



Vehicle Access Control  
Pedestrian Access Control  
Safety & Security Equipment

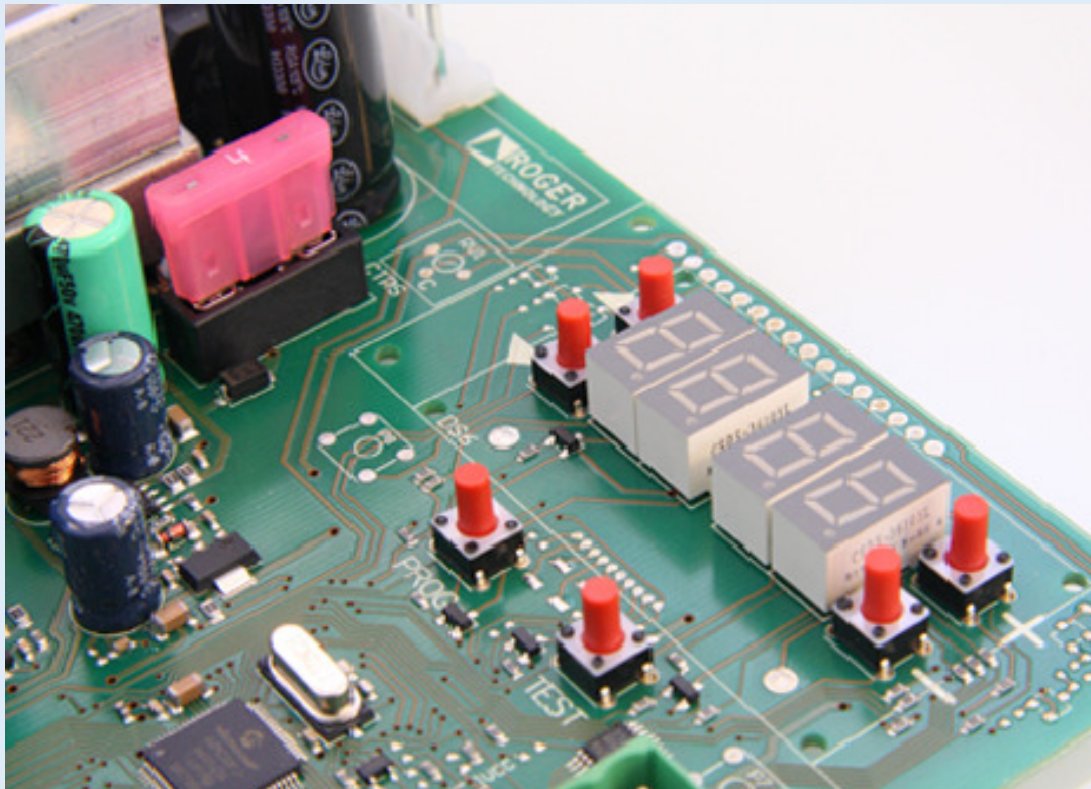
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# SENTINELAG BOOM GATE

## Electrical Quick Set-Up Instructions (V0118)



**NOTE: The Quick Set-Up Electrical Instructions below provide basic information for setting up the AG Automatic Boom Gate.**

**For more detailed installation information please refer to the full set up instructions document.**

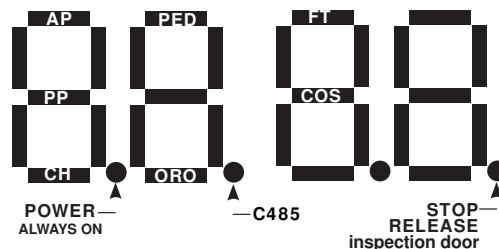
## QUICK SET-UP ELECTRICAL INSTALLATION

The following quick set-up instructions are extracts from various sections of the complete Electrical Installation Instructions

### **Warning:**

**When the boom gate is shipped the control panel is programmed with a factory setting which caters for 80% of installations.**

**DO NOT make any adjustments to the control panel and DO NOT fit any auxiliary items such as PE beams before you have run the auto learn.**



