Teletek electronics

INSTALLATION MANUAL

ECLIPSE 8
ECLIPSE 8+
ECLIPSE 16
ECLIPSE 32
ECLIPSE 99
(S.W. 3.xx)

ALARM CONTROL PANELS

Attention:
This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. The entire manual should be carefully read.

The information in this manual is a subject to change without notice!

CE

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GUARANTEE

The guarantee terms are determined by the serial number (barcode) of the electronic device!
During the guarantee period the manufacturer shall, at its sole discretion, replace or repair any defective product when it is returned to the factory. All parts replaced and/or repaired shall be covered for the remainder of the original guarantee, or 6 months, whichever period is longer. The original purchaser shall immediately send manufacturer a written notice of the defective parts or workmanship.

INTERNATIONAL GUARANTEE

Foreign customers shall possess the same guarantee rights as those any customer in Bulgaria, except that manufacturer shall not be liable for any related customs duties, taxes or VAT, which may be payable.

GUARANTEE PROCEDURE

The guarantee will be granted when the appliance in question is returned. The guarantee period and the period for repair are determined in advance. The manufacturer shall not accept any product, of which no prior notice has been received via the RAN form at: https://teletek-electronics.com/en/ran-form
The setup and programming included in the technical documentation shall not be regarded as defects. Teletek Electronics bears no responsibility for the loss of programming information in the device being serviced.

CONDITIONS FOR WAIVING THE GUARANTEE

This guarantee shall apply to defects in products resulting only from improper materials or workmanship, related to its normal use. It shall not cover:

- Devices with destroyed serial number (barcode);
- Damages resulting from improper transportation and handling;
- Damages caused by natural calamities, such as fire, floods, storms, earthquakes or lightning;
- Damages caused by incorrect voltage, accidental breakage or water; beyond the control of the manufacturer;
- Damages caused by unauthorized system incorporation, changes, modifications or surrounding objects;
- Damages caused by peripheral appliances unless such peripheral appliances have been supplied by the manufacturer;
- Defects caused by inappropriate surrounding of installed products;
- Damages caused by failure to use the product for its normal purpose;
- Damages caused by improper maintenance;
- Damages resulting from any other cause, bad maintenance or product misuse.

In the case of a reasonable number of unsuccessful attempts to repair the product, covered by this guarantee, the manufacturer's liability shall be limited to the replacement of the product as sole compensation for breach of the guarantee. Under no circumstances shall the manufacturer be liable for any special, accidental or consequential damages, on the grounds of breach of guarantee, breach of agreement, negligence, or any other legal notion.

WAIVER

This Guarantee shall contain the entire guarantee and shall be prevailing over any and all other guarantees, explicit or implicit (including any implicit guarantees on behalf of the dealer, or adaptability to specific purposes), and over any other responsibilities or liabilities on behalf of the manufacturer. The manufacturer does neither agree, nor empower, any person, acting on his own behalf, to modify, service or alter this Guarantee, nor to replace it with another guarantee, or another liability with regard to this product.

UNWARRANTED SERVICES

The manufacturer shall repair or replace unwarranted products, which have been returned to its factory, at its sole discretion under the conditions below. The manufacturer shall accept no products for which no prior notice has been received via the RAN form at: https://teletek-electronics.com/en/ran-form.
The products, which the manufacturer deems repairable, will be repaired and returned. The manufacturer has prepared a price list and those products, which can be repaired, shall be paid for by the Customer. The devices with unwarranted services carry 6 months guarantee for the replaced parts.
The closest equivalent product, available at the time, shall replace the products, the manufacturer deems un-repairable. The current market price shall be charged for every replaced product.

STANDARDS AND CONFORMITY

The Eclipse Series control panels are designed according and with conformity to the European Union (EU) Low Voltage Directive (LVD) 2006/95/EC and Electro-Magnetic Compatibility (EMC) Directive 2004/108/EC.
The CE mark is placed for indication that the Eclipse control panels comply with the requirement of EU for safety, health, environmental and customer protection.

CERTIFICATIONS AND APPROVALS

Alarm Control Panel: **Eclipse 8, Eclipse 16, Eclipse 32**	Alarm Control Panel: **Eclipse 99**
EN50131-1:2006 EN50131-3:2009 EN50131-6:2017 EN50131-10:2015 EN50136-1:2012 EN50136-2:2013	EN50131-1:2006 EN50131-6:2008 EN50131-3:2009 EN50136-1:2012 EN50136-2:2013 EN50131-10:2014
CE Cert. No: TT-449/2019	CE Cert. No: TT-76/2018
Grade 2 Class I SP2	**Grade 3 Class I SP2**

QUICK STEPS OF INSTALLATION

Step 1 Working plan-diagram of the system

Draw out a working plan diagram of the site and locate the elements of the alarm control system on it. Choose the best place for installation of the detectors, control keyboards and other system devices.

Step 2 Installation of the control panel

Choose a place for installation of the control panel close to mains power 230V and telephone line terminals. Choose the most appropriate openings for running the power supply cable, zone wires, PGM outputs and the system BUS. Mount the bottom of the box on the wall as use the supplied on the back side of the package template for drilling. Mount a tamper-switch and level it according the installation surface to provide the box self-protection. Connect the wires of the tamper-switch to that zone considered to be TAMPER type.

ATTENTION: The initial power-up of the panel is only after completing all the wiring of the system!

Step 3 Connecting devices to the system BUS

Connect all keyboards and expander modules to the control panel using 4-wire alarm cable (system BUS). It is obligatory to follow the correspondence of the colors between control panel and keyboard/additional devices terminals. Use the detailed connection diagrams provided in item 2.4 of this manual.

Step 4 Connecting of zones

Connect the detectors in the zones as use one of the following connection diagrams according the respective application. According your system you can choose among different connection styles diagrams:

ECLIPSE 8 - 5 connection styles diagrams for single zone connection
ECLIPSE 8+ - 9 connection diagram styles for single and doubling zone connection
ECLIPSE 16 - 5 connection styles diagrams for single zone connection
ECLIPSE 32 - 9 connection diagram styles for single and doubling zone connection
ECLIPSE 99 - 9 connection diagram styles for single and doubling zone connection

Use the detailed connection diagrams provided in item 2.3 of this manual.

Step 5 Connecting of sirens, PGM outputs and other devices

Connect the sirens, controlling devices (such as proximity card readers or remote controls), the digital communicator, communicator modules, etc. Use the detailed connection diagrams provided in items 2.5-8 of this manual.

Step 6 Initial power-up of the control panel

1. Set a jumper to RESET terminal of the main control panel Eclipse (see the general connection diagram corresponding to the model).
2. Power the control panel from the mains 230V.
3. Connect the battery wires to accumulator battery 12V/7Ah for back-up power supply as strictly observe the polarity: red wire to "+" battery terminal, black wire to "-" battery terminal.
4. The backlights of all connected to the system BUS control keyboards light up and a procedure for initial initialization starts running. Wait for 30-60 sec until ending of initialization procedure. Now the system is ready for registration of devices. *Note: The time for initialization depends on the size of system configuration.*
5. Press the ENT (✔) button of all connected to the system BUS keyboards one-by-one – this is the way to register the keyboards to the control panel. Press the little button (located between the two terminal rows) of all expanding modules connected to the system BUS to register them to the control panel. A confirmation sound signal is heard – see also the other ways for registration of devices to the control panel described in item 5.
ATTENTION: DO NOT press the PRG button of any of the keyboards during the registration procedure! Otherwise, you will register the keyboard as "Service keyboard"!
6. Remove the jumper from RESET terminal.
7. Wait until the system BUS LED stops blinking in green.
8. Set the actual time and date to clear the Trouble message "9. Invalid clock".

Step 7 Programming the system

1. The default set style for programming is the one using text tree-structure for the engineer menus (LCD keyboard)*. To change the programming style at the beginning you have to enter first the engineer menu with valid code (7777 by default) and choose in sequence:

7777 – 2.SETTINGS – 14. MENU STYLE: ✔ TEXT, ADDRESS or OPERATION

Confirm with ENTER (✔) the preferred programming style.
***Note:** The LED Keyboards use a default programming style with ADDRESSES. It is strongly recommended to use LCD keyboard for programming to avoid mistakes and troubles during setting the parameters and values. You can also use ProsTE software for quick programming and settings.*

2. Program the general zone parameters:
- Connecting type (address 2000, operation 200). Enter the number of the chosen connection diagram - see Step 4.
- Pulse count (address 2003, operation 203).
- Zone types and their distribution in the used areas, etc. You can use the cloning function to set the parameters of one zone to other zones (address 2005, operation 205).

3. Program the parameters of the PGM outputs, time slots, areas and users in the system – for details see the Programming tables in the ECLIPSE 8/8+/16/32/99 Series - Engineer Programming Manual.
***Note:** If the PGM5 (ECLIPSE 32 or ECLIPSE 99) output is not used for connecting siren you must program it as PGM with general application. The default setting of PGM5 is operation as sounder. To clear the trouble message "8. Siren Fault" deselect for PGM5 (5.OUTPUTS-2.PGMs-05.PGM-2.OPTIONS) option SIREN (no "✔mark") and save it; or terminate the output with 1K resistor. For more details – see item 2.6.*

Step 8 Testing system

Test the system for correct functioning and operating efficiency according the programmed parameters. Test arming and disarming with the keyboards, readers and remote controls. Test the activation of the siren and the digital communicator after an alarm event.

Step 9 Archiving the system parameters and configuration

If possible, make an archive for the system elements, programming parameters and configuration. Save a system configuration (as .TDF file) with ProsTE software to make a data base of the installed system in the site.

Step 10 Training the users to operate and manage the system

As a last step make a short training with the users of the system to familiarize with the basic functions and operations with the system:

1. Arming and disarming the system using keyboard or proximity card reader.
2. Zone bypassing in the site – why and how to do.
3. Changing own user code.
4. Review of system events and troubles.
5. Basic functions of the buttons and indication on the display.
6. Make also more detailed training of the system managers to operate and program the system with the extended Manager Programming menus.

1. GENERAL INFORMATION

The ECLIPSE series Alarm control panels are designed and tested in compliance with electromagnetic compatibility (EMC) standards. The following recommendations need to be observed for the proper performance of the alarm station:

- Ensure the alarm system is properly earthed (grounded).
- Insulate the high and low voltage cables and use different input openings on the box.
- Avoid any loops of connecting wires within the very box and in their passage over or under the printed circuit boarding.
- Additional relays MUST NOT be placed in the Eclipse Alarm control panel box as these may generate electromagnetic interference when switched.
  - Use only relays with good insulation between contacts and the winding.
  - Relays, connected to outputs with an open commutator, must be designed to accommodate a 12 V DC driving voltage and an impedance at the winding greater than 400Ω.
- The cable connecting the control panel and the keyboard is quadruple.
  It is strongly recommended not to: use this cable to make other connections - connect to a telephone line, Flash-lamps control signals, sirens or relays.
- Avoid channels or cable forms that contain high voltage cables when placing the connecting shielded cables. This is very important in cases where such cables are being used to power electric motors, fluorescent lamps or triple-phase voltage. Where the above is not possible, use only shielded cables, where the shield is grounded only in the alarm system box.

Technical Features:

Feature	ECLIPSE 8	ECLIPSE 8+	ECLIPSE 16	ECLIPSE 32	ECLIPSE 99
Zones (on board)	6	8	16	8	8
Max. Zones, expanded	8	16*	16	32**	99***
Areas	1	3	3	8	16
4 x 100mA Outputs	✓	✓	✓	✓	✓
1 x 1A Output	✓ (Not monitored)	✓ (Not monitored)	✓ (Not monitored)	✓ (Monitored)	✓ (Monitored)
Max. Outputs, expanded	5	8	8	32	99
User Codes	8	32	32	64	99
Schedules	-	-	-	✓	✓
LOG Events	1024	1024	1024	1024	5000
BUS Devices	2	5	5	30	30
Programming	Address, Operation, Text menus; ProsTE software				
Arming modes	Full, Stay, Sleep				
Digital communicator	✓ (2 tel. numbers)			✓ (4 tel. numbers)	
Voice Dialer (option)	✓ (8 tel. numbers)				
Remote programming	-			✓	

**** NOTE:** The full configuration of 16 zones can be realized with doubling zone connection.*
***** NOTE:** The full configuration of 32 zones can be realized with doubling zone connection (16 logical zones on the control PCB) and 1 Zone expander for 8 zones (16 logical zones) or without zone doubling with connection of 3 zone expanders to the panel.*
****** NOTE:** The configuration up to 99 zones can be realized with doubling zone connection (16 logical zones on the control PCB) and 5 Zone expanders with 8 zones each (16 logical zones) or without zone doubling with connection of 11 zone expanders to the panel.*

Technical Specifications:

Specification	ECLIPSE 8	ECLIPSE 8+	ECLIPSE 16	ECLIPSE 32	ECLIPSE 99
Mains Power Supply	230 VAC ±10%, fuse 0.63A				
Mains Transformer	17 VAC/17 VA		17 VAC/23 VA	21 VAC/50 VA	
Accumulator charger	13.8V, resettable fuse 0.75A			13.8V, resettable fuse 2.5A	
Back-up Power Supply	1 x Accumulator 12 V/7 Ah				
Consumption	100 mA (for control panel)				
Enclosure	ABS plastic box, white				
Dimensions, mm	290 x 240 x 80			335 x 290 x 105	
Operation temperature	from 0°C to 50°C				
Relative humidity	95%				
Weight, kg (without battery)	1.40			2.30	2.40

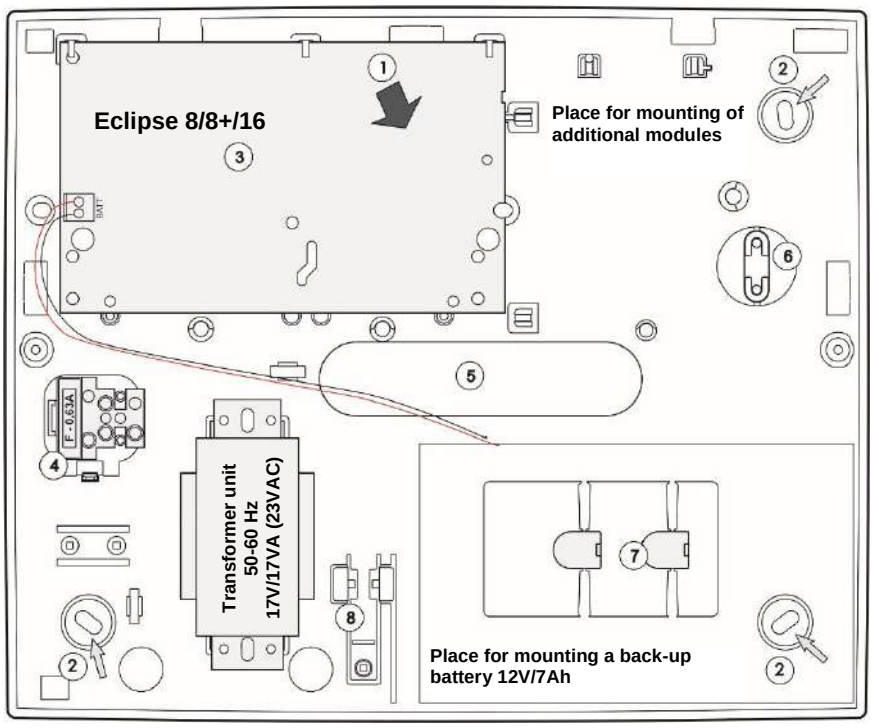
2. INSTALLATION

2.1. Control Panels Mounting

The ECLIPSE series alarm control panels are available in plastic box for wall mounting. There is additional space for mounting of communication and expander modules in the box.

2.1.1 ECLIPSE 8/8+/16

ECLIPSE 8/8+/16 Alarm Control Panel is mounted in a white plastic box with dimensions 290 x 240 x 80mm. There is additional space for mounting of one communication module in the box. For the back-up battery is provided special place. The box is equipped also with a transformer unit and 230V connection terminal with protective fuse.
The front cover is fixed with two mounting screws provided in the spare parts kit. Before the installation, break out the protective caps for the front panel from the bottom box – see the picture below. After fixing the front panel with the screws put also the protective caps on their places.



① - General support opening of the box (situated under the PCB);
② - Support openings;
③ - ECLIPSE 8/8+/16 control panel;
④ - Mains power supply terminal with fuse 0.63A;
⑤ - Main cable opening;
⑥ - Plastic cap for fixing the mains power cable;
⑦ - Plastic caps for front panel;
⑧ - Place for mounting of tamper-switch (the tamper-switch is not included in the supplied equipment).

