

# Installation and operating manual

## Lifting chain barrier LIFT X V3





## GENERAL WARNING AND SAFETY NOTES

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




### 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 (sensor, buttons, radio, photocells, etc.) have to be laid separately from the 230V lines (supply line, motors, signal lamp).**



### Characteristics

- 12 V technology
- motor pillar made of powder-coated aluminium
- simple installation, already pre-mounted
- automatic force cutoff when meeting obstacle
- 



### General

The LIFT X V3 is for closing and restriction of entrances. The LIFT X is for private use (parking space or entrance to house) as well as for public places with lower traffic (service entrance or hotel parking spaces). The big advantage of LIFT X is the compact and shapely motor pillar with all components integrated such as controls and motor and can be installed immediately..

#### Control unit with receiver:

The LIFT X V3 can be controlled through remote control. With a simple impulse on the button the chain is lowered and the entrance opened. With an additional radio signal the chain of the LIFT X V3 is lifted and the entrance closed.

**Chains:** the choice of the chaining is according to the desired usage. The nylon chain is for cars up to 3.5 tons and the stainless steel chain is for trucks. Both chains weisen sehr hohe Festigkeit und lange Beständigkeit auf.

#### Key ring:

the key ring which is attached at the end of the chain serves as predetermined breaking point in case of exterior impact on the chain (e.g. a car). This preserves the mechanical parts of the Lift X.

#### Counter pillar:

the other end of the closing chain is simply attached to a hook on the wall (of the house). If there is no wall available then an optional counter pillar is available.

