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**INSTRUCTION MANUAL
FOR CONTROL PANEL
WITH SMART MICROPROCESSOR BOARD**

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INDEX

CE CERTIFICATE	pag.2
SAFETY INFORMATION	pag.3
SMART MICROPROCESSOR BOARD TECHNICAL FEATURES	pag.4
ASSEMBLY OPERATION	pag.5
MAGNETS AND SENSORS POSITIONING	pag.7
SMART PROGRAMMING PROCEDURE	pag.9
IMMEDIATE INFORMATIONS AND FAULT CLEARING	pag.10
FAULT HISTORY AND FAULT HISTORY CLEARING	pag.11
SMART BOARD LAYOUT	pag.12
OTHER MODALITY FUNCTIONS DESCRIPTION	pag.13
FAULTS DESCRIPTION	pag.14
PROGRAMMABLE TIMES TABLE	pag.15

COMPLIANCE CERTIFICATE



FOR ELECTRICAL DEVICES

The Company signer of the present document DECLARES, under its exclusive responsibility, that the apparatus to which this declaration refers is in compliance with the prescription of the following directives:

- 2004/108/CE Electromagnetic compatibility
- 2006/42/CE Machine directive

(*) With VVVF device use of shielded cables for motor power lines is required.

SAFETY INFORMATIONS



The control panel must be connected always with grounding system. If control panel is not correctly ground connected, may be caused person injury or death.



Do not connect power supply exceeding the working voltages. If excessive voltages are applied the control panel components will be damaged.



Only qualified person can put to use the system. The latter is responsible for correct grounding system connection, appropriately cables protection, and perfect operation, according to standard regulations, of all system safety devices.

ATTENTION: before starting assembly operation it is important to read this instruction manual.

ATTENTION: the guarantee is activated since the delivery time.

The control panel must not suffer any modification or tampering, penalty guarantee ending.

PELAZZA PEPPINO S.r.l

does not assume any responsibility for any damage to properties or persons caused by improper use.

SMART MICROPROCESSOR BOARD TECHNICAL FEATURES

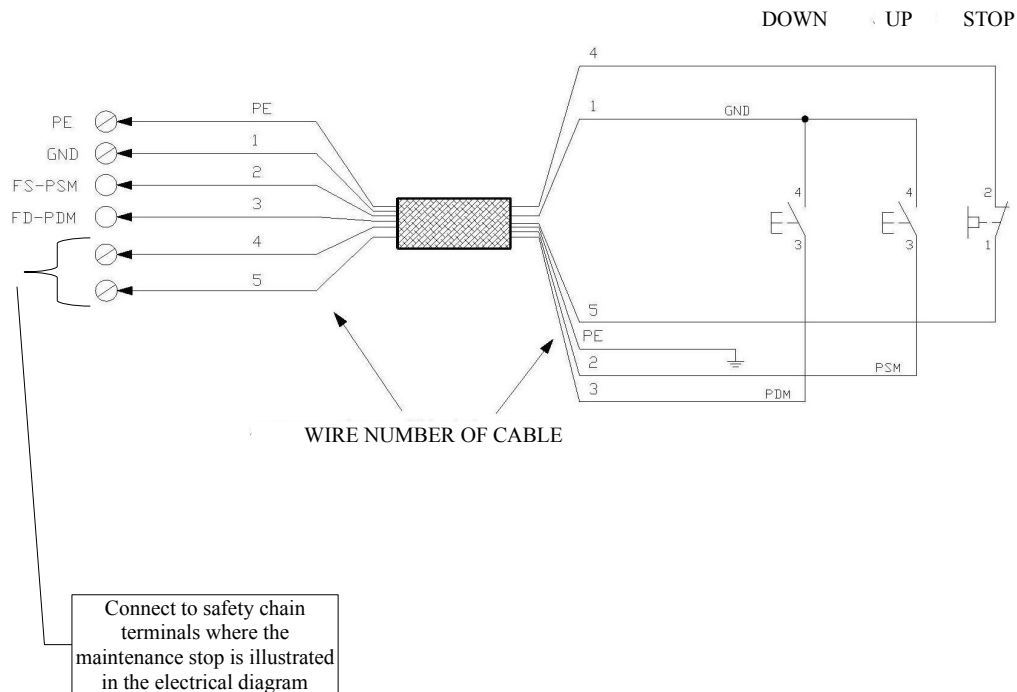
- Power supply 12 ÷ 28 Vdc.
- Safety chain operating voltage 24 ÷ 110 Vdc or Vac (EXC-ALT-CS optoinsulated inputs).
- Transistors output short-circuit protection, max load 0.5A.
- Relay output for run contactors and open/close door max load 5A.
- Parameters stored in EEprom memory (parameter values kept stored also without power supply).
- Operating temperature 0°C to + 50°C.
- Dimensions 105 x 200 mm.
- Weight 210g.
- Cabin and floor calls automatic manouvre.
- Cabin and floor calls hold to run manouvre.
- Floor calls automatic and cabin calls hold to run manouvre.
- Serial and parallel connection of car and floor operating panel.
- Display 1 pole per floor, binary coded, serial.
- Stops number up to 4 stops.

