







# Mounting and installation manual

## Sliding gate operator TPS 60 PRO m6



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## GENERAL WARNING AND SAFETY NOTES for installation and operation

- 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, gate frame, 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. ansonsten der Anspruch auf Garantie erlischt!**



## Wartung

- **Maintenance works may only be carried out by qualified personnel.**
- **Maintenance and servicing of the complete gate facility has to be carried out according to the gate builder’s/ installer’s instructions.**
- **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.**

## Characteristics

TPS 60 PRO

- Motor and central unit housed in a column and pre-wired
- Integrated central unit with frequency converter
- Base housing made of brushed stainless steel
- Cover made of aluminum, powder coated
- Cover with profile half cylinder
- Large, illuminated LCD 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 (mit Positionierungsendschalter)
- Height adjustment gear wheel (center):  $193 \pm 20\text{mm}$
- Gear wheel Z17 module 6
- Adjustable soft stop (distance and speed)
- Due to use of a frequency converter no power loss also by reduced speed
- Direct connection of 8.2 kOhm contact strips separate for main and side closing edge
- Status display for safety and push button inputs
- Self-monitoring of photocell
- Gate status display (for example, concierge)
- Slots for radio receiver and I-loop detector
- Integrated main switch and 230V Schuko socket
- Optional height-adjustable fork and bracket for signal transmission system
- Dimension (W x H x D): 520 x 1365 x 230mm (+ Gear wheel 60mm)



## Function

TPS 60 PRO

The integrated control unit can be adjusted in 3 logic modes:

- a) **Impulse mode:** with open and close button/switch function
- b) **Automatic mode:** automatic closing
- c) **Dead-man mode:** gates moves as long as switch/button is pressed

With the connection possibility of buttons OPEN/CLOSE/STOP, photocells and entrance protection as well as switch for pedestrian entry. This one opens the gate partially. The partial opening is adjustable (opening time adjustable). For control of a light signal a 230V output is available for connection of a signal lamp as well as two potential free signal contacts. The control board is also equipped with connection slots for a radio receiver board as well as induction loop detector.

## Technical data

Schiebetorantrieb TPS 60 PRO			
Control unit	integrated	Max. drive	60m
Power supply	400V a.c., 50Hz	Duty cycle in S3 mode	80%
Motor voltage	400V a.c.		
Max. current consumption(excl. equipment)	5A	Ambient temperature	-20°C +50°C
Gear wheel, head circle diameter	Z17m6, Ø 114mm	Protection class	IP44
Max. gate weight	6000kg	Torque sensor	■
Speed	9m/min	Article No.	11110700
Torque	300Nm		
optional erhältliche Komponenten	plug-in radio receiver • additional modules for courtyard / control lamp • radio transmission system TX 310 • inductive signal transmission system TX 400i		



**An all-current sensitive FI circuit breaker (Type B) is necessary for proper operation!**

**ATTENTION !**

- **ATTENTION: Mechanical limits are necessary!**
- **ATTENTION: the sliding gate operator 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 not be automated without additional safety devices (which make sure that the gate cannot start moving on its own from any gate position).**

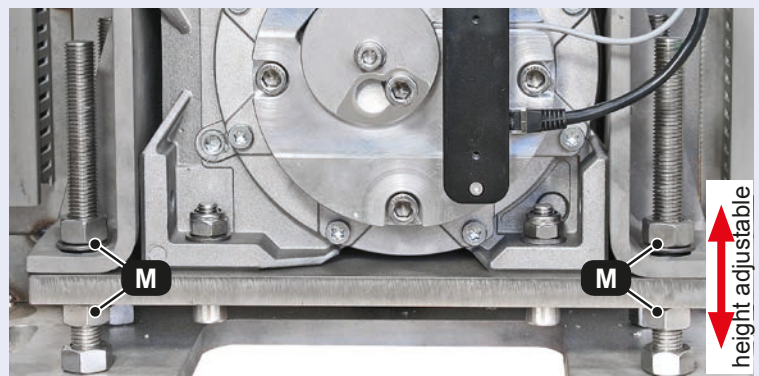


### Height adjustability of the motor (gearwheel)

- The motor is height adjustable:

To adjust the height of the gearwheel, you have to properly adjust the screw nuts (**M**) on the threaded bars.

**Possible height of the gear center:**  
 $193 \pm 20\text{mm}$



### General installation notes

Before installing the Tousek TPS 60 PRO 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.**

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.

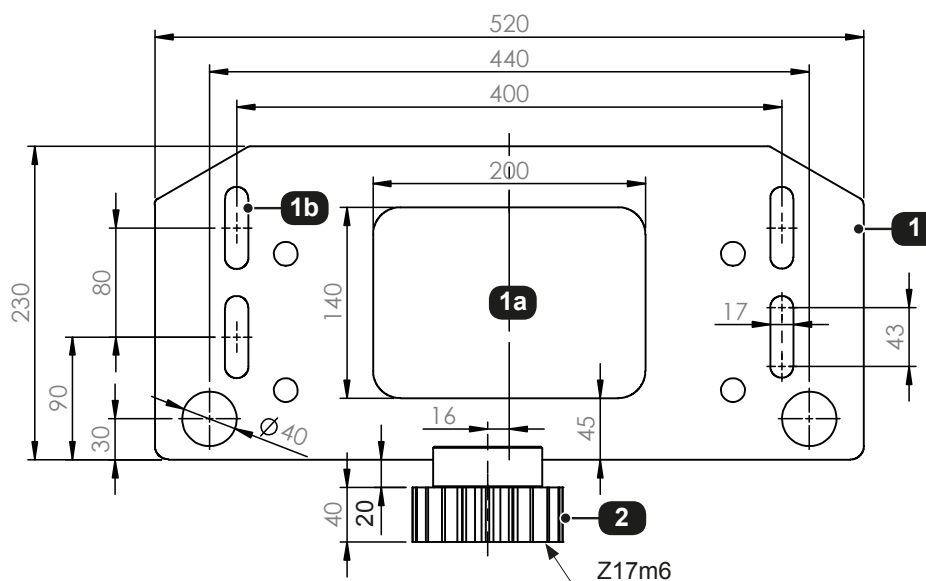
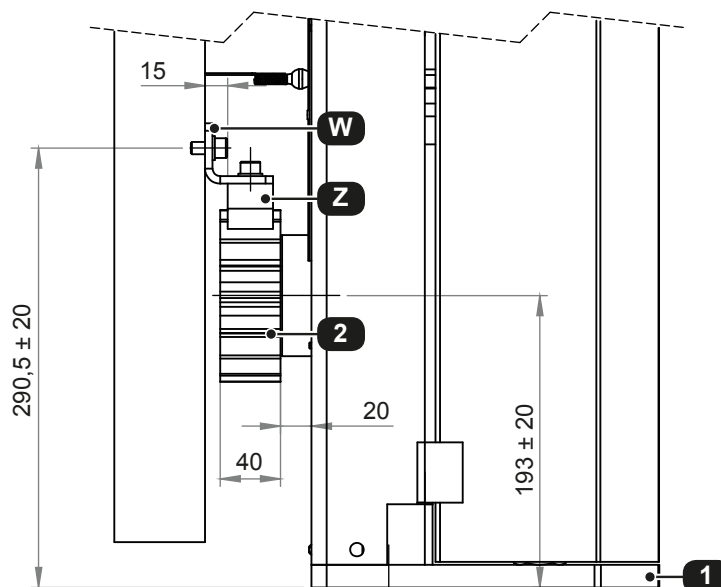


### NOTE concerning cable laying

- 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.

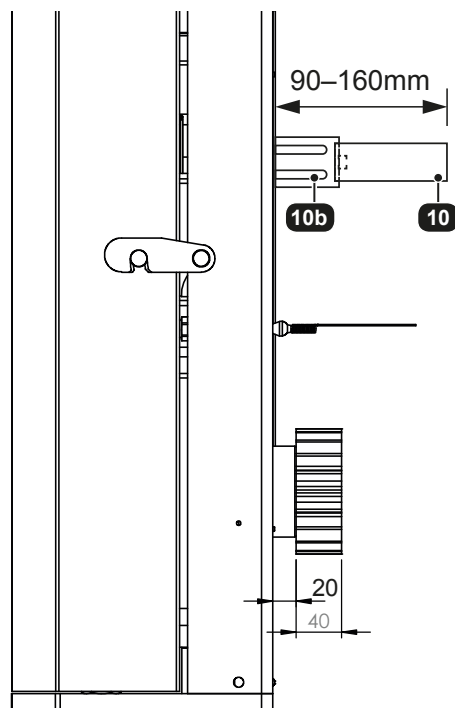
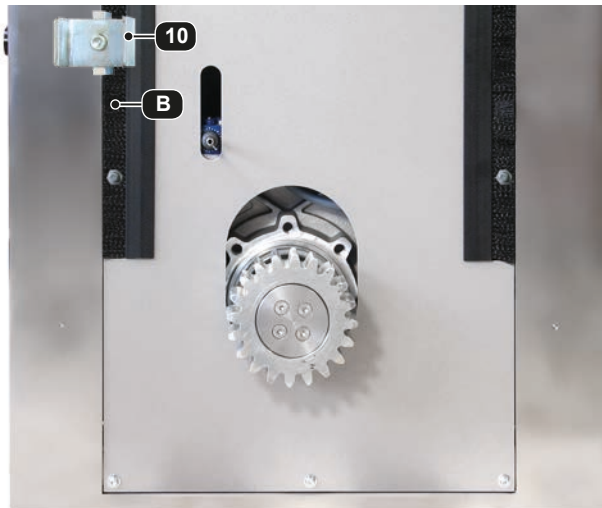
### Mounting dimensions TPS 60 PRO (in mm)

- (1) Ground plate
- (1a) Cable inlet
- (1b) Slotted holes (4x)
- (2) Gear wheel Z17m6
- (Z) Steel gear rack m6
- (W) mounting angle

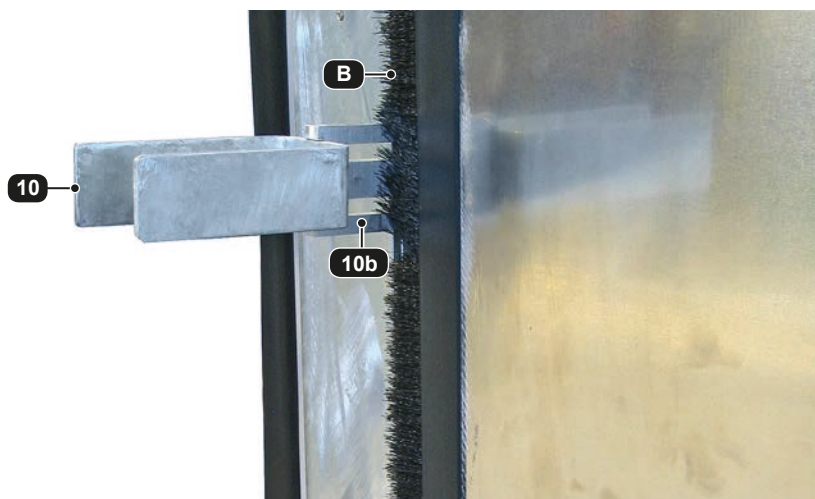
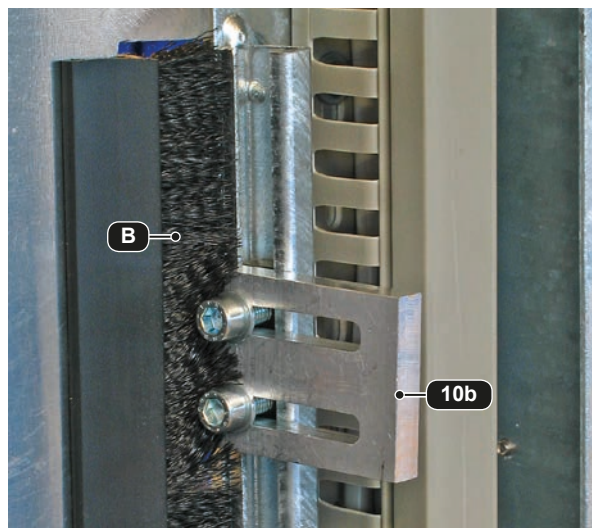
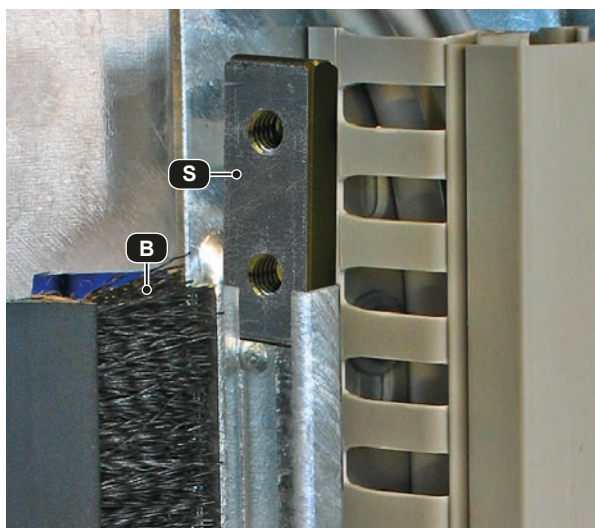


## 2.2 Mounting the fork for the power supply system (optional)

- If you plan to use a power supply system, we recommend installing the optional fork (10).
- The fork, which is adjustable in height and depth, is stuck with its bracket (10b) through one of the openings through the brush (B).