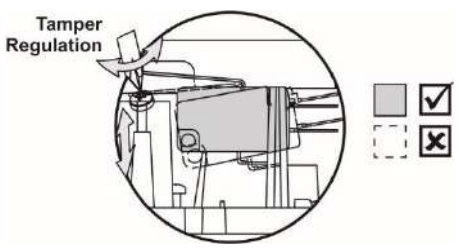
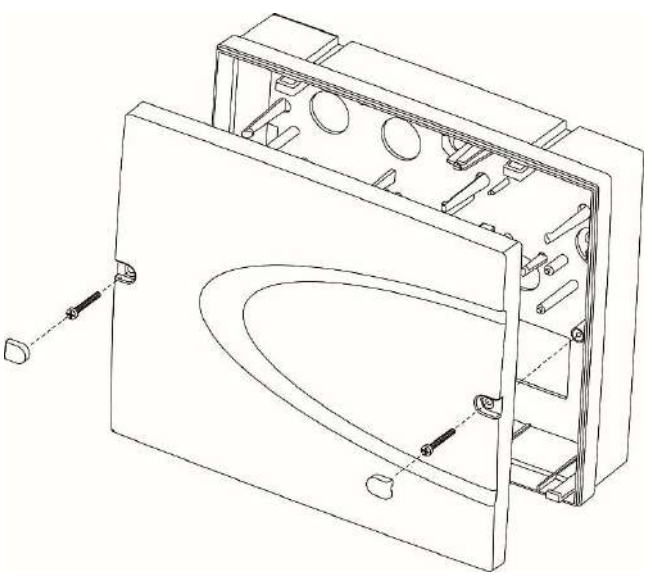


Figure 1. ECLIPSE 8/8+/16 box elements

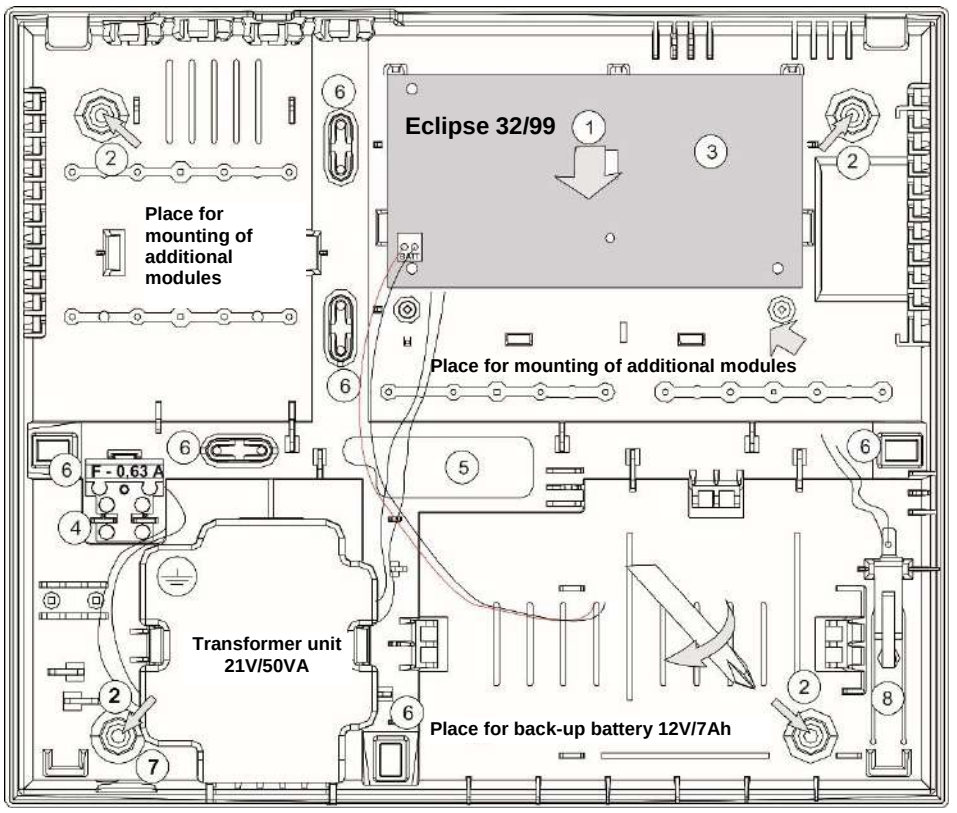


In ECLIPSE 8/8+/16 final closing, use the supplied screws in the spare parts kit to fix the front cover to the mounted bottom.
Use the plastic caps (position ⑦ at Figure 1) previously broken out from the box bottom to hide the screw heads at final closing.

Figure 2. ECLIPSE 8/8+/16 final closing

2.1.2 ECLIPSE 32/99

ECLIPSE 32/99 Alarm Control Panel is mounted in a white plastic box with dimensions 335 x 290 x 105mm. There are additional spaces for mounting of one communication module in the box and one expander module (ECLIPSE 32 - under the main PCB). For the back-up battery is provided special place. The box is equipped also with a transformer unit and 230V connection terminal with protective fuse.
The front cover is fixed with two mounting screws and nuts provided in the spare parts kit.



① - General support opening of the box (situated under the PCB);
② - Support openings;
③ - ECLIPSE 32/99 control panel;
④ - Mains power supply terminal with fuse 0.63A;
⑤ - Main cable opening;
⑥ - Additional cable openings; Remove the plastic caps from the box bottom and fix the cable with them;
⑦ - Mains power supply opening;
⑧ - Place for mounting of tamper-switch (the tamper-switch is not included in the supplied equipment).

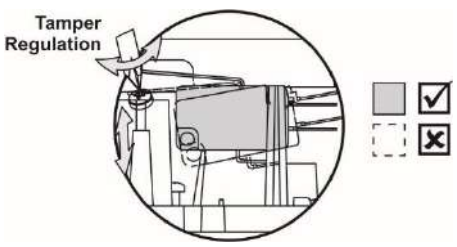
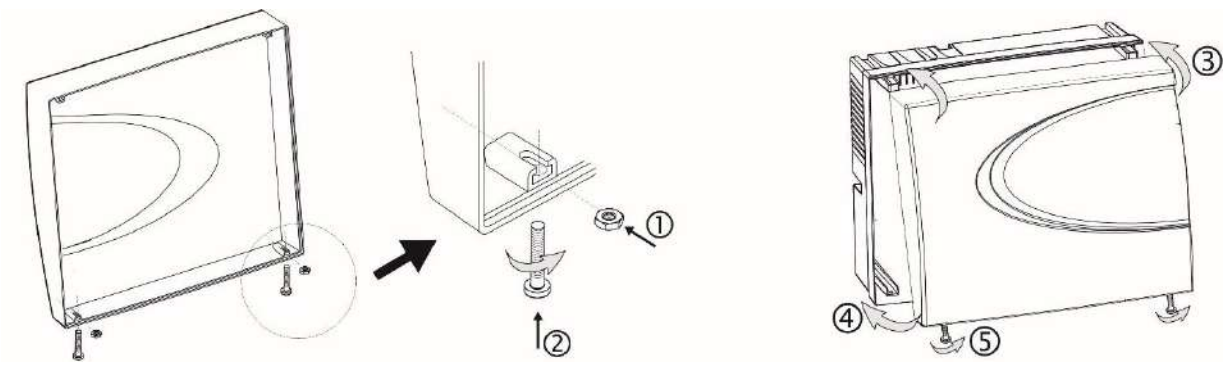


Figure 3. ECLIPSE 32/99 box elements

In ECLIPSE 32/99 final closing, use the supplied screws and nuts in the spare parts kit to fix the front cover to the mounted bottom.



① - Put the nuts into the nests on the backside of the front cover;
② - Take the screws with interrupted thread and screw on them into the openings at the front cover bottom until the nut and the interrupted part come together.
③ - Fix the front cover onto the mounted bottom;
④ - Close the cover;
⑤ - Screw on the screw for final closing.

Figure 4. ECLIPSE 32/99 final closing

2.2. Control Panels PCB Layouts

2.2.1 ECLIPSE 8

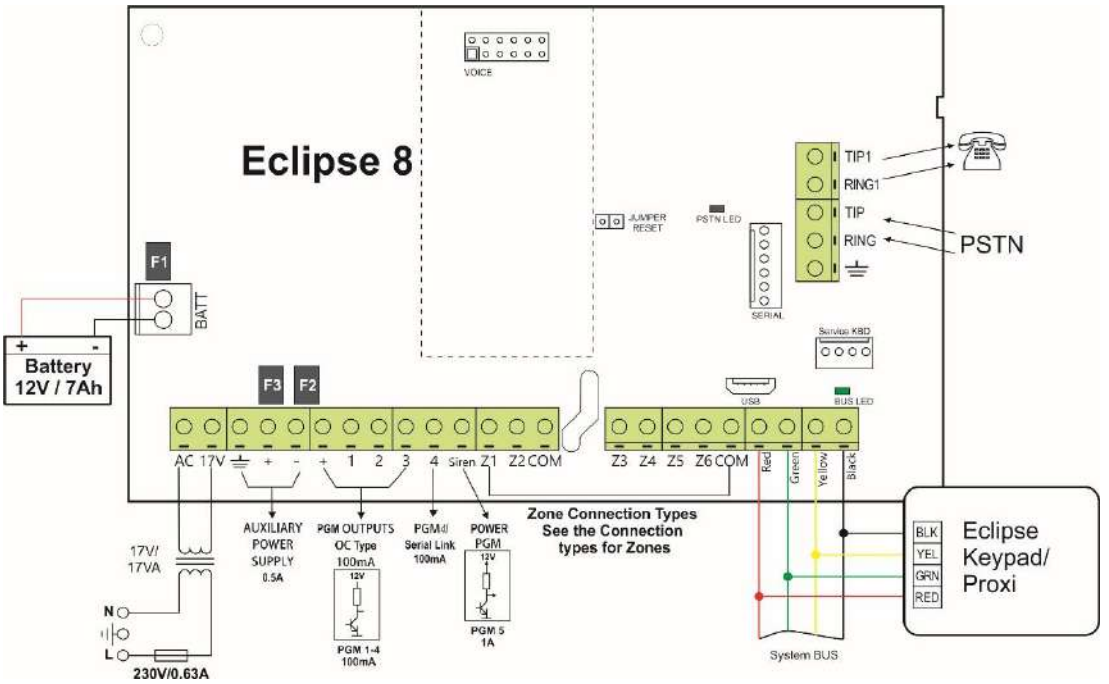


Figure 5. ECLIPSE 8 control panel

ECLIPSE 8 - Terminals and components:
17VAC – Power supply from a mains transformer 17V/17VA, fuse 0.63A
⏚ – Grounding
+/- AUX – Power supply for detectors with consumption up to 0.5A
+PGM – Power supply of auxiliary devices with consumption up to 0.5A
PGM 1-3 – Programmable outputs, 100mA, OC type (open collector)
PGM 4 – Programmable output/Serial link, 100mA, OC type (open collector)
PGM 5/SIREN – Programmable output, high power up to 1A, OC type (open collector), for connecting siren
Z1-Z6 – Zone inputs
COM – Common ground for the zones
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection of keyboards and proximity card readers.
Jumper RESET – Jumper for total hardware reset of the control panel
Serial – PC Interface connection
Service KBD – Connecting a service keyboard – see also item 6 (available for HW 1.5 and higher)
VOICE - Interface connector for mounting of Voice module ECLIPSE VD
BATT – Terminals for connecting the back-up battery
USB – Micro USB port for programming with ProsTE software (available for HW 2.0 and higher)

PSTN terminals:
TIP1, RING1 – Connect the telephone device
TIP, RING – Connect the PSTN line
⏚ – Grounding

Fuses, PTC type:
F1 – Fuse for the back-up battery: 0.75A
F2 – Fuse for PGM outputs: 0.5A
F3 – Fuse for AUX outputs: 0.5A

LED indication:

- PSTN LED – LED for the status of the built-in digital communicator.
- BUS LED – LED for the status of the system bus:

BUS LED	Lights on permanently	Blinks in pulses
Red	RESET Jumper is set; Problem with the system bus; no communication	Low power supply
Orange	Short circuit of the system bus	Wrong connection of the system bus
Green	Selected device of the system bus	Normal operation mode

2.2.2 ECLIPSE 8+

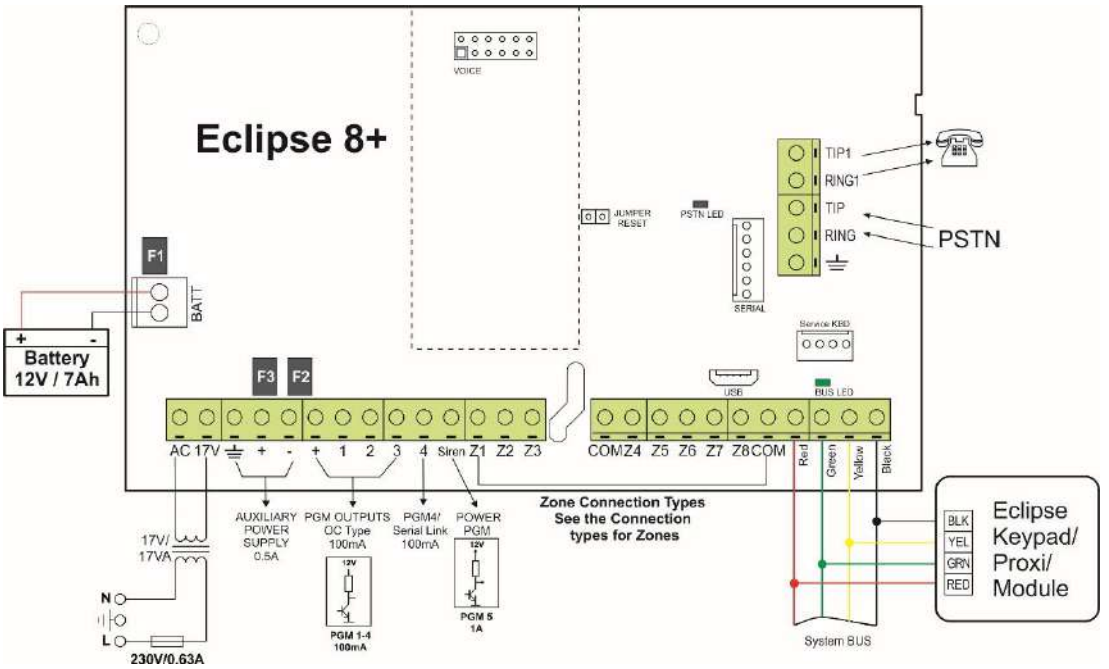


Figure 6. ECLIPSE 8+ control panel

ECLIPSE 8+ - Terminals and components:
17VAC – Power supply from a mains transformer 17V/17VA, fuse 0.63A
⏚ – Grounding
+/- AUX – Power supply for detectors with consumption up to 0.5A
+PGM – Power supply of auxiliary devices with consumption up to 0.5A
PGM 1-4 – Programmable outputs, 100mA, OC type (open collector)
PGM 5/SIREN – Programmable output, high power up to 1A, OC type (open collector), for connecting siren
Z1-Z8 – Zone inputs
COM – Common ground for the zones
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection of keyboards, proximity card readers, expanders, etc.
Jumper RESET – Jumper for total hardware reset of the control panel
Serial – PC Interface connection
Service KBD – Connecting a service keyboard - see also item 6 (available for HW 1.1 and higher)
VOICE - Interface connector for mounting of Voice module ECLIPSE VD
BATT – Terminals for connecting the back-up battery
USB – Micro USB port for programming with ProsTE software (available for HW 1.1 and higher)

PSTN terminals:
TIP1, RING1 – Connect the telephone device
TIP, RING – Connect the PSTN line
⏚ – Grounding

Fuses, PTC type:
F1 – Fuse for the back-up battery: 0.75A
F2 – Fuse for PGM outputs: 0.5A
F3 – Fuse for AUX outputs: 0.5A

LED indication:

- PSTN LED – LED for the status of the built-in digital communicator.
- BUS LED – LED for the status of the system bus:

BUS LED	Lights on permanently	Blinks in pulses
Red	RESET Jumper is set; Problem with the system bus; no communication	Low power supply
Orange	Short circuit of the system bus	Wrong connection of the system bus
Green	Selected device of the system bus	Normal operation mode

