ELECTROMECHANICAL CONTROL DEVICE FOR VEHICULAR BARRIERS

INSTALLATION AND USERS MANUAL

Attenzione! Leggere attentamente le "Avvertenze" all'interno! Caution! Read "Warnings" inside carefully! Attention! Veuillez lire attentivement les Avertissements qui se trouvent à l'intérieur! Achtung! Bitte lesen Sie aufmerksam die „Hinweise“ im Inneren! ¡Atención! Leer atentamente las "Advertencias" en el interior! Let op! Lees de "Waarschuwingen" aan de binnenkant zorgvuldig!
**-QUICK INSTALLATION-**

1. With foundation plate embedded in ground:
   - **With anchor bolts:**
     1. Insert the foundation plate into the ground.
     2. Secure the plate with anchor bolts.

2. Not supplied / Ne sont pas fournis / Nicht im Lieferumfang / No asignadas en el equipamiento base / Niet meegeleverd

---

**www.BFTGateOpeners.com | (800) 878-7829**
Opening and closing cover and door,

See manuals ATT and ELL for boom assembly,

Optional extras
### MICHELANGELO Accessories: working length of boom and balancing.

<table>
<thead>
<tr>
<th>Accessory</th>
<th>MCL PCA (solo sopra l’asta)*1</th>
<th>MCL PCA (solo sotto l’asta)*2</th>
<th>KIT MCL LIGHT</th>
<th>MAX</th>
<th>MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>+SB +SB +SB</td>
<td>+PCA +PCA +PCA</td>
<td>+LIGHT +LIGHT +LIGHT</td>
<td>35 cm</td>
<td>5 cm</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>+SB +SB +SB</td>
<td>+PCA +PCA +PCA</td>
<td>+LIGHT +LIGHT +LIGHT</td>
<td>35 cm</td>
<td>5 cm</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>+SB +SB +SB</td>
<td>+PCA +PCA +PCA</td>
<td>+LIGHT +LIGHT +LIGHT</td>
<td>35 cm</td>
<td>5 cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessory</th>
<th>MCL 40 + ATT704</th>
<th>MCL 40 + ELL6</th>
<th>MCL 60 + ATT704 + ATT902</th>
<th>MCL 60 + ATT706</th>
</tr>
</thead>
<tbody>
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<td><strong>A</strong></td>
<td>+SB +SB +SB</td>
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<td>+LIGHT +LIGHT +LIGHT</td>
<td>35 cm</td>
</tr>
</tbody>
</table>

### Notes:
- **Accessori MICHELANGELO:** lunghezza utile asta e bilanciamento.
- **MICHELANGELO Accessories:** working length of boom and balancing.
- **Accessoires MICHELANGELO:** longueur utile de la barre et équilibrage.
- **Zubehör MICHELANGELO:** Nutzlänge Schranke und Auswuchtung.
- **Accesorios MICHELANGELO:** longitud útil mástil y balance.
- **Accessoires MICHELANGELO:** nuttige lengte slagboom en balancering.

### Table:

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<tr>
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<th>MCL 40 + ELL6</th>
<th>MCL 60 + ATT704 + ATT902</th>
<th>MCL 60 + ATT706</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MIN</strong> L</td>
<td>2,8, 2,8, 2,9</td>
<td>3,2, 3,3, 3,4</td>
<td>4,5, 4,6, 4,7</td>
<td>5,3, 5,4, 5,5</td>
</tr>
<tr>
<td><strong>MAX</strong> L</td>
<td>3,3, 3,4, 3,5</td>
<td>3,6, 3,7, 3,8</td>
<td>4,8, 4,9, 5</td>
<td>5,6, 5,7, 5,8</td>
</tr>
</tbody>
</table>

### Diagram:

- **L**: Working boom length.
- **#1**: (above boom only)
- **#2**: (below boom only)
<table>
<thead>
<tr>
<th>SB+</th>
<th>SB+</th>
<th>SB+</th>
<th>SB+</th>
<th>SB+</th>
<th>SB+</th>
<th>SB+</th>
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</thead>
<tbody>
<tr>
<td>PCA</td>
<td>PCA</td>
<td>PCA</td>
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<tr>
<td>GAM</td>
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</tr>
<tr>
<td>MCL 80+</td>
<td>ATT706+</td>
<td>ATT504</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 7.4 6.4 6.9 5.8 5.4 5.6 5.9 6</td>
<td>L 8 7.2 7.1 7.6 7.8 8</td>
</tr>
</tbody>
</table>
Terminal board wiring,

1. TEST PHOT=OFF

2. TEST PHOT=ON

3. 1-PHOT

4. SCA

5. Alarm Output,

6. Connection To Parky Car-park Management System,
Transformer wiring,

I

Display + tasti programmazione,

Display plus programming keys,

Fig. H

Rif. 4, 5, 6
Edit the following values until you are happy with boom movement.