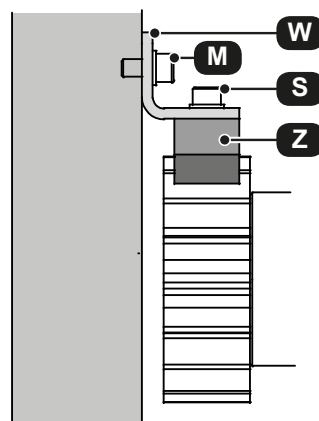


- Thereafter, push the screw piece (S) into the rail that runs along the brush inside the housing, and screw the fork support (10b) by means of two hex socket screws.

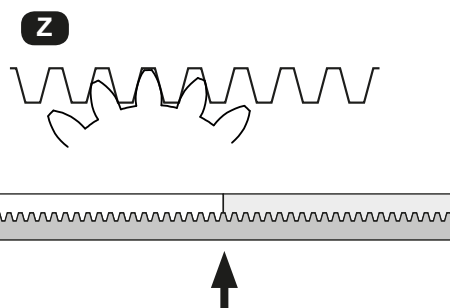
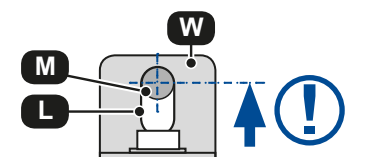



## 2.3 Installation of the gear rack

- Disengage the motor from the output drive pinion with the emergency release lever (see emergency release for instructions) and open the gate completely.
- Fix the mounting angles (**W**) on the steel gear rack elements (**Z**) using the enclosed washers and bolts (**S**).
- 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.

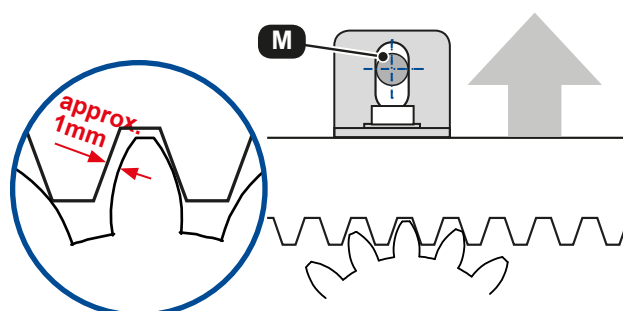


- The bolts (**M**) for fixing the mounting angles (**W**) to the gate have to be positioned on the top of the vertical slots (**L**).
- Proceed with the other gear rack elements in the same manner.



 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 bolts (**M**) 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.
- After that fix the angles again with the bolts (**M**).



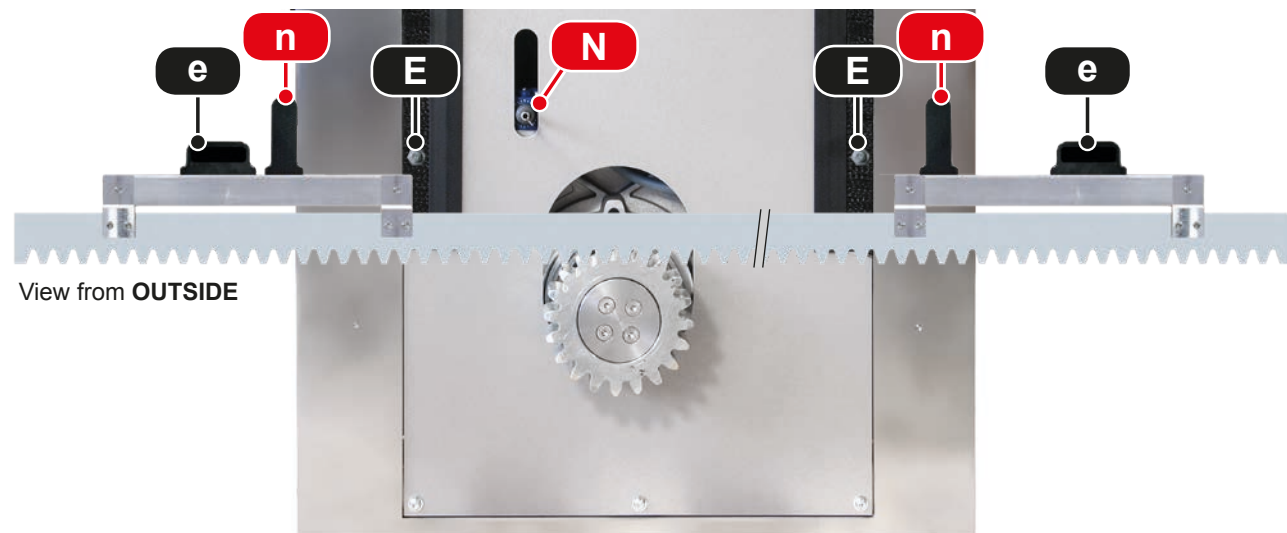
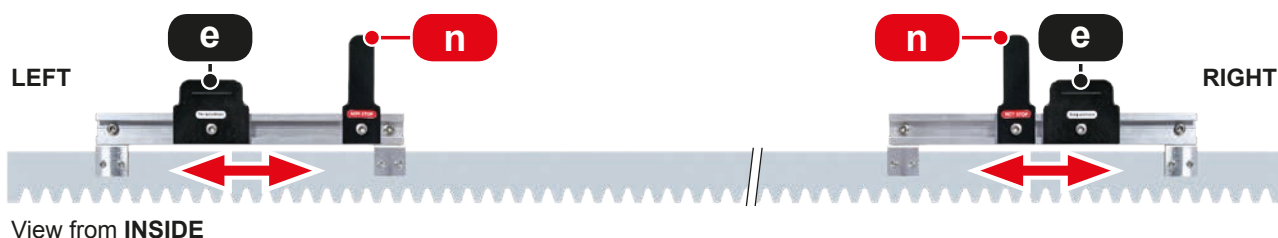
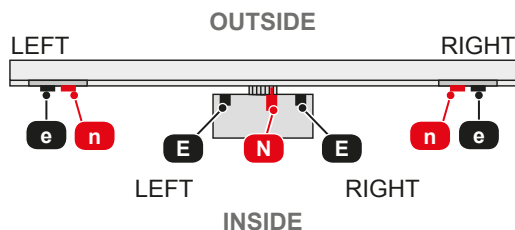
### Attention

**Do not weld the individual gear rack elements together!**

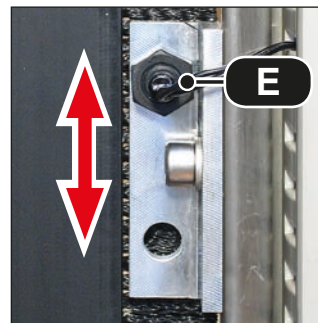


- Additional vertically adjustable reed limit switches and a mechanical emergency shutdown switch (spring bar switch) in the motor housing ensure a high degree of security in both movement directions.
- The compulsory magnetic limit switches and emergency stop triggers must be mounted at the required positions on the rack (horizontal adjustability) and can act as trigger, if necessary.

- E** 2 x Reed switches (to define the end positions)
- N** 1 x EMERGENCY switch (spring bar switch): additional protection of the system in both directions
- e** 2 x Magnets to trigger the reed limit switches
- n** 2 x EMERGENCY trigger to operate the EMERGENCY STOP switch



The existing limit switches define the final positions of the gate movement.  
 Moreover, a mechanical **EMERGENCY** switch ensures additional security.  
 In addition, mechanical stops are indispensable to prevent the gate from moving out of the guide!



2.5 Dismantling

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



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



## Warning

- Before taking off the control cover, the mains switch must be turned off!
- If the control is power supplied, its inner part is under tension.
- 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 mains 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 (buttons, radio, photocells, etc.) have to be laid separately from the 230V lines (supply line, motors, signal lamp).



## DANGER NOTES - Use of frequency converter

- Read this manual carefully before installing and using the converter. Installation, adjustment, repair and maintenance have to be made by professional staff.

### > The non-compliance of the following instructions leads to death or perilous injuries !!!

#### DANGER OF ELECTRIC SHOCK OR ELECTRIC ARC AND EXPLOSION

- The mounting plate of the converter has to be connected with protective earth before switching on. Please use the provided connection point for earth, as shown in picture below.

#### ATV12H075F1, ATV12H075M2 UND ATV12H075M3 - LOOK UP TO CONTINUOUS EARTHING

- An oxidated cooling element can form a confining layer to the mounting plate. Take implicitly the suggested earthing connections into account!

#### ACCIDENTAL USE OF DEVICE

- Read this manual carefully before installing and using the converter.
- Adjustment of parameter settings have to be done by trained professionals.

#### DANGER OF ELECTRIC SHOCK OR ELECTRIC ARC AND EXPLOSION

- Read this manual carefully before installing and using the converter. Installation, adjustment, repair and maintenance have to be made by professional staff.
- The user is responsible for the compliance of all relevant international and national electrotechnical rules/requirements regarding the protection earthing of all devices.
- Numerous components of the frequency converter, including the printed circuits boards, are being supplied through the mains voltage. DO NOT TOUCH ! Only use electrically isolated tools.
- **Do NOT touch non** shielded elements or bolt connections at terminals with mains voltage on
- **DO NOT short-out** the clamps PA/+ and PC/- or the DC-Bus-condensers.
- Before maintenance of converter:
  - Cut off any power supply (also external of control device).
  - Put a warning signboard with „DO NOT TURN ON“ onto the power switch or circuit breaker.
  - Lock the power switch or circuit breaker in open position.
  - WAIT 15 MINUTES so that the PC-Bus-condensers can discharge.
  - Measure the voltage supply of DC-Busses between clamps PA/+ and PCI-, to make sure that the voltage is under 42 Vd.c. The LED's of converter can not show whether there is no DC-bus supply.
  - Should the DC-Bus-condensers not fully discharge please contact manufacturer. Do not try to repair yourself.
- Mount all covers and before switching on the supply or before starting and stopping the converter.

