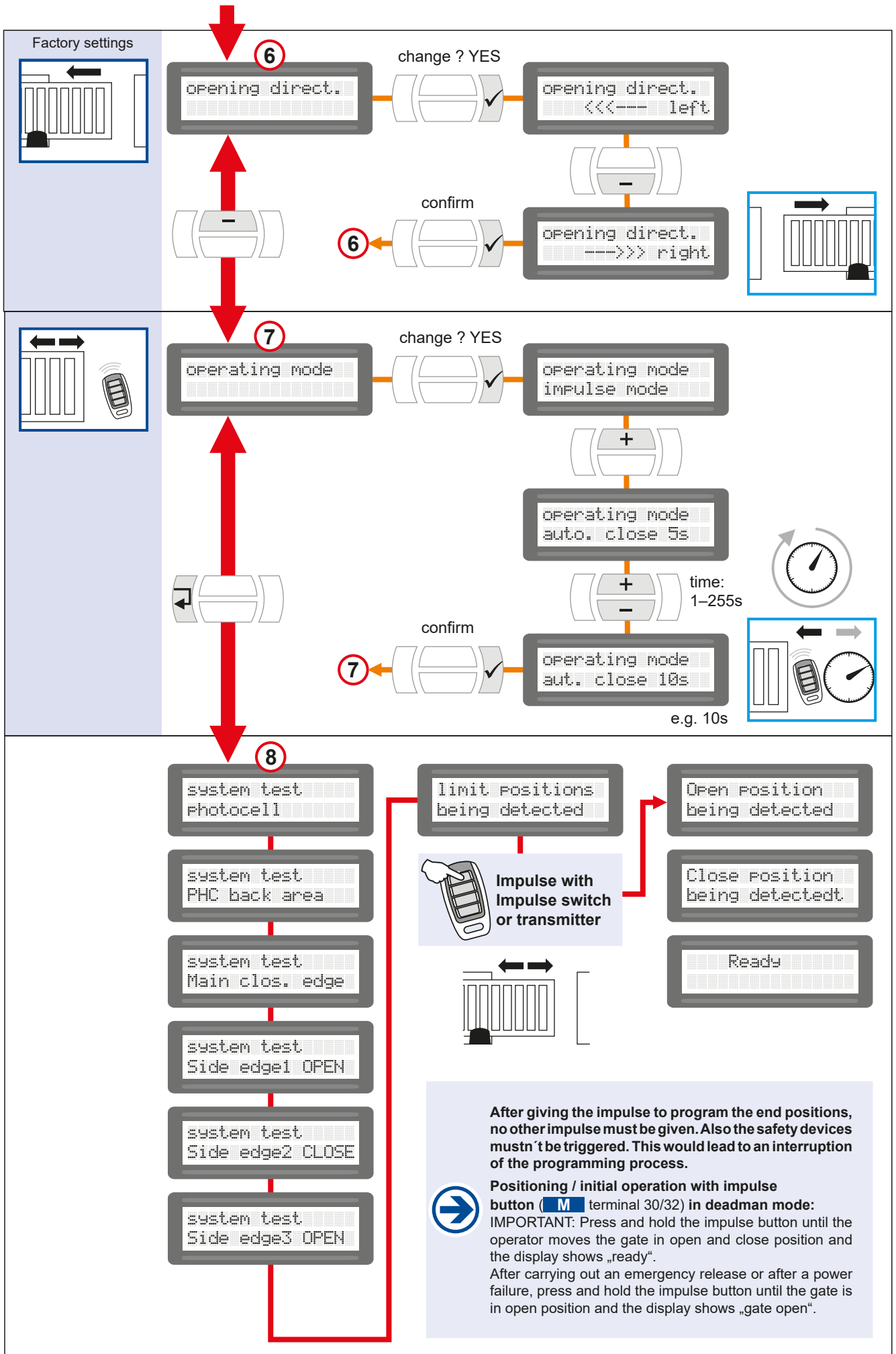


**BASIC SETTINGS of the master control**

- For setting the most important adjustments for initial operation of motor.
- Can be selected during initial operation (hence when restoring the factory setting).
- All safety devices are activated when leaving factory ([page 13](#)).
- The next programming adjustments are made in the main settings menu ([page 12, 13](#)).





