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EITK2000

System for the configuration, maintenance and diagnostics of IRIS and ENEA series devices.

About this manual

DCMIIN1PEITK2000	**MANUAL CODE**
1.00	**VERSION**

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Manufacturer's details   1

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The persons authorized by the manufacturer to repair or replace the parts of this system have authorization to work on INIM Electronics brand devices only.

General description   2

EITK1000 is a kit for the configuration, maintenance and diagnostics of IRIS and ENEA series devices.

It comes in a case containing:

- **EDRV2000**, manual programmer and loop driver
- **EITK-PWSP**, 27.6V power supply ---
- CD containing **FireGenius-PRO**, configuration and control software (also available from www.inim.biz)
- USB A cable – mini USB B for the connection of the EDRV2000 to a PC
- USB A cable – micro USB B for the connection of the EDRV2000 to ICP port equipped devices
- Installation and Programming manual (this manual).

EDRV2000

The EDRV2000 driver (included in EITK2000 kit) is capable of operating autonomously by way of its internal battery, keypad and display.

However, when the EDRV2000 driver is connected to a PC it is powered through the USB port and charges its own internal battery.

The EDRV2000 driver can be used for the following operations:

- manual configuration of the addresses of analogue-addressable devices from the Enea series
- diagnosis of a loop of addressable devices (or single device) from the Enea series
- diagnosis and configuration of the operating parameters of a line of conventional devices (or single device) from the Iris series
- configuration of the parameters of visual-audible alarm devices from Inim's 1000 and 2000 series

The FireGenius-PRO software provides the installer/programmer with functions for configuration and addressing as well as monitoring and diagnoses of the loop, conventional lines and their connected devices.

FIREGENIUS-PRO

The software also provides functions for the programming and setting of alarm tones and customized voice messages on visual-audible signalling devices.

These functions are available through a graphic interface.

The system is displayed as a tree structure in which nodes are represented by the icons of the system devices.

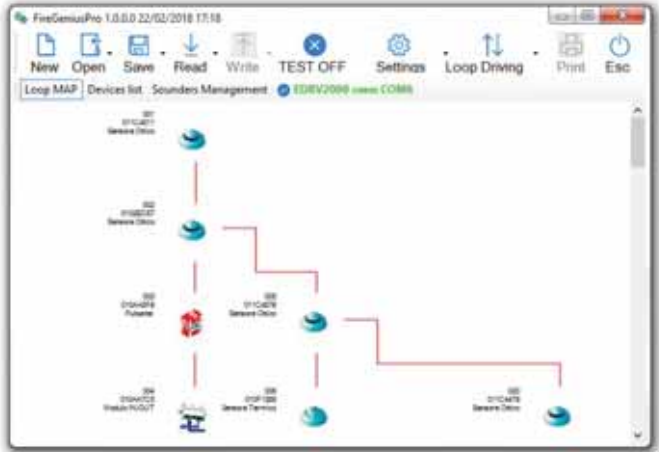It is possible to access, view and interact with each individual device on the system.

On application startup, login will be requested before access is allowed.

The administrator provided default information is as follows:

- username = "admin"
- password = "inimmini"

The user provided default information is as follows:

- username = "user"
- password = "password"

The EITK2000 allows you to configure each detector in accordance with the environment it is installed in. It is possible to connect to a line of detectors and perform a complete diagnosis for each individual detector in order to test functionality, verify real-time values, view the contamination level in the optical smoke chamber and change the sensitivity and operating mode.

DETECTORS

The non-volatile memory of each detector saves the smoke and temperature values recorded in the 5 minutes prior to the last alarm thus revealing the progression of both the smoke and temperature values.

