



DOORHAN PCB-SL Drive Control Unit Instruction Manual

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DOORHAN PCB-SL Drive Control Unit



ELECTRICAL CONNECTIONS

CONTROL UNIT WIRING DIAGRAM

WARNING! Before attempting any work on the control board (connections, maintenance), always turn off power. Use a braided shield cable to reduce induced noise. The cable wires must be protected from contact with any rough and sharp surfaces.

Connectors	Description
~220 (N, L, PE)	supply voltage
Motor (M-L2, M-L1, M-N)	pin to connect motor
Ext.Lamp	signal lamp connector (220 V)
–	accessories power contact negative (24 V), 500 mA
+	positive power supply accessory (24 V), 500 mA
Int.Lamp	signal lamp connector (24 V)
Sw Op	open limit control contact (NC)
Sw Cl	closing limit switch control contact (NC)
Stop, GND	contact pair for emergency stop (NC)
Ph Cl	output contact for photocells to open (NC)
Ph Op	output contact for photocells to close (NC)
Ped	command to close (DIP2 is on) (NO)
Start	command to open or step-by-step control (NO)

Table 3. Control unit LEDs

LED	Function	On	Off
PWR	motor power supply	on*	off
A (red)	record of transmitter code	on	off
B (yellow)	failure (emergency)	on	off
ST	START command	on	off
PED	PED command	on	off
Ph1	photocells to open	do not respond	respond
Ph2	photocells to close	do not respond	respond
STOP	STOP command	out	on
Sw1	limit switch to close	does not respond	responds
Sw2	limit switch to open	does not respond	responds

* Bold type indicates the state when the gate is stopped in the middle position.

TERMINALS DESCRIPTION

Power input connectors (J1 terminal block)

~220 (N, L, PE) — power supply connector.

PE — ground terminal.

N — power supply (neutral).

L — power supply (line).

Electric motors connectors (J2 terminal block)

MOTOR (M-L2, M-L1, M-N) — to connect motor unit. Make sure that the motor is connected as shown at the diagram.

Signal lamp connectors (J3 terminal block)

Ext.Lamp — terminal to connect signal lamp of 230 V, max 40 W. Operates at any movement of the gate leaf.

Accessories connectors (J4 terminal block)

START — «Full opening» command (NO): closing the contacts of the device connected to these terminals results in total opening and/or closing of the gate (the exact logic depends on the position of DIP1 switch).

DIP1-off — commands are given in cycle mode Open — Stop — Close — Stop.

DIP1-on — commands are given in cycle mode Open — Limit switch — Close (no stop is provided during movement). To install several devices connect their NO contacts in parallel.

Ped — «Pedestrian passage» command (NO).

DIP2-off — Ped command results in gate opening for about 1 m. Repeated Ped command results in gate closing.

If Start command follows Ped command, the control unit generates a command for complete closing of the gate.

Ped command at DIP2-off in the closed position of the gate opens the gate for 1 m, in the opened position of the gate — closes the gate completely.

DIP2-on — carries out separate operator control, i.e. Start command opens the gate, Ped command closes the gate. To install several devices connect their NO contacts in parallel.

SW OP/SW CL — signals from travel limit switches.

Limit switch operation (opening of SW OP/SW CL contact) means that the gate leaf has reached its opened/closed travel limit and further movement in the same direction is prohibited.

Photo CI — closing safety devices contact (NC). Safety devices operation results in immediate reverse movement of the gate leaf until full opening. Operation of the devices connected to these terminals has no effect on operation during the gate opening. If the gate is open and sensors connected to these terminals respond, it will prevent the gate from closing. To install several devices connect their NC contacts in series.

WARNING! If no devices are connected to these terminals, it's necessary to install a jumper between contact terminals Ph CL and «—» (see wiring diagram).

Photo Op — opening safety devices contact (NC). These contacts are used to protect an opening gate. Operation of the devices results in immediate stop of the gate. Operation of the devices connected to these terminals has no effect on operation during the gate closing. If the gate is closed and sensors connected to these terminals respond, it will prevent the gate from opening. To install several devices connect their NC contacts in series.

Stop, GND — contacts to connect emergency stop devices (NC). These connections are used to protect the gate leaf during opening and closing. Any control unit logics provides immediate stop of the gate if the devices give a signal during gate opening or closing. If the gate is at rest and sensors connected to these terminals respond, it will prevent the gate from any movement. To install several devices connect their NC contacts in series.