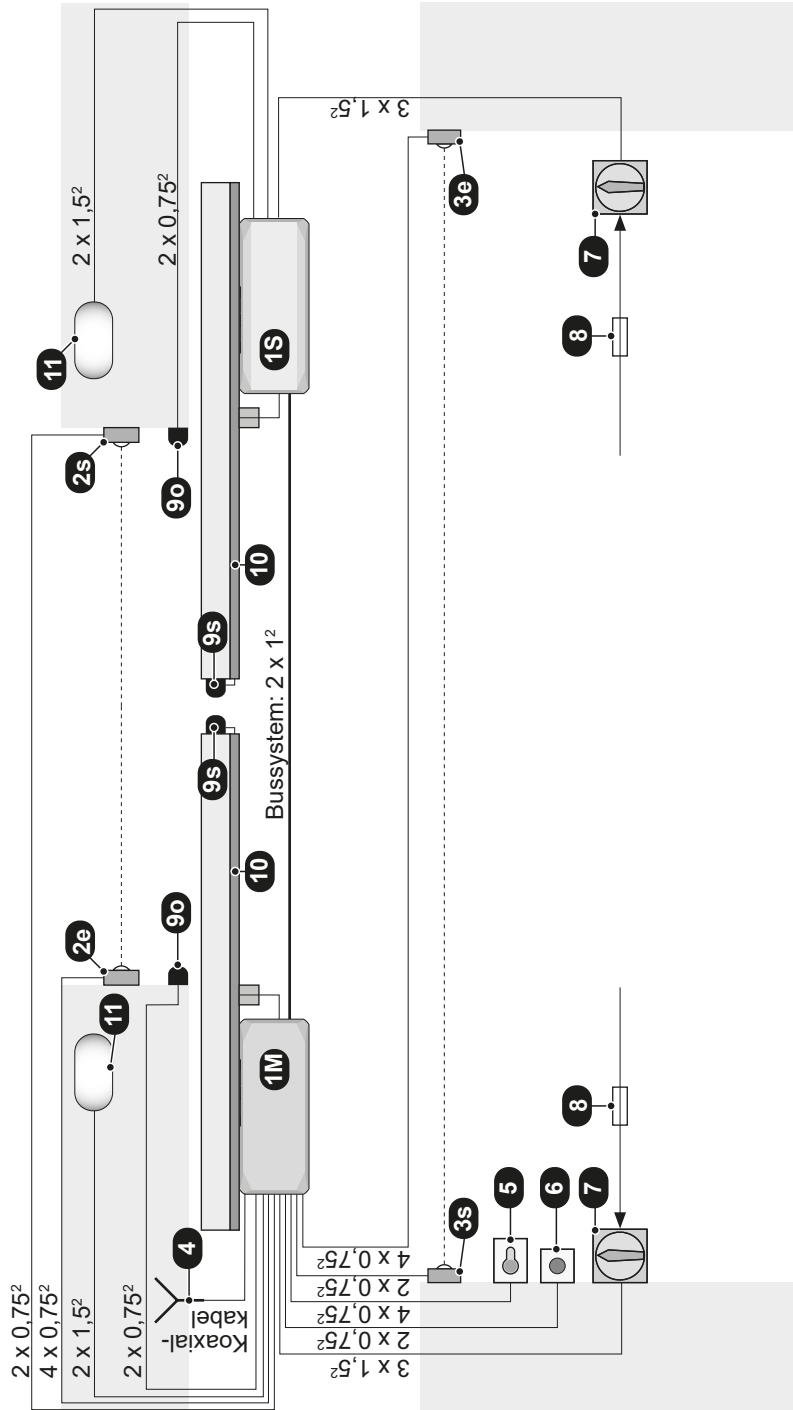


Error	Possible reason	Solution
Display: „Stop-button released“	stop-button not connected or not bridged	connect or bridge stop-button > use status display for help
Display „Photocell released“	photocell interrupted	check correct connection hence remove obstacle > use status display for help
Display: „PHC back area released“		
Display „MCE released“	main safety edge interrupted or hot-wired	check proper function hence remove obstacle > use status display for help
Display: „SE1 released“		
Display: „SE2 released“		
Display: „SE3 released“		
Display: „AR-System released“	gate ran into an obstacle or is too hard to move	check force adjustments, remove obstacle hence check if gate is easy to move
Display: „Photocell-test negative“	interruption or hot-wired photocell	check correct connection hence remove obstacle > use status display for help
Display: „PHC back area test negative“		
Display: „MCE test negative“ (only when using TX 310)	short-circuit or interruption of main safety edge	check correct connection or battery status of the transmitter > use status display for help
Display: „SE3 test negative“ (only when using TX 310)		
Display: „Error TPS 20 Slave“	The slave operator caused an error of main and side sensing edges during the system check	check the proper function of the closing edge hence remove the obstacle > use status display for help
No reaction when giving an impulse	no line voltage hence safety fuse broken	check line voltage as well as safety fuses
	error of transmitter/control device/impulse button, e.g. transmitter not programmed	check transmitter/control device, e.g. program transmitter and check battery