2.2.3 ECLIPSE 16

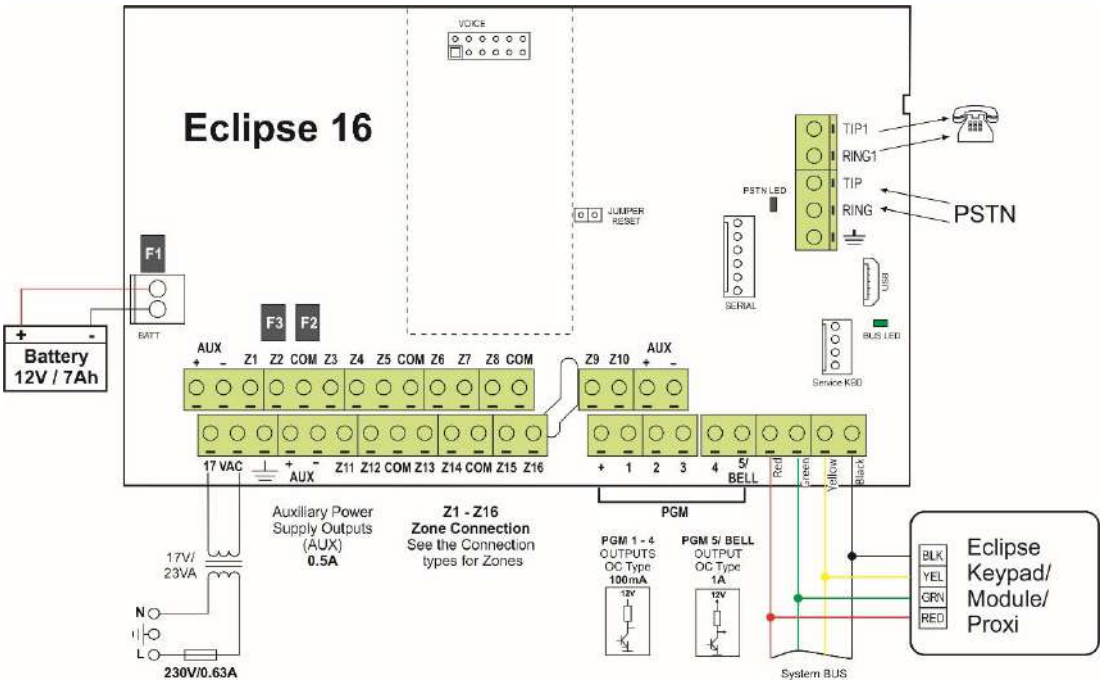


Figure 7. ECLIPSE 16 control panel

ECLIPSE 16 - Terminals and components:
17VAC – Power supply from a mains transformer 17V/23VA, fuse 0.63A
⏚ – Grounding
+/- AUX – Power supply for detectors with consumption up to 0.5A
+PGM – Power supply of auxiliary devices with consumption up to 0.5A
PGM 1-4 – Programmable outputs, 100mA, OC type (open collector)
PGM 5/SIREN – Programmable output, high power up to 1A, OC type (open collector), for connecting siren
Z1-Z16 – Zone inputs
COM – Common ground for the zones
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection of keyboards, proximity card readers, expanders, etc.
Jumper RESET – Jumper for total hardware reset of the control panel
Serial – PC Interface connection
Service KBD – Connecting a service keyboard - see also item 6 (available for HW 1.1 and higher)
VOICE - Interface connector for mounting of Voice module ECLIPSE VD
BATT – Terminals for connecting the back-up battery
USB – Micro USB port for programming with ProsTE software (available for HW 1.5 and higher)

PSTN terminals:
TIP1, RING1 – Connect the telephone device
TIP, RING – Connect the PSTN line
⏚ – Grounding

Fuses, PTC type:
F1 – Fuse for the back-up battery: 0.75A
F2 – Fuse for PGM outputs: 0.5A
F3 – Fuse for AUX outputs: 0.5A

LED indication:

- PSTN LED – LED for the status of the built-in digital communicator.
- BUS LED – LED for the status of the system bus:

BUS LED	Lights on permanently	Blinks in pulses
Red	RESET Jumper is set; Problem with the system bus; no communication	Low power supply
Orange	Short circuit of the system bus	Wrong connection of the system bus
Green	Selected device of the system bus	Normal operation mode

2.2.4 ECLIPSE 32

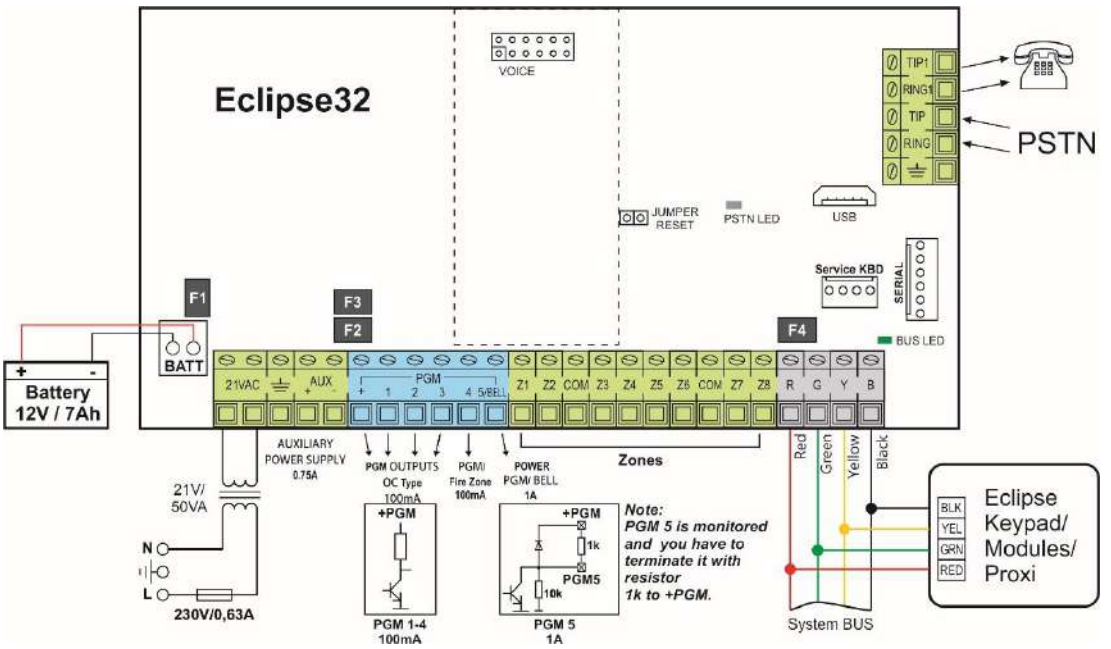


Figure 8. ECLIPSE 32 control panel

ECLIPSE 32 - Terminals and components:
21VAC – Power supply from a mains transformer 21V/50VA, fuse 0.63A
⏚ – Grounding
+/- AUX – Power supply for detectors with consumption up to 0.75A
+PGM – Power supply of auxiliary devices with consumption up to 0.75A
PGM 1-3 – Programmable outputs, 100mA, OC type (open collector)
PGM 4 – Programmable output/Fire zone (programmed at Menu 3. Programmable outputs), 100mA, OC type (open collector)
PGM 5/BELL – Monitored programmable output, high power up to 1A, OC type (open collector), for connecting siren
Z1-Z8 – Zone inputs
COM – Common ground for the zones
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection of keyboards, proximity card readers, expanders, etc.
Jumper RESET – Jumper for total hardware reset of the control panel
Serial – Interface for PC connection
Service KBD – Connecting a service keyboard – see also item 6 (available for HW 1.8 and higher)
VOICE - Interface connector for mounting of Voice module ECLIPSE VD
BATT – Terminals for connecting the back-up battery
USB – Micro USB port for programming with ProsTE software (available for HW 2.3 and higher)

PSTN terminals:
TIP1, RING1 – Connect the telephone device
TIP, RING – Connect the PSTN line
⏚ – Grounding

Fuses, PTC type:
F1 – Fuse for the back-up battery: 2.5A
F2 – Fuse for PGM outputs: 0.75A
F3 – Fuse for AUX outputs: 0.75A
F4 – Fuse for the system bus: 0.5A

LED indication:

- PSTN LED – LED for the status of the built-in digital communicator.
- BUS LED – LED for the status of the system bus:

BUS LED	Lights on permanently	Blinks in pulses
Red	RESET Jumper is set; Problem with the system bus; no communication	Low power supply
Orange	Short circuit of the system bus	Wrong connection of the system bus
Green	Selected device of the system bus	Normal operation mode

2.2.5 ECLIPSE 99

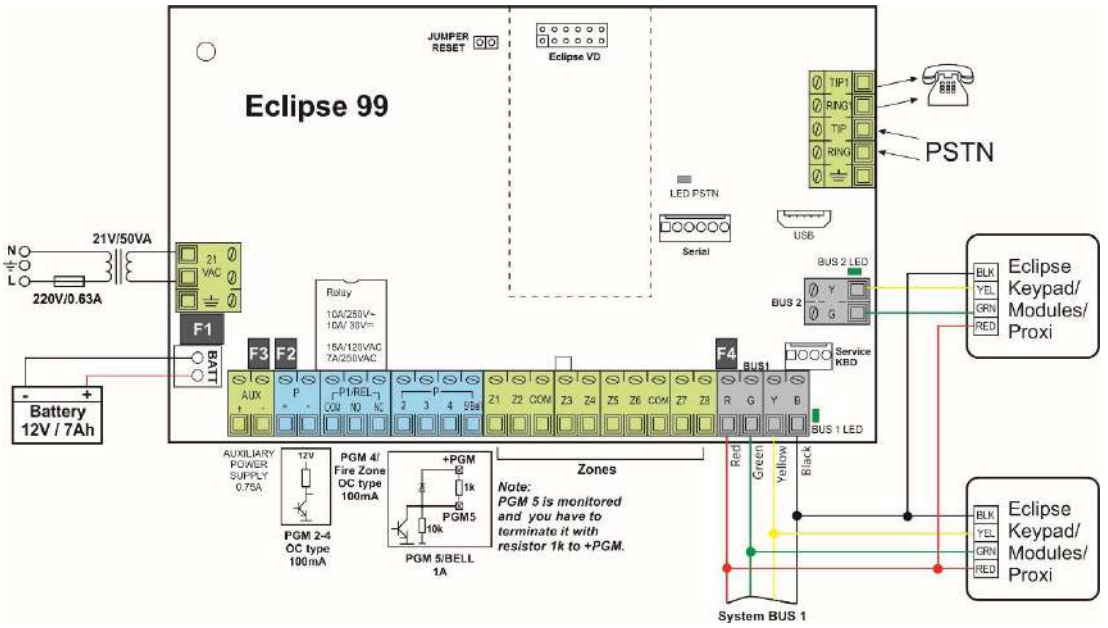


Figure 9. ECLIPSE 99 control panel

ECLIPSE 99 - Terminals and components:
21VAC – Power supply from a mains transformer 21V/50VA, fuse 0.63A
⏚ – Grounding
+/- AUX – Power supply for detectors with consumption up to 0.75A
+PGM – Power supply of auxiliary devices with consumption up to 0.75A
P1/REL (COM/NO/NC) **–** Relay output, 10A@250VAC, 10A@30VDC
PGM 2, 3 – Programmable outputs, 100mA, OC type (open collector)
PGM 4 – Programmable output/Fire zone (programmed at Menu 3. Programmable outputs), 100mA, OC type (open collector)
PGM 5/BELL – Monitored programmable output, high power up to 1A, OC type (open collector), for connecting siren
Z1-Z8 – Zone inputs
COM – Common ground for the zones
R (Red), **G** (Green), **Y** (Yellow), **B** (Black) - System bus interface (System BUS 1) for connection of keyboards, proximity card readers, expanders, etc.
Y (Yellow), **G** (Green) - System bus interface (System BUS 2) for connection of keyboards, proximity card readers, expanders, etc. (Note: You can also use an external power supply to power the devices connected to BUS 2.)
Jumper RESET – Jumper for total hardware reset of the control panel
Serial – Interface for PC connection
Service KBD – Connecting a service keyboard – see item 6 (available for HW 1.2 and higher)
VOICE - Interface connector for mounting of Voice module ECLIPSE VD
BATT – Terminals for connecting the back-up battery
USB – Micro USB port for programming with ProsTE software (available for HW 1.4 and higher)

PSTN terminals:
TIP1, RING1 – Connect the telephone device
TIP, RING – Connect the PSTN line
⏚ – Grounding

Fuses, PTC type:
F1 – Fuse for the back-up battery: 2.5A
F2 – Fuse for PGM outputs: 0.75A
F3 – Fuse for AUX outputs: 0.75A
F4 – Fuse for the system bus: 0.5A

LED indication:
BUS 1 LED – LED Indication for the status of the System BUS 1*
BUS 2 LED – LED Indication for the status of the System BUS 2*
PSTN LED – LED Indication for the status of the built-in digital communicator.

** The indication is the same as described for ECLIPSE 32 control panel – refer to item 2.2.4.*

2.3. Zone Connection

ECLIPSE Control Panels Series – Zones capability:

Control panel	Max. Zone	Connection styles	Doubling zones
ECLIPSE 8	8	5	×
ECLIPSE 8+	16	9	✓
ECLIPSE 16	16	5	×
ECLIPSE 32	32	9	✓
ECLIPSE 99	99	9	✓

2.3.1 Connection Style Diagrams

There are different connections styles for the zones (single and doubling) in the Eclipse system. The connection style is assigned in Menu 4. INPUTS (ADDRESS 2000 or OPERATION 200) and it is common for all zones in the system.

ATTENTION:

ECLIPSE 8/16 Control panels support only single connection in the zones.
ECLIPSE 8+/32/99 Control panel supports both single and doubling connection in the zones.

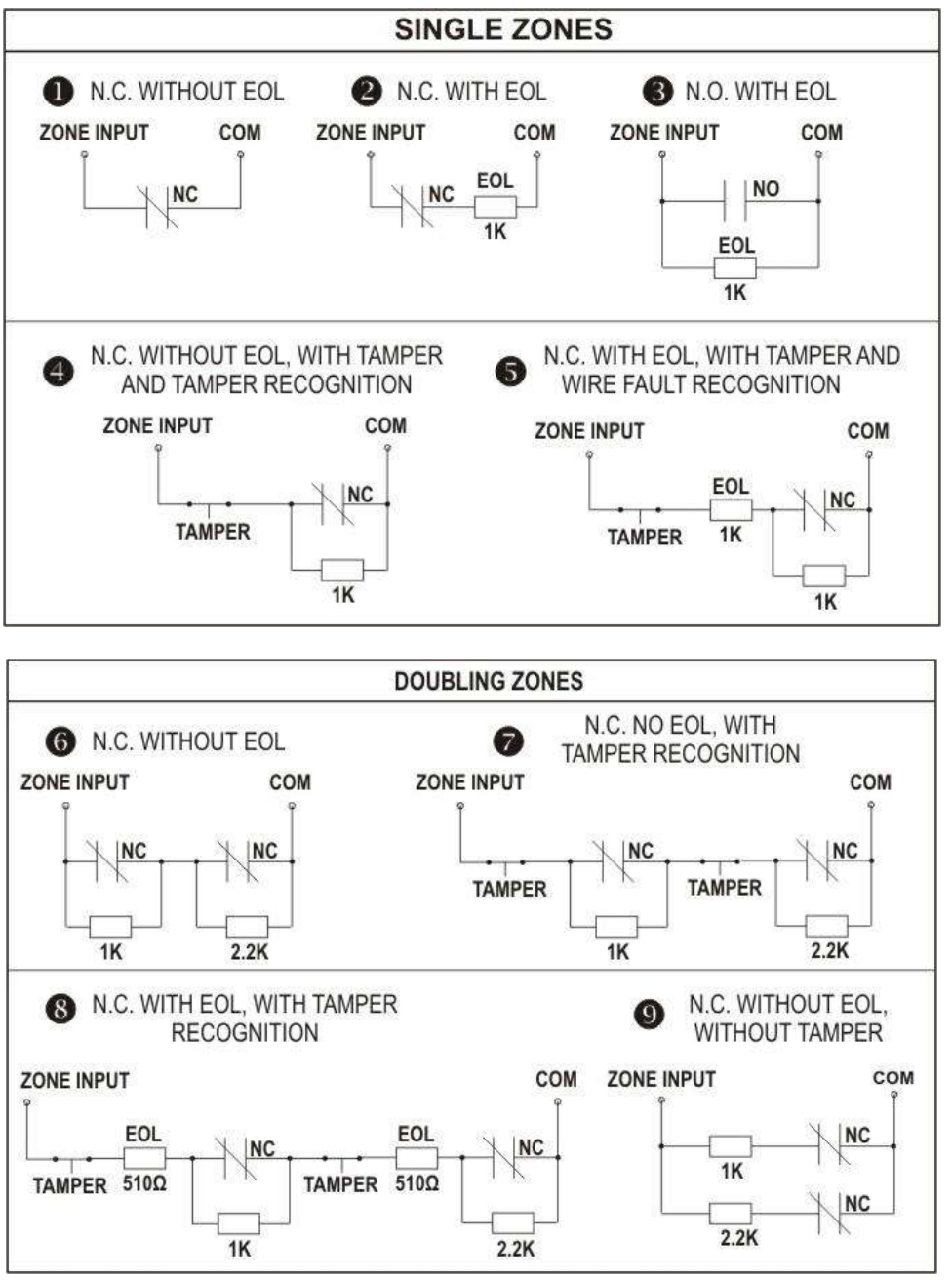
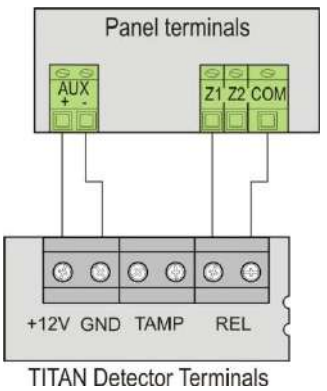


Figure 10. Connection styles diagrams

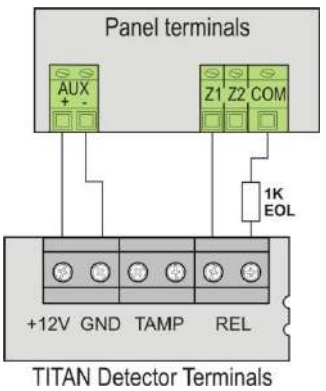
Examples for realizing different connection styles using TITAN series detectors.

NOTE: The connection style 3. NO with EOL is applicable only for detectors with normal open (NO) type terminals.