ASSEMBLY OPERATION

Connect the below devices following the control panel electrical diagram:

HYDRAULIC SYSTEM	ELECTRIC SYSTEM
<ul style="list-style-type: none">- Final limit- Cabin Stop- Frame- Cabin roof manhole- Photocell- Pit stop- Pit protection bar- Preliminary contacts- Cabin door contact- Locks- Provisory maintenance box (see following diagram)- Retiring cam (PR+, PR-)- Unit pump oil (M, M)- Solenoid electrovalves (VML, VMD)- Thermistor (GND, TM)- Make electric jumper for maintenance mode (MAN with GND)- Make electric jumper for re-phase magnetic sensor (RD with GND)	<ul style="list-style-type: none">- Preliminary contacts- Cabin door contact- Locks- Retiring cam (PR+, PR-)- Traction motor (U, V, W)- Motor brake (F1, F2)- Make electric jumper for rephase magnetic sensor (RD with GND)

PROVISORY MAINTENANCE BOX CONNECTION EXAMPLE
(only for hydraulic system. For electrical system up/down buttons are provided inside control panel)



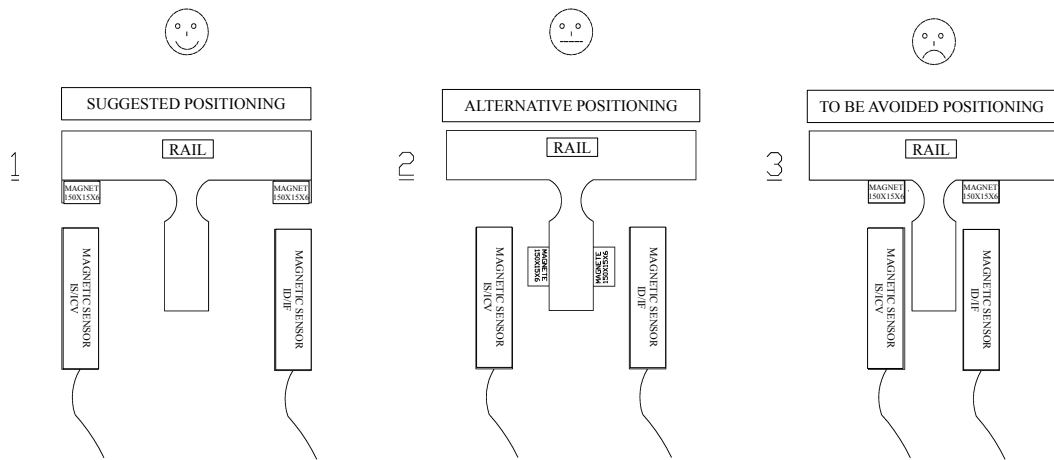
ATTENTION:

if the system does not move, executing a maintenance up or down command, check that:

- voltage between controller terminal GND and SMART inputs EXC-ALT-CS is present
- FS-PSM and FD-PDM SMART input leds are on when maintenance command up (PSM) or down (PDM) are pressed.
- RS and RD SMART inputs are on.