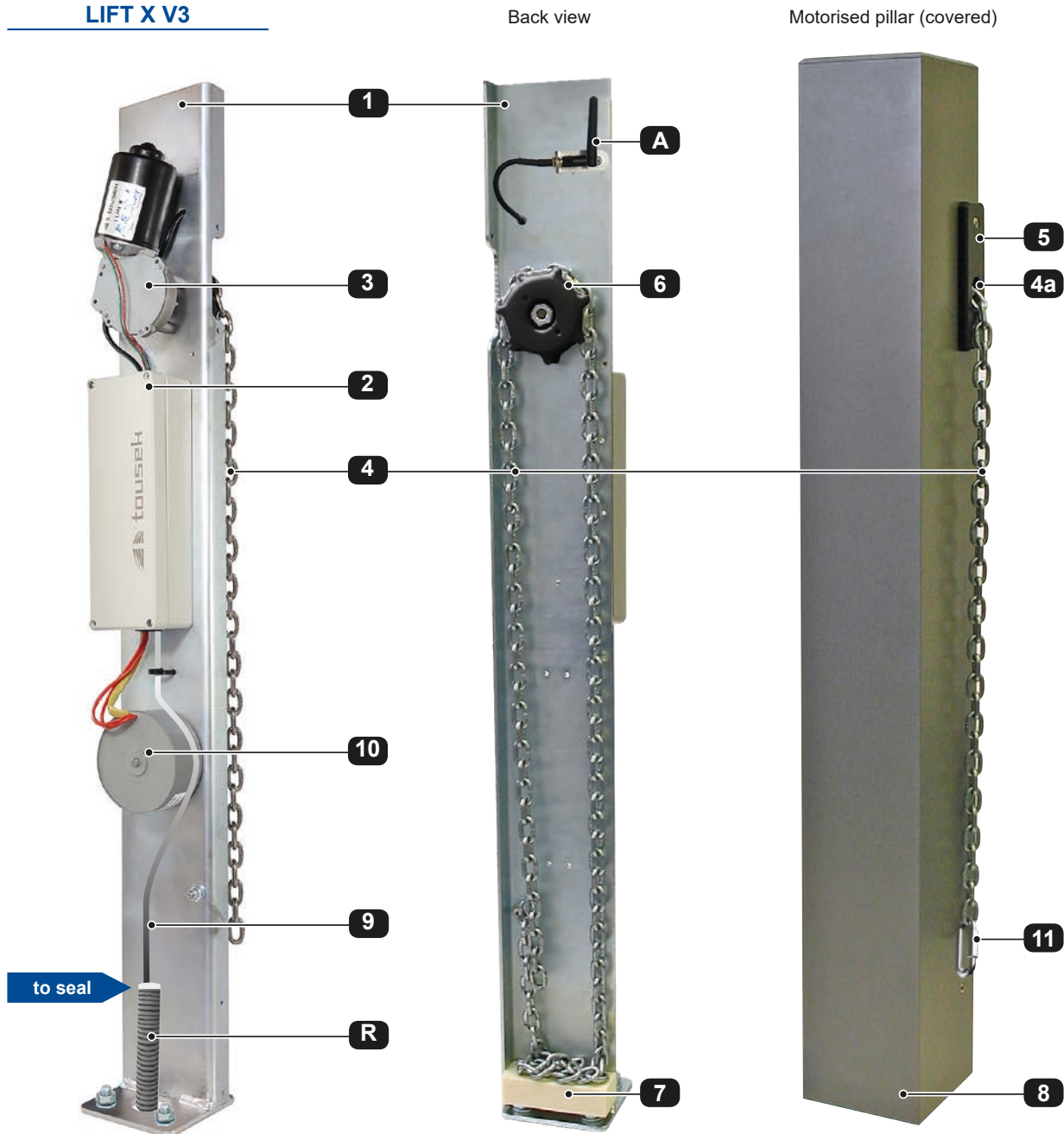
### Technical data

Lifting chain barrier LIFT X V3			
Power supply	230Va.c.	Max. closing	10m
Motor power	12V, max. 60W	Temperature	min. -25C° up to max. +55C°
Max. power	150N	Pillar dimension	120 x 120 x 1000mm
Duty cycle	20 cycles/day	Protection class	IP 54
<b>Lifting chain barrier LIFT X V3</b>	motorised pillar with integrated control box		Art.No. 11590770
<b>LIFT X V3-Kit</b>	LIFT X V3 incl. radio receiver, 2-channel transmitter and antenna RS 868		Art.No. S15020
<b>Counter pillar</b>	necessary if no attachment availability on the other side		Art.No. 11590070
<b>Mounting plate LIFT X V3</b>	mounting plate for bolting		Art.No. 14150300
<b>Foundation plate LIFT X V3</b>	mounting plate for cementing		Art.No. 14150310
<b>Nylon chain</b>	6m:	Art.No. 11590110	10m: Art.No. 11590120
<b>Stainless steel chain</b>	6m:	Art.No. 11590130	10m: Art.No. 11590140

### Components of motorised pillar

- |      |   |      |   |
|------|---|------|---|
| (1)  | Support (for components of motor pillar)                                | (6)  | Wheel   |
| (2)  | Control board (optional with integrated radio receiver and antenna (A)) | (7)  | Insulating board  |
| (3)  | Motor, gearing  | (8)  | Cover/housing of motorised pillar   |
| (4)  | Motor chain   | (9)  | Power supply cable in the protective tube (R) through the cable inlet from below into the column. |
| (4a) | Chain exit  | (10) | Ring core transformer   |
| (5)  | Cover of chain exit   | (11) | carabineer (emergency release)  |

