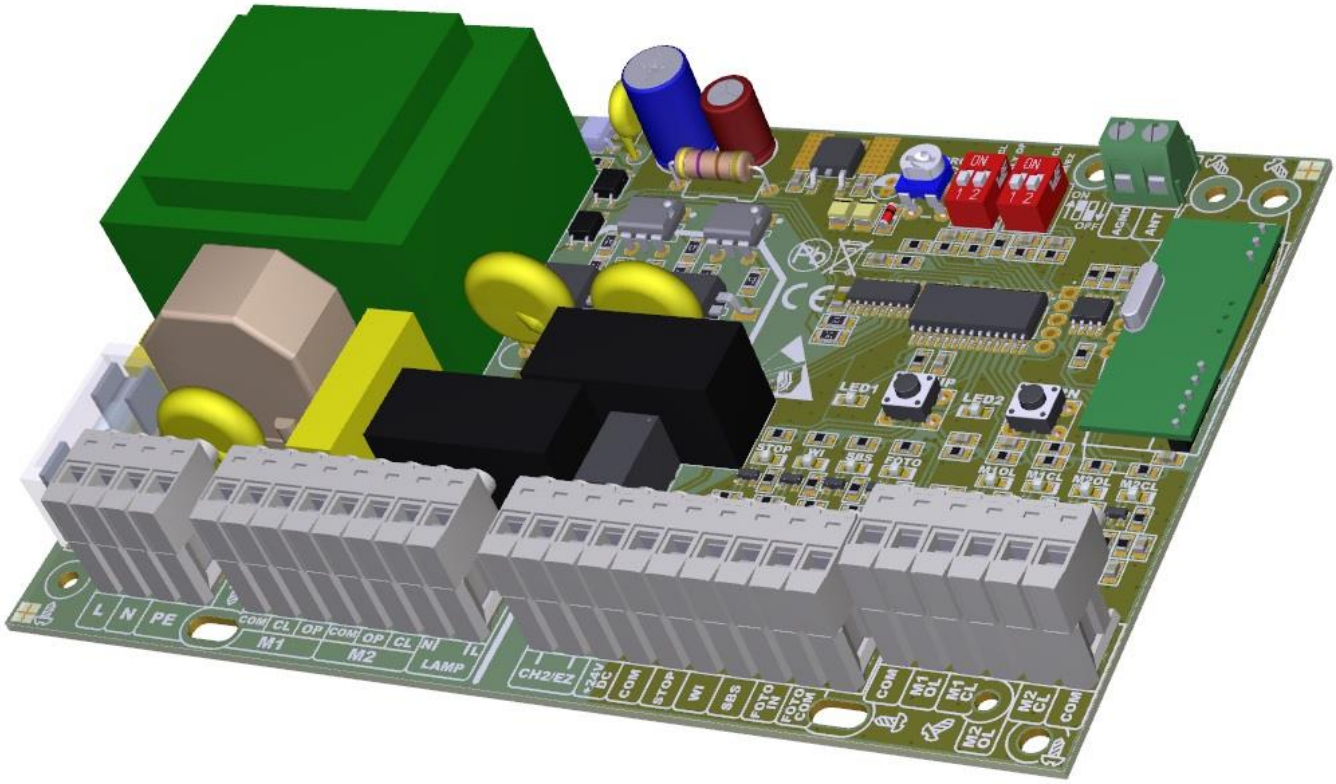
Gate drive controller for 230Vac 500W motors



OPERATING MANUAL

HEL B9

SOFTWARE

SYMBOL	COMMENTS
B9:1.0.1/1.x.x/P:1.0.x	HELB9E version – with programmed working time
B9:1.0.1/1.x.x/P:1.1.x	HELB9E version – introduction of remote learning procedure for the SBS and wicket/CH2 functions
B9:1.0.2/1.x.x/P:1.0.x	HELB9Ek version – with programmed working time and support for external limit switches
B9:1.0.2/1.x.x/P:1.1.x	HELB9Ek version – introduction of remote learning procedure for the SBS and wicket functions /CH2
B9:1.0.1/1.x.x/P:2.0.x	HELB9H version– with programmed working time
B9:1.0.2/1.x.x/P:2.0.x	HELB9Hk version – with programmed working time and support for external limit switches

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UPROSZCZONA DEKLARACJA ZGODNOŚCI UE
SIMPLIFIED EU DECLARATION OF CONFORMITY

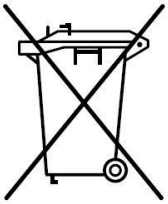
No: 6/2016/D2

CE

PRODUCENT/MANUFACTURER
HATO POLSKA S.C.
Ul. Żeromskiego 1, 41-205 Sosnowiec

niniejszym oświadcza, że typ urządzenia HELLB9 jest zgodny z dyrektywami:
EMC 2014/30/UE, LVD 2014/35/UE, RED 2014/53/UE, ROHS 2011/65/UE
hereby declares that the equipment of HELB9 type is in compliance with the Directives:
EMC 2014/30/UE, LVD 2014/35/UE, RED 2014/53/UE, ROHS 2011/65/UE

Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym:
The full text of the EU declaration of conformity is available at the following internet address:
hato.com.pl



In accordance with the applicable regulations on the disposal of unnecessary equipment by private users in the European Union, an item containing this symbol **MAY NOT** be disposed of with other waste. In this case, the user is responsible for the proper disposal by delivering the device to a designated point or a manufacturer who will take care of its further disposal. Separate collection and recycling of unnecessary equipment facilitates the protection of the environment and ensures that the disposal is carried out in a way that protects human health and the environment. This also applies to spent batteries.

