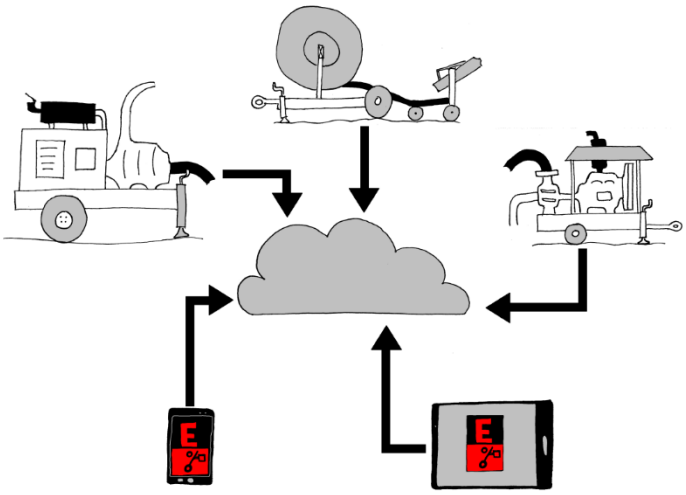
SMART CONTROL



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Version	Date	Comments
1.00	01/03/2018	Version 1.
1.01	16/04/2018	Installation-Operation sequence.
1.02	09/07/2020	Modem 4G.
1.03	26/09/2023	CEM-19X, CIM-19X and history log management.

ELCOS® srl
Tel. +39 0521/772021 Fax +39 0521/270218
E-mail: info@elcos.it - https://www.elcos.it

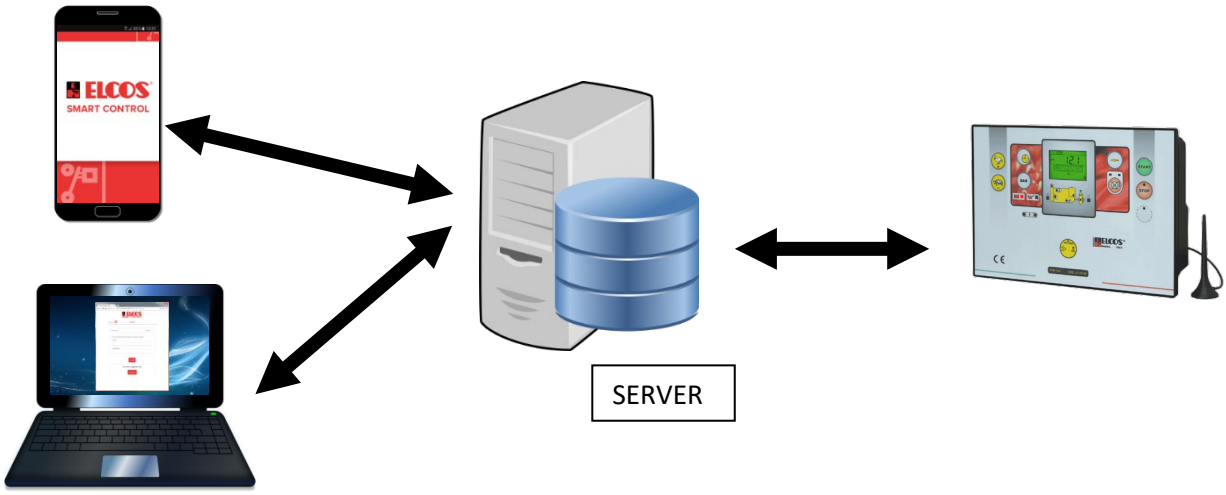
Introduction

What is it?

ELCOS SMART CONTROL is the application that allows you to use the CIM-13x, CEM-19x and CIM-19x irrigation control units remotely. It is available for Android (Play Store) and iOS (Apple Store) devices and can also be used directly on your web browser.

How does it work?

Your device (smartphone, tablet, etc.) or PC connects to and exchanges information with the ELCOS SERVER. The control unit connects to and communicates with the SERVER. The SERVER enables real time communication between the device and the control unit.



Installation

To use Elcos SMART CONTROL you will have to configure your control unit and your device.

CIM-13x

The app is supported by CIM-13x control units equipped with a MODEM and running with firmware release 2.00 or higher:

- FW 2.xx GPRS (2G) modem.
- FW 3.xx 4G modem.

