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WIŚNIOWSKI

AWso2025 PRO

DRIVE UNIT FOR GATES



Installation and
Operating Instructions

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1. OVERVIEW

[A000131] This Installation and Operating Manual is intended for professional fitters and product owners. It contains the essential information to guarantee safe installation and use, as well as the information about correct care and maintenance of the products.
Before beginning installation, read the entire manual, follow its guidelines, and perform all activities in the described order. The product and its separate elements shall be installed in accordance with the manual. Follow the guidelines for assembly and use to allow for correct assembly and to ensure a long and reliable use.

- [A000094] **The scope of activities a Professional Installer and the Owner can perform is described further in this manual.**
- [C000445] The electric drive unit or the controller can only be installed and adjusted by a **PROFESSIONAL INSTALLER** who is competent in automation and mechanical engineering equipment for residential use and must do the installation and adjustments in accordance with the current laws of the country of use.
- [A000104] **Failure to observe the safety regulations, regulatory requirements, as well as instructions and recommendations provided in this Installation and Operating Manual voids all of the Manufacturer's obligations and guarantees.**

[A000120] The Manual applies to several product model variants.
[B000203] The door is also referred to as the „product".
[A000097] The manual covers the installation of the products with standard equipment and optional equipment components. The scope of standard and optional equipment is defined in the commercial offer.
[A000099] The reference drawings found in the manual may vary in finish details. When necessary, the details are shown in separate drawings. When installing the product, follow the occupational health and safety regulations for installation and fitting works with the use of power tools, depending on the applied installation technology, and consider the applicable standards, laws and reference construction documentation. When renovating/fitting, protect all components against splashing of plaster, cement, gypsum, etc. These may leave stains of dirt. After completing the installation and checking for correct operation of product hand over the Installation and Operating Manual to the owner. The Installation and Operating Manual should be protected against being destroyed and kept it safe.
[A000122] The Manufacturer shall not be liable for any damage or operating malfunctions caused by use of the product with equip- ment from other suppliers. Such use also voids the warranty issued by the Manufacturer.
[B000129] The product shipping packaging is intended to protect the product during transport only. Protect the products in the packaging against weather. Keep the packed product on a hard and dry surface (which must be flat, level and resist variations in indoor conditions) located in sheltered rooms that are dry and well-ventilated; the storage location must be free from all external conditions which may damage the product components and its packaging. Do not store in wet rooms and/or rooms with vapours which may damage paint coats and/or galvanic coats.
[B000025] Airtight foil packaging must be unsealed when storing the doors to avoid adverse change of microclimate inside the packaging. Failure to do so may result in the damage of painted and zinc plat- ed coating.
[C000443] No elements of the drive may be modified or removed. Doing so may influence its safe operation. Changing drive subassemblies is forbidden.
[A000134] Copying these Instructions without prior written permission and further copy contents verification by the Manufacturer is prohibited.
[C000075] The wiring system and the electric shock protection installations are
defined by current norms and regulations.
Only a qualified installer is allowed to perform electrical works.

- The drive feed circuit should be equipped with a cut-off protection, a residual current circuit-breaker, and an overcurrent protection.
- The gate power supply system should be executed as a separate electrical circuit.
- Grounding of the drive unit is obligatory and should be done in the first place.
- Disconnect power supply prior to any works on the electrical system. Disconnect any backup batteries, if used.
- If fuses trip, identify the cause and eliminate the fault before restoring normal operation.
- In case a problem persists and information from this instruction fails to help, contact the manufacturer technical department.
- Any rework or repairs on the system should be conducted only by a professional installer.
- Usage other than stated in this instruction is not allowed.
- Neither children nor adults should stay within the gate operating area.

2. SAFETY REMARKS IN ACCORDANCE WITH STANDARD

Important safety guidelines. Observe this instruction manual to ensure safety of persons.

- **Keep this instruction manual.**
- Use cable type H05RN-F to connect the power supply. If there is a risk that the supply cable will be constantly immersed in water, use cable type H05RN8-F.
  - If the supply cable is damaged, it should be replaced by a professional installer or the manufacturer's service.
- Disconnect the power supply source before starting service works.
- Disconnect the power supply source before starting maintenance works and cleaning.
- This device can be used by children over 8 years of age and persons with limited physical, sensual or mental ability or persons that have no experience or are unfamiliar with the device if the operation takes place under supervision or after information regarding safe use and risk is provided.
- **This device is not intended to be used by persons (including children) with limited physical, sensual or mental ability or persons that have no experience or are unfamiliar with the device unless the operation takes place under supervision in accordance with the operating instructions provided by the safety personnel.**

- Do not allow children to play with the device and control accessories, including the remote control transmitters.
- When using the deadman control make sure that there are no persons in the gate's path.
- **The remote control transmitters and other control devices for operating the gate should be kept out of reach of children to prevent inadvertent operation.**
- **The gate and the installation should be regularly inspected visually to make sure there are no signs of mechanical maladjustment, mechanical damage, signs of wear or signs of damage to cables, accessories or assembled drive unit parts.**
- **The drive unit is fitted with a manual uncoupling mechanism. Before operating the drive, make sure the gate is in a good mechanical condition and that it opens and closes properly.**

3. TERMS AND DEFINITIONS ACC. TO STANDARD

[B000199] Explanation of warning signs used in the Instruction:



Attention! - warning sign used to denote the attention.



Information - warning sign used to denote important information.



Reference mark - sign referring to a given paragraph in the Assembly Instruction.

Professional Installer - competent person or organization, offering to third parties door installation services, including its improvement (according to EN 12635).
Owner - a natural or legal person who has legal title to administer the door, and takes responsibility for its operation and use (acc. to EN 12635).
Report Book - a book containing the main data about the door, and which has a specially designated places for records about inspections, tests, maintenance and various repairing works or modifications to the door (according to EN 12635).
[B000213] **Door operating cycle** - a single instance of opening and closing of the door.

4. DESCRIPTION OF SYMBOLS

[D000710] **Basic terminals**
24VAC
20VAC – controller and motor power supply terminal
PE – accessory and signal light power supply terminal
MOTOR – motor terminal – protective grounding

LAMP – warning light terminal
Accessory terminals
8k2 – safety terminal-resistive safety contact edge
GND – ground, common
24V – accessory supply terminal
F-TX – supply terminal for the photocell transmitter with self-test
F-RX – safety terminal-photocells
STOP – safety terminal-stop button
U/Z – programmable control terminal-open partly/close
OTW – programmable control terminal-open
LUX – LUX module terminal
LUX AKU – terminal battery power supply connected to the LUX module **Limit switch terminals**
ZAM – closed limit switch
GND – common
OTW – open limit switch
Power supply connector
3V3 - microprocessor power supply connector for the controller
GND - common
STER - control connector – transformer activation trigger
Force chart designations

Fd – the maximum force measured with a measuring instrument during the dynamic activity period Td
Fs – the maximum force measured with a measuring instrument outside the dynamic activity period Td
Td – period when the measured force exceeds 150 N
Tt – period when the measured force exceeds 25 N

5. BUILD DESCRIPTION AND TECHNICAL SPECIFICATION [D000138]

The drive makes a set with a slide rail of a relevant length which is necessary for its correct operation. It is mounted on the end of a steel slide rail. The rail is equipped with a driving chain which drives a catch. The catch is integrated with a door. The operator drives the door via an arm fastened to the chain holder from one side, and to the door leaf top part on the other side. The drive is protected with over- load switches; when the door leaf meets resistance on the way, the drive will stop and reverse.

5.1. TECHNICAL PARAMETERS

	AWso2018 PRO / AWso2025 PRO
Transformer power supply	230V AC
Drive unit	24V DC, 140W
Accessory power supply	24V DC*, 500mA
Power consumption in standby	0,25W
Standby mode transition time	15 minutes
Enclosure protection rating	Controller - IP 44
	Transformer - IP 65
Radio transmission	WIŚNIOWSKI - 433,92 MHz
Duty cycle	20 cycles/hour

*- The voltage provided is a rated value. The actual voltage on the output depends on the mains voltage connected to the transformer and on the load of the accessory power supply output

6. APPLICATIONS AND INTENDED USE

[A000102] All products shall be used and operated as intended. Their selection and use in building engineering shall follow the specific techni- cal documentation of the installation site prepared according to current laws and standards.
[D000735] The drive unit is intended for opening sliding gates while maintaining the dimensional limitations in accordance with the sales offer, operating time limitations according to this instruction manual and technical specification in accordance with this instruction manual. The drive unit is intended for use in the temperature range specified in section **„5.1. Technical parameters"**

7. SAFETY GUIDELINES

[B000190] Minimum safety levels provided in the door closing edge as required by PN-EN 13241.