### Display Function Description

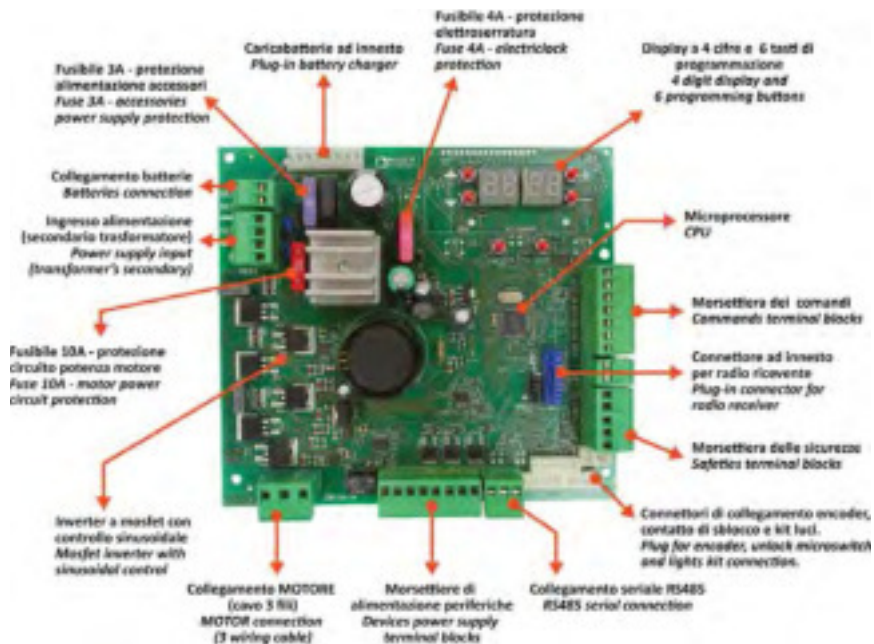
- AP** Input (NO) Open Command
- PED** Input (NO) Partial Open or Partial Open or in Parking Mode Loop (NC)
- PP** Input (NO) Open / Close Toggle (See Parameter A4)
- CH** Input (NO) Close Command
- ORO** Input (NO) Time Lock - When Input is activated, Barrier opens and remains open until the time period finishes.
- FT** Input (NC) for Photocel or Safety Loop
- COS** Input (NC) or 8K2 OHM for sensing edge on Barrier. If not used Jumper 23 (COS) to 22 (COM) or set parameter 73 00

## Auto Learn

- Switch on power, 1 red bar on display flashes
- Ensure the pole is lowered and the safety inputs are bridged out (SIOP and FT)
- The display is now in status mode, 1 bar solid and the other flashing
- Press the up arrow twice until A1 is displayed
- The display should be in set up mode (displaying input status). Using the + or - buttons, set the following values, and then press program button.
  - For a 3 or 4 metre pole set the value to 01
  - For a 6 metre pole set the value to 02

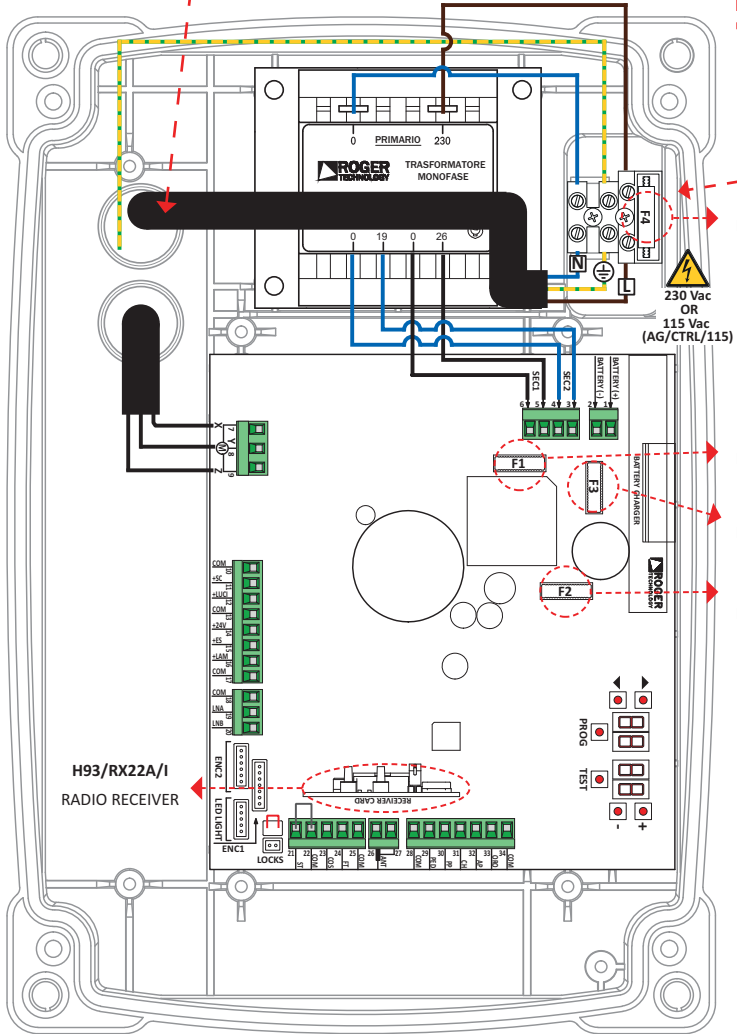
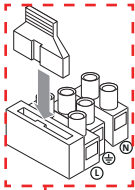
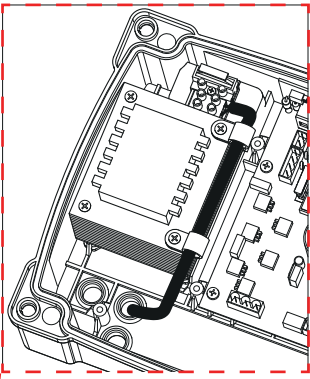
Then press the program button once to exit set up

