

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97

Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47

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Технические характеристики на блоки управления ирригационными мотопомпами, автоматическим запуском мотопомп СЕМ-370, СЕМ-380, СЕМ-390, СЕМ-250/10, СІМ-250/10, СЕМ-117, СЕМ-217

КОМПАНИИ **ELCOS**

CONTROL UNIT FOR AUTOMATIC DIESEL ENGINE TYPE CEM-217

This has the function of start-up and controls of an irrigation motor pump.

OPERATING AND INSTRUCTION MANUAL

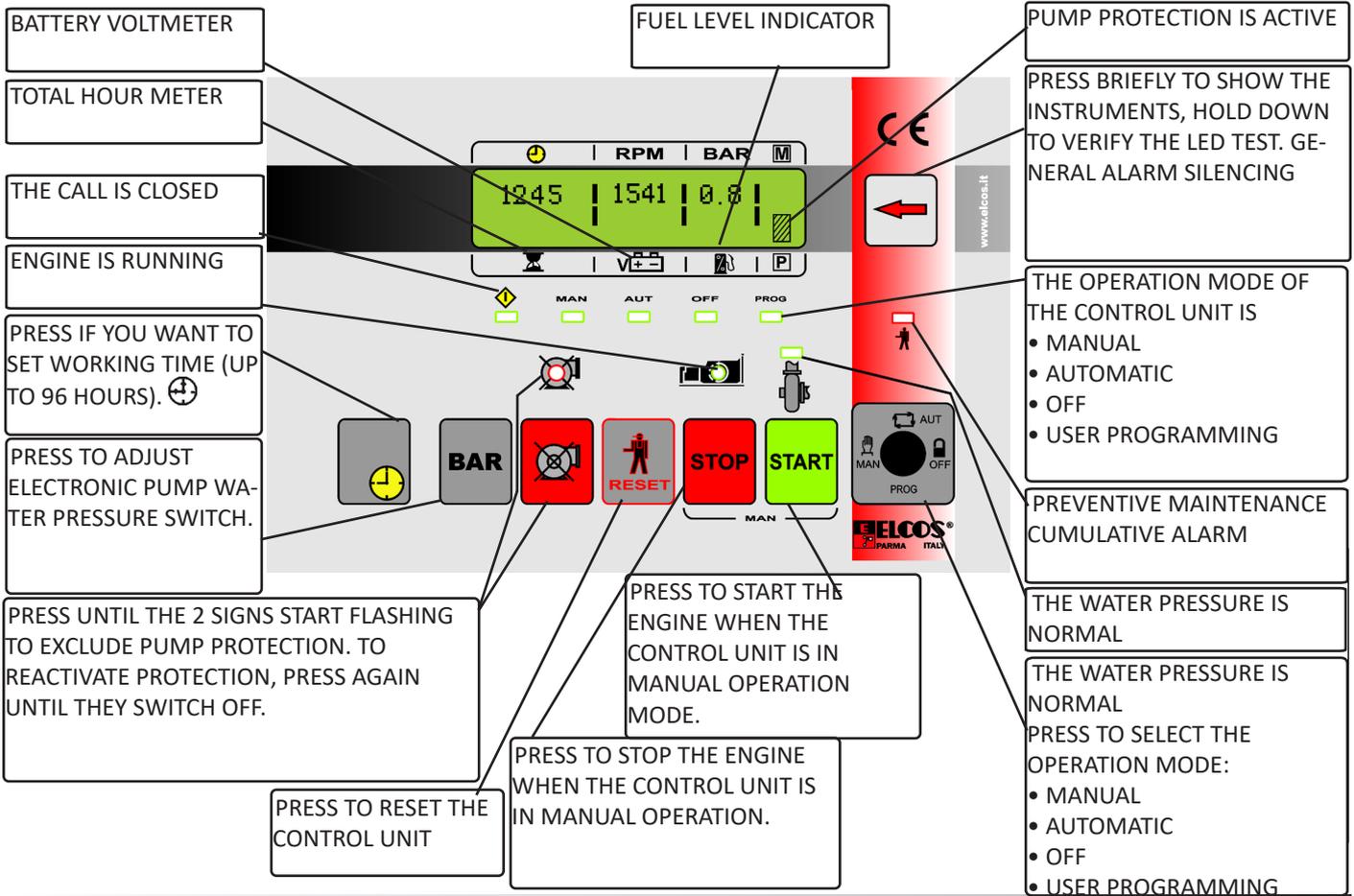


It is equipped with display to show the INSTRUMENTS:

- pump water pressure gauge
- fuel level indicator
- water oil thermometer
- oil pressure gauge
- battery voltmeter
- total hour meter
- partial hour meter
- tachometer
- starting counter
- starting failures counter

- Water pump pressure control.
- Switching off of pump water protection.
- Automatic faults surveillance with messages on the display.
- Texts in 6 languages: Italian, English, French, German, Spanish and Portuguese.
- Remote control (starting and stop).
- Preheating glow plugs management.
- Clock for programming the starting or the stopping of the engine.
- Preventive maintenance warning.
- Available and fully programmable input for anomaly.
- Anomaly historical record (Including data from the last 100 occurred anomalies).