Door activation method	Usage		
	Trained door operators (private premises)	Trained door operators (public premises)	Not trained door operators (public premises)
Deadman control with the view of the door	Push-button control without electrical latching	Key-switch control without electrical latching	Unacceptable
Pulse control with the view of the door	(KLB) [BF]	(KLB) [BF]	(KLB) (BF)
Pulse control without the view of the door	(KLB) [BF]	(KLB) (BF)	(KLB) (BF)
Automatic control (automatic closing)	(KLB) (BF)	(KLB) (BF)	(KLB) (BF)

(KLB) – main closing edge protection - required
(BF) – photocells barrier - obligatory
[BF] – photocells barrier - optional

[C000504] In each of the above cases, the main closing edge is secured by the overcurrent obstacle detection system implemented in the con- troller. The use of an additional safety device in the form of photocells for the main closing edge is obligatory when at least one of the gate leaf movements is automatic:
• the automatic door closing function is enabled;

• the remote control functionality is used;
• the controller is outside of the line of sight of the door;
• the door is not in the direct line of sight of the user;
• the door is intended to be operated automatically.
• [C000448] If the door drive unit is operated with the automatic closing enabled or the door opens directly to a public road or a public pedestrian pavement, install a warning lamp as regulated by the laws of the country where the drive unit will be operated.

8. REQUIRED INSTALLATION CONDITIONS

• [B000214] According to the current European regulations, a power-operated gate must be manufactured along with Directive 2006/42/EC. It must follow the following stan- dards, as well: EN 13241, EN 12445, EN 12453, and EN 12635.

• [A000136] Before proceeding with the installation, a risk analysis must be performed, including all safety conditions, as provided by Appendix 1 Machine Directive, to indicate solutions to be used with the installation (planning permission).

• [C000081] **The product cannot be installed in an explosive atmosphere. Safety hazard.**
• [C000449] **Protect the drive unit against water.**
• [D000142] **Before any maintenance or inspection of a garage door, disconnect the drive from power source.** Also a battery power supply should be disconnected if it has been delivered.

• [B000007] **It is prohibited to keep using the door, if any faults in its operation, or damage of its components are found.** Do not operate; contact an authorised service centre or a Professional Installer.

9. DRIVE INSTALLATION ERRORS

[D000736] Errors may occur when installing the drive, but they are easy to avoid when the following steps are taken:
• correct drive supply voltage,
• accessories were connected appropriately.
• all connections parts tightened well.

Disregarding these basic recommendations may cause malfunctioning, damage or warranty loss of the door.

10. ENVIRONMENTAL PROTECTION

Packaging
[A000008] Packaging (cardboard, plastics, etc.) are classified as waste suitable for recycling. Follow local legislation for specific material before throwing it away.
Product scrapping
The product consists of many different materials. Most of the materials used are suitable for recycling. Sort it before disposal, and then deliver to refuse collection and disposal area for recycling.

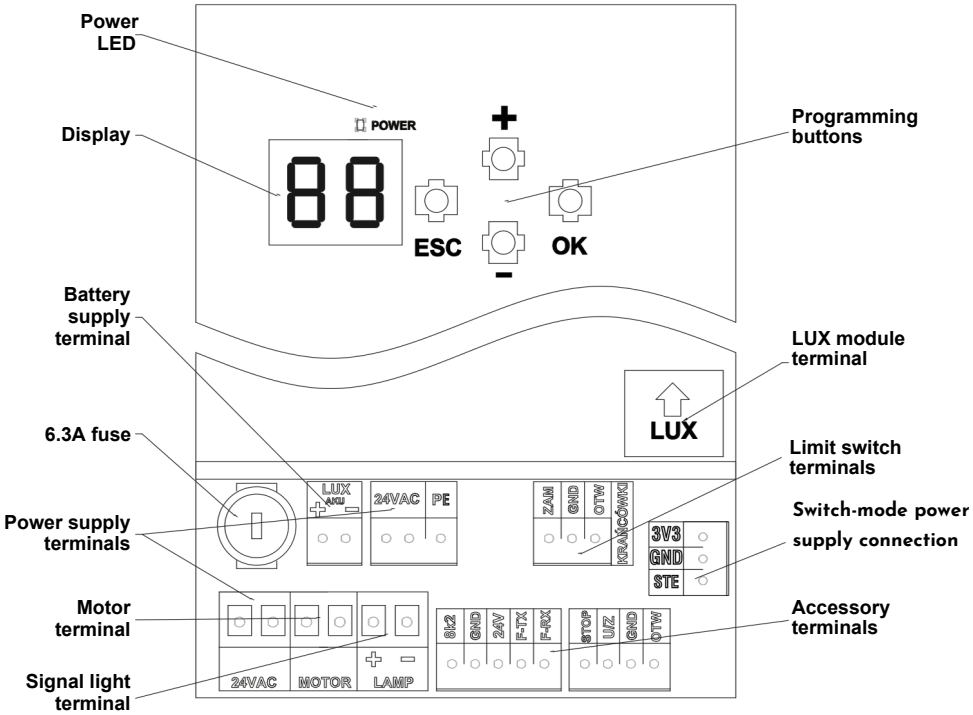
Follow local legislation for specific material before scrapping.

[A000009] **Important.** Recycling cuts raw material usage and wastes volume.

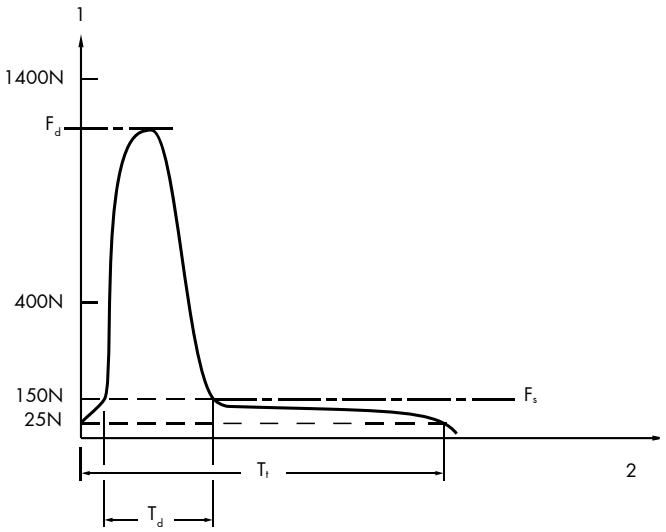
[A000118] This equipment is labelled according to the Waste Electrical and Electronic Equipment Directive 2012/19/EC.
This labelling states that once used, the equipment must not be disposed of with household waste. The equipment user must bring the waste equipment to authorised WEEE collectors. The collectors, including lo- cal collection points, retailers and community units form an appropriate system for handing over the WEEE.
Proper disposal of waste electrical and electronic equipment helps avoiding the consequences to human health and environment cause by hazardous components and improper landfilling or processing of waste equipment.

11. CONTROLLER

[D000737] Advantages of controller:
• Soft start and stop increase the life and safety of the gate.
• Control takes place via transmitters with dynamically variable code at the frequency of 433.92MHz
• Automatic selection of operation parameters.
• Compatible with photocells.
• Automatic closing also when the photocell barrier is interrupted.
• Overload sensitivity adjustment.
• Warning light also when the gate ends its travel.
• Digital display.
• Sequential door control.
• Simple installation and programming procedure.
• Expandable with an additional module.



