



FIRE  
AI-0522 EN



**ELCOS**<sup>®</sup>

MADE IN ITALY

# CONTROL DEVICES FOR FIRE-FIGHTING SYSTEMS

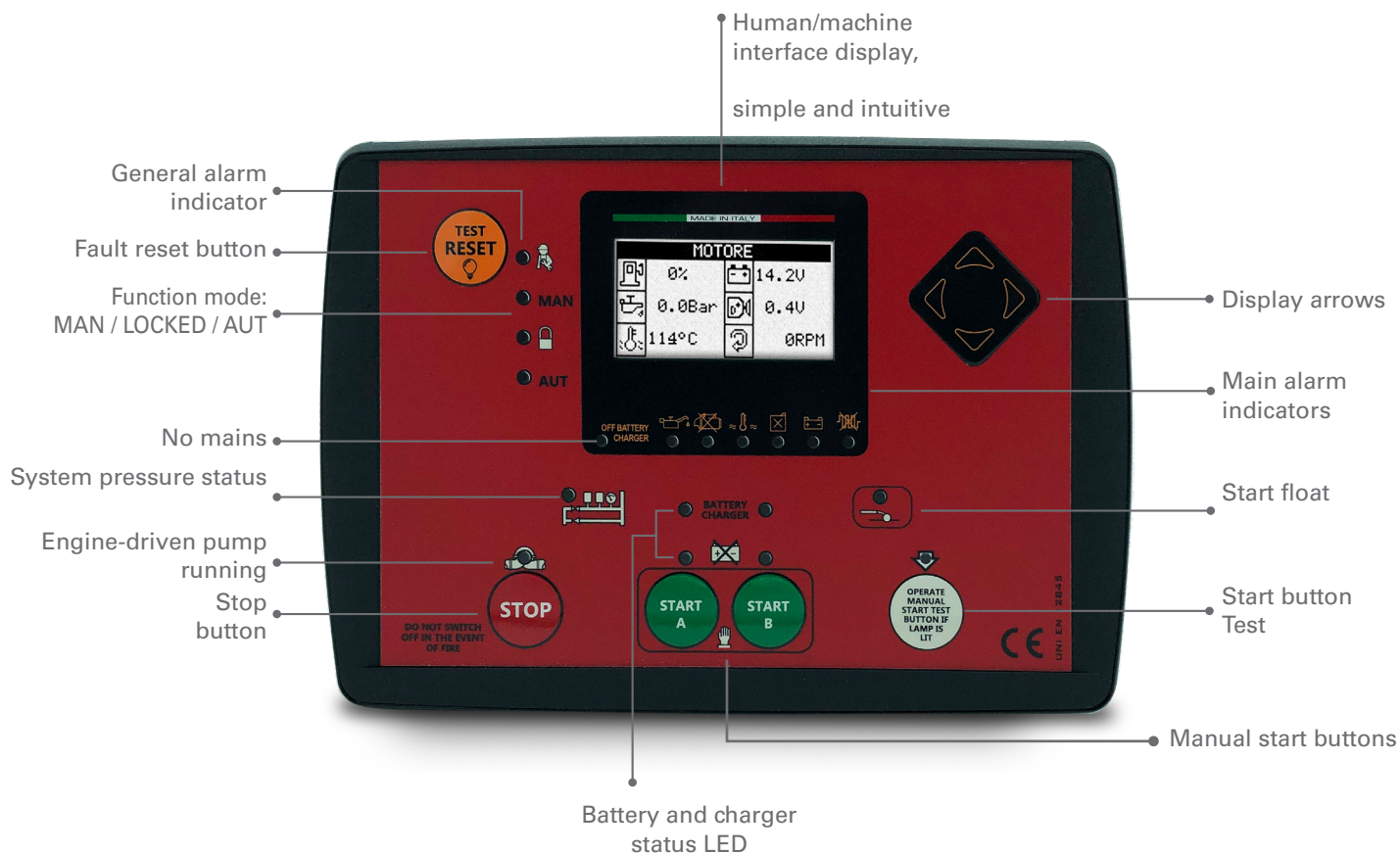


C-SMART 12845



CEA-SMART 12845

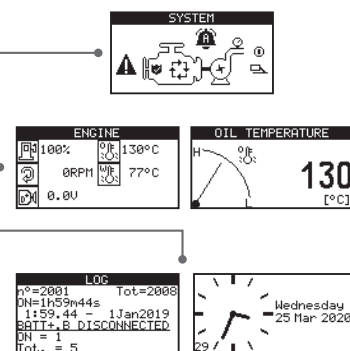
## Control unit for engine-driven fire-fighting pumps, designed for control panel fit-outs ENGINE-DRIVEN PUMP compliant with Standard UNI EN 12845



