

PREVIDIA

FIRE DETECTION AND EXTINGUISHANT SYSTEMS

GUIDE FOR INTEGRATION WITH SUPERVISION SYSTEMS





GameOver

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____inim Chapter 1

General information

1.1 Manufacturer's details

Manufacturer: INIM ELECTRONICS s.r.l

Production plant: Centobuchi, via Dei Lavoratori 10

Comune: 63076, Monteprandone (AP) - Italy

Tel.: +39 0735 705007

Fax: +39 0735 704912

E-mail: info@inim.biz

Web: www.inim.biz

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

1.2 About this manual

Manual code: DCMBINE0PREVIDIA

Version: 1.10

This manual provides the installer with the guidelines relating to the integration of Previdia control panels with external supervision systems.

1.2.1 Graphic conventions

Following are the graphic conventions used in this manual.

| Conventions | Example | Description |
|-----------------------------------|---|---|
| Text in italics | Refer to paragraph 1.2.1 Graphic conventions | Indicates the title of a chapter, section, para- graph, table or figure in this manual or other published reference |
| [Uppercase letter] or [number] | [A] or [1] | Reference relating to a part of the system or video object. |

Note:

The notes contain important information relating to the text.

Chapter 2

Connectible external systems

Previdia series control panels have been especially developed and designed for connection to various systems which are external to the fire detection system itself, such as:

- BMS (Building Management System): supervision systems, usually comprising software installed on a PC platform, capable of supervising and managing the system through graphic maps, function keys, etc. These systems constitute an easy-to-use interface for end users.
- **Pager**: systems comprising a PABX capable of receiving text messages from other systems (in our case from fire-detection control panels) and forwarding them to remote devices such as pagers or displays of cordless telephones.
- Video surveillance with IP cameras with Onvif protocol: cameras installed in the same Ethernet network can be interconnected with the fire-detection control panel in order to provide images captured in ambients where dangerous situations have been detected (in the case of PTZ bu positioning the camera at the correct angle).

The images, visible on the control-panel console or from remote locations (via e-mail or web browser), provide a valid verification tool that allows the user to establish the seriousness or irrelevance of fire signalling.

 Voice Evac: voice evacuation systems comprise one or more control units (controller, amplifiers, power supplies) and a series of sound diffusion lines. These systems have the task of warning occupants of the necessity to evacuate the building and are more effective that sounders, as they are capable of providing detailed information regarding the fire. The interconnection of these systems and the fire detection system allows the activation of accurate voice messages relating specifically

to the various zones in the building.



Building Management System

The connection of Previdia control panels with supervision systems (BMS, Building Management Systems) allows users to supervise and interact with their systems.

For this purpose Previdia control panels manage some of the most widely used communication protocols available on the market:

- Modbus RTU: protocol based on RS485 standard (for Previdia Max control panels only, available on the RS485-BMS port of the FPMCPU module)
- Modbus over TCP/IP: Modbus protocol based on TCP/IP standard, implemented on the Ethernet connection of the control panel
- **BACnet**: protocol based on TCP/IP standard (for Previdia Max control panels only, implemented on the Ethernet port of the IFMLAN module). This protocol is subject to licencing.
- SmartLook interface: protocol property of Inim Electronics used by SmartLook software (implemented on the Ethernet port, RS232 and USB located on the FPMCPU module for Previdia Max control panels and on the Ethernet and USB ports located on the Previdia Compact control panels main board)

Following are the specifications of each of the previously-mentioned protocols.

3.1 Modbus RTU and Modbus over TCP/IP

A BMS software framework connected to a Previdia control panel via Modbus protocol, capable of supervising and managing the control panel itself and all the control panels interconnected with it through the Hornet+ network (for further details regarding Hornet+ networking refer to the Praesidia networking guide).

For this reason it is necessary to configure a Modbus address for each control panel to be reached.

This setting must be done through the configuration software Previdia/Studio.

- 1. Open the Previdia/Studio solution that represents the system.
- 2. Select, from the control panels configured in the network, the control panel the BMS is connected to (via TCP/IP or RS485).
- 3. Access to the control panel CPU programming section:

for Previdia Max: Click first on the FPMCPU module icon and then on the display.

for Previdia Compact: Click first on the display.

for PREVIDIA-C-REP: You access directly to the section of interests.

4. The section shows the Modbus address button. Click on the button.

For each of the control panels connected in the Hornet+ network, the software will allow you to set on the Modbus the address to which to respond. If you select the "No Address" setting the control panel in question will not respond to Modbus commands (protocol disabled).

Note: Modbus RTU and Modbus TCP/IP protocols are available and are not subject to an activation licence.

The Previdia control panel carries out the following commands via the Modbus:

- READ REGISTER
- SET COIL





3.1.1 Register Mapping

The "READ REGISTER" command serves to interrogate the control panel in relation to its status and the status of its connected components in accordance with the register mapping as shown below:

| | Registe | rs for | Previo | dia Ma | x con | trol p | anels | (use l | Modbu | us OxC |)3 cor | nman | d to r | ead) | | | |
|---------|--------------------------------------|---------------------------|---------------------------|-------------------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit O | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| 0 | Control panel details Status 1 | | | | | | Investigate | Mute | Night mode | | | | Disabled | Fault | Early warning | Pre-alarm | Alarm |
| 1 | Control panel details Status 2 | | | | | | | | | | | | | RT network | Fault fault | Low battery | Fault fault |
| 2 | Modules fault | Module fault IFMDIAL | Module fault IFMNET | Fault emergency backup CPU | Module fault IFMLAN | Module fault IFM16IO 4 | Module fault IFM16IO 3 | Module fault IFM16IO 2 | Module fault IFM16IO 1 | Module fault IFM2L 8 | Module fault IFM2L 7 | Module fault IFM2L 6 | Module fault IFM2L 5 | Module fault IFM2L 4 | Module fault IFM2L 3 | Module fault IFM2L 2 | Module fault IFM2L 1 |
| 3 | Module fault IFMEXT 1-16 | Module fault IFMEXT 16 | Module fault IFMEXT 15 | Module fault IFMEXT 14 | Module fault IFMEXT 13 | Module fault IFMEXT 12 | Module fault IFMEXT 11 | Module fault IFMEXT 10 | Module fault IFMEXT 9 | Module fault IFMEXT 8 | Module fault IFMEXT 7 | Module fault IFMEXT 6 | Module fault IFMEXT 5 | Module fault IFMEXT 4 | Module fault IFMEXT 3 | Module fault IFMEXT 2 | Module fault IFMEXT 1 |
| 4 | Module fault IFMEXT 17-24 | | | | | | | | | Module fault IFMEXT 24 | Module fault IFMEXT 23 | Module fault IFMEXT 22 | Module fault IFMEXT 21 | Module fault IFMEXT 20 | Module fault IFMEXT 19 | Module fault IFMEXT 18 | Module fault IFMEXT 17 |
| 5 | Module fault IFM4IO | Module fault IFM4IO 16 | Module fault IFM4IO 15 | Module fault IFM4IO 14 | Module fault IFM4IO 13 | Module fault IFM4IO 12 | Module fault IFM4IO 11 | Module fault IFM4IO 10 | Module fault IFM4IO 9 | Module fault IFM4IO 8 | Module fault IFM4IO 7 | Module fault IFM4IO 6 | Module fault IFM4IO 5 | Module fault IFM4IO 4 | Module fault IFM4IO 13 | Module fault IFM4IO 2 | Module fault IFM4IO 1 |
| 6 | Fault modules fault | | | | | Module fault IFM24160 4 | Module fault IFM24160 3 | Module fault IFM24160 2 | Module fault IFM24160 1 | | Module fault FPMLED 7 | Module fault FPMLED 6 | Module fault FPMLED 5 | Module fault FPMLED 4 | Module fault FPMLED 3 | Module fault FPMLED 2 | Module fault FPMLED 1 |
| 7 | Module fault IFM4R | Module fault IFM4R 16 | Module fault IFM4R 15 | Module fault IFM4R 14 | Module fault IFM4R 13 | Module fault IFM4R 12 | Module fault IFM4R 11 | Module fault IFM4R 10 | Module fault IFM4R 9 | Module fault IFM4R 8 | Module fault IFM4R 7 | Module fault IFM4R 6 | Module fault IFM4R 5 | Module fault IFM4R 4 | Module fault IFM4R 3 | Module fault IFM4R 2 | Module fault IFM4R 1 |
| 8 | Active Timers 1 | Timer 16 | Timer 15 | Timer 14 | Timer 13 | Timer 12 | Timer 11 | Timer 10 | Timer 9 | Timer 8 | Timer 7 | Timer 6 | Timer 5 | Timer 4 | Timer 3 | Timer 2 | Timer 1 |
| 9 | Active Timers 2 | Timer 32 | Timer 31 | Timer 30 | Timer 29 | Timer 28 | Timer 27 | Timer 26 | Timer 25 | Timer 24 | Timer 23 | Timer 22 | Timer 21 | Timer 20 | Timer 19 | Timer 18 | Timer 17 |
| 10 | Disabled Tim- ers 1 | Timer 16 | Timer 15 | Timer 14 | Timer 13 | Timer 12 | Timer 11 | Timer 10 | Timer 9 | Timer 8 | Timer 7 | Timer 6 | Timer 5 | Timer 4 | Timer 3 | Timer 2 | Timer 1 |
| 11 | Disabled Tim- ers 2 | Timer 32 | Timer 31 | Timer 30 | Timer 29 | Timer 28 | Timer 27 | Timer 26 | Timer 25 | Timer 24 | Timer 23 | Timer 22 | Timer 21 | Timer 20 | Timer 19 | Timer 18 | Timer 17 |
| 12 | Loop fault | Fault loop 16 | Fault loop 15 | Fault loop 14 | Fault loop 13 | Fault loop 12 | Fault loop 11 | Fault loop 10 | Fault loop 9 | Fault loop 8 | Fault loop 7 | Fault loop 6 | Fault loop 5 | Fault loop 4 | Fault loop 3 | Fault loop 2 | Fault loop 1 |
| 13 | Loop disabled | Loop 16 disabled | Loop 15 disabled | Loop 14 disabled | Loop 13 disabled | Loop 12 disabled | Loop 11 disabled | Loop 10 disabled | Loop 9 disabled | Loop 8 disabled | Loop 7 disabled | Loop 6 disabled | Loop 5 disabled | Loop 4 disabled | Loop 3 disabled | Loop 2 disabled | Loop 1 disabled |

