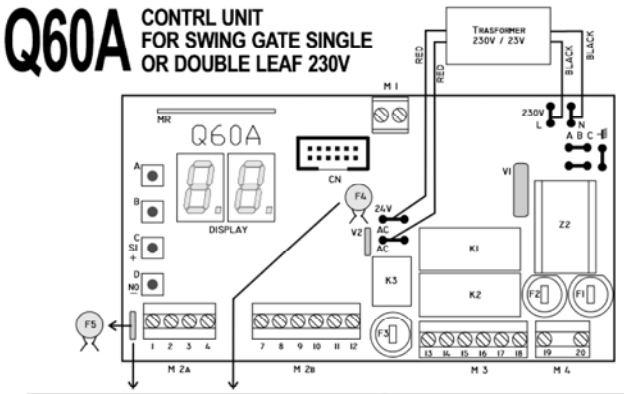
Q60A CONTRL UNIT FOR SWING GATE SINGLE OR DOUBLE LEAF 230V



CONTROL UNIT COMPONENTS

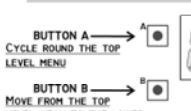
A	TOP LEVEL MENU BUTTON
B	LOWER LEVEL MENU BUTTON
C	BUTTON TO INCREASE OR CHANGE TO YES (SI)
D	BUTTON TO DECREASE OR CHANGE TO NO
F1	230V FUSE 5A
F2	COCOON FUSESFUSE MOTOR 2 1,6 A
F3	COCOON FUSESFUSE MOTOR 1 1,6 A
F4	24V FUSE (SELF-RESTORABLE) 1,6A
F5	24V FUSE (SELF-RESTORABLE) 0,65A
DISPLAY	7 SEGMENTS DISPLAY
MI	RADIO/AERIAL TERMINAL BLOCK
M2A/M2B	CONTROLS AND SAFETY DEVICES TERMINAL BLOCKS
M3	MOTORS TERMINAL BLOCK
M4	MAIN POWER TERMINAL BLOCK
A B C	EARTH CONNECTIONS
MR	RADIO UNIT
CN	ELECTROLOCK INTERFACE PCB CONNECTOR
Z2	FILTER
K1/ K2	MOTORS RELAY
K3	BLINKER RELAY
VI	PRIMARY VARISTOR
V2	SECONDARY VARISTOR

SELF-RESTORABLE FUSE 24V
IMPORTANT: IF A TEMPORARY SHORT CIRCUIT OCCURS THE FUSE WILL RESTORE ITSELF AFTER FEW SECONDS.

IN CASE OF A PERMANENT SHORT CIRCUIT, CUT THE MAIN POWER OFF, REMOVE THE TERMINAL BLOCKS 2A AND 2B, WAIT FEW SECONDS AND THEN POWER THE UNIT AGAIN. THE FUSE WILL BE AUTOMATICALLY RESTORED. FIND AND REMOVE THE SHORT CIRCUIT CAUSE BEFORE PLUGGING THE TERMINAL BLOCKS IN.

PARAMETERS

B use **button B** to move to next parameter
C use **button C** to **INCREASE** a numeric va
D use **button D** to **DECREASE** a numeric va
To save changes and to ensure that they are n
removed, use **button B** to step through SU pa
button C until the display reverts to idle displa



DISPLAY SIGNALS
AP Opening
CH Closing
tP Delay time before automatic **Closing**

TOP LEVEL MENU
STAND BY
PA PARAMETERS
rA RADIO
dE DEFAULT
AS SEQUENTIAL PROGRAMMING

DISPLAY	TIMES	STANDARD DEFAULT VALUES rP	ADVANTAGE DEFAULT VALUES dS	WHEELER DEFAULT VALUES dr
n1	MOTOR 1 WORKING TIME 0 - 99	21	13	9
n2	MOTOR 2 WORKING TIME 0 - 99	21	13	9
F1	MOTOR 1 TORQUE 6 - 19	14	10	12
F2	MOTOR 2 TORQUE 6 - 19	14	10	12
Fr	MOTOR POWER DURING DECELERATION 6 - 19	19	19	19
r1	MOTOR 1 DECELERATION TIME 0 - 99	7	4	4
r2	MOTOR 2 DECELERATION TIME 0 - 99	7	4	4
tS	MOTORS' CLOSING DIFFERENTIAL TIME DELAY 0 - 99	3	3	2
SA	MOTORS' OPENING DIFFERENTIAL DELAY TIME 0 - 15	3	3	2
tP	DELAY TIME BEFORE AUTOMATIC CLOSING 0 - 99	3	3	3
Pd	PEDESTRIAN OPENING TIME 0 - 99	7	7	3

