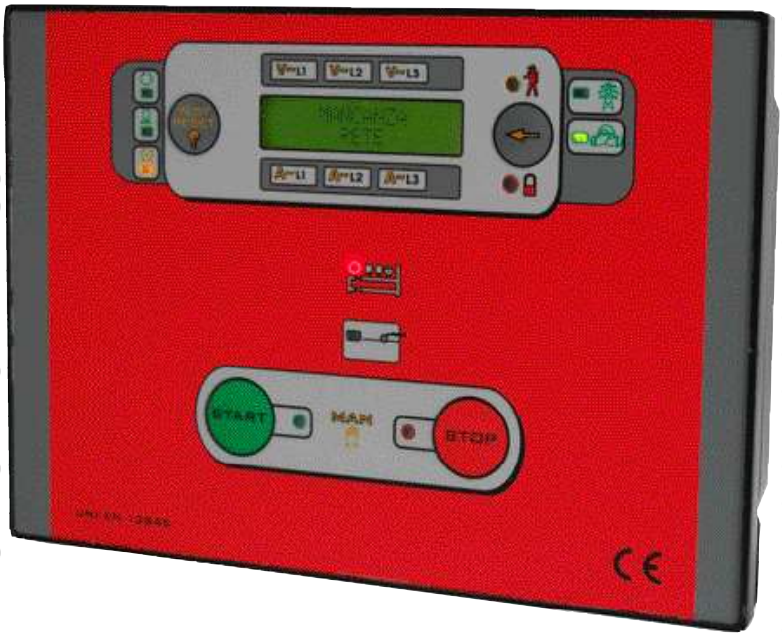
FIRE-FIGHTING ELECTRIC PUMP CONTROL UNIT IN CONFORMITY TO UNI EN 12845 STANDARD TYPE CEA-12845-485

INSTRUCTION AND USER MANUAL



COMPLETE OF:

- 3 MAINS VOLTMETERS
- 3 AMMETERS MAX 1000A (POSSIBILITY FOR THE CONNECTION OF A SINGLE AMMETER)

SIMULTANEOUS READING

- MAINS FREQUENCY METER (50/60 HZ)
- WATTMETER (ACTIVE POWER)
- VARMETER (REACTIVE POWER)
- VOLTAMMETER (APPARENT POWER)
- COSPHIMETER (POWER FACTOR)
- TOTAL HOUR METER (TOTAL HOURS OF PUMP OPERATION)
- PARTIAL HOUR METER

- STAR/DELTA START COMMAND
- IMPEDANCE START COMMAND
- BUTTON FOR TEST OF THE WARNING LIGHTS
- STARTING STOP BUTTONS
- HISTORICAL REPORT

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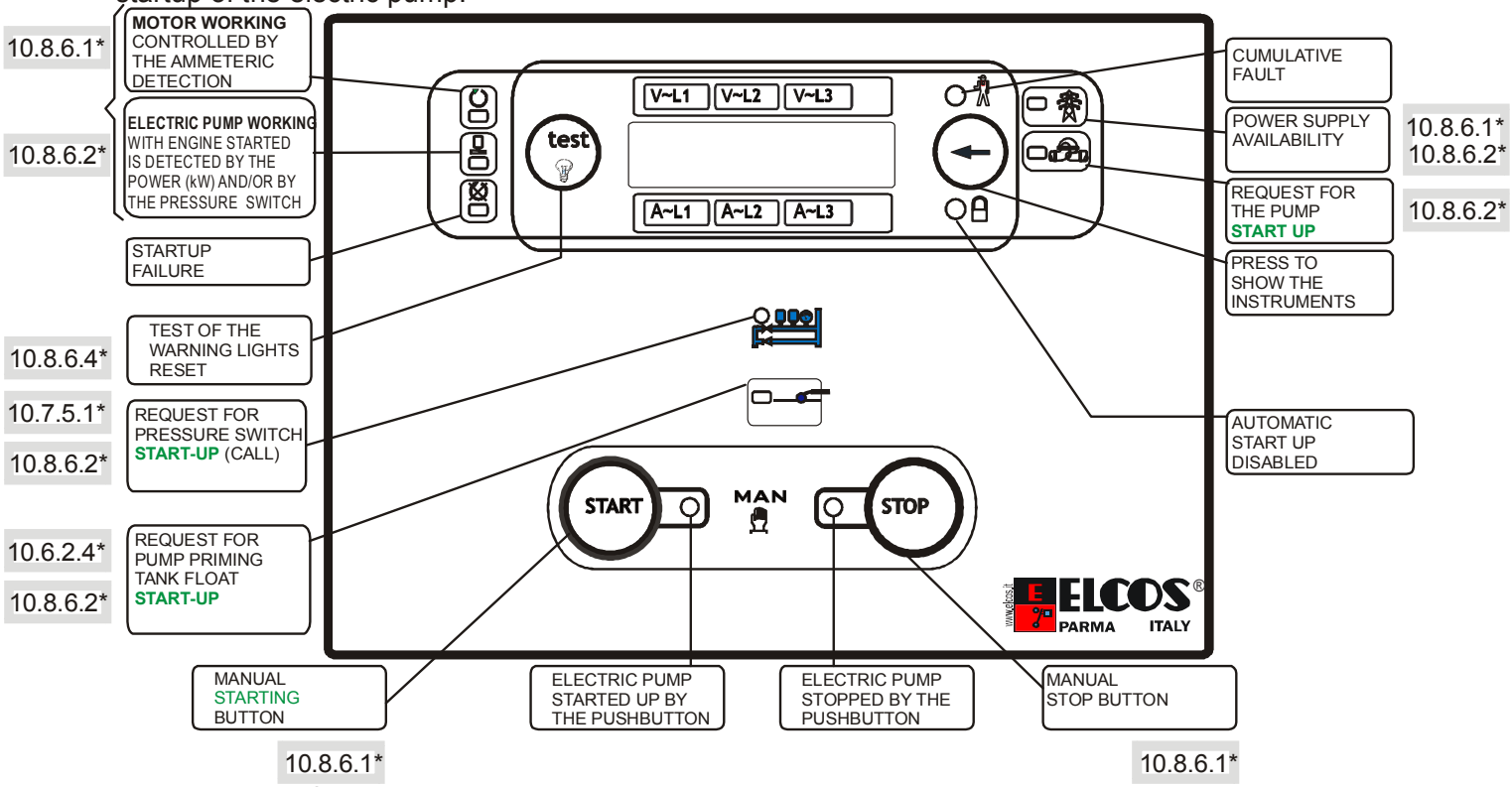
BRIEF INSTRUCTIONS

It is used to equip switchboards for fire-fighting electric pump start-up in compliance with Standard **UNI EN 12845**. It has a monitoring function and controls the contactors for the automatic and manual startup of the electric pump.