BRIEF INSTRUCTIONS



INSTRUMENTS

<p>With the running engine the instruments are shown. In the event of a fault, instead of the measurement, the display shows the message of the occurred fault.</p>	<ul style="list-style-type: none"> • WATER PRESSURE GAUGE OF PUMP • FUEL LEVEL INDICATOR • WATER OIL THERMOMETER • OIL PRESSURE GAUGE • BATTERY VOLTMETER • TOTAL HOUR-METER • PARTIAL HOUR-METER • TACHOMETER • STARTING COUNTER • STARTING FAILURE COUNTER 	<p>From 0 to 21 bar.</p> <p>Displays the percentage of fuel present in the tank</p> <p>Displays the water and oil temperature of the engine up to 140°C (284°F)</p> <p>Displays the oil pressure of the engine up to 9 bar (900kPa) For voltages ranging between 9 and 38 Volt</p> <p>With five figures and a maximum reading of 59999 (hours and minutes).</p> <p>With four figures and a maximum reading of 9999 (hours and minutes), The hours indicated are zero-set the next time the engine is started up.</p> <p>Displays the number of engine revs up to 8500 rpm</p> <p>Displays the number of startings up to 65535</p> <p>Displays the number of FAILURE STARTINGS up to 9999</p>
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SIMULTANEOUS READING OF THE INSTRUMENTS WITH THE RUNNING ENGINE:
 WATER PRESSURE GAUGE - FUEL LEVEL INDICATOR - HOUR METER - TIMER
 - BATTERY VOLTMETER - TACHOMETER

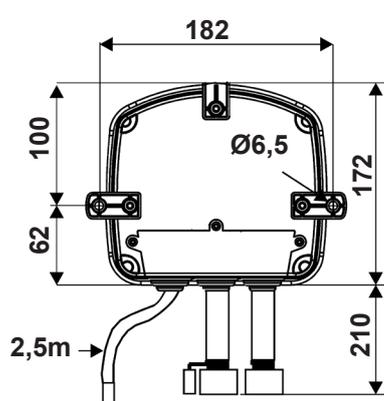
REVISIONS HISTORY

Introduced: "WATER PUMP MANUAL MODE", "TPA-200" exclusion, "PROTECTION DELAY NO PRESSURE"	1.07	04/04/2017

TECHNICAL DATA

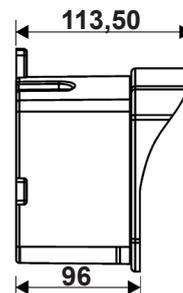
Battery power supply	12 Vdc (16Vdc max) or 24 Vdc (32Vdc max)
Selfconsumption with engine stopped (STAND BY)	4mA a 12V 3 mA a 24V
Selfconsumption with stopped engine and pressed emergency button	190 mA a 12V 110 mA a 24V
Max consumption	265 mA a 12V 150 mA a 24V
Max load of the outputs :	BLACK (starter motor) 40A
	YELLOW (stop) 1,5A
	RED/GREEN (general alarm) 0,25A
	WHITE/BROWN (glow plugs) 1,5A
Degree of rear protection: - Front/Cabinet - Back/Cabinet - Connector	IP54
	IP23
	IP20
Limiti di temperatura	-10 ÷ + 50°C
Weight	2300 g
Dimensions (LxHxP) mm	270x230x180
Tachometer	Max 4000 RPM precision ± 10 RPM

DIMENSIONS



Fixing system

With two or three clamps



DATA FOR ORDERING

Type CEM-217 Volt 12
CEM-217 Volt 24

CODE 00211112
" 00211113

SUPPLIED ACCESSORIES

Kit rods CEP-CEM

CODE 40804362

Pre-wired female connector CEM-217

" 70804392

Connector kit CEM-217

" 40804534

- PUM WATER PRESSURE
TRANSMITTER TYPE TPA-200

CODE 70500255

- NIPPLE F1/4" GAS -M3/8"GAS

CODE 70190241

ACCESSORIES ON REQUEST

SUPPORT FOR INSTALLATION ON BASE CRU-003

CODE 40493384

CONTROL UNIT FOR IRRIGATION MOTOR PUMP TYPE CEM-117

Starts and controls an irrigation motor pump.

USER INSTRUCTION MANUAL



Complete with display to display the INSTRUMENTS:

- pump water pressure gauge
- fuel level indicator
- battery voltmeter
- water and oil thermometer
- oil pressure gauge
- total hour meter
- partial hour meter
- start-up counter
- failure to start counter
- tachometer

- Pump water pressure control.
- Switching off of pump water protection device.
- Automatic monitoring of faults with messages on the display.
- Texts in 6 languages: Italian, English, French, German, Spanish and Portuguese.
- Remote control (start-up and stop).
- Management of glow plug preheating.
- Clock for programming the starting or stopping of the machine.
- Indication of preventive maintenance operations.
- Inputs for fully programmable available fault.
- Fault log (the data of the last 100 faults that occurred are collected).

COMMUNICATION MODES OF THE CEM-117

- Serial port RS232.
- GSM Modem (optional), possibility to display, with a mobile phone, the instruments of the control unit, control starting and stopping and notify with an SMS message when the motor pump is in alarm condition.

TECHNICAL DATA

Battery power supply	12 Vdc and 24 Vdc
Supply voltage	8 to 32V
Consumption with stopped engine (STAND BY)	4mA at 12V, 3 mA at 24V
Consumption with stopped engine with modem connected (STAND BY)	85mA at 12V, 45mA at 24V
Consumption with stopped engine and pressed emergency button	190 mA at 12V, 110 mA at 24V
Maximum consumption	265 mA at 12V, 150 mA at 24V
Rated insulation voltage: - Terminal board at battery voltage	32V
Maximum load on outputs	15 (start-up) 3W, 17 (stop) 7W, 19 (key) 3W, 6 (glow plugs) 3W, 70 (general alarm) 3W.
Timer	1' to 96h
Rear degree of protection	IP00
Front degree of protection	IP64
Temperature limits	-20 to +50°C
Weight	430 g
Dimensions (LxHxD) mm	157x109x74
Hole mm	88x137
Hour meter	5 digits
Precision of instruments: oil pressure gauge, water thermometer, fuel level, pump water pressure gauge	2%
Tachometer	Max 4000 RPM precision \pm 10 RPM
Pump water pressure gauge	0 to 21 bar
PUMP WATER PRESSURE TRANSMITTER: • MAXIMUM ALLOWED PRESSURE • WITH PRESSURE 4 to 14 bar differential • WITH PRESSURE 1 to 4 bar differential	21 bar 2 bar 1 bar
Serial communication parameters	9600 baud, 8 data bits, 1 stop bits; parity EVEN