Comes with all instruments, digital or analogue version, including:

- Voltmeters for batteries A and B
- Hour-meter
- Tachometer
- Fuel level indicator
- Water thermometer
- Oil thermometer
- Oil pressure gauge
- Start-up counter
- Ambient air thermometer
- Clock, calendar
- Event log

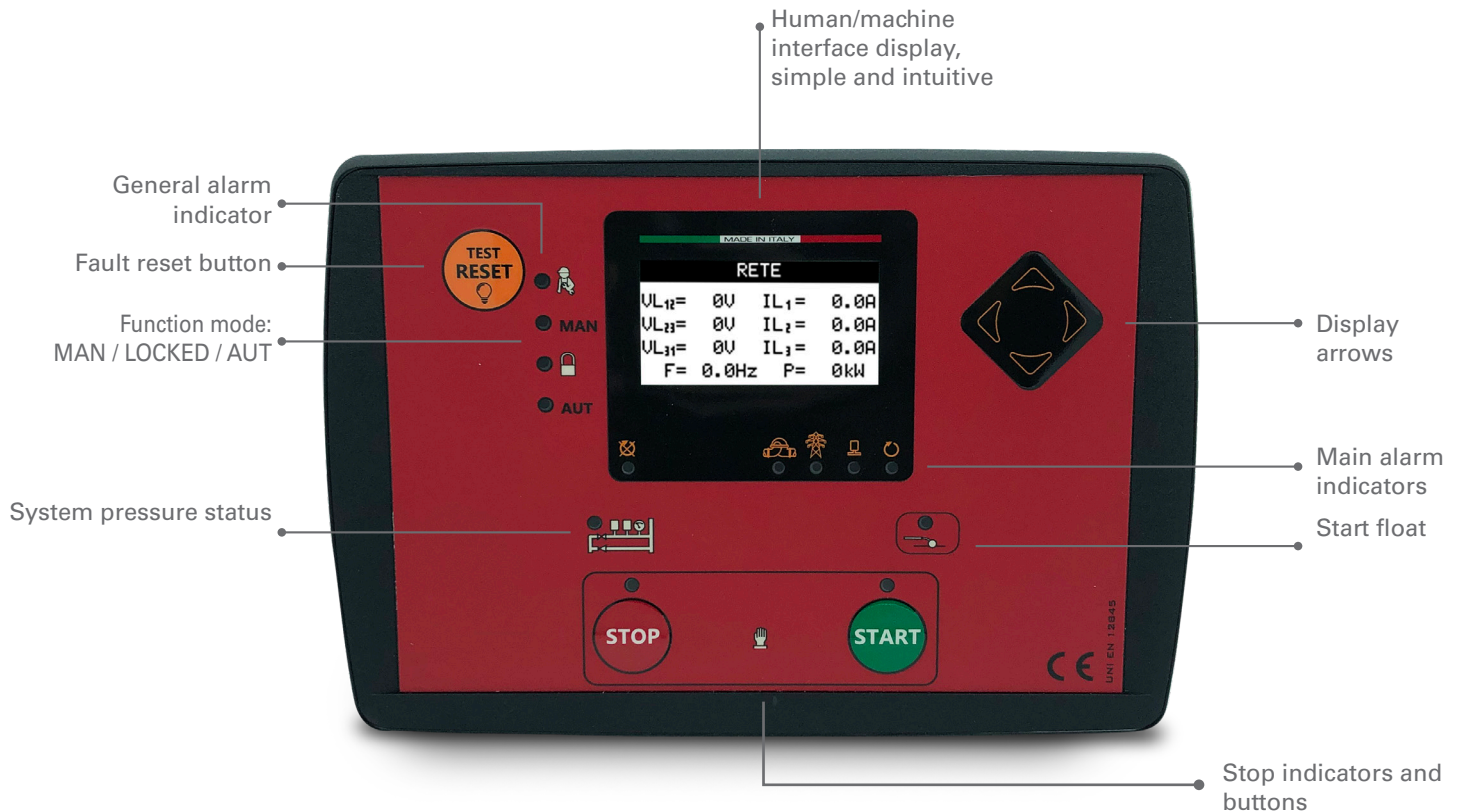
- Engine-driven pump system overview
- View of all main instruments or a specific one
- Calendar clock and event description
- Fully programmable digital inputs and outputs RS-232, RS-485 serial ports and USB.
- Resident languages (IT, EN, ES, DE, FR, PT, NL, TR, PL) and a further user programmable.
- Choice of two- or three-position operating mode selector.
- Jockey pump connection and control.
- Programmable analogue inputs (4-20mA for system pressure transducer or PT-100 probe for ambient temperature).
- Possibility to add expansion cards for additional digital I/O modules or other RS-485 ports.
- Remote signalling via ModBUS communication.
- Event log control (complete log of up to 5,100 events) also via Bluetooth, in the /BT version.
- Full remote control when connected to Gateway GTW-4.0 interface.
- Easy to program from a PC with ZW-SMART software and multiple password levels.
- The C-SMART-1200 uses SCC-1200 power board, for simplified and fewer connections to automatic panel.