FUNCTION
BUTTON B
SU PRESS & HOLD B C TO SAVE CHA PRESS BUTTON D TO ABANDON C
P8 PHOTOCELLS TE
P7 MOTORS TEST
P6 DECELERATION
P5 ONLY ONE MOT
P4 PRE BLINKING
P3 AUTOMATIC CLO STEP BY STEP
P2 MULTI OCCUPAT
P1 ELECTRO LOCK
P0 REVERSING STR

CODE FUNCTIONS
r= SHOW STORED CODES
tc NEW REMOTE CONTROL CODE ACQUISITION
CP REMOTE CONTROL CODE ACQUISITION WITH STOP FUNCTION
Pd REMOTE CONTROL CODE ACQUISITION WITH PEDESTRIAN FUNCTION

CODE FUNCTIONS
rP PRESS & HOLD BUTTON C TO SET DEFAULTS FOR LEADER, ACE OR SHARK.

ADVANTAGE MOTOR DEFAULTS
dS PRESS & HOLD BUTTON C TO SET DEFAULTS FOR ADVANTAGE

DISPLAY FUNCTIONS
1n ONLY 1 MOTOR

PROGRAMMING THE RADIO rA

IMPORTANT: BEFORE PROGRAMMING FOR THE FIRST TIME THE RADIO RECEIVER, DELETE ALL THE RECORDED TEST CODES, SEE FUNCTION rC AT THE BOTTOM OF THIS CHAPTER

r= DISPLAYING STORED CODES
Press the **button A** repeatedly until the display shows rA
Press **button B** until the display shows r=
The display will now cycle trough each stored code from 01 to 50.
TO ERASE A SINGLE STORES CODE
Press **button D** when the number of the code to be removed is displayed

tc STORING NEW REMOTE CONTROL CODE
- Press the **button A** repeatedly until the display shows rA
- Press **button B** until the display shows tc
- Press and hold the remote control button until a dot appears on the display (this means that the receiver is ready to store a new code) and simultaneously press **button C** to store the new code

CP STORING NEW REMOTE CONTROL CODE with STOP function
- Press the **button A** repeatedly until the display shows rA
- Press **button B** until the display shows CP
- Press and hold the remote control button until the dot appears on the display and simultaneously press **button C** to store the new code.

PROGRAMMING THE Q36A PARAMETERS PA

Method **1** = **STANDARD**
Method **2** = **SEQUENTIAL**

Warning:
Before powering up and programming the control unit refer to the wiring scheme and then:
1 Check that the motor connections are correct
2 Check that the photocell connections are correct
Important:
If the photocells are not installed in closing phase, you must link terminals 3 and 9.
If the photocells are not installed in opening phase, you must link terminals 4 and 9.
3 Check that the control connections are correct.
Important:
If an emergency stop button is not fitted, you must link terminals 2 and 8.
4 Use the motor release key supplied to disengage the electric motor from the mechanical drive; then close the gate and re-engage.
5 Power the control unit up

STANDARD PROGRAMMING PROCESS (*Method 1*)

a) Give a **START** signal by either turning the key s:witch or by another control device (terminals 1 and 8)
b) Wait until the gate has finished a complete (pre-programmed) **OPEN/STOP/WAIT/CLOSE** cycle.
c) Give another **START** signal and not which parameter need adjusting

SEQUENTIAL PROGRAMMING

SEQUENTIAL programming for gates with on

a) Press **button A** (steps thru the top menu) until the di
b) Press **button B** (steps thru the sub-menu) until the d
c) Give a **START** signal: the leaf starts opening and the
d) Wait until the leaf has done the 90% of the openin **START** signal: the display shows r1 and the decele
e) Wait 4/5 seconds after the opening cycle has co **START** signal.
f) The display shows tP, the control unit has stored times and is now calculating the **"stay open"** time
g) Give a **START** signals to stop calculating the **"s CLOSING CYCLE**.
g) When the closing cycle has completely finished, exits from the sequential programming process a been saved.