### LIFT X V3

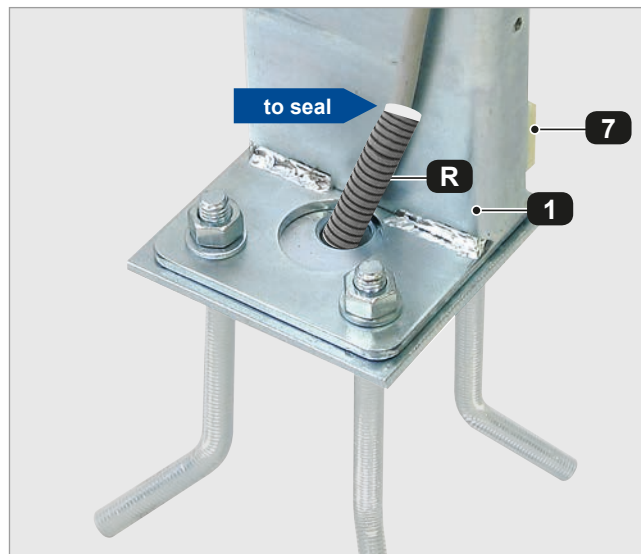
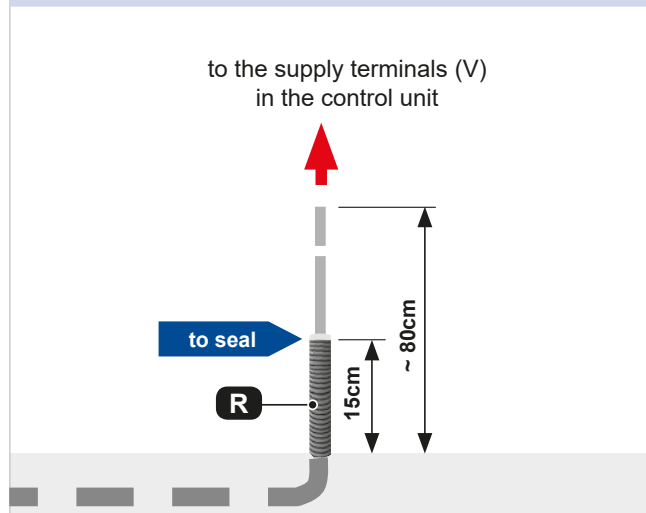


It is necessary to seal the opening of the protective tube (R) so that no condensation can occur inside the column!

## Cables, pre-installation works

- lead the necessary connection wires into a protection tube (R) to the installation site of the motor pillar  
(please check the notes under point 3 „control unit“!).

## LIFT X V3



## Installation possibilities

- The motorised pillar can be mounted in the following ways:

- mounting with mounting plate (M)
- mounting with foundation plate (F)

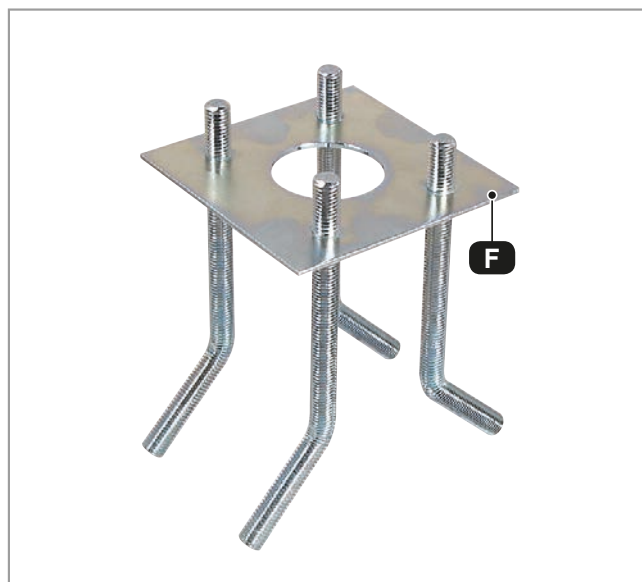
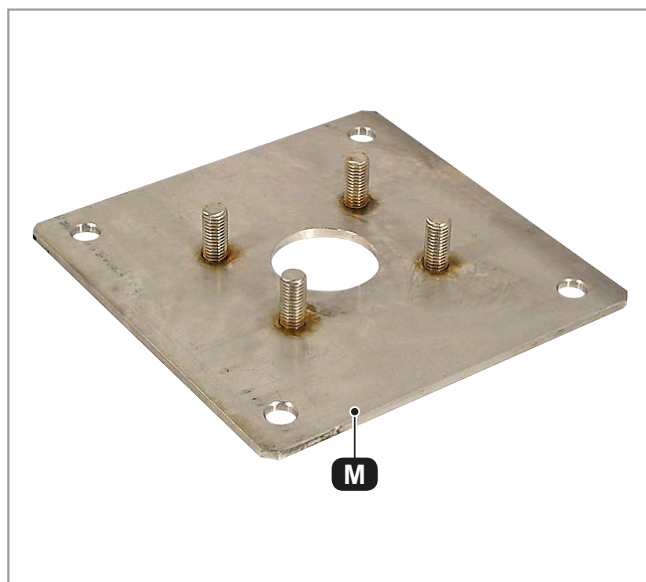
The choice of mounting is depending on ground structure.