- Press the PROGRAM button and hold until APP is displayed
- Turn the key TWO TURNS to the unlocked position – the display will change to PHASE
- When the display flashes PHASE return the key TWO TURNS to the locked position
  - The display will change to AUTO and the pole will cycle to the raised and then lowered position
  - (If during this process the display changes to APPE it is most likely the FT input is not bridged to COM)
- Test operation of the boom gate, if satisfactory connect auxiliaries, PE Beams etc.
  - It is recommended to connect each control device in turn and test each separately



Firmware Rev r3.20

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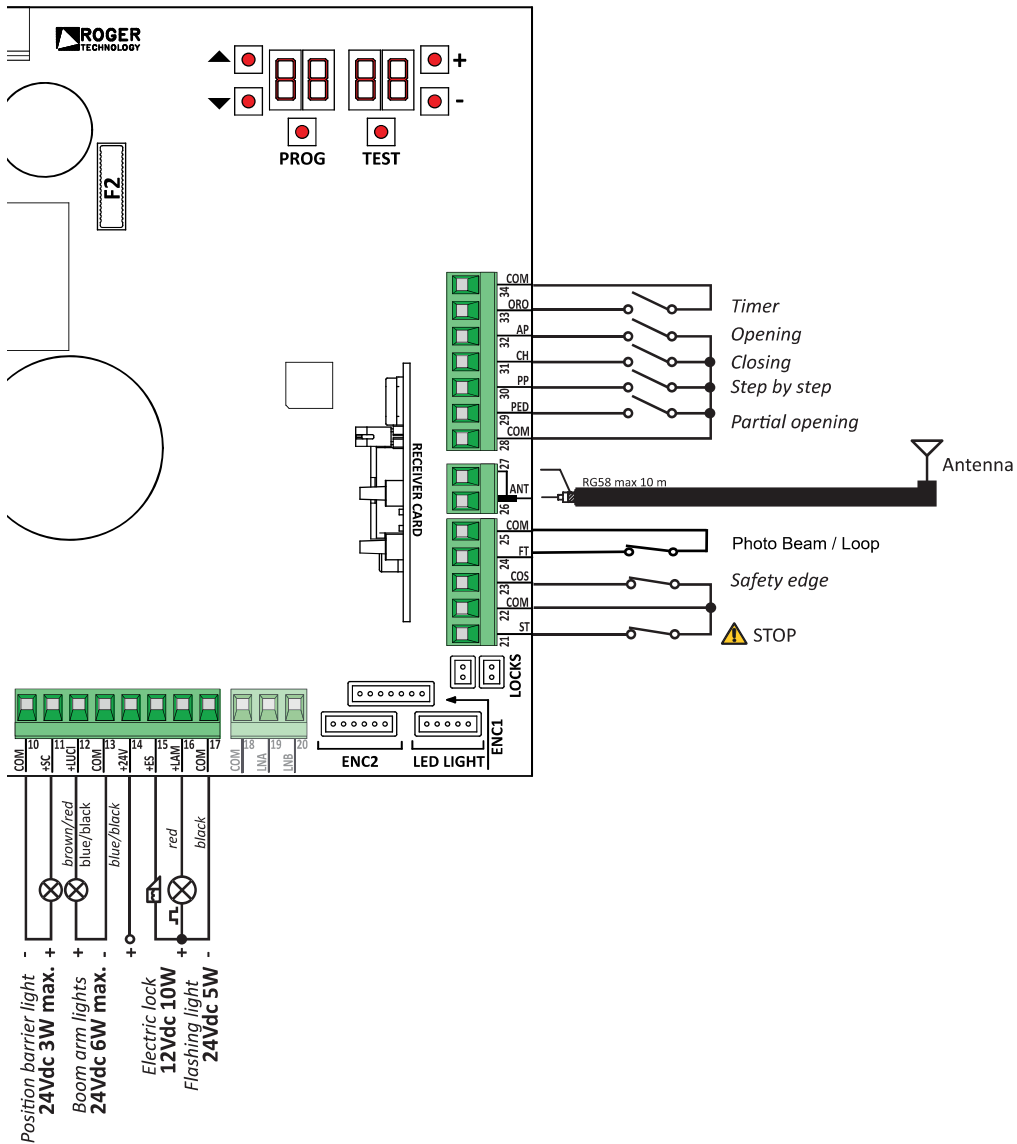