The kit takes advantage of the **Versa++** technology incorporated in IRIS and ENEA conventional detectors, which permits the configuration of each detector to suit its specific environment. Therefore, it is possible to:

• Identify each conventional detector connected to the line
• Select the operating mode of each detector (blinking on the device LED, blinking on the remote LEDs, etc.)
• Change the sensitivity of the smoke sensor
• Change the sensitivity of the heat sensor
• Select the combination mode of smoke and temperature
  - OR mode
  - AND mode
  - Only heat
  - Only smoke
  - PLUS mode
• Activate the detector manually (red or green)
• Know the details any faults (chamber contamination, chamber fault, heat sensor fault, etc.)
• Have available the tools for a complete diagnosis of the detector
  - Level of contamination in the chamber
  - Real-time smoke level
  - Real-time temperature value

The EITK2000 also uses **LOOPMAP** technology for the analogue-addressable detectors from the Enea series, for loop addressing and wiring fault searches. By means of the LOOPMAP it is possible to:

• Recognize the detectors automatically
• Reconstruct the wiring, ascertain the wiring order of the devices, T junctions and all the physical characteristics of the loop
• Detect short-circuits on the loop (each device is equipped with a short-circuit isolator)
• Manually activate the tri-colour LED on each device

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VISUAL & AUDIBLE SIGNALLING DEVICES

The EITK2000 provides an interface that allows the configuration of the parameters of visual-audible alarm indicators from the Iris and Enea series:

- Sound output level (only for conventional devices)
- Flasher intensity (only for conventional devices with visual signalling capacity)
- Alarm tone (only for conventional devices)
- Loading of alarm tones customized by the user via FireGenius-Pro software
- Reset of factory default tone configuration

Technical description   3

Table 1: EDRV2000 technical specifications

Power supply voltage	22-30V⎓
Operating temperature	from -5 to +40°C
Humidity (without condensation)	95% RH
Internal batteries	2 rechargeable LiFePo, 3,2V 1500mAh
Display	Graphic LCD display 96 x 32
Loop current limitation	250 mA resettable thermal fuse
Housing	Polystyrene casing
Maximum load on loop	200 mA (without line resistance)
Maximum line resistance	40 Ohm
Maximum loop capacity	4 µF
Dimensions	215 x 109 x 57mm
Weight	450gr

Table 2: EITK100-PWSP technical specifications

Input voltage	100/-240 V~ -15% 10% 50/60Hz
Current consumption	0.28A (max)
Output voltage	27.6V ± 1%
Maximum output current	1A
Operating temperature	from -5 to +40 °C
Isolation class	II ▣
Dimensions (W x H x D)	95 x 28 x 42 mm
Weight (with wires)	180gr
Output ripple voltage	≤1%

