## Control Type Micro 5 Threephase 400V or Monophase 230V

## For fast, rolling, sliding and Sectional door



TRIMMER - FUSE - RELAY
P1 WORKING TIME TRIMMER
P2 PAUSE TIME TRIMMER
P3 PEDESTRIAN TIME TRIMMER

F1=F2=F3 = FUSE 5X20 T6,3A
F4 = FUSE 5X20 T1A
F6 = FUSE 5X20 F2A
on 400 Vac
on 24 Vac
n protection : supply 24 Vac and 24 dc
on 230 Vac protection : transformer and blinker of 230 Vc ca

RL1 LIGHT OF COURTESY RELAY (exit 24Vdc)
RL3 OPEN RELAY
RL4 CLOSE RELAY
RL5 BLINKER RELAY 230Vac
RL6 - RL7 POWER RELAY 230/400Vac (max. 1,1kW at 400V)

DECLARATION OF CONFORMITY (according to ISO/IEC Guide 22 and EN 45014)

Manufacturer's Name :
Manufacturer's Address :

ALLTRONIC s.n.c.
Via Torino. 84-12041 Bene Vagienna (Cn) Italy

## DECLARES THAT THE FOLLOWING PRODUCT

Product Name: Central for Rapid/Rolling Door
Model : Micro5

CONFORMS TO THE FOLLOWING EMC SPECIFICATIONS BASED ON SAMPLE TESTING:

| EN 55011: 2007 | EN 60335-1 |
| :--- | :--- |
| EN 55014-1: 2006 | EN 60204-1 |
| EN 55014-2 | EN 12453 |
| EN 61000-3-2: 2006 | EN 61000-6-1 |
| EN 61000-3-3: 1995 | EN 61000-6-3: 2007 |

The product has been tested in the typical installation configuration and with peripherals which conform to EMC Directive.
I the undersigned declare that the product herewith complies with the protection requirements of the EMC Directive 89/336/ EEC, the 73/23/CEE Low Tension Directive and also the Directive 89/392/CEE (Electric Equipment Security of the Devices).

## TERMINAL BLOCKS



## 10 POLE TERMINAL BLOCK (M1):

$01-02=$ Light of Courtesy Exit of 24 Vdc . 3 W max.
$02-03=$ N.C. contact enter photocell Low
02-04 $=$ N.C. contact enter photocell High
05-06 $=$ N.C. block enter (electronic block)
$07-09=$ N.O. button enter of OPEN
08-09 $=$ N.O. button enter of CLOSE
$09-10=$ Exit $24 \mathrm{Vdc} .500 \mathrm{~mA} \max .(10=+24 \mathrm{~V})$

3 POLE TERMINAL BLOCK (M2):
$11-12=$ N.C. End-run enter of OPEN $\quad(12=$ common $) \quad-$ STOP OPEN
$12-13=$ N.C. End-run enter of CLOSE $(12=$ common $)$

2 POLE TERMINAL BLOCK (M3): 14-15 = Exit supply of 24Vac. max. 0,6A

2 POLE TERMINAL BLOCK (M4): 19-20 = Exit Blinker 230Vac. max. 30VA (23W)
4 POLE TERMINAL BLOCK (M5): R-S-T = Input 400Vac or R-S = Input 230 Vac
$\stackrel{\perp}{\text { }} \quad=$ Input EARTH

4 POLE TERMINAL BLOCK (M6): $\mathrm{U}-\mathrm{V}-\mathrm{W}=$ Output 400Vac (or 230Vac - V=Commun)
$\frac{1}{\boldsymbol{T}}=$ Output EARTH

4 POLE TERMINAL BLOCK (M7): 21-22 = Input Arial RX Radio (22 = Hold)
$23-24$ = Exit from RX Radio Channel 2
6 POLE TERM. BLOCK (M8): 25-26 = Input N.C. Contact MUSHROOM
$27-28=$ N.O. button enter of OPEN
$28-29=$ N.O. button enter of CLOSE
$28-30=$ N.O. button enter of PEDESTRIAN

ExitCommand For Front Panel

2 POLE TERMINAL BLOCK (M9): 31-32 = N.C. $=$ semi-automatic - N.O. $=$ automatic
5 POLE TERMINAL BLOCK (M10): 33-34 = LUC = Contact enter N.O. to disable the low photocell and the DW in the last centimetres of closing (when N.C. disable).