- 1 Operator TOUSEK TPS 20 (M=Master, S=Slave)
- 2 Outer photocell (s=transmitter, e=receiver)
- 3 Inner photocell (s=transmitter, e=receiver)
- 4 Antenna for integrated receiver
- 5 Key contact switch
- 6 Stop button
- 7 main switch 16A

Note: An all-pole disconnecting main switch with a contact opening-gap of minimum 3 mm has to be foreseen.

- 8 Fuse 12A
- 9 Safety sensing edge (o=safety when opening, s=safety when closing) power supply system TX100 if you use a different system (z.B. TX400i or TX) see corresponding instruction manual)
- 10 signal flashing light



Note concerning cable laying



The electric cables have to be laid in insulating sleeves which are suitable for underground usage. The insulating sleeves have to be lead into the inner of the operator housing.

230 V cables and control lines have to be laid in separate sleeves.

Only double-insulated cables, which are suitable for underground usage (e.g. E-YY-J) may be used. In case that special regulations require another type of cable, cables according to these regulations have to be used.



Safety note

Please be aware that the beside picture is only a symbolic sample illustration of a gate facility and may therefore not show all safety devices required for your specific application.

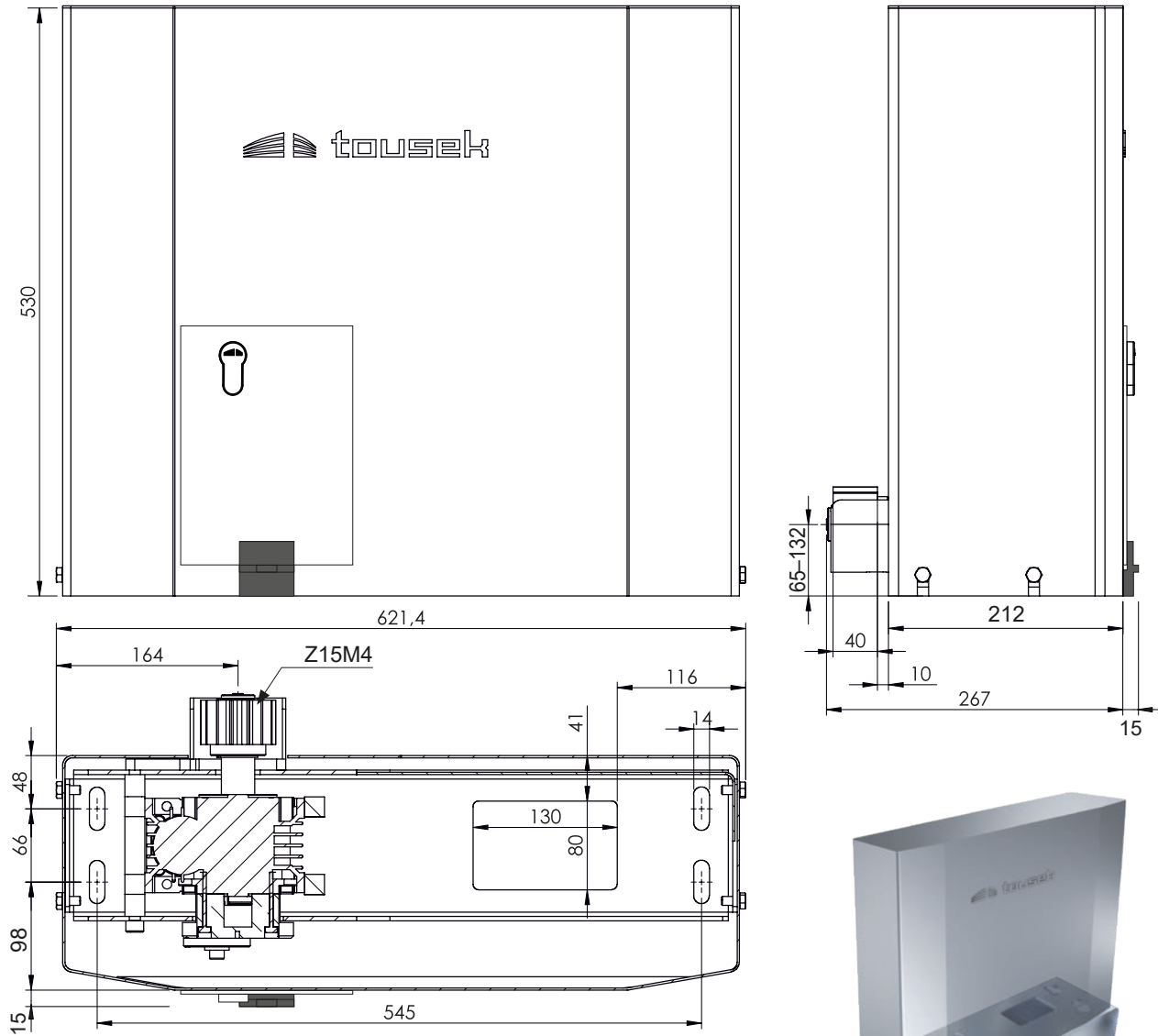
To achieve an optimum safety level at your gate facility, please make sure that all safety components and accessories which - according to the applying safety rules and laws - are required in your particular case (e.g. photocells, induction loops, sensing edges, signal lamps, traffic lights, mains- and emergency power off switches etc.) are properly installed, operated, and serviced.