Drive control is executed via programmed button transmitter (remote control). **Photocells** are an additional safety element to be connected to the control system. They improve protection against the door running over a vehicle, a person or an obje- ct in the way of the door.
Automatic closing requires photocells, to protect the user (the door will not clo- se when a barrier appears in the way). It also requires activating the function in the controller.
Overload sensitivity is a necessary element to protect objects staying within the door opening against crushing; it also protects fro
m damage the engine and the whole driving mechanism. The dynamic force of the main closing edge may not exceed 400 [N] acc. to PN-EN 12453.



12. SAFETY REQUIREMENTS

[B000191] The methods for installing electrical wiring systems and electric shock protection are defined in applicable standards and laws. Connect the electrical wiring of the drive unit with the wiring included by the Manufacturer.
The electrical wiring system must be built according to local regulations. Only qualified installers may perform electrical work.
The door and the drive unit must comply with PN-EN 12453 and PN-EN 12604.
[D000712] The control unit installed in the post meets the requirements of the following EU directives:
• Low Voltage Directive 2006/95/EC
• Machine Directive 2006/42/EC
• Electromagnetic Compatibility Directive 2004/108/EC
[B000215] Installation works to be performed in line with the following European Norms: 2004/108/EC; 2006/42/EC; 2006/95/EC; EN 13241 as amended.
Install safety units (photocells, safety bars, etc.) according to applicable standards to protect persons, animals or objects that can appear near the gate from hitting, injury or damage.

- [A000026] **Keep the packaging (plastics, polystyrene, etc.) out of reach of children.**
- [C000451] **Do not connect the drive unit to a power source before completing the installation process.**
- [A000028] **During the performance of installation/renovation work, remove all jewellery and use personal protective equipment (clothes, goggles, gloves etc.).**

13. INSTALLATION INSTRUCTIONS

- [B000207] Install and adjust the product in accordance with the requirements of EN 13241.
- [B000237] When connecting cables and accessories, make sure that the power supply is switched off.
- [B000238] **During installation, observe all of the manufacturer's guidelines, especially those related to safety.**
- [B000032] When a Professional Installer installs and adjusts the electric drive unit, the Installation and Operating Manual should be followed.
- [A000041] Proper operation largely depends on correct installation of the product. The Manufacturer recommends its authorised installation companies.Safe and intended operation of the product can only be ensured by correct installation and maintenance carried out according to the Manual.
- [D000738] Electrical installation must be prepared in accordance with the regulations applicable in your country.
- **All electrical works can only be carried out by a certified installer.**
- The drive cannot be used for operating a malfunctioning gate. Disconnect the drive unit from the power supply before starting any assembly works. Disconnect the battery supply as well, if provided.

[C000085] Correct operation of the door and the drive set to a large ex- tent depends on the drive correct installation. To avoid malfunctioning, premature wear or warranty loss of the drive, this manual has to be strictly followed.

13.1. CONTROLLER INSTALLATION SEQUENCE

- [A000136] **Before proceeding with the installation, a risk analysis must be performed, including all safety conditions, as provided by Appendix 1 Machine Directive, to indicate solutions to be used with the installation (planning permission).**
- [B000032] **When a Professional Installer installs and adjusts the electric drive unit, the Installation and Operating Manual should be followed.**
- [B000096] **When installing the drive unit, recommendations of the door manufacturer, manufacturer of the drive unit and the accessories should be observed. To connect the drive unit, only original subassemblies must be used.**

[D000714]
1. Connect a power supply source to the transformer - 230V 50 Hz. Make sure the power supply source is switched off when making the connection.
2. Make sure that the drive unit and accessories were properly installed and will not pose a safety hazard when started up.
3. Switch on the drive unit power supply.
4. Check the position and good working order of the limit switches.
5. Perform automatic gate calibration.
6. Check the release area when closing and opening.
7. Check the operation of the drive unit and accessories.

[C000505] **After each automatic gate calibration, as well as after each modification of the Overload Parameter, check whether the force threshold complies with the specification provided in Annex A to the PN-EN 12453 standard. In accordance with the PN-EN 12453 standard, the dynamic force of the main closing edge cannot exceed 400 [N], while the duration of dynamic force application should not exceed 750 [ms].**

13.2. DIAGRAM FOR CONNECTING THE TRANSFORMER

[D000778] The diagram is shown in fig. 1.

13.3. GENERAL DIAGRAM FOR CONNECTING PHOTOCELLS

[D000715] The diagram for connecting photocells to the controller is shown in fig. 2.

13.4. GENERAL DIAGRAM FOR CONNECTING PHOTOCELLS WITH A SELF-TEST

[D000716] The diagram is shown in fig. 3.

13.5. DIAGRAM FOR CONNECTING CONTROL BUTTONS

[D000717] The diagram is shown in fig. 4.

13.6. DIAGRAM FOR CONNECTING THE STOP BUTTON

[D000718] The diagram is shown in fig. 5.

13.7. CONNECTION DIAGRAM FOR CONTROL ACCESSORIES

Gate AWso2025 PRO Module (mechanical limit switch) – The diagram is shown in Fig. 6.
Gate AWso2025 PRO Module (magnetic limit switch) – The diagram is shown in Fig. 7.

13.8. CONNECTION DIAGRAM FOR SIGNALING ACCESSORIES

Signal lamp - The diagram is shown in Fig. 8.

13.9. AUTOMATIC CALIBRATION OF THE DRIVE UNIT AND ADJUSTING THE SLOW-DOWN AREA

[D000719] After making all the electrical connections, switch on the power supply and then perform automatic calibration of the drive unit.

Take special care during the calibration process - all safety systems implemented in the controller are disabled.

Once the calibration procedure is successfully completed, it ensures reliable and safe operation of the gate. Before starting the calibration, make sure that there are no objects in the path of the gate. During the

calibration process, the drive unit automatically selects the overload setting (the overload parameter can later be changed manually in accordance with the controller instruction manual).

The calibration process can be stopped in case of emergency at any time by pressing the button on the factory programmed remote control. If the calibration process is stopped, it restarts from scratch.

Before starting the calibration process, place the gate in any intermediate position and switch on the main power supply of the drive unit.

1. Start the drive unit by using the factory programmed transmitter or any accessory connected to one of the control inputs. The gate will start travelling at a reduced speed towards the end closed position.
2. Start the drive unit again - the gate will start travelling at a reduced speed towards the end open position.
3. Start the drive unit again - the gate closes
4. Start the drive unit again - the gate opens
5. Start the drive unit again - the gate closes
6. The gate is calibrated

- [C000515] **Check the selected reduced speed zones. The gate should move at a reduced speed at least 500 mm before reaching the end positions. Adjust the reduced speed zones if required - see section 15.4.**
- [C000506] **Check whether the photocells are in a good working order, also check the resistive safety contact edges, if applicable.**
- [B000208] Measure the force at the closing edge. Verify that the force restriction meets the specifications of PN-EN 12453 Annex A. In accordance with the PN-EN 12453 standard, the dynamic force of the main closing edge cannot exceed 400 [N], while the duration of dynamic force application should not exceed 750 [ms].
  Caution! Danger.

13.10. MANUAL CONTROL BUTTONS

[C000008] Manual control buttons are installed:
- in a place where the operator will have an unobstructed view of the door and its surroundings,
- in a place where the device cannot be turned on unintentionally.
- away from moving parts,
- at a height of at least 1.5 m.

14. ADDITIONAL REQUIREMENTS

[A000137] Once the installation has been completed:

- [B000209] Verify proper adjustment of the product and its compliance with EN 13241, EN 12453 and EN 12445.
- [C000507] Check whether all safety devices (overload protector, safety contact edge, photocells, etc.) operate correctly. **Caution! Accident hazard.**
- [C000459] **Verify proper adjustment and performance of the manual drive unlocking.**
- [B000007] **It is prohibited to keep using the door, if any faults in its operation, or damage of its components are found. Do not operate; contact an authorised service centre or a Professional Installer.**
- [C000508] The gate and the installation should be inspected visually to make sure there are no signs of mechanical maladjustment, mechanical damage, signs of wear or signs of damage to cables, accessories or assembled drive unit parts.
- [A000144] The Professional Installer must explain proper operation of the product to its user, including the emergency procedures, and train the user in proper use.
- [C000460] Once the installation has been completed, hand over the Installation and Operating Manual with the Door Logbook (if included with the product) to the Owner.
- [C000012] **Before first door operation check its correct installation according to Assembly and Operating Instruction.** The door is installed properly when its leaf/ curtain moves smoothly and its operation is easy.
- [B000094] Failure to perform the above-mentioned work can cause the door leaf/curtain to suddenly drop and injure people or damage items near the door.