## Control unit for electric fire-fighting pumps, designed for control panel fit-outs

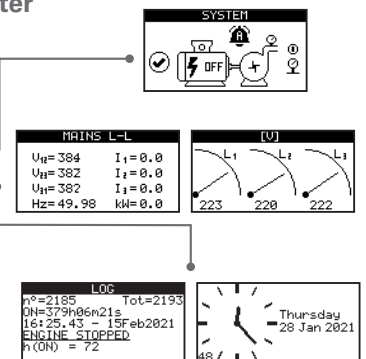
### ELECTRIC PUMP compliant with Standard UNI EN 12845



Comes with all instruments, digital or analogue version, including:

- 3 Mains voltmeters
- 3 Ammeters max 2000A  
(Possibility of connecting only one ammeter)
- Mains frequency meter
- Wattmeter (active power)
- Varmeter (reactive power)
- Voltammeter (apparent power)
- Power factor indicator
- Hour-meter
- Ambient air thermometer
- Clock, calendar
- Event log

- Electric pump system overview
- View of all main instruments or a specific one
- Calendar clock and event description
- Fully programmable digital inputs and outputs RS-232, RS-485 serial ports and USB.
- Resident languages (IT, EN, ES, DE, FR, PT, NL, TR, PL) and a further user programmable.
- Choice of two- or three-position operating mode selector.
- Jockey pump connection and control.
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- Possibility to add expansion cards for additional digital I/O modules or other RS-485 ports.
- Remote signalling via ModBUS communication.
- Event log control (complete log of up to 5,100 events) also via Bluetooth, in the /BT version.
- Full remote control when connected to Gateway GTW-4.0 interface.
- Easy to program from a PC with ZW-SMART software and multiple password levels.
- Simplified CEA-SMART-025 control unit without 230Vac supply and OUT.4



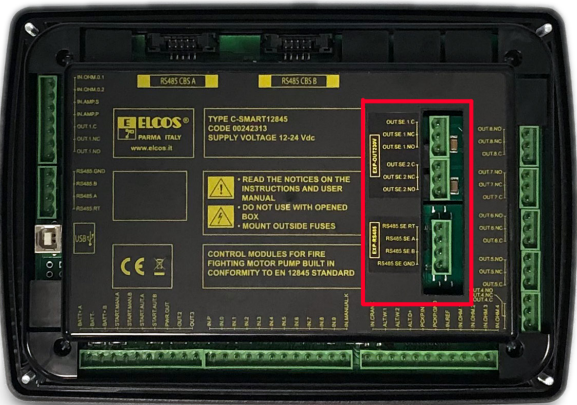
EXPANSION MODULES for C-SMART and CEA-SMART

C-SMART and CEA-SMART control units include two expansion slots for additional modules if needed. The following modules are available:

EXP-IN OUT	2 IN, 2 OUT	2 input and 2 output relays, programmable as the main inputs and outputs.
EXP-RS485	RS485 serial port	RS485, which supports the same protocols as the main RS-485.
EXP-RS232	RS232 serial port	RS232, which supports the same protocols as the main RS-485.
EXP-OUT230V	2 230VAC OUTPUTS	2 output relays with specifications to support a 230VAC voltage.