*PARAGRAPH NUMBER (OF REGULATION EN12845) TO CONSULT

INSTRUMENTS

• **THREE MAINS VOLTMETERS**	For three-phase voltages up to 570 V
• **THREE AMMETERS**	Compatible with the ammeteric transformers type 30/5, 40/5, 50/5, 60/5, 80/5, 100/5, 200/5, 150/5, 250/5, 300/5, 400/5, 500/5, 600/5, 800/5, 1000/5.
• **FREQUENCY METER**	From 0 Hz to 85 Hz for alternating voltages with amplitude greater than 20V~.
• **WATTMETER**	
• **VARMETER**	
• **VOLTAMMETER**	Displays apparent power up to 750 KVA.
• **COSPHIMETER**	
• **TOTAL HOUR METER**	With four figures and a maximum reading (hours and minutes) 9999
• **PARTIAL HOUR METER**	Displays with four figures and a maximum reading (hours and minutes) 9999.

HISTORY AND REVISIONS

Date	REVISION level	Description	Page
December 2007		See manual without revision	
January 2008	1.15	Weekly test We have removed the connections with terminals 15 16 17	enclosure C (Reserved to the manufacturer)
		Cumulative fault is flashing	8
		The automatic starting switched-off condition enables the cumulative fault led	
	1.16	Zeroing historical report (visible with remote management)	enclosure F (Reserved to the manufacturer)
		Stopping at the reopening of the float of the priming tank	enclosure G
		Inclusion - exclusion of the stopping from priming float	enclosure A
		Stopping operation UNI10779 with switch AUTOMATIC START UP ENGAGED	5
April 2008	1.17	Internal use	
July 2008	1.18	Compatibility with Modem AMD-103	
April 2009	1.19	Relay general alarm and added the programming of the T.A. 150/5	2 - 6 - 7 - 8
August 2009	1.20	INTERNAL USE. AUTOMATIC START-UP MESSAGE DISABLED in phones no. 2 and 3.	
May 2010	2.00	Portuguese added Single- and three-phase mains voltage	7
September 2012	2.03	Weekly automatic test – stop during the test. During the test an option is given to disable switch-on of the REQUEST FOR PUMP START-UP light and switching of the GENERAL ALARM relay. Procedure run to show and reset the events history.	enclosure C enclosure E 10

FUNCTIONS SWITCHING OFF

MOTOR IN OPERATION Checked by the ammeteric detection

It is detected when the pump current is higher than the threshold set for the entire duration of the intervention delay.

Setting field 0 ÷ 100% (MAX 1200A) Factory setting 8,5 A.

1 ÷ 10 SEC. / 3 SEC. } intervention delay

ON 2 Move DIP switch 2 to ON

MOTOR IN OPERATION (A)

Press to display

Threshold 8,5 A
Delay 3 sec.

• Increases START STOP • Decreases

Press when the arrow is next to the parameter to be modified

ON 2 Move DIP switch 2 to OFF

8,5 A
3 sec.

Press and wait for PROGRAMMED to be written.

START UP FAILURE (kW)

KM-△ or KM-I

When the contact of the control unit is closed, the start up failure is detected when the value of power (Kw) of the electric pump, remains lower than the programmed threshold for the whole of the intervention delay time.

Setting field 0,1 ÷ 100% MAX 690kW
Factory setting (Automatic Calibration, see page 7)

1 ÷ 120 SEC. / 70 SEC. } intervention delay

ON 2 Move DIP switch 2 to ON

STARTUP FAILURE (kW)

Press to display

Threshold 0,1 (Kw)
Delay 70 sec.

• Increases START STOP • Decreases

Press when the arrow is next to the parameter to be modified

ON 2 Move DIP switch 2 to OFF

8 (Kw)
70 sec.

Press and wait for PROGRAMMED to be written.

STARTUP FAILURE CONTROLLED BY THE PUMP PRESSURE SWITCH

With engine started, it is detected when the pump pressure switch does not close and the intervention delay has elapsed.

INTERVENTION DELAY

Setting field 0 ÷ 120 SEC.
Factory setting 70 SEC. } intervention delay

ON 2 Move DIP switch 2 to ON

STARTUP FAILURE BY PRESS. SWITCH

Press to display

Delay 70 sec.

• Increases START STOP • Decreases

Press to change the delay

ON 2 Move DIP switch 2 to OFF

70 sec.

Press and wait for PROGRAMMED to be written.

ANOMALIES BASIC TABLE

ALARMS INDICATED ON DISPLAY	INTERVENTION DELAY (SECONDS)	THRESHOLDS		INTERVENTION DELAY SECONDS		STORES THE FUNCTION	**INTERVENTION OCCURS WHEN**:
		SETTING FIELD	FACTORY SETTING	ADJUSTMENT RANGE	FACTORY SETTING		
MAINS UNDER-FREQUENCY	10 AFTER THE THRESHOLD IS EXCEEDED	20 ÷ 60Hz	47,5 Hz	0 ÷ 10	5	NO	Mains frequency remains lower than the programmed threshold for the whole of the intervention delay time
MAINS OVERFREQUENCY	ALWAYS ACTIVE	51 ÷ 85Hz	60 (50Hz) 72 (60Hz)	0 ÷ 5	2	NO	Mains frequency remains above the programmed threshold for the whole of the intervention delay time
MAINS UNDERVOLTAGE	"	100 ÷ 400V	356V Three-ph. 205V Single-ph.	1÷ 180	5	NO	At least one phase has a value lower than the programmed threshold and the intervention delay time has elapsed
MAINS VOLTAGE PRESENT	"	100 ÷ 500V	360V Three-ph. 208V Single-ph.	1÷ 180	5	NO	The three phases stay permanently above the programmed threshold for the whole of the intervention delay time
MAINS OVERVOLTAGE	"	200 ÷ 570V	444V Three-ph. 257V Single-ph.	1 ÷ 10	3	NO	At least one phase remains above the programmed threshold for the whole of the intervention delay time
STARTUP FAILURE DETECTED BY POWER (kW)	BY CLOSING THE CONTACT KM-△ KM-I 24 25 CEA-12845	0,1 ÷ 100% MAX 690kW	See AUTOMATIC CALIBRATION	1 ÷ 120	70	YES	The kilowatts remain lower than the programmed threshold for the whole of the intervention delay time
STARTUP FAILURE CONTROLLED BY THE PUMP PRESSURE SWITCH	ALWAYS ACTIVE			1 ÷ 120	70	YES	The pump pressure switch does not close and the intervention delay has elapsed
PUMP OVERCURRENT	"	0 ÷ 100% (MAX 1000A)	50 A (T.A. 50/5)	1 ÷ 30	15	YES	Current of the pump remains above than the programmed threshold for the whole of the intervention delay time