15. USING THE CONTROLLER

[B000239] Before starting the controller, when connecting cables and accessories, make sure that the power supply is switched off.

15.1. DISPLAY SCREEN MESSAGES

The controller display shows messages informing about the status of the gate, access restrictions, and errors.

Message	Flashing	Meaning
Gate status messages		
cL/CL		gate closed
cL/CL	cL/CL	closing in progress
cL/CL	L	closing – slowed-down
cH/CH		stopped when closing
oP/OP		gate open
oP/OP	oP/OP	opening in progress
oP/OP	P	opening – slowed-down
oH/OH		stopped when opening
Control restriction messages		
Hr		no reaction to the remote control input – Hold to Run function
oS		no reaction to the remote control input – Housing estate function
Error messages		
E1		no reaction because of a motor short-circuit
	E1	stopped because of a motor short-circuit
E2		no reaction because of an interruption of the optical barrier
	E2	stopped because of an interruption of the optical barrier
E3		no reaction because of the active STOP input
	E3	stopped because of the active STOP input
E4		no reaction because of the active 8k2 input
	E4	stopped because of the active 8k2 input
E5	E5	stopped because of overload triggering
E6		no reaction because of the actuating relay failure
E7		no reaction because of the safety edge detection system failure
E8		no reaction because of the motor current measurement system failure

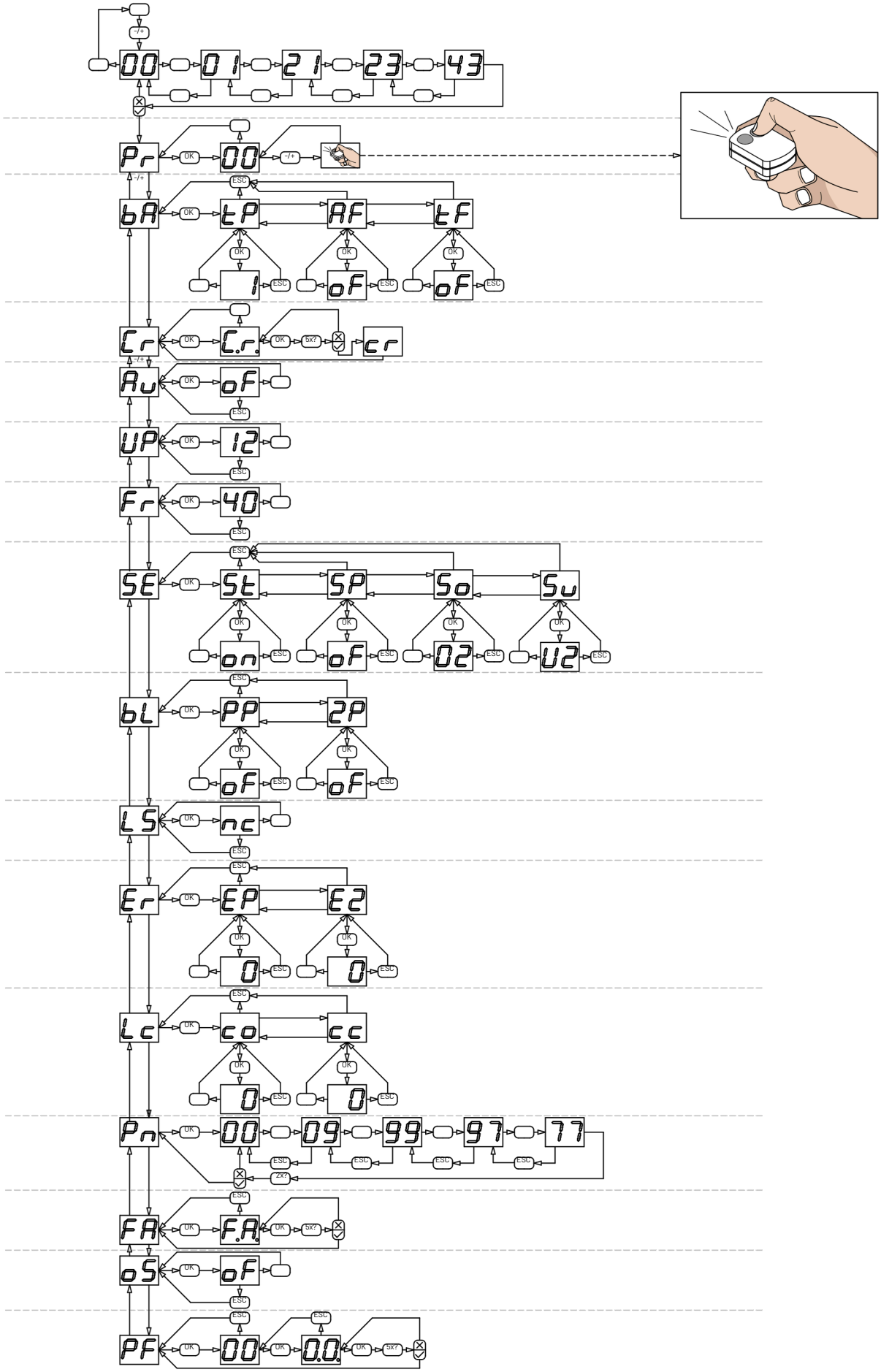
*The case of the first letter informs about the calibration status of the gate:
• lower case – the gate is not calibrated
• upper case – the gate is calibrated

15.2. PROGRAMMING THE CONTROLLER

[D000721] The drive unit is programmed using the “OK”, “ESC”, “+”, and “-” buttons located on the drive unit controller and the digital display. To access the controller menu, enter the four-digit installer key. Press “+” or “-” to start entering the key. The factory installer key is 1234.

No.	Function Level 1	Function Level 2	Range	Factory setting	Definition	Description
1	Pr		1, ..., 99	-	Remote control programming	Programming or removing one remote control. Removing all remote controls – the PF function.
2	bA				Optical barrier	Optical barrier settings
		tP	0, 1, 2, 3, 4	**1**	Operating modes	Optical barrier operating modes: 0 – Photocells are inactive 1 – No reaction when opening, reverse motion when closing 2 – Stop when opening, reverse motion when opening 3 – No reaction when opening, stop when closing 4 – Stop when opening, stop when closing
		AF	oF, 0.1, ..., 9.9	**oF**	Closing after interrupting the barrier path	Time in minutes after which the gate will start closing when the barrier is interrupted
		Ft	on/oF	**oF**	Barrier self-test	Starts the photocell self-test before each movement of the gate
3	cr/Cr				Gate calibration information	Informs whether the gate is calibrated (Cr) or not (cr). 5x OK resets the gate calibration
4	Au		oF, 0.1, ..., 9.9	**oF**	Automatic closing	Time in minutes after which the gate will start closing automatically
5	UP		1, ..., 20	-	Overload setting	Gate operating force adjustment. The parameter is selected automatically during the calibration

No.	Function Level 1	Function Level 2	Range	Factory setting	Definition	Description
6	Fr		oF, 1, ..., 40	**40**	Wicket – partial opening of the gate	Width setting determining the width to which the gate opens when the wicket mode is activated
7	SE				Controller inputs	Controller input setting
		St	on/oF/rE	**oF**	Stop	oF – stop input inactive on – stop input active – stop when activated rE – stop input active – reverse when activated
		SP	0, 1, 2	**0**	Resistive safety edge input 8k2	0 – safety edge input inactive 1 – reverse when opening, reverse when closing 2 – no reaction when opening, reverse when closing
		So	Ot/OZ/3F/U	**3F**	Control input 1 OTW	Ot – open OZ – open / close 3F – open / stop / close / stop U – open partially
		Su	ZA/UZ	**UZ**	Control input 2 U/Z	ZA – close UZ – open partially / close
8	bL				Controller interlocks	Controller interlock settings
		CA*	on/oF	**oF**	Automatic calibration interlock	When this function is active, calibration will not be performed
		PP	on/oF	**oF**	Simple remote control programming interlock	When this function is active, simple remote control programming is disabled
		ZP	on/oF	**oF**	Remote programming of remote controls interlock	When this function is active, remote programming of remote controls is disabled
9	LS		nc/no	**nc**	Limit input type setting	Can be used to set the type of limit switches that are used – normally open or normally closed
10	Er				Error counter	Records errors
		EP	0, ..., 9999	-	Overload counter	Records all stops caused by the triggering of the overcurrent safety device
		EZ	0, ..., 9999	-	Short-circuit counter	Records all motor short-circuits