DATA FOR ORDERING

Type CEM-117

code 00242299

SUPPLIED ACCESSORIES

MUCEM-117 KIT
WITH CABLE TPA 200

code 40804484
" 40500254

- PUMP WATER PRESSURE
TRANSMITTER TYPE TPA-200
- NIPPLE F1/4" GAS -M3/8"GAS

CODE 70500255
CODE 70190241

UNIT FOR CONTROL AND PROTECTION OF IRRIGATION MOTOR PUMPSET TYPE CEM-370

INSTRUCTION AND USER MANUAL



Complete with display for displaying the following functions:

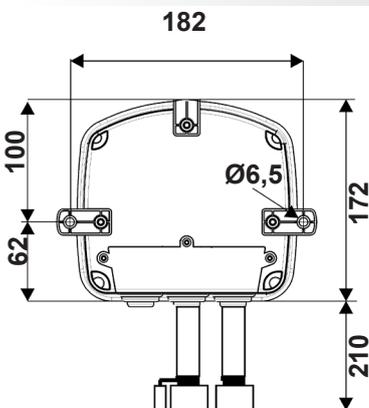
- pump protection exclusion
- battery and oil lights
- protections intervention
- hour-meter
- timer
- fuel level indicator
- tachometer
- battery voltmeter

PROTECT THE MOTOR PUMP SETS BY STOPPING THEM IN THE EVENT OF

- low oil pressure
- over-temperature
- belt breakage
- minimum fuel level
- available A1
- A2 (low diesel fuel pressure)
- low coolant level
- insufficient pump water pressure

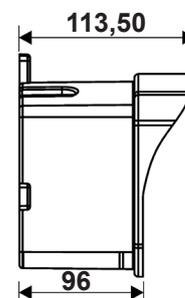
Assembly also on the machine and in the open air.