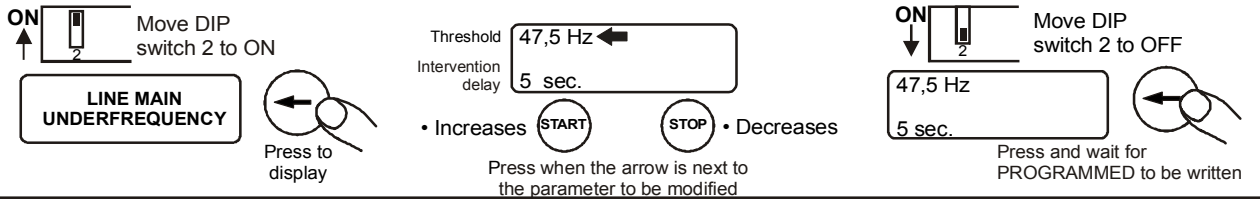
INDICATIONS OF ALARM

The alarms do not cause the pump to stop, they are indicated by the relative signal, by the cumulative led , by the message displayed and they switch over the contact (availability of electric power) to activate remote monitoring.

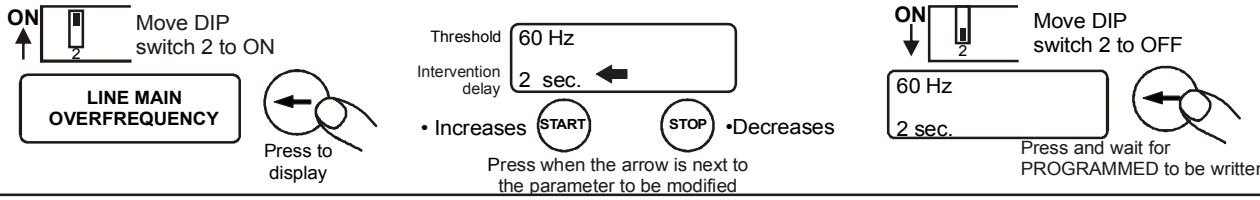
PROGRAMMINGS

It is possible to modify the thresholds and the intervention delay.

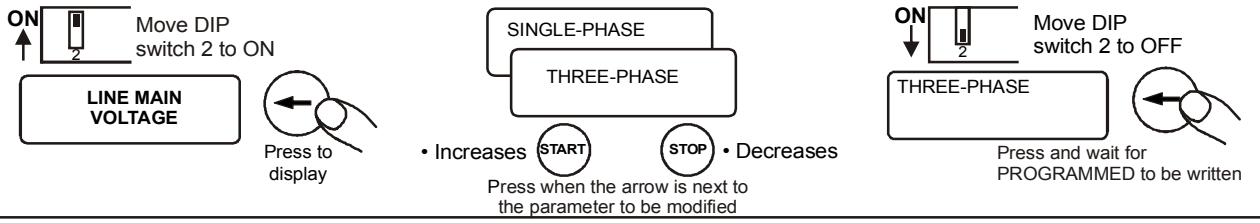
MAINS UNDERFREQUENCY. Setting field 20 ÷ 60Hz — 0 ÷ 10 sec.
Factory setting 47,5 (50Hz) 57 (60Hz) — 5 sec.



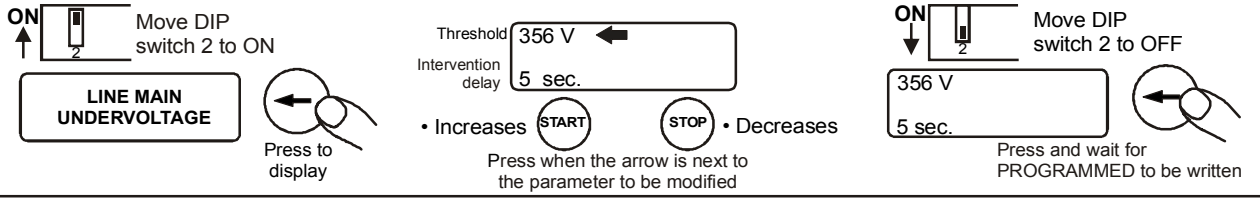
MAINS OVERFREQUENCY. Setting field 51 ÷ 85Hz — 0 ÷ 5 sec.
Factory setting 60 (50Hz) 72 (60Hz) — 2 sec.



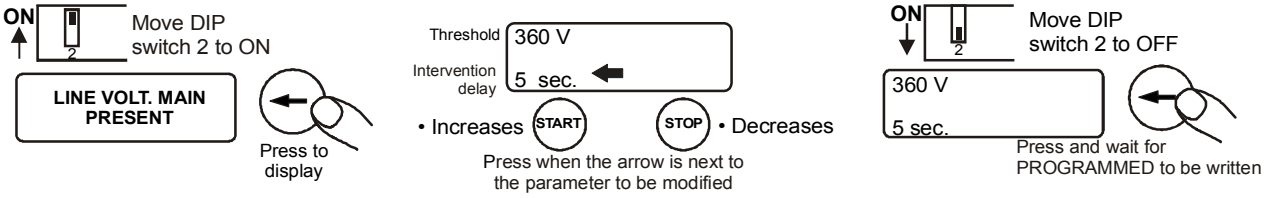
MAINS VOLTAGE. Factory setting THREE-PHASE.



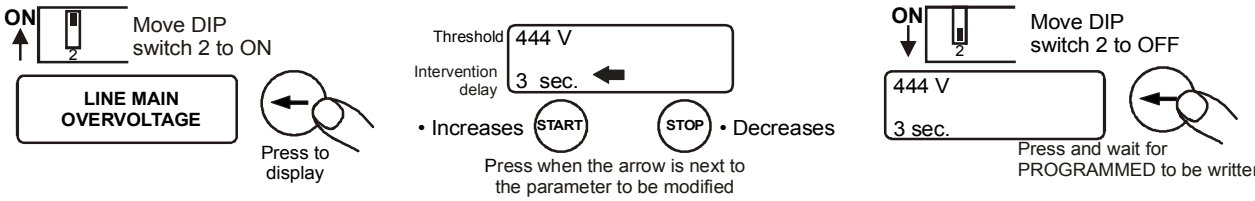
MAINS UNDERVOLTAGE. Setting field 100 ÷ 400V — 1 ÷ 180 sec.
Factory setting 356V — 5 sec.