| | Registers for Previdia Max control panels (use Modbus 0x03 command to read) | | | | | | | | | | | | | | | | |
|----------|---|-----------------------|-----------------|--------------------------|----------|----------------------------|------------------|------------------------------|------------------|------------------------------|-----------------------|-----------------------------|--------------------|------------------------------|-----------------------|---------------------------|------------------------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| Addi C33 | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| 20 | Status of tele- phone com- municator 1 | Supervision failed | Call queue full | SMS fault | SMS OK | Fault call failed | Fault call OK | Alarm call failed | Alarm call OK | Fault call ongoing | Alarm call ongoing | | | | GPRS Fault | PSTN Fault | GSM Fault |
| 21 | Status of tele- phone com- municator 2 | | | | | | | | | | | | | | Info call disabled | Fault call disabled | Alarm call disabled |
| 25 | Fire extinguish- ment module 1 | | | | | | | | | Fault | Automatic stop | Manual stop | Pre-extinguishment | Extinguishment | Manual disabled | Automatic disabled | Disabled |
| | | | | | | | | | | | | | | | | | |
| 48 | Fire extinguish- ment module 24 | | | | | | | | | Fault | Automatic stop | Manual stop | Pre-extinguishment | Extinguishment | Manual disabled | Automatic disabled | Disabled |
| 49 | Extinction module 1 ter- minals faults | | | Short circuit on HOLD | nopen | Short circuit on MANEXT | MANEXT open | Short circuit on PRESSOS. | PRESSOS. open | Short circuit on STOP-EXT | STOP-EXT open | Short circuit on PRE-EXT | PRE-EXT open | Short circuit on RELEASED | RELEASED open | Short circuit on VALVE | VALVE open |
| | | | | | | | | | | | | | | | | 6 | |
| 72 | Extinction module 24 ter- minals faults | | | Short circuit or HOLD | HOLD | Short circuit or MANEXT | MANEXT open | Short circuit or PRESSOS. | PRESSOS. open | Short circuit or STOP-EXT | STOP-EXT open | Short circuit or PRE-EXT | PRE-EXT open | Bhort circuit or RELEASED | RELEASED open | Short circuit or VALVE | VALVE open |
| | | رو رو | | D) | ZOr | ie z | D | _ | | a) | | a) | ZOr | le I | D | | |
| 100 | Zone 1 Zone 2 | Do not us | Test | Do not us | Disabled | Fault | Early warnir | Pre-alarm | Alarm | Do not us | Test | Do not us | Disabled | Fault | Early warnir | Pre-alarm | Alarm |
| | | | | | 7 | 1000 | | | | | | | ~ | | | | |
| | | 0 | | 0 | Zone | 1000 | D | | | 0 | | 0 | Zone | 999 | Ð | 1 | |
| 599 | Zone 999 Zone 1000 | Do not use | Test | Do not use | Disabled | Fault | Early warnir | Pre-alarm | Alarm | Do not use | Test | Do not use | Disabled | Fault | Early warnir | Pre-alarm | Alarm |
| | | (1) | (1) | | Gro | up 2 | ğ | | | (1) | (1) | 4) | Gro | up 1 | Ď | | |
| 600 | Group 1 Group 2 | Do not use | Do not use | Do not use | Disabled | Do not use | Early warnir | Pre-alarm | Alarm | Do not use | Do not use | Do not use | Disabled | Do not use | Early warnir | Pre-alarm | Alarm |
| | | | | | | | | | | | | | | | | | |
| | | | | | Grou | p 240 | D | | | | | | Grou | p 239 | D | | |
| 719 | Group 239 Group 240 | Do not use | Do not use | Do not use | Disabled | Do not use | Early warning | Pre-alarm | Alarm | Do not use | Do not use | Do not use | Disabled | Do not use | Early warning | Pre-alarm | Alarm |