F4  
FUSE  
T1A

F1  
FUSE  
10A  
F3  
FUSE  
3A  
F2  
FUSE  
4A

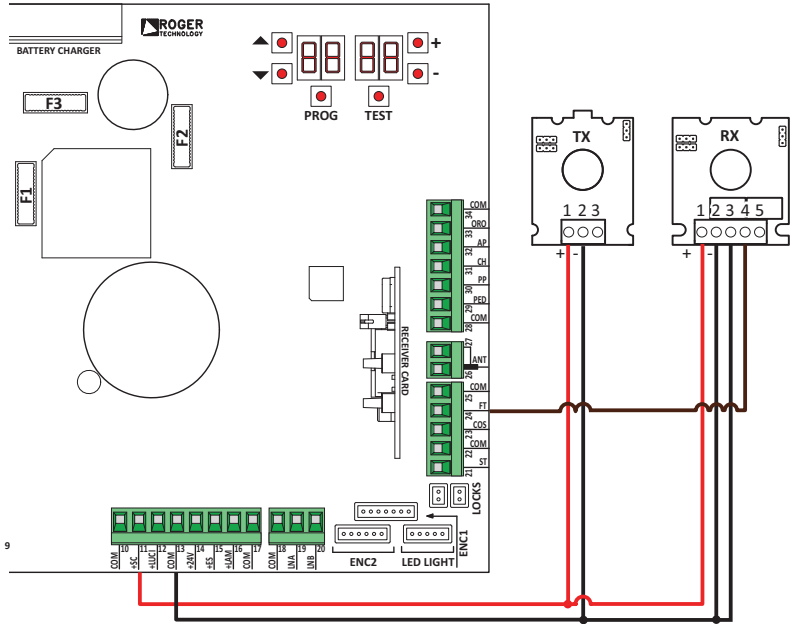
H93/RX22A/I  
RADIO RECEIVER

2

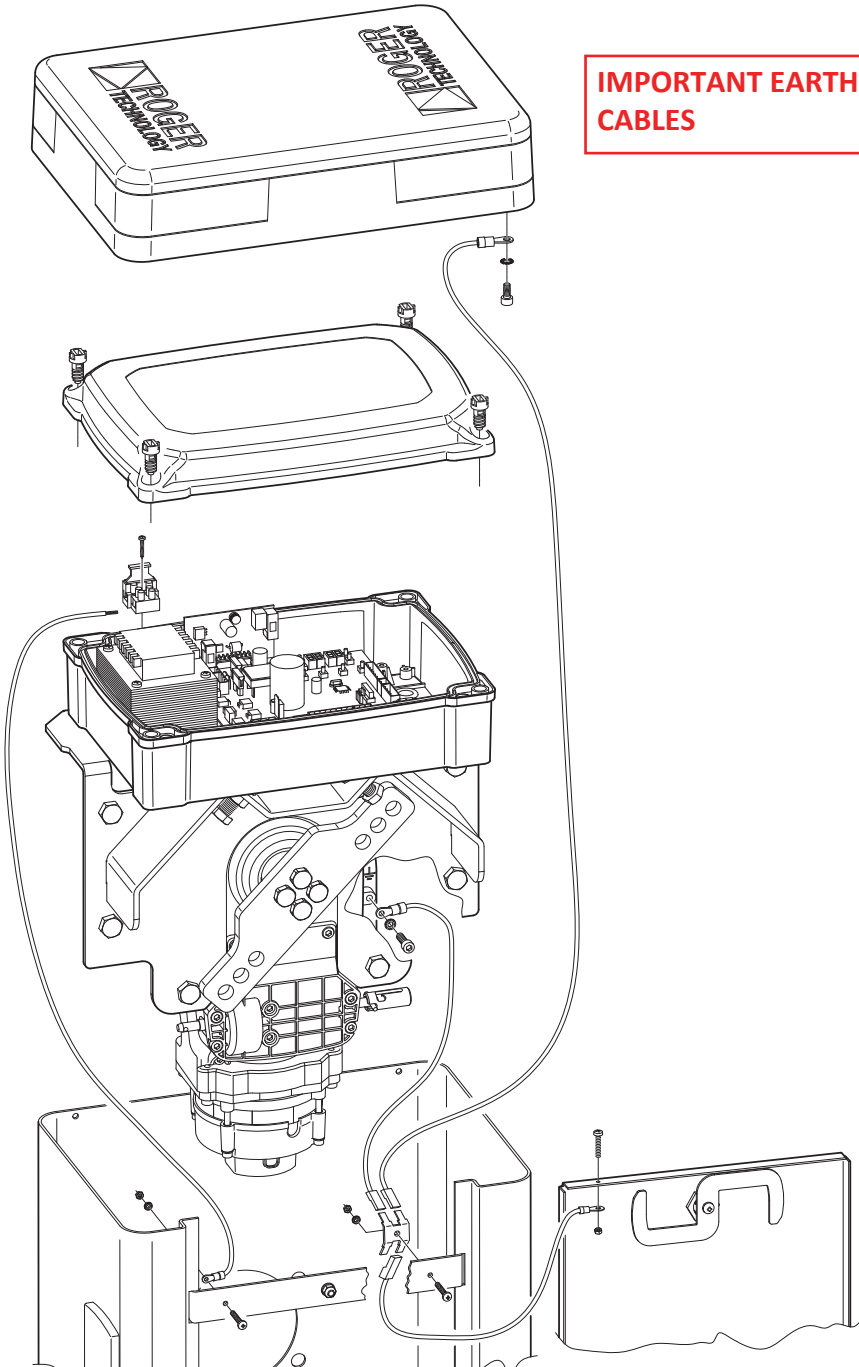


# 6

## BATTERY SAVING (impostare / set AB 03) BATTERY SAVING + / PHOTOCELLS TEST (impostare / set AB 04)




**IMPORTANT EARTH  
CABLES**





## 11 Commands and Accessories







 If not installed, safety devices with NC contacts must be jumpered at the COM terminals, or disabled by modifying the parameters  $50$ ,  $51$  and  $73$ .










For installations with two opposed barriers, connections for command signals and accessories must be made on the MASTER controller. The sensing edge and, if used, the STOP command signal must be connected to the SLAVE controller.


KEY:

N.A. (Normally Open) .

N.C. (Normally Closed).