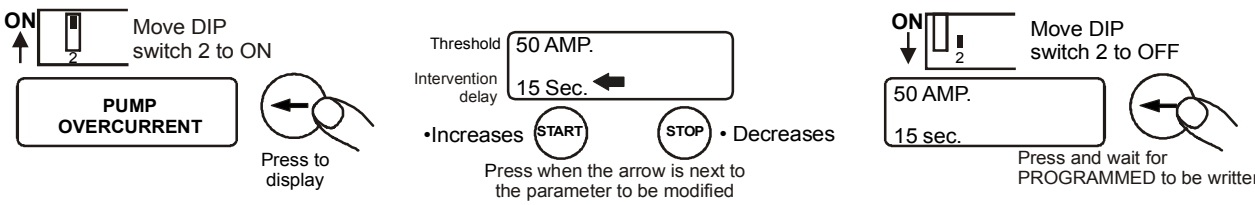
MAINS VOLTAGE PRESENT. Setting field 100 ÷ 500V — 1 ÷ 180 sec.
Factory setting 360 V — 5 sec.



MAINS OVERVOLTAGE. Setting field 200 ÷ 570V — 1 ÷ 10 sec.
Factory setting 444 V — 3 sec.

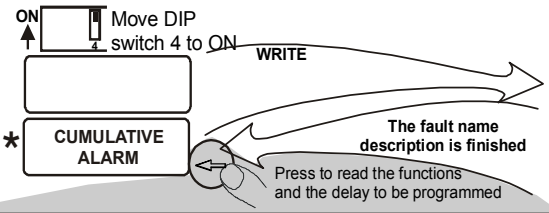


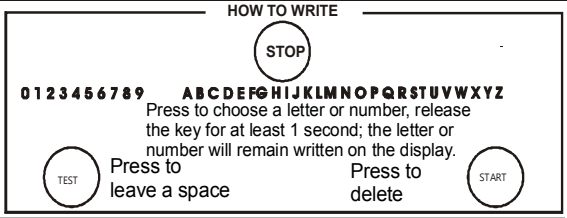
PUMP OVERCURRENT. Setting fielde 0 ÷ 100% — 1 ÷ 30 sec.
Factory setting 50 A — 1 5 sec.



AVAILABLE FAULT

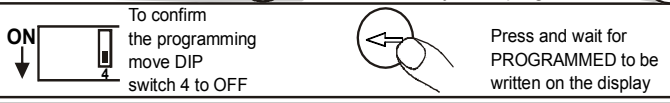
THE NEW DESCRIPTION OF THE NAME OF THE FAULT IS NOT TRANSLATED.





FUNCTIONS TO BE PROGRAMMED DESCRIBED ON THE DISPLAY		DESCRIPTION
NOT STORED *	STORED	Choice of whether to store the cause of the alarm.
ACTIVE WITH THE OPEN CONTACT *	**ACTIVE** WITH THE CLOSED CONTACT	The probe intervenes when it closes or opens his contact
ACTIVATION * ALWAYS ACTIVE	**ACTIVATION** ACTIVE RUNNING	Instant of probe activation
CONTACT (42 -43) **CLOSING NO**	**CONTACT** (42-43) * **CLOSING YES**	Intervention lights up the cumulative flashing led and closes the contact on the terminals 42 43
INTERVENTION DELAY (ADJUSTABLE) 0 ÷ 60 SEC. * FACTORY SETTING 10 seconds for the WATER RESERVE		The intervention occurs when the intervention delay has elapsed

START Press to modify the functions and the delay to be programmed STOP



FUNCTION AUTOMATIC STOP	JUMPER	JUMPER NOT CUT	JUMPER CUT
ALLOWED BY THE STANDARD **UNI 10779 July 2007** When necessary, for any activities that are not constantly manned, automatic stopping is permitted, providing the pumping system is used exclusively by the hydrant system.	B	(Factory setting) AUTOMATIC STOP NOT ACTIVATED	(During the led test **UNI 10779** appears on the display) AUTOMATIC STOP ACTIVATED
OPERATION (With automatic start up engaged) The electric pump stops 20 mins. after the contacts of the call pressure switches have been permanently closed. (The display continuously shows how much time is left before the electric pump stops). The electric pump is not stopped when the switch is positioned on AUTOMATIC START UP EXCLUDED. When the switch is positioned back to AUTOMATIC START UP ENGAGED, the electric pump continues to run.			

STOP WAITING TIME (UNI 10779).

SETTING FIELD 1 ÷ 30 minutes
FACTORY SETTING 20 minutes.