DIMENSIONS

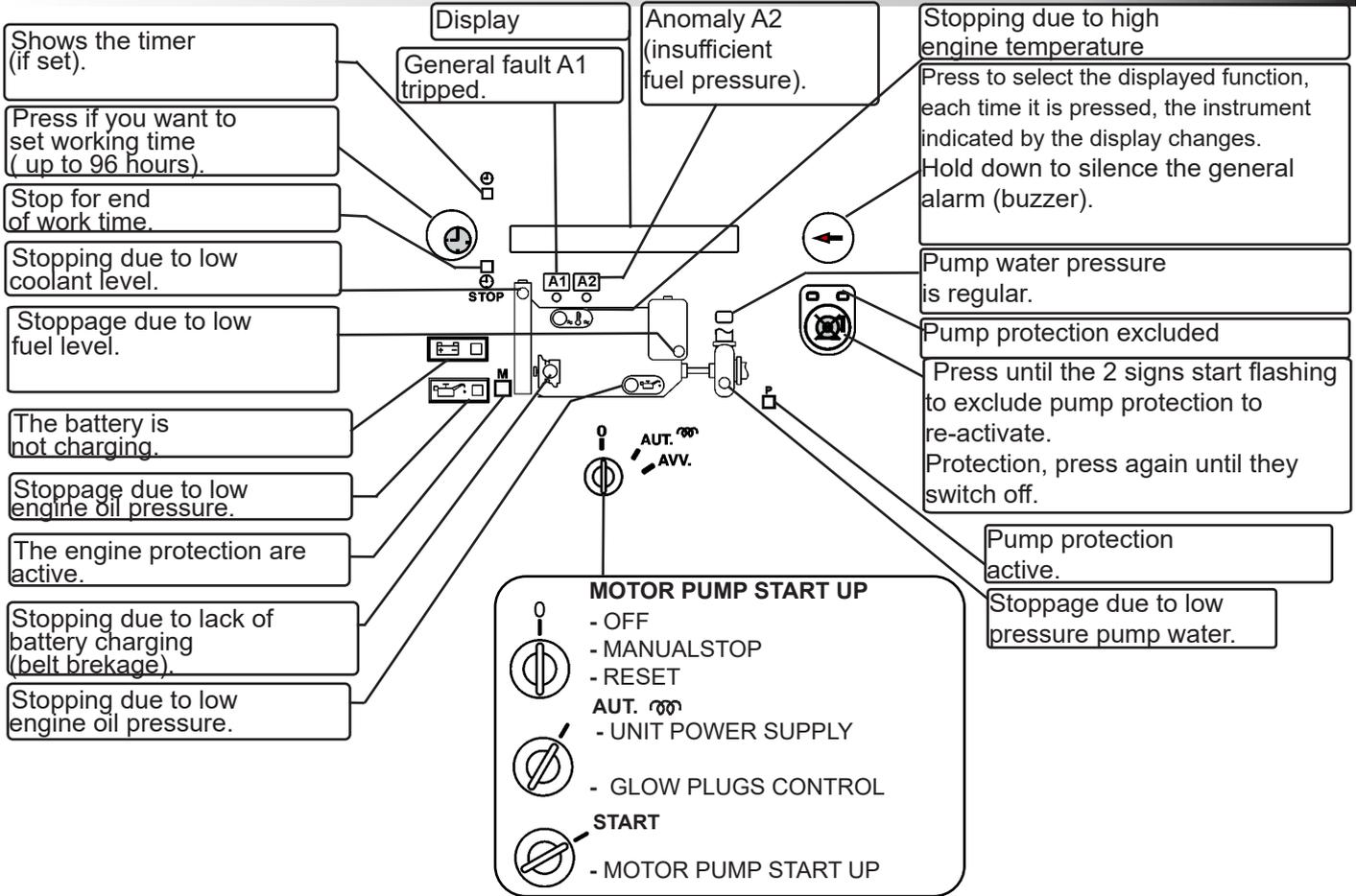


Fixing system

With two or three clamps



BRIEF INSTRUCTIONS



TECHNICAL DATA

Battery voltage supply	12 Vdc 24 Vdc
Voltage supply	8 ÷ 32V
Circuit loading with key at zero	0 mA
Maximum Consumption	265 mA a 12V 150 mA a 24V
Tachometer	Max 4000 RPM precision ± 10 RPM
Timer	1 ÷ 96h
Instruments precision:battery voltmeter, fuel level gauge	2%
Hour-meter	5 digits
Max load of the outputs: • starting motor (black) • stopping (yellow) • preheating (white/brown) • headlight (brown) • general alarm (red/green)	40A 3A 3A 3A 3A
Degree of protection: Box front Rear Connector	IP54 IP23 IP20
Installation conditions	for external use
Temperature range	-20 ÷ +60°C
Weight	950 g

ORDERING DATA

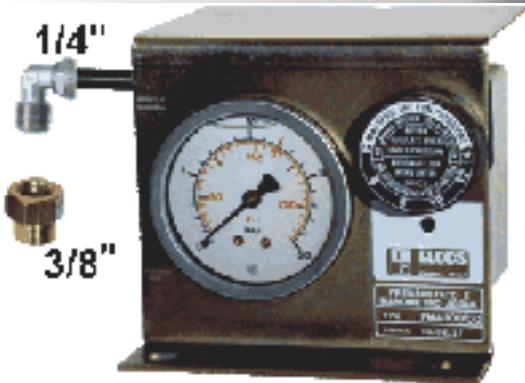
Type CEM-370 cod. 00210722

ACCESSORIES KIT

Pre-wired female
connector cod. 70804416
kit rods CEP-CEM cod. 40804362

ACCESSORIES ON REQUEST

PUMP WATER PRESSURE SWITCH AND GAUGE



PMA-100/00 (4-14 bar) cod. 00500227
PMA-102/00 (2-5 bar) cod. 00500235

PUMP WATER PRESSURE SWITCH



PA-100/00 (4-14 bar) code 00500226
PA-102/00 (2-5 bar) code 00500231

RADIATOR COOLANT LEVEL PROBE ROD ELECTRODE

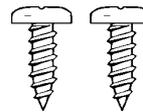
(complete with: rivet fitting, bolt, nut,
washer, seal and female connector)



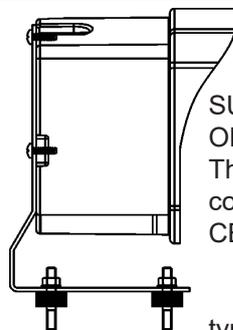
type AST-015/00 code 40241012

SCREW ELECTRODE

(complete with terminals)



type E-25 code 40190115



SUPPORT FOR INSTALLATION
ON BASE

The support facilitates replacement of
control units of type CEM-330 and
CEM-350

type CRU-004 cod. 40493382

PANEL FOR CONTROL AND PROTECTION OF IRRIGATION MOTOR PUMPSET

TYPE CEM-390

Complete with electronic transmitter (electronic pressure switch) and digital pressure gauge for pump water pressure.

Enables manual adjustment of the engine rpm and stopping with automatic deceleration.

INSTRUCTION AND USER MANUAL



It is equipped with display to the following functions:

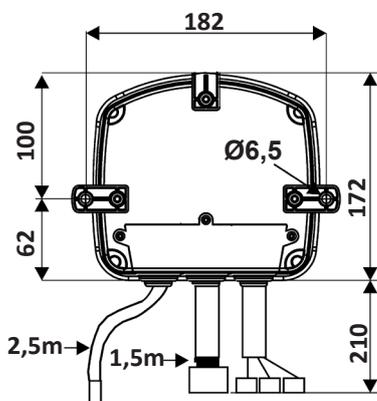
- pump protection exclusion
- battery and oil lights
- protections intervention
- hour-meter
- timer
- partial hour meter
- timer
- pump water pressure gauge
- fuel level indicator
- tachometer
- battery voltmeter

PROTECTS THE MOTOR PUMP GROUP SET BY THEM IN THE EVENT OF:

- low oil pressure
- over-temperature
- belt breakage
- minimum fuel level
- A1 fault available
- A2 (low diesel pressure)
- low coolant level
- insufficient pump water pressure
- pump water overpressure

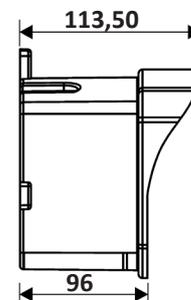
Assembly on the machine and in the open air.

