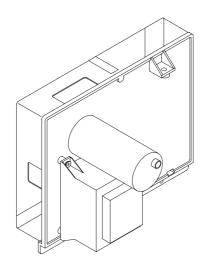
L8542624 Rev. 10/04/05



CENTRALINA A MICROPROCESSORE PER
CONTROL UNIT WITH MICROCONTROLLER FOR
MIKROCONTROLLER-STEUERUNG FÜR
CENTRALE A MICROCONTRÔLEUR POUR
CENTRALITA A MICROPROCESADOR POR
CENTRALKA Z MIKROPROCESOREM DLA

RI.10KI



Libro istruzioni

Operating instructions

Betriebsanleitung

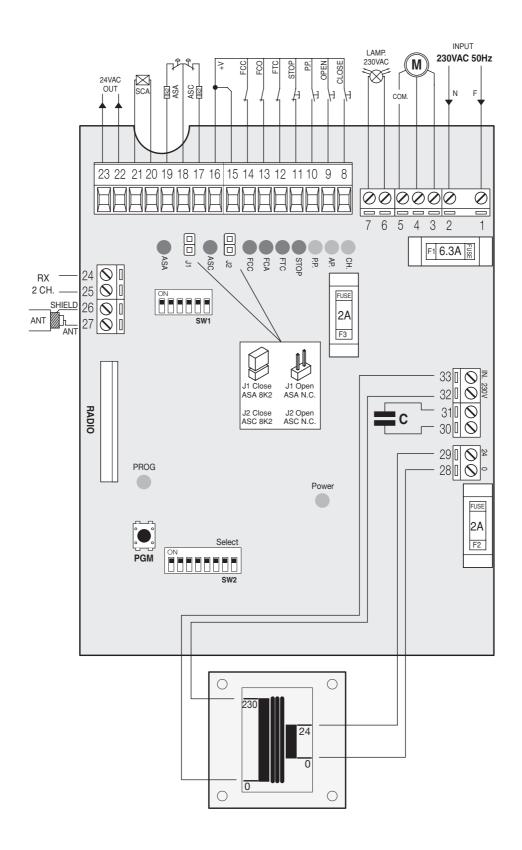
Livret d'instructions

Libro de instrucciones

Książeczka z instrukcjami



UNIONE NAZIONALE COSTRUTTORI AUTOMATISMI PER CANCELLI, PORTE, SERRANDE ED AFFINI



RI10KI Control unit with microcontroller

The control unit with microprocessor RI.10KI can be used to control motors featuring a power not exceeding 750W.

GENERAL WARNINGS

- a) The wire connections and the operating logic should be in compliance with regulations in force.
- b) The cables featuring different voltage should be physically detached, or adequately insulated by an additional insulation of at least 1 mm.
- c) The cables should be further fastened in proximity to the terminals.
- d) Check all connections before powering the unit.
- e) Check that settings of the Dip-switches are the required ones.
- f) When the unit is powered, the LED "POWER" must light on. In the negative, check the good condition of fuses and the presence of 230Vac, 50Hz between terminals 1 and 2 (INPUT 230VAC follow phase/neutral).
- g) All normally closed inputs, which are not in use, should be short-circuited with the relevant Dip-Switch located near the connection terminal of the inputs.
- h) If the rotation direction of the motor is inverted, it is sufficient to invert the wires "APRE" "CHIUDE" (OPEN CLOSE) of the motor as well as the limit switches wires "FCA" "FCC".

Input/Output functions

Terminal No.	Function	Description		
(1,2)	Input, 230VAC	Power supply of the control unit 230Vac, 50Hz (Phase: terminal 1 Neutral: terminal 2).		
(3,4,5)	Output, Motor	Respectively, Move(3), Move(4) and Common (5).		
(6,7)	LAMP	To the flashing light at 230Vac		
(8)	CHIUDE	Input, CLOSE push-button Normally Open (N.O.) contact		
(9)	APRE	Input, OPEN push-button N.O. contact (it can be switched to "Pedestrian" input)		
(10)	P.P.	Input, STEP-BY-STEP push-button		
(11)	STOP	Input, STOP push-button Normally closed (N.C.) contact		
(12)	FTC	Input, safety devices connection, N.C. terminal (e.g. photocells)		
(13)	FCA	Input, opening limit switch. N.C. contact		
(14)	FCC	Input, closing limit switch. N.C. contact		
(15,16)	+V	Output, common for all inputs		
(17)	ASC	Input, safety edge. Its activation causes the movement reversion for 1 second if the motor is in the closing phase*		
(18)	Input, common to the safety edges	Input, common of safety edges. The safety edges MUST NOT BE CONNECTED TO THE COMMON OF THE PUSH-BUTTONS		
(19)	ASA	Input, safety edge. Its activation causes the movement reversion for 1 second if the motor is in the opening phase*		
(20,21)	SCA	Open gate indicator light connection, 24 Vac/3W max.		
(22,23)	OUT 24VAC	Output, auxiliary power supply, 24Vac (1A max.)		
(24,25)	Output,2nd chan- nel	N.O. contact, controlled by the second channel of the remote control		
(26,27)	Input, antenna	Antenna connection for the receiving card of the remote control. Shield= terminal 26		
(28,29)	Input, 24VAC	Connection to the secondary of the transformer, 24V		
(30,31)	Capacitor	Connection to the capacitor		
(32,33)	Output, 230VAC	Connection to the primary of the transformer, 24V		
RTX	Connector to the receiving card of the remote control.			