SAFETY PRECAUTIONS

Before installation and use of the controller for the first time, read the operating manual carefully and retain it for future reference.

MEANINGS OF SYMBOLS

IMPORTANT SAFETY INSTRUCTIONS!

INFORMATION!

In accordance with the European regulations in force, a powered gate must comply with the Directive 2006/42/EC. It must also meet the following standards: EN 13241-1; EN 12445; EN 12453 and EN 12635.

Pursuant to the Machinery Directive 2006/42/EC, it is hereby declared that the product may not be put into service until the final machine which the product is incorporated into or whose component it is receives a declaration of compliance with the directives and the relevant regulations that the final machine must meet.

GENERAL RECOMMENDATIONS

- The person performing the assembly or maintenance as well as all users of the drive must be familiarised with the Installation and Operating Manual.
- The installation and operating manual should be kept in an accessible location.
- Use the product according to its intended use.
- Follow and comply with occupational health and safety regulations and standards in the respective countries.
- Installation, connection and first start-up of the gate drive can only be carried out by qualified personnel.
- The drive may be installed only in properly assembled gates.
- Before performing any work on the drive, disconnect the supply voltage and protect it against accidental start-up. This also applies to the battery power supply.
- During any welding work near the gate, disconnect the gate from the power supply and disconnect the electronic circuitry.
- The procedures for implementing electrical installation and its protection against electric shock are specified by applicable standards and regulations.

- Install safety devices (photocells, edge strips, curtains, etc.).
- Install the warning sign “Automatic gate” on the gate.
- The manufacturer is not liable for any damage or interruptions in work resulting from this installation and operating manual not being observed.

Observe all installation instructions. Incorrect installation may lead to serious injuries.

SAFETY PRECAUTIONS

OPERATION

- Only use the drive if it is installed in accordance with the applicable standards and guarantees the safety of the user.
- The gate can only be used by trained persons.
- Children and mentally handicapped persons may not control the gate.
- Do not put your hands or other body parts into moving gate or its moving parts.
- Do not insert any objects or mechanical parts into the moving gate or its moving parts.
- Do not attempt to go through the gate until it is fully opened.
- In the case of automatic gate closing, secure the edges according to the applicable standards.
- No children, adults, animals or objects may be present in the gate operating area while the gate is moving.
- Regularly check the operation of the safety devices.
- Malfunctions that may affect the safety of use must be removed immediately.
- Use the drive in non-explosive zones.
- Do not use the drive in a room with an aggressive atmosphere.
- Do not use fluorescent lamps as signal lighting.
- Inspection and maintenance work should be performed at least every 6 months.

INSTALLATION

- Gates automatically opened by a drive must meet the requirements of applicable standards and directives, such as EN 12604 and EN 12605.
- Use only a technically sound drive according to its intended purpose, taking into account the safety rules and dangers and following the installation and operating instructions.
- While opening or closing, the gate must not be tilted and must be level.
- The gate must move properly throughout its working range.
- The gate must be stable and rigid, i.e. it may not bend or twist when opening or closing.
- If no limit switches are used, stops must be installed.
- Observe the occupational health and safety rules during the installation.
- Perform the installation in accordance with the applicable standards.
- The controller may only be installed by qualified personnel with the appropriate qualifications.
- The installation must be carried out with basic ESD protection.
- Do not connect the drive to the power supply earlier than stated in the manual, otherwise this may present a risk of electric shock.

SAFETY NOTES

- It is forbidden to walk or drive under a moving gate.
- It is forbidden use the gate to lift or move objects or persons.
- Keep the control transmitter out of the reach of children as they may use it for play.
- The gate may be started only when the entire gate movement area is clearly visible and free of obstacles.

DESCRIPTION OF THE EQUIPMENT

INTENDED USE

The HEL B9 controller is designed for gate drives that use two motors/actuators with the voltage of 230Vac and power of 500W. It is ideal for continuous operation and can be used on private and business premises. The applied variable transmitter encoding system manufactured by Microchip makes the system inaccessible to an unauthorised person.

HEL B9 is available in two main versions:

HEL B9x – *with programmed working time*

HEL B9xk – *with programmed working time and support for external limit switches*

CAUTION!

HEL B9H and HEL B9Hk *work with transmitters compliant with the Keeloq transmission standard and operating at 433.92 MHz.*

HEL B9E and HEL B9Ek *work with all HATO transmitters that are compliant with the Keeloq transmission standard and operate at 433.92 MHz.*

CONTROLLER ADVANTAGES

- Soft start and stop to increase the service life of the gate.
- Controlled using transmitters with Keeloq dynamic variable code.
- Controlled with bell buttons.
- Functions: AUTO-CLOSE, ONLY OPEN, WICKET (opening one gate leaf).
- Thrust adjustment.
- Working time adjustment.
- Deceleration function.
- Automatic limit switch type recognition.
- Signal lighting.
- Reducing the auto-closing time after a passage has been detected.
- Possibility of installing an infrared barrier.
- Photocell testing function for increased safety.
- Possibility of connecting an electro-lock.
- Input status indication.
- Remote programming of transmitters in HEL B9E and HEL B9Ek versions.
- Easy installation and programming procedure.