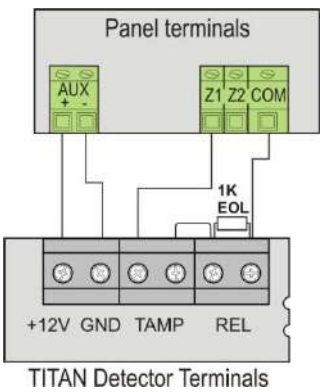
1. NC without EOL



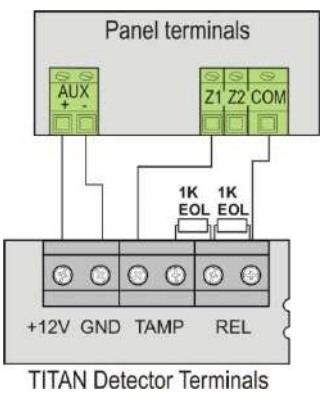
2. NC with EOL



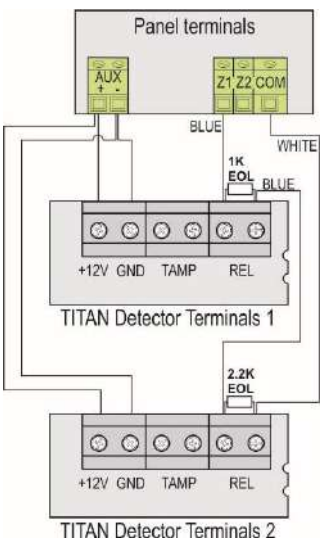
4. NC without EOL, TAMPER recognition



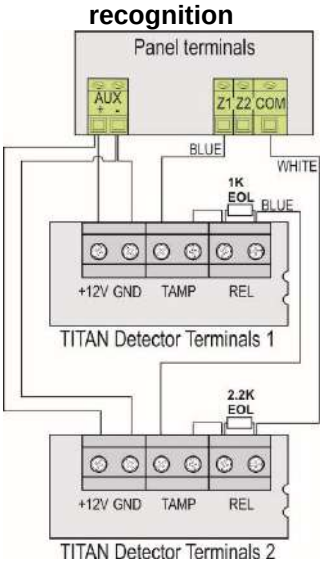
5. NC with EOL, TAMPER and short-circuit recognition



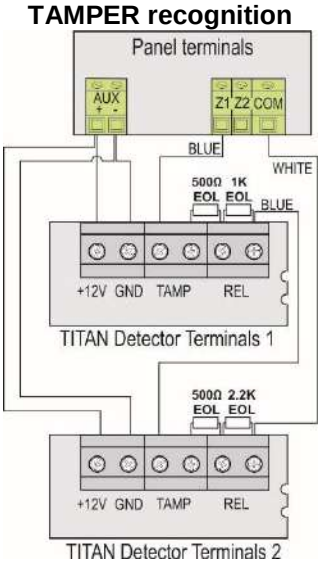
6. NC without EOL



7. NC without EOL, TAMPER recognition



8. NC with EOL, TAMPER recognition



9. NC without EOL, no TAMPER (parallel connection)

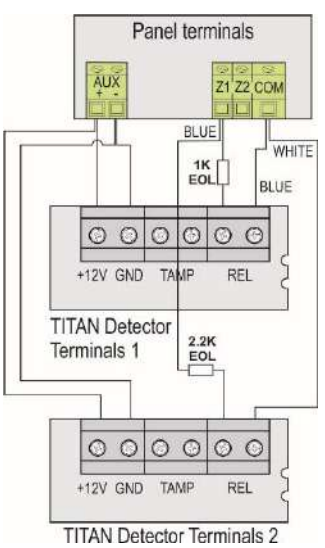


Figure 11. Examples for detector connection

2.3.2 Connecting shutter detector to a zone (for ECLIPSE 8+/16/32/99)

The hardware implementation of Zone with set attribute “Pulse count” permits performance in pulse count mode, suitable for connecting a rolling shutters detector. This mode counts short pulses - 2 to 4 ms for a period of 20 seconds. The first pulse starts a 20-second countdown during which pulses are expected to be received. Their number is assigned at Address 2003 of the engineer programming. An alarm signal is emitted when this number is reached within the time of 20 seconds. Otherwise, the pulse counter will be zeroed after the time of 20 seconds expires. Activating the pulse count mode will automatically start when a number other than 0 is keyed in at Address 2003 of the engineer programming.

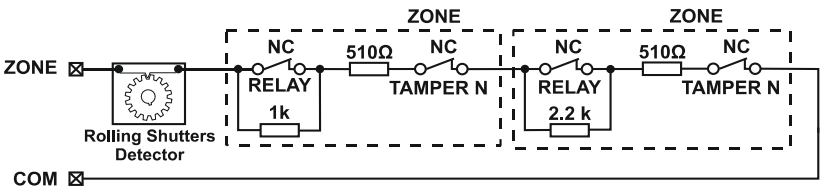


Figure 12. Connecting of rolling shutter detector

2.3.3 Checking the line resistance

The engineer can check the line resistance of the zone after the initial power-up of the system. It is suitable to perform diagnostics of the zone troubles. The line resistance can be checked at address 2xx9, where “xx” in the zone number. The address is accessible only through LCD type keyboard.

NOTE: The double zone connection is available in ECLIPSE 8+, ECLIPSE 32 and ECLIPSE 99 control panels!
The displayed value can vary according the used hardware connection style in the system and has the following meaning:

Connection style		Displayed value	Description
Single zone connection	1	< 1.5 kΩ	The zone is closed.
		> 1.5 kΩ	The zone is open.
	2	< 0.75 kΩ	The zone is open.
		0.75 – 1.5 kΩ	The zone is closed.
		> 1.5 kΩ	The zone is open.
	3	< 0.75 kΩ	The zone is open.
		0.75 – 1.5 kΩ	The zone is closed.
		> 1.5 kΩ	The zone is open.
	4	< 0.75 kΩ	The zone is closed.
		0.75 – 5.6 kΩ	The zone is open.
		> 5.6 kΩ	Tamper break down.
	5	< 0.75 kΩ	Tamper short-circuit.
		0.75 – 1.5 kΩ	The zone is closed.
		1.5 - 5.6 kΩ	The zone is open.
		> 5.6 kΩ	Tamper break down.
Double zone connection	6	< 0.5 kΩ	The both zones are closed.
		0.5 – 1.5 kΩ	The 1st zone is open, the 2nd zone is closed.
		1.5 – 2.7 kΩ	The 1st zone is closed, the 2nd zone is open.
		2.7 kΩ - ∞	The both zones are open.
	7	< 0.5 kΩ	The both zones are closed.
		0.5 – 1.5 kΩ	The 1st zone is open, the 2nd zone is closed.
		1.5 – 2.7 kΩ	The 1st zone is closed, the 2nd zone is open.
		2.7 – 4.9 kΩ	The both zones are open.
		> 4.9 kΩ	Tamper break down.
	8	< 0.75 kΩ	Tamper short-circuit.
		0.75 – 1.5 kΩ	The both zones are closed.
		1.5 – 2.5 kΩ	The 1st zone is open, the 2nd zone is closed.
		2.5 – 3.7 kΩ	The 1st zone is closed, the 2nd zone is open.
		3.7 – 4.9 kΩ	The both zones are open.
		> 4.9 kΩ	Tamper break down.
	9	< 0.5 kΩ	Tamper short-circuit.
		0.5 - 0.75 kΩ	The both zones are closed.
		0.75 - 1.5 kΩ	The 1st zone is closed, the 2nd zone is open.
		1.5 – 2.7 kΩ	The 1st zone is open, the 2nd zone is closed.
		> 2.7 kΩ	The both zones are open.

2.3.4 Connecting Fire Lines

Fire detectors can be connected to every zone set as Fire type zone.

For ECLIPSE 8 and ECLIPSE 16 is possible to realize only 4-wire connection of 12V alarm fire base with one or two balancing resistors.
For ECLIPSE8+, ECLIPSE 32 and ECLIPSE 99 is possible to realize 4-wire connection of 12V alarm fire base with one or two balancing resistors and also connection of two fire detectors to a doubling zone.
PGM 4 for ECLIPSE 32 and ECLIPSE 99 has a special functionality. The output can be programmed to operate as Fire zone with realizing of 2-wire connection of standard 24V fire alarm base.

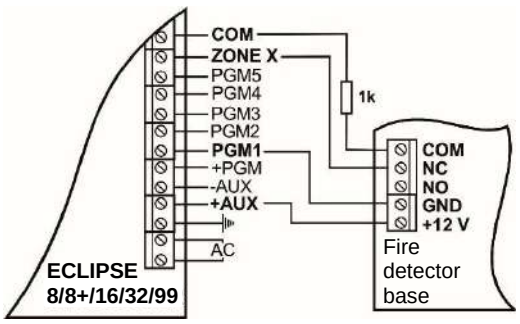
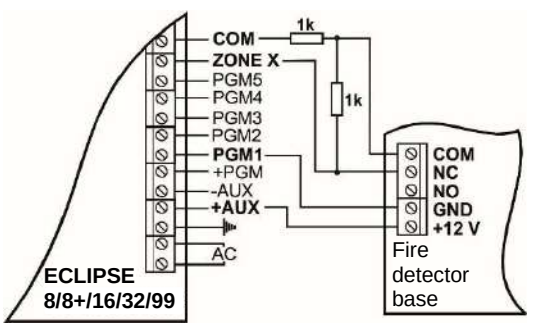
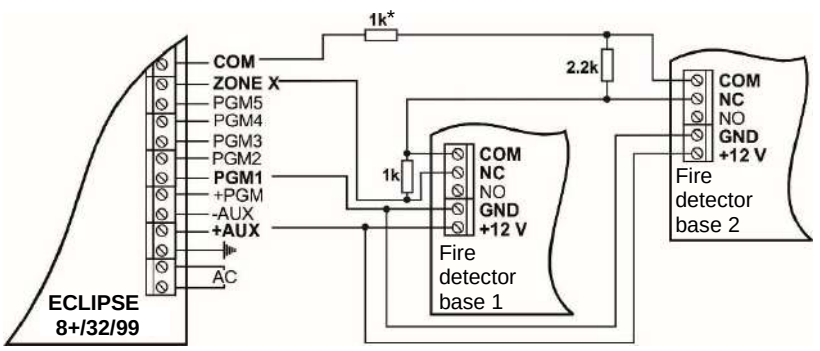
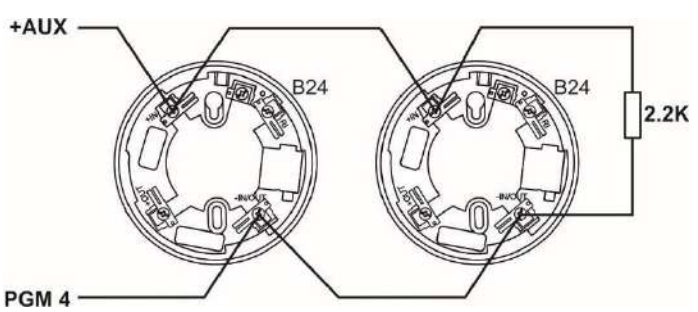
	*A) Connecting a fire detector with one balancing resistor* The PGM 1 must be programmed as Fire Reset and the active status must be +12V. The PGM 1 Fire reset option for activation is programmed at address 3013 – event 61. The Zone type is programmed at address 2xx1, where “xx” is the zone number.
	*B) Connecting a fire detector with two balancing resistors* The PGM 1 must be programmed as Fire Reset and the active status must be +12V. The PGM 1 Fire reset option for activation is programmed at address 3013 – event 61. The Zone type is programmed at address 2xx1, where “xx” is the zone number.
	*C) Connecting of two fire alarm detectors to a zone with set doubling connection style* The PGM 1 must be programmed as Fire Reset and the active status must be +12V. The PGM 1 Fire reset option for activation is programmed at address 3013 – event 61. The Zone type is programmed at address 2xx1, where “xx” is the zone number. *** Note:** Instead of 1k resistor, you can use also two 510Ohm resistors (by one for every fire detector), instead one 1K resistor.
	*D) Realization of 2-wire connection of standard fire bases to PGM 4 programmed as Fire Zone at address 3000 in the menus of ECLIPSE32/99 control panel.*

Figure 13. Connecting of Fire detectors

2.4. Connection of Peripheral Devices

2.4.1 Connection to the System Bus

ECLIPSE Control Panels Series – DEVICE capability:

Control panel	Max. devices on system bus	Keyboards	Proxy	Zone exp.	PGM exp.	Wireless exp.
ECLIPSE 8	2	✓	✓	×	×	×
ECLIPSE 8+	5	✓	✓	✓	×	✓
ECLIPSE 16	5	✓	✓	✓	×	✓
ECLIPSE 32	30	✓	✓	✓	✓	✓
ECLIPSE 99	30	✓	✓	✓	✓	✓

All ECLIPSE Series peripheral devices are connected to the system bus – power and data terminals, located at the right bottom corner and labeled as: B - Black (0V), R - Red (+12V), Y - Yellow and G - Green (both for data transfer).

When connecting devices to the system bus, assure first to turn off the main and the backup power supply of the control panel and **strictly observe the polarity of wires as shown on Figure 14**.

The maximal distance between the control panel and the last device on the system bus is 250m without using external power supply. Keep in mind that this distance might be shorter and depends on the number of peripheral devices connected to the bus. The great number of devices will cause voltage drop in the cable. Refer to the technical specification tables for used keyboards and expander modules to calculate the possible consumption of your system and the expected voltage drops.

For cable distances exceeding 250m (up to 1km) you need an external 12V power supply source connected to the system bus – B (black) (0V) and R (red) (+12V) terminals. Refer also to the connection diagram on Figure 15.

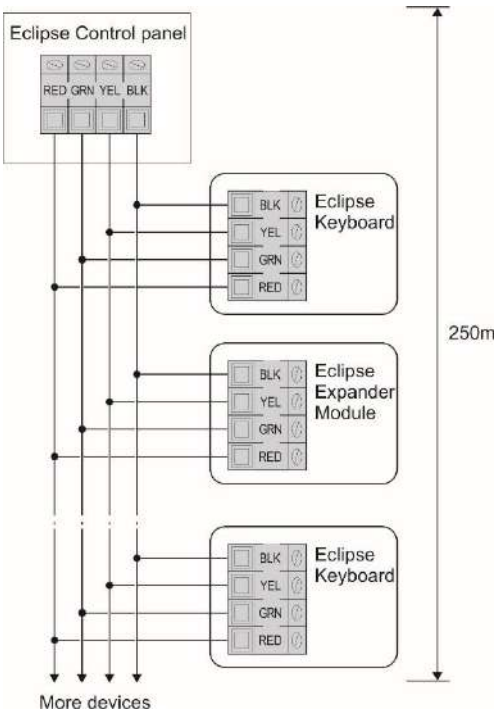


Figure 14. Connecting of peripheral devices (up to 250 meters cable length, no external power supply needed)

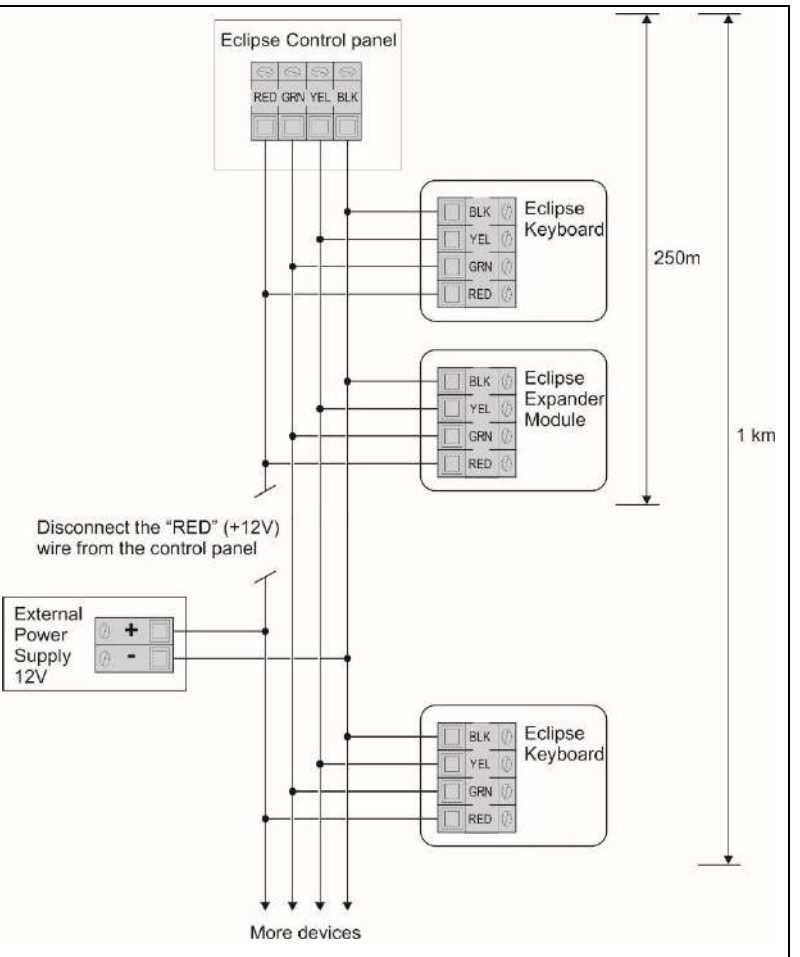


Figure 15. Connecting of peripheral devices (up to 1 km cable length, with external power supply)