If everything is correct, check the IMMEDIATE INFORMATIONS, pressing button DATO.

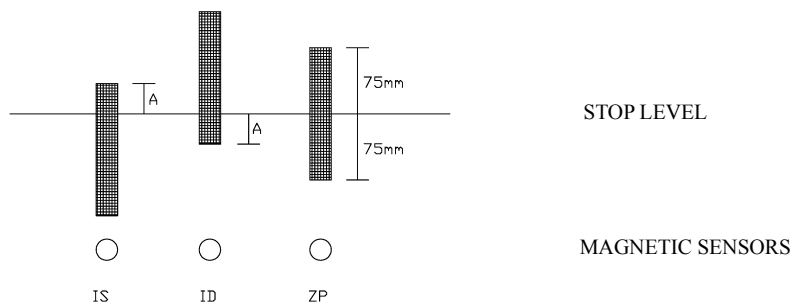
MAGNETS AND SENSORS POSITIONING



Pict. 1

In picture nr.1 are represented three magnets positioning methods, regard to the magnetic sensor.
It is confirmed that method 1 is the best magnet positioning. Avoid positioning of magnets in the corner of the rail.

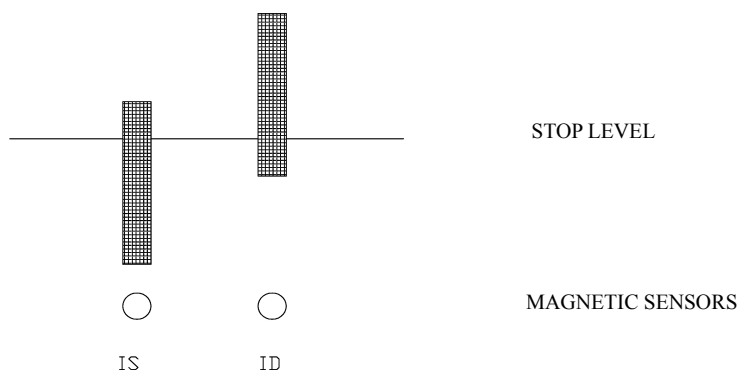
Configuration for hydraulic systems with automatic door



Pict. 2

In picture nr.2 are represented the right magnets positioning at stop level.
The centre of magnet ZP must be exactly at stop level.
In case of re-leveling function enabling, the quote "A" must not be greater than 20 millimeter.

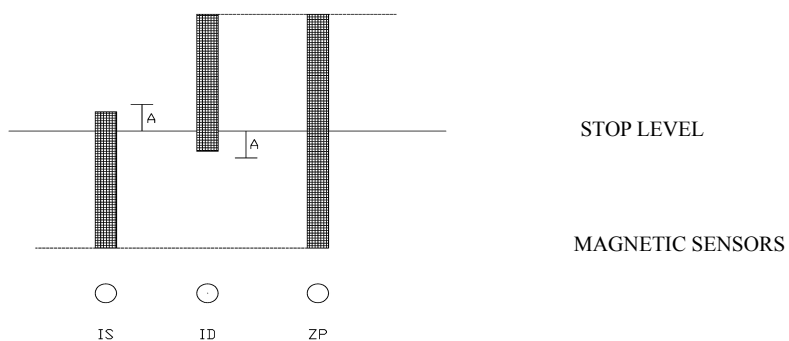
Configuration for electric systems with automatic door without re-levelling function



Pict. 3

In picture nr.3 are represented the right magnets positioning at stop level.
The elevator stops is made by IS and ID magnets overlapping: it is dependent on elevator speed.