WARNING! If no devices are connected to these terminals, it's necessary to install a jumper between Stop and GND terminals (see wiring diagram).

24 V DC — output terminals of power supply transformer with 24 V DC, max load of 600 mA.

DIP-SWITCHES ADJUSTMENT

WARNING! If DIP-switch position was changed then turn operator power supply off and on, otherwise adjustment won't be made.

DESCRIPTION OF MECHANICALLY OPERATED CONTROLS

Reverse/TIMER W — adjustment of reverse time after limit switch response.

AUTO CL — adjustment of time delay before the gate automatic closing. Time delay can be adjusted within the range from 0 to 70 seconds. Automatic closing function is off in the leftmost position of the control.

FORCE — adjustment of operator traction force (adjustment of maximum current consumption). If the control is in the right-most position the traction force is maximum, and the electric motor operates at its full capacity (not recommended).

To increase the parameter, turn the corresponding control clockwise.

To reduce the parameter, turn the corresponding control counterclockwise.

Adjustment of mechanically operated controls



TRANSMITTER PROGRAMMING

RECEIVER MEMORY CLEARING

After power is on, hold down the transmitter record button (CODE/Radio) for 20 seconds. Indicator «A» will be constantly on, signal lamp will flash, then indicator «B» will be on for one second and go out to confirm erasing of stored codes, signal lamp and indicator «A» will go out.

RECORDING OF DOORHAN TRANSMITTERS IN THE RECEIVER

To record a transmitter, press and hold down the transmitter record button (CODE/Radio) for 3 seconds. Indicator «A» will light, signal lamp will blink. Then press twice the button on the transmitter that you wish to control the control unit within 10 seconds interval while indicator «A» is on. Indicator «B» will flash once and go out to confirm successful recording of transmitter code in the receiver's memory, signal lamp and indicator «A» will go out.

NOTE! To record several transmitters repeat the code recording procedure for every transmitter. In case of receiver memory overflow, indicator «B» will flash three times (max. number of transmitters in the receiver's memory — 60 pcs.).

NOTE! Multichannel transmitters can be recorded too making separate control of gate opening and closing possible.

HOW TO DELETE A TRANSMITTER FROM RECEIVER MEMORY

To delete one particular transmitter, you must press and hold the CODE / Radio button, release it after the «A» indicator starts to blink (about 12 seconds). Then press twice the button on the transmitter which you want to clear from the receiver memory. The «B» indicator will flash three times, indicating successful deletion of this transmitter from the receiver memory.

REMOTE PROGRAMMING OF DOORHAN TRANSMITTERS Perform items 1–4 within five-second interval:

1. Press and hold the button 2 of programmed transmitter (see the figure below).
2. Holding the button 2 pressed, press and hold the button 1.
3. Release all the buttons.
4. Press the programmed transmitter button, the receiver will switch to the transmitter programming mode.
(indicator «A» will be constantly on, signal lamp will flash).

NOTE! Recording of transmitter should be carried out within 10 seconds after entering the programming mode, than the receiver exits the programming mode.

5. Press twice the button on new transmitter that you wish to control the operator. Indicator «B» will flash once and go out to confirm successful record of transmitter code in the receiver's memory, signal lamp and indicator «A» will go out.

NOTE! Perform transmitters programming within the operating range of the operator receiver. In case of receiver memory overflow, indicator «B» will flash three times (maximum number of transmitters in the receiver's memory — 60 pcs.).

DISABLING OF REMOTE PROGRAMMING FUNCTION

If the function is enabled — when power is supplied to the control board, HL9 (a) and HL10 (b) LEDs turn on and off briefly. If the function is disabled — when power is supplied to the control board, the LEDs don't turn on.

To enable / disable the function press and hold the CODE / Radio button, than supply power to the control board without releasing the button.

MARKING OF DOORHAN TRANSMITTER BUTTONS



NOTE! Number of each button can be determined by the dots on the transmitter body.

Documents / Resources

	<p>DOORHAN PCB-SL Drive Control Unit [pdf] Instruction Manual PCB-SL Drive Control Unit, PCB-SL, Drive Control Unit, Control Unit</p>
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