-/+
00
01
21
23
43
Pr
OK
00
-/+
ESC
bA
tP
AF
tF
1
oF
oF
Cr
C.r
5x?
cr
Au
oF
UP
12
Fr
40
SE
St
SP
So
Su
on
oF
02
U2
bL
PP
2P
oF
oF
LS
nc
Er
EP
E2
0
0
Lc
co
cc
0
0
Pn
00
09
99
97
77
2x?
FA
F.A.
5x?
oS
oF
PF
00
0.0
5x?

No.	Function Level 1	Function Level 2	Range	Factory setting	Definition	Description
11	LC				Cycle counter	Records cycles
		cc	0, ..., 999999	-	Closing counter	Records all closing cycles of the gate
		co	0, ..., 999999	-	Opening counter	Records all opening cycles of the gate
12	Pn		0000, ..., 9999	**1234**	Change installer code	To change the installer code, the new installer code has to be entered twice
13	FA				Restore factory settings	To restore the factory settings, press the OK button 5 times.
14	oS*		on/oF	**oF**	Housing estate function	This function enables one transmitter to take over control of the controller unit for a short period of time.
15	PF		1, ..., 99*	-	Number of programmable transmitters	Shows the number of transmitters that can be programmed. 5x OK removes all stored transmitters
16	Lo				Slow-down area adjustment	This function adjusts the slow-down areas
		to	5, ..., -5	**0**	Opening	Opening slow-down area adjustment
		tc	5, ..., -5	**0**	Closing	Closing slow-down area adjustment
17	Sb		oF, 1 ... 15	**2**	Energy-saving function	oF – energy-saving mode is off 1...15*** – energy-saving mode is on; the values represent the delay time in seconds from the control pulse to the start of the drive
*This function requires the administrator code to be entered						

** - Disabling the energy-saving function may be necessary for the operation of some accessories powered by the drive controller – in this case, the gate controller acts as a power supply for additional devices. In this situation, the amount of electrical energy consumed by the drive from the network will increase.
*** - This time is adjustable, as some external devices may require more time to start (e.g., wireless signal transmission system).

15.3. CONTROLLER MENU DIAGRAM

15.4. BASIC CONTROLLER FUNCTIONS

[D000723] **Remotes can be programmed** using 3 methods:
• quick programming of remote controls - press and hold the “OK” button for 5 seconds, the “Pr” message will be displayed on the screen. Press the button of the pilot/pilots that you want to program. The quick remote programming procedure ends automatically 15s after the last transmitter is coded
• remote programming of remote controls - press and hold buttons 1 and 2 of an already programmed remote control for 5 seconds, the “Pr” message will be displayed on the screen. The procedure is the same as with quick programming
• manual programming of remote controls - enter the installer code, then navigate to the “Pr” function in the controller. Next, select a free cell in the controller memory - when the cell is free, its number flashes. Select a free cell and press the button on the remote control you are programming

Photocell operation mode settings - enter the installer code, go to the “bA” function in the controller menu, press “OK” and select the “tP” function. The optical barrier has 4 operating modes. The default mode is 1

Mode number	Reaction of the drive unit to photocell interruption	
	When opening	When closing
0	No reaction	No reaction
1	No reaction	Opens the gate
2	Stops the gate	Opens the gate
3	No reaction	Stops the gate
4	Stops the gate	Stops the gate

Wicket function – enter the installer code, then go to the “Fr” function in the controller menu. Next, press the “OK” button and select the percent value of the opening width to open the gate like a wicket
Automatic closing – enter the installer key and go to the “Au” function in the controller menu. Next, press the “OK” button and select time, in minutes, after which the gate closes automatically
Automatic calibration reset – enter the installer code, then go to the “Cr” function in the controller menu. To reset gate calibration, press “OK” 5 times. After resetting the calibration, the next operation of the gate will start the calibration process
Restoring factory settings – enter the installer code, then go to the “FA” function in the controller menu. To restore factory settings, press the “OK” button 5 times. Restoring factory settings also resets gate calibration
Changing the installer code – enter the installer code, then go to the “Pn” function in the controller menu. Next, press the “OK” button and enter the installer code twice
Adjusting the slow–down areas – enter the administrator code, then navigate to the “Lo” function in the controller menu. Next, press the “OK” button and select adjustment of the slow–down area when open- ing (“to”) or adjustment of the slow–down area when closing (“tc”). Both areas can be adjusted from –5 (shorter) to 5 (longer). Each “tc” and “to” unit modifies the slow–down area by about 10 cm. Every time the slow–down area is modified, automatic calibration must be run – the procedure starts automatically
Housing estate function – allows a transmitter to take over temporary control (30s) of the controller. For this period of time, the signals of other transmitters will be ignored. Commands issued by the transmitter that took over control of the controller will be performed normally.

15.5. CHANGING THE TRANSMITTER BUTTON ASSIGNMENT

[D000745] This feature makes it possible to assign the function of individual buttons of any programmed transmitter.

Function Level 1	Function Level 2	Function Level 3	Range	Factory setting
PE				
	1, ..., 99	P1	Ot/OZ/3F/ZA/UZ/__	3F
		P2		UZ
		P3		__
		P4		__

The feature enables independent control of up to four garage doors or gates within the range of a single transmitter:

		Gate 1	Gate 2	Gate 3	Gate 4
Channel of the transmitter	1	3F	__	__	__
	2	__	3F	__	__
	3	__	__	3F	__
	4	__	__	__	3F

16. CONTROLLER DISASSEMBLY

[D000724] The drive unit should be disassembled by reversing the sequence of the installation procedure.

17. OPERATION REMARKS

[D000725] The following basic guidelines will ensure long and smooth operation of the drive:
• protect the drive unit from agents that could damage varnish and metal, such as acids, lyes, and salts,

• the drive unit should be opened in accordance with the instruction manual supplied with the electrical equipment,



• [B000210] Do not modify the adjustments done by the Professional Installer.
Caution! Danger.
• [A000062] **Do not perform any product repairs on your own.**
• [C000461] During the full operating cycle of the door, the user shall visually monitor the door operating area and keep all bystanders away until the door is fully opened/closed.

18. OPERATING INSTRUCTION



• [C000383] Do not stay, pass, run or drive under the door when it is in motion. Before opening or closing,
• ensure that no persons, and especially children or any objects, are in the path of the moving garage
• door. No persons, objects or vehicles are allowed to stay within the clearance of the open door.
• [C000384] **Do not use the garage door to lift any objects or people.**
• [A000103] **Do not use faulty products!** Do not use the product and contact an authorized service centre if the product is malfunctioning or its subassemblies are damaged.
• [A000125] **Do not remove, alter or disable any protective equipment.**
• [B000194] The product can only be operated when all the required safety devices are in place and if these devices are operational.
• [C000042] This equipment can only be operated by children above 8 years of age, persons with impaired physical/and or mental performance and inexperienced users under supervision or according to the operating manual and with the principles of safe use and related hazards properly explained. Do not allow children to clean or perform maintenance works on the device. Mind that children must never play with this equipment.
• [B000211] Keep batteries, rechargeable batteries or other small power sources out of the reach of children. Hazard of swallowing by children or pets!
Deadly hazard!
If this emergency occurs, immediately consult a medical doctor or seek medical attention. Do not shorten the battery leads. Do not throw the batteries into fire. Do not recharge non-rechargeable batteries. Explosion hazard!
• [C000076] **WARNING: Do not obstruct the door leaf movement area.** Make sure that no persons, especially children, or objects stand in the way of a closing or opening door leaf.
• [C000077] No barriers may stand in the way of a door leaf.
CAUTION! Danger.
• [C000078] The door can be opened and closed using the drive unit only when the door is within the operator's sight, unless it is fitted with suitable safety devices.
CAUTION! Danger.
• [C000079] The door may be approached only when its motion (opening or closing) is finished. Approaching the door in motion is not allowed.
CAUTION! Danger.
• [C000080] Remote control transmitters, transmitters or other control equipment to activate the door should be kept out of reach of children, to avoid unauthorised activation. Children should not be allowed to play with this equipment. Transmitters should be kept in dry places.
CAUTION! Danger.
• [D000726] Do not uncouple during operation of the drive, risk of permanent damage to the drive unit.
• [D000727] Do not intentionally block movement of the gate or the drive unit. Do not insert your fingers and other objects in the strip and the toothed wheel.
• [D000728] Do not use the drive when it needs repair or adjustment, risk of bodily injury.
• [A000170] It is strictly prohibited tu use a malfunctioning gate, it is especially prohibited to use the gate if it shows visible damage.