- Put the protection tube (R) with the connection lines through the middle drilling of the mounting- or foundation plate and of the pillar socket (1).



It is necessary to seal the opening of the protective tube (R) so that no condensation can occur inside the column!

- Now put on the pillar socket(1) and bolt it (4x).
- then insert **implicitly** the insulation board (7) (for noise reduction and for not having the bolts interfering with chain)



## Put on the pillar cover/housing



- before putting on the pillar cover all electrical connections and adjustments have to be done following the safety rules and regulations in effect.

➔ electric connections and adjustments see page 8–10

- now attach the pillar (5) onto the steel socket (7). Please check the correct arrangement (towards chain exit). Next, align the column cover so that the chain exit (4a) matches with the recess of the support (4b).
- make sure that the chain is hanging 500mm down from over the wheel (6).
- Note that the chain does not protrude beyond the imaginary flight case (the lower chain links should be attached to the insulation (7))

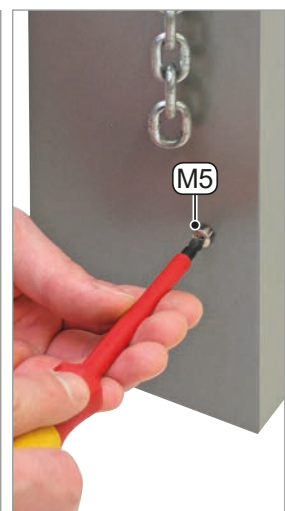
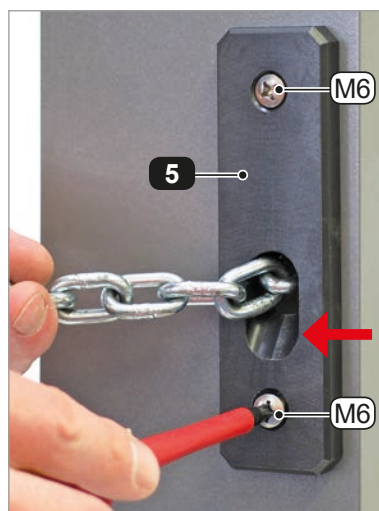


- The pillar cover can now be placed onto the pillar socket.
- Slide out the chain of the pillar cover and through the opening of the cover of the chain exit (5).
- Bolt on the chain exit cover as shown on picture (2 x M6).
- Bolt in another bolt M5 into the lower part of the of the pillar cover.



### Note

- In case you wish to remove the pillar cover please slide the chain to the interior of housing first.



## 2b. Mounting of counter-pillar

Mounting

- If there is no house wall on the other side of the motor pillar there is an optional counter pillar available.
- The counter pillar is mounted opposite of the motor pillar with the required distance.
- As with the motor pillar the counter pillar can be mounted to the ground in 3 different ways.