#### Procedure for measuring the bus tension (voltage)

##### RISK OF ELECTRIC SHOCK, ELECTRIC ARC OR EXPLOSION

- Read all safety instructions given here carefully and completely before you perform this procedure.
- The supply of the DC bus can exceed 400 VD. Use a voltage sensor when performing this procedure, with correct assessment of the correct voltage - measure the supply of the DC bus as follows:

#### 1 Turn off power supply.

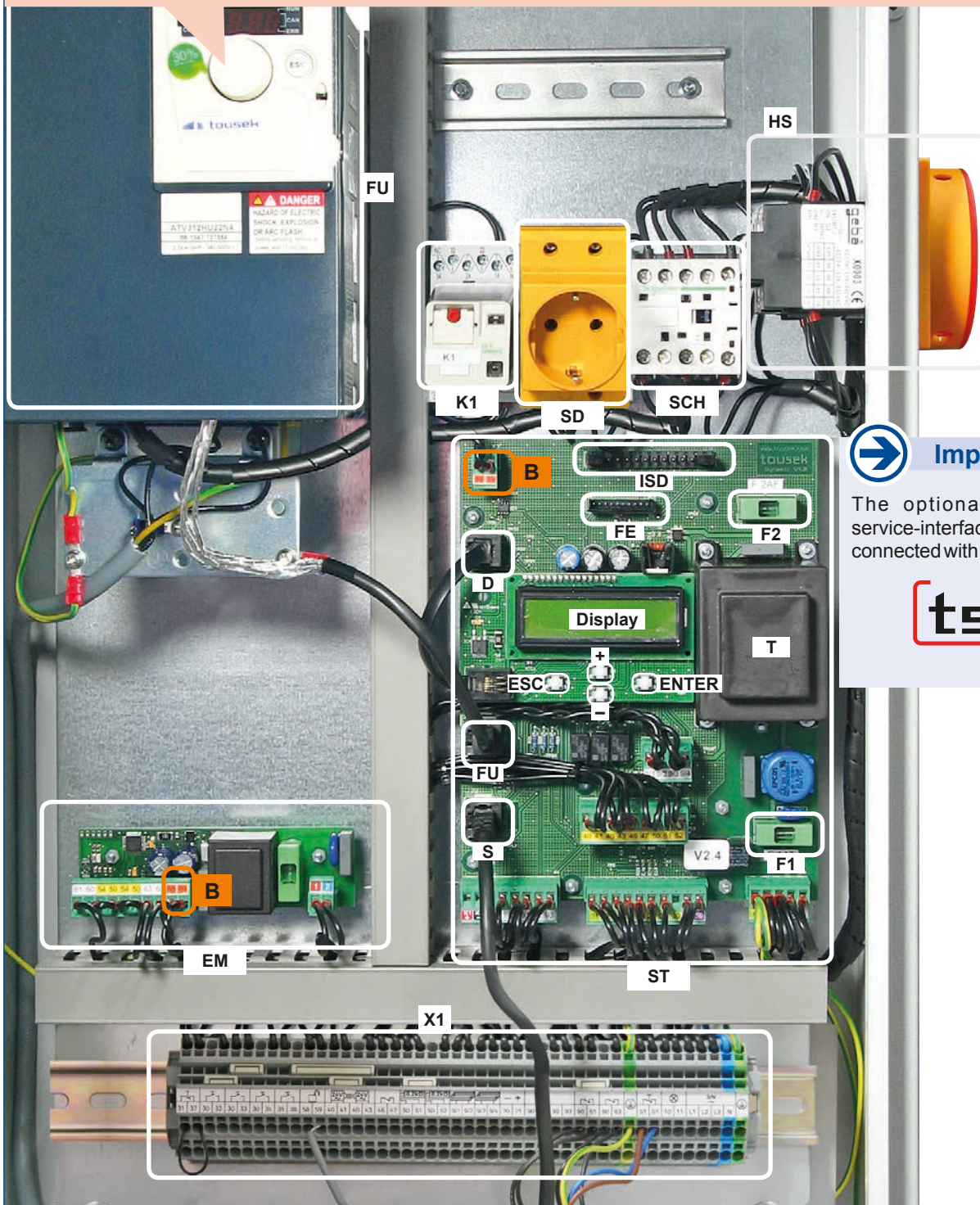
#### 2 Wait for 15 minutes so that the condensers of DC-Bus can discharge.

#### 3 Measure the voltage supply of DC-Busses between clamps PA/+ and PCI-, to make sure that the voltage is under 42 Vd.c.

#### 4 Should the DC-Bus-condensers not fully discharge please contact manufacturer. The converter should not be used or repaired in such a case.



**Important: the factory setting of frequency converter (FU) must not be changed!  
With each change the guarantee is not valid anymore!**



**Important**

The optional tousek-service-interface must be connected with socket (D)!



**Components of the control box**

- FU** Frequency converter
- SCH** EMERGENCY-protection
- K1** Decoupling relay always open-button
- HS** Main switch
- X1** Terminal block
- SD** 230V Schuko socket
- EM** Limit switch module
- B** Bussytem module limit switch/control board

- ST** Control circuit board with display and four programming buttons +, -, ENTER und ESC
- T** Transformer
- F1** Fuse 1A T
- F2** Fuse 2A F
- D** Connection display or connection with optional tousek-service-interface (TSI)
- FU** Connection frequency converter
- S** Connection torque sensor
- ISD** Slot for optional I-loop detector
- FE** Slot for optional radio receiver



## Danger notice

- Before installing and operating the converter, read all safety warnings (see page 10) **COMPLETELY AND CAREFULLY**. Violation of these instructions can cause serious injury or death
- After switching off, it is always necessary to wait 15 minutes, in order to let the capacitors discharge.
- An all-current sensitive FI circuit breaker (Type B) is necessary for proper operation!
- During connection, adjustment and maintenance works please take care, that the electronic circuit board won't be damaged by moisture (rain).

### 3.2 Module limit switch

### Sliding gate operator TPS 60 PRO



- The limit switch module is connected through bus line (terminals 88/89) with the control board ST.
- The limit switch terminals are looped to the terminal block X1 (Reed switches connected).
- An additional STOP button can be connected to the terminals 54/50 of each module.
- The status of the inputs of the limit switches can be queried/checked via menu point SECURITY / Module Status (see page 21).

Control circuit board ST

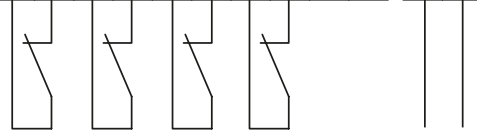
88 89



If no STOP button is connected, bridge the terminals 50/54 (jumper as factory settings).

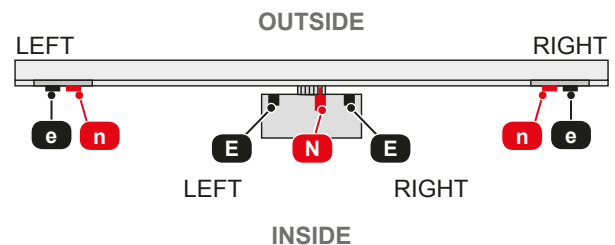
bus system  
High  
Low  
pre-wired

61 60 54 50 54 50 63 60 88 89 1 2

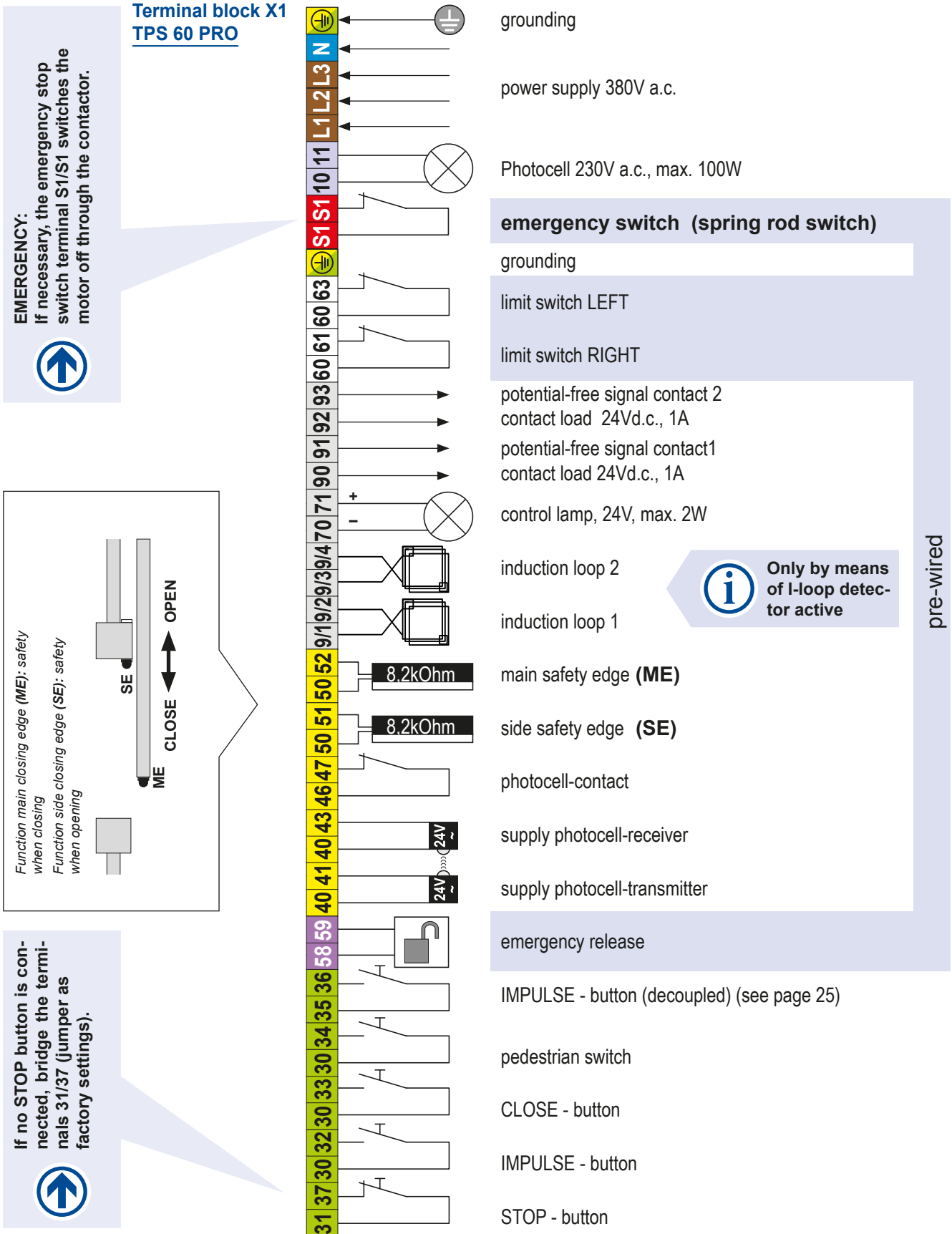


limit switch RIGHT  
additional STOP-button 1RE  
additional STOP-button 1LI  
Limit switch LEFT  
230V, 50Hz L  
power supply N  
pre-wired

Limit switch module



- E** 2 x Reed switches (to define the end positions)  
- Terminal block X1:  
60/61 Limit switch RIGHT  
60/63 Limit switch LEFT
- N** 1 x EMERGENCY switch (spring rod switch): additional security in both directions (Emergency through contactor)  
- Terminal block X1:  
S1/S1 input EMERGENCY- switch
- e** 2 x Magnets to trigger the reed limit switches
- n** 2 x Emergency trigger to trigger the emergency stop switch



**⚠ 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!**

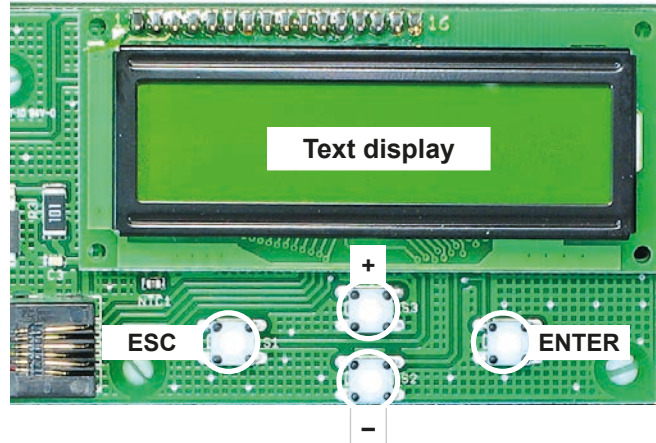
## Programming buttons

## Adjustments - overview



- The adjustment (programming) of the operating parameters is carried out with four programming buttons and the display.
- Before starting the programming, please choose the language. Use the buttons **+** or **-** to choose menu language and confirm with **ENTER**.
- Note: Language selection can also be chosen by pressing the **ESC** button for 5s.