18.1. MANUALLY OPERATED GATE

[D000729] In the case of a power outage and to open the gate remotely, uncouple the drive unit using the lever. In order to re-couple the drive, push the lever in the initial position.
[B000104] All the manually operated products should be opened and closed smoothly, without any jerking which decreases product durability and safety of use.

18.2. POWER OPERATED GATE

[D000731] Unlocking is not allowed when the drive is operating, as this can cause permanent damage to the drive.
[D000732] To open and close the gate with a drive unit, press the button on the remote control transmitter or operate the accessory connected to one of the control inputs.
[B000154] The drive unit is constantly coupled under normal operating conditions in the power-operated door (with electric drive). The drive can be uncoupled only in emergencies, e.g. in the case of drive breakdown. After the drive unit was uncoupled, following the manual opening and closing of the door, the drive should be re-coupled. The un-coupling may not be performed while the drive unit is in use as this may cause permanent damage to the drive unit.



[D000668] **Failure to comply may result in severe injuries due to crushing by the door or other hazards.**
Caution! Danger.

19. ROUTINE MAINTENANCE INSTRUCTIONS

[A000140] **Activities which may be performed by the Owner after careful reading the instruction.**
[C000509] Electric power doors: every 3 months:
• check whether the limit switches are properly adjusted (to check this, operate the gate and carefully observe where the gate stops),
• check whether the electrical protective devices operate properly (if applicable) by simulating the operating conditions,
• check the photocells - simulate the conditions,
• check the overload switch - the gate should stop and reverse when the leaf runs into an obstruction,
• check the mechanism for manual uncoupling of the drive unit,
• check whether electrical cables do not show any signs of wear,
• clean the photocell covers and the signal light cover lens on a regular basis,
• replace the transmitter batteries at least every 12 months.



• [B000212] If any operating malfunctions or damage to the components is found, do not operate the product. Immediately stop using the product and contact an authorised service company or a Professional Installer.

Caution! Danger.
• [C000463] **Maintain the electric drive unit according to its Operating Manual.**

[A000141] **Activities to be performed by a professional installer only**
[A000166] Any alterations and modifications to the door should be agreed on with the door manufacturer.
[C000510] Inspect the drive unit at least every year and:
• check whether the photocells operate correctly, depending on the setting, when the beam is crossed, the gate should either not move at all or should not close,
• if the electric drives malfunction, disconnect the drive unit from the power supply for at least 5 seconds and reconnect,
• check the electrical system, in particular, inspect the electrical cables,
• check whether the force threshold complies with the specification provided in Annex A to the PN-EN 12453 standard,
• if after the check you find that the parameters fail to meet the requirements specified in the PN-EN 12453 standard - the dynamic force of the main closing edge should not exceed 400 [N], the dynamic time should not exceed 750 [ms] - perform automatic calibration in accordance with section 13.9,
• check the mechanical components responsible for safety and proper operation of the product,
• perform maintenance actions prescribed by the product Owner,
• any defects and irregularities in the operation of the product found during inspection should be eliminated immediately, the damaged elements posing a safety hazard to the user should be repaired or replaced,
• all actions should be carried out in accordance with the Installation and Operating Manual of the gate.
[A000107] **Actions restricted to authorised service agents of the Manufacturer:**
• any modifications of the product;
• repairs of components.
• [C000465] Power cable replacement.



• [C000467] **Disconnect the drive power supply during all maintenance and inspection works.**
• **Also a battery power supply should be disconnected if it has been delivered.**

20. WARRANTY CONDITIONS
[A000142] This product is covered by a commercial warranty according to the Manufacturer's General Warranty Terms & Conditions.

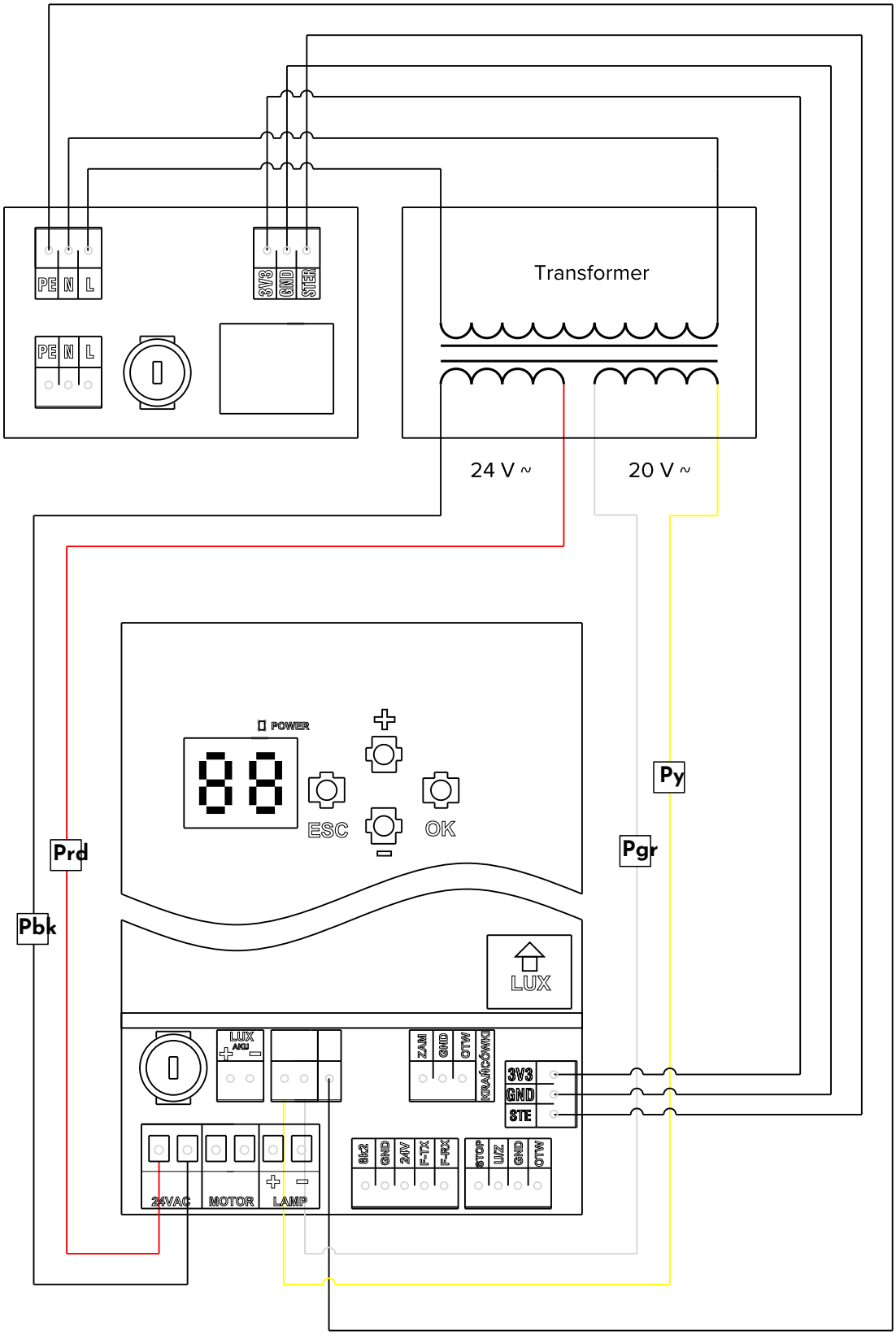
[A000079] **The manufacturer reserves the right to introduce design modifications due to technological progress that do not alter the product functionality, without prior notice.**
This documentation is copyright of the manufacturer. Copying, reproduction and usage in full or in a part without the written consent of the owner is prohibited.