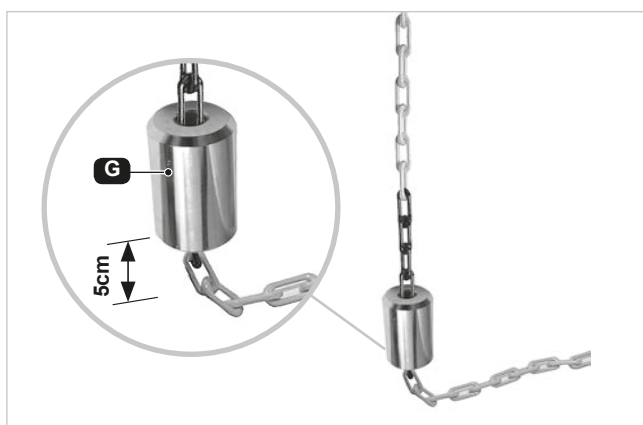
### Attention

- if the cord retainer (ear) is not mounted on the counter pillar the correct height has to be respected (= like the height of the chain exit of motor pillar)!

## 2c. Mounting of closing chain

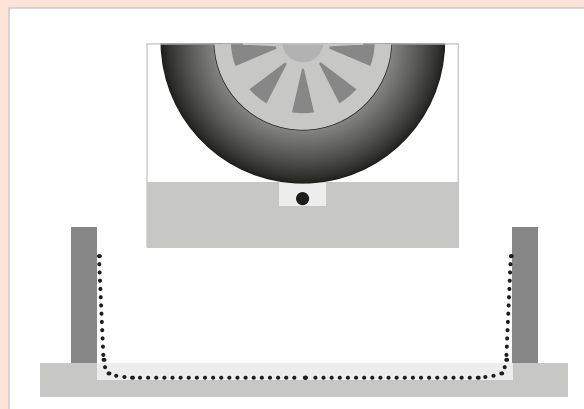
Mounting

- the closing chain is attached to the motor chain through the key ring (**SR**) and special bracket (**N**) (for emergency release). The key ring serves as predetermined breaking point in case of exterior impact on the chain (e.g. a car)
- on the counter side (counter pillar) a counter weight (**G**) is fixed to the closing chain so that **the counter weight with lowered chain is hanging approx. 5cm above the ground.**



### Important

- the chain should only be overrun. **Do not start up, steer or brake on the chain!**
- to prevent impact on the chain as described above we suggest a gutter in which the chain can be counterbored.





#### Danger



- Before connecting or opening the control unit, be sure to switch off the power supply!
- Follow safety regulations (→ page 2)!