MODE OF OPERATION

The drive is controlled by transmitter button programmed in HEL B9 or bell buttons for SBS sequential control, WI wicket control and STOP. In the case of control from the SBS input and the transmitter assigned to this function, the operation consists in executing OPEN-STOP-CLOSE-STOP commands step by step or only in opening the gate if the ONLY OPEN function is enabled. After the power is turned on, opening is the first command to be executed. If you issue another command while the gate is moving, you will stop it, and then you can launch it in the closing direction. The WICKET function is controlled from the WI input and/or by the button of the transmitter assigned to this function.

After the power is turned on, the controller assumes that the gate is in the central position and after the first control signal, the motors are switched on for half of the programmed working time. The settings are synchronised after reaching the limit positions (limit switches or mechanical stops).

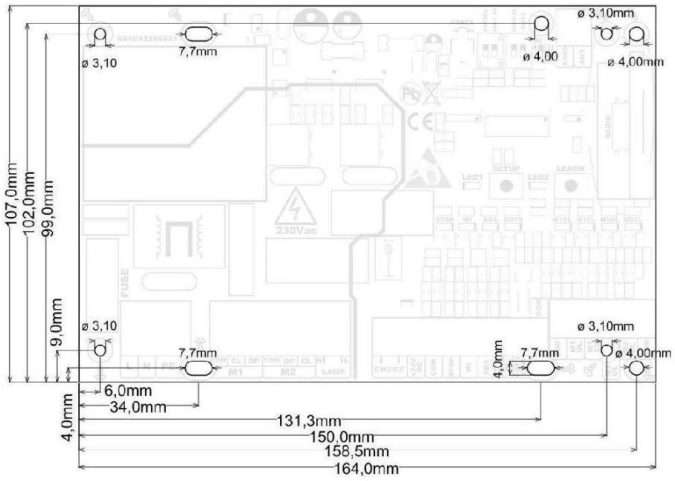
The HEL B9 controller is equipped with an additional potential-free NO contact. It can perform two functions:

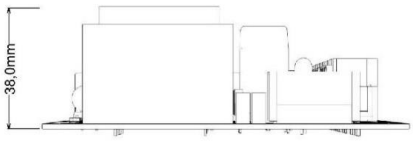
- electro-lock switch – it is activated 0.5s before the start of the movement in the opening direction to unlock the latch – 3s activation time.
- CH2 universal output channel – controlled by transmitters assigned to the WICKET/CH2 function.

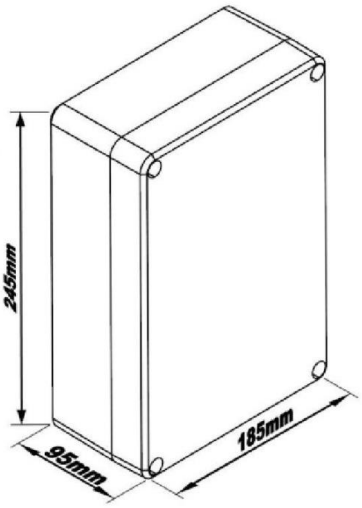
TECHNICAL DATA

Controller power supply	AC 230Vac +/-10% 50Hz
Operating temperature range	from -20 to +70°C
Motor supply voltage	AC 230V+/-10% 50Hz Vac
Standby power consumption	<3W (without accessories)
Radio receiver	433.92MHz OOK
Range	up to 200m
Transmitter type **HEL B9E, HEL B9Ek** **HEL B9H, HELB9Hk**	 HATO compatible with Keeloq transmission compatible with Keeloq transmission
Transmitter memory	32 pcs.
Maximum motor power	<=500W
Maximum CH2 channel load capacity	1A/30VDC, 0.3A/60VDC, 0.5A/125VAC
Maximum auto-closing time	25min
Maximum working time	2min
Maximum break time	10s when opening 20s when closing
Fuse type	5A/230V, ø5x20
Weight **HEL B9x** **HEL B9xk**	 470g 480g

DIMENSIONS







OPTIONAL IN THE HOUSING

INSTALLATION OF THE CONTROLLER

Make sure that all safety instructions have been followed before starting the installation.

Only qualified personnel may perform any installation work. Electrical installation and connection of electronic devices may only be carried out by qualified persons.

1. **Turn off the power supply.**
2. **Install mechanically the controller.**
3. **Remove the quick-release couplings.**
4. **Connect the conductors to the quick-release couplings as described on the controller housing or the connection diagram:**

4.1. Connection of opening and closing limit switches – for HEL B9Ek and HEL B9Hk versions (optional)

Limit switches can be of NC or NO type. The controller automatically recognises their type when programming the operation.

The opening and closing limit switches are used to precisely stop the gate in a fully opened or closed position. Adjust the positioning of the magnets so that the gate leaves open and close in a precise manner.

M1OL – M1 motor opening limit switch,
M1CL – M1 motor closing limit switch,
M2OL – M2 motor opening limit switch,
M2CL – M2 motor closing limit switch,
COM – common limit switch conductor.