SEQUENTIAL programming for gates with tw

a) Press **button A** (steps thru the top menu) until the di
b) Press **button B** (steps thru the sub-menu) until the d
c) Give a **START** signal:
The leaf 1 starts opening and the display shows n1

Pd **STORING NEW REMOTE CONTROL CODE with PEDESTRIAN function**
- Press the **button A** repeatedly until the display shows r A
- Press **button B** until the display shows Pd
- Press and hold the remote control button until the dot appears on the display and simultaneously press **button C** to store the new code

rC **DELETING ALL STORED CODES**
- Press the **button A** repeatedly until the display shows r A
- Press **button B** until the display shows r C
- Press and hold **button D** until the display shows r -

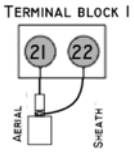
d) Press **button A** on the control unit to select the Parameters menu.
e) Press **button B** repeatedly until the display shows the parameter that you need to change
f) Use **buttons C** and **D** to change or confirm each parameter as necessary
IMPORTANT: press **button B** repeatedly until the display shows SU and then press **button C** to save the changes.

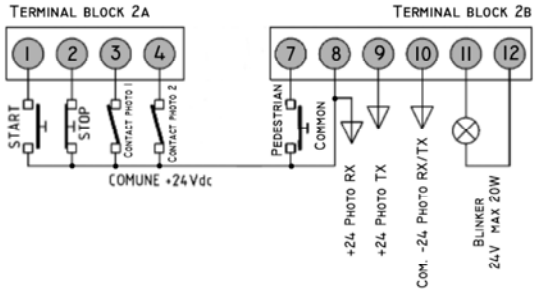
Example:
Increase the **Motor 1** working time by **2 seconds**

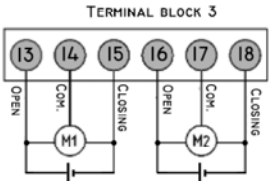
d) Wait until the **leaf 1** has done the 90% of the openir
START signal: the display shows r1 and the decele
e) Wait 4/5 seconds after the **leaf 1** has completely ope
signal. The display shows n2 and the **leaf 2** starts c
f) Wait until the **leaf 2** has done the 90% of the openir
START signal: the display shows r2 and the decel
g) Wait 4/5 seconds after the **leaf 2** has completely ope
signal.
h) The display shows tP, the control unit has stored
times of both leaves and is now calculating the **"stay**

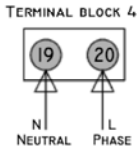
TERMINAL BLOCK CONNECTIONS

All the connections must be done without power supply.









EARTH TERMINAL BLOCK CONNECTIONS

Connect the yellow/green network cable and the yellow/green motor cables to earth terminals **A E**

TERMINAL BLOCK 1 CONNECTIONS

21	**Aerial or radio receiver signal**
22	**Sheath or negative for radio receiver**

TERMINAL BLOCK 2 CONNECTIONS

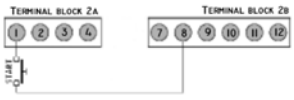
1-8	**Start control** normally open (NA) for button, key selector, radio receiver or Timer clock connections. The Start control starts the programmed running cycle.
2-8	**Stop control** normally closed (NC). Emergency button. When pressed the gate stops immediately. In Opening phase: at the first impulse the gate closes. Break-time: at the first impulse the gate closes In Closing phase: at the first impulse the gate opens. **If temporarily the Stop contact is not used, link terminal 2 with terminal 8.**
3-8	**Input of one safety photocell in closing phase. Input of safety rubber edges and of safety photocell in closing phase. Input of several safety photocells in closing phase.** The receiver contacts must be connected in series. Normally closed (NC). In opening phase: does not work In closing phase: Stop, break-time for 2 seconds, opening phase again. **If temporarily the photocell contacts are not used, link terminal 3 with terminal 9.**
3-9	**Input only for safety rubber edges in closing phase.** The contacts must be connected in series if there is more than one safety rubber edge. Normally closed (NC). In opening phase: does not work. In closing phase: Stop, break-time for 2 seconds, opening phase again.
4-8	**Input for safety photocells in opening phase (for swing gate).** Normally closed (NC). In opening phase: Stops until the obstacle has not been removed In closing phase: Stops and changes direction when the obstacle has been removed If you also want to connect the safety rubber edges, you must connect in series their contacts with the **If temporarily the photocell contacts are not used, link terminal 4 with terminal 9.**
4-9	**Input for safety rubber edges in opening phase (for swing gate).** Normally closed (NC). In opening phase: Stops until the obstacle has not been removed In closing phase: Stops and changes direction when the obstacle has been removed The contacts should be connected in series.
7-8	**Pedestrian start input.** Normally open (NA).
8-10	**Output for photocell receiver power supply. Output for extra 24V dc accessories power supply.** With all Standard accessories included 100 mA are still available for extra accessories.
9-10	**Output for photocell transmitter power supply.**
11-12	**Blinker intermittent output.** 24V 20W max.

