

Technical information / Planning document

sliding gate opener PULL T5, -T8, -T10, -T15



Fields of application:

- For all cantilever and rail driven sliding gates.

PULL T5, -T8, -T10, -T15 features

- Programmable control panel accessible from exterior with illuminated display in english
- Direct connection of 8,2 kOhm contact barriers (safety sensing edges (2-channels)
- Three operating modes (impulse, automatic and dead man)
- Adjustable partial opening
- Built in control board in separate housing
- Safety system ARS (automatic reversal system)
- Self locking worm gear
- Emergency release, lockable with profile half cylinder (3 keys included) - changeable, thus incorporation into an existing house key system is possible.
- Self learning end positions (limits)
- Drive unit (gearbox unit) made of steel and runs in an oil bath
- Permanently selflearning force
- Adjustable soft stop (no loss of force even with reduced revolution speed)
- worm gear and worm wheel made of tempered steel

PULL T5 features

- up to 500kg
- 20 cycles/day

PULL T8 features

- up to 800kg
- 40% duty cycle

PULL T10 features

- up to 1000kg
- 40–60% duty cycle

PULL T15 features

- up to 1500kg
- 60% duty cycle

www.tousek.com

Tousek Ges.m.b.H. Austria
 A-1230 Vienna
 Zetschegasse 1
 Tel. +43/ 1/ 667 36 01
 Fax +43/ 1/ 667 89 23
 info@tousek.at

Tousek GmbH Germany
 D-83395 Freilassing
 Traunsteiner Straße 12
 Tel. +49/ 8654/ 77 66-0
 Fax +49/ 8654/ 57 196
 info@tousek.de

Tousek Benelux NV
 BE-3930 Hamont - Achel
 Buitenheide 2A/ 1
 Tel. +32/ 11/ 91 61 60
 Fax +32/ 11/ 96 87 05
 info@tousek.nl

Tousek Sp. z o.o. Poland
 PL 43-190 Mikołów (k/Katowic)
 Gliwicka 67
 Tel. +48/ 32/ 738 53 65
 Fax +48/ 32/ 738 53 66
 info@tousek.pl

Tousek s.r.o. Czech Republic
 CZ-130 00 Praha 3
 Jagellonská 9
 Tel. +420/ 2/ 2209 0980
 Fax +420/ 2/ 2209 0989
 info@tousek.cz



