TECHGLOBE Sp. z o.o.
ul. Kolejowa 12, 23-200 Kraśnik, Poland
Tax ID (NIP): PL9462697129
Tel. +48 510 510 945

www.techglobe.pl

OPERATING INSTRUCTIONS

DRIVE SET FOR DOUBLE-LEAF GATES

V-D-400

Original manual
V2 - 01/2026

TABLE OF CONTENTS

1. General information 3
2. Kit contents 5
3. Product information 7
3.1. Technical Specifications 7
3.2. Power requirements 7
4. Assembly and configuration instructions 8
4.1. Installation information 8
4.2. Actuator installation 9
4.3. Drive unlocking 12
5. Drive controller 13
5.1. Connection diagram 13
5.2. Description of connectors 14
5.3. Main menu 16
6. Remote control 18
7. Photocell 19
7.1. Photocell installation and connection 20
8. Signal lamp with antenna 21
Technical data 21
8.1. Lamp installation 22
8.2. Lamp connection and lighting mode 22

1. General information

Before installing and using the device, please read this manual carefully and follow the instructions contained herein.

Symbol	Description
	Caution/Warning about the need to strictly follow the information contained in the documentation to ensure the safety and full functionality of the device.
	Information particularly useful for installation and operation of the device
	Information on the disposal of used equipment

The product has been designed and developed for the automatic opening and closing of swing gates. All safety precautions must be observed during installation and use. Incorrect installation or improper use of the product may result in serious danger to human health or life, animals and property damage.

The product should not be operated by children or persons without the appropriate experience and knowledge. For safety reasons, ensure that no animals, children or bystanders are near the gate during use.

The installer must provide complete information on the system's operating instructions in emergency situations and provide the user with the operating instructions included with the product. Repairs and modifications should be carried out by qualified persons. The installer is obliged to ensure the safe use of the automation system by securing the area around the gate.

Before starting any installation or maintenance work, the power supply must be switched off. Inspections and maintenance work must be carried out regularly. Appropriate overload protection devices must be used in the installation network to ensure complete disconnection under the conditions specified by overvoltage category III.

The manual should be kept and stored in a known location throughout the entire period of use of the device. Failure to follow the instructions may result in damage to the device, loss of warranty and lack of guarantee.
The manufacturer is not liable for damage resulting from improper use of the product. The user manual will be updated as the product develops.

Waste electrical and electronic equipment (WEEE) must not be disposed of with other municipal waste. Such equipment should be taken to a specialised WEEE collection point, such as municipal waste sorting centres (PSZOK), collection points run by electrical and electronic equipment retailers (e.g. when purchasing a new device) or another location designated by the local authorities.

2. Contents of the kit

After unpacking the kit, check its condition and completeness. If any items are missing, defective or otherwise problematic, contact the retailer.

The contents of the kit are listed below:

- Drive actuators with mounting brackets – 2 pcs.

- Drive controller with mounting accessories – 1 pc.

- Limiter – 1 pc. (optional)

- Remote control – 4 pcs.

- Photocell set – 1 pc.

- Signal lamp – 1 pc.

3. Product information

3.1. Technical specifications

Mains power supply	AC 230V 50 Hz
Controller power supply	AC/DC 12/24V
Power	100 W
Maximum arm movement	300 mm
Maximum gate opening angle	110
Maximum length of one leaf	2 m
Maximum weight of one leaf	200 kg
Permissible ambient temperature	-25°C to 50°C
Ingress protection class (water and dust resistance)	IP55

Actuator dimensions in extreme positions:

Rear actuator bracket
(mounted to the post)

Front actuator bracket
(attached to the gate)

3.2. Power supply requirements

- Main power supply 230V AC – 3 x 1.5 mm^2
- Photocell
  - Transmitter 2 x 0.5 mm^2
  - Receiver 4 x 0.5 mm^2
- Signal lamp – 2 x 1 mm^2
- Manual control panel (optional) – quantity depends on the number of buttons, 0.5 mm^2

⚠	**Take special care when operating at 230V.** **A 10A overcurrent protection device must be used in the drive power supply circuit.**

4. Assembly and configuration instructions for the kit

4.1. Installation information

The figure below shows an illustration of how to install the gate drive. The drive unit must be installed on the inside of the gate so that unauthorised persons cannot access it.