[A000048] **This document has been translated from Polish. In case of discrepancies, the Polish version prevails.**

21. FAQ

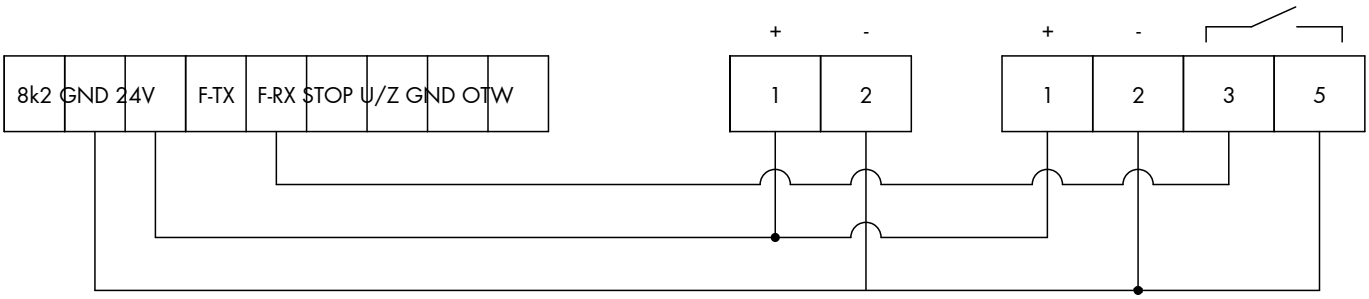
Reason	Solution
• Diode on transmitter (remote control) is off	• Replace batteries, possibly replace the transmitter.
• Control system does not react to signal from operative transmitter (remote control)	• Check controller feed. • Program transmitter.
• Control system operates correctly but door does not move	• Check if the toothed wheel is meshed with the toothed bar. • Check if manual drive may be opened.
	• Check overload rate adjustment.
• Drive does not stop upon contact with barrier	• Check overload rate adjustment.
• Drive stops immediately after starting	• Check limit switches function.
• Door does not stop at open/close position • Drive opens but does not close, photocells are connected	• Check photocells connection. • Check photocells.
• In final closing phase – door opens	• Check limit switches function. • Check overload rate adjustment.
• In final opening phase – door closes	• Check limit switches function. • Check overload rate adjustment.