MEMORIZING REMOTE CONTROLS

MODIFICARE I VALORI SEGUENTI FINO A RAGGIUNGERE IL MOVIMENTO DELL’ASTA DESIDERATO.

EDIT THE FOLLOWING VALUES UNTIL YOU ARE SATISFIED WITH BOOM MOVEMENT.
Assembly of right boom

Make sure the spring is not under tension and the boom is not fitted.

Remove the spring assembly.
Refit the right-hand spring assembly.

\[30 \text{ Nm}\]
Make sure the spring is not under tension and the boom is not fitted.

1. 

2. 

3. 

ASSURSI che la molla non sia in tensione, e l'asta non sia montata.

Vérifiez si le ressort n'est pas en tension et si la tige n'est pas montée.

Sicherstellen, dass die Feder nicht gespannt und die Stange nicht montiert ist.

Asegurarse de que el muelle no esté tensado y de que el mástil no esté montado.

Controleren of de veer niet onder spanning staat, en de stang niet gemonteerd is.
Fitting Photocell 130,

1. Montaggio Fotocellule
2. CELLULA 130, Fitting Photocell 130,
3. Montage de CELLULA 130,
4. Montage CELLULA 130, Montaje CELLULA 130,
5. Montage CELLULA 130.
Fori verticali CELLULA 130, PHOTOCELL 130 vertical holes, Trous verticaux CELLULA 130, Vertikale Bohrungen CELLULA 130, Ori/f_icios verticales CELLULA 130, Vertikale Bohrungen CELLULA 130.

Fori orizzontali cellula 130, PHOTOCELL 130 horizontal holes, Trous horizontaux CELLULA 130, Horizontale Bohrungen CELLULA 130, Ori/f_icios horizontales CELLULA 130, Horizontale openingen CELLULA 130.

Refer to PHOTOCELL 130 manual,

Refer to MCL 130 manual for assembly of stations,

WARNING! For MCL 80 boom with opening on right only: install station unit before moving spring assembly.
### ACCESS TO MENUS

**Press the OK key**

- **sFe**
  - Control unit software version
  - N. total manoeuvres
  - N. radio control devices memorised

- **PRG**
  - ITA
  - FRA
  - DEU
  - ENG
  - esp

- **OK**
  - +/−

**End**

- **Logic**
  - 1
  - 2
  - ...

- **Add. start hidden button release**

- **PRG. read erase 64 COD RX 1A9C OK 22FD OK 01**

**See PARAMETERS MENU**

**See LOGIC MENU**

**See RADIO MENU**

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### LEGENDA

- **Scroll**
  - Cancel/return to main menu

- **Confirm/Switch on display**

### DESCRIPTION

- **SkoP** STOP input activation
- **bBrE** EDGE input activated (obstacle alarm)
- **tMnP** ampere-stop triggering (obstacle alarm)
- **Enc** encoder stopped detected (obstacle alarm)
- **PhoE** PHOT input activation
- **FlLrF** FAULT input activation for checked photocells
- **tIPE** TIMER input activation
- **ttcR** waiting time for automatic closing on TIMER release
- **cLoS** CLOSE input activation
- **oPEn** OPEN input activation
- **SrEn** START input activation
- **Su0** barrier in opening position
- **SuC** barrier in closing position
- **rEFa** reference input on opening activated
- **rEFC** reference input on closing activated
- **tOh** overload signal indication (the system completes the manoeuvre in progress and does not allow new ones until the signal indication has been eliminated).
- **Er0H** check on safety devices failed
- **Er IN** check on motor control failed
- **Er2H** power supply cables for motor or encoder signal reversed
- **Er4H** overload error (the system remains under protection lock until the error has been corrected).
- **ErEF** error due to position references both active.

**35.40** Set torque threshold %

Maximum motor torque %
WARNING! Important safety instructions. Carefully read and comply with the Warnings booklet and Instruction booklet that come with the product. Incorrect installation or improper use can cause damage to persons, animals or things.

1) GENERAL SAFETY

WARNING! An incorrect installation or improper use of the product can cause damage to persons, animals or things.