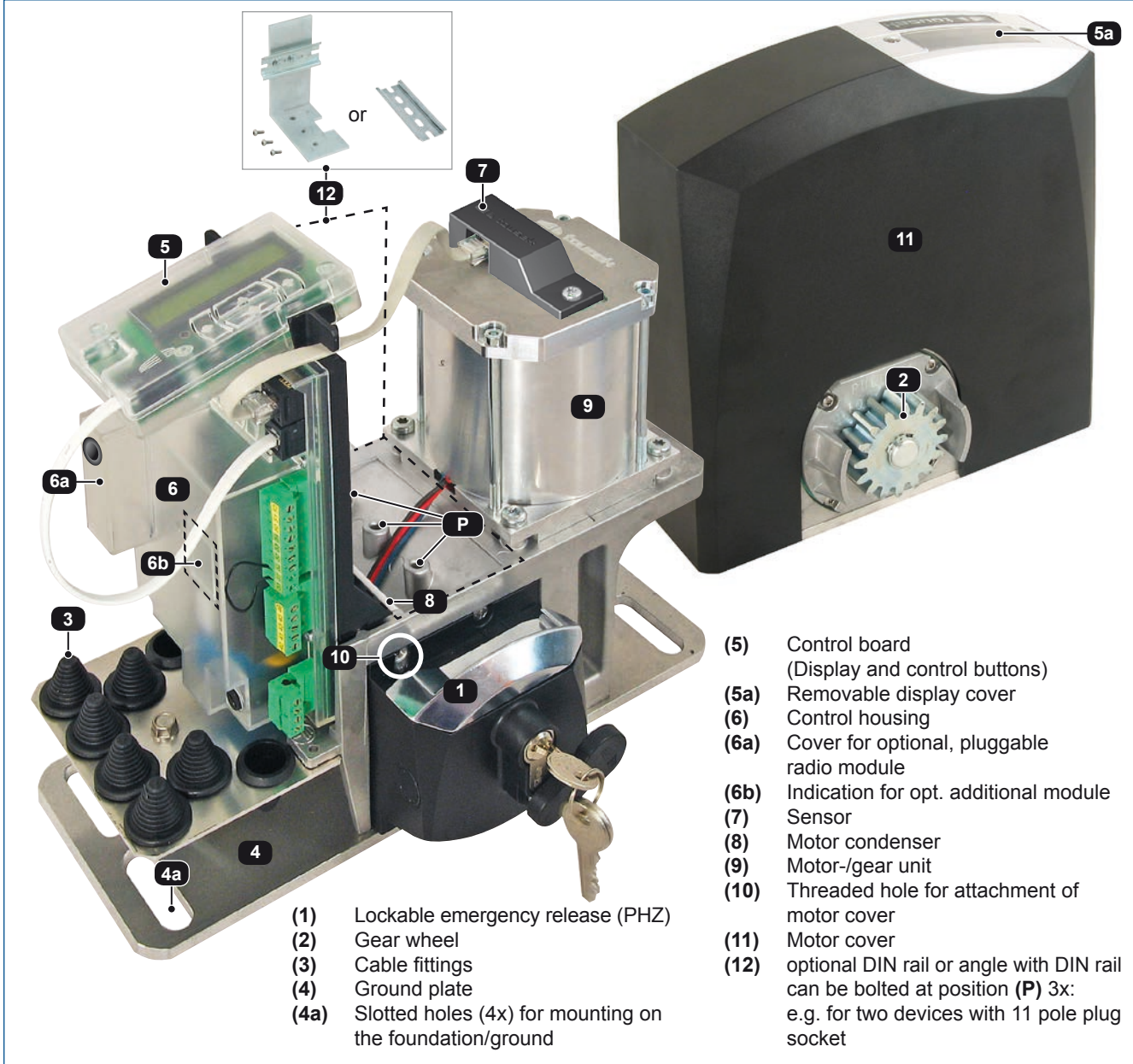
Green safe



tousek[®]
 G A T E A U T O M A T I O N



Sliding gate operator PULL T5, -T8, -T10, -T15



Technical data

Sliding gate operator PULL-	T5	T8	T10	T15		T5	T8	T10	T15
Control board	integrated				Max. drive	30m			
Power supply	230V a.c., 50Hz				duty cycle in S3 mode	20 cycles/day	40%	40-60%	
max. current consumption (excl. equipment)	1,6A		1,9A	2,2A	Ambient temperature	-20°C +40°C			
Gear wheel	Z20M4		Z16M4		Protection class	IP44			
Max. gate weight	500kg	800kg	1000kg	1500kg	Torque sensor	■	■	■	■
Speed	11m/min		9m/min		Article no.	11110370	11110380	11110390	11110570
Torque	20Nm	25Nm		30Nm					
Optional equipment	pluggable receiver • additional module für courtyard/control lamp • additional module for gate status • bracket incl. top hat rail • radio transmission system TX 310 • inductive system TX 400i								

Motor selection by using a spring scale	T5	T8	T10	T15	T24	T24speed
Attach the spring scale to the gate at approx. the height of the rack. Then pull horizontally and without rocking at motor speed. Compare the max. detected tractive force with the guide values listed on the right.	up to 20kg	up to 30kg	up to 40kg	up to 60kg	up to 25kg	up to 20kg