In this context please follow the EU Machine Directive, accident prevention rules and laws, as well as applying EU- and national standards in force at the time of installation and operation of the gate facility. The Tousek Ges.m.b.H. cannot be held responsible for any consequences resulting from disregard of applying standards and laws during installation or operation of the gate facility.

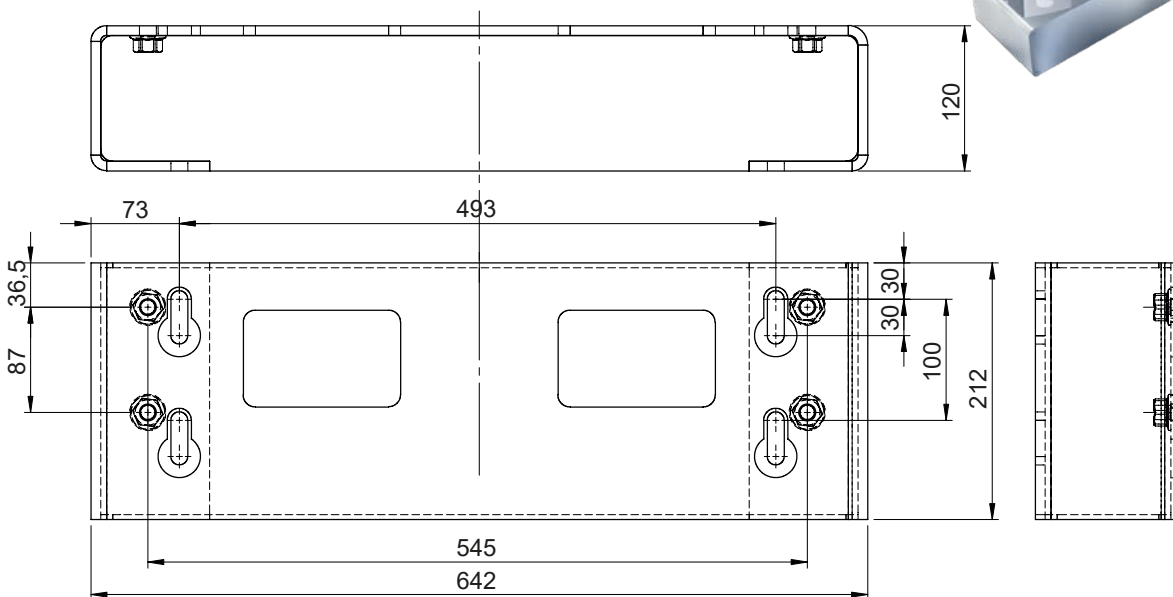
The 0,75mm² control lines are shown without ground lead. In order to facilitate connections we recommend using flexible wires and not using thicker wires for the control lines.