1

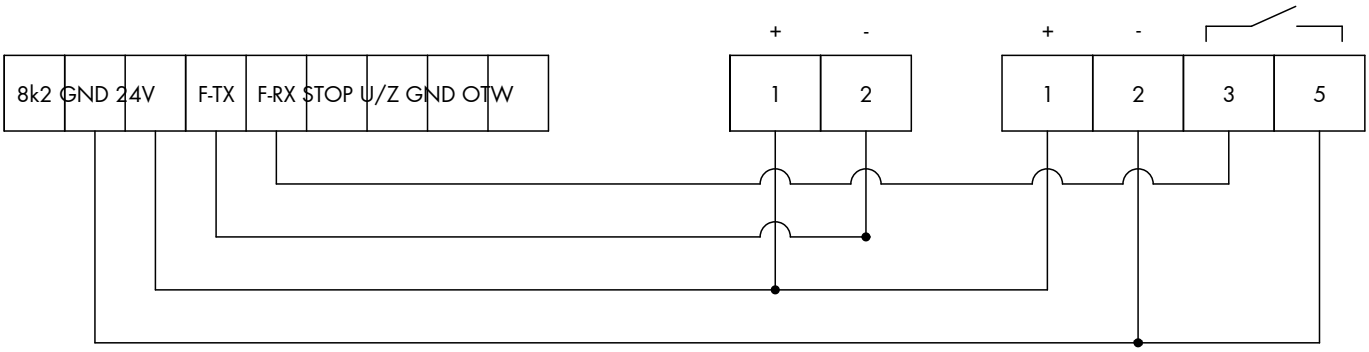


Pbk - black
Prd - red
Pgr - grey
Py - yellow

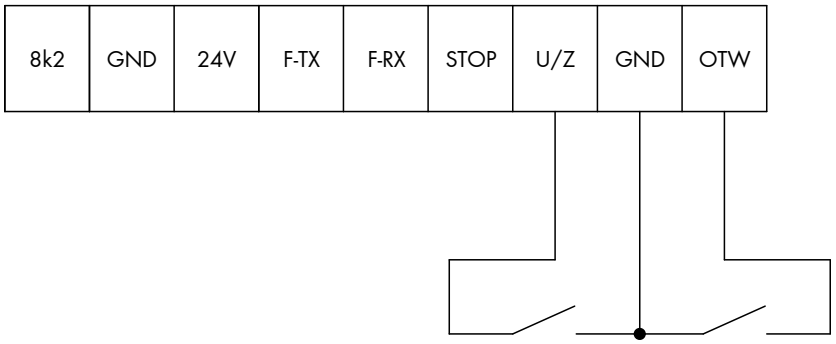
2


8k2
GND
24V
F-TX
F-RX
STOP
U/Z
GND
OTW
+
-
1
2
+
-
1
2
3
5

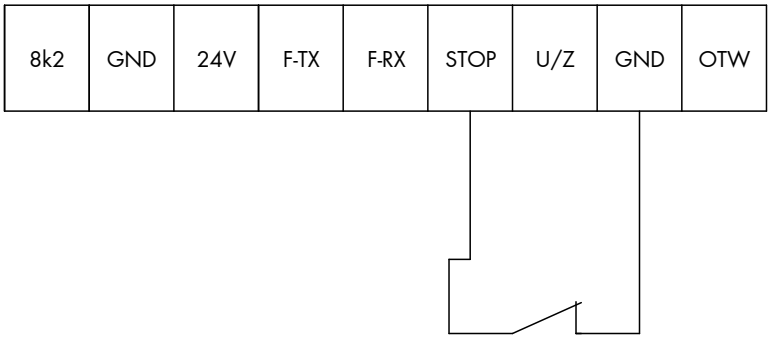
3


8k2
GND
24V
F-TX
F-RX
STOP
U/Z
GND
OTW
+
-
1
2
+
-
1
2
3
5

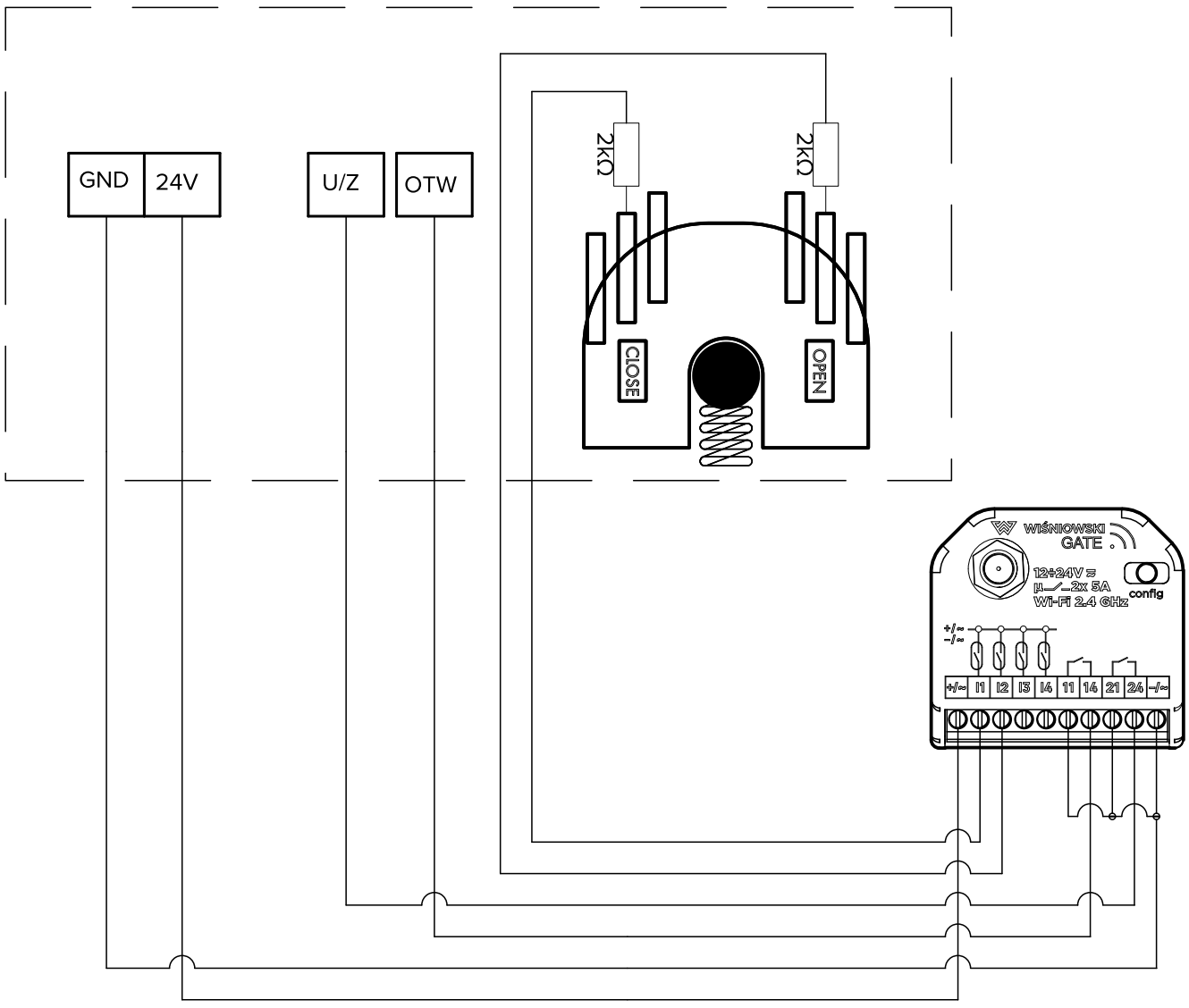
4


8k2
GND
24V
F-TX
F-RX
STOP
U/Z
GND
OTW

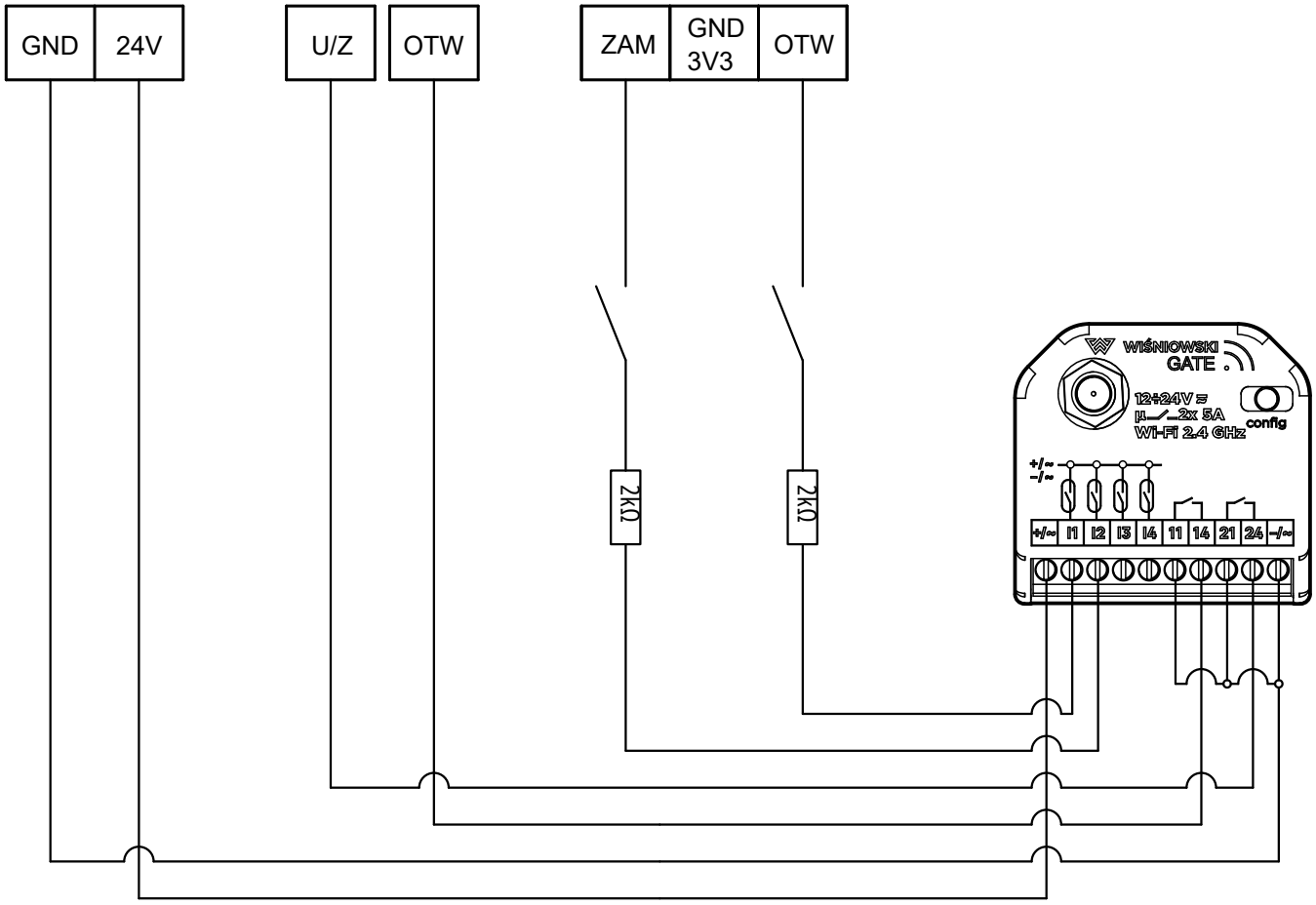
5


8k2
GND
24V
F-TX
F-RX
STOP
U/Z
GND
OTW

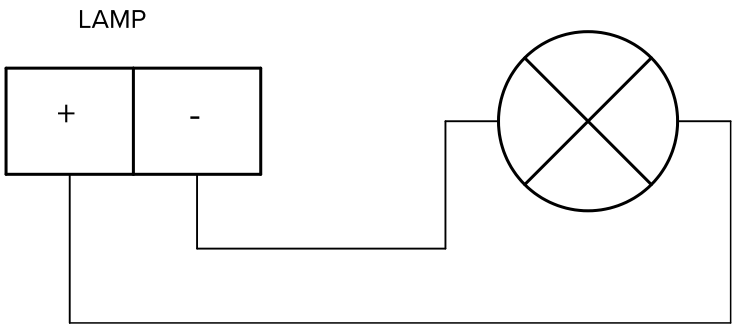
6


GND
24V
U/Z
OTW
2kΩ
2kΩ
CLOSE
OPEN
WIŚNIOWSKI
GATE
12÷24V ≂
⎍⎍ 2x 5A
Wi-Fi 2.4 GHz
config
+/≂
-/≂
+/≂
I1
I2
I3
I4
1
1
1
4
2
1
2
4
-/≂

7


GND
24V
U/Z
OTW
ZAM
GND
3V3
OTW
2kΩ
2kΩ
WIŚNIOWSKI
GATE
12÷24V ≂
μ⎍⎍2x 5A
Wi-Fi 2.4 GHz
config
+/~
-/~
+/~
I1
I2
I3
I4
11
14
21
24
-/~

8


LAMP
+
-