Illustrative diagram of drive mounting:

1. Actuators
2. Photocells
3. Drive controller
4. Gate control panel (optional)
5. Antenna (optional)
6. Signal lamp
7. Remote control
8. Gate closing and opening limiters

Before installing the drive, check where the actuator brackets can be mounted on both the post and the gate.

The actuator with gate brackets should be pre-fitted to assess whether it is possible to mount the actuator on both sides without exposing it to bending.

Incorrect installation of the actuator may cause resistance when opening and closing the gate, and using the drive in this way may result in damage.

4.2. Actuator installation

A	B	C	D	E	F
100	195	15	90	44	700
90	205	25	90	44	700
98	195	15	90	44	700
120	195	15	110	44	700

Dimensions to be aware of:

A – distance from the hinge axis to the axis of the rear actuator bracket pin (horizontal axis)

B – distance from the hinge axis to the axis of the rear actuator bracket pin (vertical axis)

C – distance from the hinge axis to the mounting plane of the rear actuator bracket

D – gate opening angle

E – distance from the hinge axis to the front actuator bracket pin axis

F/L – shortest actuator length (700 mm)

	The dimensions are indicative and depend on many factors – the length of the actuator, the working range of the actuator, the thickness of the gate, the relative distances between the mounting points of the actuator and the gate. In order to determine the mounting points more accurately, we recommend using the gate actuator calculator available on the Internet and/or consulting an experienced installer. The actuators must not be mounted parallel to the gate leaf – they must be mounted at an angle and in such a position that they never pass through the point where they would be parallel to the gate leaf. It is recommended to use physical buffers at the extreme positions of the gate, i.e. both when the gate is closed and when it is open.

Mounting the rear actuator bracket to the post

Spacing of holes for mounting the bracket to the post:

Depending on the material to which the drive is mounted, the actuator mounting brackets can be bolted or welded to the post.

In the case of screws mounted in the post (figure on the left), place the bracket in the designated location and tighten the screws.

In the case of welding, drill holes at the mounting points, then place the actuator mounting bracket on the prepared holes and weld the actuator bracket to the post.

For concrete posts, drill holes according to the spacing of the holes in the bracket. Then insert concrete bolts into the drilled holes, attach the rear bracket and tighten the nuts.

Adjusting the rear actuator mounting

The holes in the rear actuator mounting brackets allow you to adjust the position of the rear actuator mounting as shown in the figures below.

Correct installation of the actuator

	The above shows how the actuator should be installed (left) and the mistakes that can be made (right). The power cable (4) and drain hole (3) must be at the bottom to avoid the risk of damage to the cable and problems with water collecting in the actuator. The pin (2) securing the actuator to the rear bracket (1) should be installed from above and then secured from below.

The dimensions of the holes are measured to the centre of the hole.

The holes for attaching the rear bracket of the actuator are symmetrical to the axis of symmetry of the actuator. The holes for attaching the front bracket of the actuator are below the axis of symmetry of the actuator.

Installation of the front actuator bracket

The front bracket has mounting holes in the form of so-called beans. In order to maintain the possibility of adjusting the position of the bracket, it is recommended to make mounting holes at a distance of 62 mm (min. 48 mm, max. 76 mm).

4.3. Unlocking the drive

Using the key (2), separate the drive actuator (3) from the bracket mounted on the gate (1) and then open or close the gate.

5. Drive controller

5.1.Connection diagram

5.2. Description of connectors

AC_N	AC 24V power supply
AC_L	AC 24V power supply
Solar+	Solar panel +
Solar-	Solar panel -
BAT-	DC battery connector
BAT+	DC battery connector+
ANT	Antenna
GND	Antenna shield
M1+	Motor power supply (main) DC+ (red wire)
M1-	Motor power supply (main) DC- (black wire)
M2	Auxiliary motor power supply DC+ (red wire)
M2-	Auxiliary motor power supply DC- (black wire)
VCC	DC+ 24V
GND	GND
POWER FOR BEAM+	DC+ 24V
GND	GND
BEAM	Photocell signal connector (NO/NC)
GND	GND
LOOP	For LOOP1: Gate mode – M1 – Open then close For LOOP2: M1 and M2 – Opening (+ closing if Autoclose > 0)
GND	GND
PB1	Close (M1 and M2)
GND	GND
PB2	STOP
GND	GND
PB3	Open (M1 and M2)
GND	GND
LOCK+	24V DC electric lock+
LOCK-	24V DC electric lock-
LED+	Signal lamp 24V DC+
LED-	24V DC signal lamp-

Buttons

-	Down (another option)
OK	Confirm button
+	Up (next option)

Jumpers

Jumpers allow you to enable or disable certain functions.