- 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** (see page 28)
- 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 menu control includes all kinds of settings.



The different menu points are indicated as follows:

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

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

Main layer	Sub layer	Settings/adjustments
<b>button/switches</b> <i>see page 16, 17</i>	<b>impulse button</b>	<input type="radio"/> OPEN/STOP/CLOSE <input type="radio"/> OPEN/CLOSE/OPEN <input type="radio"/> OPEN <input type="radio"/> DEAD MAN*)
	<b>pedestrian button</b>	<input type="radio"/> OPEN/STOP/CLOSE <input type="radio"/> OPEN/CLOSE/OPEN <input type="radio"/> OPEN <input type="radio"/> impulse OPEN <input type="radio"/> DEAD MAN*)
<b>safety</b> <i>see page 18–21</i>	 <b>photocell</b>	<input type="radio"/> active <input type="radio"/> not active
	 <b>main safety edge</b>	<input type="radio"/> active <input type="radio"/> not active <input type="radio"/> radio edge TX <input type="radio"/> TX 400
	 <b>side safety edge</b>	<input type="radio"/> active <input type="radio"/> not active <input type="radio"/> radio edge TX <input type="radio"/> TX 400
	<b>PHC- function</b>	<input type="radio"/> when closing reverse <input type="radio"/> stop, open after release <input type="radio"/> stop during closing , then close
	<b>PHC- pause time</b>	<input type="radio"/> no influence of photocell <input type="radio"/> abort pause time <input type="radio"/> re-start pause time <input type="radio"/> close immediately after opening
	<b>PHC- self test</b>	<input type="radio"/> active <input type="radio"/> not active
	<b>module status</b>	 status display of limit switch
<b>motor</b> <i>see page 21</i>	<b>OPENING speed</b>	<input type="radio"/> 50...100% [increment 5] <input type="radio"/> = 100%
	<b>CLOSING speed</b>	<input type="radio"/> 50...100% [increment 5] <input type="radio"/> = 80%
	<b>soft speed</b>	<input type="radio"/> 25...90% [increment 5] <input type="radio"/> = 50%
	<b>soft way OPEN</b>	<input type="radio"/> 0...2m [increment 0,1] <input type="radio"/> = 0,5m
	<b>soft way CLOSE</b>	<input type="radio"/> 0...2m [increment 0,1] <input type="radio"/> = 0,5m
	<b>end position OPEN</b>	<input type="radio"/> 0...-30 [increment 1] <input type="radio"/> = -5
	<b>end position CLOSE</b>	<input type="radio"/> 0...-30 [increment 1] <input type="radio"/> = -5
<b>operating mode</b> <i>see page 22</i>	<b>impulse mode</b>	<input type="radio"/> Stop, start of pause time <input type="radio"/> impulse suppression when opening <input type="radio"/> pause time extension
	 <b>opening direction</b>	<input type="radio"/> <<<- left <input type="radio"/> ->>> right
	 <b>operating mode</b>	<input type="radio"/> impulse mode <input type="radio"/> automatic 1...255s [increment 1]
	<b>partial opening</b>	<input type="radio"/> 10...100% [increment 5] <input type="radio"/> = 30%
	<b>automatic mode</b>	<input type="radio"/> complete/partial opening <input type="radio"/> only complete opening <input type="radio"/> only partial opening
	<b>pause time logic</b>	<input type="radio"/> no influence <input type="radio"/> always open in automatic mode
<b>lights/lamps</b> <i>see page 23</i>	<b>prewarning OPEN</b>	<input type="radio"/> OFF, 1...30s <input type="radio"/> = OFF
	<b>prewarning CLOSE</b>	<input type="radio"/> OFF, 1...30s <input type="radio"/> = OFF
	<b>signal contacts</b>	<input type="radio"/> gate status display 1 <input type="radio"/> gate status display 2
	<b>control lamp</b>	<input type="radio"/> illuminates when opening/closing <input type="radio"/> blinks slowly / illuminates / blinks <input type="radio"/> illuminates in open position
<b>diagnosis</b> <i>see page 24</i>	<b>status display</b>	 status display of all inputs
	<b>delete positions</b>	<input type="radio"/> NO <input type="radio"/> YES
	<b>factory settings</b>	<input type="radio"/> NO <input type="radio"/> YES
	<b>software version</b>	 show software version
	<b>serial number</b>	 show serial number
	<b>protocol</b>	<input type="radio"/> scroll through the log entries (with+ or -)
	<b>status sensor</b>	 show sensor



\*) if impulse button is set to DEADMAN, then the pedestrian and close button are also set automatically to DEADMAN mode. Close with CLOSE button (page 16, 17)

Note: Some changes regarding mode of operation and operation logic will only be accepted if the gate is closed and „eady to use“ appears on the display.





### Warnung

- Before taking off the control cover, the mains switch must be turned off!
- If the control is power supplied, its inner part is under tension.
- 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 mains 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 cables (push button, remote control, photocells etc...) must be laid separately from the 400V (230V) lines (supply, motors, signal light).



The different menu points are indicated as follows:

- = selectable setting    ⊙ = factory settings    ⇄ = status display  
 [G] shows the menu points which are in the "BASIC SETTINGS"

- A general status display of all inputs can be found in the menu DIAGNOSIS / STATUS DISPLAY

## Buttons / switches

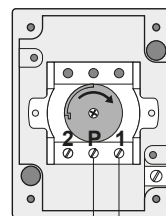
## Connections and adjustments

### [G] Impulse button (terminals X1: 30/32)

### 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.

X1



Impulse switch  
(e.g key switch EPZ 1-2T)



- 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 is set out of order for reasons of safety.**



**IMPORTANT: Do not put into operation in dead man mode.**  
 Select only after putting into operation (see page 28), if desired.



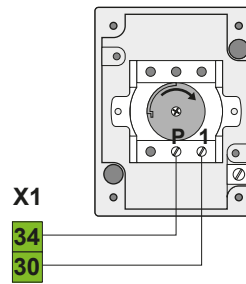
As impulse emitters pushbuttons or key switches as well as external radio receivers with potential free make contacts can be used



## Pedestrian button (terminals X1: 30/34)

## Buttons / switches

- **OPEN / STOP / CLOSE impulse repetition:**  
After a command of the pedestrian opening button the motor for pedestrian opening starts with an open- or closing movement. If the button 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 pedestrian opening button the motor starts an open or close movement. If the button is pressed again during this movement, the motor reverses.



pedestrian opening button  
(e.g. key switch EPZ 1-1T)



- 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.
- **Impulse OPEN:** The contact at terminals X1: 30/34 works as a second impulse button with the fixed adjustment „OPEN“.
- **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. **As soon as DEADMAN is selected, the radio receiver is without function for safety reasons.**



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

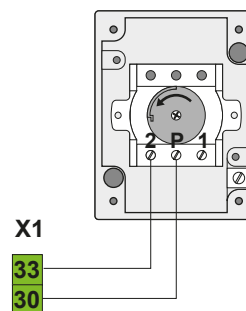


As pedestrian button you can use pushbuttons or key switches as well as external radio receivers with potential free make contacts can be used.

## CLOSE- button (terminals X1: 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.



CLOSE-button  
(e.g. key switch EPZ 1-2T)

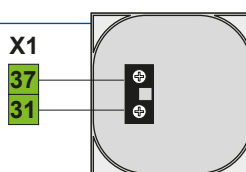


As CLOSE-buttons you may use pushbuttons or key switches as well as external radio receivers with potential free make contacts can be used.

## STOP-button (terminals X1: 31/37)

## Buttons / switches

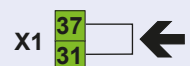
- When pressing the stop switch the gate stops in any desired position.



STOP-button  
(e.g. switch KDT-1N)



As stop switch a break contact has to be used. If no stop switch is connected, terminals X1: 31/37 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!



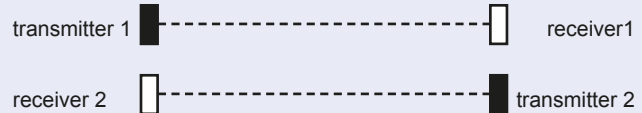
### Important: Photocells notes

- The control unit has a power supply connection for a 24V a.c. photocell (PHC):  
supply PHC-transmitter: terminals 40/41 / supply PHC-receiver: terminals 40/43  
**Note:** in „gate closed“ position the terminals 40/41 get 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 46/47

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

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

**Standard:**



**with SYNC-Function:**



- **Photocell self-test function:** The control board is equipped with a self-test function for the connected photocell. With an opening impulse (switch or button) the transmitter of the photocell is switched off for a short time in gate position „closed“. Thus the photocell receiver interrupts the contact 46/47 - the control board verifies the function of the photocell receiver. This short interruption at the photocell input is not carried out, the control board reports 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.**

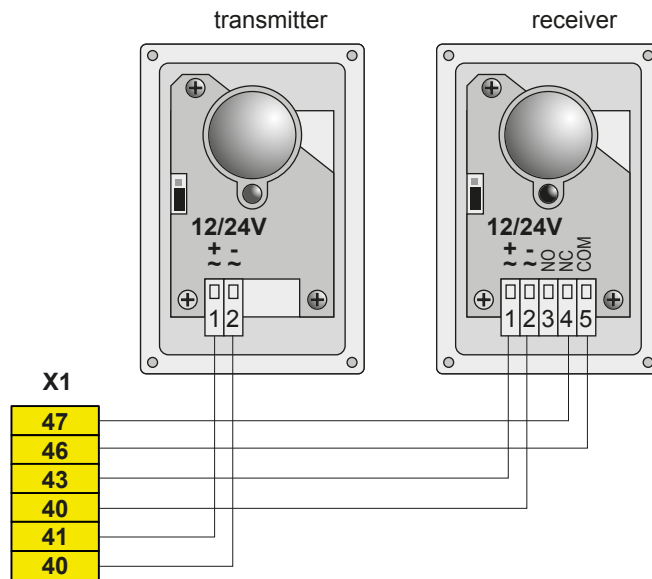
#### Photocells (contact: terminals X1: 46/47)

Safety

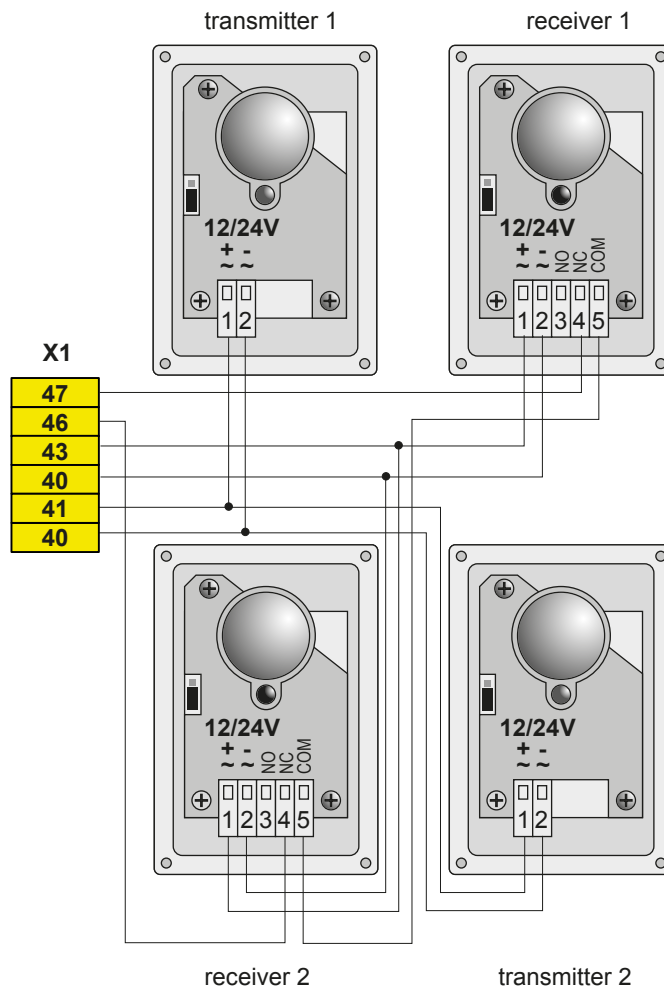
- ⊙ **ACTIVE:** to be selected, if photocell should be triggered.
- **NOT ACTIVE** to be selected, if photocell should not be triggered.