DIMENSIONS

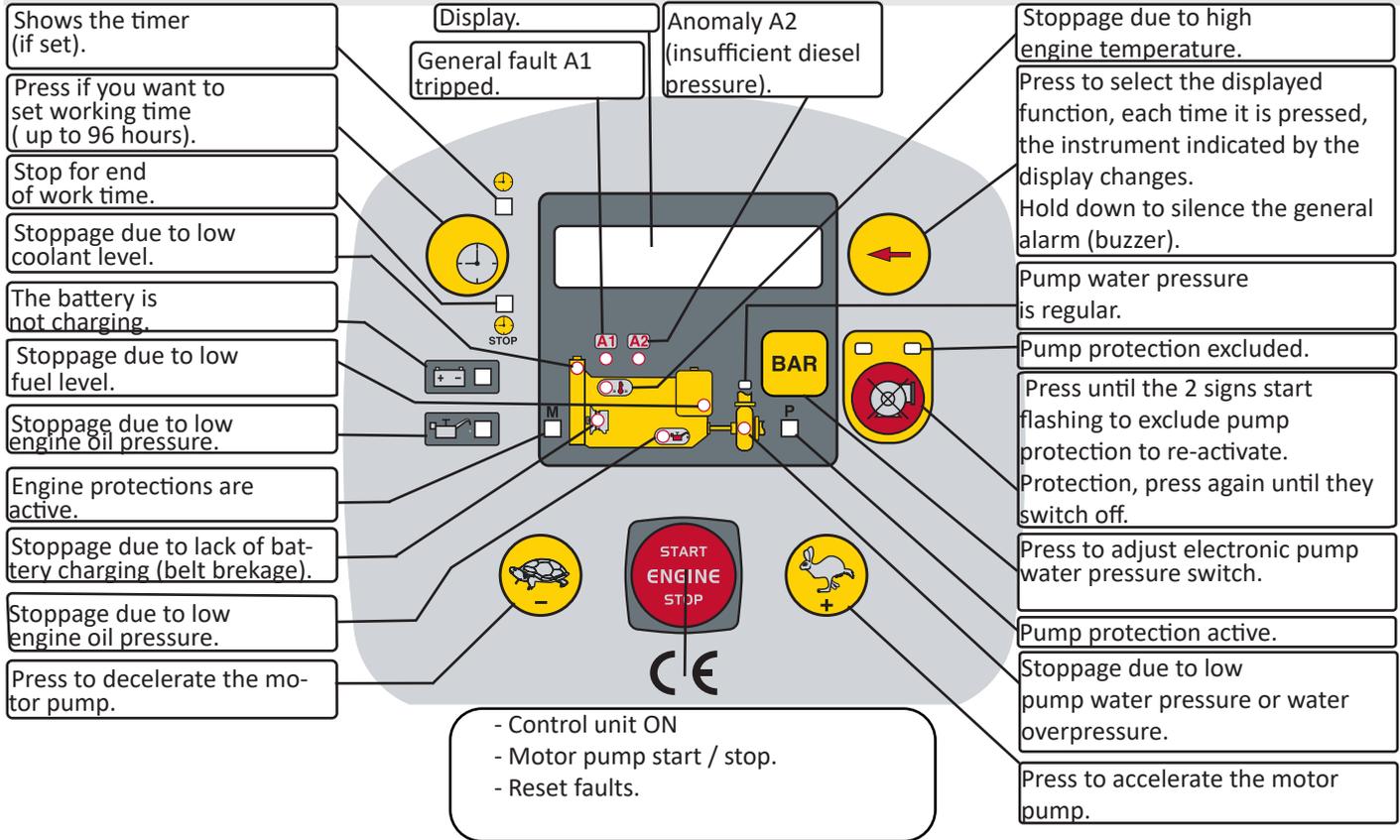


Fixing system

With two or three clamps



BRIEF INSTRUCTIONS



TECHNICAL DATA

Battery voltage supply	12 Vdc 24 Vdc
Voltage supply	8 ÷ 32V
Self-consumption with control unit off	2 mA
Tachometer	Max 4000 RPM precision ± 10 RPM
Timer	1 ÷ 96h
Instrument accuracy: battery voltmeter, fuel level gauge, motor thermometer, oil pressure gauge, pump water pressure gauge	2%
Hour-meter	5 digits
Max load of the outputs: <ul style="list-style-type: none"> starting motor (black) stopping (yellow) preheating (white/brown) auxiliaries (brown) general alarm (red/green) 	40A 3A 3A 3A 3A
Pump water pressure gauge	0 ÷ 21 bar
Pump water pressure transmitter: <ul style="list-style-type: none"> Maximum permissible pressure With pressure 4 ÷ 14 bar With pressure 1 ÷ 4 bar 	21 bar differential 2 bar differential 1 bar
Degree of protection: <ul style="list-style-type: none"> Box front rear Connector 	IP54 IP23 IP20
Installation conditions	for external use
Temperature gauge	-20 ÷ +60°C
Weight	1000 g

ORDERING DATA

- Type CEM-390

code 00210735

ACCESSORIES KIT

- Pre-wired female connector type CEM-390

code 70804418

- KIT rods CEP/CEM

code 40804362

- Pump water pressure transmitter TYPE TPA-200

code 70500255

- Nipple F1/4" GAS -M3/8"GAS

code 70190241

ACCESSORIES ON REQUEST

RADIATOR COOLANT LEVEL PROBE

ROD ELECTRODE (complete with: rivet connection, bolt, nut, washer, seal and female connector)

type AST-015/00

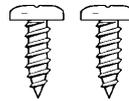
code 40241012



SCREW ELECTRODE (complete with lugs)

type E-25

code 40190115



SPEED VARIATOR

type VAR-140 12V

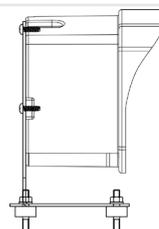
code 00571543



SUPPORT FOR INSTALLATION ON BASE

type CRU-003

code 40493384



PANEL FOR CONTROL AND PROTECTION OF IRRIGATION MOTOR PUMPSET TYPE CEM-380

Complete with electronic transmitter (electronic pressure switch) and digital pressure gauge for pump water pressure.