- The "Warnings" leaflet and "Instruction booklet" supplied with this product should be read carefully as they provide important information about safety, installation, use and maintenance.
- Scrap packing materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children’s reach.
- Keep the instructions together with the technical brochure for future reference.
- This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.
- The Company declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.
- Do not install the product in explosive atmosphere.
- The units making up the machine and its installation must meet the requirements of the following European Directives: 2004/108/EEC, 2006/95/EEC, 98/37/EEC, 99/05/EEC (and later amendments). For all countries outside the EEC, it is advisable to comply with the above-mentioned standards, in addition to any national standards in force, to achieve a good level of safety.
- The Company declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- The installation must comply with the provisions set out by the following European Directives: 2004/108/EEC, 2006/95/EEC, 98/37/EEC, 99/05/EEC and subsequent amendments.
- Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.
- Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3,5 mm.
- Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.
- Check that earthing is carried out correctly: connect all metal parts for earth terminal.
- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing, according to and in compliance with the applicable directives and technical standards.
- Position at least one luminous signal indication device (blinker) where it can be easily seen, and fix a Warning sign to the structure.
- The Company declines all responsibility with respect to the automation safety and correct operation when other manufacturer’s components are used.
- Only use original parts for any maintenance or repair operation.
- Do not modify the automation components, unless explicitly authorised by the Company.
- Instruct the product user about the control systems provided and the manual opening operation in case of emergency.
- Do not allow persons or children to remain in the automation operation area.
- Keep radio control or other control devices out of children’s reach, in order to avoid unintentional automation activation.
- The user must avoid any attempt to carry out work or repair on the automation system, and always request the assistance of qualified personnel.
- Anything which is not expressly provided for in the present instructions, is not allowed.
- Installation must be carried out using the safety devices and controls prescribed by the EN 12978 Standard.

WARNINGS

Correct controller operation is only ensured when the data contained in the present manual are observed. The Company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual. The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.
2) GENERAL OUTLINE
Compact electromechanical barrier suitable for limiting private areas, park-
ings, access areas for vehicles only. Available for passageways from 4 to 8
metres. Adjustable electronic limit switches, they guarantee correct boom
stopping position. In case of intensive use, a thermal sensor activates the
cooling fan.

The emergency release device for manual manoeuvre is controlled by a
personalised key lock.
The actuator is always supplied for left-hand side fitting. However, when
necessary, the opening direction can be reversed by means of simple
operations.

The BM mod. foundation base (on request) makes barrier installation
easier. Appropriate fittings make it easy to install accessories.
The LIBRAC MV control panel is supplied by the manufacturer with standard
setting. Any change must be set by means of the incorporated display or by
means of the universal programmer.

3) TECHNICAL SPECIFICATIONS
Power supply: 230V±10% 50Hz(*)
Power absorbed: 300W
Absorption (with accessories): 1 A
Internal lubrication: permanent grease
Max torque: 600 Nm
Opening time: 6s (5-6m), 8s (8m)
Boom length: 4m (MICHELANGELO 40)
5-6m (MICHELANGELO 60)
da 6m a 8m (MICHELANGELO 80)
Impact reaction: encoder
Manual mechanical release: customised key
Type of boom: rectangular/round
Limit devices: electrical incorporated and electroni-
cally adjustable
Maximum no. manoeuvres in 24h: continuous operation
Working temperature: from -20°C to +55°C
Degree of protection: IP 24
Operator weight (without boom): 55 Kg (MICHELANGELO 40)
58 Kg (MICHELANGELO 60)
68 Kg (MICHELANGELO 80)
Dimensions: see fig. A
Mains/low voltage insulation: > 2MOhm 500V•min
Dielectric strength: mains/low voltage 3750V• for 1
minute
Motor output current: 20A max (MICHELANGELO 40)
25A max (MICHELANGELO 60)
30A max (MICHELANGELO 80)
Cooling intervention temperature: 80°C
Supply to accessories: 24V~ (180 mA max absorption)
Barrie-open warning light: 24V~ 3W max
Blinker: 24V~ 3W max
Fuses: see figure I-L
N° of combinations: 4 billion
Max. n° of remotes that
can be memorized: 63
(*): special power supply voltages on request.
Usable transmitter versions:
All ROLLING CODE transmitters compatible with

4.1) FOUNDATION PLATE (Fig. B1).
4.2) FASTENING ANCHOR BOLTS (Fig. B2).

5) FITTING OF THE ACTUATOR
WARNING! The barrier must be exclusively used for vehicles to
drive through. Pedestrians must not walk within the operator
manoeuvring area. An appropriate pedestrian passageway must be
provided for.
The passageway must be suitably indicated by means of the warning
signs illustrated in Fig.A.