2.4.2 Supported Keyboards

Summary for ECLIPSE Series Keyboards:

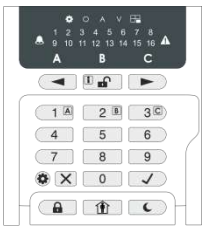
Keyboard	Display	Buttons	Areas	Zones	Proximity card reader	1 x AUX PGM
LED 8	LED	Silicone	1	8	×	×
LED 16A	LED	Silicone	3	16	×	×
LED 16A VG	LED	Silicone	3	16	×	×
LED 32	LED	Silicone	8	32	✓ (option)	×
LCD 32	LCD	Silicone	Up to 16*	Up to 99*	✓ (option)	✓
LCD 32S	LCD	Sensitive	Up to 16*	Up to 99*	✓	✓

** Depends on the type of the control panel.*

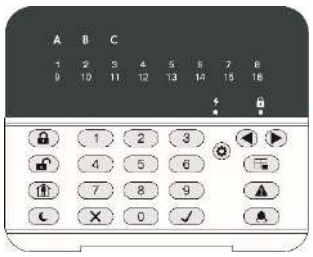
LED 8



LED 16A

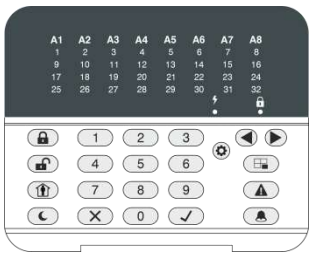


LED 16A VG

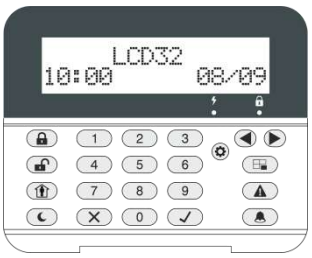


Keyboard with voice guide messages

LED 32



LCD 32

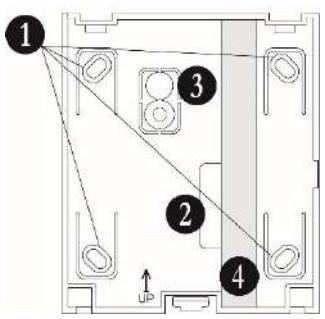


LCD 32 Sensitive

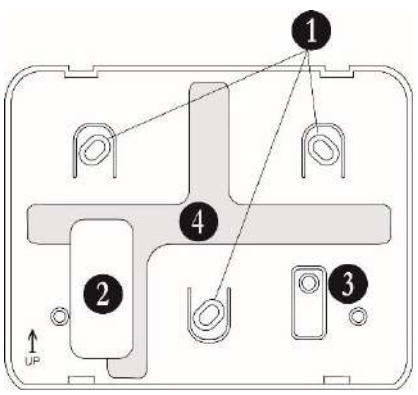


Figure 16. Front panels of ECLIPSE Series Keyboards (open cover)

LED 8 and LED 16A



LED 16A VG, LED 32 and LCD 32



LCD 32 Sensitive

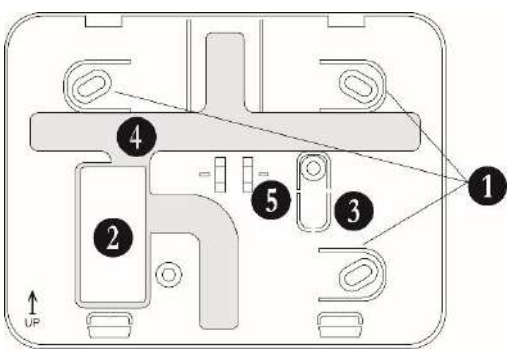


Figure 17. Rear panels of ECLIPSE Series Keyboards

- **Description of the keyboard rear panel elements:**

1. Mounting holes
2. Main opening for cable running
3. Tamper plate. Fix the plate with a screw to the mounting surface. In case of unauthorized attempt for demounting the keyboard, the tamper plate will break out and release the tamper-switch on the keyboard's PCB.
4. Special cable channels on the back side of the rear panel.
5. Lever holder.

- **Keyboard terminals:**

RED, GREEN, YELLOW, BLACK - System bus interface for connection to control panel
Zone – Independent full functional keyboard zone with freely programmable parameters. It can be used as additional zone to control panel and must be attached to a zone number at address 2xx0 (xx is the zone number) with the respective number of the device.
GND – Common ground
PGM (LCD 32 and LCD 32 Sensitive) – Programmable output, 100mA, OC type

- **Technical Specifications:**

Feature	LED 8	LED 16A	LED 16A VG	LED 32	LCD 32	LCD 32 Sens.
GRADE Conformity	-	GRADE 2, Class II*	-	-	GRADE 3, Class II*	-
Power Supply		9-18V (nom. 14V)				
Consumption	Min. 50mA/ Max. 80	Min. 50mA/ Max. 80	Min. 60mA/ Max. 140	Min. 60mA/ Max. 140	Min. 60mA/ Max. 100	Min. 50mA/ Max. 100
Operation temperature		-20 ÷ +50°C				
Tamper	Yes					
Dimensions, mm	100x90x24		110x134x22			105x130x22

** In conformity with the requirements for EN 50131-1:2006 and EN 50131-3:2009.*

- **Sound signalization from keyboards**

All Eclipse Series Keyboards have sound signalization for occurring of different system events. The sound signalization has 4 volume levels adjustable in the Manager programming menus (Menu 5.KBD Settings -1. Buzzer level or at address 90):

Sound Signal	Description
Button	Single short beep indicating the pressing of a key.
Confirmation	Two long sound signals, indicating the system confirmation to executed operation.
Cancel operation	A single long beep, indicating system incorrectly executed operation.
Entry time	Continuous beep, indicating intrusion into an entrance zone.
Exit time	Short beeps, indicating the system is armed and the user is required to leave the entrance zone. 10 seconds before the exit time is over beep frequency increases.
Technical problem	Two short beeps at every 20 sec, indicating a technical trouble. To stop the sound signalization – enter a valid user code and press in sequence TROUBLE and ENTER buttons (for LED 16A VG, LED32, LCD32, LCD32 Sensitive keyboards), or twice ENTER button (for LED8 and LED16A keyboards).
Chime	Short beeps with subsequently increasing period, indicating intrusion into a zone with an activated chime option.
Fire alarm	Three sound signals in sequence repeated every 5 seconds. That kind of signalization shows activated fire detector in the premises.

- **Buttons Functions**

NOTE: *The functionality of BYPASS, TROUBLE and MEMORY buttons for LED 8 and LED 16A keyboards is accessible through the manager and user menus only with the respective LED indication on the display.*

Button	Function	Description
	ENTER	Confirmation of the entered data; step ahead in the engineer programming menus. For LED 8 and LED 16A keyboards: Use the button to review the memory log file, the system troubles and the bypassed zones – the respective system LED is blinking during the review.
	CANCEL	Canceling the entered parameters; exit from a programming mode.
	FULL ARM	Quick button for Full Arming Mode.
	DISARM	Disarming the system. The button has a special function in text entering mode – deletes the current symbol and moves the cursor on one position to the left (like Backspace button on a standard PC keyboard).
	STAY ARM	Quick button for Stay Arming Mode. The button has a special function in text entering mode – shifting between small and capital letters.
	SLEEP ARM	Quick button for Sleep Arming Mode.
	PRG	Entry in Manager and User programming modes. Entry in Service Keyboard Mode. The button has a special function in engineer programming mode – saving the entered settings and moves forward as the current index number is increased with +1.
	BYPASS	Bypassing zones. The button lights on permanently if there are bypassed zones in the system. The button is blinking during the bypassed zones review. The button has a special function in engineer programming – canceling the entered settings and moves forward as the current index number is increased with +1, option 0.
	TROUBLE	Reviewing the system troubles. The button lights on permanently if there are system problems. The button is blinking during the system troubles review.
	MEMORY	Reviewing the memory events log file. The button lights on permanently if there are memory events. The button is blinking during the memory events review. The button has a special function in text entering mode – entering of special symbols.
	Scroll arrows	Arrows for moving the cursor on the left and on the right in programming mode.
0 - 9	Digit Buttons	Digital buttons for entering parameters, codes, etc. For LED 16A VG keyboard: Use button 1 to arm/disarm AREA A; button 2 to arm/disarm AREA B; button 3 to arm/disarm AREA C.

- **Supported voice messages for Eclipse LED 16A VG**

The control keyboard Eclipse LED 16A VG is equipped with voice guiding messages for events to support user operation. The following messages are performed:

"System is armed" - The exit time is over and the system is armed (Full, Stay or Sleep mode).
"System is disarmed" - The entry time is over and the system is disarmed.
"Please, enter your code to disarm" – The entry time is running on. The message is played on every 5 seconds until a valid user code is entered and the system is disarmed.
"Please, leave the premises" – The exit time is running on. The message is played on every 5 seconds until the system is armed (Full, Stay or Sleep mode).
"AC power is failure" – The main power supply is missing or off. The message is played after disarming the system; during exit time is running on; activation of entry-exit or follow type zone when the system is disarmed.
"Battery is discharged" – The backup battery is low charged or missing. The message is played after disarming the system; during exit time is running on; activation of entry-exit or follow type zone when system is disarmed.

Attention: *The voice messages cannot be muted or switched off. They can be only silenced at address 90 (text menu "5. KBD Settings – 1. Busser Level") in the manager programming menus. The volume level can be set in range from 1 (the lowest) to 4 (the highest).*

- **Correspondence between the ECLIPSE panels and the supported areas from keyboards**

You must consider the following important notes for Eclipse Series Keyboards, when design and organize the security system including ECLIPSE panels!

ECLIPSE 8:

Keyboard	Display type	Indication
		Area 1
LED 8	LED Icon	No specific indication
LED 16A	LED Icon	A
LED 16A VG	LED Icon	A
LED 32	LED Icon	A1
LCD 32 (S)	LCD Text	1

ECLIPSE 8+ and ECLIPSE 16:

Keyboard	Display type	Indication		
		Area 1	Area 2	Area 3
LED 8*	LED Icon	One Area: No specific indication		
LED 16A	LED Icon	A	B	C
LED 16A VG	LED Icon	A	B	C
LED 32	LED Icon	A1	A2	A3
LCD 32 (S)	LCD Text	1	2	3

ECLIPSE 32 and ECLIPSE 99:

Keyboard	Display type	Indication							
		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
LED 8*	LED Icon	One Area: No specific indication							
LED 16A**	LED Icon	Three Areas: A, B and C indication							
LED 16A VG**	LED Icon	Three Areas: A, B and C indication							
LED 32***	LED Icon	A1	A2	A3	A4	A5	A6	A7	A8
LCD 32 (S)	LCD Text	1	2	3	4	5	6	7	8

**** Note:** LED 8 keyboard supports operation with only one area in the system. The area number is set at address 8xx1, where "xx" is the keyboard number in the system.*
***** Note:** LED 16A / LED 16A VG keyboard supports operation with three independent areas in the system. The area numbers are set in menu 9.DEVICES-XX.Device-2.AREA (address 8xx1), where "xx" is the keyboard number in the system. The areas are displayed as A, B and C, where A is the area with the smaller number, and C - the area with higher one. Note that there may not be direct correspondence between the area number and the keyboard indication letter.*
****** Note:** When connected to Eclipse 99 the installer can associate up to 8 areas to one LED32 keyboard. The area numbers are set in menu 9.DEVICES-XX.Device-2.AREA (address 8xx1), where "xx" is the keyboard number in the system. The areas are displayed as A1-A8, where A1 is the area with the smaller number, and A8 - the area with higher one. Note that there may not be direct correspondence between the area number and the keyboard indication letter.*

2.4.3 Supported Wired Expander modules

Summary for ECLIPSE Series Expander modules:

Module	Description	ECLIPSE 8	ECLIPSE 8+	ECLIPSE 16	ECLIPSE 32	ECLIPSE 99
ZONE 8	8-Zone expander	×	✓	✓	✓	✓
PGM 8	8-PGM expander	×	×	×	✓	✓
ZONE 8 PS	8-Zone expander with power supply	×	✓	✓	✓	✓
PGM 8 PS	8-PGM expander with power supply	×	×	×	✓	✓

The ECLIPSE Series expander modules are connected to the system bus. Every module is available in two variants:
a) PCB with power supply from the control panel (ZONE 8 and PGM 8);
b) PCB with own power supply (ZONE 8 PS and PGM 8 PS)

The Eclipse modules ZONE 8 and PGM 8 can be situated in the panel's box – see Figures 1 and 3 - or into a separate small plastic box SB-U (sold separately).

ATTENTION: It is possible to mount the ZONE 8 and PGM 8 modules under the main PCB of ECLIPSE 32 only!

The Eclipse modules ZONE 8 PS and PGM 8 PS are designed for mounting in big box with transformer unit and 230V terminal.

- **Installation in the box of ECLIPSE 32 control panel**

ATTENTION: *The full configuration of 32 zones in ECLIPSE 32 can be realized with doubling zone connection (16 logical zones on the control PCB) and 1 Zone expander for 8 zones (16 logical zones) or without zone doubling with connection of 3 zone expanders to the panel.*

Remove the PCB of the ECLIPSE 32 control panel – the PCB is secured with two clips from both sides.
Mount the expander module PCB to the bottom of the box:

1. Fix the upper side of the PCB into the holders as shown on the Figure 18.
2. The pins of the bottom must fit in the PCB openings.
3. Press the PCB of the expander downwards to secure with the clips.
4. Mount back the PCB of the ECLIPSE 32 control panel above the expander – fix it into the upper holders (4) and press down to secure in the side clips (5).
5. Connect the 8-Zone Expander to the ECLIPSE 32 serial system bus as observe the polarity – see Figures 14 and 15.

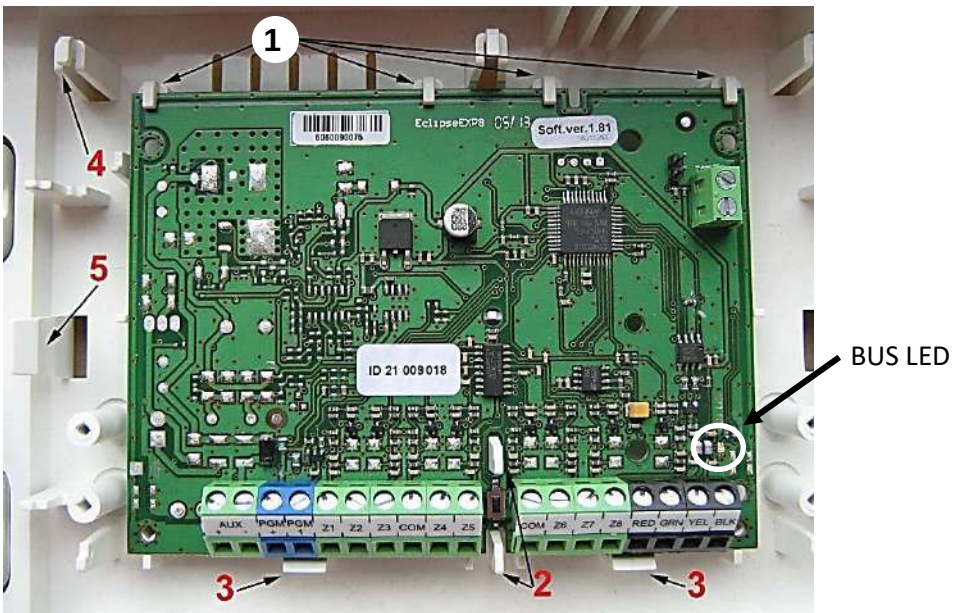
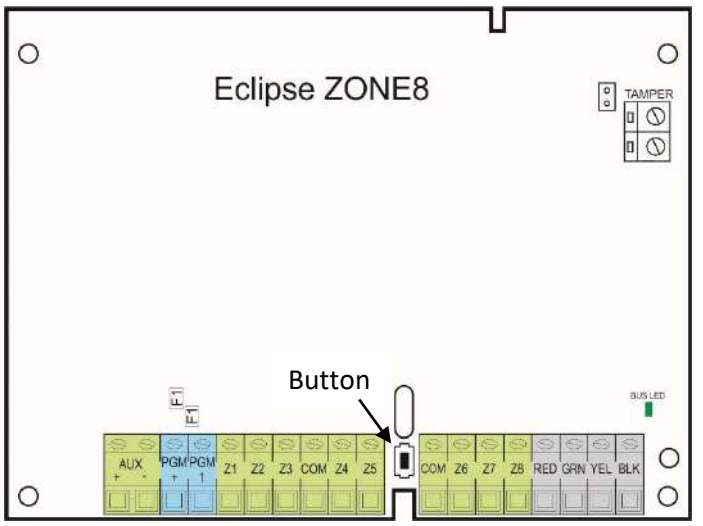