If no additional limit switches are used, mechanical stops must be installed in the fully opened and closed positions.

4.2. Connection of photocells

An infrared barrier is an essential safety device that must be connected to the controller. It prevents the gate from hitting a vehicle, person or object in the gate clearance. Photocells are essential for proper operation and safety. It is necessary to connect a safety curtain or another additional device to protect against crushing within the leaf operating clearance during closing. It should be connected in series with the photocells.

+24VDC – photocell power supply plus
COM – photocell receiver power supply minus
FOTOCOM – photocell transmitter power supply minus
COM – photocell COM output
FOTO IN – photocell NC contact

The power performance of the 24V connector is 400 mA, so make sure that the total power load does not exceed this value. An example photocell connection is shown in the wiring diagram.

4.3. STOP protection connection

NC type protections that monitor the leaf range area shall be connected in series to the STOP and COM inputs. They are essential for proper operation and safety.

STOP – NC protection input
COM – common conductor

4.4. Connecting the SBS manual control and the WI wicket function buttons

The connection should be made using a 2x 0.5mm conductor (the conductor type should be compliant with CEI 20-22; CEI EN50267-2-1). The maximum length of the conductor depends on its electrical parameters. Therefore, you must adopt the rule that the resistance of the conductor should not exceed 100ohm for the required conductor length. As standard, a conductor with a diameter of 0.5 mm and a length not greater than 20 m is

enough for the proper operation of the controller. If greater lengths are required, you can use 4x0.5(mm) conductors by connecting the wires in parallel in pairs or increasing the cross-section of the conductor (2x 1mm).

SBS – bell button for sequential control
WI – bell button for the WICKET function control
COM – common conductor

4.5. Connecting the electro-latch

The electro-latch is connected to an additional potential-free CH2 contact. When selecting the latch, you must take into account the load limitations of the relay (see TECHNICAL DATA). An external power source that is appropriate to the model selected is required.

CH2 (pin 1) – one end of the electro-latch coil
CH2 (pin 2) – external power supply minus

Insulate the electro-latch with a varistor or another element that eliminates the overvoltage caused by turning on/off the inductance.

The next step is to make electrical connections of the 230Vac connectors.

4.6. Connection of M1 and M2 motors

M1 motor is started as the first one (overlapping leaf). The motor connections must be carried out as described on the PCB board:

M1
COM – common motor conductor
OP – the motor conductor that activates it in the opening direction
CL – the motor conductor that activates it in the closing direction
PE – protective earth conductor

M2
COM – common motor conductor
OP – the motor conductor that activates it in the opening direction
CL – the motor conductor that activates it in the closing direction
PE – protective earth conductor

The motors must be equipped with starting capacitors. Otherwise, they must be appropriately selected and connected between the OP and CL inputs for each of the motors.

4.7. Signal lighting connection

A bulb with a power that does not exceed 40W/230V must be connected to the LAMP connector:

N – lamp's neutral conductor
L – lamp's phase conductors

Do not use fluorescent lamps as signal lighting.

4.8. Power supply connection

The last stage is to connect the controller power supply. To do so, connect the following conductors one after another:

PE – protective earth conductor
L – phase conductor
N – neutral conductor

Secure the controller power supply through the application of a residual current operated circuit-breaker.

5. **Place the quick-release couplings back in the controller.**

Check the power supply, grounding and conductors before starting up the equipment. Conductors should not be too long. It is forbidden to roll the remaining conductor in loops and simultaneously route the controller and motor power supply cables and control cables

6. **Set the gate manually to the closing position.**
7. **Turn on the power.**
8. **Check the opening direction.**

Pressing the button of the SBS manual control or the programmed transmitter activates the gate in the opening direction. If this is not the case, the conductors connected to the OP and CL terminals should be exchanged (after disconnecting the supply voltage).