34-35 $=\mathrm{AP} / \mathrm{CH}=$ N.O. Buttom enter of OPEN/CLOSE Dynamic
With SW1 - Dip 4 at ON : Dynamic = at every impulse : Open - Block - Close - Open etc.)
With SW1 - Dip 4 at OFF: Dynamic = Open - Close (on end-run)

$$
\begin{aligned}
36-37=\mathrm{TX} 24 \mathrm{~V}= & \text { Supply Exit } 24 \mathrm{Vdc} \text { for photocells (for autotest) } \\
& \frac{\text { Only photocells transmitter }}{+24 \mathrm{Vdc.} \mathrm{high}} \\
& 0 \mathrm{~V}(-) \text { low }
\end{aligned}
$$

3 POLE TERMINAL BLOCK (M11): If shunt on 16-17 = Input at 230V (Monophase or Treephase)
If shunt on 17-18 = Input at 400 Vac . (set of factor)

## DIP FUNCTIONS (Dip Switch SW1)

DIP 1: ON : LEAF DOOR FUNCTION ACTIVATED (photocell stops movement in opening)
OFF: LEAF DOOR (P. L.) DISACTIVATED

DIP 2: ON : ANTI-DRAGGING FUNCTION ACTIVATED (with low and/or hight photocell obscured, the control does not grasp the opening order)

OFF : ANTI-DRAGGING DISACTIVATED

DIP 3: ON : PRESSED BUTTON FUNCTION (look at the instructions next page)
OFF: PRESSED BUTTON DISACTIVATED : Automatic or Semiautomatic cycle

DIP 4 : ON : DYNAMIC FUNCTION ON BUTTOM : OPEN - BLOCK - CLOSE
OFF : DYNAMIC FUNCTION DISACTIVATED (Normal Cycle: Open - Close)

DIP 5 : ON : THE BLINKER BLINKS DURING ALL THE CYCLE (il pulsante di blocco - 5 e 6 di M1-lo spegne)

OFF: THE BLINKER FIRST BLINK 4 SEC BEFORE CLOSING (the button of block - 5 and $\mathbf{6}$ of M1 - switches it off)

DIP 6 : ON : AUTO-TEST FUNCTION DW24B ACTIVATED
OFF : AUTO-TEST DW24B DISACTIVATED

DIP 7: ON : AUTO-TEST FUNCTION LOW PHOTOCELL ACTIVATED
OFF : AUTO-TEST LOW PHOTOCELL DISACTIVATED

DIP 8 : ON : AUTO-TEST FUNCTION HIGH PHOTOCELL ACTIVATED
OFF : AUTO-TEST HIGH PHOTOCELL DISACTIVATED

## WARNING OF FAILURE AUTOTEST :

- If the Low photocell does not work, the blinker advises with a blink of 2 seconds and the control does not move.
- If the Hight photocell does not work, the blinker advises with 2 blink of 2 seconds and the control does not move.
- If the DW 24B does not work, the blinker advises with 3 blink of 2 seconds and the control does not move.


## DIP (SW1) FUNCTIONS DEEPENING

- DIP 3 ON : "PRESSED BUTTON" FUNCTION ACTIVATED (Homme Mort)

| OPENING ORDER | $=$ OPENING WITH PRESSED BUTTON |
| ---: | :--- |
| CLOSING ORDER | $=$ CLOSING WITH PRESSED BUTTON (with close pressed an order of "open" |
|  | blocks the closing movement) |

## THE PEDESTRIAN ORDER IS NOT CONNECTED

## DYNAMIC ORDER = OPENING WITH SELF-HOLDING AND CLOSING WITH PRESSED BUTTON

At end opening, an impulse to the dynamic order closes with pressed button (closing activated, the order release for 3 sec . (before arrive at FCC) stops the function $=$ an other impulse connects the opening.

OPEN END-RUN $=$ STOP THE OPENING
CLOSE END-RUN $=$ STOP THE CLOSING
BLOCK $=$ BLOCK THE MOVEMENT

With DIP8 on ON; "A" HIGH PHOTOCELL With DIP7 on ON; "B" LOW PHOTOCELL With DIP6 on ON; DW24B (edges)
With DIP8 on OFF; "A" HIGH PHOTOCELL With DIP7 on OFF; "B" LOW PHOTOCELL With DIP6 on OFF; DW24B (edges)
= PHOTOCELL BLOCKS IN OPENING
= PHOTOCELL BLOCKS IN CLOSING
= DW24B BLOCKS IN CLOSING
= PHOTOCELL NOT CONNECTED (OR DISACTIVATED)
= PHOTOCELL NOT CONNECTED
= DW24B NOT CONNECTED

- DIP3 OFF : PRESSED BUTTON DISACTIVATED

AUTOMATIC OR SEMIAUTOMATIC CYCLE

- DIP1 $\begin{aligned} & \frac{\text { ON : "LOW" PHOTOCELL STOP TEMPORARILY THE MOUVEMENT }}{\text { (stop the movement until the "low" photocell is obscurated, keep the counter of the }} \\ & \text { "Work Time"). }\end{aligned}$
ON : "HIGH" PHOTOCELL BLOCK THE MOUVEMENT (CENTRALE BLOCKED)