The operations to perform are the following:

1. With the control unit turned off, insert a SIM card that supports 2G or 4G frequencies.
2. Enable IOT (Internet Of Things) mode:
   TECHNICAL PROGRAMMINGS>SWITCH. OFF OF FUNC. AND PROT. DEV.>IOT=INCLUDED
3. Disable GSM mode:
   TECHNICAL PROGRAMMINGS>SWITCH. OFF OF FUNC. AND PROT. DEV.>GSM=EXCLUDED
   Otherwise, the control unit will continue to support mobile phone control via SMS (and DTMF); even if the two methods can coexist it is not recommended to do so, to avoid conflicts.
4. Set the APN (Access Point Name) of your phone provider at:
   USER PROGRAMMING>APN
   Check with your provider for the correct APN; a few are provided below as example:
   TIM = “wap.tim.it” or “ibox.tim.it”
   WIND = “internet.wind”
   VODAFONE ITALIA= “mobile.vodafone.it”
5. Take note of the SERIAL NUMBER and the ACCESS CODE; both are printed on a label on the side of the control unit:

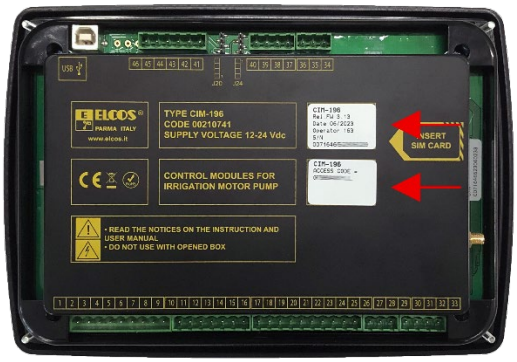
The SERIAL NUMBER can also be accessed through the following programming:

USER PROGRAMMING >DATA>1
USER PROGRAMMING >DATA>2

CEM-19x and CIM-19x

The CEM-196 and CIM-196 control units both support the App and are equipped with a 2-3-4GW MODEM. The operations to perform are the following:

1. With the control unit turned off, insert a SIM card that supports 4G frequencies.
2. Enable IOT (Internet Of Things) mode:
   PROGRAMMING>MODEM>IOT>FUNCTION= INCLUDED
3. Disable GSM mode:
   PROGRAMMING>MODEM>SMS> FUNCTION= EXCLUDED
   Otherwise, the control unit will continue to support mobile phone control via SMS; even if the two methods can coexist it is not recommended to do so, to avoid conflicts.
4. Set the APN (Access Point Name) of your phone provider at:
   PROGRAMMING>MODEM>IOT>APN
   Check with your provider for the correct APN; a few are provided below as example:
   TIM = “wap.tim.it” or “ibox.tim.it”
   WIND = “internet.wind”
   VODAFONE ITALIA= “mobile.vodafone.it”
5. Take note of the SERIAL NUMBER and the ACCESS CODE, both are printed on a label on the side of the control unit, if CEM-19x, or on the back, if CIM-19x:



The SERIAL NUMBER can also be accessed through the following programming:
PROGRAMMING>DATA>APP.

App

You can access the control unit through the app installed on a mobile device or through a PC connected to the Internet. The operations you need to perform are similar:

1. Download the App from Google Store or Apple Store or connect to the address *https://smartcontrol.elcos.it*
2. Register with a valid email address.
3. Access with your sign-in information.
4. Launch the application and add the control unit to your list by inserting the unit's SERIAL NUMBER and ACCESS CODE.

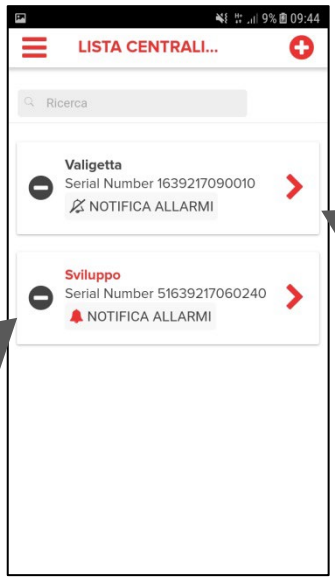
Operation sequence

In the "Control unit list" page it is possible to add a control unit only AFTER the latter has connected to the SERVER at least once; if a control unit has never exchanged information with the server, the entry procedure returns an error.