TERMINAL BLOCK 3 CONNECTIONS

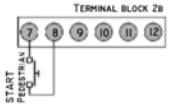
13	**Motor M1- output** (13 Brown; 14= Blue; 15= Black)
14	Leaf that opens firstly and that delays in closing phase.
15	In case of a gate of one single leaf connect the motor to output **M1**, select parameter PS on SI, cc push **button C**. CAPACITOR between terminal 13 and 15
16	**Motor M2- output** (16=brown - 17=Blue - 18= Black)

WIRING SCHEME FOR THE Q60A CONTROL UNIT

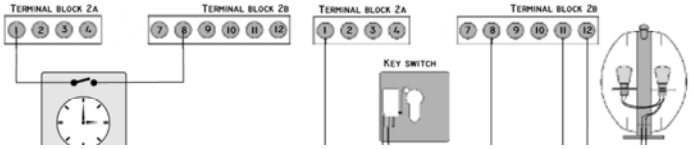
1 START



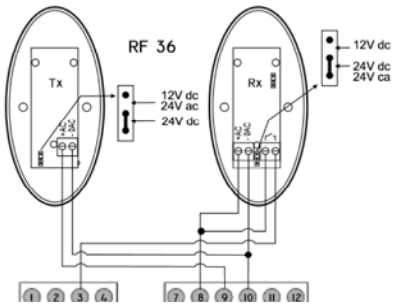
2 PEDESTRIAN START



3 PERMANENT START COMMAND WITH TIMER

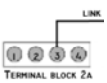


6 CONNECTING PHOTOCELL IN CLOSING PHASE

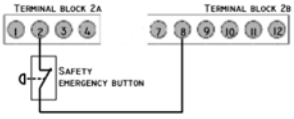


PHOTOCELL
8 = Power supply
9 = Power supply
10= Power supply -
3 - 8 = Photocells co

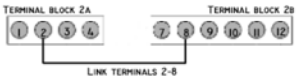
3 - 9: Link termina
are not usec



4 EMERGENCY STOP BUTTON



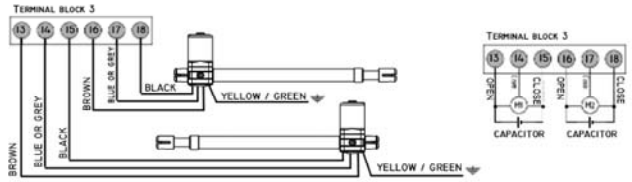
N.B.: Link terminals **2** and **8** if, an emergency **STOP** button is NOT USED.



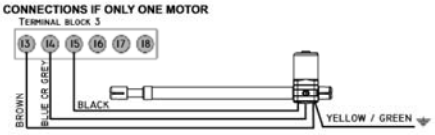
5 MOTORS CONNECTIONS

MOTOR 1
Leaf with electro-lock and/or leaf that opens first
13 OPEN = BROWN motor wire + WHITE Capacitor wire
14 COMMON = BLUE or GREY motor wire
15 CLOSE = BLACK motor wire + WHITE capacitor wire

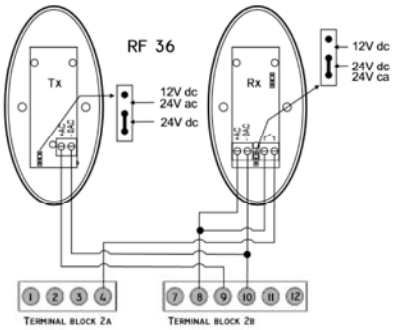
MOTOR 2
Leaf that opens second
16 OPEN = BROWN motor wire + WHITE Capacitor wire
17 COMMON = BLUE or GREY motor wire
18 CLOSE = BLACK motor wire + WHITE capacitor wire



CONNECTIONS IF ONLY ONE MOTOR

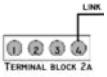


CONNECTING PHOTOCELL IN OPENING PHASE



PHOTOCELL
8 = Power supply +
9 = Power supply +
10 = Power supply -
4 - 8 = Photocells co

4 - 9: Link terminal
are not used



7 ELECTRO-LOCK INTERFACE BOARD(MEL)
IF YOU WANT TO CONNECT THE **MEL** INTO **CN**
• CONNECT THE ELECTRO LOCK
• CHANGE THE PARAMETERS P0 - P1 AND E C