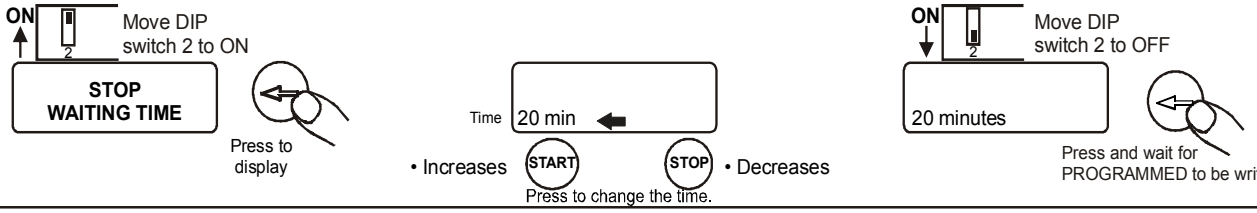
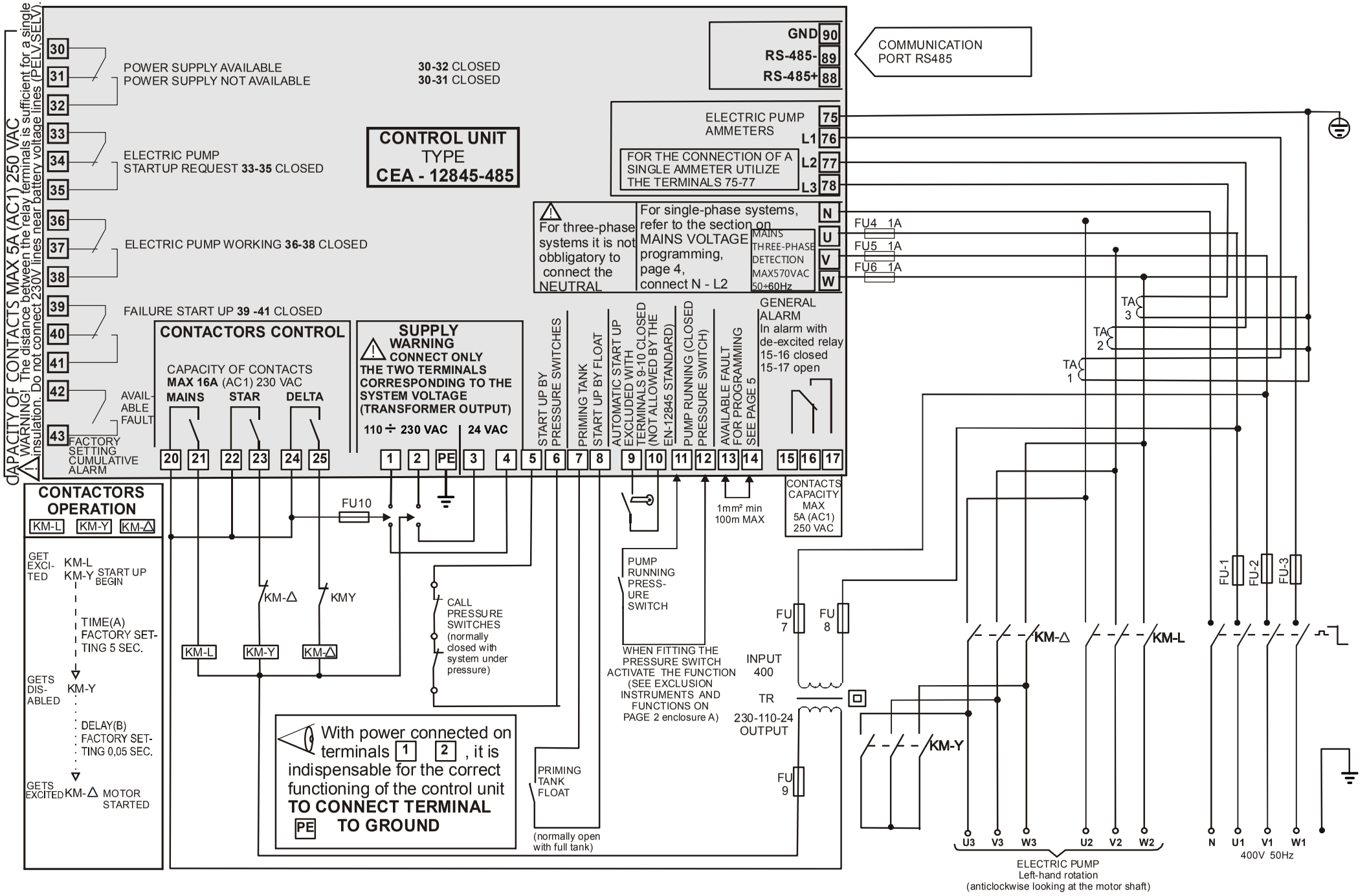


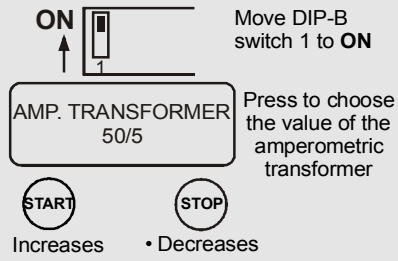
DIAGRAM OF CONNECTION STAR/DELTA START UP WITH THE FIRE-FIGHTING ELECTRIC PUMP CONTROL UNIT TYPE CEA-12845-485

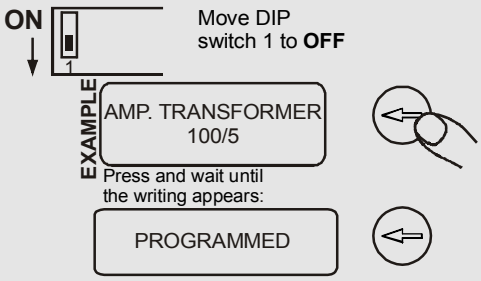


NECESSARY PROGRAMMING OPERATIONS

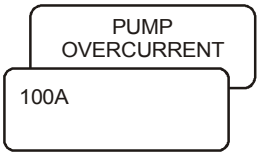
Selection of amperometric transformer and entry of current value

It is possible to select ammeteric transformers type 30/5, 40/5, 50/5, 60/5, 80/5, 100/5, 150/5, 200/5, 250/5, 300/5, 400/5, 500/5, 600/5, 800/5, 1000/5
Maximum reading of 1000 A or 110% of the base scale current of the chosen transformer.





Having programmed the Ammeteric Transformer the PUMP OVERCURRENT threshold is automatically adjusted to 100% of the nominal Ammeteric Transformer value
To manually modify the threshold refer to page 4.



ENTERING THE CURRENT VALUE

Read the **current (A)** value on the motor plate and enter the values in the control panel using the following procedure.

AUTOMATIC CALIBRATION

Following the described procedure, the thresholds of the following will be automatically programmed:
MOTOR RUNNING and START UP FAILURE

PUMP WORKING (Controlled by the ammeteric detection)

Intervention occurs when the pump current remains above the set threshold for the whole of the intervention delay time (5 sec).

AUTOMATIC CALIBRATION LESS 50%
WITH PUMP STARTED WITH FEED CLOSED

EXAMPLE

PUMP STARTED WITH FEED CLOSED	PUMP IN OPERATION
17 A	8,5 A

START UP FAILURE
(Controlled by the value of power kW)

Intervention occurs when the value of power (Kw) remains lower than the programmed threshold for the whole of the intervention delay time (5 sec.)

AUTOMATIC CALIBRATION LESS 20%
WITH PUMP STARTED WITH FEED CLOSED

EXAMPLE

PUMP STARTED WITH FEED CLOSED	START UP FAILURE
10 Kw	8 Kw

TO CHANGE THE THRESHOLDS MANUALLY REFER TO PAGE 3.

PROGRAMMING

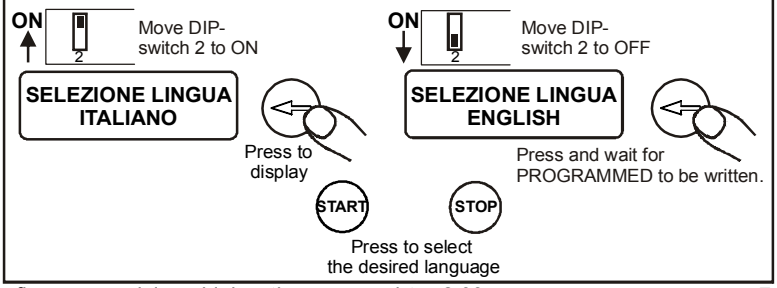
Start the primed pump with feed closed

Press the three buttons to display AUTOMATIC CALIBRATION, hold down and wait for PROGRAMMED to appear on the display.