| | Registers for Previdia Max control panels (use Modbus 0x03 command to read) | | | | | | | | | | | | | | | | |
|---------|---|--------|--------|----------------|-----------|----------------|----------------|-------|--------|--------|--------|----------------|---------|----------------|----------------|--------|----------|
| Adduces | | | | | High | byte | | | | | | | Low | byte | | | |
| Address | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| | | | | IFM16 | 0 1 Moo | dule, ch | annel 2 | | | | - | IFM16I | O 1 Mo | dule, ch | annel 1 | | 1 |
| 868 | IFM16IO 1 Module | use | use | use | led | use | y du | E | E | use | use | use | led | use | y Bu | arm | F |
| | channels 1, 2 | o not | o not | o not | isab | o not | Earl | e-ala | Alarr | o not | o not | o not | lisab | o not | Earl | e-ala | Alarr |
| | | DO | DO | DO | | DO | > | P | | DO | D | DO | | Do | > | L L | |
| | | | | | | | | | | | | | | | | | |
| | IFM16IO 4 | Ð | e | IFM16IC |) 4 Moc | ule, cha ູູ | annel 16 |) | | Ð | e | IFM16IC |) 4 MOC | jule, cha | annel 15 | - - | 1 |
| 899 | Module | ot us | ot us | ot us | ablec | ot us | arly ning | alarn | m | ot us | ot us | ot us | ablec | ot us | arly ning | alarn | m |
| | channels 15, 16 | n oC | n oC | n oC | Disa | n oC | Ea | Pre- | Ala | n oC | n oC | n oC | Disa | n oC | Ea | Pre- | Ala |
| | | | | IFM4I | D 1 Moc | lule, cha | annel 2 | | | | | IFM4I | D 1 Mod | dule, cha | annel 1 | | 1 |
| 000 | IFM4IO 1 Mod- | use | use | s ut | ed | | / ng | rm | C | use | use | ut Is | ed | | / ng | rm | C |
| 900 | channels 1, 2 | not | not | Dutpi statu | isabl | Faul | Early /arni | e-ala | Alarn | not | not | Dutpi statu | isabl | Faul | Early /arni | e-ala | Alarn |
| | | Do | Do | 0 0 | Ō | | 5 | Pr | | Do | Ô | 0 | Ō | | 5 | Å | |
| | | | | | | | | | | | | | | | | | |
| | IFM4IO 16 | U | U | IFM4IC |) 16 Moi | dule, ch | annel 4 | _ | | U | U | IFM4IC |) 16 Mo | dule, ch | annel 3 | _ | T |
| 931 | Module | ot us | ot us | :put tus | bled | ult | rly 1ing | alarm | E | ot us | ot us | tus | bled | ult | rly ning | alarm | Ę |
| | channels 3, 4 | 0 00 | 00 00 | Out star | Disa | Fai | Ea warr | ore-a | Ala | 0 00 | 0 00 | Out sta: | Disa | Fai | Ea warr | Pre-a | Ala |
| | | | | IFM4R | l Modu | ule , cha | innel 2 | | | | | IFM4F | R 1 Mod | ule , cha | annel 1 | | <u> </u> |
| 072 | Module | use | use | s It | g | use | use | use | use | use | use | s H | be | use | use | use | use |
| 952 | channels 1, 2 | not | not | butpu | sable | not | not | not | not | not | not | Jutpu | sable | not | not | not | not |
| | | Do | Ô | 0 | Ō | Do | Ô | Do | Ô | Do | Do | 0 | ā | Ô | Ô | Do | Ô |
| | | | | | | | | | | | | | | | | | |
| | Module | U | U | IFM4R | 16 Mod | ule , ch v | annel 4 o | U | U | U | U | IFM4R | 16 Mod | lule , ch v | annel 3 v | U | U |
| 963 | IFM4R 16 | ot us | ot us | put tus | bled | ot us | ot us | ot us | ot us | ot us | ot us | tus | bled | ot us | ot us | ot us | ot us |
| | channels 3, 4 | on oc | on oc | Out | Disa | on oc | on oc | o no | on oc | on oc | on oc | Out | Disa | o ne | on oc | on oc | o ne |
| | | | | IFM241 | 60 1 M | odule, c | utput 2 | | | | | IFM242 | 160 1 M | odule, c | output 1 | | |
| 964 | IFM24160 1 | use | use | s rt | eq | | use | use | use | use | use | t s | eq | | use | use | use |
| 904 | output 2 | not | not | Dutpi | isabl | Fault | not | not | not | not | not | Dutpi | isabl | Fault | not | not | not |
| | | Do | Do | | | | Ô | Do | Do | Do | Do | | | | Ô | Do | Do |
| | IFM24160_1 | e | e | IFM241 | .60 2 M | odule, c | output 1 | Ð | e | e | e | IFM243 | 160 1 M | odule, c | utput 3 | e | e |
| 965 | Uutput 3 IFM24160 2 | ot us | ot us | tput itus | bled | ult | ot us | ot us | ot us | ot us | ot us | tput atus | bled | ult | ot us | ot us | ot us |
| | Output 1 | 00 10 | 00 10 | Ou sta | Disa | ц | 00 10 | 00 10 | 00 10 | 00 10 | 00 10 | ou | Disa | Ъ | 00 10 | 00 10 | 00 10 |
| | IEM24160.2 | | | IFM241 | .60 2 M | odule, c | utput 3 | | | | | IFM241 | 60 2 M | odule, c | output 2 | | |
| 966 | Module | use | use | s ut | eq | <i>ب</i> | use | use | use | use | use | ut Is | ed | + | use | use | use |
| 500 | output 2 | not | not | Dutp statu | lisabl | Faul | not | not | not | not | not | Dutp statu | lisabl | Faul | not | not | not |
| | output 5 | DO | DO | | <u>с</u> | | | D | D | DO | D | | | | | DO | DO |
| | IFM24160 3 | e U | e e | 1FIM241 | .00 3 101 | Saule, c | uipui z | Ð | e U | e U | e O | IFIM241 | | odule, c | Bulpul I | Ð | e |
| 967 | output 1 | ot us | ot us | tput atus | ablec | ault | ot us | ot us | ot us | ot us | ot us | tput atus | ablec | ault | ot us | ot us | ot us |
| | output 2 | и о(| n oC | Ou | Disa | Ľ. | n oC | n oC | n oC | и о(| u oC | ou | Disa | Ľ. | n oC | n oC | n oC |
| | IEM2/160 7 | | | IFM241 | 60 4 M | odule, c | output 1 | | | | | IFM241 | 60 3 M | odule, c | utput 3 | | <u> </u> |
| 968 | Output 3 | nse | nse | ut Js | led | ÷ | nse | nse | nse | nse | nse | ut us | led | ŧ | nse | nse | nse |
| 500 | IFM24160 4 Output 1 | not | not | Dutp statu | isabl | Faul | not | not | not | not | not | Dutp statu | isabl | Faul | not | not | not |
| | | Ô | Do | | | odula - | | Do | Do | Ô | Do | | 60.4 M | odula - | | Do | Do |
| | IFM24160 4 | Se | se | 17/1/241 | .00 4 Mi | Juule, C | wiput 3 | Se | Se | Se | se | 17141241 | .00 4 M | ouule, C | wiput 2 | Se | se |
| 969 | output 2 | ot u: | ot u: | utput atus | ablec | ault | ot u: | ot u: | ot u: | ot u: | ot u: | utput atus | ablec | ault | ot u: | ot u: | ot u: |
| | output 3 | Do n | Do n | ol | Disi | шĭ | Do n | Do n | Do n | Do n | Don | or st | Disi | шĭ | Do n | Do n | Do n |

| | Registe | rs for | Previo | dia Ma | ix con | trol p | anels | (use I | Nodb | us 0x0 |)3 cor | nman | d to r | ead) | | | |
|---------|----------------------------|--------|--------|---------------|----------|----------|---------------------------|---------|-----------------|--------|--------|---------------|----------|------------|------------------------|----------|-----------------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| | Loon 1 | (1) | (J) | | Loop1 a | ddress 2 | 2 | | | 0 | 0 | | Loop1 a | ddress : | 1 | | |
| 1001 | Address 1 | ot use | ot use | put tus | oled | T | کا ing | larm | Ę | ot use | ot use | put | oled | TH | yl y Ding | larm | Ę |
| | Address 2 | o no | 0 10 | Out sta | Disat | Fau | Eai warn | Pre-a | Alaı | 0 10 | 0 10 | Out stat | Disat | Fau | Ear warr | Pre-a | Alaı |
| | | | | | | | | | | | | | | | | | |
| | | | | | cop1 ad | dress 24 | 40 | | | | | | oop1 ad | dress 23 | 39 | | |
| | Loop 1 | Ise | Ise | - - | 0 | | 0 | E | | Ise | Ise | - | 000100 | | 0 | E | |
| 1120 | Address 239 Address 240 | lot L | lot L | utpu catus | sable | ault | Early arnin | -alar | larm | 1ot L | 1ot L | utpu catus | sable | ault | Early arnin | -alar | larm |
| | Address 240 | Do | Do | 0 12 | Di | | A No | Pre | ∢ | Do | Doi | 0 12 | Di | | ∎ ⊗ | Pre | ∢ |
| | Loop 2 | (1) | 0 | 1 | _oop 2 a | address | 2 | 1 | | 0) | 0 | | Loop 2 a | address | 1 | | |
| 1121 | Address 1 | ot use | it use | put us | oled | it | √ [†] Ping | larm | Ę | it use | it use | put us | oled | it | y [†] Ding | larm | Ę |
| | Address 2 | 0 10 | 0 10 | Outl | Disak | Fau | Ear warr | re-a | Alar | 0 10 | o no | Outl stat | Disak | Fau | Ear warr | re-a | Alar |
| | | | | | | | | <u></u> | | | | | | | | а. | |
| | | | | | 000 2 ac | Idress 2 | 40 | | | | | | on 2 ac | Idress 2 | 39 | | |
| | Loop 2 | Ise | ISE | 1 | 0 | GI C33 Z | 0 | Ε | | ISE | ISE | + | 00200 | . ai coo Z | 0 | E | |
| 1240 | Address 239 | lot L | not L | utpu tatus | able | ault | arly arnin | -alari | larm | not L | not u | utpu | able | ault | arly arnin | -alar | larm |
| | Address 240 | Do | Dor | ō s | Dis | LL | [™] [™] | Pre | \triangleleft | Dor | Dor | st O | Dis | LL. | | Pre | \triangleleft |
| | 1000 3 | (1) | 0 | | _oop 3 a | address | 2 | 1 | | 0 | 0 | | Loop 3 a | address | 1 | | |
| 1241 | Address 1 | t use | t use | out | oled | Ę | li ing | larm | E | t use | t use | out us | oled | Ę | ly ing | larm | E |
| | Address 2 | o nc | o nc | Out | Disat | Fau | Ear warr | re-a | Alar | o nc | o nc | Out | Disat | Fau | Ear warr | re-a | Alar |
| | | | | | | | | | | | | | | | | <u>ц</u> | |
| | | | | | oop 3 ac | dress 2 | 40 | | | | | | 000.3 ac | ldress 2 | 39 | | |
| | Loop 3 | Ise | Ise | <u>ر</u> | 0000 | | 5 | E | | Ise | ISe | - | 0 | | 0 | E | |
| 1360 | Address 239 Address 240 | lot L | lot L | utput atus | sable | ault | Early arnin | -alar | larm | 1ot L | 1ot L | utpu catus | sable | ault | Early arnin | -alar | larm |
| | Address 240 | Do | Do | 0L t | Di | | A No | Pre | ∢ | Do | Doi | 0 12 | Di | | ∎ ⊗ | Pre | ∢ |
| | Loop 4 | (1) | 0 | l | _oop 4 a | address | 2 | 1 | | 0) | 0) | | Loop 4 a | address | 1 | | |
| 1361 | Address 1 | ot use | ot use | put | oled | T | y) ding | larm | Ę | ot use | ot use | put | oled | TH | yl Ding | larm | Ę |
| | Address 2 | 0 10 | 0 10 | Out staf | Disal | Fai | Ea warr | re-a | Ala | 0 10 | 0 10 | Out staf | Disal | Fai | Ea warr | re-a | Ala |
| | | | | | | | | | | | | | | | | | |
| | | | | Lc | op 4 ac | dress 2 | 40 | | | | | Lc | bop 4 ac | dress 2 | 39 | | |
| 4.400 | Loop 4 | Ise | Ise | + | 0 | | 0 | E | | Ise | Ise | <i>ب</i> | g | | 0 | E | |
| 1480 | Address 239 Address 240 | not (| not (| utpu tatus | sable | Fault | Early arnin | -alar | larm | not (| not ı | utpu tatus | sable | Fault | Early arnin | alar | larm |
| | , | Do | Do | 0 % | Ö | | 1 3 | Pre | 4 | Do | Do | 0 % | Ö | | ⊥ š× | Pre | 4 |
| | Loop 5 | U | U | | _oop 5 a | address | 2 | | | U | U | | Loop 5 a | address | 1 | - | |
| 1481 | Address 1 | ot use | ot us | put tus | bled | ŧ | rly ning | larm | E | ot use | ot use | put tus | bled | ŧ | rly ning | larm | E |
| | Address 2 | 0 00 | 0 00 | Out sta | Disa | Fai | Ea wari | Pre-a | Ala | 0 00 | 0 00 | Out sta | Disa | Fai | Ea warr | Pre-a | Ala |
| | | | | | | | | | | | | | | | | | |
| | | | | Lc | pop 5 ac | dress 2 | 40 | | | | | Lo | pop 5 ac | dress 2 | 39 | | |
| 4600 | Loop 5 | JSe | JSe | ± | D | | D | E | _ | JSe | JSe | ± .0 | p | | D | E | _ |
| 1600 | Address 239 Address 240 | not ı | not ı | utpu tatus | sable | ault | Early arnin | -alar | larm | not ı | not ı | utpu tatus | sable | ault | Early arnin | -alar | larm |
| | | Do | Do | 0 % | Di | | - Mo | Pre | A | Do | Do | 0 % | Di | |] M | Pre | A |
| | | | | l v | _oop 6 a | address | 2 | | | | | S | _oop 6 a | address | 1 | | |
| 1601 | Loop 6 Address 1 | use | use | statu: | led | ÷ | rning | arm | F | use | use | statu: | led | ÷ | rning | ar M | F |
| 1001 | Address 2 | o not | o not | put | Disab | Fau | y wa | e-ald | Alarr | o not | o not | :put : | Disab | Fau | y wa | re-ali | Alarr |
| | | D | DO | Out | | | Earl | Ъ | | D | D | Out | | | Earl | ď | |
| | | | | | | | | | | | | | | | | | |