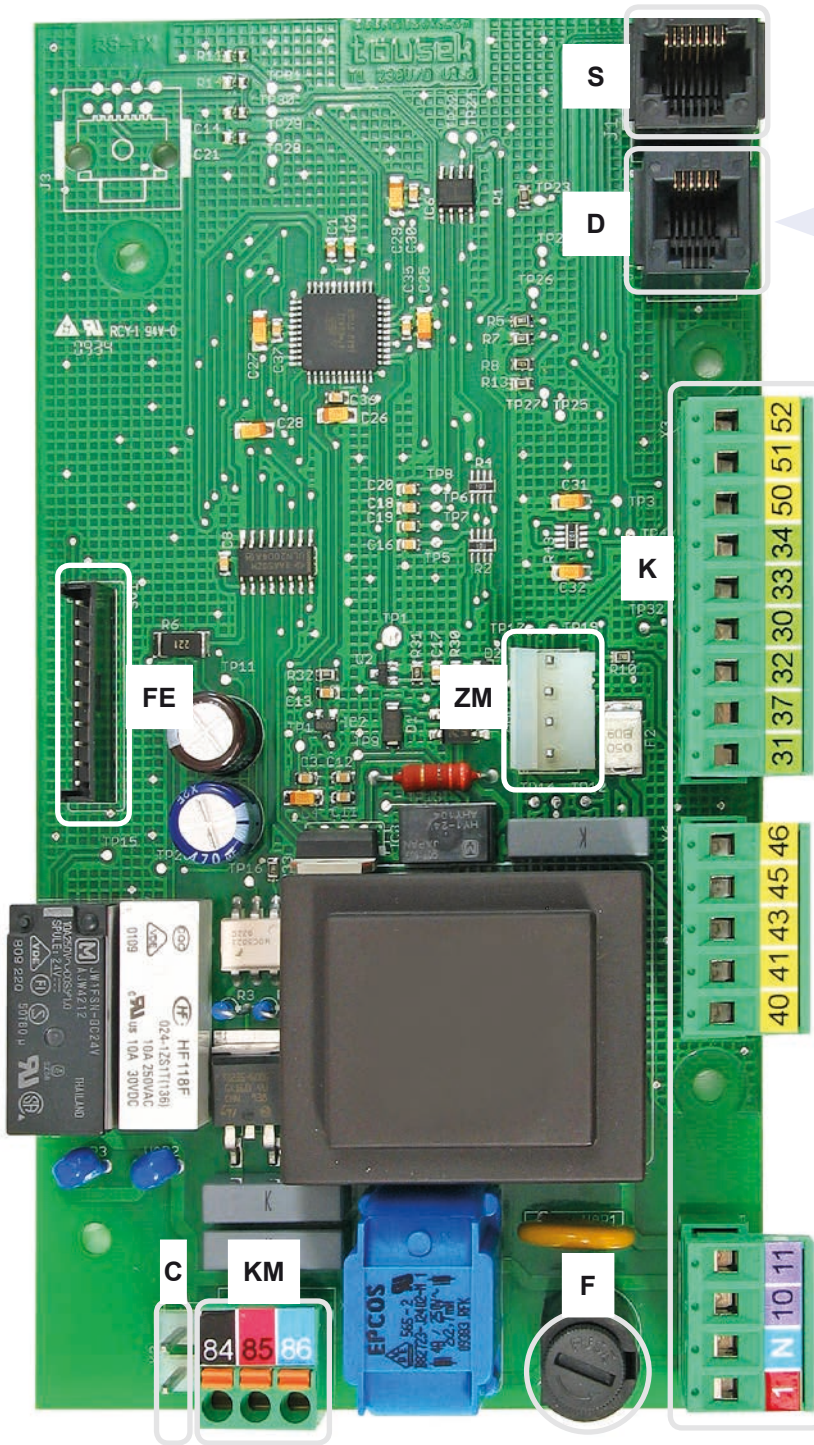
Main layer	Sub layer	Settings/adjustments
button/switches	impulse button	<input type="radio"/> OPEN/STOP/CLOSE <input type="radio"/> OPEN/CLOSE/OPEN <input type="radio"/> OPEN <input type="radio"/> DEAD MAN
	pedestrian button	<input type="radio"/> OPEN/STOP/CLOSE <input type="radio"/> OPEN/CLOSE/OPEN <input type="radio"/> OPEN <input type="radio"/> Impulse OPEN <input type="radio"/> DEAD MAN ¹⁾
*) 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“)		
safety	photocell	<input type="radio"/> active <input type="radio"/> not active
	main safety edge	<input type="radio"/> active <input type="radio"/> radio edge TX <input type="radio"/> TX 400 <input type="radio"/> not active
	side safety edge	<input type="radio"/> active <input type="radio"/> radio edge TX <input type="radio"/> TX 400 <input type="radio"/> not active
	photoc.-function	<input type="radio"/> when closing reverse <input type="radio"/> stop - after release open <input type="radio"/> during close stop, then close
	PHC-pause time	<input type="radio"/> no influence of photocell <input type="radio"/> abort of pause time <input type="radio"/> re-start of pause time <input type="radio"/> immediate close after opening
	PHC-self test	<input type="radio"/> active <input type="radio"/> not active
motor	max. force	<input type="radio"/> 25...100% [increment 5] <input type="radio"/> = 70%
	ARS-response time	<input type="radio"/> 0,15...0,95s [increment 0,05] <input type="radio"/> = 0,50s
	speed	<input type="radio"/> 65...100% [increment 5] <input type="radio"/> = 100%
	soft stop way	<input type="radio"/> 0...2m [increment 0,1] <input type="radio"/> = 0,5m
	soft speed * PULL T15	<input type="radio"/> 30(50*)...60% [increment 5] <input type="radio"/> = 50%
	limit position OPEN	<input type="radio"/> 0...-30 [increment 1] <input type="radio"/> = -5