DIP-SWITCH

	NECESSARY PROGRAMMING OPERATIONS AMMETERIC TRANSFORMER	CHOICE • LANGUAGES •TIMES •THRESHOLDS	INSTRUMENTS AND FUNCTIONS EXCLUSION	AVAILABLE PROTECTION	NOT USED	NOT USED BY EN12845 STANDARD	MAINS FREQUENCY	START UP SYSTEMS
ON							60 Hz	IMPEDANCE
	1	2	3	4	5	6	7	8
OFF							50 Hz	STAR TRIANGLE

LANGUAGE SELECTION. The factory set language is ITALIAN; the languages that can be selected are: ENGLISH - SPANISH - GERMAN - FRENCH - PORTUGUESE



OPERATION

PREPARATION FOR AUTOMATIC

Active with the switch (externally connected) AUTOMATIC STARTUP ENGAGED (from this position it is possible to remove the key). Setting the switch to excluded, the automatic start is blocked. This exclusion is signalled by the flashing warning light and by the following message displayed on the screen: AUTOM. STARTING EXCLUDED.

AUTOMATIC

When the equipment detects the closure of the "starting call" contact (pressure switch), the electric pump set begines to start up. The control unit checks (without commanding the stopping of the electric pump unit) for possible motor faults, during its operation.

AUTOMATIC - MANUAL STARTING

AUTOMATIC

This takes place when the CALL pressure switch contacts are opened, which is shown by a fixed light coming on. After the pressure switches have closed, the indicator starts to flash. Automatic starting also happens when the pump priming float contact is closed, which is shown by a fixed light coming on .When the contact opens, the indicator starts to flash.

Flashing lights stay on for the whole time the motor is running

MANUAL

With START button.

MOTOR IN OPERATION

- It is detected when the motor current is higher than the threshold set for the entire duration of the intervention delay.

ELECTRIC PUMP IN OPERATION

- With motor started it is detected by the value of power (kW) and by closing of the pump pressurized-pressure switch.

STOP

THE ENGINE CAN ONLY BE TURNED OFF MANUALLY.

It is not possible to stop it when the call from the pressure switches is present and automatic start up engaged.

• With call from the pressure switches present

Pressing the STOP pushbutton, the following message is displayed on the screen: DON'T SWITCH OFF IN EVENT OF FIRE STOP EXCLUDED.

• With call from the pressure switches absent.

Pressing the STOP pushbutton, the following message is displayed on the screen: DON'T SWITCH OFF IN EVENT OF FIRE.

ALARMS

The alarms are indicated on the display by the relative led and by a cumulative flashing led and the switching of relay GENERAL ALARM .

They are divided into two groups:

MOTOR SUPPLY ALARMS
- voltage value failure or lowering even on just one phase
- incorrect phase sequence

MOTOR ALARM
- overcurrent

PLANT ALARM
- working pump pressure switch fault

RESTORING

This is done by pressing the RESET (test Reset) pushbutton: In this way, the protections are activated and the startup cycle controlled by the priming tank float is released.

START UP FAILURE

is detected with at least one of the following functions after a request for automatic starting of the motor

it is not controlled through amperometric detection

- when the value of power (kW) of the motor of the pump remains lower than the programmed threshold for the whole of the intervention delay time .

REMOTE AUXILIARY FUNCTIONS

		INTERVENTION SWITCHES THE RELAY:	INTERVENTION IS INDICATED BY THE SIGNAL
- ELECTRIC POWER NOT AVAILABLE	It is detected when at least one of the following faults occurs: • voltage value failure or lowering even on just one phase • phase sequence not correct (for three-phase systems only) • blown switchboard fuses • automatic start up excluded • alarms	30 31 32	
- ELECTRIC PUMP START UP REQUEST	It is detected in two ways: • at the opening of the call pressure switches • at the closing of the pump priming tank float contact	33 34 35	
• ELECTRIC PUMP IN OPERATION	see description	36 37 38	
• START UP FAILURE	see description	39 40 41	

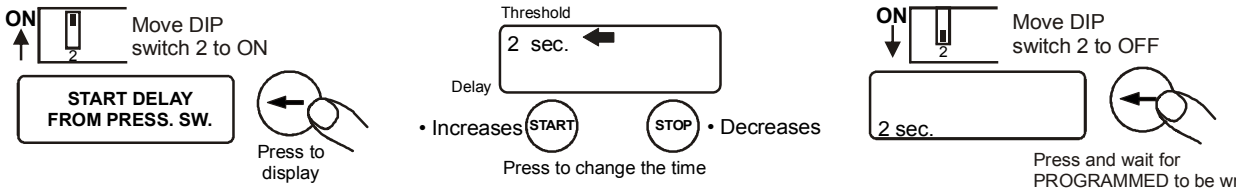
PARTIAL HOUR METER

Press to select (PARTIAL HOUR METER) the operating hours and minutes of the last run of the electric pump The hours indicated are zero-set the next time the motor pump is started up.

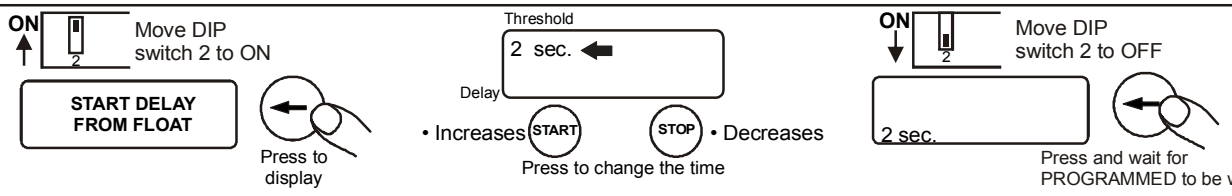
PROGRAMMABLE TIMES

	DESCRIPTION	SECONDS	
		SETTING FIELD	FACTORY SETTING
	DELAYED START AFTER OPENING OF THE CONTACTS OF THE CALL PRESSURE SWITCHES	0÷120	1
	DELAYED START AFTER CLOSING OF THE CONTACT OF THE PRIMING TANK FLOAT	0÷120	1
STAR/DELTA START UP	TIME (A) STAR CLOSING	1÷60	5
STAR/DELTA START UP	TRANSITION DELAY (B) (PAUSE) IN SWITCHOVER FROM STAR TO DELTA	0÷1	0,05
IMPEDANCE START UP	TIME (C) FROM STAR CONTACTOR OPENING TO LINE CONTACTOR CLOSING	1÷60	5
IMPEDANCE START UP	TRANSITION DELAY (D) (PAUSE) BETWEEN STAR CONTACTOR OPENING, LINE CONTACTOR CLOSING AND IMPEDANCE CONTACTOR OPENING	0÷1	0,05