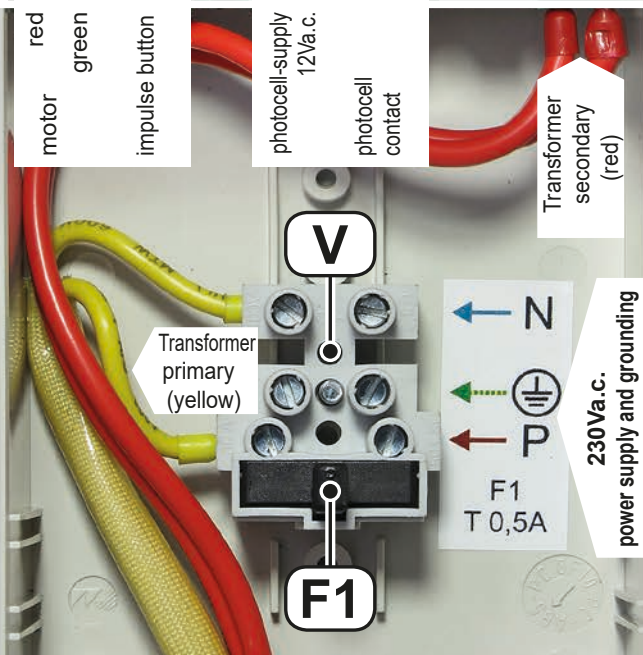
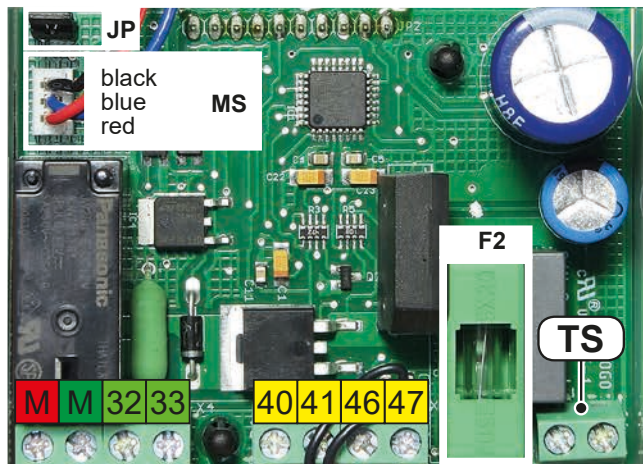
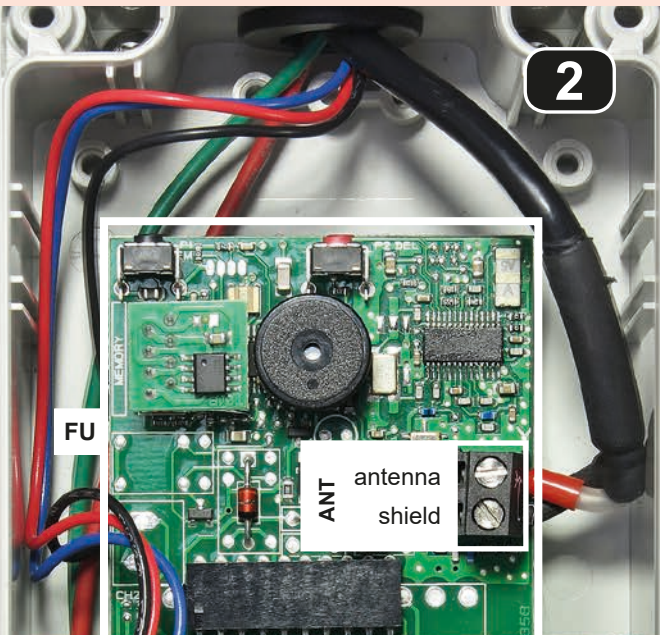


The antenna cable is routed through the opening to the mounted antenna and guided above the reel wheel.



#### Power supply

- The power cable with 230Va.c. (9) is routed to the control unit (2) and connected to the terminals (V).
- From the power supply terminal blocks (V) a pre-wired cable leads via the primary fuse (F1) to the toroidal transformer (10). The secondary power supply (red) leads to the control unit terminal blocks (TS).



- (2) control unit
- (9) Power supply line
- (10) Ring core transformer
- (V) supply clamps  
230Va.c. and grounding
- (F1) Primary fuse T 0,5A
- (TS) control clamps  
„transformer secondary (red)“
- (F2) Fuse T 5A
- (MS) Motor sensor-clamps
- (JP) Jumper-mode:  
plugged on: **impulse mode**  
removed: **automatic mode**
- (FU) Radio receiver (optional)
- (ANT) Connection for optional antenna



#### NOTES for wire 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.



**Operation mode (Jumper JP)**

Connections and adjustments

- ⊙ **JP attached** ▶ **impulse mode (factory setting):** impulse necessary to start closing movement.
- **JP removed** ▶ **automatic mode:** lifting chain barrier closes after the pause time (approx. 1min) automatically.