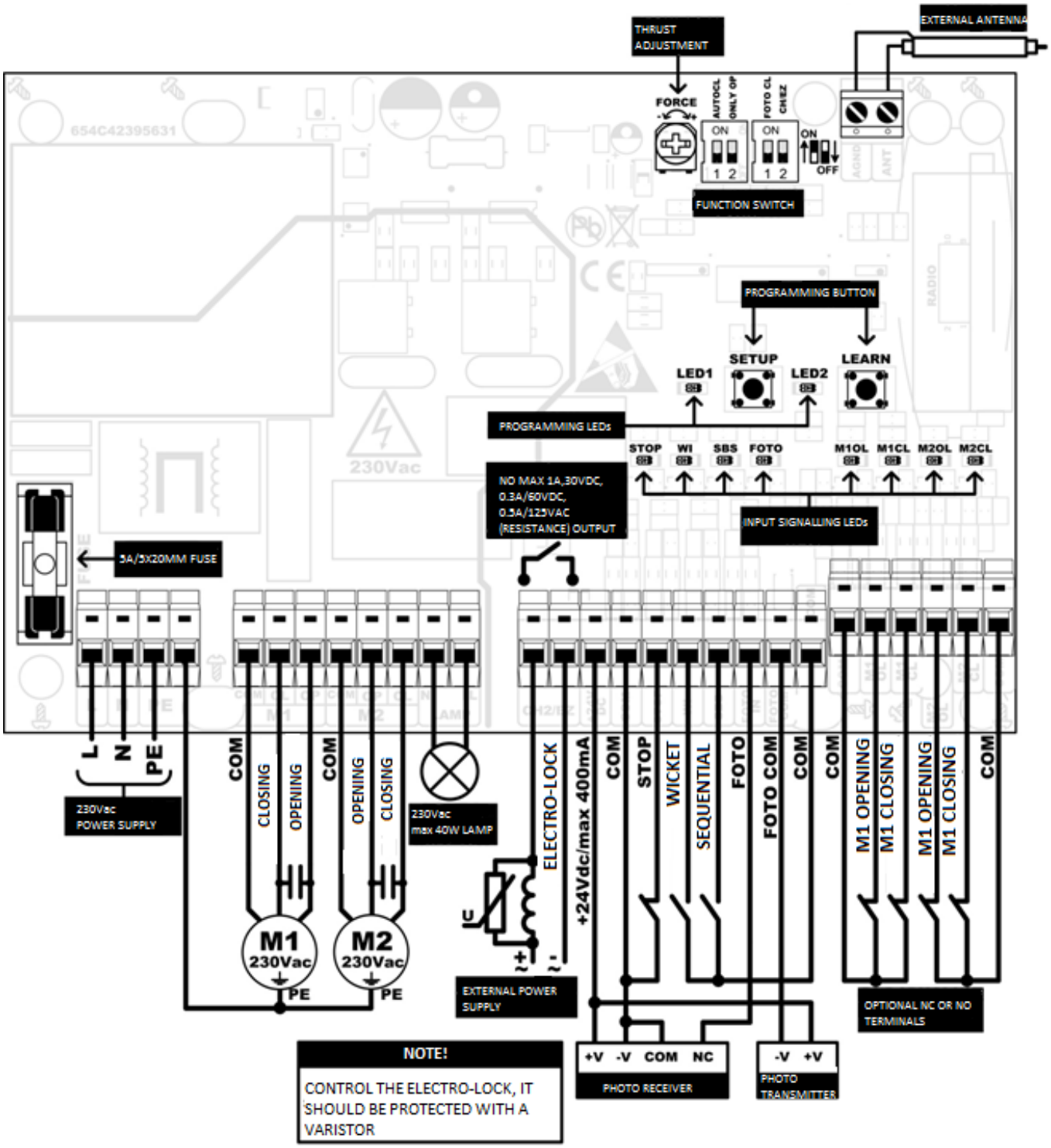
9. **Adjust the thrust of the motors.**

The thrust adjustment is performed with the FORCE potentiometer. Adjustments should be made with a screwdriver: clockwise rotation increases the thrust and counter-clockwise rotation decreases it.

The adjustment should be carried out in accordance with the applicable standards.

10. **Programme the operation of the motors – following the procedure described in the Programming section.**
11. **Properly set up the controller and programme the remote-control transmitters.**
12. **Make sure that the gate leaves stop correctly in the edge positions. If this is not the case, check the connection and repeat the gate leave programming procedure.**
13. **Check the operation of the entire apparatus and all the connected safety, signalling and control elements (limit switches, photocell, edge bar, signal lighting, etc.).**
14. **Train all gate users.**

CONNECTION DIAGRAM



PROGRAMMING SETTINGS

The controller is programmed using the SETUP and LEARN buttons as well as LED1 and LED2 located on the controller board and 4 function switches.

You can programme the controller only when the gate is stopped. If you start programming the controller during the auto-closing countdown, the countdown will be stopped and the SBS button or the remote-control transmitter button must be pressed to close the gate.

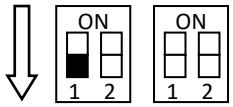
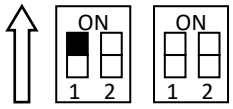
The controller logic and the type of the actuators require that the motors and M1-to-M2 leaf lead time be programmed first.

SIGNAL LIGHTING

When the gate is moving, the signal lighting is on. In addition, it can be used as the auxiliary lighting of the driveway or garage with a delayed deactivation. The time should be programmed with the **AUTO CL** switch off.

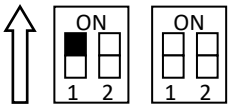
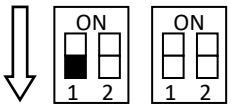
SETTING THE DELAY TIME FOR TURNING OFF THE LIGHT

Adjustment is done within the range from 0s to 25min with an increment of 15s. Factory setting: 0s

If the AUTO-CLOSE function is on, set the **AUTO CL** switch to OFF.	
Press and hold the SETUP button for less than 3s. Glowing **LED1** confirms that the button has been pressed.	
Release the SETUP button.	
LED1 flashes rapidly.	
Start setting the time within 5s. Press the SETUP button **x** times. One press corresponds to 15s. Each press is confirmed by the glowing LED. If the button is not pressed within 5s, the controller will set the time for 0s.	
After 3s from the last press, the LED will flash 3 times. The controller will save the settings and return to normal operation.	
If the AUTO-CLOSE function is on before programming, set the **AUTO CL** to ON.	