CONTACT	DESCRIPTION
<b>11(+SC)</b> <b>10(COM)</b> 	Barrier open/closed indicator lamp, 24 V DC 3 W. The function of the indicator lamp is determined by parameter $AB$ .
<b>11(+SC)</b> <b>13(COM)</b> 	Photocell test function and/r battery saving mode connection (fig. 6-7). The power feed for the photocell transmitters (TX) may be connected to terminal <b>11(SC)</b> . Set the parameter $AB02$ to enable the test function. Each time a command is received, the controller unit switches the photocells off and on to check that the contact changes state correctly. Power feeds for all external devices (excluding the external radio receiver) may be connected to reduce battery consumption (if batteries are used). Set $AB03$ or $AB04$ . In the case of installations with two opposed barriers, the functions are not available for the SLAVE barrier. <b>WARNING!</b> If contact <b>11(SC)</b> is used for the photocell test function or battery saving function, a barrier open indicator lamp cannot be connected.
<b>12(+LIGHTS)</b> <b>13(COM)</b> 	Input for connecting AG/ALED series signal lights on boom (optional). 24 V DC 12W max.
<b>14(+24V)</b> <b>13(COM)</b>	Power feed for external devices, max. 10W. See technical specifications.
<b>15(+ES)</b> <b>17(COM)</b> 	Input for connecting electric block. See technical specifications.
<b>16(+LAM)</b> <b>17(COM)</b> 	Connection for flashing light (24 V DC - max. 5 W). The settings for the pre-manoeuve flashing warning signal may be selected with parameter $A5$ , while the flashing mode is set with parameter $7B$ .
<b>18(COM)-19(LNA)-20(LNB)</b> 	RS485 serial communication cable connection (3x0.5 mm <sup>2</sup> - max. length 20 m) for installation of two MASTER / SLAVE opposing barriers (from firmware version $n613$ or later).  <b>Connections.</b> Connect the <b>COM-LNA-LNB</b> terminals of the MASTER barrier to the relative terminals of the SLAVE barrier. The MASTER barrier is the barrier which opens (completely) when the partial open command (PED) is received. Set parameter $A011$ for the MASTER barrier and parameter $A010$ for the SLAVE barrier. All command signals, the photocells and the main STOP command must be connected to the MASTER barrier. Sensing edges must be connected to the respective barriers. An auxiliary STOP command signal may also be connected to the SLAVE barrier. If not used, jumper terminals <b>21(ST)-22(COM)</b> on the SLAVE controller. All parameters except for $A0$ and $73$ must be set on the MASTER controller. The travel acquisition procedure must be performed for both barriers, after setting the parameters as required and in accordance with the type of installation. Alarm messages are viewable on the displays of the respective controllers.

CONTACT	DESCRIPTION
<p><b>18(COM)-19(LNA)-20(LNB)</b></p> 	<p><b>Function.</b></p> <p>Serial communication enables synchronised operation of the two barriers. The obstacle detection system immediately reverses the direction of the boom which detected the obstacle, while the other boom reverses after a fixed delay.</p> <p>If the MASTER barrier is completely open or completely closed and the SLAVE barrier is in an intermediate position, the MASTER barrier sends a re-alignment command to the SLAVE barrier, with a 5 second pre-manoeuve flashing warning signal.</p> <p>Conversely, if the MASTER barrier is in an intermediate position, after 5 seconds of inactivity, it re-aligns with the SLAVE barrier.</p> <p>The alignment function is disabled if the "operator present" function <math>A7 \square 1</math> is enabled.</p>