WARNING: before opening the door, the spring must be unloaded
(vertical boom). The door of the box must be facing towards the inside
of the property. When you stand in the middle of the passageway, facing
outwards, if the box is on your right, the barrier is left-hand fitted, if the box
is on your right, the barrier is right-hand fitted.
The actuator is always supplied for left-hand side fitting.

5.1) COVER AND DOOR OPENING AND CLOSING (Fig. D).
5.2) POSITIONING OF ENCLOSURE FIG.E
5.3) BOOM FIXING (Fig. F).

6) OPTIONAL ACCESSORIES (Fig. G)
Foundation Base - BM
Boom light kit - KIT MCL LIGHT
Blinker kit - KIT MCL LAMPO
Moveable boom rest rod - GA
Fixed boom support fork - FAF (compulsory with 7-8m boom).
Cellula 130 post fixing kit - KIT MCL 130 (only when GA and SB are absent)
Skirt already assembled to the boom - SB (only for boom - ELL 6)
BIR passive safety edge
Lower and/or upper boom covering contour - MCL PCA 6/8
ELL 6 - ATT 704/706 - ATT 504/502 Booms.
ACC MCL ATT KIT (for ATT 704/706 - ATT 504/502)
ACC MCL ELL KIT (for ELL 6)
SCHEDA MCL KIT
LOOP
RMM (metal object detector 24V) (Fig. AG)
KIT MCL BAT,
KIT MCL RFL,

6.1) MICHELANGELO 40-60 accessories: boom length limits and balanc-
ing (Fig. G1).
For further information about the installation and use of accessories, refer
to the respective instruction manuals.

6.2) MICHELANGELO 80 accessories: Fig.G2.
6.3) BAR BALANCING (Fig. G3).
6.4) ATTACHMENT AND TENSIONING OF SPRING fig. AC-AD

7) Right-hand fitting (Fig. AA, AB)
- Carry out bar balancing as described in Fig. G3.
- Set the Direction Reversal logic to ON in the control panel.

WARNING: the Direction Reversal logic must be configured to OFF for
left-hand fitted barriers, and to ON for right-hand fitted barriers.
Otherwise, the limit devices will not operate or an encoder direction
error will be displayed.

8) Cellula 130 fitting (Fig. AE-AF)
9) MCL 130 fitting (Fig. AF)

10) ELECTRICAL INSTALLATION SET-UP
WARNING: before opening the door, the spring must be unloaded (ver-
tical boom). Set up the electrical installation (fig. A) with reference to the
current regulations for electrical installations. Keep the mains power supply
con-nections definitely separate from the service connections (photocells,
electric edges, control devices etc.).

Warning: for connection to the mains, use a multipolar cable having
minimum 3x1.5mm² cross section and complying with the previously
mentioned regulations (for example, if the cable is not protected, it
must be at least equal to H07 RN-F, whereas if it is protected it must be
at least equal to H07 7V-F with a 3x1.5 sq mm² cross section).

Fig. A shows the number of connections and section for a 100m length of
power supply cables; for greater lengths, calculate the section for the true
automation load. When the auxiliary connections exceed 50 metre lengths
or go through critical disturbance areas, it is recommended to decouple the
control and safety devices by means of suitable relays.
The main automation components are (fig. A):
I) Type-approved adequately rated omnipolar circuit-breaker with
at least 3.5 mm contact opening, provided with protection against
overloads and short circuits, suitable for cutting out automation from
the mains. Place, if not already installed, a type-approved differential
switch with a 0.03A threshold just before the automation system.
5. Refit the transformer cover and secure in place by means of the slots for magnetothermal protection and a differential switch having adequate contact opening distance equal to or greater than 3.5 mm, provided with In the initial section of the electrical installation, fit a circuit breaker with a connection.

Standards.

WARNING: (Fig. H-I)

11) CONNECTION (Fig. H-I)

WARNING: The electrical connections must be carried out workmanlike by qualified experienced personnel, in conformity with all the current standards and with the use of appropriate materials.

Lay out the electrical installation with reference to the current electrical standards. Keep the mains supply connections clearly separated from the service connections.