## Photocell - connection examples

### Photocell Tousek 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!



## (De)activation of contact strips Main and Side Safety Edges

### • OBSTACLE DETECTION:

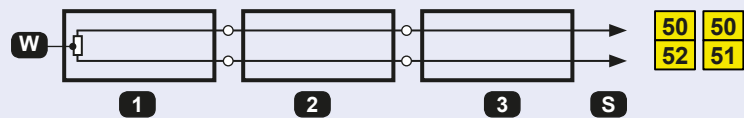
When a contact strip is triggered/activated then a change of direction is effected for 1 second. After that the gate stops.

I.e.: safety edges that have to react on obstacles in closing movement have to be serially connected to the terminals of the main safety edge.

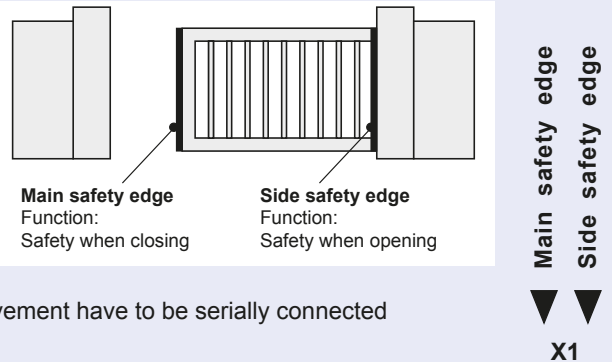
Safety edges that have to react on obstacles in opening movement have to be serially connected to the terminals of the side safety edge.

**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.

### **E** Main safety sensing edge (terminals X1: 50/52)

Safety

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

### **E** Side safety edge (terminals X1: 50/51)

Safety

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



- Connection and detailed information of radio transmission system TX 310 see according manual.
- Connection and detailed information of inductive system TX 400i see according manual.

## Photocell function

Safety

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





## Photocell with pause time

Safety

- ⊙ **No influence:** 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 outer photocell during pause time, restarts the pause time. As soon as the pause time has run out, the gate closes
- **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.

## Photocell test

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.

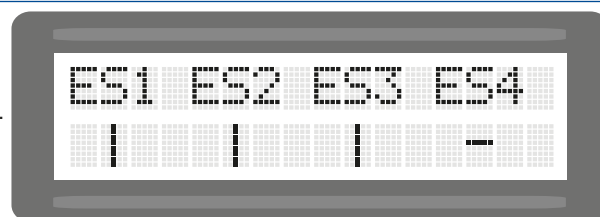
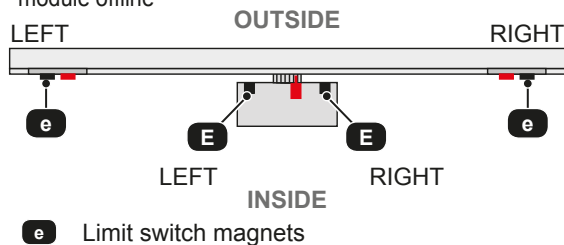


- The photocell test can be deactivated by selecting „not active“.
- The deactivation of the self-test function is only allowed if the safety devices correspond to the category 3!

## Module status

Safety

- ⊙ Status display of the reed limit switch and eventually of the additional stop switch (**limit switch module: terminal 54/50**)  
If no limit switch is detected the following message appears: "module offline"



- ES1 limit switch **E** RIGHT
  - ES2 additional Stop switch 1
  - ES3 additional Stop switch 2
  - ES4 limit switch **E** LEFT
- switch not triggered  
 switch triggered

## Motor

Anschlüsse und Einstellungen

### Speed OPEN ⊙ 100% (factory settings)

Motor

- 50–100% adjustable [increments in 5 steps]: Determines the speed during the opening movement.

### Speed CLOSE ⊙ 80% (factory settings)

Motor

- 50–100% adjustable [increments in 5 steps]: Determines the speed during the closing movement.

### Speed Soft Stop ⊙ 50% (factory settings)

Motor

- 25–90% adjustable [increments in 5 steps]: Determines the speed of the soft run.

### Soft stop distance OPEN ⊙ 0,5m (factory settings)

Motor

- 0–2m adjustable [increments in 0,1 steps]: Specifies the distance of the soft run in the opening movement.

### Soft stop distance CLOSE ⊙ 0,5m (factory settings)

Motor

- 0–2m adjustable [increments in 0,1 steps]: Specifies the distance of the soft run in the closing movement.



## Limit positions

During the commissioning the motor learns the end positions. These positions are determined by magnetic switches, that trigger the limit switches. Through the functions "end position OPEN" and "end position" the two end positions get reduced (reduced travel distance of the gate).

By setting „0“ the motor runs into the learned end position.

### End position OPEN ⊙ -5 (factory settings)

Motor

- 0...-30 adjustable [increments in 1 steps]: This setting is only accepted in the close position.

### End position CLOSE ⊙ -5 (factory settings)

Motor

- 0...-30 adjustable [increments in 1 steps]: This setting is only accepted in the close position.



**ATTENTION:** For the adjustments the valid safety regulations and standards have to be strictly followed !

**Impulse switch/button**

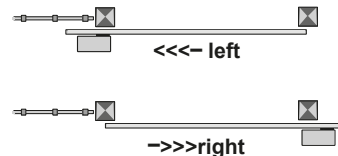
Operation logic

- ⊙ **Stop at opening and 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 at 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**

Operation logic

- ⊙ **<<<< 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**

Operation logic

- ⊙ **Impulse mode:** Impulse through impulse switch/button or CLOSE-button to start closing of gate.
- **Automatic mode, pause time 1-255s adjustable [increment 1]:** gate closes automatically after the adjusted pause time

**Partial opening ⊙ 30% (Werkseinstellung)**

Operation logic

- **10–100% einstellbar [increment 5]:** value defines the partial opening of the total opening.

This adjustment is ONLY adopted in CLOSED-position.

**Automatic mode**

Operation logic

- ⊙ **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.
- **Only partial opening:** only after partial opening the gate closes automatically after the the adjusted pause time.

**Pause time logic**

Operation logic

- ⊙ **No influence**
- **Permanent open in automatic mode:** if this function is activated, the control unit goes from automatic mode into impulse mode **with activated pause time through impulse in open gate position for this cycle**, hence if gate is open then an impulse will end the automatic mode - the gate remains open. Only the next impulse will close the gate and the control unit goes back to automatic mode. 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)



**Warning**

- Before connection works please turn off the main power switch !
- Follow safety rules (see page 10)!



**Pre-alert OPEN** (Photocell: terminals X1: 10/11)

Light/lamps

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

**Pre-alert CLOSE** (Photocell: terminals X1: 10/11)

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



**Signal lamp**

- A signal lamp can be connected to the terminals X1: 10/11 (230V, max. 100W).



**Signal contacts** (Signal contact K1: Kl. X1: 90/91, signal contact K2: Kl. X1: 92/93)

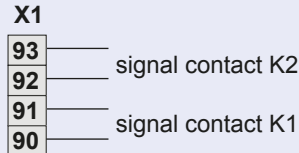
Light/lamps

- ⊙ **Gate status 1:** with the two potential-free signal contacts K1 and K2, the gate end positions (limits) can be evaluated.
- **Gate status 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.



**Signal contacts**

- max. contact load: 1A 24Va.c./d.c.



		Function	K1	K2
Gate status 1	1	Gate in CLOSE position	1	0
		Gate in OPEN position	0	1
Gate status 2	2	Gate in CLOSE position	0	0
		Gate opens/closes	0	1
		Gate stopped or error	1	0
		Gate in OPEN position	1	1

0 = signal contact opened 1= signal contact closed

**Control lamp** (terminals X1: 70/71)

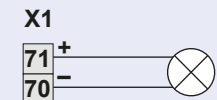
Light/lamps

- ⊙ **Illuminates at opening/closing:** The pilot lamp output is activated during opening- and closing movement.
- **Flashing slowly/illuminates/flashing:** 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
- **Illuminated when gate is open:** Pilot lamp is illuminated as soon as the gate has reached end position open



**Control lamp**

- you can connect a control lamp to the terminals 70/71 (24V, max. 2W)

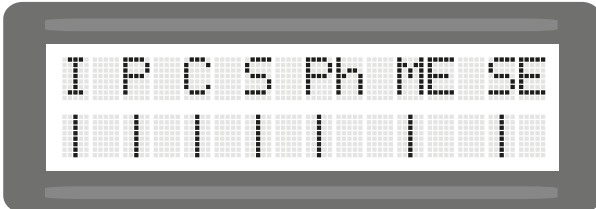


Status display

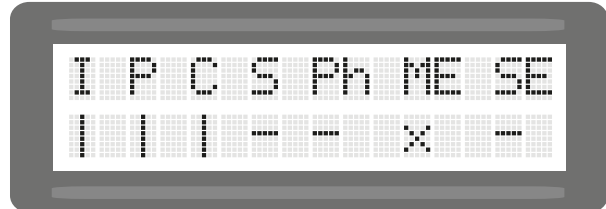
Reset / diagnosis

➔ Status display for inputs as photocell, safety sensing edges, 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: triggered
ME	contact strip main closing edge		Status: triggered
SE	contact strip side closing edge		Status: triggered
	z.B.		Status: contact strip not connected or defect
		o	Status: contact strip or photocell deactivated in menu



All inputs okay.



Impulse-, pedestrian - and close button not triggered.  
STOP-button and photocell are triggered.  
Contact strip (main closing edge) not connected or defect.  
contact strip (side closing edge) triggered.

Detete positions

Reset / diagnosis

- ⊙ **NO:** does not delete the end positions "gate closed" and "gate open"
- **YES:** the determined end positions are beeing 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.

factory settings

Reset / diagnosis

- ⊙ **NO:** no reset back to factory settings.
- **JA:** back to factory settings and delete the determined end positions. Note: the end positions will be determined after giving a new impulse.



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

Software version

Reset / diagnosis

➔ shows the software version on display

Serial number

Reset / diagnosis

➔ shows the serial number on display

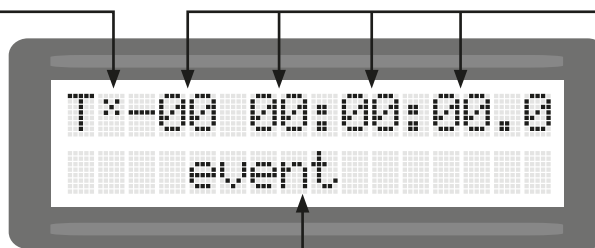
Protocol

Reset / 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



Type of event

Status Sensor

Reset / Diagnose

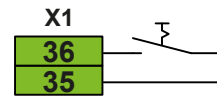
➔ Degree and signal strenght of rotation speed sensor is shown on display.



**Decoupled Impulse switch** (terminals X1: 35/36)

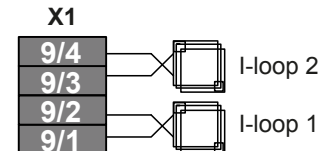
## Other connections

- These input terminals are used for a far away impulse switch. The function is identical to the normal impulse switch input.