<p><b>21(ST) 22(COM)</b></p> 	<p>STOP command input (NC).</p> <p>The current manoeuvre is arrested if the safety contact opens.</p> <p><b>N.B.:</b> the controller is supplied with this contact already jumpered by ROGER TECHNOLOGY.</p> <p>In the case of installations with two opposed barriers, if the STOP command signal is given for the MASTER barrier, both barriers stop. If the STOP command signal is given for the SLAVE barrier, only the SLAVE barrier stops.</p>
<p><b>23(COS) 22(COM)</b></p> 	<p>Input (NC or 8.2 kOhm) for connecting sensing edge <b>COS</b>.</p> <p>Movement is reversed (open) if the sensing edge is activated during closure.</p> <p>If the sensing edge is not installed, jumper the terminals <b>23(COS)-22(COM)</b> or set parameter <math>73 \square \square</math>.</p> <p>In the case of installations with two opposed barriers, the sensing edge (if installed) must be connected to and configured for both the MASTER barrier and the SLAVE barrier.</p>
<p><b>24(FT) 13(COM)</b></p> 	<p>Input (NC) for connecting photocell <b>FT</b> (fig. 4-5).</p> <p>The photocells are configured by default with the following settings:</p> <ul style="list-style-type: none"> <li>- <math>50 \square \square</math> . Photocell triggers only during barrier closure. Photocell is ignored during barrier opening manoeuvre.</li> <li>- <math>51 \square 2</math> . Movement is reversed if the photocell is triggered during barrier closure.</li> <li>- <math>52 \square 1</math> . The barrier opens when an open command is received if the photocell <b>FT</b> is obstructed.</li> </ul> <p>If the photocells are not installed, jumper the terminals <b>24(FT) - 25(COM)</b> or set the parameters <math>50 \square \square</math> and <math>51 \square \square</math>.</p> <p><b>WARNING!</b> Use <b>G90/F4ES</b> or <b>T90/F4S</b> photocells.</p> <p>In the case of installations with two opposed barriers, the photocells must be connected to and configured for the MASTER barrier only.</p> <p>In the case of installations with parking mode, the input <b>FT</b> may be used to receive a closing command from a magnetic loop (NC) (see chapter 12).</p>
<p><b>27 26(ANT)</b></p> 	<p>Antenna connector for slot-in radio receiver board.</p> <p>Use RG58 if an external antenna is used - maximum recommended length: 10 m.</p> <p><b>N.B.:</b> do not make joints in cable.</p>
<p><b>29(PED) 28(COM)</b></p> 	<p>Partial open command input (NO).</p> <p>The barrier is always opened completely when the contact is closed.</p> <p>In the case of installations with two opposed barriers, the command PED only opens the MASTER barrier when both barriers are completely closed.</p> <p>In the case of installations with "Directional" parking mode (parameter <math>B3 \square 2</math> or <math>B3 \square 3</math>), the input PED may be used to receive a closing command from a magnetic loop (NC) (see chapter 12).</p>
<p><b>30(PP) 28(COM)</b></p> 	<p>Step mode command input (NO).</p> <p>The function of this command is determined by parameter <math>A4</math>.</p>
<p><b>31(CH) 28(COM)</b></p> 	<p>Close command input (NO).</p>
<p><b>32(AP) 28(COM)</b></p> 	<p>Open command input (NO).</p>