Configuration for electrical and hydraulic systems without cabin door

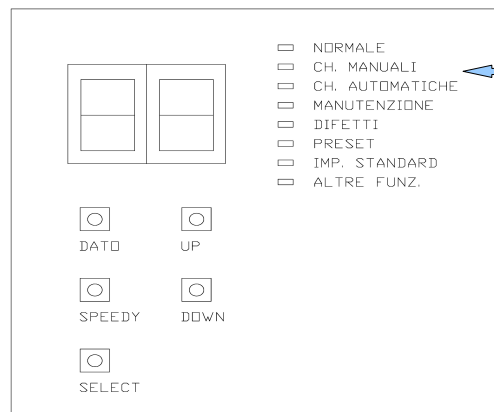


Pict. 4

In picture nr.4 are represented the right magnets positioning at stop level.
The zone covered by ZP magnets must be the same of IS and ID magnets covered zone.
In case of re-levelling function enabling, the quote "A" must not be greater than 20 millimeter.

SMART PROGRAMMING PROCEDURE

- 1) Keeping pressed SELECT button, press slowly more times the UP button until PRESET modality is selected.
- 2) Using UP or DOWN button, select the address to be modified and viewed.
- 3) When the desired address is selected, it is possible to display the relative value pressing DATO button.
- 4) To modify the value keep pressed DATO button and press UP or DOWN button to select the new setting.
- 5) When the desired value is reached release DATO button: if the memorization is correct the display will blink 3 times with the correct value.
- 6) Keeping pressed SELECT button, press slowly more times the DOWN button until NORMAL modality is selected.



The selected modality is indicated by led on

PROGRAMMING KEYPAD

IMMEDIATE INFORMATIONS

During the normal lift functioning, without fault indications, the following operation is possible:

- pressing DATO button, some conditions that might prevent the normal system function are displayed.

If none of these conditions is active, pressing DATO button the display will show '00'.

In order of priority the possible conditions are:

Code	Description
S41	First safety chain open (ALT off)
S42	Photocells or safety edges interrupted (CM)
S43	Open-door button pressed (PAP)
S44	Close-door button pressed (PCP)
S45	Overload active (CCS)
S48	Alarm input active (A+/ A-)
S49	Emergency mode active (EM)
S50	Maintenance up button pressed (PSM)
S51	Maintenance down button pressed (PDM)
S52	Maintenance mode active (MAN)
S53	Fireman function active (FS3)

High priority



Low priority

FAULT CLEARING

With SMART board in fault status, pressing SPEEDY button for a few seconds, the error status is erased and the system is reactivated if the cause was a blocking fault.

If the error status can not be erased pressing SPEEDY button, means that the error condition is still active.

FAULT HISTORY

SMART board stores up-to 32 errors, in sequence from the most recent to the oldest.