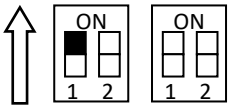
AUTO-CLOSE FUNCTION

When the gate is stopped after the OPENING signal, a countdown set by the user starts. When it is finished, CLOSING occurs. The light is on during the countdown. Photocells are required for the safety of the user so that the gate does not close when there is an obstacle in the gate clearance. In addition, when the FOTO CLOSE function is enabled, the photocells will shorten the auto-closing time and after a passage has been detected, the gate will close after 5s. Each detected passage will cause a new countdown of this time. If the gate is fully opened, any signal that attempts to activate it in the opening direction will cause a new countdown of the auto-closing time.

Set the **AUTO CL** switch to ON in order to **enable** the function.	
Set the desired auto-closing time according to the procedure.	**SETTING THE AUTO-CLOSING TIME**
To **disable** the function, set the **AUTO CL** switch to OFF.	

SETTING THE AUTO-CLOSING TIME

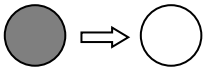
Adjustment is done within the range from 15s to 25min with an increment of 15s. Factory setting: 6min

The **AUTO CL** switch must be in the ON position.	
Press and hold the SETUP button for less than 3s. Glowing **LED1** confirms that the button has been pressed.	
Release the SETUP button.	
LED1 flashes rapidly.	
Start setting the time within 5s. Press the SETUP button **x** times. One press corresponds to 15s. Each press is confirmed by the glowing LED. If the button is not pressed within 5s, the controller will set the default factory time.	
After 3s elapse from the last press, **LED1** will flash 3 times. The controller will save the settings and return to normal operation.	

M1-to-M2 LEAF LEAD TIME

If the leaves overlap, you should set the M1-to-M2 leaf lead time. In the case of closing, the lead time is twice as long as for opening. Adjust the settings so that there is no collision of the leaves and the overlapping leaf does not reach the final position earlier than the other leaf.

Adjustment is done within the range from 0s to 10s with an increment of 1s. Factory setting: 0s

Press and hold down the SETUP button.	
LED1 will turn on and go off.	
Release the SETUP button.	

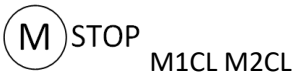
LED1 flashes rapidly.	
Start setting the time within 5s. Press the SETUP button **x** times. One press corresponds to 1s for opening and 2s for closing. Each press is confirmed by the glowing LED. If the button is not pressed within 5s, the controller will set the time for 0s.	
After 3s elapse from the last press, **LED1** will flash 3 times. The controller will save the settings and return to normal operation.	

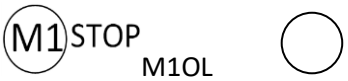
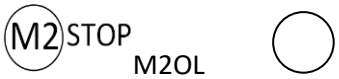
PROGRAMMING MOTOR OPERATION

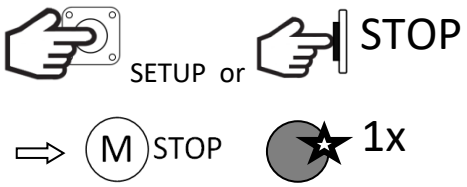
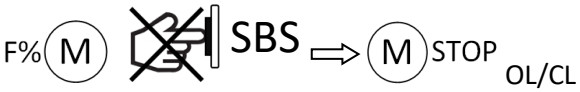
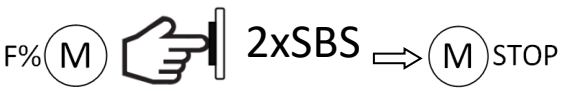
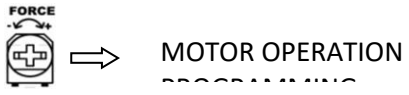
The maximum working time of the motor is 2 min (at full speed). The controller can programme the deceleration of the leaves – during this time, the motor runs at a slower speed while approaching the full opening or closing position.

CAUTION! Limit switches can be of NC or NO type. The controller automatically recognises their type when programming the operation. If no additional limit switches are used, <u>mechanical stops</u> must be installed in the fully opened and closed positions. The controller automatically adds a margin to the programmed settings so that the gate always reaches the fully opened and closed position even if the load changes (e.g. due to the influence of outside temperature).

FACTORY SETTINGS: 60s (without deceleration)

CAUTION! During the procedure, the photocell input is ignored. Before programming, use the FORCE potentiometer to adjust the thrust according to the applicable standards.	
Set the leaves in the fully **closed** position.	
Press and hold down the SETUP button.	
LED1 will turn on and go off and then turn on again.	
Release the SETUP button.	
LED1 flashes rapidly.	
Press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M1 leaf will start to open with the power set on the FORCE potentiometer. **LED1** will glow.	
To specify the deceleration position before the full opening, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	

The M1 leaf will open at slower speed. **LED1** will glow.	
When the limit switch is reached, the M1 leaf will stop in the fully opened position. **LED1** will go off. **OR** To set the position manually, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function. **LED1** will go off.	 
Press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M2 leaf will start to open with the power set on the FORCE potentiometer. The LED will turn on.	
To specify the deceleration position before the full opening, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M2 leaf will open at a slower speed. **LED1** will glow.	
When the limit switch is reached, the M2 leaf will stop in the fully opened position. **LED1** will go off. **OR** To set the position manually, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function. **LED1** will go off.	 
Press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M2 leaf will start to close with the power set on the FORCE potentiometer. **LED1** will glow.	
To specify the deceleration position before the full closure, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M2 leaf will close at a slower speed. **LED1** will glow.	
When the limit switch is reached, the M2 leaf will stop in the fully closed position. **LED1** will go off. **OR** To set the position manually, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	 