## Regulatin Times (Dip Swich SW2)

## WORKING TIME:

Dip 1 OFF min. $27 \mathrm{sec} . \quad$ MAX $\mathbf{5 0}$ sec.
Dip 2 OFF
Dip 1 OFF min. $\mathbf{8 0} \mathrm{sec} . \quad$ MAX $\mathbf{1 5 0} \mathrm{sec}$.
Dip 2 ON
Dip 1 ON min. $\mathbf{0 4} \mathrm{sec} . \quad$ MAX 30 sec (set on factory)
Dip 2 OFF
Dip 1 ON min. 04 sec. MAX 150 sec.
Dip 2 ON
PAUSE TIME:
$\min \mathbf{0 1} \mathrm{sec} . \quad$ MAX 70 sec (set on factory)
With R11 shunt the max time is 200 sec.

## PEDESTRIAN TIME:

$\min .02 \mathrm{sec} . \quad$ MAX 13 sec.

## REVERSAL TIME:

Dip 3 OFF reversal time $=\mathbf{0 , 5} \mathbf{~ s e c}$.
Dip 4 OFF
Dip 3 OFF reversal time $=\mathbf{1} \mathrm{sec}$. (set of factor)
Dip 4 ON
Dip 3 ON reversal time $=\mathbf{2} \mathrm{sec}$.
Dip 4 OFF
Dip 3 ON reversal time $=\mathbf{4} \mathrm{sec}$.
Dip 4 ON

## SHUNTS SET

W3 - W4 - W5 - W6 - W7 = For predisposition type of Rx Radio (on costumer request)
W8 Shunted: DW control not connected
Free: DW control connected (insert DW24 in J3 position)

W1 Shunted 1-2 (central - left) CH2 of receiver
Shunted 2-3 (central - right) CH2 of receiver
W2 Shunted 4-5 (central - left) CH1 of receiver Shunted 5-6 (central - right) CH1 of receiver

FOR PEDESTRIAN ORDER
FOR CLOSE ORDER
FOR DYNAMIC ORDER
FOR OPEN ORDER

## LEDS VISUALIZATION

| DL1 (yellow led) | LIGHT (On) : DW24B in warning (contact Open) |
| :---: | :---: |
| DL2 (green led) | SWITCHED ON : power supply insert SWITCHED OFF : lack of supply |
| DL3 (red led) | SWITCHED ON : pressed OPEN order It remains lighted only during the time while it is pressed |
| DL4 ( red led) | SWITCHED ON : presses CLOSE order It remains lighted only during the time while it is pressed |
| DL5 ( red led) | SWITCHED ON : pressed AP/CH order (Dynamic) |
| DL6 ( red led) | SWITCHED ON : pressed PEDESTRIAN order |
| DL7 (yellow led) | SWITCHED ON : semi automatic cycle activated SWITCHED OFF : automatic cycle activated |
| DL8 ( yellow led) | SWITCHED ON : present LOW PHOTOCELL (Open contact) |
| DL9 ( yellow led) | SWITCHED ON : present HIGH PHOTOCELL (Open contact) |
| DL10 ( yellow led ) | SWITCHED ON : present button of BLOCK (Open contact) |
| DL11 ( red led ) | SWITCHED ON : present END-RUN OF OPEN (Open contact) |
| DL12 (red led) | SWITCHED ON : present END-RUN OF CLOSE (Open contact) |

## Functionnement

Automatic Cycle: Pressing N.O. button of Open the motor will begin to move for the time determinated by the "End-run/working time" combination (P1).
The control works with normally closed End-run (N.C.).
With the gate opened the pause timer (It can be bypassed pressing the button of close), after the determinated time (P2), will close the door. If during the pause time an object or a person crosses the photocell, it resets the the pause time which will start again from the beginning. We get same function, always during the pause time, giving an opening impulse.
The contact of Low and Hight Photocell (N.C.) is activated only during the reclosing phase, it opens again the door if there is an obstacle.
A possible temporary Block of the control can be obtained by acting on the block button (N.C.), in this case the motor will stop until the open-close button will be pressed again giving movement to the gate in the desired direction.

Pedestrian Function : N.A. enter contact which operates the opening door for the time determinated by the P3 trimmer.
During the reclosing phase the photocell or an impulse of Open will open the door completely.

## Semiautomatic Cycle (pass-pass):

All the functions are the same of the automatic cycle except the pause time that is not inserted, therefore to reclose you should press the close button once again.