* The inputs of the safety edges are at calibrated resistance.

If a resistive safety edge is used, the relevant jumpers (J2 for ASC and J1 for ASA) should be closed. Conversely, if a mechanical edge is used the jumpers should be left open. In the event the safety edges are not mounted, leave the corresponding jumper open and move the short-circuit Dip-Switch to ON (No. 1 for ASA and no. 2 for ASC).

N.B.: for the safety edge, two inputs are provided, **NEVER CONNECT THE SAFETY EDGE TO THE COMMON TERMINAL.**

CAUTION: When the control unit is powered, do not touch any metallic parts.

Dip-Switch Function - SW2 "Select"

DSW1 Operating mode of the "P.P. button" and of the remote control.

Off: Open/Stop/Close sequence

On: Open/Close/Open sequence

DSW2 "Service man" function. The automatic system carries out the opening and closing opera-

tions as long as the Open and Close push-buttons, respectively are kept pressed.

Off: Service Man function disabled

On: Service man function enabled. In this case the Open push-button cannot be used

as control for pedestrian use.

DSW3 "Multiple-flat" function: the "P.P." (STEP-BY-STEP) input does not cause the motor stop-

ping in the opening phase. At end of opening, the "P.P." input is enabled for the gate closure.

Off: Multiple-flat function is disabled

On: Multiple-flat function is enabled

DSW4 "Forewarning" function: the flashing light switches on 3 seconds before the beginning of

every movement.

Off: Forewarning flashing light is disabled

On: Forewarning flashing light is enabled

DSW5 Photocell activation during the opening phase. If the photocell beam is obscured, the

motor stops. The movement starts after 1 second from the photocell reset.

Off: No activation

On: Temporary stop

DSW6 "Pedestrian" function: the "Open" input controls the temporary opening (adjustable from

about 1.5 to 10 metres).

Off: Operation as "Open Push-button"

On: Operation as "Pedestrian push-button"

DSW7 Enables or disables electronic braking. The activation of electronic braking allows the

reduction of the gate inertia and therefore of the stopping space.

Off: Electronic braking disabled

On: Electronic braking enabled

DSW8 Automatic closure.

Off: Automatic closure disabled

On: Automatic closure enabled

The selections which are preset with the Dip-Switches are memorized in the Stop phase. If a variation to the configuration of the Dip-Switches is carried out, the control unit operation is modified after the following stop.

Dip-Switch SW1 "Bypass" Function

The Dip-Switches "Bypass" allow to short-circuit the normally closed inputs that are not in use.

DSW1 Input ASA

Off= Enabled input

On= Disabled input (leave the gate open).

DSW2 Input ASC

Off= Enabled input

On= Disabled input (leave the gate open).

DSW3 Input FCC

Off= Enabled input

On= Disabled input.

DSW4 Input FCA

Off= Enabled input

On= Disabled input.

DSW5 Input FTC

Off= Enabled input

On= Disabled input.

DSW6 Input STOP

Off= Enabled input
On= Disabled input.

Programmable functions

The RI.10KI control unit is equipped with connector to communicate with the programming display. If the display is not used, the control unit can be programmed as follows:

The functions for which it is possible to choose between a range of values can be preset by using the programming push-button (PGM) together with the Dip-switches. The fixed values are indicated with "(def.)".

To store the programmable functions in memory, move the Dip-switches as shown in the table, then press the push-button PGM for at least 2 seconds. The light of the "PGM" LED, which normally flashes, will be steady. When the LED switches off, then the programming has been successfully carried out. At this point, the push-button can be released and the LED start flashing.

At completion of the programming procedure, move the Dip-switches to the normal positions.

This control unit performs the power circuit integrity test automatically. Should a fault be detected, the unit stops and indicates the fault through two blinks of the PGM led in rapid succession.

The triggering of the thermal switch is considered a fault in the power circuit, and once the thermal protection is reset, the control unit restarts automatically. If the control unit keeps on indicating a faulty operation, even when the motor has cooled down, try to momentarily switch power off.