| | Registers for Previdia Max control panels (use Modbus 0x03 command to read) | | | | | | | | | | | | | | | | |
|---------|---|--------|--------|--------|----------|----------|----------|----------|-------|--------|--------|--------|----------|-----------|-------------|----------|-------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| Address | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| | | | | Lo | oop 6 ad | ddress 2 | 40 | | | | | Lo | pop 6 ad | ddress 2 | 39 | | |
| 1720 | Loop 6 | use | use | tatus | eq | | ning | E | | use | use | tatus | eq | | ning | E | |
| 1/20 | Address 239 Address 240 | not | not | out s | sable | Fault | war | e-ala | Alarm | not | not | out s | sable | Fault | war | e-ala | Alarm |
| | | Do | Do | Outp | ā | | Early | Pre | | Do | Do | Outp | ā | | Early | Pre | |
| | | | 1 | l | _oop 7 a | address | 2 | 1 | 1 | | 1 | | Loop 7 a | address | 1 | | 1 |
| 4704 | Loop 7 | Ise | ase | atus | p | | ning | Ę | _ | rse | ase | atus | p | | ning | Ę | _ |
| 1/21 | Address 1 Address 2 | not ı | not ı | ut st | sable | -ault | war | -alar | llarm | not (| not ı | ut st | sable | -ault | war | -alar | llarm |
| | / loui coo E | Do | Do | Dutp | Di | | Early | Pre | < | Do | Do | Dutp | Ö | | Early | Pre | < |
| | | | | | | | | | | | | | | | | | |
| | | | | Lo | pop 7 ac | ddress 2 | 40 | | | | | Lo | Dop 7 ac | dress 2 | 39 | | |
| | Loop 7 | se | se | itus | | | ing | Ę | | se | se | itus | 73 | | ing | Ę | |
| 1840 | Address 239 | ot u | ot u | ut sta | abled | ault | varn | alarr | arm | ot u | ot u | ut sta | abled | ault | varn | alarr | arm |
| | Address 240 | 00 L | 00 L | utpr | Dis | Ľ. | arly v | Pre- | M | 00 L | 00 L | utpr | Dis | Ľ. | arly v | Pre- | M |
| | | | | | _oop 8 a | address | 2 | | | | | | Loop 8 a | address | ш 1 | | |
| | Loop 8 | e | e | tus | | | bu | C | | e | e | tus | | | bu | C | |
| 1841 | Address 1 | ot us | ot us | ıt sta | ablec | ault | varni | alarr | m | ot us | ot us | ıt sta | ablec | ault | varni | alarr | m |
| | Address 2 | n oC | n oC | utpu | Disa | Ľ. | arly v | Pre- | Alá | n oC | n oC | utpu | Disa | Ľ. | arly v | Pre- | Alá |
| | | | | 0 | | | ш | | | | | 0 | | | Щ | | |
| | | | | Lc | 00 8 a | ddress 2 | 40 | | | | | Lc | | ddress 2 | 39 | | |
| | Loop 8 | e. | Ð | tus | | | bu | _ | | e | Ð | tus | | | - Du | _ | |
| 1960 | Address 239 | ot us | ot us | t sta | blec | ult | varni | alarn | E L | ot us | ot us | t sta | blec | ult | varni | alarn | E L |
| | Address 240 | 00 ne | Do ne | utpu | Disa | ц | arly v | Pre-9 | Ala | Do ne | oo ne | utpu | Disa | ц | arly v | Pre-3 | Ala |
| | | | | Ō | 000.92 | address | 2 | | | | | Ō | 00n 9; | address | й 1 | | |
| | Loop 9 | U | U | sn | | | - Du | _ | | U | U | sn: | | | - D L | _ | |
| 1961 | Address 1 | ot us | ot us | t stat | bled | ult | /arni | alarm | E | ot us | ot us | t stat | bled | ult | /arni | alarm | E |
| | Address 2 | o ne | on oc | utpu. | Disa | Га | rly v | Pre-9 | Ala | on oc | o no | utpu. | Disa | Fa | irly v | Pre-9 | Ala |
| | | | | Ō | | | Ц Ш | | | | | Ō | | | ш | | |
| | | | | | | dross 2 | 10 | | | | | | | dross 2 | 70 | | |
| | Loon 9 | 0 | a) | S LC | op 9 ac | | 40 20 | | | a) | 0 | S LC | | | 22 | | |
| 2080 | Address 239 | ot use | ot use | stati | oled | T | arnir | larm | E | ot use | ot use | stati | oled | TIT | arnir | larm | E |
| | Address 240 | o no | o no | utput | Disa | Fai | rly v | Pre-a | Ala | o no | o no | utput | Disa | Fai | rly v | Pre-a | Ala |
| | | | | Ō | 000 10 | addross | Ea | | | | | Ō | 000 10 | addross | е Ш | | |
| | Loop 10 | U | U | sn | 000 10 | | p p | | | U | υ | sn | 000 10 | | т Б | _ | |
| 2081 | Address 1 | ot us | ot us | : stat | bled | nlt | arnii | Ilarm | E | ot us | ot us | : stat | bled | nlt | arnii | Ilarm | E |
| | Address 2 | o no | o no | utput | Disa | La | rly v | pre-a | Ala | o no | o no | utput | Disa | Fa | rly w | pre-a | Ala |
| | | | | Õ | | | Еа | | | | | Õ | | | Ша | | |
| | | | | | 00.10 | ddross | 240 | | | | | | 00.10 | ddrass | 20 | | |
| | Loop 10 | (1) | 0 | LO | op 10 a | daress 2 | 240 | | | (1) | | LO | op 10 a | daress 2 | 27A | | |
| 2200 | Address 239 | t use | t use | statu | oled | Ę | arnin | arm | E | t use | t use | statu | oled | Ę | arnir | arm | E |
| | Address 240 | o no | on o | tput | Disab | Fau | ly wa | re-al | Alar | on o | on o | tput | Disab | Fau | ly wa | re-al | Alar |
| | | Ŏ | Õ | no | 0.017.44 | o ol clu | Ear | <u>م</u> | | ă | Ŏ | no | | o ol clus | Ear | <u>م</u> | |
| | Loop 11 | 0 | 0 | ST | .00p 11 | address | 2 0 | | | 0 | 0 | ST | .oop 11 | address | 1 | | |
| 2201 | Address 1 | t use | t use | statı | led | Ęt | arnin | arm | E | t use | t use | statı | peld | It | arnin | arm | E |
| | Address 2 | ouc | ou c | tput | Disab | Fau | ly wa | re-al | Alar | ou c | ou o | tput | Disat | Fau | ly wa | re-al | Alar |
| | | ă | ă | nO | | | Ear | Д. | | ă | ă | nO | | | Ear | Д. | |
| | | | | | | | | | | | | | | | | | |