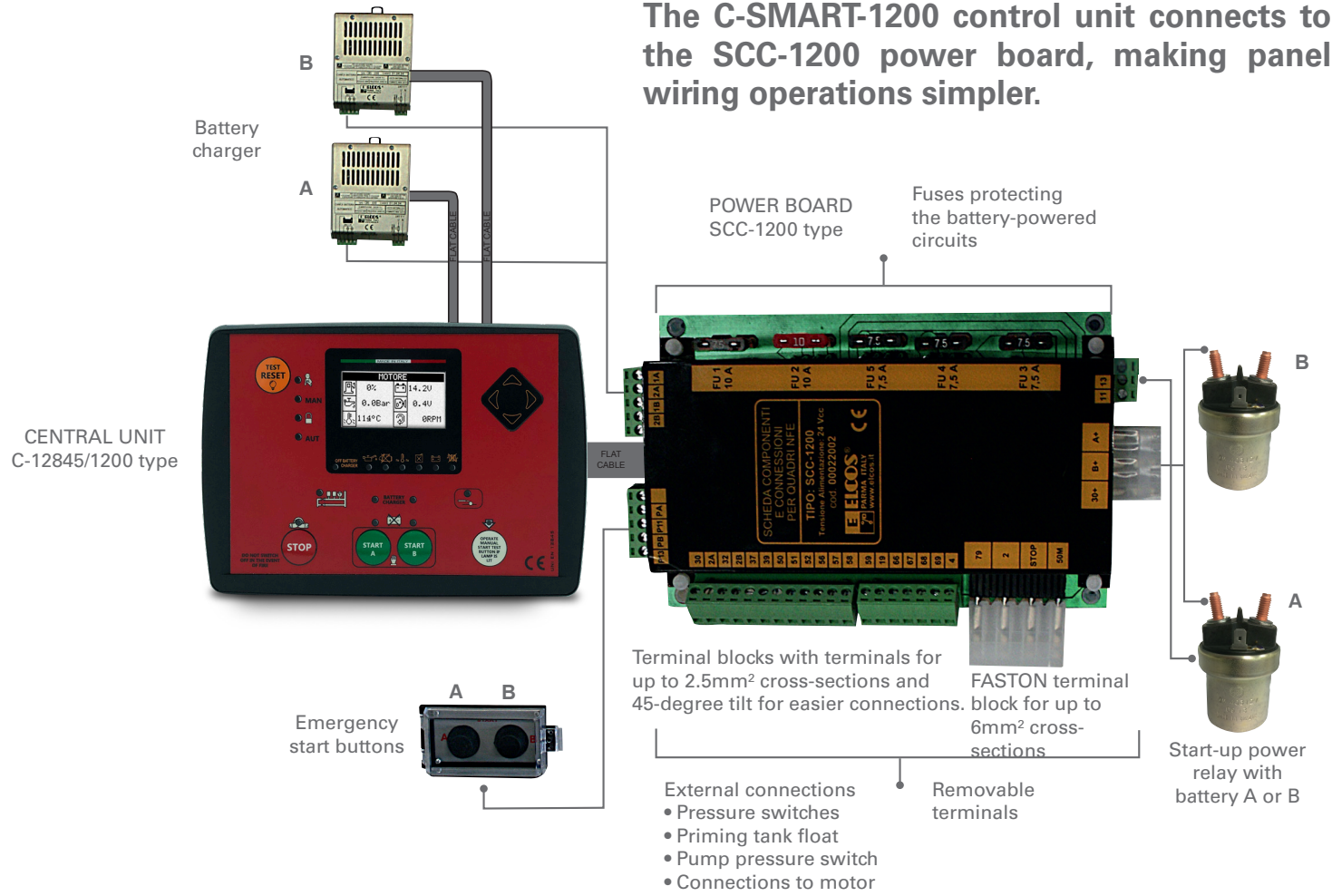
The expansions go in the rear of the control units and are easy to connect.

The control units automatically recognise the expansion module, for easy set-up.



SCC-1200

The C-SMART-1200 control unit connects to the SCC-1200 power board, making panel wiring operations simpler.







## Software developed for set-up of the control unit via USB port.

Once connected to the PC, the latter will automatically recognise the control unit and make it possible to:

- Consult settings more easily.
- Upload factory settings.
- Upload or download dedicated settings.
- Upload or download custom logs.
- Edit a custom language.

## ELCOS Smart Connect app

The ELCOS Smart Connect app is available free of charge for C-SMART12845/BT and CEA-SMART 12845/BT control units, giving the opportunity to download, read and share control unit logs on a smartphone.



## GATEWAY GTW-4.0

GATEWAY GTW-4.0, an IOT device, is used to manage the fire-fighting system remotely. Just one GTW-4.0 connected to all the control units and panels of the system is all that is needed to monitor the system remotely.

**NEW**

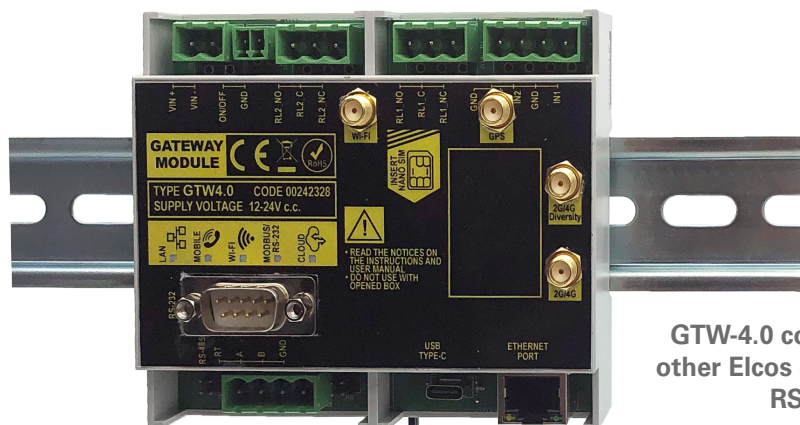
**CLOUD SERVER**  
Connected via WiFi, Ethernet  
port or 4G-LTE modem.