INSTRUCTION AND USER MANUAL



It is equipped with display to the following functions:

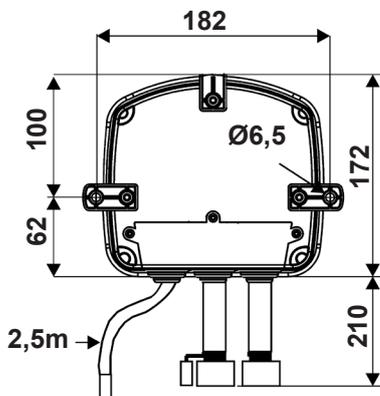
- pump protection exclusion
- battery and oil lights
- protections intervention
- hour-meter
- timer
- pump water pressure gauge
- fuel level indicator
- tachometer
- battery voltmeter

PROTECTS THE MOTOR PUMP GROUP SET BY THEM IN THE EVENT OF:

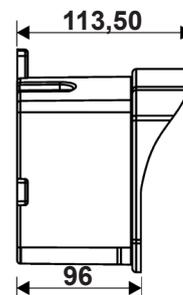
- low oil pressure
- over-temperature
- belt breakage
- minimum fuel level
- available A1
- A2 (low diesel pressure)
- low coolant level
- insufficient pump water pressure
- pump water overpressure

Assembly on the machine and in the open air.