| | Registers for Previdia Max control panels (use Modbus 0x03 command to read) | | | | | | | | | | | | | | | | |
|---------|---|-------|--------|-----------------|---------|---------------|-----------------|-------|-------|--------|-------|------------------------|---------|----------|----------------|----------|----------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| Address | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| | Loop 11 | | 0 | Lc | op 11 a | ddress 2 | 240 | 1 | | | 0 | Lc | op 11 a | ddress 2 | 39 | 1 | 1 |
| 2320 | Address 239 | t use | t use | out us | oled | It | ly ing | arm | E | t use | t use | out us | oled | it. | l√ ing | arm | 3 |
| | Address 240 | o no | 0 10 | Outperstat | Disat | Fau | Ear varn | re-al | Alar | 0 10 | 0 10 | Outp | Disat | Fau | Ear varn | re-al | Alar |
| | | ă | Õ | | 000 12 | address | 2 | ۵. | | Õ | Õ | | 000 12 | address | 1 | ۵. | |
| | Loop 12 | Se | Se | | 7 | | | 3 | | Ise | ISe | | 7 | | | 3 | |
| 2321 | Address 1 | lot u | lot u | utpul atus | able | ault | arly rning | -alan | arm | lot u | lot u | utpui | able | ault | arly rning | -alan | arm |
| | Address 2 | Dor | Dor | st O | Dis | LLC | ма | Pre- | A | Dor | Dor | or o | Dis | L.C. | ма | Pre- | AI |
| | | | | | | | | | | | | | | | | | |
| | | | | Lc | op 12 a | ddress 2 | 240 | | | | | Lo | op 12 a | ddress 2 | 239 | | |
| 2440 | Loop 12 | use | use | ut Is | eq | + | , bu | E | Ę | use | use | s ut | ed | - | , bu | E | Ę |
| 2440 | Address 240 | not | not | Dutp statu | isabl | Faul | Early varni | e-ala | Alarr | not | not | Dutp statu | isabl | Faul | Early varni | e-ala | Alarr |
| | | Ô | Do | | | | > | Pr | | Do | Do | | | | > | Pr | |
| | Loop 13 | e. | e U | L | .00p 13 | address | 2 | 6 | | e U | e. | L | .00p 13 | address | 1 | 6 | <u> </u> |
| 2441 | Address 1 | ot us | ot us | tput atus | bled | ult | ırly ning | alarm | E | ot us | ot us | tput tus | bled | nlt | ining | alarm | E L |
| | Address 2 | Do ne | o ne | Our | Disa | Fa | Ea war | Pre-8 | Ala | o ne | o ne | Ou [.] sta | Disa | Fa | Ea wan | Pre-8 | Ala |
| | | | | | | | | | | | | | | | | | |
| | | | | Lc | op 13 a | ddress 2 | 240 | | | | | Lo | op 13 a | ddress 2 | 239 | | |
| 2560 | Loop 13 | use | use | s It | be | | , DC | E | _ | use | use | s t | q | | , b | гш | _ |
| 2500 | Address 239 Address 240 | not | not | Jutpu | sable | Fault | Early 'arnir | e-ala | Alarm | not | not | utpu itatu: | sable | Fault | Early arnir | e-ala | Narm |
| | | Do | Do | 0 % | Ō | | 3 | Pre | 4 | Do | Do | 0 0 | Ō | | 3 | Pre | 4 |
| | 1 oop 14 | U | U | L | .oop 14 | address I | 2 | | | U | U | L | .oop 14 | address | 1 | | r |
| 2561 | Address 1 | ot us | ot us | :put tus | bled | ult | rly 1ing | alarm | Ę | ot us | ot us | :put tus | bled | ult | rly ning | alarm | Ę |
| | Address 2 | o no | o no | Out | Disa | Fa | Ea wari | Pre-a | Ala | o no | o no | Out | Disa | Fa | Ea war | Pre-a | Ala |
| | | | | | | | | | | | | | | | | | |
| | | | | Lo | op 14 a | ddress 2 | 240 | | | | | Lo | op 14 a | ddress 2 | 239 | | |
| 2690 | Loop 14 | use | use | s t | be | | , bi | E | _ | use | use | s t | p | | , b | гш | _ |
| 2000 | Address 239 Address 240 | not | not | Jutpu | sable | Fault | Early arnir | e-ala | Alarm | not | not | butpu | sable | Fault | Early arnir | e-ala | Marm |
| | | Do | Do | | ā | | 3 | Pre | | Ô | Do | 0 0 | | | 3 | Pre | |
| | Loop 15 | e. | Ð | | .00p 15 | address | 2 | 6 | | e. | e. | L | .00p 15 | address | 1 | 6 | 1 |
| 2681 | Address 1 | ot us | ot us | tput tus | bled | ult | ırly ning | alarm | E | ot us | ot us | tput tus | bled | nlt | ning | alarm | E L |
| | Address 2 | 00 10 | 00 10 | Ou sta | Disa | Fa | Ea war | Pre-8 | Ala | 00 10 | 00 10 | Ou | Disa | ца | Ea war | Pre-8 | Ala |
| | | | | | | | | | | | | | | | | | |
| | | | | Lc | op 15 a | l ddress 2 | 240 | | | | | Lo | op 15 a | ddress 2 | 239 | <u> </u> | <u> </u> |
| 2800 | Loop 15 | use | use | s ut | ed | | , br | г | - | use | use | s rt | eq | | , br | гл | |
| 2000 | Address 239 Address 240 | not | not | Dutpi statu | isabl | Fault | Early 'arnir | e-ala | Alarn | not | not | Dutpi statu | isabl | Fault | Early | e-ala | Alarn |
| | | Do | Do | | | | 3 | Pre | | Do | Do | 0 0 | | | 3 | Pre | |
| | Loop 16 | e | e | | .00p 16 | address | 2 | | | e | e | L | .00p 16 | address | Ţ | | |
| 2801 | Address 1 | ot us | ot us | tput atus | ablec | ult | arly ning | alarm | arm | ot us | ot us | tput atus | ablec | ult | arly ning | alarm | m |
| | Address 2 | n oC | n oC | Ou sta | Disa | Ľ, | Eč | Pre- | Alá | n oC | n oC | Ou | Disa | Ľ. | Eä | Pre- | Alá |
| | | | | | | | | | | | | | | | | | |
| | | | | Lo | op 16 a | ddress 2 | 240 | | | | | Lo | op 16 a | ddress 2 | 239 | | |
| 2020 | Loop 16 | use | use | s | ed | + | , br | E | E | use | use | s ut | ed | + | , br | ш | _ |
| 2920 | Address 239 | not | not | Jutpi statu: | sable | Fault | Early arnir | e-ala | Alarn | not | not | Dutpi statu: | sable | Fault | Early arnir | e-ala | Alarn |
| | | Do | Do | 0 0 | Ō | | ≥ | Pre | | Do | Do | 0 0 | Ō | | 3 | Pré | |