Checking the integrity of the power circuit

The control unit has the possibility of checking the integrity of the power circuit (TRIAC). According to the factory setting, this function is disabled.

To check:

- Set the Dip-switches 1=ON and 8=ON
- Press PGM, the LED blinks twice briefly, then goes out.

With the control activated, in the event of a fault in the power circuit or of tripping of the protection, the control unit does not perform any kind of command.

To deactivate checking:

- Set the Dip-switches 1=ON and 8=OFF
- Press PGM until the blinking LED goes out.

With the control deactivated, even in the event of a malfunction in the power circuit the control unit still performs the command.

Dwell time for the automatic closure.

Dip-switch 1÷4= On/On/Off/Off

The dwell time is reset when the input FTC contact is opened or the Open input contact stays open.

Function

Dsw5	Dsw6	Dsw7	Dsw8	Seconds
Off	Off	Off	Off	5
On	Off	Off	Off	10
Off	On	Off	Off	15
On	On	Off	Off	20
Off	Off	On	Off	30
On	Off	On	Off	40
Off	On	On	Off	50
On	On	On	Off	60 (def.)
Off	Off	Off	On	80
On	Off	Off	On	100
Off	On	Off	On	120
On	On	Off	On	140
Off	Off	On	On	160
On	Off	On	On	180
Off	On	On	On	200
On	On On		On	220

Options

Operating time of the "Pedestrian" function.

Dip-switch 1÷4= On/Off/On/Off



Dsw5	Dsw6	Dsw7	Dsw8	Seconds
Off	Off	Off	Off	5
On	Off	Off	Off	10 (def.)
Off	On	Off	Off	15
On	On	Off	Off	20
Off	Off	On	Off	25
On Off		On	Off	30
Off	On	On	Off	35
On	On On Or		Off	40

Operating power.

Dip-switch 1÷4= Off/On/On/Off



Dsw5	Dsw6	Dsw7	Dsw8	Percent.
Off	Off Off		Off	Min. Pow.
On	On Off		Off	
Off	Off On		Off	
On	On On		Off	
Off	Off Off		Off	
On	On Off		Off	
Off	Off On		Off	
On	On On		Off	(def.)
Off	Off Off		On	
On	Off	Off	On	
Off	On	Off	On	
On	On	Off	On	
Off Off		On	On	
On	On Off		On	
Off	Off On		On	
On On		On	On	Max Pow.

Function

Programmable functions

Dip-switch 1÷4= Off/On/Off/Off



On= In case of failure of the protection devices, the system switches automatically to "Service Man" operating mode after pressing the push-button for 2 seconds.

Options

Off= In case of failure of the protection devices, the system cannot be activated even after pressing the push-button (def.).

DSW6

On= Slow down enebled. About 7 seconds before theend of the operating time, the control unit sends a slow down control signal.

Off= Slow down disabled (def.).

DSW7= Off

DSW8= Off

The work time is regulated with the following menu, after the motor has been started from the limit switch; 7 seconds before the set time has elapsed the control unit starts slowing down (if this has been selected). If the work time is modified before you have been able to see the correct operation of the control unit, you must make it perform a complete manoeuvre (that is with arrival on a limit switch and restarting from the same point). The intervention of the protection edges deactivates slowing down until the first subsequent complete manoeuvre (that is with arrival on a limit switch and restarting from the same point).

Operating time.

Dip-switch 1÷3= Off/Off/On



Dsw4	Dsw5	Dsw6	Dsw7	Dsw8	Seconds
Off	Off	Off	Off	Off	15
On	Off	Off	Off	Off	18
Off	On	Off	Off	Off	21
On	On	Off	Off	Off	24
Off	Off	On	Off	Off	27
On	Off	On	Off	Off	30
Off	On	On	Off	Off	33
On	On	On	Off	Off	36
Off	Off	Off	On	Off	39
On	Off	Off	On	Off	42
Off	On	Off	On	Off	45
On	On	Off	On	Off	48
Off	Off	On	On	Off	51
On	Off	On	On	Off	54
Off	On	On	On	Off	57 (def.)
On	On	On	On	Off	60
Off	Off	Off	Off	On	63
On	Off	Off	Off	On	66
Off	On	Off	Off	On	69
On	On	Off	Off	On	72
Off	Off	On	Off	On	75
On	Off	On	Off	On	78
Off	On	On	Off	On	81
On	On	On	Off	On	84
Off	Off	Off	On	On	87
On	Off	Off	On	On	90
Off	On	Off	On	On	93
On	On	Off	On	On	96
Off	Off	On	On	On	99
On	Off	On	On	On	102
Off	On	On	On	On	105
On	On	On	On	On	108