Il gateway è programmabile tramite PC, localmente tramite USB oppure tramite il Cloud.

Once installed, the device provides:

- Geolocation and position-based identification.
- Multiple levels of access, with hierarchical differentiation, using customisable credentials and logos.
- Access from any device.
- Possibility to reach and manage multiple systems.
- Possibility to communicate with each Elcos device present on the individual systems, managing them separately.



GTW-4.0 communicates with other Elcos devices via isolated RS-485 BUS.





## REMOTE ALARM MONITORING AND SIGNALLING SYSTEM FOR FIRE-FIGHTING SYSTEMS

The monitoring system consists of a panel, or a board to be installed in the panel, for data collection, and a fire alarm and signal panel. The two devices communicate with each other via RS-485 serial connection.

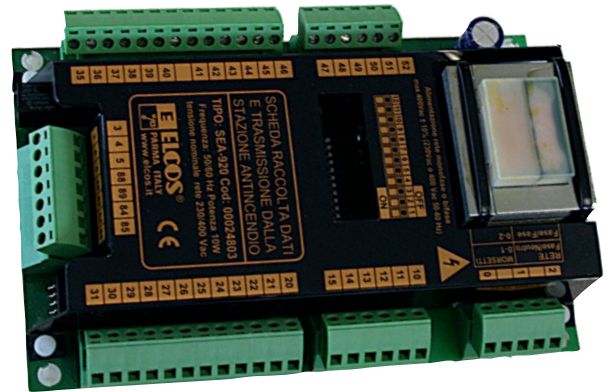
### FIRE-FIGHTING STATION DATA COLLECTION

PANEL



NFE-920/10 TYPE

BOARD  
for installation in  
panel



SEA-920/10 TYPE

## FIRE ALARM AND SIGNAL PANEL FOR MANNED LOCATION

The NFE-921/10 panel uses a serial connection to remotely detect signals from the control panels in the engine-driven and electric pumps and other signals of the fire-fighting system.

To complete the panel, you simply choose the desired composition and apply the pertinent labels in the appropriate spaces.

Sample composition:  
(1 electric pump and 1 engine-driven pump)

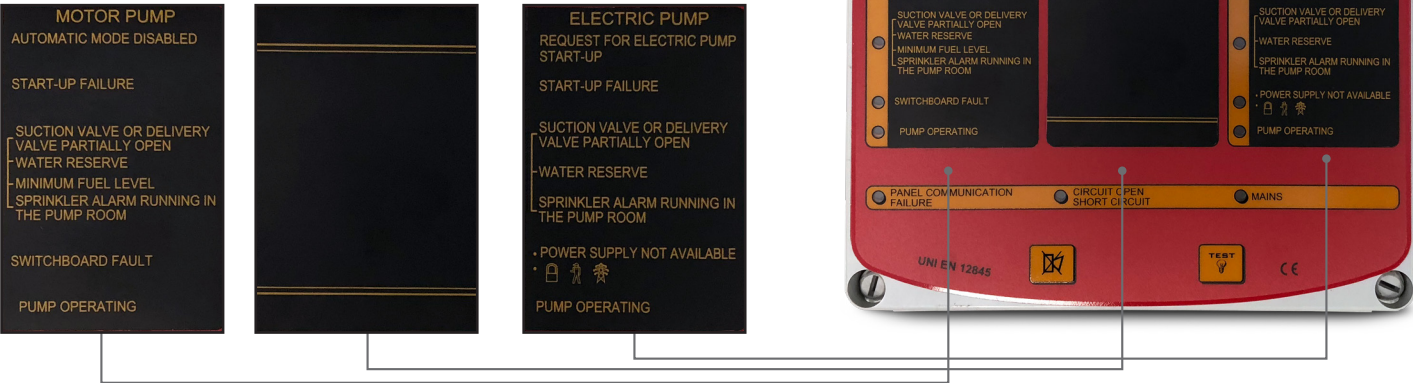


NFE-921/10 TYPE

FIRE ALARM AND SIGNAL PANEL FOR MANNED LOCATION

The NFE-919/10 panel uses an RS-485 serial connection to remotely detect all the signals coming from the control panels in the engine-driven and electric pumps of the fire-fighting system.  
To complete the panel, you simply choose the desired composition and apply the pertinent labels in the appropriate spaces.