In the initial section of the electrical installation, fit a circuit breaker with a contact opening distance equal to or greater than 3.5 mm, provided with magnetothermal protection and a differential switch having adequate capacity for the appliance consumption. For the wiring, only use cables conforming to the harmonised or national standards, having a cross section corresponding to the initial protection, the appliance consumption and the installation conditions, for example a 3x1.5 sq mm (H 05 VV-F) cable. Proceed as explained below:

1. Remove the transformer cover.
2. Unscrew the screw which locks the cap (Fig. I Rif. 1) and take the cap out.
3. Fix the cables to the terminal bar (Fig. I Rif. 2).
4. To close the cap, reverse the actions in step 2.
5. Refit the transformer cover and secure in place by means of the slots located on top of the transformer (Fig. I Rif. 3-4).

12) ADJUSTMENTS

RECOMMENDED ADJUSTMENT SEQUENCE:

Adjusting the limit switches (See reference section) Fig.M Programming remote controls (Fig. O) Setting of parameters/logic, where necessary.

13) PARAMETERS MENU (PrR– Rp)

(TABLE “A” PARAMETERS)

14) LOGIC MENU (Lo0Ac)

(TABLE “B” LOGIC)

15) RADIO MENU (r Rd lo)

<table>
<thead>
<tr>
<th>Logic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rdd SrRtb</td>
<td>Add Start Key associates the desired key with the Start command</td>
</tr>
<tr>
<td>rERd</td>
<td>Read checks a key of a receiver and, if memorized, returns the number of the receiver in the memory location (from 01 to 64) and number of the key (T1-T2-T3 or T4).</td>
</tr>
<tr>
<td>E-RSE fY</td>
<td>Erase List ! WARNING! Erases all memorized remote controls from the receiver’s memory.</td>
</tr>
<tr>
<td>cod rH</td>
<td>Read receiver code displays receiver code required for cloning remote controls.</td>
</tr>
<tr>
<td>Uk</td>
<td>ON = Enables remote programming of cards via a previously memorized W LINK transmitter. It remains enabled for 3 minutes from the time the W LINK remote control is last pressed. OFF = W LINK programming disabled.</td>
</tr>
</tbody>
</table>

- IMPORTANT NOTE: THE FIRST TRANSMITTER MEMORIZED MUST BE IDENTIFIED BY ATTACHING THE KEY LABEL (MASTER).

In the event of manual programming, the first transmitter assigns the RECEIVER’S KEY CODE: this code is required to subsequently clone the radio transmitters.

The Clonix built-in on-board receiver also has a number of important advanced features:

• Cloning of master transmitter (rolling code or fixed code)
• Cloning to replace transmitters already entered in receiver
• Transmitter database management
• Receiver community management

To use these advanced features, refer to the universal handheld programmer’s instructions and to the CLONIX Programming Guide, which come with the universal handheld programmer device.

16) LANGUAGE MENU (L RnGURe)

Used to set the programmer’s language on the display.

17) DEFAULT MENU (dEFRUL L)

Restores the controller’s default factory settings.

18) CONNECTION TO PARKY CAR-PARK MANAGEMENT SYSTEM

The board can be configured in order to make an output available for controlling the barrier status. When the SCA Alarm logic is disabled (OFF) and the Alarm Time parameter is set to 0 s, the SCA contact (21-22) is configured as follows (Fig. H Rif. 6):

- contact closed between terminals 21-22 with the barrier lowered
- contact open between terminals 21-22 with the barrier lifted

19) LIMIT SWITCH SETTING

WARNING: before opening the door, the spring must be unloaded (vertical boom). The barrier is provided with programmable electronic limit switches and mechanical stop devices. There must be a rotation margin (about 1°) on closing and opening between the electrical limit switches and mechanical stop devices (Fig. N). The adjustment is carried out as follows:

The end-of-stroke opening and closing positions must be set by modifying the parameters of the control panel for Opening Value Calibration and Closing value Calibration: if the value is increased, the end-of-stroke positions move towards the opening direction. The extent of the movement depends on the effective boom length: in the case of a 6-m boom, a unit change (1.0) entails a movement of about 4.4 cm which, proportionally, becomes about 5.8 cm for an 8-m boom.

The effective closing value also depends, in part, on the manoeuvring speed. It is therefore convenient to proceed to end-of-stroke calibration only after having set the other opening parameters.