Table 3: EDRV2000 Description of parts

A	Output connection terminals
B	Base for detector connection
C	Battery level LED
D	LED RX
E	LED TX
F	"R" output LED
G	Display
H	OK/Read button
I	Esc/Write button
J	Up button
K	Down button
L	24V power supply socket
M	USB to PC connector
N	USB connector with ICP port
O	Battery housing
P	Internal speaker
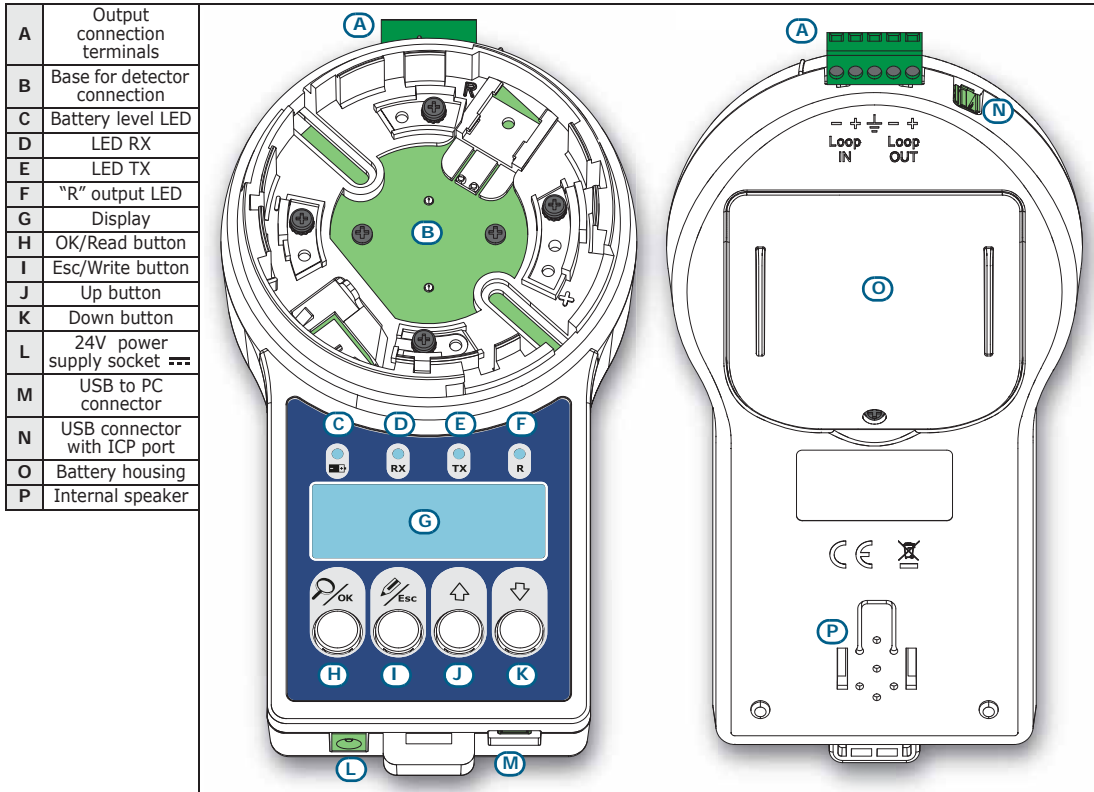
Table 4: EDRV2000 - LED

C	**Battery**	Green	Blinking: battery charging Solid: battery full charged
D	**Rx**	Green	Signal reception in progress
E	**Tx**	Red	Signal transmission in progress
F	**R**	Yellow	Activity on the output of the connected device

Table 5: EDRV2000 - connectors

A	**Connection terminals**	Terminals for connection to the loop or to a single device for the manual configuration of the address.
L	**EITK-PWSP power-supply connector**	By connecting the power supply, the devices connected to the driver will be powered by the latter and the internal batteries will be placed into the process of recharging.
M	**USB to PC connector**	By connecting a PC via the USB A – Mini USB B cable (included), it will be possible to use the device with the FireGenius-PRO software. By connecting the cable to a PC, the internal batteries will be placed into the process of recharging.
N	**USB connector with ICP port**	Port to be used for the connection through the USB A - Micro USB B cable (included), with the ICP port of duly equipped Enea series devices (visual-audible alarm indicators from the 1000 and 2000 series)

Manual configuration of the addresses of analogue addressable devices from the Enea series   4

Inim Electronics fire-detection control panels are capable of assigning automatically ("auto-addressing") logic addresses to the various devices connected to the loop (Enea series analogue-addressable devices). However, it is possible to manually assign an address to each device before connecting it to the loop by means of the EDRV2000 driver and then, via the control panel, execute the read procedure of the device addresses ("Enroll" procedure).

Note

The execution of the auto-addressing procedure via the control panel automatically overwrites any addresses assigned manually via the driver.
To avoid this it is necessary to execute the enroll procedure only.

To carry out the manual assignment or verification of the address of an analogue device proceed as follows:
1. Connect just one device to the EDRV2000 driver, to the base (*table 3, B*) if it is a detector, to the terminal board (*table 3, A*) if it is a module, call point or sounder.
2. Switch the driver ON using the **OK/Read** (*table 3, H*) button.
3. If you wish to know the address of the connected device press the **OK/Read** (*table 3, H*) button.
    If you wish to assign an address to the connected device, select the desired address by means of the **Up** (*table 3, J*) or **Down** (*table 3, K*) button, then press and hold the **Esc/Write** (*table 3, I*) button for at least 1 second to assign it.
    In the case of multi-module devices, it is necessary first to select one of the modules it comprises.