Sample composition:  
(1 electric pump and 1 engine-driven pump)



NFE-919/10 TYPE

CBS

AUTOMATIC BATTERY CHARGERS FOR LEAD ACID BATTERIES



Fitted with hook for DIN bar.  
With three charging levels: fast charge with current control, intermediate, and maintenance.

**CBS - 031 (3.5A)**  
**CBS - 061 (6A)**

RS-485 serial communication port over which the battery voltmeter, charging current ammeter and battery status transmit.

Signals due to short circuiting, polarity inversion, and battery cable disconnection.

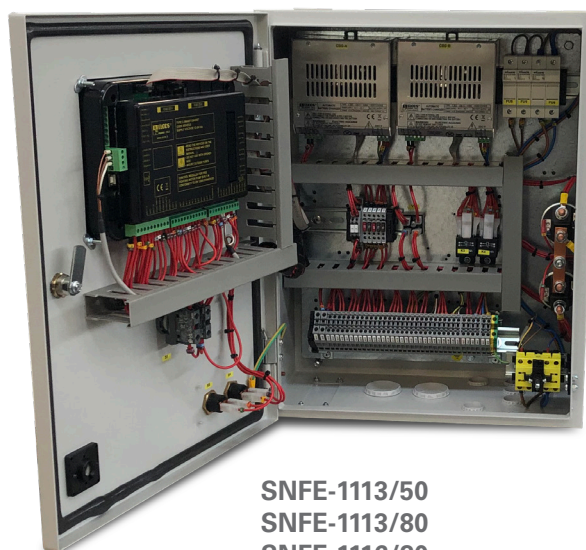


**CBS-010 (1A)**  
Simple battery charge status signal LED.

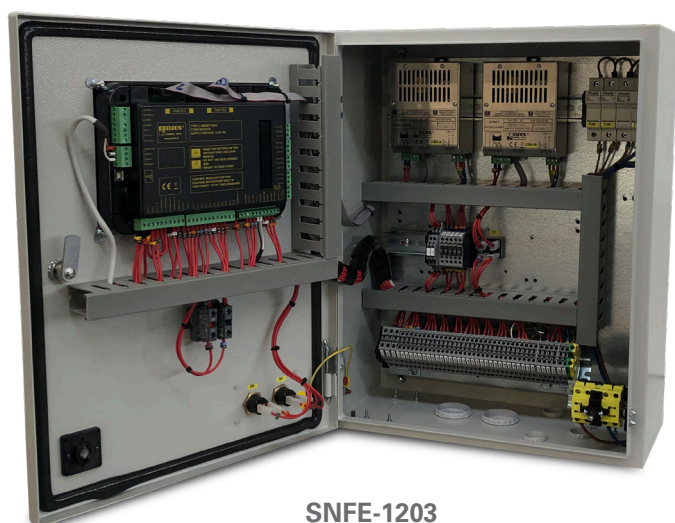


# **AUTOMATIC CONTROL PANELS FOR ENGINE-DRIVEN FIRE-FIGHTING PUMP UNIT EN 12845**

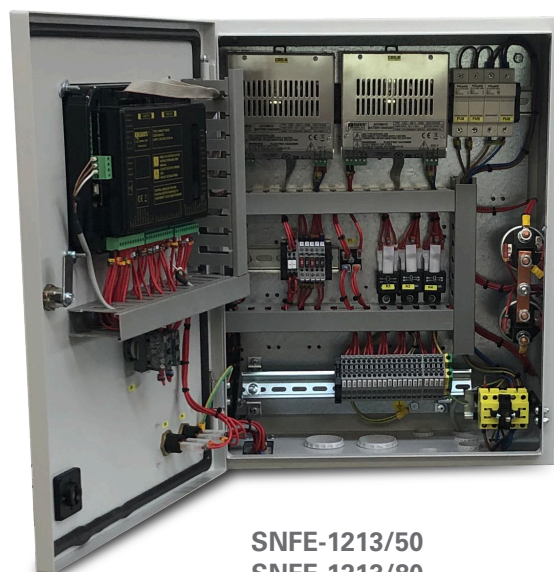
Equipped with C-SMART12845 control unit



**SNFE-1113/50  
SNFE-1113/80  
SNFE-1116/80**



**SNFE-1203  
SNFE-1206**



**SNFE-1213/50  
SNFE-1213/80  
SNFE-1216/80**

components installed in the panel	SNFE 1203	SNFE 1206	SNFE 1213/50	SNFE 1213/80	SNFE 1216/80	SNFE 1113/50	SNFE 1113/80	SNFE 1116/80
C-SMART 12845	X	X	X	X	X	X	X	X
CBS-031 3.5A	X		X	X		X	X	
CBS-061 6A		X			X			X
power relay 500A			X			X		
power relay 800A				X	X		X	X
16-pole watertight connector including cable harness for engine connection			X	X	X			
watertight connector for connection to the engine heater			X	X	X			
connection to motor system via terminal block	X	X				X	X	X

AUTOMATIC CONTROL PANELS FOR ELECTRIC FIRE-FIGHTING PUMP UNI EN-12845  
Direct start-up

Equipped with CEA-SMART12845 control unit



- Three-phase power supply 400Vac 50/60Hz.
- Low-voltage control inputs.
- AC3 electric pump contactors.