JP1	**BAT-/BAT+**	Connector for connecting the battery
JP2	**AC_EN**	Mains power on/off
JP3	**DC_EN**	Battery power on/off
JP4	**REMOTE**	Remote control receiver connector
JP5	**LOOP1/LOOP2**	Support for one or two gate wings
JP6	**MLOCK/ELOCK**	Electric lock operating mode
JP7	**12V_EN**	12V power jumper (close for 12V power supply, leave open for 24V power supply)

Electric lock

The electric lock is activated when opening. The lock should be mounted on the gate leaf that opens first (M1).

The operating mode is selected by setting the JP6 jumpers (MLOCK/ELOCK) accordingly. **Both jumpers must be set to the same position.**

MLOCK – by default, the power supply is on all the time and is turned off when opening – for normally open (NO) electric locks.

ELOCK – by default, the power supply is turned off and is turned on when the gate is opened – for normally closed (NC) electric locks.

5.3. Main menu

To enter the main menu, press the "OK" button.

If Chinese is set as the default language, change the language to English and configure the settings using the list of parameters described below.

Changing the language from Chinese to English: sequence OK; OK; - ; OK

To navigate between the available functions, use the buttons -/ +. To select an option, press the "OK" button.

To exit the menu, select Exit or Cancel.

Description of functions in Polish	Function description in English	Available options (in English)	Available options (translation into Polish)
Language	Language	Chinese/English	Chinese/English
List of parameters	Parameter set		
Controller configuration	Programming	Start learning? Cancel Yes	Start configuration? Cancel Yes
Add remote	Add remote	Add remote? Cancel Yes	Add remote? Cancel Yes
Remote control deletion	Delete remote	Delete remote? Cancel Yes	Delete remote? Cancel Yes
Calibration of current consumption in standby mode	Current cal	Start zero calibration? Cancel Yes	Start zero calibration? Cancel Yes
Current consumption graph preview	Current wave	M1 current wave M2 current wave Exit	Current consumption of motor M1 M2 motor current consumption Exit
Restore default settings	Restore default	Restore default? Cancel Yes	Restore default settings? Cancel Yes
Select door type	Set door type	Slide 1 key Slide 3 key Swing 1 key Swing 3 key	Sliding (single-key operation) Sliding (three-button operation) Swing (single-button operation) Swing (three-button operation)
Exit	Exit		

List of available parameters in the "Parameter set" menu

Parameter name	Default value	Description
F opentime1	8	Opening time for gate M1 at higher speed
S opentime1	5	Gate M1 opening time at lower speed
F closetime1	8	Closing time of gate M1 at higher speed
S closetime1	5	Closing time for gate M1 at lower speed
F opentime2	8	Opening time of gate M2 at higher speed
S opentime2	5	Gate M2 opening time at lower speed
F closetime2	8	Closing time of gate M2 at higher speed
S closetime2	5	Closing time for gate M2 at lower speed
Autoclose	2	Time until automatic closing
Delay open	2	Opening delay
Delay close	2	Close delay
Obstacle	45	Obstacle detection force [%]
Stop force	27	Force at stop [%]
F Open speed	99	Higher opening speed [%]
S Open speed	50	Lower opening speed [%]
F Close speed	99	Higher closing speed [%]
S Close speed	50	Lower closing speed [%]
Start speed	60	Initial speed [%]
Exit		Exit

If the value in the "Autoclose" option is set to 0, the automatic closing function is disabled.

The default settings are restored after selecting and confirming the "Restore default" option in the main menu.