Diagnoses of Enea analogue devices   5

The EDRV2000 driver can be used to drive and control an entire loop of Enea addressable devices by means of the addressing, diagnosis and configuration procedures.

These procedured, when applied to an entire loop or even a single device, can be carried out without having an Inim fire-detection control panel installed.

The diagnosis can be carried out in two ways:
*   Using the buttons and display on the driver
*   Using the FireGenius-PRO software

Diagnoses using the buttons and display on the driver   5-1

In this way the appliance can operate using its own internal batteries.

If instead the EITK-PWSPS (included in the kit) is connected to the driver, the loop will be powered by the same and the internal batteries will be placed into the process of recharging.
1. Connect just one device to the EDRV2000 driver, to the base (*table 3, B*) if it is a detector, to the terminal board (*table 3, A*) if it is a module, call point or sounder of an entire loop.
2. Switch the driver ON using the **OK/Read** (*table 3, H*) button.
3. Press and hold the **OK/Read** button again to access the main menu of the driver.
4. Select the "Device Info" option for the diagnosis of a single device connected to the appliance, select the "Loop" option in the case of several devices (loop or conventional line).

```
>Device Info
Loop
ICP Port
EDRV2000
```

DEVICE INFO

From the "Device Info" option on the menu it is possible to access the management menu of the devices connected to the driver.

This menu can also be reached by using the **OK** button to select a single device from among those listed after a loop has been read (refer to the "Loop" option).

```
>S/N   xxxxxxxx
Address  yyy
Detector
LED    ON
```

Table 6: Device Info

line	option	Device data and status
1	S/N	Serial number
2	Address	Logic address
3	ED100	Description (e.g. type of model)
4	LED	LED activation status It is possible to activate or deactivate the LED via the **OK** button.
5	Output	Output activation status It is possible to activate or deactivate the output via the **OK** button.
6	Smoke	Level of smoke in the protected environment in mdB/m
7	Temperature	Temperature of the protected environment in °C
8	Contamination	Contamination value of the optical detection chamber, in percentage
9	N. alarms	Number of alarms detected by the device and saved to its memory.
10	Settings	Access to parameter programming phase.

The presence of the above-mentioned options depends on the type of device connected.

The "Settings" option provides access to the parameter programming phase of the connected device.

Table 7: Connected device settings

line	option	device parameter
1	Blink on LED	Activates blinking on the device LED
2	Blink on R	Activates blinking on the LED of the remote device connected to the output
3	Sensitivity	
4	Smoke	Alarm value of the smoke level in the protected environment (0,08, 0,10, 0,12, 0,15dB/m)
5	Heat	Modality of temperature alarm signalling (A1R, B, A2S, BR)
6	Combination	Modality of alarm signalling for combined detection (PLUS, OR, AND, Only smoke, Only heat)
7	Contamination	Temperature of the protected environment in °C
8	Auto-Reset	Parameter for the reset of stand-by conditions on the device on restoral of the alarm condition

Via the "Loop" option you enter the loop management menu or that of the conventional line connected to the driver. **LOOP**

Table 8: Loop

line	option	function
1	List	Option that indicates the number of devices present in the EDRV2000 memory (from a possible previous reading). Pressing the **OK** button provides access to a list of devices which indicates the logic address, serial number and the description of each one. Via the **OK** button it is possible to select one of the devices from this list and access its data, as described in "Device Info".
2	Read	Option that scans the devices connected to the loop and enrolls the addresses (the device addresses will not be changed). Once the scan is complete you enter the "List" option.
3	Re-address	Option that scans of the devices connected to the loop and assigns a new address to each one in accordance with the order of connection to the loop (the previously assigned addresses will be overwritten).

```
>List      nnn
Read
Re-address
```

Diagnoses with FireGenius-PRO   5-2

The driver allows the FireGenius-PRO software to communicate with the connected devices and perform a diagnosis.

For details, please refer to the Software manual.