Type	kW	In (A)	hP	Dimensions LxHxW (mm)
SNFD-4	4	8	5.5	400x500x200
SNFD-5.5	5.5	11	7.5	
SNFD-7.5	7.5	15	10	
SNFD-9.2	9.2	19	12.5	
SNFD-11	11	23	15	
SNFD-15	15	29	20	
SNFD-18.5	18.5	40	25	400x600x200
SNFD-22	22	50	29	
SNFD-30	30	63	40	



## AUTOMATIC CONTROL PANELS FOR ELECTRIC FIRE-FIGHTING PUMPS UNI EN-12845

### Star-Delta starter

Equipped with CEA-SMART12845 control unit



- Three-phase power supply 400Vac 50/60Hz.
- Low-voltage control inputs.
- AC3 electric pump contactors.

Type	kW	In (A)	hP	Dimensions LxHxW (mm)
SNFST-15	15	31	20	400x600x200
SNFST-18.5	18.5	38	25	
SNFST-22	22	50	30	
SNFST-30	30	62	40	500x700x200
SNFST-37	37	75	50	
SNFST-45	45	100	60	
SNFST-55	55	124	74	600x800x300
SNFST-75	75	135	100	
SNFST-90	90	155	120	
SNFST-110	110	200	147	800x1000x300
SNFST-132	132	241	177	
SNFST-160	160	280	214	
SNFST-200	200	350	268	800x1300x300
SNFST-250	250	430	335	

PRESSURE MAINTENANCE PUMP (JOCKEY PUMP) CONTROL PANELS

- Three-phase power supply ~ 50/60Hz 400V 4kW.
- Low-voltage circuit inputs.
- Adjustable electronic control for motor overload
- General alarm output and thermal trip.
- Direct start-up (4kW).



NFJ-P4/10 TYPE  
(ABS BOX)



NFJ-M4/10 TYPE  
(METAL BOX)

Type	Current	BOX
NFJ-P3/10	3 kW single-phase	plastic box
NFJ-M3/10	3 kW single-phase	metal box
NFJ-P4/10	kW three-phase	plastic box
NFJ-M4/10	4 kW three-phase	metal box



## AUTOMATIC CONTROL UNITS FOR DIESEL ENGINE PUMPS



**DCA-109**

- Includes automatic control
- Digital instruments.
- Texts in 6 languages.
- Internal clock for programming start/stop times over 24h period.
  - Weekly tests.
- Programmable start when battery charge low.



**DCA-339**

- Includes automatic control from remote contact (with possibility to program filling/emptying via float).
- Graphic display including every possible digital instrument and display mode.
- StageV diesel engine-ready CAN Bus SAE J1939 (with regeneration control, etc.).
- RS-232, RS-485 serial ports and USB2.0.
- Possibility to connect with GSM modem or GTW-4.0 gateway.
- Fully programmable inputs and outputs.
- Possibility to connect actuator with acceleration/deceleration command, both manual and automatic.
- Texts in 6 languages + 1 programmable.
- Fully programmable with ZW-SMART software.
- Programmable start when battery charge low.

## NF-1100 and NF-1300

## AUTOMATIC CONTROL PANELS FOR DIESEL ENGINE PUMPS



**NF-1100 with DCA-109**



**NF-1300 with DCA-339**

## ELECTRIC HEATERS FOR DIESEL ENGINES

- 230Vac or 110Vac power supply ( RA-0511/110 and RA-1011/110 only).
- Heaters equipped with internal operation thermostat.
- Equipped with coolant discharge plug.
- Protective electrophoretic coating.
- Protection rating IP54.
- 3-metre power cable.