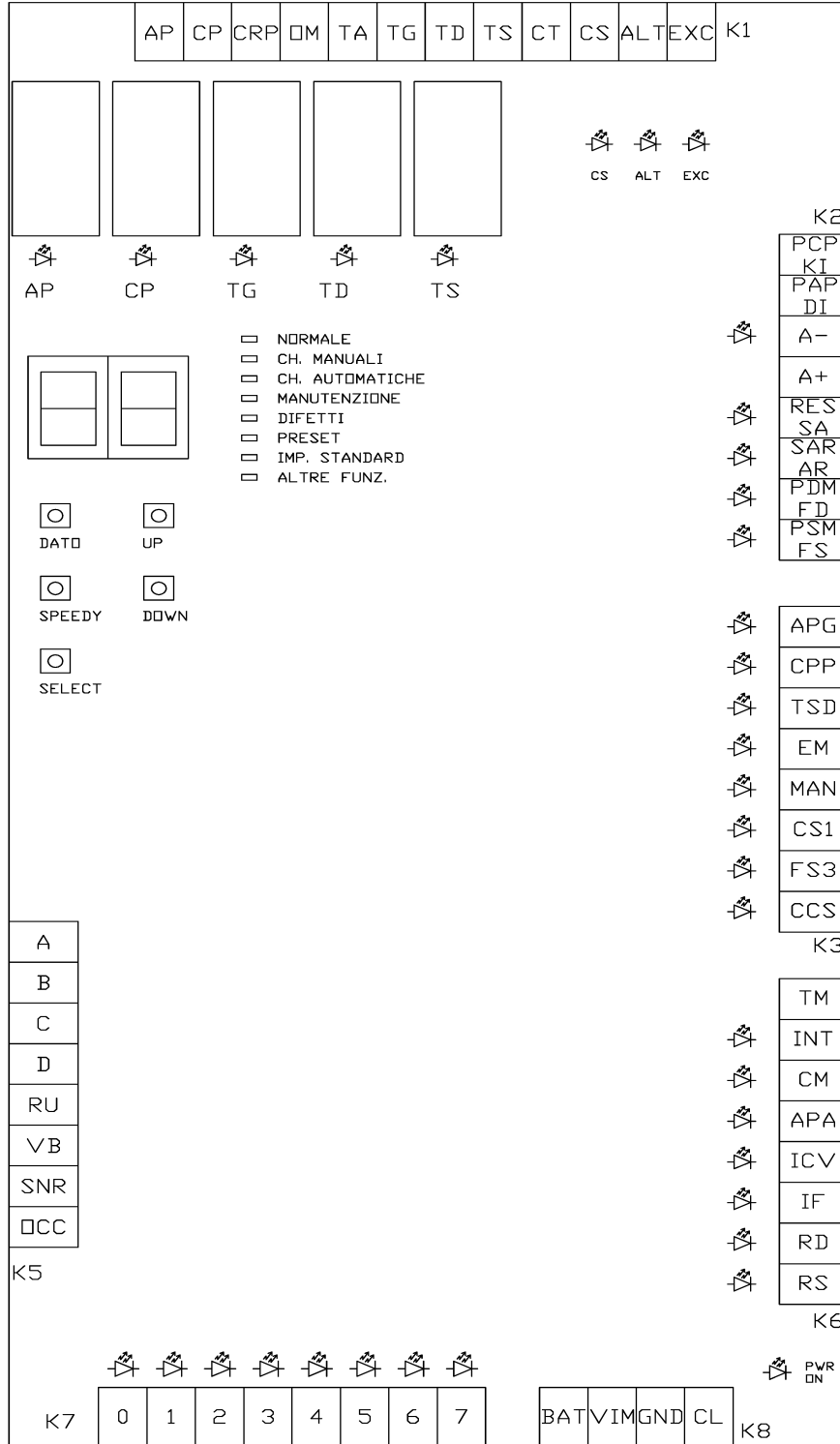
After selected DIFETTI modality, pressing simultaneously S1 and S2 buttons the last memorized error is shown. Releasing one or both buttons S1, S2 for more than one second the fault is cancelled.

Continuing for more times to press simultaneously S1 and S2 the whole sequence of faults is shown.

FAULT HISTORY CLEARING

For erasing the fault history, after selected DIFETTI modality, keep pressed SPEEDY button and hit three times the DATO button at intervals of around one second: at the third time keep press DATO until "99" is displayed to confirm the fault history clearing.

SMART BOARD LAYOUT



OTHER MODALITY FUNCTIONS DESCRIPTION

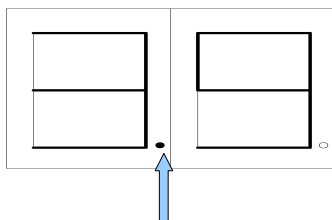
CH.MANUALI: allows to make a calls to bottom or top floor using the UP or DOWN button (calls could be automatic or hold to run, depending on the programmed manoeuvre).

CH.AUTOMATICHE: no function enabled.

MANUTENZIONE: allows to enable maintenance mode to move cabin using the UP and DOWN buttons.

IMP.STANDARD: no function enabled.

ALTRE FUNZIONI: allows to show battery voltage:



the displayed value corresponds to 3.9V: the left digit point ON means that must be added 10V to 3.9V: so, in this example, the measured battery voltage is 13.9Vdc.