Diagnosis of Iris conventional devices   6

The EDRV2000 driver can be used to drive and control an entire line of conventional detectors or a single conventional detector from the Iris series connected to the driver base.

The above-mentioned operations can be performed in two ways, as for analogue devices: either by using the device buttons and display or via the FireGenius-PRO software.

Configuration of Inim visual-audible devices   7

By connecting the EDRV2000 driver to the visual-audible alarm indicators from the 1000 and 2000 series (both the "ES" analogue series and the "IS" conventional series) it is possible to set their function parameters.

1. Connect the driver via USB A – Micro USB B (included in the kit) and the appropriate port (*table 3, N*) to the ICP port of the visual-audible alarm indicator.
2. Switch the driver ON using the **OK/Read** (*table 3, H*) button.
3. Press and hold the **OK/Read** button again to access the main menu of the driver.
4. Select the "ICP Port" option.
5. Press the **OK** to start a scan on the ICP connection. Once completed it is possible to access the programming parameters of the device.

```
Device Info
Loop
>ICP Port
EDRV2000
```

Table 9: Visual and audible alarm-indicator settings

line	option	device parameter
1	ESxxxx	Model of the connected device
2	ALM xyz	Description of the audible signalling tone. Pressing the **OK** button accesses the complete list of tones available where it is possible to select one by pressing the **OK** button again.
3	Flasher:	Brightness level of luminous signal (High/Low/Off). Pressing the **OK** button allows you to change the setting.
4	Volume:	Sound level of the audible signal (High/Low). Pressing the **OK** button allows you to change the setting.
5	Synch	If you select "Yes" the device will synchronize its signals with all the other devices with the option enabled
6	Write audio	This option accesses a menu that will allow you to set customized tone, generated via the FireGenius-PRO software.
7	Test audio	Pressing the **OK** button activates/deactivates an audible signal to carry out a test on the device.

For further details refer to the respective manual of each visual-audible alarm indicator.

CUSTOMIZED VOICE MESSAGES

Programming of the sounders allows for customization of voice messages.

Such messages must be created through the FireGenius-PRO software and then loaded to the memory of the EDRV2000 driver.

At this point it is possible to write the voice messages on the sounder by means of the "Write Audio" option on its programming menu.

```
Flasher: High
Volume:  High
Synch    YES
>Write audio
```

Table 10: Audio writing settings

line	option	device parameter
1	Tones xyz	Identification code of the audible tones set loaded to the audible alarm indicator (sounder). In the event of a reading error, the "memory corrupted" message will be shown. In such a case it is convenient to reprogram the sounder using the "Repair all" option (below).
2	Write custom	Option that transfers all the customized messages to the audible alarm indicator (sounder)
3	Repair all	Option that resets the programming of the factory default tones and transfers the customized messages
4		

EDRV2000 driver settings 8

The EDRV2000 driver has a section on the main menu for the setting and viewing of its own function parameters.

1. Switch the driver ON using the **OK/Read** (*table 3, H*) button.
2. Press and hold the **OK/Read** button again to access the main menu of the driver.
3. Select the "EDRV2000" option.
4. Press the **OK** to start a scan on the ICP connection. Once completed it is possible to access the programming parameters of the device.

```
Device Info
Loop
ICP Port
>EDRV2000
```

Table 11: EDRV2000 settings

line	option	device parameter
1	FW x.y.z	Firmware revision
2	Battery:	Status of the internal batteries
3	DRIVING Loop-x	Driving the loop connection (driver output channel). Pressing the **OK** button provides the possibility to change the setting (Loop IN, Loop OUT, both, none)
4	English	Language used by the user interface. Pressing the **OK** button allows you to change the setting.
5	Tones xyz	Identity Code of the set of tones loaded to the driver. By pressing the **OK** button it is possible to view the descriptions of the customized tones. In the event of a read error, the "memory corrupted" message will be shown. In such a case it is convenient to reprogram the driver via FireGenius-PRO software.

In the event of a read error ("memory corrupted") the driver will not access the read audio menu (*Table 10 "Audio writing settings"*).

Note