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**TERMINAL DESCRIPTION**

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>1-2</td>
<td>Control for cooling fan</td>
</tr>
<tr>
<td>3-4</td>
<td>Not used</td>
</tr>
<tr>
<td>6-7</td>
<td>Motor connections</td>
</tr>
<tr>
<td>15-5</td>
<td>Motor connections, closing reference</td>
</tr>
<tr>
<td>15-8</td>
<td>Motor connections, opening reference</td>
</tr>
<tr>
<td>9-10</td>
<td>Blinker connection (24 V~/25W)</td>
</tr>
<tr>
<td>11-12</td>
<td>24 V~/180mA max output – power supply for photocells or other devices (11+12)</td>
</tr>
<tr>
<td>13-14</td>
<td>24 V~/180mA max output – power supply for photocell transmitters with check (Vsae 13+-14)</td>
</tr>
<tr>
<td>15-16</td>
<td>START button (N.O.)</td>
</tr>
<tr>
<td>15-17</td>
<td>STOP button (N.C.) if not used, leave the jumper bridged</td>
</tr>
<tr>
<td>15-18</td>
<td>Photocell input (N.C.) if not used, leave the jumper bridged</td>
</tr>
<tr>
<td>19</td>
<td>Photocell FAULT input (N.C.) for photocells with N.O. check contact</td>
</tr>
<tr>
<td>15-20</td>
<td>Safety edge input (N.C.) if not used, leave the jumper bridged</td>
</tr>
<tr>
<td>21-22</td>
<td>Barrier open warning output (N.O. contact, 24V~/3Wmax) or, in alternative, alarm output (see configuration paragraph) and Connection to Parky Car-Park Management System</td>
</tr>
<tr>
<td>23-24</td>
<td>Encoder inputs</td>
</tr>
<tr>
<td>25-26</td>
<td>Motor connections</td>
</tr>
<tr>
<td>15-27</td>
<td>Open button (OPEN N.O.) if the TIMER logic on OPEN is enabled and the input remains engaged for over 3 sec., it commutes to open input (TIMER N.O.). The TIMER input opens and keeps the barrier open when engaged; on disengagement, after waiting for the time set in the Automatic Closing Time parameter, it starts the closing movement (regardless of the TCA Logic status). If the command is interrupted by the STOP button being pressed or by the safety devices being triggered, it can be reset using the START input</td>
</tr>
<tr>
<td>15-28</td>
<td>Close button (CLOSE N.O.)</td>
</tr>
</tbody>
</table>
To evaluate correctly the values set, you are advised to carry out a few complete consecutive manoeuvres.

20) EMERGENCY RELEASE (Fig. Y)
WARNING! When an actuator without bar needs to be released, ensure that the balancing spring is not compressed (bar in the opening position).

21) MALFUNCTION: CAUSES and REMEDIES
21.1) The bar does not open. The motor does not turn.
WARNING: before opening the door, the spring must be unloaded (vertical boom).
1) Check that the photocells are not dirty, or engaged, or not aligned. Proceed accordingly. Check the electric edge.
2) Check the correct connection of the drive motor and capacitor.
3) Check that the electronic appliance is correctly supplied. Check the integrity of the fuses.
4) Use the control unit self-diagnosis (Fig. I-O), to check whether the functions are correct. Identify any possible cause for the fault. If self-diagnosis indicates that a start command persists, check that there are no radio transmitters, start buttons or other control devices keeping the start contact activated (closed).
5) If the control unit does not work, it must be replaced.
6) Check the activation of the reference microswitches by checking the messages appearing on the control panel display.
7) Lubricate the guide-ressort tirants in case of rumors or vibrations.

21.2) The bar does not open. The motor turns but there is no movement.
1) The manual release was left engaged. Reset the motorised operation.
2) If the release is in the motorised operation position, check the gearmotor for integrity.

TABLE "A" - PARAMETERS MENU - (PR-RI)