LED1 will go off.	
Press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M1 leaf will start to close with the power set on the FORCE potentiometer. **LED1** will glow.	
To specify the deceleration position before the full closure, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
The M1 leaf will close at a slower speed. **LED1** will glow.	
When the limit switch is reached, the M1 leaf will stop in the fully closed position. **LED1** will go off. **OR** To set the position manually, press the SBS sequential control button for less than 3s or the transmitter button assigned to this function. **LED1** will go off.	 
Press the SBS sequential control button for less than 3s or the transmitter button assigned to this function.	
LED1 will flash 3 times to confirm that the settings have been saved. The controller will return to normal operation.	
CAUTION! To return to normal operation without saving settings, press the STOP or SETUP button for less than 3s. The gate will stop and **LED1** will flash once.	
CAUTION! If you do not want to use the deceleration function during programming when the motor is operating with the power set on the FORCE potentiometer, do not press the SBS button and wait until the gate reaches the limit switches. **OR** In the manually set end position, press the transmitter button or SBS button 2 times within 2s.	 
CAUTION! After each adjustment of the motor power on the FORCE potentiometer, the motor programming procedure must be performed again.	

ONLY OPEN FUNCTION

It facilitates the entry and exit and ensures that the gate does not close when another person activates the gate using the manual control button or the remote control. **This function only works with AUTO-CLOSE turned on.**

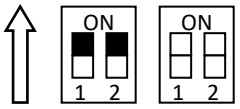
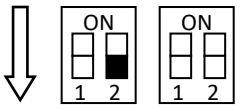
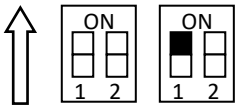
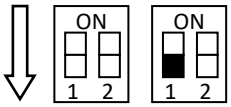
To **enable** the function, set the **AUTO CL** and **ONLY OP** switches to ON.	
To **disable** the function, set the **ONLY OP** switch to OFF.	

FOTO CLOSE FUNCTION

It allows you to close the gate more quickly and save energy. If the function is enabled, the auto-closing time is shortened after the passage of the vehicle has been detected in AUTOCLOSING mode and the gate closes after 5s. In turn, when opening the WICKET, the gate will be stopped when the photocells detect an obstacle.

To **enable** the function set the **FOTO CL** switch to ON.	
To **disable** the function, set the **FOTO CL** switch to OFF.	

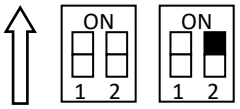
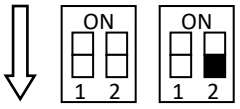
CH2/EZ OUTPUT FUNCTION

The controller is equipped with an additional potential-free NO output. Depending on the settings, it can perform two functions. In the first function as an electro-lock switch – to unlock the latch, the relay is turned on 0.5s before the start of the movement in the opening direction – activation time is 3s. In the second function as universal CH2 output channel operating in a monostable manner – it is controlled by transmitters assigned to the WICKET/CH2 function.

CAUTION!

In B9:1.x.x/1.0.x/x.x.x versions for the CH2 setting, after pressing the button of the transmitter assigned to the WICKET/CH2 function, the relay is activated for 0.5s and the M1 leaf (wicket) is activated.

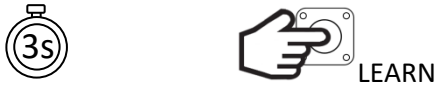
From B9:1.x.x/**1.1.x**/x.x.x versions for the CH2 setting, after pressing the button of the transmitter assigned to the WICKET/CH2 function, the relay is activated for 3s and the M1 leaf is controlled from the WI input.

To enable the **ELECTRO-LOCK** function, set the **CH2/EZ** switch to ON.	
To enable the **transmitter control** function of the WICKET/CH2 function, set the **CH2/EZ** switch to OFF.	

RESETTING ALL TRANSMITTERS

When the memory is full or if you have trouble programming the transmitters, you need to perform a reset procedure. We recommend performing this procedure first thing after installation of the receiver.

Press and hold down the LEARN button.	
LED2 will turn on, go off and start flashing.	
Release the LEARN button. **LED2** will turn on.	

Press and hold down the LEARN button again within 3s.	
LED2 will flash 3 times.	
Release the button. The reset procedure has been completed. When the LED stops flashing, the receiver will return to normal operation.	

RESETTING TRANSMITTERS IN A PARTICULAR FUNCTION

It is possible to delete transmitters only from a particular function (SBS or WICKET/CH2).

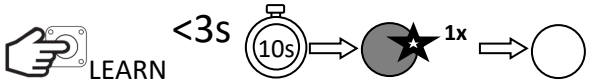
Follow the procedure for programming transmitters for a particular function.	TRANSMITTER PROGRAMMING PROCEDURE
Press and hold down the LEARN button while waiting for the transmitter code.	
LED2 will flash 3 times.	
Release the button. When the LED stops flashing, the reset procedure has been completed and the controller returns to normal operation.	