## 9. Dimensional Drawing TPS 20

• Maße in mm



**Distance console (optional)**



We reserve the right to change dimensions and technical specifications without prior notice.



### Declaration of incorporation

In compliance with EC Machine Directive 2006/42/EC, Annex II B for the installation of an incomplete machine.

We hereby declare that the following product, as well as its version, put by us into circulation, complies with the essential requirements of the Machinery Directive (2006/42/EC), due to its design and type of construction.

The validity of this declaration will cease in case of any unauthorized modifications to the products.

#### The product:

##### Sliding gate opener

**TPS-10, -20, -20N, -20 PRO, -20 Master/Slave, TPS 35 PRO, TPS 40 PRO, TPS 60 PRO, TPS 6speed, TPS 10speed**

is developed, designed and manufactured in accordance with:

Machinery Directive 2006/42/EG  
Low Voltage directive 2014/35/EU  
Electromagnetic compatibility 2014/30/EU

#### Applied and used standards and specifications:

EN ISO 13849-1, PL-,c“, Cat 2  
EN 60335-1 as applicable  
EN 60335-2-103  
EN 61000-6-3  
EN 61000-6-2

Following requirements of Annex I of the EC Directive 2006/42/EC are met:

1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.6, 1.3.2, 1.3.4, 1.3.7, 1.5.1, 1.5.4, 1.5.6, 1.5.8, 1.7

The relevant technical documentation is compiled in accordance with Annex VII, Part B of the EC Machinery Directive 2006/42/EC.

We undertake to submit it in electronic form and within a reasonable time to the market surveillance authorities in response to a duly substantiated request.

**TOUSEK Ges.m.b.H., A1230 Wien, Zetschegasse 1, Austria**

is authorized to compile the technical documentation.

The incomplete machine cannot be put into service, until it is determined that the machine, into which the incomplete machine has to be inserted, complies with the the Machine Directive 2006/42/EC.

Eduard Tousek, CEO

Vienna, 20. 03. 2019

### EC Declaration of Conformity

In compliance with EC Machine Directive 2006/42/EC, Annex II, Part 1 A.

When the described operators are connected to a gate they form a machine in the sense of the EC Machine Directive.

#### Relevant EU directives:

Construction Products Directive 89/106/EWG  
Machinery Directive 2006/42/EG  
Low Voltage directive 2014/35/EU  
Electromagnetic compatibility 2014/30/EU

We hereby declare that the following product, in the version put by us into circulation, complies with the essential requirements of the Directives mentioned above. The validity of this declaration will cease in case of any unauthorized modifications to the products.

#### Product:

\_\_\_\_\_

*Gate description*

\_\_\_\_\_

*Motor description*

The incomplete machine cannot be put into service, until it is determined that the machine, into which the incomplete machine has to be inserted, complies with the the Machine Directive 2006/42/EC.

\_\_\_\_\_

*Installation company*

\_\_\_\_\_

*Address, ZIP code, Place*

\_\_\_\_\_

*Date/ Signature*

Motor number (Type plate): \_\_\_\_\_

Other components:

## **tousek PRODUCTS**

- sliding gate operators
- cantilever systems
- swing gate operators
- garage door operators
- folding door operators
- traffic barriers
- electronic controls
- radio remote controls
- key operated switches
- access control
- safety devices
- accessories

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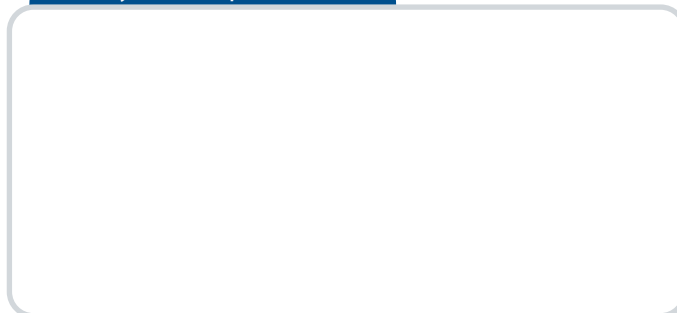
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**tousek**  
EN\_TPS-20-M-S\_09  
25. 03. 2020



*your service partner:*



We reserve the right to change dimensions and/or technical specifications without prior notice. Claims resulting from misprints or errors cannot be accepted.