CONTACT	DESCRIPTION
33(ORO)      34(COM) 	Clock timer contact input (N.O.). When the clock function is active, the barrier opens and remains open. At the end of the programmed time set with the external device (clock) the barrier closes.
ENC1	7-way connector for connecting to encoder installed on motor (see fig. 9-10). <b>WARNING!</b> Always disconnect from electrical power before disconnecting or connecting the encoder cable.
ENC2	6-way connector for connecting to encoder installed on one side of motor (see fig. 9-10). <b>WARNING!</b> Always disconnect from electrical power before disconnecting or connecting the encoder cable.
LED LIGHT	Connector for the (OPTIONAL) AG/EXP signal device connection and flashing lights installed on the top cover (see fig. 11).
LOCKS	Connectors for connecting lock device microswitch and safety stop microswitch on barrier inspection hatch (see fig. 8). Jumper the other connector if only one connector is connected.
RECEIVER CARD	Connector for slot-in radio receiver board. The controller has two radio remote control functions by default: – <b>PR1</b> - step mode command (modifiable with parameter 76). – <b>PR2</b> - close command (modifiable with parameter 77).
B71/BCHP BI/BCHP BATTERY CHARGER  AG/BAT/KIT BI/BAT/KIT BATTERY KIT 2x12 Vdc 4.5 Ah (AGM type ONLY)	Connector for slot-in battery charger board. In the event of a mains power loss, the controller unit is powered by the batteries. When battery power is used, the message <i>bAtE</i> is shown on the display and the flashing light flashes briefly at intervals until mains power is restored or until the battery voltage drops below the minimum permissible limit. In this case, <i>bEL</i> (Battery Low) is shown on the display and the controller unit accepts no commands. If mains power is lost while the boom is moving, the boom stops and then automatically resumes the interrupted manoeuvre after 2 seconds. Setting a value for parameter <i>B5</i> other than 00 enables automatic opening when the battery voltage drops below the safety limit. Once the boom reaches the completely open position, the boom remains open and the controller accepts no further commands until mains voltage is restored. In the case of installations with two opposed barriers, the battery charger must be connected to both barriers. Parameter <i>B5</i> is not available for SLAVE automation systems. <b>WARNING!</b> the batteries must always be connected to the electronic controller unit in order to charge. Periodically (at least every 6 months), check that the batteries are in good working order.  For more information, refer to the installation manual for the <b>B71/BCHP</b> or <b>BI/BCHP</b> battery charger.