**Impulse button**

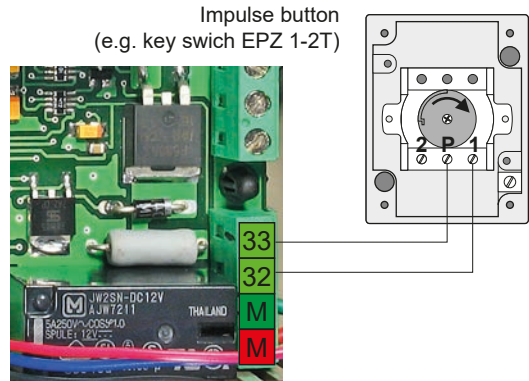
Connections and adjustments

- ⊙ **OPEN/ STOP / CLOSE impulse cycle:**  
An impulse of the impulse switch makes the motor start opening/closing. If the impulse switch is actuated again during this opening-/closing movement, the motor stops. With the next command of the impulse switch the motor travels in the opposite direction of the last gate movement.



**Note**

- When opening with a ongoing impulse, it will be newly adjusted during closing.



push buttons, key switches or external radio receivers with potential-free make contacts can be used as impulse switches.

**Photocell**

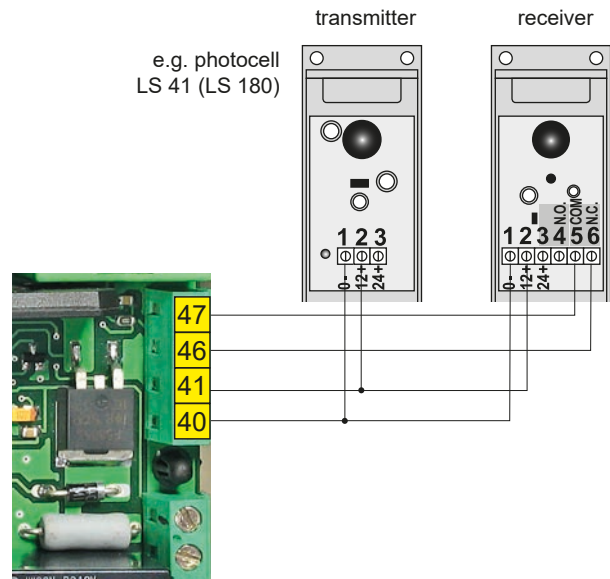
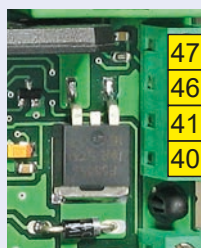
Connections and adjustments

- ⊙ **when CLOSING reverse:**  
an interruption of the photocell during the closing movement engages a direction change, therefore a **complete** lowering of the chain (can not be interrupted). With automatic mode on the chain closes after the pause time, in impulse mode a new impulse has to be emitted.



**Important**

- the control unit has a power supply for 12V a.c. photocells (LS)
- the photocell contact has to be closed with powered and positioned photocells (opening contact).
- **IMPORTANT: if no photocell is connected, please bridge the input "photocell contact" !**



**Force deactivation (cutoff)**

Connections and adjustments

- ⊙ If the chain runs against an obstacle during closing a **complete** lowering of the chain is engaged (can not be interrupted).

**New adjustment of closed position**

Connections and adjustments

- ⊙ In order to reprogram the closed position of the chain a constant impulse has to be given shortly before reaching the open position. Then the actual closed position is deleted and with the next impulse it will be newly adjusted