	limit position CLOSE	<input type="radio"/> 0...-30 [increment 1] <input type="radio"/> = -5
operating mode	impulse mode	<input type="radio"/> stop, start of pause time <input type="radio"/> impulse suppression when opening <input type="radio"/> pause time extension
	opening direction	<input type="radio"/> <<<<- left <input type="radio"/> ->>> right
	operating mode	<input type="radio"/> impulse mode <input type="radio"/> aut. close 1...255s [increment 1]
	partial opening	<input type="radio"/> 10...100% [increment 1] <input type="radio"/> = 30%
	automatic mode	<input type="radio"/> complete/partial opening <input type="radio"/> only complete opening <input type="radio"/> only partial opening
	pause time logic	<input type="radio"/> no influence <input type="radio"/> always open in automatic mode
lights/lamps	prewarning OPEN	<input type="radio"/> OFF, 1...30s <input type="radio"/> = OFF
	prewarning CLOSE	<input type="radio"/> OFF, 1...30s <input type="radio"/> = OFF
	additional module	<input type="radio"/> yard/control light <input type="radio"/> status display 1 <input type="radio"/> status display 2
	courtyard light ¹⁾	<input type="radio"/> OFF, 5...950s <input type="radio"/> = OFF
	control lamp ¹⁾	<input type="radio"/> illuminates when opening/closing <input type="radio"/> blinks slowly / illuminates / blinks <input type="radio"/> illuminates in open position
diagnosis	status display	<input checked="" type="radio"/> status display of all inputs
	delete position	<input type="radio"/> NO <input type="radio"/> YES
	factory setting	<input type="radio"/> NO <input type="radio"/> YES
	software version	<input checked="" type="radio"/> show software version
	serial number	<input checked="" type="radio"/> show serial number
	protocol	<input checked="" type="radio"/> show protocol notes
	status sensor	<input checked="" type="radio"/> show sensor