| | Registers | for Pre | evidia | Com | pact c | ontro | l pan | els (us | e Moo | dbus (|)x03 c | omm | and to | o reac | 1) | | |
|---------|---|--------------------------------|-----------------|-----------|----------|----------------------|------------------|----------------------|-------------------------------------|-----------------------|-----------------------|-------------|--------------------|----------------|-----------------------|------------------------|------------------------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit O | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit O |
| 0 | Control panel details Status 1 | | | | | | Investigate | Mute | Night mode | | | | Disabled | Fault | Early warning | Pre-alarm | Alarm |
| 1 | Control panel details Status 2 | | | | | | | | | | | | | RT network | Fault fault | Low battery | Fault fault |
| 2 | Fault on boards | Fault board PREVIDIA-C-DIAL | | | | | | | | | | | | | | | Fault board I/O |
| 6 | Fault on boards 2 | | | | | | | | Module fault power supply module | | | | | | | | Module fault LED |
| 8 | Active Timers 1 | Timer 16 | Timer 15 | Timer 14 | Timer 13 | Timer 12 | Timer 11 | Timer 10 | Timer 9 | Timer 8 | Timer 7 | Timer 6 | Timer 5 | Timer 4 | Timer 3 | Timer 2 | Timer 1 |
| 9 | Active Timers 2 | Timer 32 | Timer 31 | Timer 30 | Timer 29 | Timer 28 | Timer 27 | Timer 26 | Timer 25 | Timer 24 | Timer 23 | Timer 22 | Timer 21 | Timer 20 | Timer 19 | Timer 18 | Timer 17 |
| 10 | Disabled Tim- ers 1 | Timer 16 | Timer 15 | Timer 14 | Timer 13 | Timer 12 | Timer 11 | Timer 10 | Timer 9 | Timer 8 | Timer 7 | Timer 6 | Timer 5 | Timer 4 | Timer 3 | Timer 2 | Timer 1 |
| 11 | Disabled Tim- ers 2 | Timer 32 | Timer 31 | Timer 30 | Timer 29 | Timer 28 | Timer 27 | Timer 26 | Timer 25 | Timer 24 | Timer 23 | Timer 22 | Timer 21 | Timer 20 | Timer 19 | Timer 18 | Timer 17 |
| 12 | Loop fault | | | | | | | | | | | | | | | Fault loop 2 | Fault loop 1 |
| 13 | Loop disabled | | | | | | | | | | | | | | | Loop 2 disabled | Loop 1 disabled |
| 20 | Status of tele- phone com- municator 1 | Supervision failed | Call queue full | SMS fault | SMS OK | Fault call failed | Fault call OK | Alarm call failed | Alarm call OK | Fault call ongoing | Alarm call ongoing | | | | GPRS Fault | PSTN Fault | GSM Fault |
| 21 | Status of tele- phone com- municator 2 | | | | | | | | | | | | | | Info call disabled | Fault call disabled | Alarm call disabled |
| 25 | Fire extinguish- ment module | | | | | | | | | Fault | Automatic stop | Manual stop | Pre-extinguishment | Extinguishment | Manual disabled | Automatic disabled | Disabled |
| 49 | Faults on electrovalve terminal (I/O 4) | | | | | | | | | | | | | | | Short circuit | Open |

| | Registers f | for Pre | evidia | Com | pact c | ontro | l pane | els (us | e Moo | dbus (|)x03 c | comm | and to | o reac | 4) | | |
|---------|------------------------|---------|--------|---------------|----------|------------|----------------|----------|-------|--------|--------|----------------|----------|------------|----------------|----------|--------|
| Address | | | | | High | byte | | | | | | | Low | byte | | | |
| Address | Name | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
| | | | | | Zor | ne 2 | | | | | | | Zor | ne 1 | | | |
| 100 | Zone 1 | t use | t | t use | led | Ħ | ing | arm | E | t use | ta | t use | led | Ŧ | ≥ ing | arm | E |
| | Zone 2 | 0 10 | Tes | ouo | Disab | Fau | Ear warr | re-al | Alar | 0 10 | Tea | ouo | Disab | Fau | Ear warn | re-al | Alar |
| | | ă | | Õ | | | | <u> </u> | | ă | | Ő | | | | <u>م</u> | |
| | | | | | 7000 | 1000 | | | | | | | 7006 | 000 | | | |
| | 7000 999 | Se | | se | | 1000 | 0 | F | | Se | | Se | | | 0 | F | |
| 599 | Zone 1000 | lot u | est | lot u | able | ault | arly rning | -alarr | arm | lot u | est | lot u | able | ault | arly rning | -alarr | arm |
| | | Dor | | Dor | Dis | Ľ. | м | Pre- | Al | Dor | | Dor | Dis | Ľ. | ма | Pre- | AI |
| | | | | 1 | Gro | up 2 | | | | | 1 | | Gro | up 1 | | 1 | 1 |
| 600 | Group 1 | nse : | nse | nse | led | nse | y. ing | arm | ε | nse : | nse | nse | led | nse | , ng | arm | ε |
| | Group 2 | o not | p n o | p n o | Disab | p n o | Earl warn | re-al | Aları | o not | o not | o not | Disab | p n ot | Earl varn | re-al | Alar |
| | | ă | ă | ă | | ă | | ā | | ă | ă | ă | | ă | > | ā | |
| | | | | | Crow | n 240 | | | | | | | Crow | n 270 | | | |
| | Croup 270 | se | se | se | GIOU | p 240 g | 0 | Ę | | se | s e | se | Grou | 9 239 9 | 0 | Ę | [|
| 719 | Group 239 Group 240 | ot n | ot n | ot n | abled | ot n | arly rning | alarr | arm | ot n | ot n | ot n | abled | ot n | arly rning | alarr | arm |
| | | Dor | Dor | Dor | Dis | Dor | м | Pre- | Al | Dor | Dor | Dor | Dis | Dor | Ча | Pre- | AI |
| | | | 1 | I | Chann | el I/O 2 | 1 | 1 | 1 | | 1 | 1 | Chann | el I/O 1 | 1 | 1 | ı |
| 900 | Channels I/O 1, | nse | nse | out us | led | Ŧ | , v Ng | arm | F | nse | nse | out us | led | Lt. | , ∠ ing | arm | 3 |
| | 1/0 2 | o not | o not | Outp stati | Disab | Fau | Earl warn | re-ali | Aları | o not | o not | Outp statu | Disab | Fau | Earl warn | re-ali | Alan |
| | | ă | ă | | Chann | el 1/0 4 | _ | Ē. | | ă | ă | _ | Chann | el 1/0 3 | _ | Ē. | |
| | Channels I/O | Ise | Ise | + | p | | D | Ε | | tse | Ise | + | p | | D | ε | [|
| 901 | 3, I/O 4 | not L | not L | utpu tatus | sable | ault | Early arnin | -alar | larm | not L | not L | utpu tatus | sable | ault | Early arnin | -alar | llarm |
| | | Do | Do | <u>o</u> r | Dis | | ± 88 | Pre | ∢ | Do | Do | 0 r | Dis | | | Pre | ∢ |
| | | | 1 | r | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | Relay | output | U. | 0 | 0 |
| 932 | Relay output | | | | | | | | | ot use | ot use | put us | oled | ot use | ot use | ot use | ot use |
| | | | | | | | | | | 0 10 | 0 10 | Out stat | Disat | o nc | 0 10 | o nc | 0 10 |
| | | | | | Loop1 a | ddress 2 | 2 | | | | | | Loop1 a | ddress : | 1 | | |
| 1001 | Loop 1 | use | use | s H | D | | . D | E | C | use | use | ۍ ۲ | D | | , p | E | _ |
| 1001 | Address 1 Address 2 | not | not | Jutpu | sable | Fault | Early arnii | e-ala | Alarm | not | not | butpu | sable | Fault | Early arnir | e-ala | Marm |
| | | Ô | Ô | 0 | ā | | \$ | Pre | | Ô | Do | 0 0 | ā | | 3 | Pre | |
| | | | | | | | | | | | | | | | | | |
| | 1 oop 1 | U | U | L | oop1 ad | dress 24 | 40 | | | U | U | L | oop1 ad | dress 2. | 39 | | 1 |
| 1120 | Address 239 | ot us | ot us | :put tus | bled | ult | rly ning | alarm | E | ot us | ot us | :put tus | bled | ult | rly ning | alarm | E |
| | Address 240 | on oc | on oc | Out sta | Disa | Fa | Ea wari | Pre-3 | Ala | on oc | on oc | Out sta | Disa | Fa | Ea war | Pre-3 | Ala |
| | | | | l | _oop 2 a | address | 2 | | | | | l | Loop 2 a | address | 1 | | |
| 1101 | Loop 2 | use | use | s rt | eq | | , p | E | | use | use | s rt | eq | | , br | гIJ | _ |
| 1121 | Address 1 Address 2 | not | not | Dutpu | isable | Fault | Early | e-ala | Alarn | not | not | Dutpi statu | isable | Fault | Early arnir | e-ala | Alarm |
| | | Do | Do | 0 0 | | | 3 | Pre | | Do | Do | 0 0, | | | 3 | Pré | |
| | | | | | | | | | | | | | | | | | |
| | 100p 2 | U | U | Lo | pop 2 ac | ddress 2 | 40 | _ | | U | U | Lo | pop 2 ac | ddress 2 | 39 | | 1 |
| 1240 | Address 239 | ot us | ot us | tput tus | bled | ult | ning | alarm | Ę | ot us | ot us | tput tus | bled | ult | ırly ning | alarm | Ę |
| | Address 240 | on oc | on oc | Ouc | Disa | Fa | Fa | Pre-3 | Ala | on oc | on oc | Ou | Disa | Ъ | Ea | Pre-2 | Ala |
| | | | | | 1 | 1 | | | | | | | 1 | 1 | 1 | 1 | |

3.1.2 COIL Mapping

The "SET COIL" allows you to carry out operations on the addressed control panel. To activate a COIL command relative to the implementation of an operation it is necessary to set it to "ON".