**Induction loop inputs** (terminals X1: 9/1,9/2 - 9/3,9/4)

## Other connections

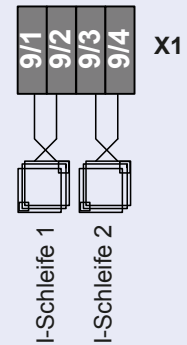
- For connecting the induction loop. The function is identical to the "permanent open" switch input.  
To evaluate the I-loops, you need the optional detector ISD 6 (see page 26).  
For more information see *manual ISD 6*.





**Important**

- The device is for plugging onto a compact control board. The compact control board has to be built into a separate housing with IP54-insulation.
- After each device setting a readjustment is carried out automatically. After a change in the frequency (DIP switch 1: OFF / ON) the Reset-button (RES) has to be pressed.
- **Special notes for loop:** The safe function of the device depends essentially on the correct technical installation and of the laying of the loop wire, as these are the sensors of the device. The loop should not be mechanically loaded or moved. The loop feed line has to be twisted for **approx. 20 to 50 times per meter** and separated from any voltage carrying lines.
- The loop connection has to be made to **terminals 9/1-9/2 (= loop 1) and 9/3-9/4 (= loop 2).**
- *Detailed informations can be found in the corresponding manual.*



**Mounting and installation**



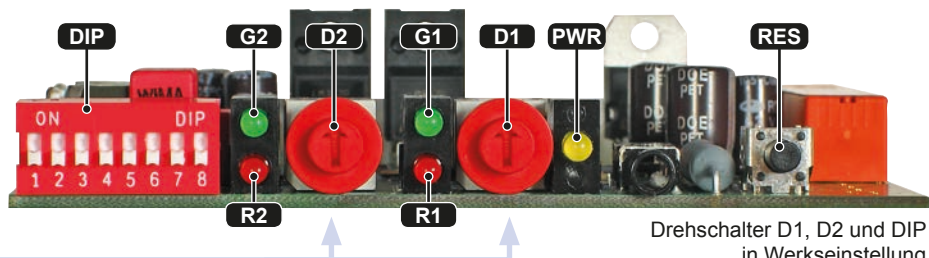
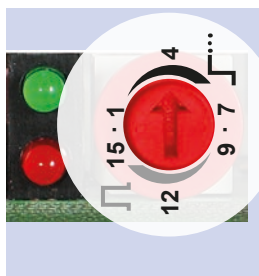
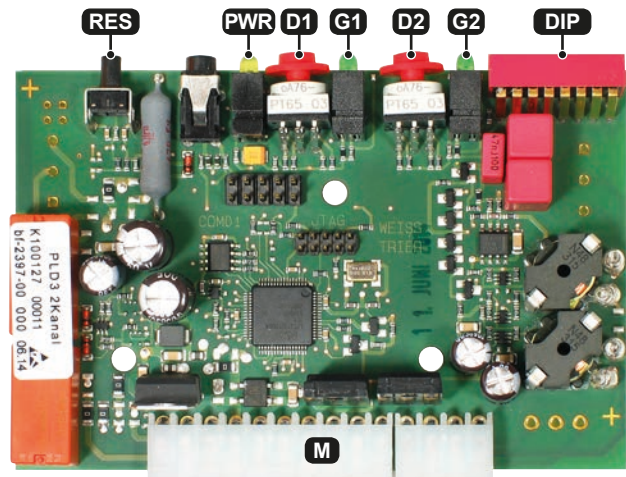
**Switch off the power supply.** open the control board housing and plug the I-loop detector onto the connection slot as shown on picture.

- All detector settings can be made easily with the rotary switches (**D1**) for channel 1 and (**D2**) for channel 2 as well as the DIP-switches (**DIP**). [see corresponding manual.](#)

**Factory settings (DIP1–DIP8 = OFF, D1 and D2 = 4).**

LED's	for channel	display
G1 (green)	1	detection
G2 (green)	2	
R1 (red)	1	defective
R2 (red)	2	
PWR (yellow)	blinking when adjusting / power	

- DIP** DIP-switch
- RES** Reset-button
- M** Molex bar
- D1** rotary switch channel 1
- D2** rotary switch channel 2



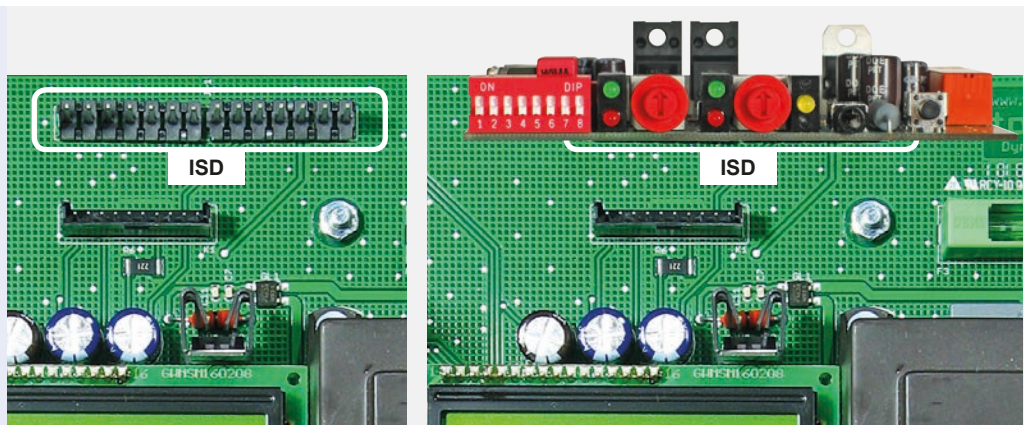
Drehschalter D1, D2 und DIP in Werkseinstellung


The Reset button (**RES**) has 2 functions which can be activated via the different duration of the key pressure:

- **Adjustment:** short key pressure (< 2s), Initialization of all activated loop channels.
- **Reset:** average duration of the key press (> 2s), reset the detector, subsequent initialization of all channels.



Insert the board of the induction loop detector on the slot (**ISD**) of the control board.

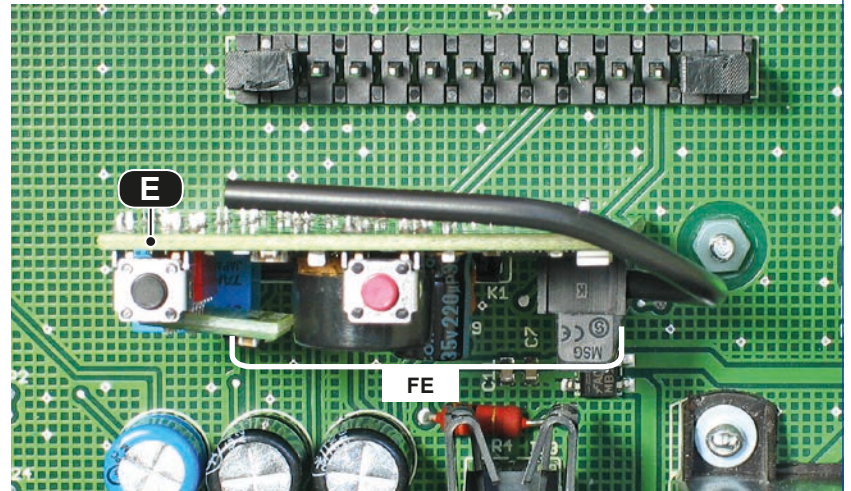
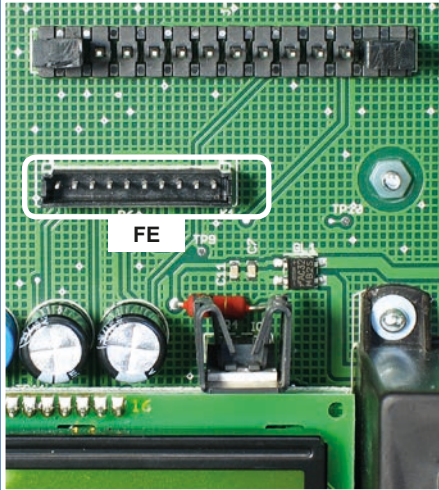


- Turn off power supply. 
- Open cover of control unit housing.
- Plug-in the receiver printed circuit board (E) RS433/868-STN1 (1 channel) or RS433/868-STN2 (2 channels) into the corresponding slot (FE) as shown in the picture.
- To increase the range an external antenna FK433 or FK868 can be connected.



### 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*.





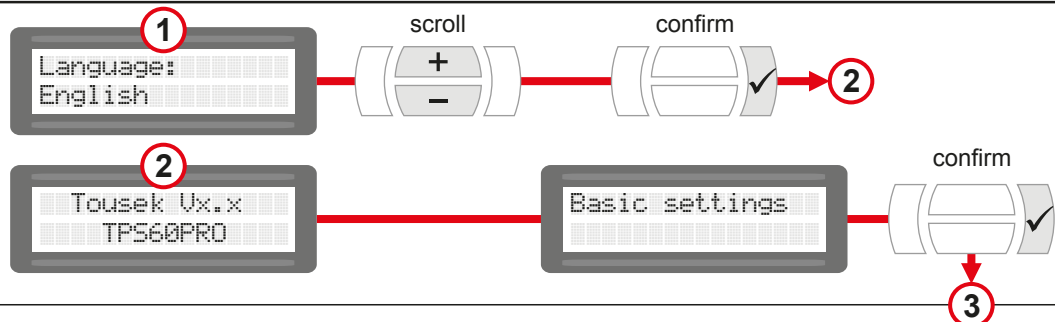
**Important: preparation works**

- Connect control panels, safety devices to the motor under the safety regulations in .  
**Attention: if no stop switch is connected then the terminals 31/37 have to be bridged.**
- **The mechanical limits have to be placed so that contact edges are not triggered, as this would lead to an error message**
- Unlock with emergency release ( see page 30) and set gate to half-opened position-Then lock the operator again.
- Then re-engage operator (correct connection necessary).
- **Important:** Putting into operation in Impulse mode (standard setting) and not in dead man mode.
- During initial operation the choice of language is made first, then in the “Basic settings” the adjustment of most important operator settings and after the system test, the automatic detection of limit positions of gate is made.
- **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.