Application

The application has several pages, some of which are illustrated below.

List of Control Units Page



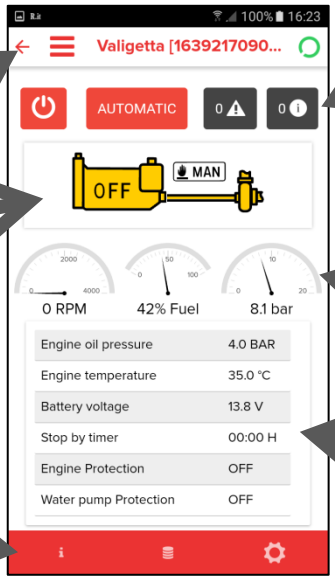
Add to list

Remove from list

Access control units

Alarm and message notifications can be enabled or disabled

Control Unit Page



Name and SERIAL NUMBER

Controls:

- START
- STOP
- MODE
- ALARMS
- MESSAGES

States

Instruments

Access to pages:

- Info
- Alarm History
- Settings

Values

Info Page

The NAME can be edited and personalised for each user.

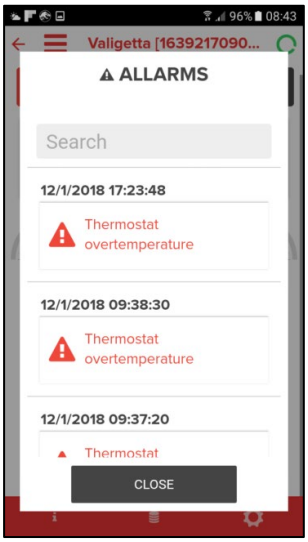
Model

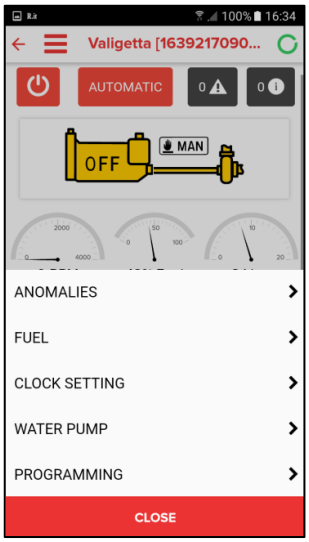
SERIAL NUMBER

Rel. FW

Alarms and Settings Page

The Alarm page shows the alarm history stored on the server and the Setting page shows access to other pages, if available.





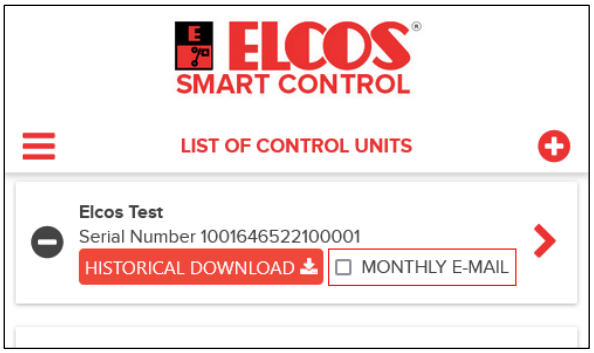
Operation History Log

The significant events relating to all the connected control panels are archived on the Elcos servers for 31 days and can be downloaded for consultation if necessary. The downloaded log is in Excel format: each line corresponds to an event, with specified SN, date, type of event, value, possible unit of measurement, direction of the signaling or command, reading or writing attributes (if the command comes from remote) and firmware release of the control unit.