Figure 18. Example for mounting of expander module in the ECLIPSE 32 panel box

- **LED indication of expander modules ZONE 8, PGM 8, ZONE 8 PS and PGM 8 PS**

BUS LED	Lights on	Blinking
Red	Problem with the system bus; no communication	Low power supply
Orange	Short circuit of the system bus	Wrong connection of the system bus
Green	Selected device of the system bus	Normal operation mode

- **Expanders' Terminals and Specifications**

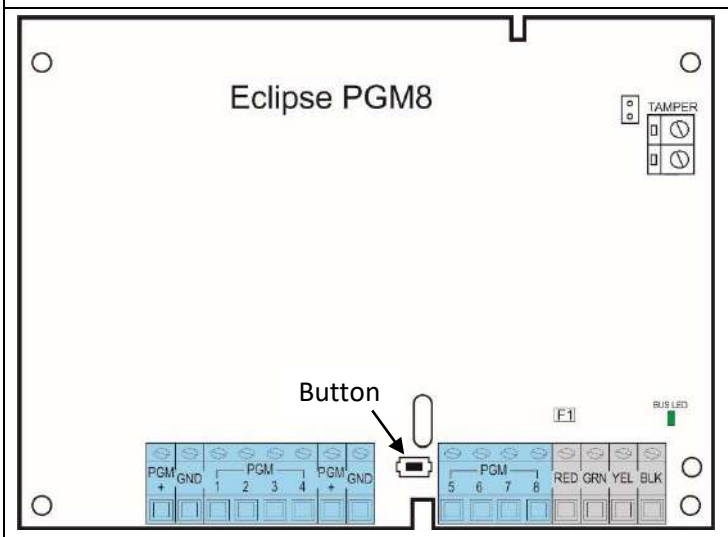


Technical Specifications:

GRADE 3 Class II	Yes*
Power Supply from the panel	11.5 ÷ 18V DC
Consumption	Min. 30mA/ Max. 100mA
Zone inputs	8
PGM output, 100mA, OC type	1
Operation temperature	-20°C ÷ 50°C
Storage temperature	-40°C ÷ 60°C

** In conformity with the requirements for EN 50131-1:2006 and EN 50131-3:2009.*

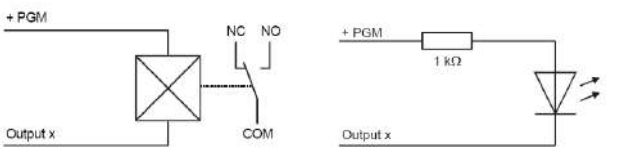
+/- AUX – Power supply for detectors with consumption up to 0.1A.
+PGM – Power supply for auxiliary devices with consumption up to 0.75A.
PGM 1 – Programmable output, 100mA, OC type (open collector).
Z1-Z8 – Zone inputs. Every input is independent full functional zone with freely programmable parameters. Every additional input must be attached to a zone on the control panel.
COM – Common ground for the zones.
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection to control panel.
Tamper – Terminals for Tamper switch. Set a jumper on the terminals if the tamper switch is not used.
F1 – Fuses for PGMs output, 100mA.
Button – Button for enrollment of the module to the system configuration.



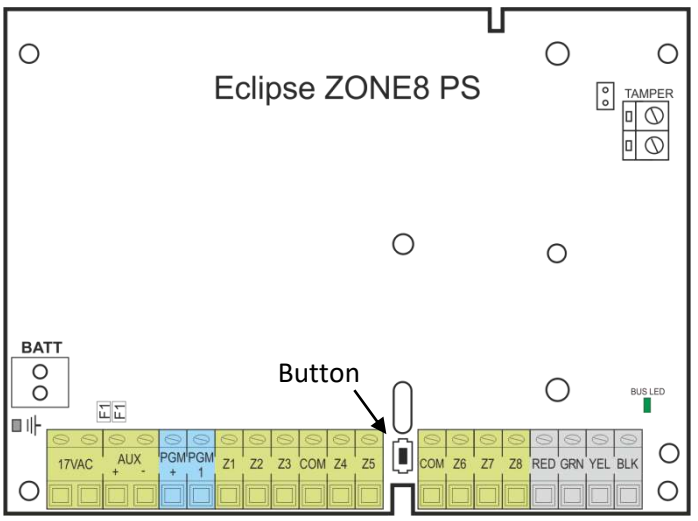
Technical Specifications:

Power Supply	11.5 ÷ 18V DC
Consumption	Min. 30mA/ Max. 100mA
PGM outputs, 100mA, OC type	8
Operation temperature	-20°C ÷ 50°C
Storage temperature	-40°C ÷ 60°C

Internal structure of PGM output:



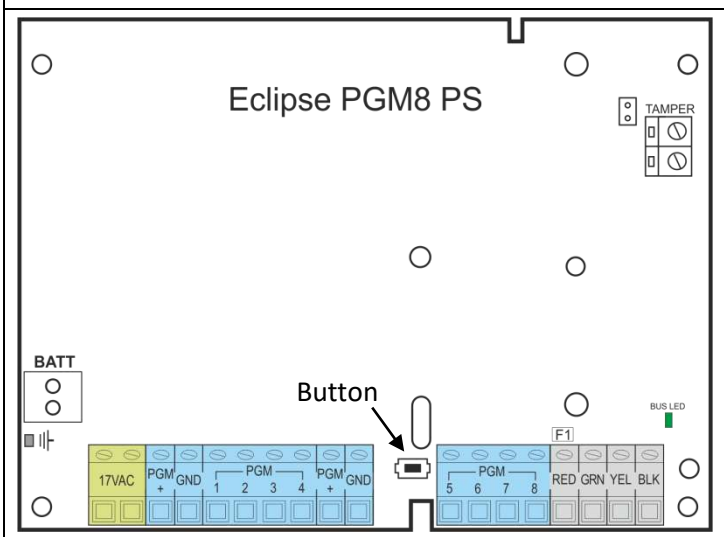
+PGM – Power supply for auxiliary devices with consumption up to 0.1A.
PGM 1-8 – Programmable outputs, 100mA, OC type (open collector). Every output is independent full functional PGM with freely programmable parameters. Every additional output must be attached to a PGM number on the control panel.
GND – Common ground for the outputs.
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection to control panel.
Tamper – Terminals for Tamper switch.
F1 – Fuse for PGM output, 100mA.
Button – Button for enrollment of the module to the system configuration.



Technical Specifications:

Main power supply	230VAC +10%/ -15%
Transformer	17V/17 VA
Backup power supply	12V/7 Ah
Consumption	Min. 30mA/Max. 750mA
Zone inputs	8
PGM outputs	1
Operation temperature	-20°C ÷ 50°C
Storage temperature	-40°C ÷ 60°C

17VAC – Power supply from a mains transformer 17V/17VA, fuse 0.63A.
BATT – Terminals for connecting accumulator battery.
+/- AUX – Power supply for detectors with consumption up to 0.75A.
+PGM – Power supply for auxiliary devices with consumption up to 0.75A.
PGM 1 – Programmable output, 100mA, OC type (open collector).
Z1-Z8 – Zone inputs. Every input is independent full functional zone with freely programmable parameters. Every additional input must be attached to a zone on the control panel.
COM – Common ground for the zones.
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection to control panel.
Tamper – Terminals for Tamper switch. Set a jumper on the terminals if the tamper switch is not used.
F1 – Fuses for PGMs output, 100mA.
Button – Button for enrollment of the module to the system configuration.



Technical Specifications:

Main power supply	230VAC +10%/ -15%
Transformer	17V/17 VA
Backup power supply	12V/7 Ah
Consumption	Min. 30mA/Max. 750mA
PGM outputs, 100mA, OC type	8
Operation temperature	-20°C ÷ 50°C
Storage temperature	-40°C ÷ 60°C

17VAC – Power supply from a mains transformer 17V/17VA, fuse 0.63A
BATT - Terminals for connecting accumulator battery
+PGM – Power supply for auxiliary devices with consumption up to 0.75A
PGM 1-8 – Programmable outputs, 100mA, OC type (open collector). Every output is independent full functional PGM with freely programmable parameters. Every additional output must be attached to a PGM number on the control panel.
GND – Common ground for the outputs.
R(red)**, G**(green)**, Y**(yellow)**, B**(black) - System bus interface for connection to control panel.
Tamper – Terminals for Tamper switch.
F1 – Fuse for PGM output, 100mA.
Button – Button for enrollment of the module to the system configuration.

2.4.4 Supported Wireless Expander Module

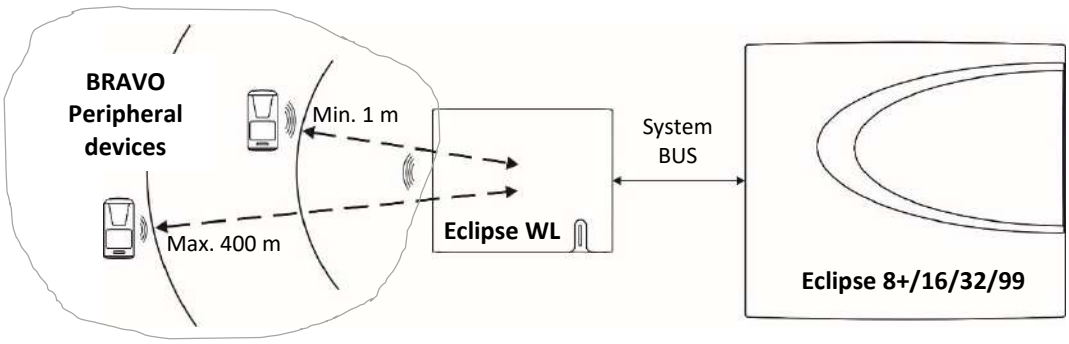
Eclipse WL is a wireless expander module designed for building of hybrid alarm systems with Eclipse 8+/16/32/99 control panels and wireless devices BRAVO series.

Up to 4 separate Eclipse WL modules can be connected to one Eclipse control panel.

Eclipse WL is mounted in a small plastic box and it is connected to the system bus of the control panel – see connection diagram on Figures 14 and 15.

The BRAVO series includes:

- BRAVO PIR, BRAVO PIR GJD – Wireless motion detectors
- BRAVO Curtain – Wireless Curtain type detector
- BRAVO MC – Wireless magnetic contact
- BRAVO FL – Wireless flood detector
- BRAVO FD – Wireless fire detector
- BRAVO SR200/SR300LIT/SR300ALK – Wireless outdoor sirens
- BRAVO RC – Two-way remote key fob
- BRAVO RC-41/RC-21/RC-11 – One-way remote key fobs



Functional operation diagram of Eclipse hybrid system.

Attention: *The minimum distance between Eclipse WL and enrolled to it peripheral devices BRAVO must be 1 meter to guarantee the correct operation of the system.*

Important: *The radio distance of Eclipse WL wireless expander module could vary according the construction and the building materials of the site, where the wireless detectors are installed.*

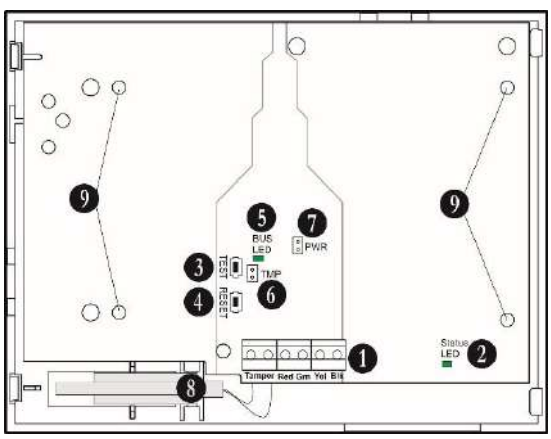
Technical Specifications of Eclipse WL:

Power supply from the panel	9 ÷ 18V DC
Consumption	Max. 150mA
Operation frequency	~ 868MHz
Radio distance (open space)	Up to 400 meters
Operation temperature	0°C ÷ 40°C
Storage temperature	-10°C ÷ 50°C

Number of supported wireless devices:

Device type	Control panel Eclipse		
	8+/16	32	99
PIR, MC, FL, FD and SR	Max. 16	Max. 32	Max. 99
RC, RC-41/RC-21/RC-11	Max. 32	Max. 64	Max. 99

Elements of Eclipse WL:



1. Terminal row:
   - **Tamper** – Connect the wires of the tamper-switch of the box.
   - **R**(red)**, G**(green)**, Y**(yellow)**, B**(black) – Interface for connecting to the panel.
2. LED for module's current state (Status LED)
3. TEST Button – not used.
4. RESET Button – erasing of all enrolled to Eclipse WL wireless devices.
5. LED for current status of the system bus (BUS LED) – in normal operation mode the LED is blinking in green during communication with the panel.
6. TMP Jumper (TAMPER) – set a jumper in case the tamper switch of the box is not used.
7. PWR Jumper (POWER) – set a jumper in case you need to increase the module's sensitivity for receiving signals from wireless devices.

Attention: *When the PWR jumper is set, the minimum distance between Eclipse WL and enrolled to it devices BRAVO series must be 2 meters!*

8. Tamper-switch for self-protection of the plastic box.
9. Holes for fixing the module to the plastic box bottom.

2.4.5 Supported Proximity Card Readers

Summary for ECLIPSE Series Proximity Card Readers:

Reader	Description	ECLIPSE 8	ECLIPSE 8+	ECLIPSE 16	ECLIPSE 32	ECLIPSE 99
PR IT	Reader for built-in installation	✓	✓	✓	✓	✓
Eclipse PR	Stand-alone proximity card reader	✓	✓	✓	✓	✓

The proximity card readers are control devices for management of ECLIPSE 8/8+/16/32/99 security systems.
The ECLIPSE proximity readers are connected to the system bus observing the polarity.
The readers are equipped with three-color LED indication for the selected arming mode and sound signalization for announcing current events. The arming and disarming of the system via proximity reader is with using standard proximity cards, tags or other 125kHz passive transponders.
It is possible that only proximity-card readers be included in a system without having an installed keyboard. In such systems this would hinder current programming of parameters and cards, as well as Log Review and Technical Trouble indications. Portable LED or LCD type keyboards can be used to accomplish such tasks.
Up to 8/32/64/99 cards can be assigned to one ECLIPSE 8/8+/16/32/99 security systems - one card for each of the users.
The Managers in the system are allowed to program the performance of the cards.
Arming and/or disarming rights must be assigned for the respective user code.
The user may not be designated a code combination. In such case the only way to control the security system would be the proximity-card.
The parameters and functions of the proximity card readers are programmed in Menu 9. DEVICES, according to the realized system configuration.

- **Installation of proximity reader PR IT**

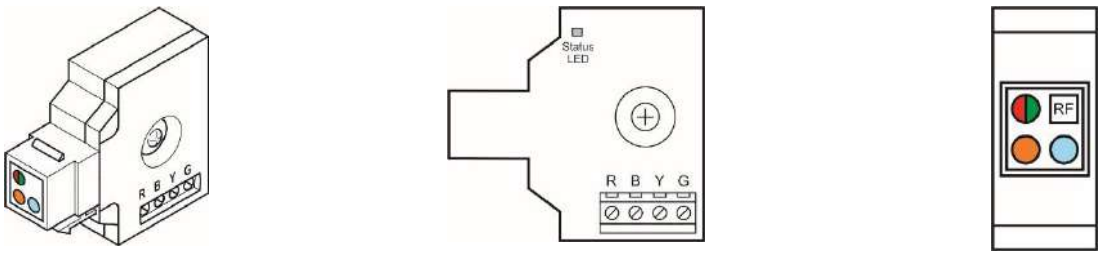
Technical Specification:

Power supply	9 ÷ 18V DC (Nom. 14V)
Consumption	Min. 70mA/Max.100mA
Operation temperature	-20°C ÷ 50°C
Dimensions, assembled	55x48x19mm

The PR IT proximity reader is designed for built-in installation in electrical sockets via specialized DIN box.

Description of PR IT elements:
R (red), **G** (green), **Y** (yellow), **B** (black) - System bus interface for connection to control panel;
Status LED – LED indicator for the status of the system bus; The LED is blinking in green during normal operation mode of the reader; the LED is lighting on in red if there is no connection with the panel;
Red, green, yellow and blue LED – LED indicators for the current active arming mode;
RF – RFID (Radio frequency identification card reader), a place for reading a proximity card or tag for operation with the system.

All LEDs are blinking in turn – the reader is not enrolled to the system; or there is no communication with the control panel.
All LEDs are blinking together – the system is in programming mode.