## 4. Error diagnosis

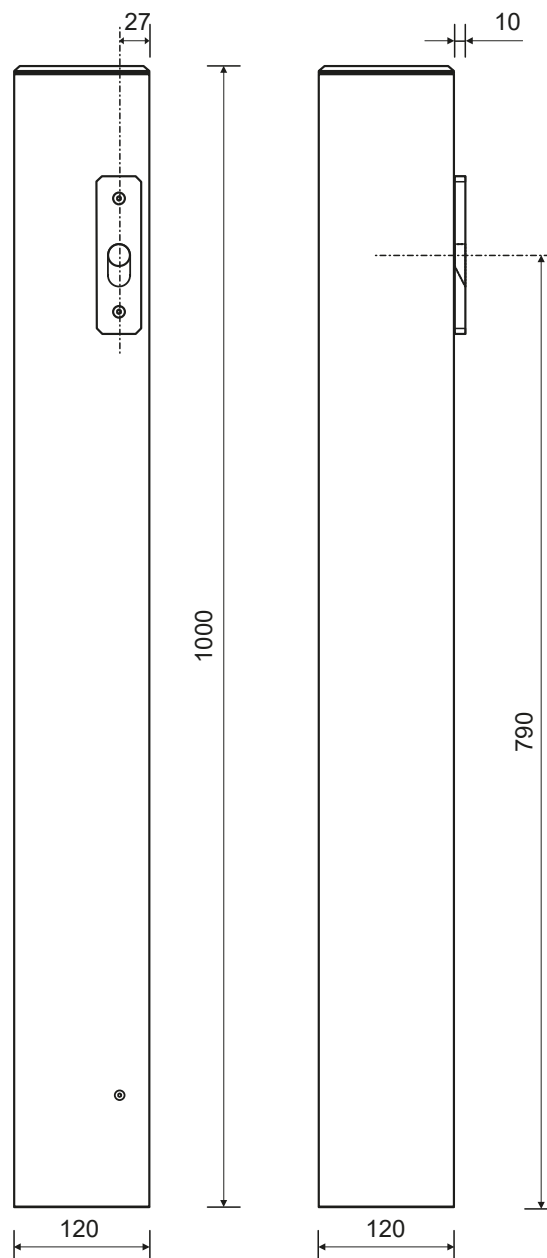
Lifting chain barrier LIFT X V3

Error	possible reason	solution
No response when giving a command	Absence of supply voltage	check the supply voltage and fuses
	no radio contact with command transfer by radio	check receiver and antenna connection and battery of transmitter
LIFT X V3 opens but does not close	Photocell interrupted or obstacle effect on chain	release photocell or remove obstacles

## 5. Dimensioned drawing

Lifting chain barrier LIFT X V3

- Dimensions in mm



Dimensions and technical changes reserved!



**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:**

**Lifting chain barrier LIFT X2, LIFT X V3**

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“
- EN 60335-1
- EN 60335-2/95
- 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, Österreich**

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, 08. 11. 2018

**EC Declaration of Conformity**

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

If the mentioned products are installed together then they form a machine in the sense of the EC Machine Directive.

**Relevant EU directives:**

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

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

**Product:**

*Motor description*

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

*Installation company*

*Address, ZIP code, Place*

*Date/ Signature*

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

Other components:

## **tousek PRODUCTS**

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

**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

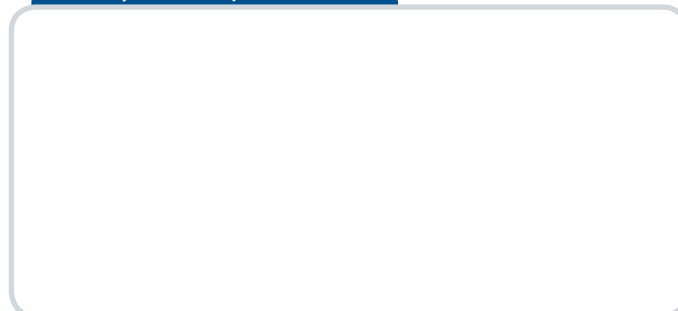
**Tousek Sp. z o.o. Poland**  
PL 43-190 Mikołów (k/Katowic)  
Gliwicka 67  
Tel. +48/ 32/ 738 53 65  
Fax +48/ 32/ 738 53 66  
info@tousek.pl

**Tousek s.r.o. Czech Republic**  
CZ-252 61 Jeneč u Prahy  
Průmyslová 499  
Tel. +420 / 777 751 730  
info@tousek.cz

**tousek**  
E\_LIFT-X-V3\_00  
08. 11. 2018



*your service partner:*



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