	A	B	C	D	E	F	G	H	I
1	Serial Number	Date	Parameter	Value	UDM	From Control Unit	Attrib.	Message	Firmware rel.
596	11163922111293	25/09/2023 09:23:10	PMP_PRES (Water pump pressure)	11.0	bar	true			3.18
597	11163922111293	25/09/2023 09:23:03	PMP_PROT (Water pump Protection)	ON		true			3.18
598	11163922111293	25/09/2023 09:22:09	PMP_PRES (Water pump pressure)	11.1	bar	true			3.18
599	11163922111293	25/09/2023 09:22:09	ENG_RPM (Engine rpm)	1513.0	RPM	true			3.18
600	11163922111293	25/09/2023 09:21:09	PMP_PRES (Water pump pressure)	11.0	bar	true			3.18
601	11163922111293	25/09/2023 09:20:08	PMP_PRES (Water pump pressure)	10.4	bar	true			3.18
602	11163922111293	25/09/2023 09:19:38	ENG_FUEL (Fuel level)	81.0	%	true			3.18
603	11163922111293	25/09/2023 09:19:22	ENG_STS (Engine)	ON		true			3.18
604	11163922111293	25/09/2023 09:19:07	PMP_PRES (Water pump pressure)	3.6	bar	true			3.18
605	11163922111293	25/09/2023 09:18:45	ENG_PROT (Engine Protection)	ON		true			3.18
606	11163922111293	25/09/2023 09:18:37	ENG_FUEL (Fuel level)	82.0	%	true			3.18
607	11163922111293	25/09/2023 09:18:29	ANOM_WARN (WARNING anomalies)	N		true			3.18
608	11163922111293	25/09/2023 09:18:29	ANOM_STOP (STOP anomalies)	N		true			3.18
609	11163922111293	25/09/2023 09:18:29	ALLARM (Alarms)	0x0000000000000000		true			3.18
610	11163922111293	25/09/2023 09:18:22	ENG_STS (Engine)	OFF		true			3.18
611	11163922111293	25/09/2023 09:18:22	ENG_BAT (Battery voltage)	26.2	V	true			3.18
612	11163922111293	25/09/2023 09:18:14	MODE (MODE)	MAN		true			3.18
613	11163922111293	25/09/2023 09:17:36	PMP_PRES (Water pump pressure)	0.1	bar	true			3.18
614	11163922111293	25/09/2023 09:17:36	ENG_FUEL (Fuel level)	79.0	%	true			3.18
615	11163922111293	25/09/2023 09:17:29	ANOM_WARN (WARNING anomalies)	Y		true			3.18
616	11163922111293	25/09/2023 09:17:29	ALLARM (Alarms)	0x0000000000000004 -THERMOSTAT OVERTEMP		true			3.18
617	11163922111293	25/09/2023 09:17:29	ANOM_STOP (STOP anomalies)	Y		true			3.18
618	11163922111293	25/09/2023 09:17:21	ENG_STS (Engine)	ON		true			3.18
619	11163922111293	25/09/2023 09:17:13	MODE (MODE)	OFF		true			3.18
620	11163922111293	25/09/2023 09:17:06	ALLARM (Alarms)	0x0000000000000000		true			3.18

Direct Download

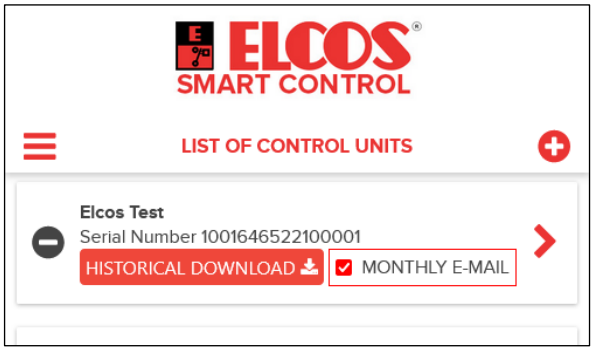
The history log can only be downloaded from the browser version of the app and to obtain it simply press on "HISTORICAL DOWNLOAD".



Monthly E-Mail

It is also possible to activate the monthly forwarding service by ticking "MONTHLY E-MAIL". This way the system will forward, every 1st day of each month, a message with attached the historical log of all the

control units for which the automatic forwarding box has been ticked.



If there is a tick on the automatic forwarding, but the control unit has never worked or the license has expired, you will not receive any email.

Access Levels

There are three access levels, with increasing privileges, in order to limit management errors. To change the access level, contact ELCOS.

USER Level

This level is for end users and enables full use of the functions. This level is assigned by default at the time of registration.

MANUFACTURER Level

This level is for the motor pump manufacturer and enables use of the motor pump and a number of settings.

ADMINISTRATOR Level

Provides full control of the functions and settings.

Account Type

There are two types of account:

SINGLE

Provides access to only one control unit.

MULTIPLE

Provides access to multiple control units (no limit on the number).

Free Use

At the time of registration, you get 6-months' use of a MULTIPLE account for free. Once expired, subscription renewal will be on a yearly basis and with different prices for the single and multiple account.