**Note: during operation with the basic setting for limit positions OPEN/CLOSE (= -5), the limit stops will not be reached (only with adjustment = 0)**

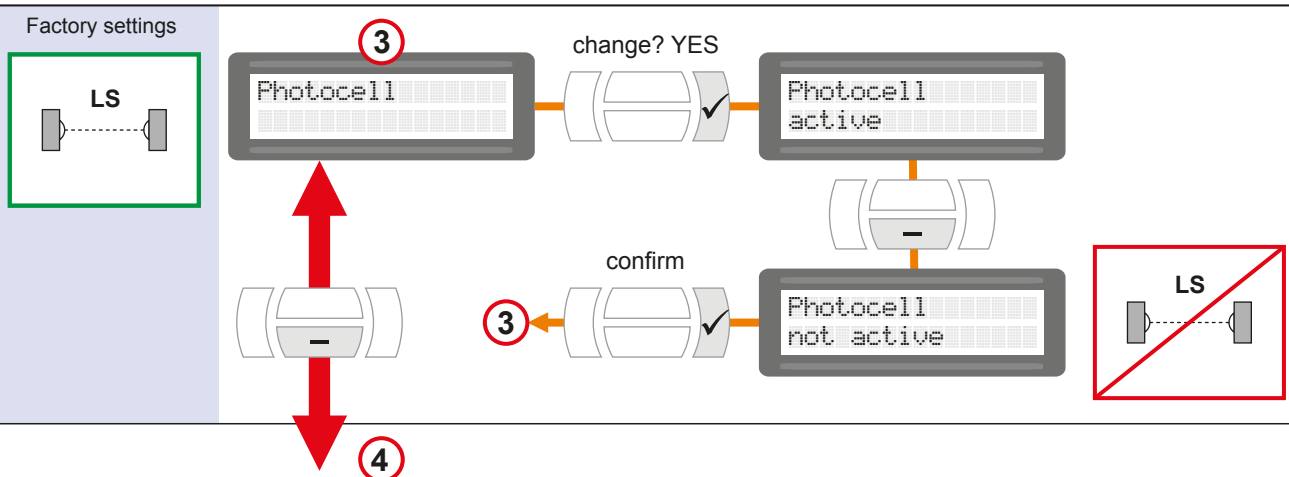
**LANGUAGE SELECTION**

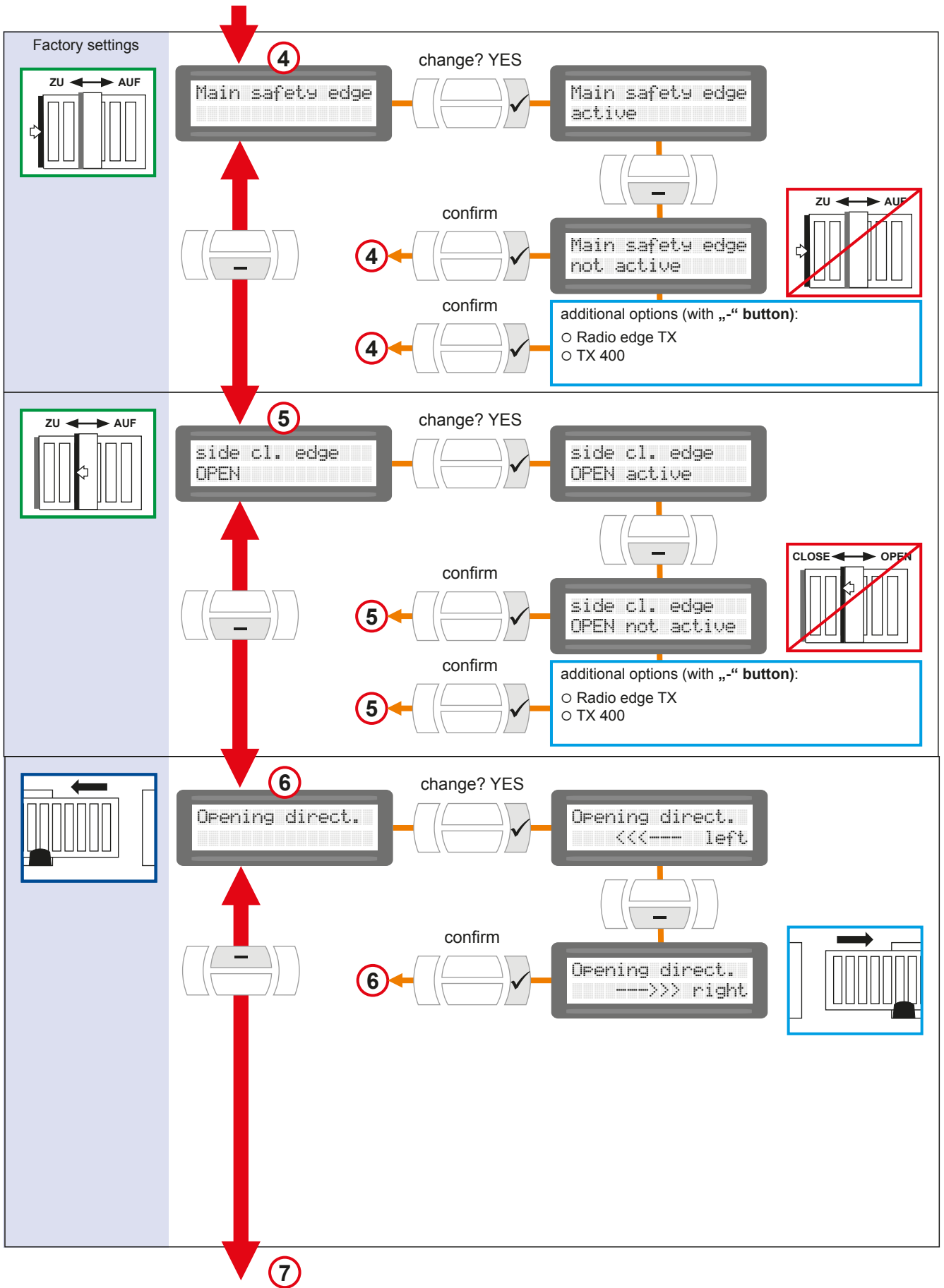
- Can be selected during initial operation (hence after reset to factory settings).
- Can be also chosen by pressing the ESC button ( ↵ ) for 5s, from any position in menu.

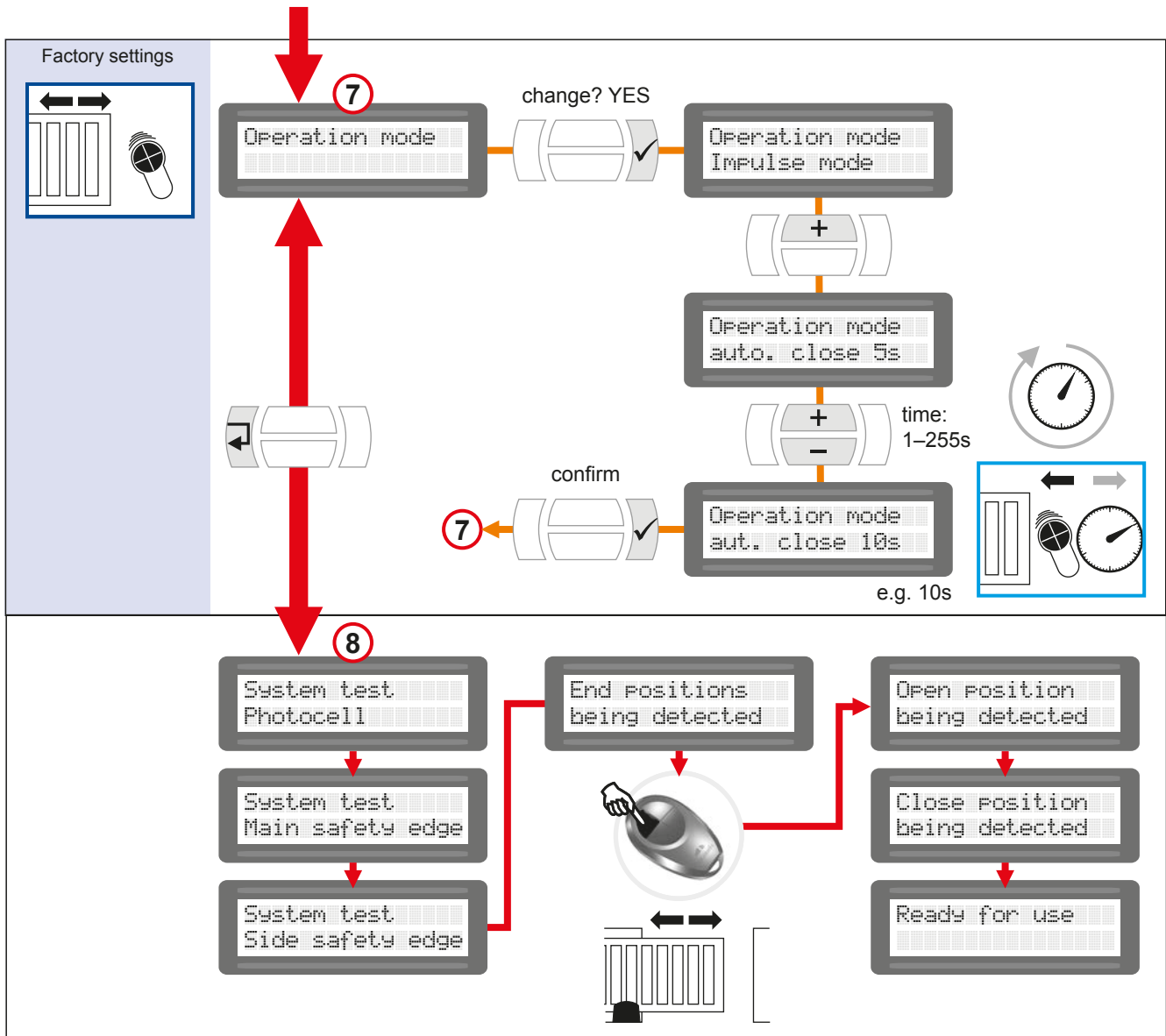


**BASIC SETTINGS**

- 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 (see menu page 15).
- The next programming adjustments are made in the main settings menu (see page 14, 15).








## 7. Emergency release in case of power failure (Note for the user)

TPS 60 PRO

In case of defect or power failure, unlock the drive as follows:

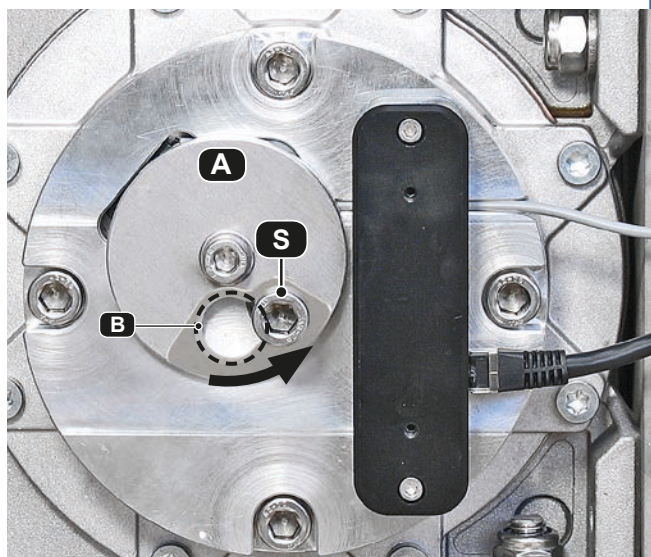
- **Disconnect the power** 
- Turn the cover (A) counterclockwise, until the hole (B) and the emergency release screw (S) are coincident. Screw in screw (S) as far as possible.
- The controller detects the unlocking and shows the message „motor unlocked“ on the display.
- Now it is possible to open and close the gate manually.

*Re-commissioning: to restore the motor operation, unscrew the screw (S). The cover (A) gets back to the starting position.*



### Important

- After the re-set to the „locked“ position, the gate must be moved manually until it audibly engages!



This image shows a motor in „locked“ position.

*By giving the next impulse, the actuator looks for its open position (it is not necessary to re-programm the end positions).*

Error	Possible reason	Solution
Display: „Stop-button released“	stop-button not connected or not bridged	Stop-button (KI. ) connect or bridge > use status display for help
Display: „Photocell released“	photocell interrupted	check correct connection hence remove obstacle > use status display for help
Display: „MCE released“	main safety edge interrupted or hot-wired	check correct connection hence remove obstacle > use status display for help
Display: „SCE released“	side safety edge interrupted or hot-wired	check correct connection hence remove obstacle > use status display for help
Display: „Motor monitoring“	no motor movement because of an obstacle in the way or because the thermic pill has been activated	Remove obstacle or check if gate can be moved easily by hand
Display: „Frequency converter“		cut off power supply, wait 1min. and then switch on again - if this is not the solution please contact service technician
Display: „photocell test negative“	interruption or hot-wired photocell	check correct connection hence remove obstacle > use status display for help
Display: „Low Voltage“	undervoltage	check supply line
Display: „Modul offline“	Control does not recognize limit switch module	Check the connection control / limit switch module
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
Control relays are switching but no gate movement	motor is in emergency release (unlocked)	lock motor gearing



### 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. It is essential to instruct children about the risks. 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.
- 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 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.