Following is the map of COIL registers:

| | COIL (use the Mo | odbus 0x05 coi | nmand) |
|---------|---|----------------|--|
| Address | Name for Previdia Max | Address | Name for Previdia Max |
| 0 | Activate "Action 1" | 1400 | Activate/Deactivate loop1 address 1 device's output |
| | | | |
| 99 | Activate "Action 100" | 5239 | Activate/Deactivate loop16 address 240 device's output |
| 100 | Enable/Disable Zone 1 | 5400 | Enable/Disable I/O 1 of IFM4IIO 1 module |
| | | | |
| 1099 | Enable/Disable Zone 1000 | 5463 | Enable/Disable I/O 4 of IFM4IO 16 module |
| 1100 | Activate/Deactivate I/O 1 of IFM4IO 1 module | 5500 | Enable/Disable relay 1 of the IFM4R 1 module |
| | | | |
| 1163 | Activate/Deactivate I/O 4 of IFM4IO 16 module | 5563 | Enable/Disable relay 4 of the IFM4R 16 module |
| 1200 | Activate/Deactivate relay 1 of the IFM4R 1 module | 5600 | Enable/Disable output 1 of the IFM24160 1 module |
| | | | |
| 1263 | Activate/Deactivate relay 4 of the IFM4R 16 mod- ule | 5611 | Enable/Disable output 3 of the IFM24160 4 module |
| 1300 | Activate/Deactivate output 1 of the IFM24160 1 module | 5700 | Enable/Disable address 1 of loop 1 |
| | | | |
| 1311 | Enable/Disable* output 3 of the IFM24160 4 mod- ule | 9540 | Enable/Disable address 240 of loop 16 |

| | COIL (use the Mod | bus 0x05 cor | nmand) |
|---------|---------------------------|--------------|--|
| Address | Name for Previdia Compact | Address | Name for Previdia Compact |
| 0 | Activate "Action 1" | 1400 | Activate/Deactivate loop1 address 1 device's output |
| | | | |
| 99 | Activate "Action 100" | 1879 | Activate/Deactivate loop 2 address 240 device's output |
| 100 | Enable/Disable Zone 1 | 5400 | Enable/Disable I/O 1 |
| | | | |
| 1099 | Enable/Disable Zone 1000 | 5404 | Enable/Disable I/O 4 |
| 1100 | Activate/Deactivate I/O 1 | 5500 | Enable/Disable relay |
| | | 5700 | Enable/Disable address 1 of loop 1 |
| 1104 | Activate/Deactivate I/O 4 | | |
| 1200 | Activate/Deactivate relay | 6179 | Enable/Disable address 240 of loop 2 |



3.2 BACnet

BACnet is a building-automation-network communication protocol developed by ASHRAE (American Society of Heating, Refrigeration and Air-Conditioning Engineers). BACnet, as a result of its versatility and flexibility, is now extensively used as a standard communication protocol between devices and building-automation systems made by various manufacturers.

The BACnet protocol used for Previdia Max, with the IFMLAN module, is subject to licencing regulations.

3.2.1 BACnet licence

The licences for use of the BACnet protocol on Previdia Max control panels must be purchased from Inim Electronics.

The order codes are as follows:

- INFLINIOPRALICBAC500, BACnet protocol licence Previdia 500 points, Italian
- INFLINEOPRALICBAC500, BACnet protocol licence Previdia 500 points, English

Each licence allows the management of 500 points. For the management of a greater number of points it is necessary to purchase more than one licence. Inim Electronics supplies a single licence containing the sum of the licences purchased as per the format indicated here.

3.2.2 Licence activation procedure

- 1. In order to activate the licence you must communicate the following data to Inim:
- the licence number shown in the letter [A]
- the serial number of the IFMLAN [B] (not to be confused with that of the FPMCPU). This data can be found in the software solution of the Previdia being configured, by going to the programming section of the IFMLAN module in the control panel.

| ELECTRONICS | PREVIDIA |
|---|--|
| BAC | CNET Licence |
| BAC | C1234567 (A) |
| for the managing of 1 | LOOO points in Ethernet network. |
| For the licence activ | vation, send an e-mail to the address |
| <u>servi</u> | i <u>ce-previdia@inim.biz</u> |
| reporting the nu | umber indicated here above and |
| the serial number of the mod | ule IFMLAN, shown on the side of the module. |
| NIM ELECTRONICS S.r.L Legal and operating headquarters: Via Dei Law TeL +39 0735 705007, Fax +39 0735 704912, y PVA & C.F. 01855460448 | oratori 10, Frazione Centobuchi, 63076, Monteprandone (AP), Italy www.inim.biz_infoelinim.biz |

| 🗮 PREVIDIA 1.000 01/01/2018 18:23 | _ 🗆 × |
|--|---------------|
| | |
| System > Control panel xvz > IFMLAN | |
| SETTINGS CONTACTS ACTIONS ESPA444 ONVIF BACNET EVAC Ma | |
| Serial number | |
| LIFE SAFETY POINT BINARY OUTPUT LIFE SAFETY ZONE BINARY OUTPUT Activate Lice | |
| | |
| Netmask 255.yyy.yyy.y Gateway | |
| 192.zzz.zzz DNS server | |
| 192.www.www 6001 Communication port | $ + \otimes $ |
| 80 Web server port | |
| Enable SSL | |
| | |
| Enable BACNET G | |
| BACnet device name | |
| Previdia BACnet device ID | |
| 1234567890 Password BACnet | |
| Timezone | |
| Europe (London, Jersey, Isle of Man, Guernsey) | |
| Web Reset Enabled | |
| Web Silence Enabled | |

2. The activation of the licence can be carried via e-mail or web.browser.

Via e-mail: send an e-mail to **service-previdia@inim.biz** containing the numbers previously indicated. You will receive an e-mail containing a file block which corresponds to the actual licence, required to block BACnet functionality.

Via web: by connecting to the <u>service-previdia.inimcloud.com</u> website it is possible to request the activation of a BACnet licence. After providing the previously mentioned data, the website will send you a file which corresponds to the actual licence.

- 3. After receiving the block file you must go back to the software solution associated with the control panel you are configuring. You must then go to programming section of the IFMLAN module and access the "BACnet Activate licence" [C-D].
- 4. This section provides the **Load licence file** button[*E*] which allows you to inform the software of the location of the received file inside the computer.
- 5. Click on the Activate licence button [F] to send the licence to the IFMLAN module.

After the licence activation you can integrate the Previdia system using the BACnet protocol by means of the "Enable BACnet" option [G] and setting the parameters for the provider connection:

- BACnet device name
- BACnet device ID
- Password BACnet

3.2.3 BACnet objects

Following are the BACnet objects made available by Previdia and their essential features. For licencing purposes, each of the objects belonging to the typology listed below constitutes a "point".

- Life Safety Point
- Binary Input
- Binary Output
- Life Safety Zone

Life Safety Point

The "life safety point" comprises objects that represent the status of a specific point included in the following:

- Loop point
- IFM4IO module channel
- IFM16IO module channel
- IFMEXT module (one point only per module)

The status of each point is characterized by a defined list of values (stand-by, alarm, fault, etc.).

It is not possible to interact with a life safety point, change its status or bypass it.

Life Safety Zone

The "life safety zone" comprises objects that indicate the status of a zone. Therefore, they can be associated with the zones of the control panel that are linked to points.

It is not possible to interact with a life safety zone change its status or bypass it.

Binary Output

This object represents the status of any of the control panel outputs.

It is possible to change the status through the BACnet protocol. The "Binary output" objects of the Previdia control panel are the:

- Loop point
- IFM4IO module channel
- IFM4R module channel
- IFM16IO module channel
- IFM24160 module channel
- Actions on control panel

The actions on the control panel allow you to interact with the system. These are actions such as "silence sounders", "rearm control panel" or "investigate".



Binary Input

These objects represent the status of any of the control panel inputs, therefore, not is possible to view the status but not set it. On the Previdia control panel they are used for the viewing of some control panel conditions.

- Alarm
- Pre-alarm
- Fault
- Disable
- Night mode
- Sounder silenced
- Investigate

3.2.4 Creation of BACnet points via software

In order to create BACnet points you must first open the software, load the software solution of the relevant control panel/Hornet+ network, access the page relative to the IFMLAN then access the "BACnet" section.



This section provides the tools for the creation of life safety points. The other three sections ("Life safety zone", "Binary input" and "Binary output") function in the same way.

- 1. Select the control-panel point typology by means of the appropriate check boxes with dropdown menus [A]. In the section below [B] a list of points that correspond to the selection made will appear.
- 2. From the list select or deselect the BACnet points you wish to create.
- 3. Click on **Add** *[C]*. From this moment on the selected points will be shown in the "Life safety point" list *[D]*. The points in this section can be removed from the list by simply unticking the corresponding boxes.
- 4. Click on the Write button [E] to forward the programming to the control panel.

This procedure is valid for all BACnet point typologies.

3.3 SmartLook Software

The Previdia control panels can be supervised through the SmartLook software program created by Inim Electronics.