PROGRAMMING TRANSMITTERS

You can programme up to **32** transmitters with Keeloq dynamic code. Each button must be trained separately. It is possible to change the buttons controlling particular functions of an already programmed transmitter by re-programming another button. When programming changes, remember that when you programme a particular function, the unprogrammed button will replace the button previously programmed for this particular function. After being programmed to another function, the button that was programmed for one function works now only for the other function.

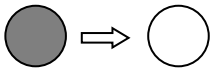
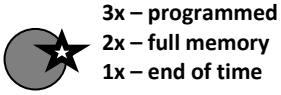
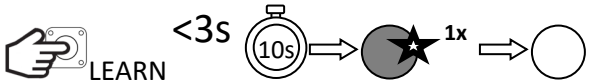
Programming a transmitter for SBS sequential control function.

Press and hold down the LEARN button for less than 3s.	
LED2 will flash rapidly.	
Press the transmitter button within 10s.	
Correct programming is confirmed by **LED2** flashing 3 times. 2 flashes mean full memory 1 flash means the end of learning time.	 **3x – programmed** **2x – full memory** **1x – end of time**
After correct programming, we have 10s more to programme other transmitters etc.	

To finish the procedure, wait for 10s from the last programming or briefly press the LEARN button. **LED2** will flash and the receiver will return to normal operation.	

Programming a transmitter for WICKET/CH2 function

Depending on the CH/EZ switch (see CH2/EZ OUTPUT FUNCTION), you can use the transmitters assigned to this function to control the CH2 output channel and the wicket function – opening one gate leaf (M1). With the FOTO CLOSE function activated, the gate will stop when the photocells detect an obstacle during the opening. You can close it by pressing the manual control button or the remote-control transmitter assigned to this function. In combination with enabled AUTO-CLOSE and FOTO CLOSE functions, the gate will stop when the photocells detect an object during the opening and the gate will be automatically closed after 5s after the object has been removed.

Press and hold down the LEARN button.	
LED2 will turn on and go off.	
Release the button.	
LED2 will flash rapidly.	
Press the transmitter button within 10s.	
Correct programming is confirmed by **LED2** flashing 3 times. 2 flashes mean full memory 1 flash means the end of learning time.	 **3x – programmed** **2x – full memory** **1x – end of time**
After correct programming, we have 10s more to programme other transmitters etc.	
To finish the procedure, wait for 10s from the last programming or briefly press the LEARN button. **LED2** will flash and the receiver will return to normal operation.	

REMOTE PROGRAMMING OF TRANSMITTERS (FOR SBS FUNCTION) -HEL B9E and HEL B9Ek

(B9:1.0.1/1.0.0/P:1.0.0 and B9:1.0.2/1.0.0/P:1.0.0 versions)

Remote programming of transmitters takes place when you have a pre-programmed 4-channel transmitter (e.g. 4E433 type). This procedure allows you to programme a new transmitter for the SBS function.

Press and hold down the C and D buttons of the programmed transmitter for approx. 5s.	

Release the C and D buttons (**LED2** glows).	 C D
Press the button of the transmitter you wish to programme for 5s. (Correct programming is confirmed by **LED2** flashing 3 times)	
Verify the correct operation. The gate should start after the programmed button is pressed.	

REMOTE PROGRAMMING OF TRANSMITTERS (SBS OR WICKET) – HEL B9E and HEL B9Ek

(B9:1.0.1/1.0.0/P:1.1.0 and B9:1.0.2/1.0.0/P:1.1.0 versions)

Remote programming of transmitters takes place when you have a pre-programmed 2- or 4-channel transmitter (e.g. 4E433 type). This procedure allows you to programme a new transmitter for the SBS or WICKET function.

Simultaneously press and hold down the **A** and **B** buttons of the **programmed** transmitter for approx. 5s.	 A B
Release the **A** and **B** buttons (**LED2** glows).	 A B
Press the button of the **programmed** transmitter that controls the **SBS** or **WICKET** function within 5s. **CAUTION!** *The new transmitter will be assigned to the function which the pressed button is programmed for.*	
LED2 will flash rapidly.	
Press the button of the transmitter you wish to programme for 5s. (Correct programming is confirmed by **LED2** flashing 3 times)	
Verify the correct operation. After the programmed button is pressed, the operation should comply with the assigned function.	

STATUS AND ERROR SIGNALS

LED/LEDs	NORMAL OPERATION STATUS	ACTIVE STATUS
STOP	●	○
WI, SBS	○	●
FOTO IN	○ AT STANDBY ● DURING MOVEMENT/AUTO-CLOSING COUNTDOWN	○ DURING MOVEMENT
M1OL, M1CL, M2OL, M2CL	○ FOR NO ● FOR NC	● FOR NO ○ FOR NC

If LED1 starts flashing in the normal operation state during an attempt to start the drive, this indicates an error.

LED1 SIGNALING		DESCRIPTION
	1 quick flash every 1.5s	Triac error. Motor triac(s) was/were damaged. Contact the service.
	2 quick flashes every 1.5s	Photocell test error. Check the connection. The transmitter ground must be connected to the FOTO COM input.

NOTES

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Distributor / Seller