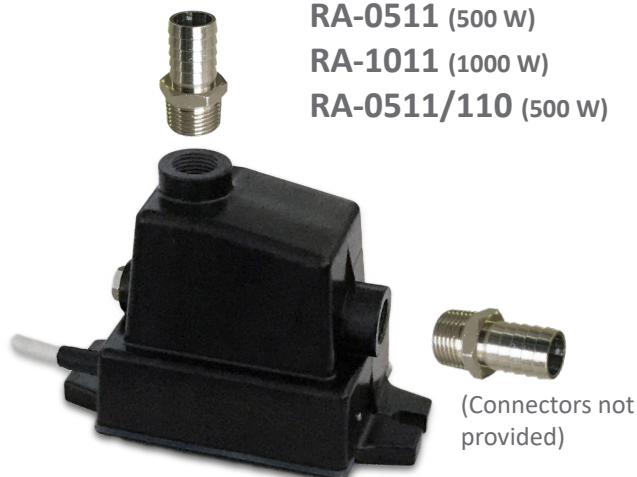
Versions with GAS ½" thread

Type

RA-0511 (500 w)

RA-1011 (1000 w)

RA-0511/110 (500 w)



Version with hose connectors for Ø 16 internal hose

Type

RA-0500 (500 w)

RA-1000 (1000 w)

RA-1500 (1500 w)

Coolant drainage plug cooling



Versions with GAS ½" thread

Type

RA-0501 (500 w)

RA-1001 (1000 w)

RA-1501 (1500 w)

RA-2501 (2500 w)

RA-1011/110 (1000w)



## OIL HEATERS FOR DIESEL ENGINES

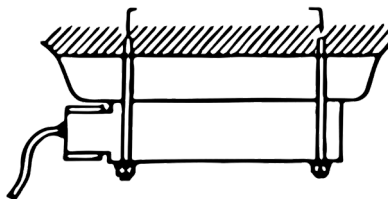
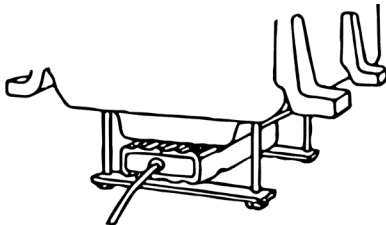
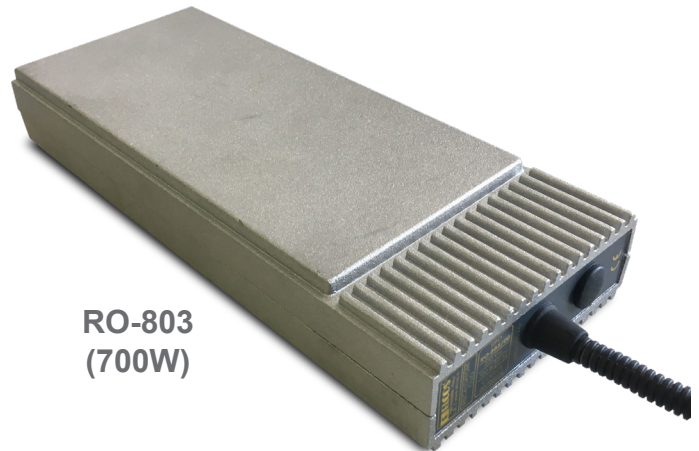
For applications in contact with the oil sump

- Power supply 230Vac.
- Heaters equipped with internal operation thermostat.
- Protection rating IP54.
- 3-metre power cable.

RO-405  
(350W)



RO-803  
(700W)



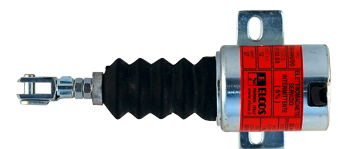
## STOP ELECTROMAGNETS

For intermittent service



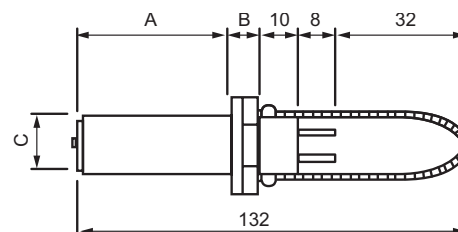
ESI-060/00

TYPE	STROKE mm	FORCE KG	
		At stroke start	At stroke end
ESI-046/00	35	1	25
ESI-060/00	50	5	50



ESI-046/00

## SPEED TRANSDUCERS



PICK-UP  
M16x1.5  
M18x1.5  
5/8"-W18-UNF  
3/4"-W16-UNF

TYPE	A	B	C
TM90-M16	68	8	M16x1.5
TM90-M18	66	9	M18x1.5
TM90-5/8	67	8	5/8"W18-UNF
TM90-3/4	66	9	3/4"W16-UNF





**Elcos S.r.l. designs and produces manual and automatic switchboards, control units, remote monitoring systems, battery chargers, water heaters, oil sump heaters and other components for use on Generating Sets, Irrigation Motor Pumps, Fire-Fighting Motor Pumps (compliant with the EN 12845 standard) and other industrial diesel engine-related applications, such as motor welders and motor compressors.**



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