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



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

Overview of the control unit



Important

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



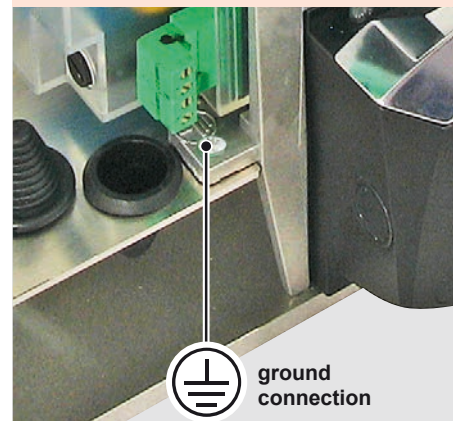
Attention

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



Grounding

The grounding connection is made on the operator housing with the designated grounding screw!



Elements of control board

- (K) Terminal blocks
- (KM) Motor clamps
- (C) Condenser plug
- (S) Sensor plug
- (D) Display plug
- (FE) Slot for optional radio receiver
- (ZM) Connection slot for optional module
- (F) Safety fuse T 3,15A



Warning notes

- 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.

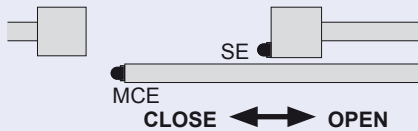


- The product is not suitable for installation in explosion-hazardous areas.
- An all-pole disconnecting mains switch with a contact opening gap of min. 3 mm has to be foreseen. The gate facility has to be secured according to the valid safety regulations!
- **IMPORTANT:** The control lines (buttons, radio, photocells, etc.) have to be laid separately from the 230V lines (supply line, motors, signal lamp).

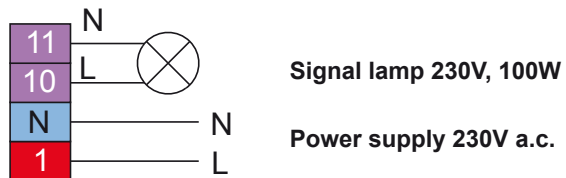
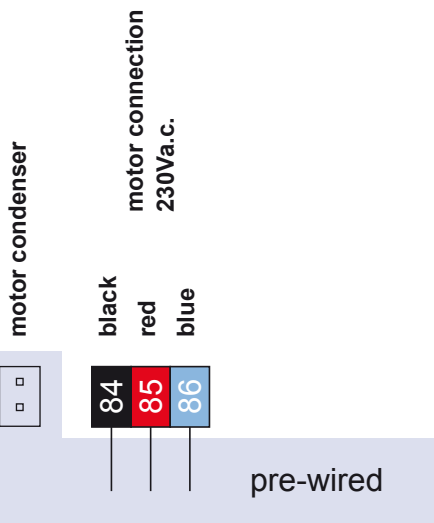
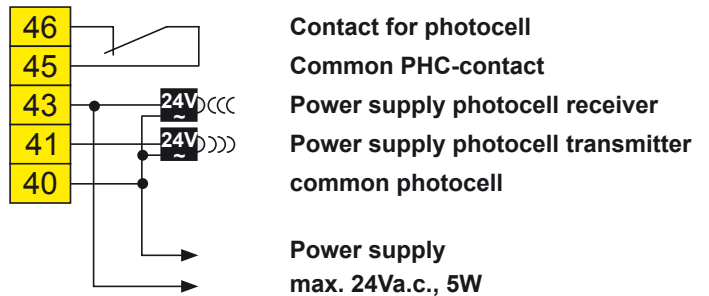
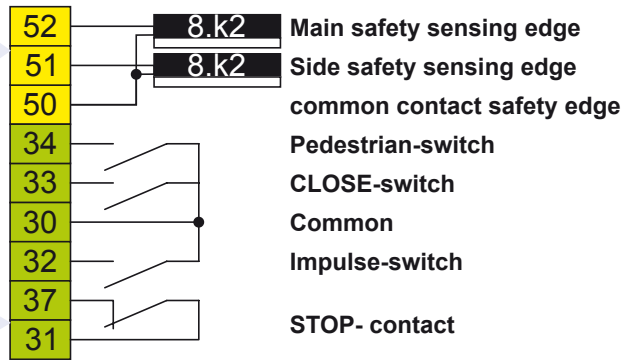


Safety sensing edges

Function main safety sensing edge (MCE):
Safety during closing
Function side safety sensing edges (SE):
Safety during opening



If no stop switch is connected, terminals 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!

- 1 operator TOUSEK PULL T5, -T8, -T10, -T15
- 2 a - outer photocell / b - inner photocell
- 3 antenna for built-in radio receiver
- 4 key-operated contact switch
- 5 signal flashing light
- 6 fuse 12A

- 7 main switch 16 A
Note: An all-pole disconnecting main switch with a contact opening-gap of minimum 3 mm has to be foreseen.
- 8 safety sensing edge
- 9 power supply system TX100 for moving gate components.
When using other power supply system (e.g. TX200i)
- 10 connection socket
- 11 stop momentary contact switch