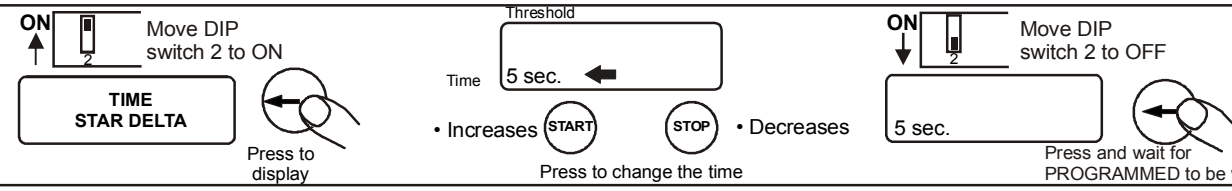
DELAYED START AFTER OPENING OF THE CONTACTS OF THE CALL PRESSURE SWITCHES



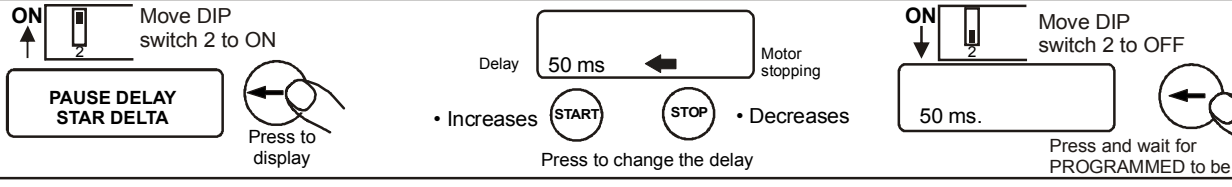
DELAYED START AFTER CLOSING OF THE CONTACT OF THE PRIMING TANK FLOAT



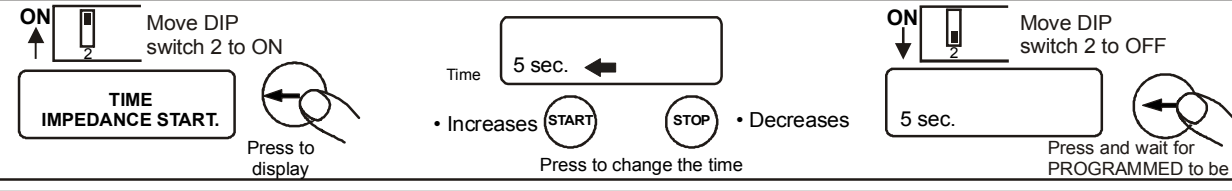
TIME (C) FROM STAR CONTACTOR OPENING, TO DELTA CONTACTOR CLOSING.
STAR/DELTA START UP



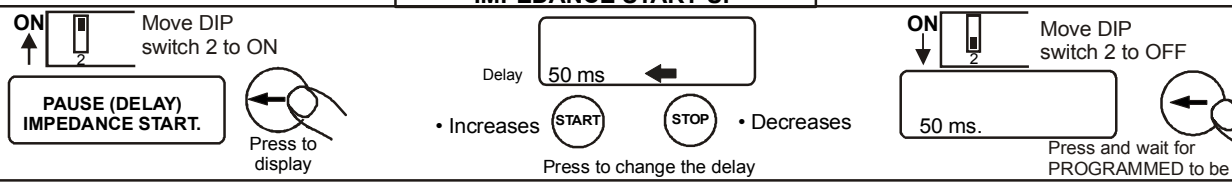
TRANSITION DELAY (B) (PAUSE) IN SWITCHOVER FROM STAR TO DELTA
STAR/DELTA START UP



TIME (C) FROM STAR CONTACTOR OPENING TO LINE CONTACTOR CLOSING
IMPEDANCE START UP



TRANSITION DELAY (D) (PAUSE) BETWEEN STAR CONTACTOR OPENING, LINE CONTACTOR CLOSING AND IMPEDANCE CONTACTOR OPENING
IMPEDANCE START UP



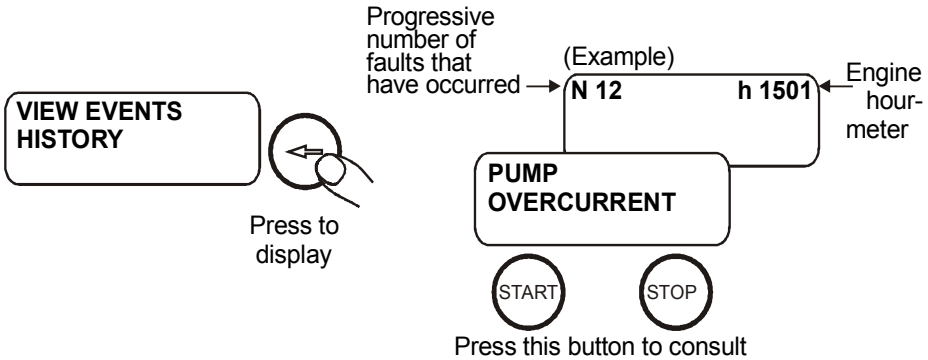
VIEW THE EVENTS HISTORY

Data relating to the latest 100 events is collected.

LIST OF EVENTS:
- START UP BY PRESS. SWITCHES
- START UP BY PRIMING
- START UP BY BUTTON
- START UP BY WEEKLY TEST
- STOP MANUAL
- STOP AUTOMATIC
- SENDES ALARMS

TO BE CARRIED OUT WITH ENGINE OFF

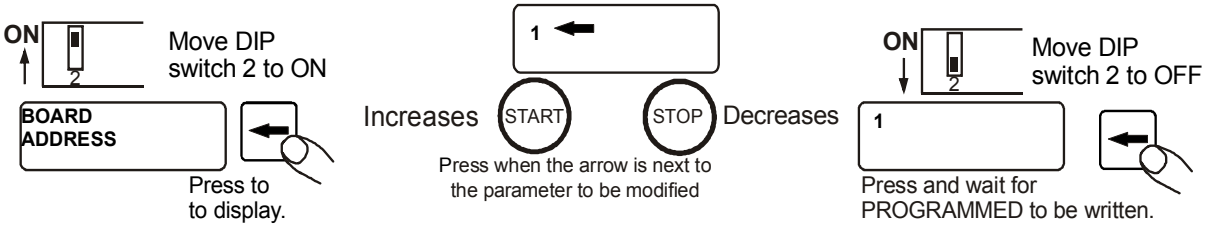
Move DIP switches 2-5 to ON



WARNING: when never the mains voltage is cut off from the control unit, the events history is reset.