FAULTS DESCRIPTION

NB = unblocking fault (if error condition is cleared, the fault code keeps blinking until new call is done)

B = blocking fault (the lift is blocked and for reactivation it is necessary to press SPEEDY (S2) button until the fault indication is cleared)

CODE	FAULT CATEGORY	FAULT DESCRIPTION
0-4	NB	Missed start due to malfunction of the safety contact or safety contact has been opened during the run and operator couldn't close the doors.
37	NB	IF , ICV sensor doesn't match doors zone sensor (APA), IF or ICV fault, or APA fault.
38	NB	Failed floors count ascending. IF/DB or ICV/DA sensors don't switch properly or wrong floors number (address '32' value greater than effective floors number). Stop at top or bottom floor.
39	NB	Failed floors count descending. IF/DB or ICV/DA sensors don't switch properly or wrong floors number (address '32' value greater than effective floors number). Stop at top or bottom floor.
40	NB	Stop zone not found: wrong placement sensors or IF fault if IF/ICV.
41	NB	DRS or DRD sensors always opened or wiring fault.
42	NB	Stop zone too short or stop delay too long (address '26').
43	NB	ICV slowing down sensor fault (IF/ICV configuration only). Stop on the floor on IF.
44	NB	'High speed' contactor's solenoid or doors opening relays jammed (APG open).
45	NB	Missed start during phasing procedure.
46	NB	'Low speed' contactor or closing doors relays jammed (CPP open).
47	NB	Ascent or Descent contactors jammed (TSD open).
51	NB	Descent contactor coil fault or wiring fault (TSD not open).
52	NB	Ascent contactor coil fault or wiring fault (TSD not open).
53	NB	'low speed' contactor coil fault or wiring fault (CPP not open).
55	NB-B	DRD always closed or RD input always to ground or wrong floors number (address 32 is less than effective floors number). At the second event in a row the fault becomes blocking.
56	NB-B	Motor thermal protection
58	NB-B	Value programmed not valid. Value stored is maintained.
59	NB-B	Lift stops' number faulty (> 32 or < 2). Value stored is maintained.
62	NB	Internal cabin serial fault or wiring fault.
68	NB	Short circuits on the outputs
80	NB	Maximum travel run time expired. It occurs after two consecutive times that the maximum travel time expires. The first time the maximum travel time expires one of the fault 76, 77, 78 or 79 occurs, according to the state the lift was, when the time TMC has expired.
81	NB-B	System over the finel limit (no voltage to EXC).
82	B	Re-levelling fault (re-levelling timeout).
83	B	Safety circuit fault (CS1 open).
88	B	Exit from maintenance mode.
90	NB	Firmware error or parameter value wrong
91	NB	SMART board self-reset

PROGRAMMABLE TIMES TABLE

PARAMETER	LIMIT VALUES	PARAMETER NAME	DESCRIPTION
16	2 – 45 sec.	TAP	Opening doors waiting time
17	2 – 45 sec.	TOP	Maximum time door opening command is active
18	2 – 45 sec.	TCH	Maximum time door closing command is active
20	0 – 99 dec.	TIG	Gong pulse duration (0 → disabled)
21	10 – 99 sec.	TMP	Maximum time between door closure and 'no car start' fault is signalled.
22	10 – 99 sec.	TMC	Maximum travel run time. Maximum timeout during which drive commands are activated between floors (they are reset next to the stopping zone and to the slowing down zone) If <80 → time=TMC; If >=80 → time=80+(TMC-80)*10; If =99 → travel run time control disabled.
24	0 – 99 dec.	TOC	Time during which the "Busy" signal is ON after start closing doors.
26	0 – 99 dec.	TRIF	Stop delay after magnetic sensors stop area detection
27	1 – 99 x 10 sec.	TSN	Waiting time since quenching 'busy' signal before moving the car to the programmed floor at address '34'.
28	1 – 99 min.	SBA	Battery detachment time after Emergency procedure activation (EM input) and no further A (alarm) button press. (99 → No detachment)
30	0 – 99 sec.	RIP	Re-levelling timeout (0 → control disabled) SAP function activation on PCP input if RIP is programmed to an even value
44	0 – 99 dec.	RITUSC	Delay time on switching contactors' control TS, TD, TP, TG, RCP, RAP
45	0 – 99 dec.	RITING	Delay time on control inputs EXC, ALT, CS, RD, RS, TSD, APG, CPP, EM, CS1. delay reverse direction driving
46	0 – 99 cent.	LETT	Rebound time on calls