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

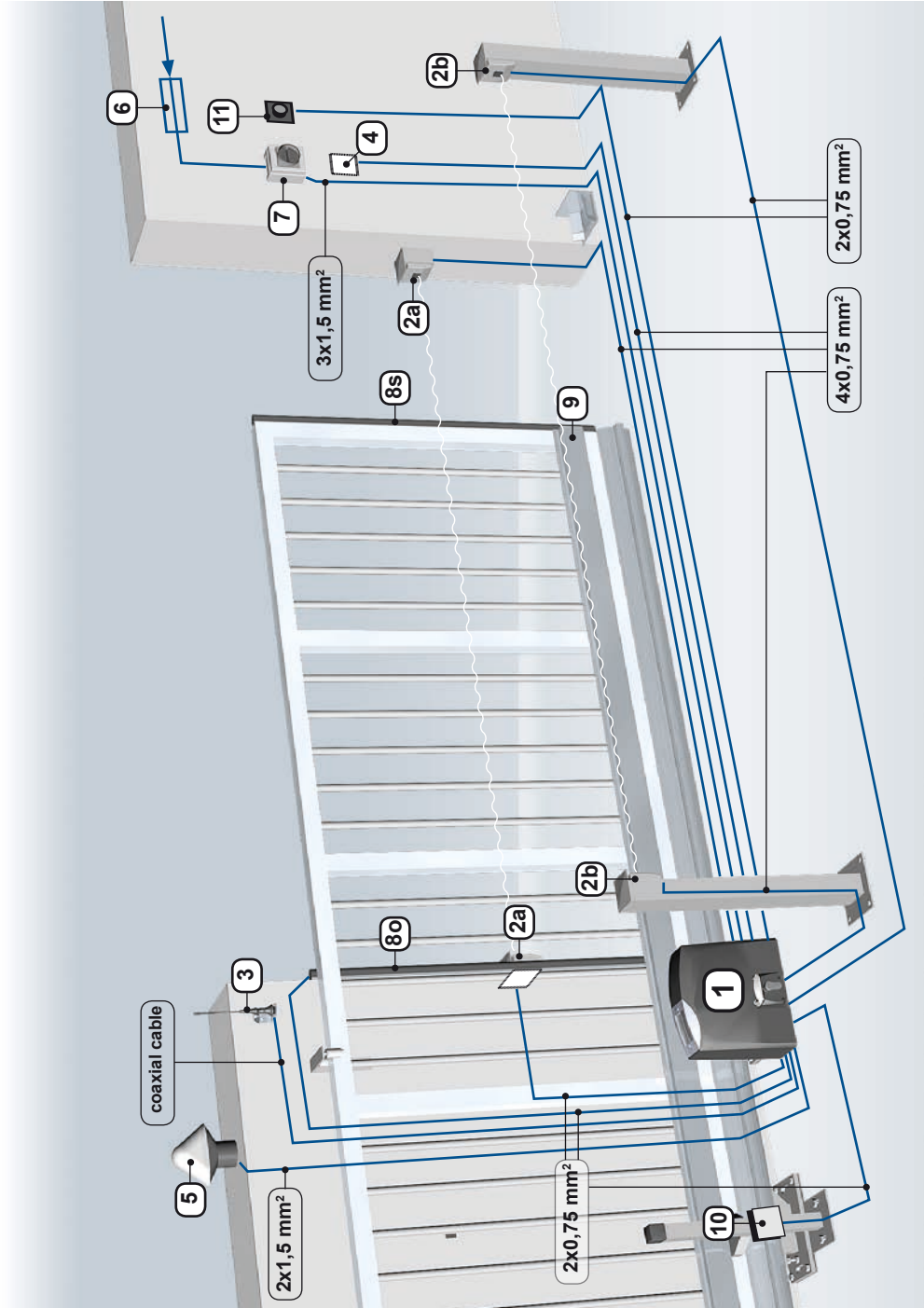
Please be aware that the beside picture is only a symbolic sample illustration of a gate facility and may therefore not show all safety devices required for your specific application.

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.