Move all the DIP switches back to OFF.

BOARD ADDRESS. Factory preogramming 1.



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CONTROL AND MONITORING UNIT ELECTRIC PUMP UNIT IN CONFORMITY TO EN12845 STANDARD
TYPE CEA-12845-485

Carries out the automatic control and monitoring functions of a fire-fighting electric pump unit. It has been designed to be installed only inside on an electrical panel as a single unit and so that it can be connected to other components (, fuses, contactor, etc.) which the installer will have available to complete the plant.

NOTICES

Warning:
Components carrying dangerous voltage levels

Only assigned and suitably trained personnel are allowed access to the control unit.
No maintenance operations are permitted unless the plant is disconnected from the mains and the battery.
As an additional safety measure, the plant phases should be short-circuited and earthed.
Not withstanding the above, only assigned and trained personnel can perform the following operations with the plant on:

- make a visual inspection of the control unit, the connections and their markings.
- measure the voltage and/or current values.

These interventions, however, must be performed using equipment which ensures appropriate levels of electrical protection.

Warning:
adhere closely to the following advice

- When making connections always follow the instructions and the Wiring Diagrams on pages 6-7.
- Check that the user equipment power consumption is compatible with the technical features described.
- Install in such a way that there is always adequate heat disposal.
- Always install under other equipment which produces or spreads heat..
- Handle and connect without mechanically stressing the electronic card.
- Make sure that no copper conductor cuttings or other waste material fall inside the equipment.

THIS CONTROL UNIT IS NOT SUITABLE FOR OPERATING IN THE FOLLOWING CONDITIONS:

- Where the environmental temperature is outside the limits specified lin the present technical manual.
- Where the air pressure and temperature variations are so rapid as to produce exceptional condensations.
- Where there are high levels of pollution caused by dust, smoke, vapour, salts and corrosive or radioactive particles.
- Where there are high levels or heat from radiation caused by the sun, ovens or the like.
- Where attacks from mould or small animals are possible.
- Where there is the risk of fire or explosions.
- Where the switch-board can receive strong vibrations or knocks.

CONDUCTION AND MAINTENANCE

The following maintenance operations should be performed every week:

- check that the indicators function;
- check that the conductors are tight, check the condition of the terminals.

ELECTROMAGNETIC COMPATIBILITY

This control unit functions correctly only if inserted in plants which conform with the CE marking standards; it meets the exemption requirements of the standard EN61326-1 but it cannot be excluded that malfunctions could occur in extreme cases due to particular situations.
The installer has the task of checking that the disturbance levels are within the requirements of the standards.

UNLESS WE MAKE A WRITTEN DECLARATION STATING THE CONTRARY, THIS CONTROL UNIT IS NOT SUITABLE FOR USE AS A CRITICAL COMPONENT IN EQUIPMENT OR PLANTS RESPONSIBLE FOR KEEPING PERSONS OR OTHER LIVING BEINGS ALIVE

Any use which differs from that which is indicated in this instruction and user manual must be authorized by us to the manufacturer.

YOUR ELECTRICAL TECHNICIAN CAN ASK ANY QUESTIONS ABOUT THIS CONTROL UNIT BY TELEPHONING OUR TECHNICIAN

TECHNICAL DATA

-	Nominal mains voltage	400 VAC
-	Frequency	50÷ 60Hz
-	Supply voltage	24VAC or 110÷ 230VAC ±10%
-	Power supply tolerance	±10%
-	Absorbed power	4 W
-	Nominal insulation voltage:	
	• terminals at mains voltage	400VAC
	• terminals from 3 to 14	24 VAC
-	Capacity of contacts:	
	• contactors control	MAX 16A (AC1) 250 VAC
	• contacts for remote monitoring	MAX 5A (AC1) 250VAC
-	Insulation class	CLASS 1
-	Voltmeters	MAX 570V Precision ±2%
-	Ammeters	MAX 1200A Precision ±2%
-	Frequency meter	0÷-85 Hz, Precision ±2%
-	Wattmeter	MAX 830 KW
-	Serial communication parameters	9600 baud, 8 bit data, 1 bit stop; EVEN parity
-	Degree of protection:	
	• front	IP64
	• rear	IP20
-	Temperature range	-10 + 60 °C
-	Installation conditions	for internal use
-	Weight	869 gr
-	Dimensions (LxHxP) mm	243 x 170 x 62
-	Hole	227X155

ORDERING DATA

TYPE CEA-12845-485 Code 00242290

ACCESSORIES KIT

KIT MU-CEA-12845-485 Code 40804524

CONFORMITY DECLARATION

CE

ELCOS s.r.l. assumes full responsability for declaring that the equipment:

type **CEA-12845-485**

installed and used in the ways and for the purposes described in the instruction and user manual, is in conformity with the following directives:

2014/35/UE	on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits
2014/30/UE	on the harmonisation of the laws of the Member States relating to electromagnetic compatibility
2011/65/UE	on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

because it is built and functions in accordance with the harmonized Standards:

EN 12845:2015	Fixed firefighting systems - Automatic sprinkler systems - Design, installation and maintenance
EN 61010-1:2010	Amendment 1 - Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements.
EN 60529:1997	Degrees of protection provided by enclosures (IP Code)
EN 61326-1:2012	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
EN 61000-6-2:2016	Generic standards - Immunity standard for industrial environments

tests of:

EN 61000-4-2:2008	Electrostatic discharge immunity test
EN 61000-4-3:2006	Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4:2012	Electrical fast transient/burst immunity test
EN 61000-4-5:2014	Surge immunity test
EN 61000-4-6:2013	Immunity to conducted disturbances, induced by radio-frequency fields
EN 61000-4-8:2009	Power frequency magnetic field immunity test
EN 61000-4-11:2004	Voltage dips, short interruptions and voltage variations immunity tests
EN 61000-6-3:2006	Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 55022:2012	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
EN61000-3-2:2014	Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

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Parma, 08/09/2017
Technical Director
Stecconi Andrea