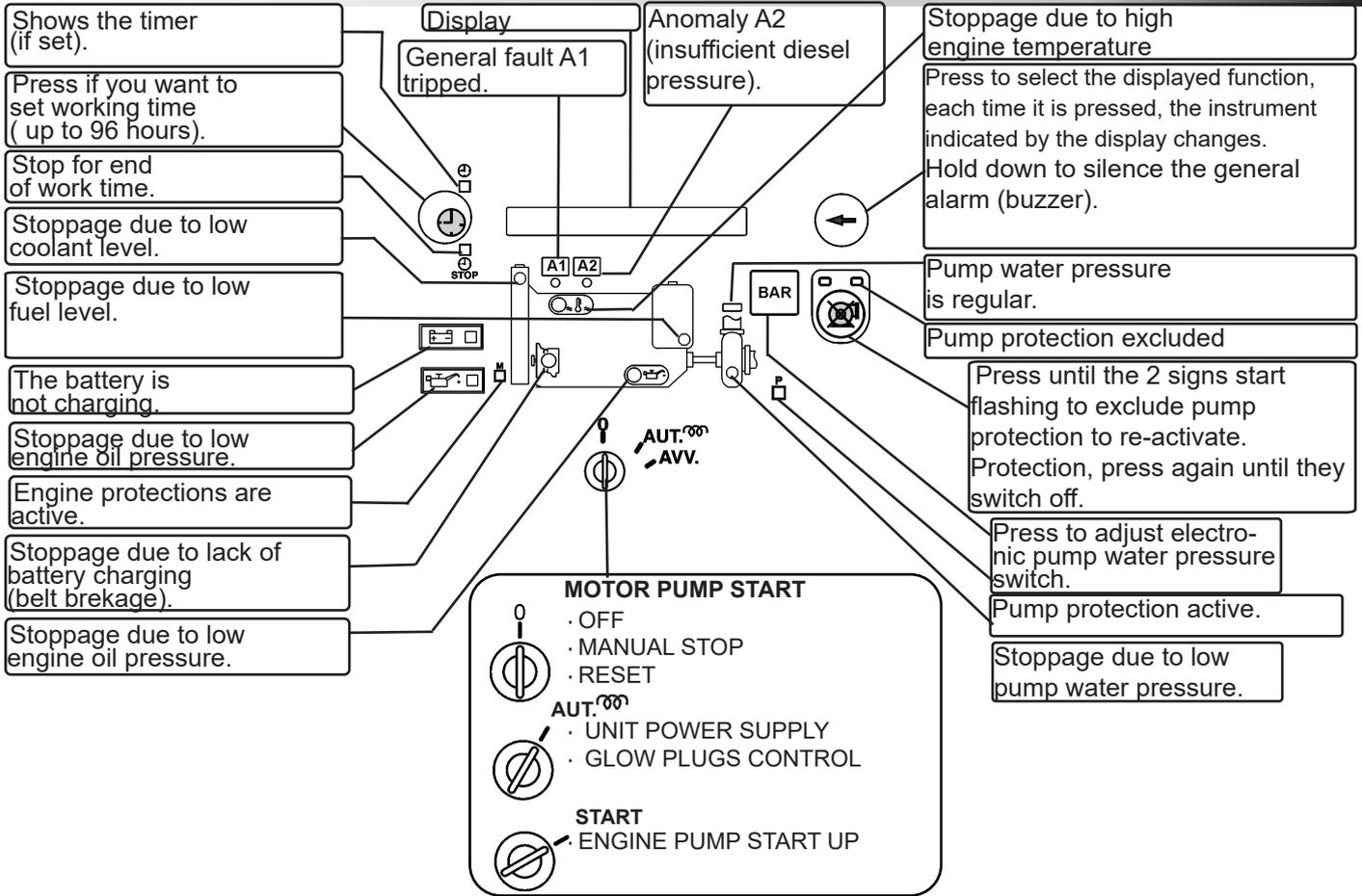
DIMENSIONS



Fixing system
With two or three clamps



BRIEF INSTRUCTIONS



TECHNICAL DATA

Battery voltage supply	12 Vdc 24 Vdc
Voltage supply	8 ÷ 32V
Circuit loading with key at zero	0 mA
Tachometer	Max 4000 RPM precision ± 10 RPM
Timer	1 ÷ 96h
Instruments precision: battery voltmeter, fuel level gauge	2%
Hour-meter	5 digit
Max load of the outputs: • starting motor (black) • stopping (yellow) • preheating (white/brown) • lighthouse (brown) • general alarm (red/green)	40A 3A 3A 3A 3A
Pump water pressure gauge	0 ÷ 21 bar
Pump water pressure transmitter: • Maximum permissible pressure • With pressure 4 ÷ 14 bar • With pressure 1 ÷ 4 bar	21 bar differential 2 bar differential 1 bar
Degree of protection: Box front rear Connector	IP54 IP23 IP20
Installation conditions	for external use
Temperature range	-20 ÷ +60°C
Weight	1000 g

ORDERING DATA

- Type CEM-380 cod. 00210731

ACCESSORIES KIT

- Pre-wired female connector
type CEM-380 cod.70804417
kit rods CEP-CEM cod.40804362
- Pump water pressure
transmitter TYPE TPA-200 “ 70500255
- Nipple F1/4”
GAS -M3/8”GAS “ 70190241

ACCESSORIES ON REQUEST

RADIATOR COOLANT LEVEL PROBE

ROD ELECTRODE (complete with: rivet connection, bolt, nut, washer,
seal and female connector)

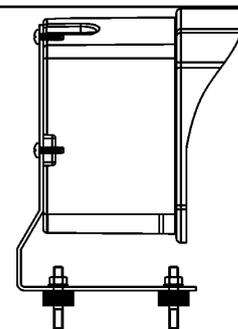
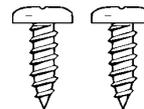
type AST-015/00 code 40241012



SCREW ELECTRODE

(complete with lugs)

type E-25 code 40190115



SUPPORT FOR INSTALLATION
ON BASE

type CRU-003 code 40493384

UNIT FOR CONTROL AND PROTECTION OF IRRIGATION MOTOR PUMPSET

TYPE **CIM-250/10**

INSTRUCTION AND USER MANUAL



MOUNTING AT PANEL

- By simply starting, it automatically controls the motor pump
- Pump water electronic pressure switch
- Digital pump water pressure gauge
- Assembly also on the machine and in the open air.

MADE TO:

PROTECT

motor pump sets by stopping them in the event of:

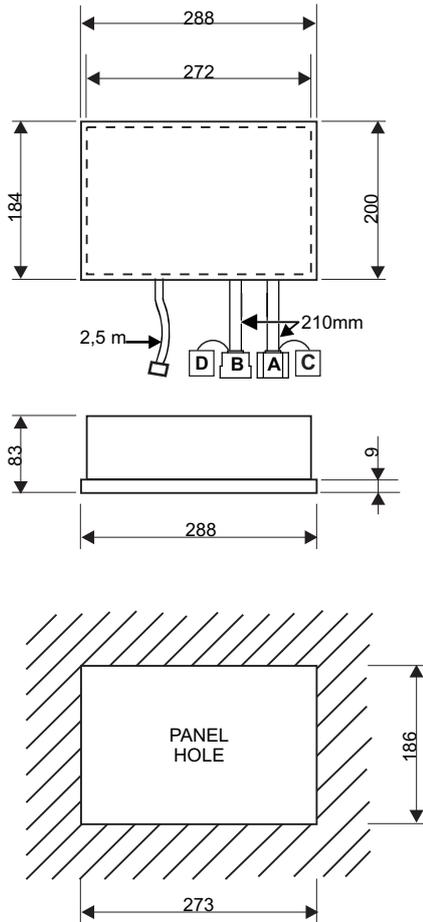
- low oil pressure
- over-temperature
- belt breakage
- minimum fuel level
- low coolant level
- low pump water pressure
- pump water overpressure
- A1 available
- low fuel pressure

DISPLAY

on the panel the functions of:

- hour-meter
- oil pressure gauge
- water or oil thermometer
- tachometer
- pump water pressure gauge
- timer
- fuel level gauge
- pump protection exclusion
- battery and oil lights
- protections intervention
- emergency stop

DIMENSIONS



TECHNICAL DATA

- BATTERY VOLTAGE SUPPLY	12 Vdc 24 Vdc
- VOLTAGE SUPPLY	8÷ 32V
- CIRCUIT LOADING WITH KEY AT ZERO	13 mA at 12 V 9 mA at 24 V
- MAX LOAD OF THE OUTPUT:	
- (STOPPING) YELLOW	3 A
- (STARTING MOTOR) BLACK	40 A
- (GENERAL ALARM) RED/GREEN	3 A
- (AUXILIARY) BROWN	3 A
- TEMPERATURE RANGE	-10 ÷ +60 °C
- HOUR-METER	4 DIGITS
- OIL PRESSURE GAUGE	0 ÷ 7 bar
- PUMP WATER PRESSURE GAUGE	0 ÷ 21 bar
- PUMP WATER PRESSURE TRANSMITTER:	
• ALLOWED MAX. PRESSURE	21 bar
- ENGINE OIL/WATER THERMOMETER	+20 ÷ +145 °C
- TACHOMETER	4000 rpm
- TIMER	1' ÷ 96 h
- INSTALLATION CONDITIONS	FOR EXTERNAL USE
- DEGREE OF PROTECTION:	
BOX/CONNECTOR	IP54/IP20
- CONTROL UNIT WEIGHT	1,5 Kg
- TOTAL WEIGHT	3,2 Kg
(CONTROL UNIT + ACCESSORIES + PACKAGE)	