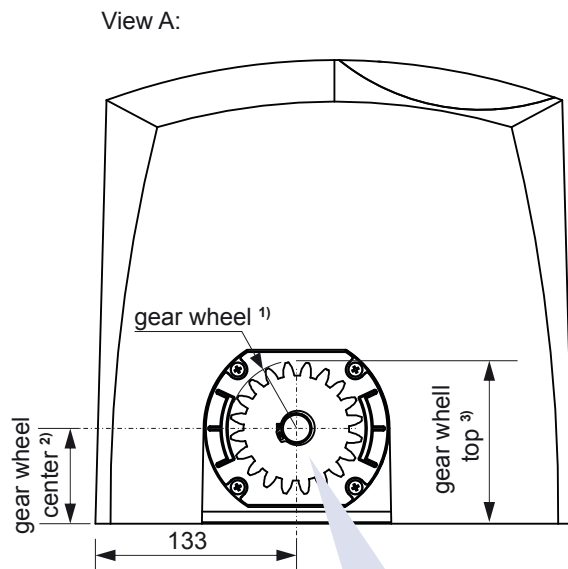
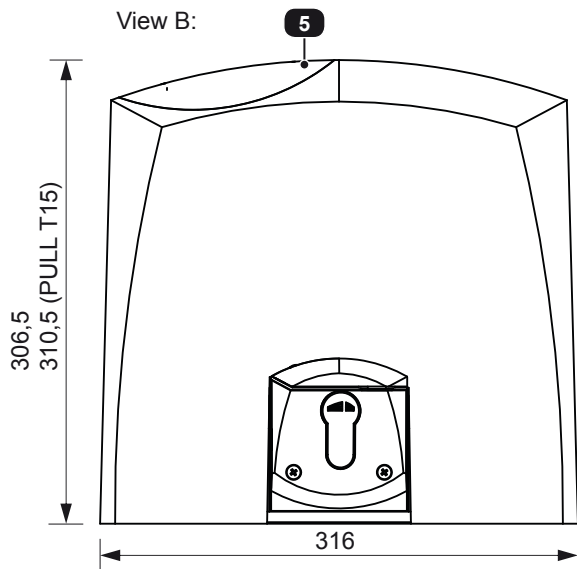
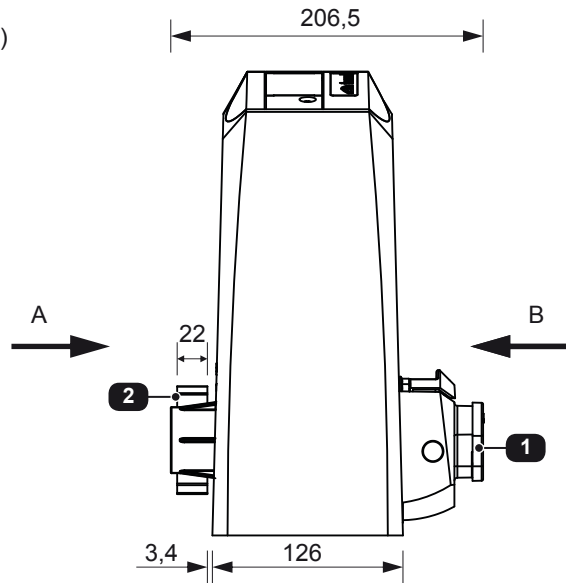
The 0,75mm² control lines are shown without ground lead. In order to facilitate connections we recommend using flexible wires and not using thicker wires for the control lines.



• Dimensions in mm

- (1) lockable emergency release (euro standard cylinder)
- (2) gear wheel
- (3) cable entrance
- (4) ground plate
- (4a) slotted holes (4x) for mounting on foundation
- (5) display for programming

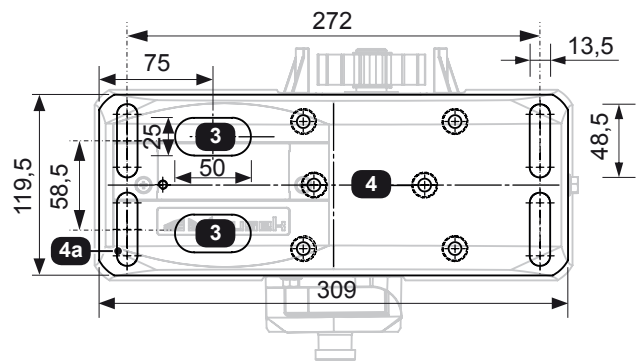
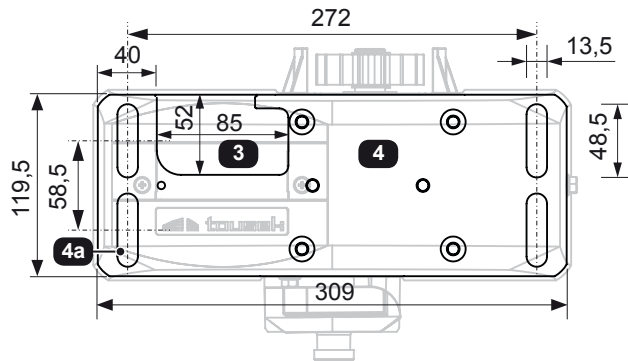
PULL	-T5	-T8	-T10	-T15
¹⁾ gear wheel	Z20M4, r44		Z16M4, r36	
²⁾ gear center		63		67
³⁾ gear top		107	99	103