<table>
<thead>
<tr>
<th>Logic</th>
<th>min.</th>
<th>max.</th>
<th>default</th>
<th>Definition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tcR</td>
<td>1</td>
<td>180</td>
<td>10</td>
<td>Automatic Closing Time</td>
<td>Automatic Closing Time [s]. Set the numerical value of the automatic closing time from 1 to 180 seconds. Automatic closing can be deactivated by the TCA Logic, but it is always carried out on releasing the TIMER.</td>
</tr>
<tr>
<td>tcRQUE</td>
<td>60</td>
<td>99</td>
<td>85</td>
<td>Maximum torque</td>
<td>Maximum torque [%]. Set from 60% to 99% the maximum torque that activation must be able to provide before generating an obstacle alarm. With the maximum value set, the control is disabled.</td>
</tr>
<tr>
<td>AccEL</td>
<td>1</td>
<td>99</td>
<td>75</td>
<td>Acceleration</td>
<td>Acceleration [%]. Special parameter 14 on second-generation universal programmers. Set a value from 1% to 99% for the acceleration to be applied at the beginning of each movement.</td>
</tr>
<tr>
<td>oP. SPEEd</td>
<td>1</td>
<td>99</td>
<td>99 M60 50 M80</td>
<td>Opening speed/Closing</td>
<td>Opening speed/Closing [%]. Set the numerical value of the speed: 1% corresponds to the slow-down speed, 99% to the maximum speed.</td>
</tr>
<tr>
<td>brRRE</td>
<td>0</td>
<td>85</td>
<td>50</td>
<td>Braking</td>
<td>Braking [%]. Set from 0% to 85% the braking to be applied during the slow-down phase. The initial slow-down value is automatically calculated according to this parameter and the effective movement speed.</td>
</tr>
<tr>
<td>EnEr.br.RRE</td>
<td>75</td>
<td>99</td>
<td>75</td>
<td>Emergency braking</td>
<td>Emergency braking [%]. Set a value from 75% to 99% for the braking intensity in case of reversing movement or emergency braking; any values lower than those set in the &quot;braking&quot; parameter will be ignored.</td>
</tr>
<tr>
<td>cRL.p.</td>
<td>0</td>
<td>100</td>
<td>82</td>
<td>Opening value calibration</td>
<td>Opening value calibration [%]. Special parameter 1 on second-generation universal programmers. Set the reference value from 0,0 to 100,0 for the required opening position (see Paragraph Limit Switch Setting).</td>
</tr>
<tr>
<td>cRL.ch.</td>
<td>0</td>
<td>100</td>
<td>21</td>
<td>Closing value calibration</td>
<td>Closing value calibration [%]. Special parameter 2 on second-generation universal programmers. Set the reference value from 0,0 to 100,0 for the required closing position (see Paragraph Limit Switch Setting).</td>
</tr>
<tr>
<td>ALAr.t. &amp; tINE</td>
<td>10</td>
<td>240</td>
<td>30</td>
<td>Alarm time</td>
<td>Alarm time [%]. In the case of obstacle detection or photocell engagement for a period exceeding the time set (ranging from 10 s to 240 s), the SCA contact closes. The contact is subsequently opened by the STOP command or by triggering of the closing limit switch. Only active when the SCA Alarm logic is set to OFF. If set to 0 s, the SCA contact becomes a connection to the Parky system (see Paragraph Connection To Parky Car-Park Management System).</td>
</tr>
<tr>
<td>Zone</td>
<td>0</td>
<td>127</td>
<td>0</td>
<td>Zone</td>
<td>Zone [ ] Set the zone number between a minimum value of 0 and a maximum value of 127.</td>
</tr>
<tr>
<td>Logic</td>
<td>default</td>
<td>Definition</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>------------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| tca   | ON      | Automatic closing time | ON: Activates automatic closing  
OFF: Excludes automatic closing  
Note: automatic closing on TIMER release cannot be deactivated. |
| 2 Step | OFF     | 2-step logic | ON: Enables the 2-step logic (prevails over the “3-step logic”).  
OFF: Disables the 2-step logic, activating the 4-step logic if the “3-step logic” is OFF. |
| 3 Step | ON      | 3-step logic | ON: Enables the 3-step logic (if the “2-step logic” is OFF).  
OFF: Disables the 3-step logic, activating the 4-step logic if the “2-step logic” is OFF.  
*Response to the START impulse*  
<table>
<thead>
<tr>
<th>Barrier</th>
<th>2 steps</th>
<th>3 steps</th>
<th>4 steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>closed</td>
<td>opens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>on closing</td>
<td>opens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>open</td>
<td>closes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>on opening</td>
<td>stops + TCA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>after stop</td>
<td>opens</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| lbL aPEn | ON     | Opening Impulse lock | ON: The Start impulse has no effect during the opening phase.  
OFF: The Start impulse becomes effective during the opening phase. |
| lbL tcaR | OFF    | Impulse lock TCA | ON: The Start impulse has no effect during the TCA dwell period.  
OFF: The Start impulse becomes effective during the TCA dwell period. |
| P+E-RaRN | OFF    | Pre alarm | ON: The blinker comes on about 3 seconds before the motor starts.  
OFF: The blinker comes on at the same time as the motor starts. |
| hoLD-tO-rUn | OFF | Hold-to-run control device | ON: Hold-to-run operation: the manoeuvre continues as long as the OPEN and CLOSE control keys are kept pressed. The radio transmitter cannot be used.  
OFF: Normal impulse operation. |
| FaSt ClS | OFF | Rapid closing | ON: Closes barrier after photocell disengagement, before waiting for the end of the TCA (automatic closing time) set.  
OFF: Command not entered. |
| Photc. aPEn | ON | Photocells on opening | ON: In case of obscuring, this excludes photocell operation on opening. During the closing phase, it immediately reverses the motion.  
OFF: In case of obscuring, the photocells are active both on opening and on closing. When a photocell is obscured on closing, it reverses the motion only after the photocell is disengaged. |
| tESt Phot | OFF | Photocell test | ON: Activates photocell check  
OFF: Deactivates photocell check |
| Inv. d Ir | OFF | Direction Reversal | ON: For right-hand fitted barrier (see Par. Right-hand fitting)  
OFF: For left-hand fitted barrier  
**IMPORTANT: Default has no effect on the logic.** |
| t NeR | OFF | TIMER OPEN | ON: OPEN pressed for over 3s becomes TIMER  
OFF: TIMER input disabled |
| RARe RN ScA | ON | SCA Alarm | ON: The SCA contact (terminals 21-22) behaves as follows:  
with barrier open and on opening: contact closed (warning light on)  
with barrier closed: contact open (warning light off)  
ON: The SCA contact closes according to the modes set by the Alarm Time parameter. |
| F IMEd code | OFF | Fixed code | ON: The receiver is configured for operation in fixed-code mode.  
OFF: The receiver is configured for operation in rolling-code mode. |
| rAd la ProG | ON | Radiotransmitter programming | ON: This enables transmitter storage via radio:  
1 – First press the hidden key (P1) and then the normal key (T1, T2, T3 or T4) of a transmitter already memorised in standard mode by means of the radio menu.  
2 – Within 10s press the hidden key (P1) and the normal key (T1, T2, T3 or T4) of a transmitter to be memorised.  
The receiver exits the programming mode after 10s, other new transmitters can be entered before the end of this time.  
This mode does not require access to the control panel.  
The transmitters can only be memorised using the appropriate Radio menu. |
| mAsTeR | OFF | Master/Slave | ON: The control panel is set as Master in a centralised connection.  
OFF: The control panel is set as Slave in a centralised connection. |
Thank you for choosing this product. The Firm is confident that its performance will meet your operating needs. This product meets recognized technical standards and complies with safety provisions. We hereby confirm that it is in conformity with the following European directives: 2004/108/EEC, 2006/95/EEC, 98/37/EEC, 99/05/EEC (and later amendments).