## 9. Cable plan

## Sliding gate operator TPS 60 PRO

### 1 Motor TOUSEK TPS 60 PRO

incl.:

- Control box with drive control, Radio receiver \*, loop detector \*)
- Main switch, photocell receiver, height-adjustable fork for current supply \*, 2 safety edges\*)

(2s - safety when closing / 2o - when opening)

\*) = optional components

### 3 a - outer photocell / b - inner photocell

### 4 Antenna for optional receiver

### 5 Signal lamp

### 6 s - safety sensing edge (safety during closing)

### o - safety sensing edge (safety during opening)

### 7 Power supply sytem TX100

When using other power supply system

(e.g. TX200i) see related *instruction manual*

### 8 Key switch

### 9 Stop button

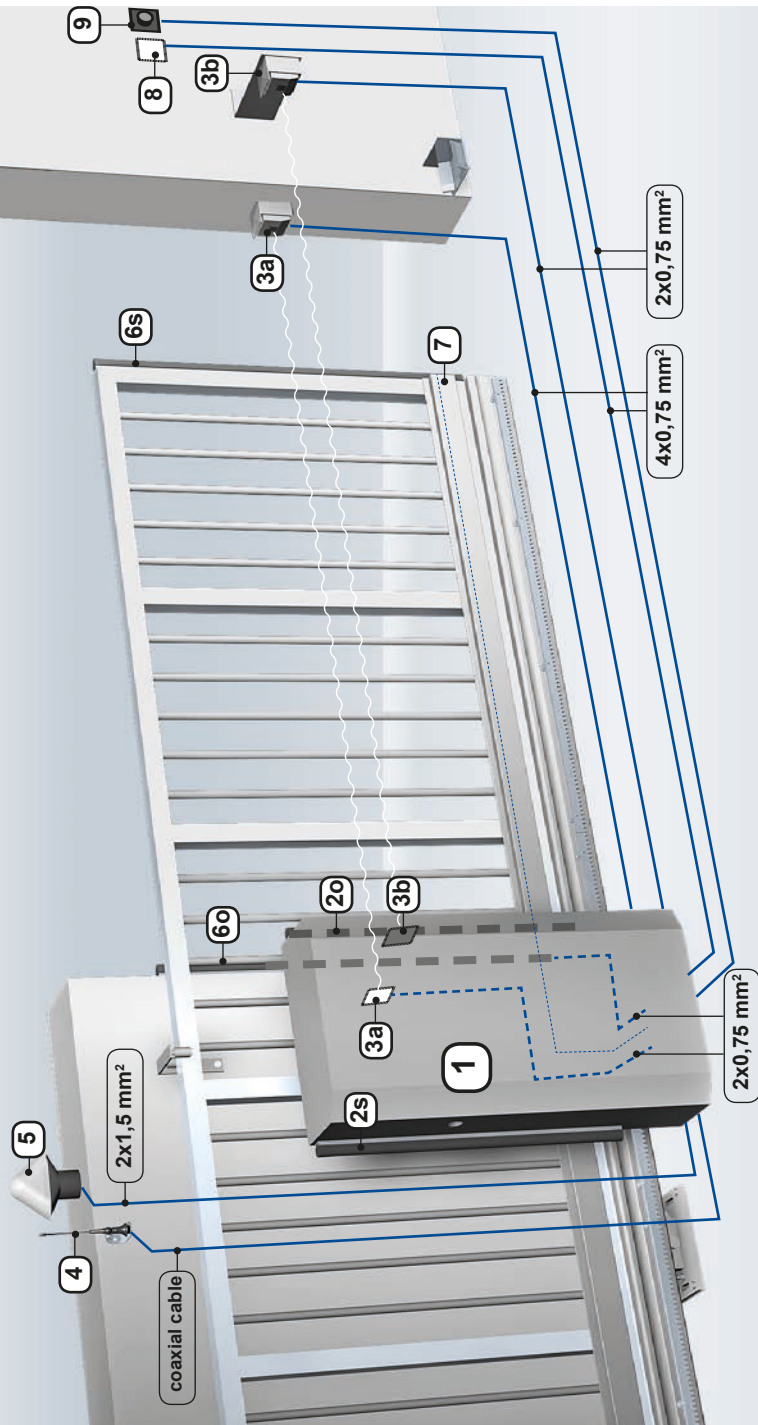
### NOTE concerning cable laying

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.



### Warning 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.

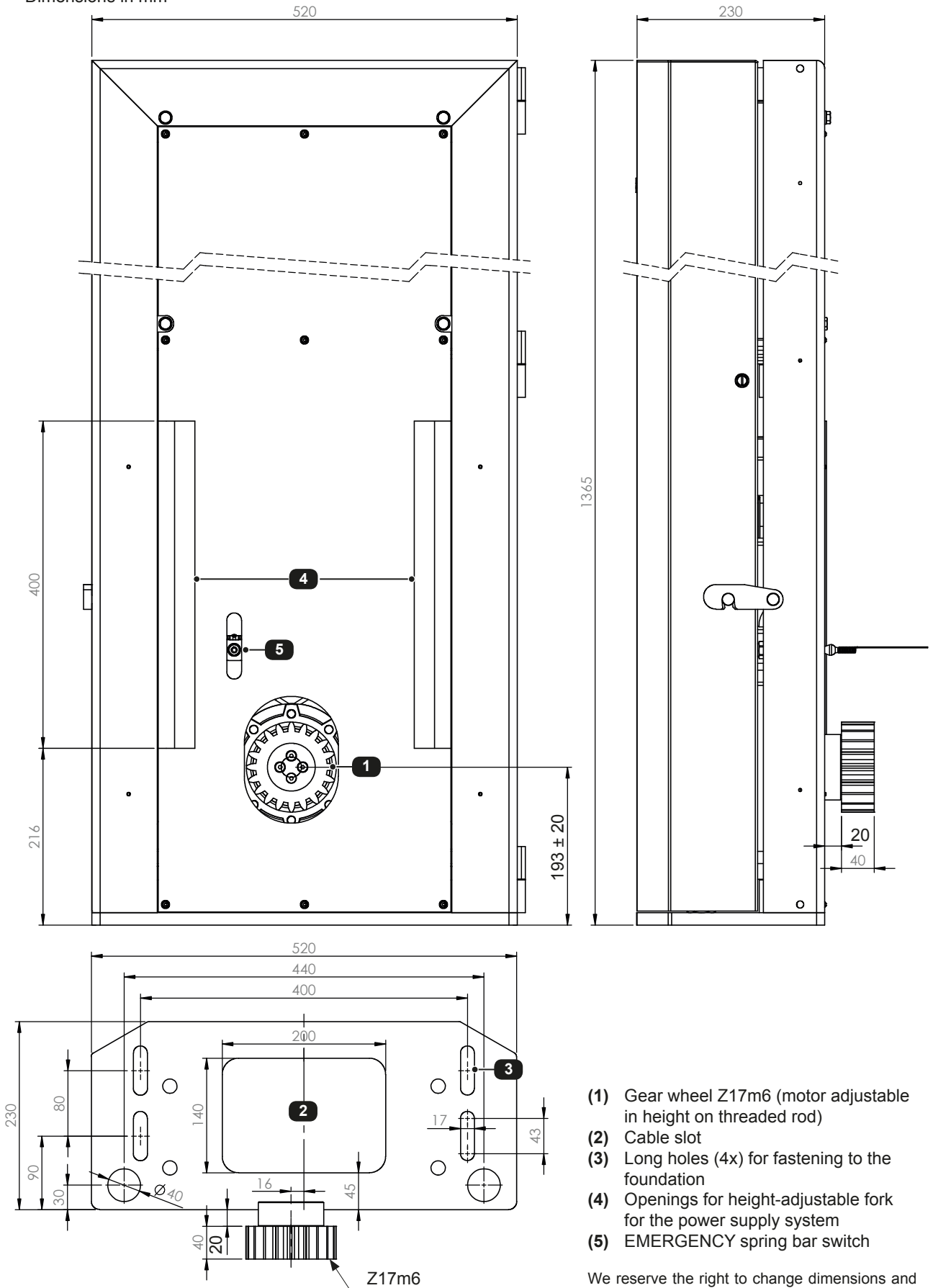
The Tousek Ges.m.b.H. cannot be held responsible for any consequences resulting from disregard of applying standards and laws during installation or operation of the gate facility.

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.



## 10. Dimensioned drawing TPS 60 PRO

• Dimensions in mm





# tousek Interface Programming via PC/laptop



## Product features

- Programming via PC
- Event Viewer of the last 1000 cycles (approx.)
- Saving of preset menu-parameters
- Uploading of preset menus into the control board
- History of all the changes/events in the menu
- Cycle counter
- Software updates via Internet
- Event memory sent by e-mail (internet access required)

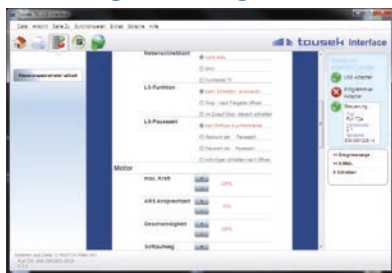
## Compatible with:

- Automation series PULL TSA, PULL T, TPS 20 (N, PRO), TPS 35 PRO and TPS 60 PRO
- Barrier series PASS 838 / ST 80 and PASS 882/ST800
- Control boards ST 12/5, ST 51 and ST 61



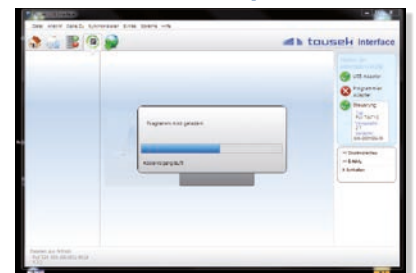
System requirements: from Windows XP® (32/64-bit), from INTEL Atom 1.6 GHz

## Programming via PC



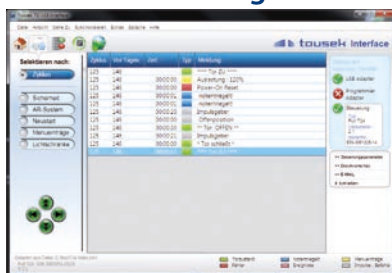
You can easily program the control system by scrolling and clicking in the Tousek menus and then save your configurations under any desired name.

## Softwareupdate



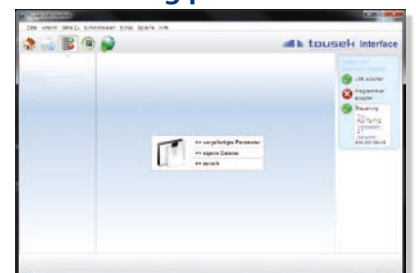
Download the current drive software from [www.tousek.com](http://www.tousek.com) and transfer it to the control board.

## Event log



The last 1000 cycles (approx.) are saved with indication of day and time. Sortable by different events.

## Loading parameters



Load your settings onto the control boards or readout parameters.



### 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**

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, 24. 04. 2016

### 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  
Electromagnetic compatibility 2004/108/EG  
Low Voltage directive 2006/95/EG

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
- carpark management system
- window operators
- domelight operators
- sliding door operators
- electronic controls
- radio remote controls
- key operated switches
- access control
- safety devices
- accessories

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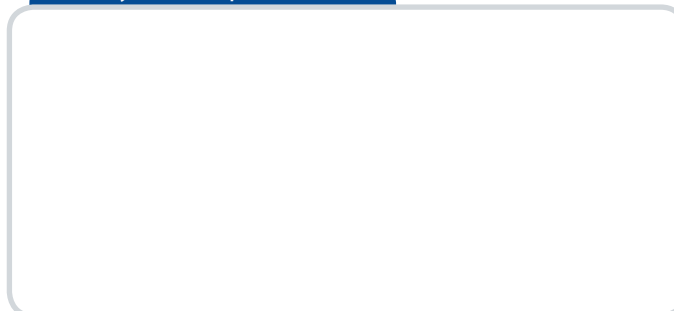
**Tousek Sp. z o.o. Poland**  
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**tousek**  
E\_TPS-60PRO\_05  
23. 04. 2018



*your service partner:*



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