6. Remote control

One-button operation mode for double-leaf gates (SWING 1 KEY)
1 - Open/stop/close

Three-button mode for double-leaf gates (SWING 3 KEY)
1 - Open/stop + open when closing

2 – STOP

3 – Close/stop when opening

Programming a new remote control - Add remote

From the main screen, press the OK button, then use the (-) button to go to the "ADD remote" option and confirm with the OK button. The message "Add remote?" will appear on the screen. Use the (-) button to go to the "Yes" option and confirm with the OK button. The green and red LEDs will light up. Within 5 seconds of the LEDs lighting up, press the button on the remote control. The LEDs will start flashing. The remote control has been added.

Deleting a remote control - Delete remote

From the main screen, press the OK button, then use the (-) button to navigate to the "Delete remote" option and confirm with the OK button. The message "Delete remote?" will appear on the screen. Use the (-) button to navigate to the "Yes" option and confirm with the OK button. The green and red LEDs will light up. Within 5 seconds of the LEDs lighting up, press the button on the remote control. The LEDs will start flashing. The remote control has been deleted.

7. Photocell

External appearance of the photocell	Photocell connectors

Technical data of the photocell

Range	Up to 15 m May be reduced by up to 30% in adverse weather conditions (rain, dust, etc.)
Infrared wave frequency	1920 Hz
Power	12–24 V DC/AC
Infrared wavelength	940 nm
Current consumption	RX receiver 15 mA TX transmitter 30 mA
Temperature range	-20°C ÷ 70°C
Current and voltage parameters of the relay	max. 36V 1A
Photocell dimensions	100x40x35 mm

Description of photocell operation

When the **red** LED is lit, the light beam from the transmitter reaches the receiver, which means there is no obstacle.

When the **red and blue** LEDs are lit, **the photocell detects an obstacle** or does not detect the light beam from the transmitting photocell. This causes a signal to be sent to open the gate when it is in closing mode.

When the **JP1** jumper in the photocell is in the **NO** position, the circuit between the **COM** and **NO/NC** contacts is **open** when there is no obstacle. When an obstacle is detected between the **COM** and **NO/NC** contacts, the circuit is **closed**.

When the **JP1** jumper in the photocell is in the **NC** position, the circuit between the **COM** and **NO/NC** contacts is **closed** when there is no obstacle. When an obstacle is detected between the **COM** and **NO/NC** contacts, the circuit is **open**.

7.1. Photocell installation and connection

The receiving photocell should be installed in such a way that it is not exposed to strong sunlight. Solar radiation can significantly affect the sensitivity of the photocell.

Photocells should be installed at a height of approximately 20 cm above the ground. Both photocells should be mounted at the same height.

The photocells included in the set significantly affect the safety of the device. Four wires are required for the receiving photocell and two wires for the transmitting photocell.

- The **V+** power supply should be connected to the **VCC** power source in the controller.
- The **V-** power supply should be connected to the **GND** connector in the controller
- The **NO/NC** photocell signal output should be connected to the **BEAM** connector in the controller
- Connect the **COM** connector of the photocell to the **GND** connector in the controller

When using the photocell**, remove** the wire (jumper) connecting the **BEAM and GND** pins**. Set the JP1 jumper in the photocell to NC.**

If the photocell is NOT used, the BEAM and GND connectors in the controller should be connected to each other.

8. Signal lamp with antenna

Technical data

Power supply	AC/DC 12-265 V
Current consumption	40mA (at DC 24 V)
Flashing frequency	1 Hz (once per second)
Nominal power	2 W
Temperature range	-35 to 90
Humidity	10 to 90% RH
Dimensions	approx. 130 x 100 x 220 (width x length x height)
Weight	approx. 250 g
Fuse	glass tube Ø5x20mm F0.5A250V

Required cables:

- Shielded antenna cable
- Power cable 2 x 0.5 mm²

8.1.Lamp installation

Installation on a vertical or horizontal surface

Upper housing installation

8.2.Lamp connection and lighting mode

Connect the power cables to the P1 connector (L and N contacts).

The P2 jumper is responsible for the lamp lighting mode.

- If the lower pins are connected, the lamp flashes at a frequency of 1 Hz (once per second).
- If the upper pins are connected, the lamp shines continuously.

Connect the antenna cables to the P3 connector (ANT contacts for the antenna and COM/GND for the antenna screen).