ORDERING DATA

TYPE CIM-250/10 CODE 00211128

ACCESSORIES KIT

- PRE - WIRED FEMALE CONNECTOR CEM-250-256/10	CODE 70804420
- EMERGENCY BRIDGE CONNECTOR	CODE 70804421
- PUMP WATER PRESSURE TRANSMITTER TYPE TPA-200	CODE 70500255
- NIPPLE F1/4" GAS -M3/8"GAS	CODE 70190241
- NUTS KIT	CODE 40179906

ACCESSORIES ON REQUEST

- SUPPORT KIT CRU-CIM

CODE 40493383

PANEL FOR CONTROL AND PROTECTION OF IRRIGATION MOTOR PUMPSET

TYPE **CEM-250/10**



- By simply starting, it automatically controls the motor pump
- Pump water electronic pressure switch
- Digital pump water pressure gauge
- Assembly also on the machine and in the open air.

MADE TO:

PROTECT

motor pump sets by stopping them in the event of:

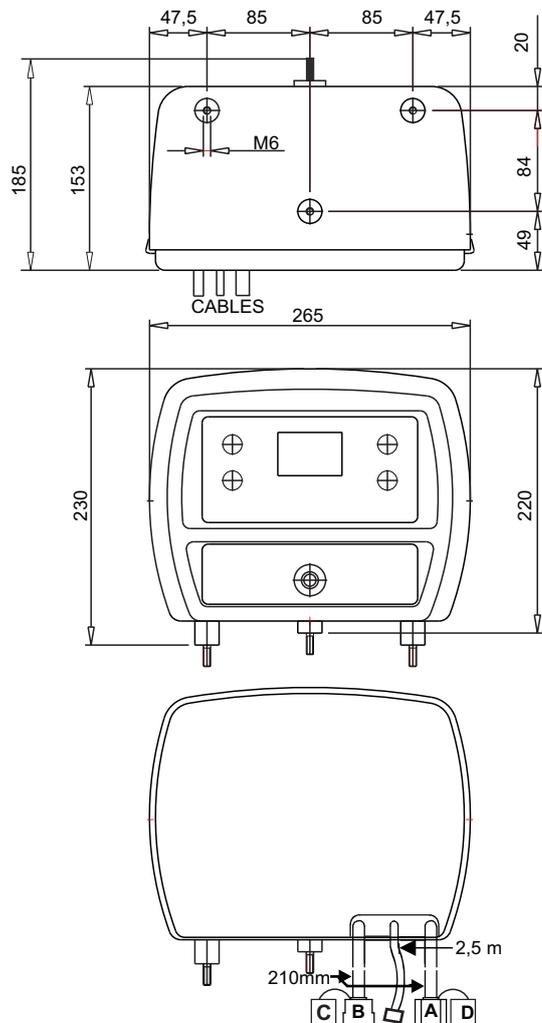
- low oil pressure
- over-temperature
- belt breakage
- minimum fuel level
- low coolant level
- low pump water pressure
- pump water overpressure
- A1 available fault
- low fuel pressure

DISPLAY

on the panel the functions of:

- hour-meter
- oil pressure gauge
- water or oil thermometer
- tachometer
- pump water pressure gauge
- timer
- fuel level gauge
- pump protection exclusion
- battery and oil lights
- protections intervention
- emergency stop

DIMENSIONS



TECHNICAL DATA

- BATTERY VOLTAGE SUPPLY:	12 Vdc 24 Vdc
- VOLTAGE SUPPLY:	8 ÷ 32V
- CIRCUIT LOADING WITH KEY AT ZERO	13 mA at 12 V 9 mA at 24 V
- MAX CURRENT OUTPUT	
- (STOPPING) YELLOW	3 A
- (STARTING MOTOR) BLACK	40 A
- (GENERAL ALARM) RED/GREEN	3 A
- (AUXILIARY) BROWN	3 A
- TEMPERATURE RANGE	-10 ÷ +60 °C
- HOUR-METER	4 DIGITS
- OIL PRESSURE GAUGE	0 ÷ 7 bar
- PUMP WATER PRESSURE GAUGE	0 ÷ 21 bar
- PUMP WATER PRESSURE TRANSMITTER:	
• ALLOWED MAX. PRESSURE	21 bar
• WITH PRESSURE 4 ÷ 14 bar	
DIFFERENTIAL	2 bar
• WITH PRESSURE 1 ÷ 4 bar DIFFERENTIAL	1 bar
- ENGINE OIL/WATER THERMOMETER	+20 ÷ +145 °C
- TACHOMETER	4000 rpm
- TIMER	1' ÷ 96 h
- INSTALLATION CONDITIONS	FOR EXTERNAL USE
- DEGREE OF PROTECTION	
BOX/CONNECTOR	IP23/IP20
- PANEL WEIGHT	3,3 kg
- TOTAL WEIGHT	3,7 kg
(PANEL + ACCESSORIES + PACKAGE)	

ORDERING DATA

TYPE CEM-250/10 CODE. 00211124

ACCESSORIES KIT

- PRE - WIRED FEMALE CONNECTOR CEM-250-256/10	CODE 70804420
- EMERGENCY BRIDGE CONNECTOR	CODE 70804421
- PUMP WATER PRESSURE TRANSMITTER TYPE TPA-200	CODE 70500255
- NIPPLE F1/4" GAS -M3/8"GAS	CODE 70190241

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