## WARNING

- The motor time of start is istantaneous when the door is on the end-run, the movement reversal time of the door out of the end-run (and also of starting) is regulated by the Dip-switch "SW2".
Inserting the photocell contact (N.C.) in this control, control the the right functionnement otherwise the control will not close or will always be on block (Autotest).


## Always check the signalling leds before of every intervention.

On this control it is possibile to insert (SW1 dip 2) the function anti-dragging : with close end-run opened and the low and/or Hihgt photocell obscurated, an impulse of open does not give movement.
In case of damage of the photocells it is possible to make the control working only with "Pressed Button" (SW1 dip 3) for opening and closing movement.

## First intervention on Control drawbacks

| Problem | Likely Cause | Solution |
| :---: | :---: | :---: |
| Control does not move, switched off leds | Wrong connection line 18 V , check Fuse F4. | Insert supply like in the scheme |
| Control does not move, switched off leds | Short-circuit on output 24Vdc. Check F4. | Disconnect the controls supplyed from the gate-opener and check wires. |
| Control doesn't move, DL10 led light | Block contact opened | Check that the block is N.C. |
| Control doesn't close, DL8-9 led light | photocell enter opened | Check that the enters are N.C. |
| Control goes on with opening or don't close in automatic | Open button always pressed (led DL3 or DL5 or DL6 lighted) | Check all the enters (buttons, Rx radio, magnetic spool) |
| Control opens a little and then stops | Safety profile, block, end-run | Check that there are not false contacts |
| Control opens but does not reclose | Semiautomatic function insert | Select function (DL7) |
| Control does not feel end-run of open and close | Wrong connection of the end-run | Connect in the right way |
| Control gives movement only in one directon | Wrong connection of the Common wire of the end-run | Connect in the right way |
| Control reverse with low photocell when the motor opens | Wrong connection of the motor (reverse 2 phases) | Connect in the right way |
| The motor does not open the door completely | "Working" time too short | Increase the "Time of working" trimmer (P1) |
| Control close at once | "Pause" time short | Increase the "Time of pause" trimmer (P2) |
| Control reverse the movement brusquely | "Reversal" time short | Set the "Reversal Time" (SW2) |
| Photocell stops on Open | P.L. function inserted | Check Dip 1 SW1(OFF) |
| Control does not open | Failured of the hight or low photocell autotest | Check the photocells |
| Control does not open | Anti-dragging acrivated (SW1 Dip 2) | Check the photocells |
| Times too long | Time Regulations SW2 | Set in the right way |

The Alltronic s.n.c. will not be responsabile for wrong connections and/or mishandlings of the control which will not be considered under guarantee.

## Installation Advices

1) The control should be installed as near the gate as possible.
2) If this is not possible, you should:

Use cables with proper sizes.
Never use a multiwire cable to connect either the motor or all the services (open, close, block, photocell, end-run), but ALWAYS SEPARATE THE POWER from the Low Tension (controls and securities) using more cables.
In case of threephase 400 V supply it is necessary to place the control near the gate in order to have the shortest way of the power wires, always separating the low from the very low tension.
If it is not possible, so it is necessary to use screened cables, remembering to earth the cable screen at the two ends.
3) After every installation check, with a tester Vac., that there isn't any induction tension on the enters, measuring between the earth and one end of the "Open button" terminal block. If there is an "Alternating tension" below 20-30 V (induced tension for cable passage with supply) the system is ready to be tested, otherwise it is necessary to overhaul the cable arrangement as described above.

## Max Loads and Maintenance

The relays set on the control have a load of 9 Amp. And they must be, relating to their load, periodically checked.
It is advisable to overhaul the relay contacts every 4 years, but always according to the following conditions:

Micro 5 control 400V threephase supply
Max. load permitted : 1,1kW
Threephase motor $\cos \varnothing=0,7$
$\mathrm{N}^{\circ}$ of possible movement: 100.000
Micro 5 control 230V threephase or monophase supply
Max. load permitted : $0,65 \mathrm{~kW}$
Threephase motor $\cos \emptyset=0,7$
$\mathrm{N}^{\circ}$ of possible movement: 100.000
WARNING: Reducing the motor $\cos \emptyset$ the $\mathrm{n}^{\circ}$ of possible openings decreases (ex. with $\cos \emptyset=0,3$ the number of movement is halved).

## Check always the values of the installed motors

WARNING : The above specifications are adressed to technicians and/or qualified staff.
All checks and works should be made OUTSIDE the electric and electronic details of the controls. Never forget that installations should be made according to law requirements and "Rules of good installation".

## It is advisable to protect the control, at least on the upper side, if it could be subject to inclement weather.

The ALLTRONIC snc states that the control has been registred.
Therefore the central will be protected in all its parts by the law.
It is forbidden to riproduce any part of this manual without written authorisation of the Alltronic