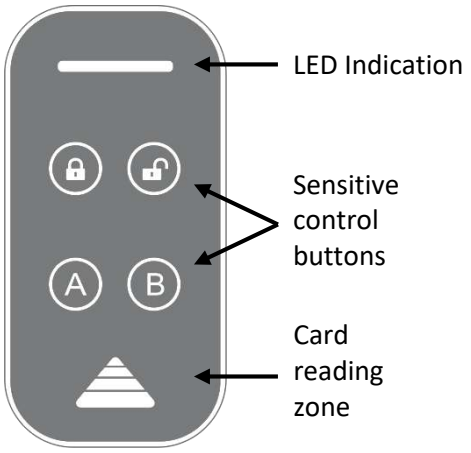


(a) (b) (c)

Figure 19. Proximity card reader PR IT

- **Installation of proximity reader Eclipse PR**

Eclipse PR is a stand-alone proximity card reader, which is connected to the system bus of the control panel. The reader is with compact design and is suitable for wall mounting:



Technical Specifications:

Power supply from the panel	9 ÷ 18V DC (Nom. 14V)
Consumption	Min. 70mA/Max.100mA
Operation temperature	-20°C ÷ 50°C
Dimensions	100x50x23mm

LED indication:

Green	Lights on – recognized valid user card.
Red	Lights on – not valid user card; or the system is armed on time slot during which the card has not rights for operation. Blinking – Activated alarm; alarm memory.

All LEDs are blinking in turn – the reader is not enrolled to the system; or there is no communication with the control panel.
All LEDs are blinking together – the system is in programming mode.

Mounting and description of the elements of Eclipse PR:

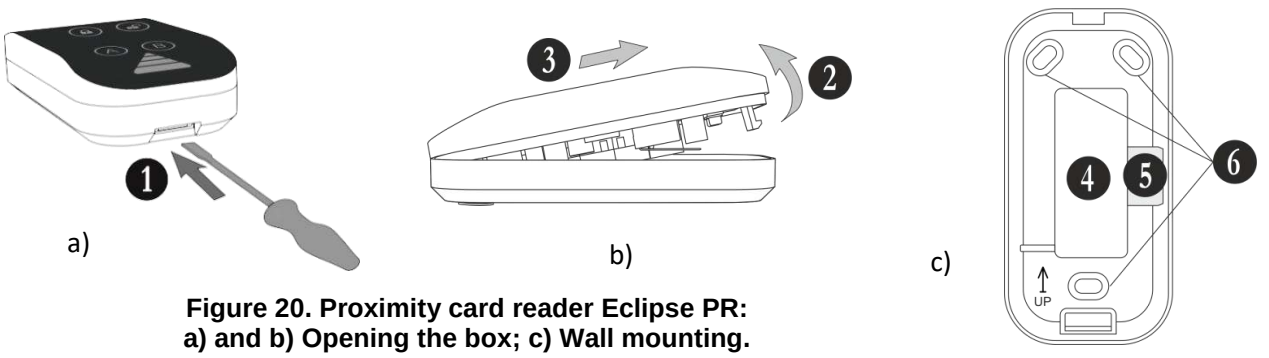
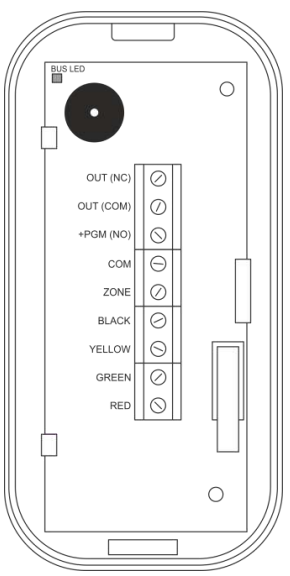
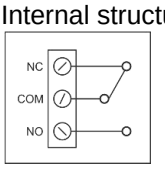


Figure 20. Proximity card reader Eclipse PR:
a) and b) Opening the box; c) Wall mounting.

1 – Open the box as use small plain screw driver
2 – Pick up the cover
3 – Slide the cover as shown on the drawing and remove it from the base
4 – Main opening for running cables
5 – Cable channel for running wires on the back side of the base
6 – Mounting holes



Description of the terminal row:
RED, GREEN, YELLOW, BLACK – System bus interface for connection to control panel
ZONE – Independent full functional zone with freely programmable parameters. It can be used as additional zone to control panel and must be attached to a zone number at address 2xx0 (xx is number of the zone) with the respective number of the device. It is suitable to connect a magnetic contact to this zone (entry-exit type).
COM – Common ground
NO/COM/NC – Relay, volt free changeover contacts: 0.5A/125VAC; 1A/30 VDC.
Internal structure of the relay:



Bus LED – LED indication for the status of the system bus; in normal operation mode the LED is blinking evenly in green.

2.5. Connection of PGM Outputs

ECLIPSE Control Panels Series – PGM capability:

Control panel	Max. PGM outputs	Power output, up to 1A	PGM Additional Functionality
ECLIPSE 8	5	1 (PGM 5), non-monitored	PGM 4 - Serial link to TP2000 transmitter
ECLIPSE 8+	8	1 (PGM 5), non-monitored	PGM 4 - Serial link to TP2000 transmitter
ECLIPSE 16	8	1 (PGM 5), non-monitored	N.A.
ECLIPSE 32	32	1 (PGM 5), monitored	PGM 4 - Fire zone for 24V standard fire base
ECLIPSE 99	99	1 (PGM 5), monitored	PGM 4 - Fire zone for 24V standard fire base

In the ECLIPSE series alarm panels PGM1, PGM2, PGM3 and PGM4 outputs have a programmable active level. This allows them to be used to transmit control signals towards external devices (e.g. a block siren input) or to directly control low-powered external devices (e.g. relays, LED, etc.).

The internal structure of all PGMs (excepting PGM5 in ECLIPSE 32 and ECLIPSE 99) is the same and is shown on Figure 21 a).

The internal structure of PGM5 in ECLIPSE 32 and ECLIPSE 99, is shown on Figure 21 b).

Important: PGM5 output in ECLIPSE 32 and ECLIPSE 99 control panels are monitored and when are used it is obligatory to be terminated with 1k resistor to +PGM terminal.

Figure 21 c) shows the connection of the relay and a light-emitting diode to the PGM. The active level of this connection is low.

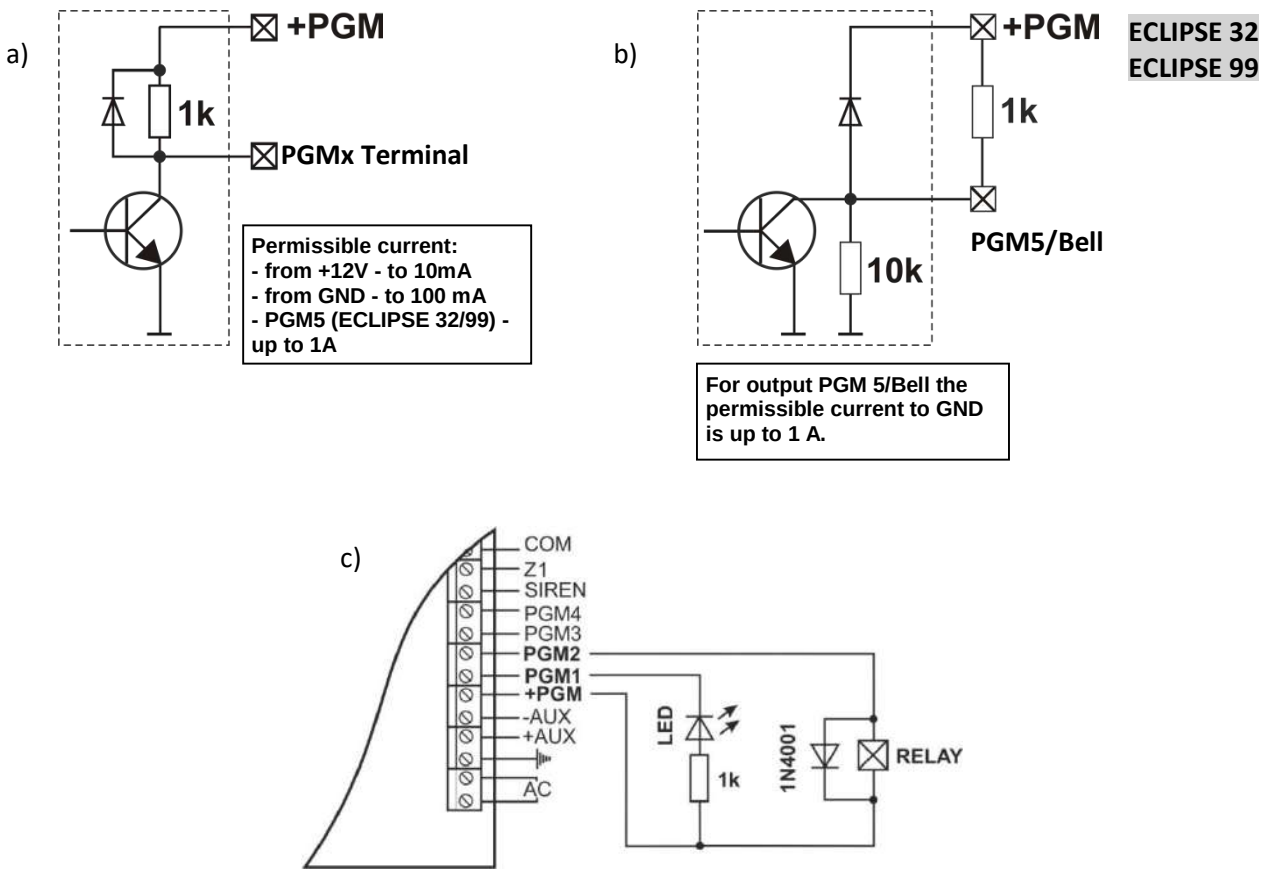


Figure 21. Internal structure of PGM output and example for connection of LED

PGM 4 has a special functionality and can be programmed for different operation in ECLIPSE 8/8+/32/99 control panels.

In ECLIPSE 8/8+, when set at address 3000, PGM 4 can be used for **serial connection to TP2000 transmitter**. The serial link is realized with connection between the AC terminal of the transmitter and PGM 4 on the ECLIPSE 8/8+ – Figure 22.

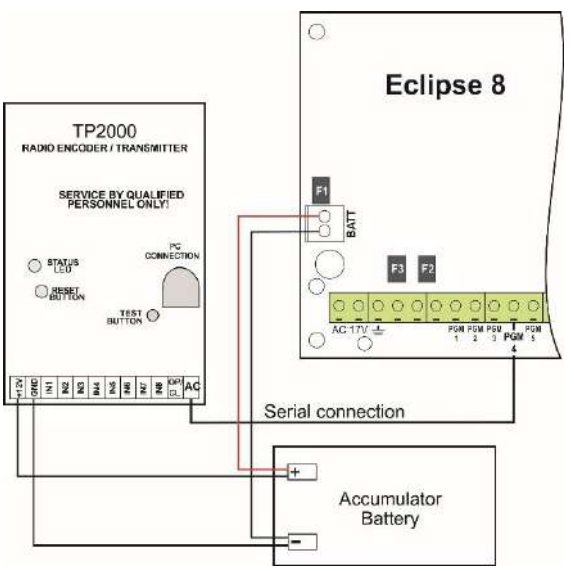


Figure 22. Serial connection between TP2000 transmitter and ECLIPSE 8 control panel

Note: *In Eclipse 8+ control panel, when the serial connection with TP2000 is used, the transmitting of messages is allowed only for Area 1.*

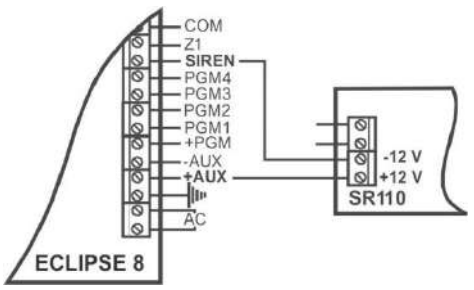
In ECLIPSE 32 and ECLIPSE 99, when set at address 3000, PGM 4 can be used for fire zone operating with **standard 24V fire base** – see Figure 13 D.

2.6. Connection of Siren to Power PGM Output

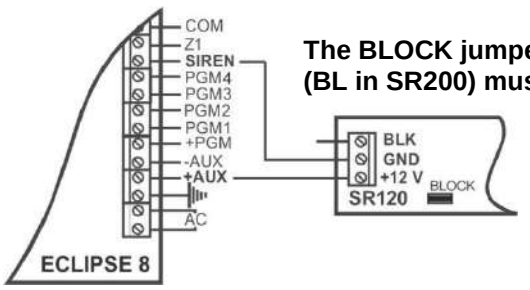
In ECLIPSE 8/8+/16 Alarm panel, the PGM 5 (BELL) output has a programmable active level. The default configuration of PGM5 is with SIREN functionality. The output is activated in case of alarm event in the system. The output is non-monitored.

In ECLIPSE 32/99 Alarm panel, the PGM 5 (BELL) output has a programmable active level. The default configuration of PGM5 is with SIREN functionality. The output is activated in case of alarm event in the system. The output is monitored and for correct functionality you should terminate the PGM 5 output with 1K resistance.

The internal structure is identical to the one shown in Figure 21 a) and we should point out that the transmitter can pass through to GND electricity of up to 1 A.
Figure 23 shows how to connect SR110, SR120, SR200, SR300 and SR400 sirens using the BELL output to ECLIPSE 8.

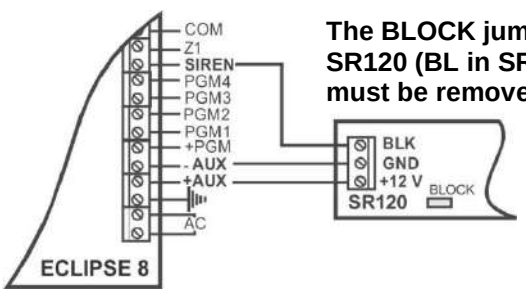


A) Connecting SR110 using a double-wire connection



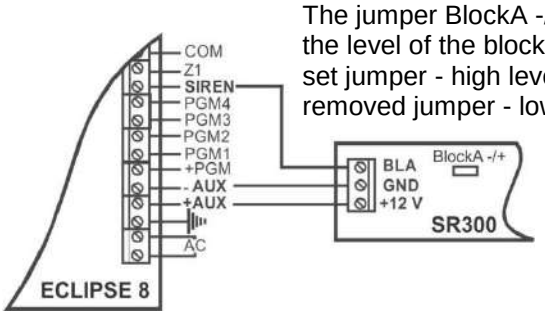
The BLOCK jumper in SR120 (BL in SR200) must be set on.

B) Connecting SR120/SR200 using a double-wire connection



The BLOCK jumper in SR120 (BL in SR200) must be removed.

C) Connecting SR120/SR200 using triple-wire connection



The jumper BlockA -/+ determines the level of the block signal:
set jumper - high level (12V)
removed jumper - low level (GND)

D) Connecting SR300/SR400 using triple-wire connection

Figure 23. Double- and triple-wire connection of sirens to ECLIPSE 8.

ATTENTION: The connections to ECLIPSE 8+/16/32/99 are all the same with those shown on Figure 23.
For panels ECLIPSE32 and ECLIPSE99 you have to terminate the PGM 5 output with 1K resistance (connect the resistance between PGM 5 and +AUX terminals on the control panel or between +12V and BLA terminals of the siren), because the PGM 5 in ECLIPSE 32 and ECLIPSE 99 is a monitored output – Figure 24.

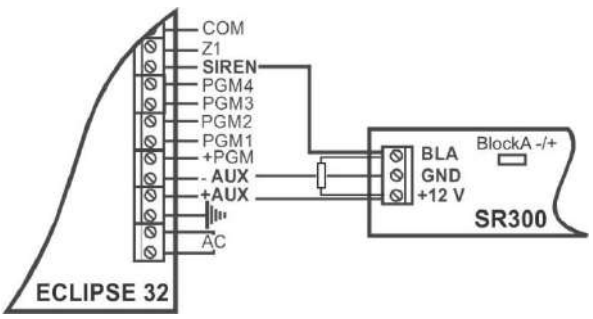


Figure 24. Example for triple-wire connection of SR300 to ECLIPSE 32.

2.7. Connecting the Digital Communicator

The telephone line is connected to TIP and RING terminals on the ECLIPSE 8/8+/16/32/99 Control Panel with no requirements to observe polarity (see Figures 5-9). The telephone device is connected to TIP1 and RING1 terminals on the ECLIPSE 8/8+/16/32/99 Control Panel with no requirements to observe polarity. The parameters of the digital communicator are programmed from the engineer. It is not necessary to install additional components if the digital communicator is not to be used.
You can test the Built-in Digital Communicator working efficiency in menu 4. COMM TEST (ADDRESS 0023) described in the Engineer programming Manual ECLIPSE 8/8+/16/32/99.
The menus for communicator programming are accessible only from the Engineer of the system (engineer code 7777 by default).

ECLIPSE Control Panels Series – dialer capability:

Control panel	Telephone numbers	Protocols	Remote programming
ECLIPSE 8	2	SIA, CID	×
ECLIPSE 8+	2	SIA, CID	×
ECLIPSE 16	2	SIA, CID	×
ECLIPSE 32	4	SIA, CID	✓
ECLIPSE 99	4	SIA, CID	✓

ATTENTION: Due to differences in PSTNs provided in different countries and territories, Teletek Electronics JSC cannot provide unconditional assurance of successful operations on every PSTN network termination point. This may be subject to changes made to the communication facilities or procedures of each individual telephone service provider.

Additionally, Teletek Electronics JSC' alarm equipment is designed to work with traditional telephone line. Please, bear in mind that the use of alarm panels over alternative telephone systems like VoIP (Voice over Internet Protocol) may not be as effective as with traditional telephone line.