Fixing of the gear wheel:
 - PULL T5, T8, T10: Seeger ring
 - PULL T15: with screw

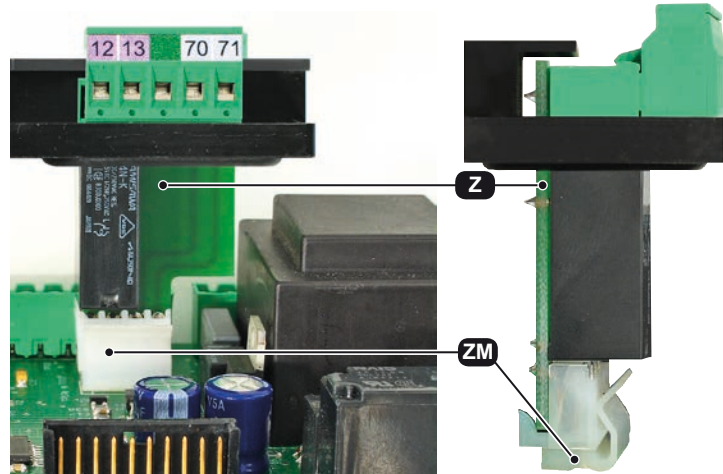
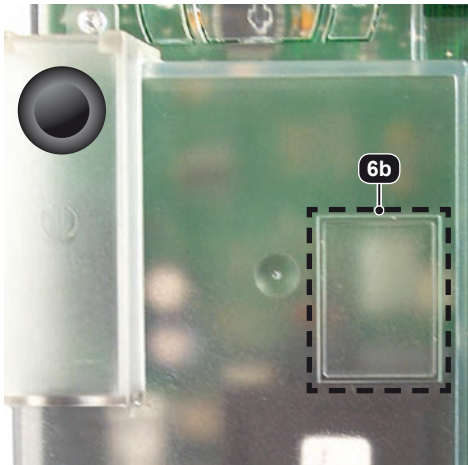
PULL T5, -T8, -T10: depth of ground plate = 8mm

PULL T15: depth of ground plate = 12mm



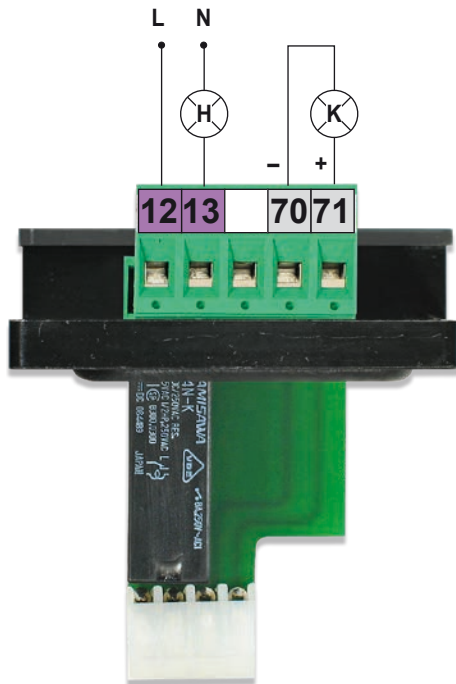
We reserve the right to change dimensions and technical specifications without prior notice.

- The use of one of the additional modules is optional.
- 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“.



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 status can be evaluated in two ways (see menu point „Additional module“).
- Contact load: **24Va.c./d.c., max. 10W**