The SmartLook program is capable of enrolling the elements installed on the system either by reading the control panel directly or through the importation of data from the configuration software. At this point all that is necessary is to provide the graphic maps with image files and drag the icons of the objects installed on the system onto them.



SmartLook uses Modbus over TCP/IP to communicate with the control panel (refer to *paragraph 3.1 Modbus RTU and Modbus over TCP/IP*). During the configuration phase, SmartLook asks for the addresses of Previdia control panels on the Modbus and Hornet+ networks.

Note: The address of a control panel in Modbus must coincide with that in Hornet+.

For further information refer to the SmartLook software manual.

Pager systems

ESPA 4.4.4 is a standard protocol for the interconnection of paging systems, PABXs and automatic fire-detection systems. This protocol allows the exchange/sending of text messages between mobile devices such as pagers, cordless telephones, etc.

ESPA444 protocol is implemented for Previdia Max control panels within the IFMLAN module, through the RS232 communication port [A].

| Serial | | Terminal | |
|--------|------|-------------------------------------|------------------------|
| | 1 | Programmable ancillary power output | |
| RS232 | 2 | RS232 TX | |
| | 3 | RS232 RX | |
| | 4 | RS232 RTS | |
| | 5 | RS232 CTS | 16 15 14 13 12 11 10 9 |
| | 6 | Negative (GND, 🖨) | |
| | 7, 8 | Earth | |

The protocol communication parameters can be configured through the Previdia control-panel configuration software. Access the page relative to the programming of the IFMLAN module, then access the "ESPA444" sub-section.

| PREVIDIA 1.000 01/01/2018 18:23 | | | | | | | | _ | |
|--|-------------------|----------|---------------|----------|--------|------|------|-----------|--------------|
| | DIO | | | | | | | | |
| System > Control panel xyz > IFMLAN | | | | | | | | | |
| | SETTINGS | CONTACTS | ACTIONS ESPA4 | 44 ONVIF | BACNET | EVAC | Maps | | |
| Serial number NSNSNSNS | | | | | | | | | |
| | Serial port | | RS232 | • | | | | | |
| | Parity | | None | • | | | | | \Box |
| | Stop Bit | | 1 | • | | | | | |
| 192.xxx.xxx.xxx | Data bit | | 7 | • | | | | | |
| Cotovor | Bits per second | | 300 | • | | | | | \bigcirc |
| Baleway 192.zzz.zzz DNS sonor | Address | | 1 | • | | | | | |
| 192.www.www.www | Pager address | | 1 | ▼ | | | | | \bigotimes |
| 6001 Communication port | Handshake | | No | • | | | | J | \odot |
| 80 Web server port | Add zone label | | \checkmark | | | | | | |
| Enable SSL | Add control panel | label | | | | | | \square | |
| Enable UPNP | Master | | | | | | | | |
| Enable DHCP | Delete event labe | | \checkmark | | | | | | |
| Enable BACNET | | | | _ | | | | | |
| Previdia Richard davise ID | | | Clear | | | | | | |
| 1234567890 | | | | | | | | | |
| Password BACnet | | | | | | | | | |
| Timezone | | | | | | | | | |
| Europe (London, Jersey, Isle of Man, Guernsey) | | | | | | | | | |
| | | | | | | | | | |
| Web Silence Enabled | | | | | | | | | |

Refer to the user manual regarding the Previdia Max software configuration for further details.

Chapter 5

Video verification

Control panels from the Previdia series are capable of capturing images from IP cameras equipped with ONVIF. These images can be displayed on screens or forwarded from a remote location via e-mail to provide the end-user with a clear understanding of what is happening in the ambient signalling the alarm.

The video verification function is implemented within the IFMLAN module. By means of the configuration software you can define the list of IP cameras (up to 200) that are intended to interact with the Previdia system.

Previdia Compact control panels can use the video verification function by means of a IFMLAN module of a Previdia Max control panel.

Access the page relative to the programming of the IFMLAN module, then access the "Onvif" sub-section. Each camera will acquire the various "preset" parameters:

| PREVIDIA 1.000 01/01/2 | 2018 18:23 | DIO | | | | | | | | _ | |
|---|-----------------------|-----------------|--------------|---------------|---------------------------|---------------------------|--------|--------|------|---|-----------|
| <u>System</u> > <u>Control panel xyz</u> > | > <u>IFINILAIN</u> | SETTINGS | CONT/ | ACTS ACTI | ONS ESPA444 | ONVIF | BACNET | EVAC | Maps | | |
| Serial number | NSNSNSNS | Onvif Camera | | B | Camera | | C | | | | |
| | | | | | Description IP address | camera 1 192.191.192.n | | https: | | | |
| IP 192.xxx.xxx | | 192.191.192.1 1 | 92.191.192.2 | 192.191.192.3 | Port User name | 80 | | * * | | | 6 |
| Netmask 255.yyy.yyy.y Gateway 192 zzz zzz zzz | | 192.191.192.4 1 | 92.191.192.5 | 192.191.192.6 | password Media profile | | | | | | \odot |
| DNS server 192.www.www.www 6001 Communication | port | | | | Preset | Pan-Iilt- Zoom | | | A | + | \otimes |
| 80 Web server port | | | | | | | | | U | | (|
| Enable UPNP Enable DHCP | | | | | URL Snapshot | | | | C | | |
| Enable BACNET BACnet device name | | | | | URL Stream | <u> </u> | | | | | |
| Previdia BACnet device ID 1234567890 Password BACnet | | | | | | | | | | | |
| Timezone Europe (London, Jersey, Isle Web Reset <u>Enable</u> | e of Man, Guernsey) 🔻 | | | | | | | | | | |
| Web Silence Enabl | led | | | | | | | | | | |

To add the cameras to the configuration simply click-on the **Add** button [A]. The "Onvif cameras" section [B] provides a list of all the IP cameras in the configuration, whilst the "Camera" section on the right [C] provides the parameters of the selected camera.

Once the IP camera list has been defined, the configuration software will allow you to establish a series of presettings that permit the identification of the specific IP camera and the correct preset in accordance with each event.

To program the presettings go to the programming section of the graphic maps. To reach the IP Camera section you must first access the programming section of the FPMCPU frontplate module, click-on the "Graphic maps" button then access the "Cameras" sub-section.

| PREVIDIA 1.00 | 00 01/01/2018 18:2 | 23 | | | _ 🗆 × |
|---------------------------|------------------------------|---------------|---------------|---|-------------------------------|
| (| PRE\ | | | | |
| <u>System</u> > Panel 1 > | <u>CPU</u> > <u>Maps Can</u> | neras | | | |
| Мар | Cameras | | | | |
| 00 | 00 | IFMLAN | Cluster xyz | • | |
| المكار | المك | | | | |
| Camera 1 | Camera 2 | Camera | 192.192.192.n | • | |
| 00 | 00 | Preset | | • | |
| المكار | المك | Cluster | 1 | • | |
| Camera 3 | Camera 4 | Control panel | 7 | • | |
| 00 | 00 | Zone | | • | |
| السال | المك | Module type | | • | $\bigcirc \bigcirc \bigcirc$ |
| Camera 5 | Camera 6 | Module | | • | |
| | | Point | | • | |
| | | | | | $\mathbf{\tilde{\mathbf{v}}}$ |
| | | × | Clear | | |

Refer to the user manual regarding the Previdia Max software configuration for further details.

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Chapter 6

Voice Evac-systems

Previdia Max series control panels can be interconnected with the following voice evacuation systems.

• Paso

The voice evacuation systems made by Paso can be connected to the IFMLAN module through the RS485 port.



• Tutondo

The voice evacuation systems made by Tutondo can be connected to the IFMLAN module housed inside the Previdia Max control panel by means of TCP/IP connection.

6.1 Voice Evac configuration

Once the control panel has been connected to the voice evacuation system, the configuration software will allow you to configure each speaker line (evacuation zone) as an output capable of activating warning and evacuation messages.

Access the page relative to the programming of the IFMLAN module, then access the "Evac" sub-section.

- 1. Select the typology of voice-evacuation system [A].
- 2. Indicate the address of the Previdia Max control panel on the selected evacuation system [B]:
- for "Paso" it is necessary to indicate the address on the RS485 connection BUS
- for "Tutondo" it is necessary to indicate the IP address and the port
- 3. Indicate the number of evacuation zones (speaker lines) in the "Number of zones" box [C].

An icon will be added to the list at the bottom of the section for each added zone. In the case of "Tutondo", the "End of evacuation" zone is added automatically to all zones, this is an evacuation ended message that is common to all the evacuation zones.

4. Select each individual evacuation zone from the list [D] and program its parameters on the right [E].



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Centobuchi, via Dei Lavoratori 10 63076 Monteprandone (AP) Italy Tel. +39 0735 705007 _ Fax +39 0735 704912

info@inim.biz _ www.inim.biz