1) GENERAL SAFETY

WARNING Important safety instructions. Carefully read and comply with the Warnings booklet and Instruction booklet that come with the product as improper use can cause injury to people and animals and damage to property. Keep hold of instructions for future reference.

This product has been designed and built solely for the purpose indicated herein. Uses not contemplated herein might result in the product being damaged and could be a source of danger.

- The Firm disclaims all responsibility resulting from improper use or any use other than that for which the product has been designed, as indicated herein, as well as for failure to apply Good Practice in the construction of entry systems (doors, gates, etc.) and for deformation that could occur during use.

If installed and used correctly, the automated system will meet the required level of safety. Nonetheless, it is advisable to observe certain rules of behaviour so that accidental problems can be avoided:

- Keep adults, children and property out of range of the automated system, especially while it is operating.
- This application is not meant for use by people (including children) with impaired mental, physical or sensory capacities, or people who do not have suitable knowledge, unless they are supervised or have been instructed by people who are responsible for their safety.
- Children must be supervised to ensure they do not play with the application. Keep remote controls or other control devices out of reach of children in order to avoid the automated system being operated inadvertently.
- Check the system frequently, especially cables, springs or supports, to detect any loss of balance and signs of wear or damage.
- When cleaning the outside or performing other maintenance work, always cut off mains power.
- Keep the photocells’ optics and illuminating indicator devices clean. Check that no branches or shrubs interfere with the safety devices (photocells).
- Do not use the automated system if it is in need of repair. In the event of a malfunction, cut off the power, activate the emergency release to allow access and call in qualified technical personnel (professional installer).
- If the automated system requires work of any kind, employ the services of qualified personnel (professional installer).
- Have the automated system checked by qualified personnel once a year.
- Anything that is not explicitly provided for in these instructions is not allowed.

- The operator’s proper operation can only be guaranteed if the information given herein is complied with. The Firm shall not be answerable for damage caused by failure to comply with the installation rules and instructions featured herein.
- Descriptions and illustrations herein are not binding. While we will not alter the product’s essential features, the Firm reserves the right, at any time, to make those changes deemed opportune to improve the product from a technical, design or commercial point of view, and will not be required to update this publication accordingly.