If you are experiencing problems with the use of a Teletek Electronics JSC device over PSTN, please contact us for further assistance.

2.8. ECLIPSE VD Voice Dialer

The ECLIPSE VD voice dialer is an additional module to the ECLIPSE 8/8+/16/32/99 security alarm system. The dialer serves to transmit alarm event messages to the user, system status check-up and remote control of the system – arming and disarming, switching on/off of programmable outputs.

- **Installation of ECLIPSE VD Voice Dialer**

Attention: The voice dialer must to be installed ONLY when the mains and back-up power supplies are switched off and the micro SD memory card is set in the PCB's holder!

1. Switch off the mains and the back-up power supply of the control panel.

2. Set the spacer support as fix it to the underside of the control panel PCB – Figure 25-1.

3. Mount the Voice dialer PCB to the VOICE connector - Figure 25-2.

4. Set the mini SD card in the Eclipse VD holder – Figure 25-3.

5. Connect the PSTN telephone line to TP and RING terminals of the control panel without observing the polarity – Figure 25-4.

6. Switch on the mains and the back-up power supply of the control panel.

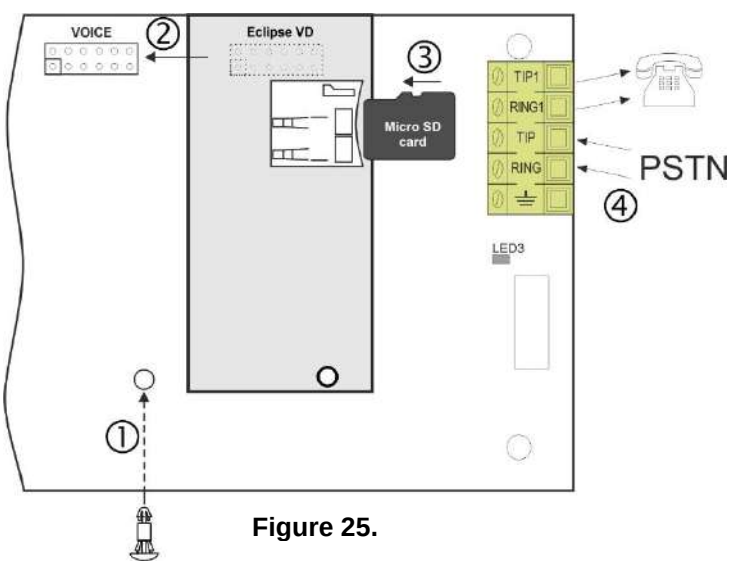


Figure 25.

7. Program the options and phone numbers for the voice dialer according the system organization – Menu 8. COMMUNICATION – 2. VOICE DIALER.

2.9. Connecting Communication Modules

ECLIPSE Series Control panels operate with the whole range universal communication modules produced by Teletek Electronics JSC. The GPRS and LAN modules support serial interface connection with the ECLIPSE Series control panels and offer remote management and programming via the web application AJAX SP.

The supported communication modules are:
- **TTE GPRS Standard.** Use a serial interface cable to connect the Eclipse panel to the GPRS module.
- **TTE GPRS Simple.** Use a serial interface cable to connect the Eclipse panel to the GPRS module.
- **TTE LAN.** Use a serial interface cable to connect the Eclipse panel to the LAN module.
- TTE Combo. Universal communication module via GPRS, LAN or PSTN channel and transmitting messages for events over CID communication protocol.
- **ARGUS GSM.** Connect the +PWR and –PWR terminals of ARGUS module to +AUX and – AUX terminal of the Eclipse control panel. Connect the PSTN main line to the LINE connector of ARGUS module. Connect the PHONE connector of ARGUS module to the RING and TIP terminals of Eclipse panel. Connect a telephone to RING1 and TIP1 terminals.

3. INITIAL POWER-UP and RESET ALGORITHMS

ATTENTION: The initial power-up of the control panel CANNOT be done with back-up battery supply only! First, you have to power the panel from the mains and then to connect the back-up battery!

3.1. Initial Power-up algorithm

1. Set a jumper at RESET terminals (see Figures 5-9).
2. Switch on the mains power supply.
3. The backlights of all connected to the system bus keyboards will light on permanently. Wait the system initialization to complete – 30-60 seconds according the system configuration and the number of devices connected to the system bus. The system is in ENROLLING MODE and waits for enrolling the first keyboard:
- *LCD keyboards.* At the screen is displayed the current software revision (of the keyboard) and a text message “Press Enter”. The LED “Lightning” (AC power supply) lights on permanently. Press ENTER button for quick enrolling the device.
- *LED keyboards*.* The LED “Lightning” (AC power supply) lights on permanently. Press ENTER button for quick enrolling the device.
4. Connect the BATT leads from the control panel to the terminals of back-up battery as observe the polarity – red wire to the “+” terminal and black wire to the “-”.
5. Enroll the other devices connected to the system bus - the keyboards with single pressing the ENTER button, the expander modules with pressing the little button between the two row terminals, the card reader with placing a card in front of it.
6. Remove the jumper from RESET terminals at the control panel. Do not forget that you can add other devices later following the Enrolling algorithm described in item 5.
7. Wait until the initialization of the system is running out: the BUS LED blinks for 2-3 seconds in green and then stops.
8. Test the connected detectors and other devices to zone inputs for proper operation.
9. Group the used zones and PGM outputs and program all necessary system parameters.
10. Set the actual time and date.

* ***Note:*** *When using LED 8/16A keyboard there is no indication on the display, and all digit buttons are lighting on during the initial power-up and after full hardware reset of the system.*



IMPORTANT NOTE!
When enrolling devices to ECLIPSE 8 control panel, the first one is automatically added to ZONE 7, and the second to ZONE 8!

3.2. Reset Algorithm

The full hardware reset can be done when the main and back-up power supply is off. Set a jumper at RESET terminals. Proceed as describe in the item 3.1 - Initial power-up algorithm.

4. TROUBLE EVENTS

The possible system troubles are listed in the table below as the indication differs according the type of the used keyboard:
- Keyboard LED 8 – The troubles are displayed with a lighting zone LED or lighting up digit button.
- Keyboards LED 32 and LED 16A – The troubles are displayed with a lighting zone LED.
- Keyboards LCD 32 and LCD 32 Sensitive – The troubles are displayed as text messages.
- Keyboard LED 16A VG – The troubles are displayed with a lighting zone LED. Playing voice messages for “Battery Trouble” and “AC Loss” trouble events.

The sound signalization for a system trouble (two short sound signals at every 20 seconds) can be disabled/enabled in Menu 2. SETTINGS – 03. TRBL SOUNDS (ADDRESS 0013 or OPERATION 013). The signalization is common for all troubles. By default, the sound signalization for all system troubles is enabled.

LED 8	LED 32/ LED 16A/ LED 16A VG	LCD 32/ LCD 32 Sensitive	Description	Control panels Eclipse			
				8	8+/16	32	99
❶	❶	1. AC Loss	The mains power supply is lost.	✓	✓	✓	✓
❷	❷	2. Battery Trouble	The accumulator battery is discharged or missing.	✓	✓	✓	✓
❸	❸	3. Blown fuse	Blown out fuse.	✓	✓	✓	✓
❹	❹	4. Comm. TRBL	Telephone line (PSTN) or digital communicator (GPRS) is lost. Communication with central Monitoring station fails. Sending of message (PSTN/GPRS/LAN) is impossible.	✓	✓	✓	✓
❺	❺	5. Tamper	Open tamper in the system.	✓	✓	✓	✓
❻	❻	6. Sysbus err	System bus error. It could be short circuit in the line or lost device.	✓	✓	✓	✓
❼	❼	7. Fire line Error	Fire Detector Loss or the fire line is broken.	×	×	✓	✓
❽	❽	8. Siren Fault*	Problem with a connected siren; no siren connected to PGM5 (ECLIPSE 32/99).	×	✓	✓	✓
Button “1”	❾	9. Invalid clock**	The internal clock has to be set to an actual time and date.	✓	✓	✓	✓
Button “2”	❿	10. WL device trouble.	Possible problems: - Low battery charge of wireless device; - Wireless device lost; - Dirty chamber of a wireless fire detector.	×	✓	✓	✓
Button “3”	⓫	11. WL RF jamming.	Radio signal jamming.	×	✓	✓	✓
Button “4”	⓬	12. AUX PSU trouble.	Possible problems with power supply of expander modules: - The mains power supply is lost; - Problem with the backup battery; - Blown out fuse.	×	✓	✓	✓

***** *It is possible, after the initial power-up of ECLIPSE 32 or ECLIPSE 99 panel, a trouble message for 8.SOUNDER FAULT to be displayed on the screen of LCD keyboards (8 zone number lights on the LED display). That indicates some problems with sounder connected to PGM5. In case the monitored PGM is used as a standard output, you have to terminate it with 1K resistor, or to program it as regular output – disable option 1 at ADDRESS 3051.*

*** It is possible, the message to be displayed after the initial power-up of the panel and after every hardware reset of the system. The installer must set the actual time to clear the trouble message.*

5. ENROLLING/DELETING OF DEVICES

5.1. Enrolling Devices during the Initial Power-up of the Control Panel

1. With set RESET jumper on the main PCB power-up the Eclipse control panel.
2. Wait the initial initialization of the connected to the system bus keyboards. At the end of the procedure, the bus LED of all devices including the main PCB is lighting permanently in red. A text message "SW revision XX; Press ENTER" is displayed on LCD screen, and at LED keyboards is lighting on only the power LED.
For LED 8/16A only the buttons 0-9 are lighting on.
3. Start to press the ENTER button or the address button of other devices – the manufacturer recommends first to enroll the keyboards in the system, then proxy readers, modules, etc. The system starts an automatic enrollment procedure of the devices on consecutive addresses as the first is attached at address 2 (in address menus 8020). Remember that the first enrolled device to the system bus is always the main PCB of the panel. It is strongly recommended the next enrolled device to be LCD keyboard for programming, especially for system configurations with Eclipse 99 control panel.
4. Remove the RESET jumper and wait the system bus LED to stop blinking in green. The system is ready for further programming and parameter configuration.
5. Set an actual time and date.

5.2. Enrolling Devices to a working system configuration via LCD keyboard

1. Enter engineer code (7777 by default).
2. Press button "9" for direct access to menu "9. DEVICES". Use the buttons with arrows to reach a free address position for adding a new device. Choose in sequence:

XX. Device [Free] – ENTER – 1. ID – ENTER – [Free] [_____]

3. Press the ENTER button (for a keyboard), press the button (for module) or place a card (in front of the proxy readers) of the device connected to the system bus and which you want to enroll to the system configuration.
4. After successful enrollment to the control panel, the screen displays:

[Device type] [unique ADDRESS] for the respective device.

The following device types are supported from ECLIPSE Series control panels:

Device	Description	ECLIPSE 8*	ECLIPSE 8+/16**	ECLIPSE 32***	ECLIPSE 99***
MAIN	The main PCB of the control panel	✓	✓	✓	✓
LED	Keyboard LED8/16A/16A VG/32	✓	✓	✓	✓
LCD	Keyboard LCD 32/32S	✓	✓	✓	✓
ZEXP	Zone expander	×	✓	✓	✓
PEXP	PGM expander	×	×	✓	✓
WEXP	Wireless expander	×	✓	✓	✓
PRX	Proximity card reader	✓	✓	✓	✓
PIR	Wireless motion detector	×	✓	✓	✓
MC	Wireless magnetic contact	×	✓	✓	✓
FLD	Wireless flood detector	×	✓	✓	✓
FIRE	Wireless fire detector	×	✓	✓	✓
SIRN	Wireless outdoor siren	×	✓	✓	✓
REMT	Remote key fob	×	✓	✓	✓

* ***Eclipse 8:*** *Up to 2 devices can be enrolled to the system bus: 2 keyboards, 2 proximity card readers or 1 keyboard and 1 proximity card reader.*
** ***Eclipse 8+/16:*** *Up to 5 devices can be enrolled to the system bus irrespective of their type.*
*** ***Eclipse 32/99:*** *Up to 30 devices can be enrolled to the system bus irrespective of their type.*
NOTE: *It is not necessary to enroll the built-in proximity reader in keyboards LED 32 PR, LCD 32 PR and LCD 32S. The wireless devices can be enrolled only to wireless expander module Eclipse WL, which already has been added to the system configuration.*

5. Press ENTER button of the used for programming keyboard. The keyboard will confirm the end of the successful enrollment procedure with sound signal.
6. The new enrolled device is in normal operation mode and ready for further programming and configuration.

Digit	Button
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

***Note**: Other way for enrolling of a new device is to enter its unique ID number directly at a free address as use the digit buttons – see the table at the left. The unique ID number is provided from the manufacturer with a sticker on the backside of the PCB of the device.*

5.3. Enrolling Devices to a working system configuration via LED keyboard

1. Enter engineer code (7777 by default) – zone numbers 13, 14, 15 and 16 are lighting on. (For LED 8 – 1, 2, 3 and 4).
2. Enter ADDRESS 8020 and press BYPASS or PRG button several times until you reach a free address in the system – zone numbers from 1 to 16 are lighting on. (For LED 8/16A – button "0" is lighting on).
3. Press the ENTER button (for a keyboard) or the button (for module, proxy reader or other) of the device you want to enrol to the system configuration.
4. After successful enrolment to the control panel, the screen displays lighting on zone number according the type of the enrolled device (for LED 8/16A a lighting button):

No	Description	ECLIPSE 8*	ECLIPSE 8+/16**	ECLIPSE 32***	ECLIPSE 99***
1	The main PCB of the control panel	✓	✓	✓	✓
2	Keyboard LCD 32/32S	✓	✓	✓	✓
3	Keyboard LED8/16A/16A VG/32	✓	✓	✓	✓
4	Zone expander	×	✓	✓	✓
5	PGM expander	×	×	✓	✓
6	Wireless expander	×	✓	✓	✓
7	Proximity card reader	✓	✓	✓	✓
11	Wireless outdoor siren	×	✓	✓	✓
12	Wireless magnetic contact	×	✓	✓	✓
13	Wireless motion detector	×	✓	✓	✓
15	Remote key fob	×	✓	✓	✓
16	Wireless fire detector	×	✓	✓	✓
18	Wireless fire detector	×	✓	✓	✓

* ***Eclipse 8:** Up to 2 devices can be enrolled to the system bus: 2 keyboards, 2 proximity card readers or 1 keyboard and 1 proximity card reader.*
** ***Eclipse 8+/16:** Up to 5 devices can be enrolled to the system bus irrespective of their type.*
*** ***Eclipse 32/99:** Up to 30 devices can be enrolled to the system bus irrespective of their type.*
***NOTE:** It is not necessary to enroll the built-in proximity reader in keyboards LED 32, LCD 32 and LCD 32S. The wireless devices can be enrolled only to wireless expander module Eclipse WL, which already has been added to the system configuration.*

5. Press ENTER button of the used for programming keyboard. The keyboard will confirm the end of the successful enrolment procedure with sound signal.
6. The new enrolled device is in normal operation mode and ready for further programming and configuration.

5.4. Deleting of a device from the system configuration

1. Enter engineer code (7777 by default).
2. Enter the address of the device you want to delete from the system configuration.
3. At the respective address press and hold the button "0" for 2-3 seconds – the LCD shows [Free] for the address, LED 16A VG/LED32 – LEDs from 1 to 16 are lighting on, LED 8/16A – button "0" lights on. A continuous sound signal is heard. **Attention: Deleting the unique ID number with button "0" is permanent and you cannot reject the operation with CANCEL button! To enroll the device again follow the procedure described at items 5.2 and 5.3.**

5.5. Deleting a device from the configuration of wireless expander Eclipse WL (via LCD keyboard)

1. Enter engineer code (by default 7777).
2. Choose the menu of Eclipse WL.
3. Use the arrows to enter the menu “6.WL Device” (address 8xx5) or “7.WL Remote” (address 8xx6) and press ✓ button (ENTER).
4. Enter a number of a device or a remote key fob.
5. The device is described with a name and unique ID code.
6. Press continuously the “0” button until a confirmation sound from the keyboard is heard – the screen displays [Free] [_ _ _ _ _ _ _ _] for the number.

Note: *When deleting a wireless device type PIR, MC, FD, FL or SR, which is currently connected to Eclipse WL, the device is resetting automatically and it is prepared for enrollment to a new system. However, if the wireless device is not currently connected to Eclipse WL (because of missing battery, lost communication with the expander or other reason), it is obligatory the installer to reset it manually before enrolment to a new system. When deleting a remote key, fob it is not resetting automatically and before new enrolment to a system the installer must reset it manually.*

6. OPERATION WITH A SERVICE KEYBOARD

The service keyboard is a device, which is not a part of the system configuration, but can provide full access to all engineer programming menus. Every keyboard of Eclipse Series can be used as service, **when it is not enrolled at address** in the system configuration.
The service keyboard is not enrolled at a certain address and that is why its removing will not cause a system trouble for a lost device.
You can connect only one service keyboards to the system configuration at the same time.
The “Service keyboard” mode allows access only to the engineer programming menus and the Manager and User programming menus are not available. The system arming and disarming is also unavailable.
Every Eclipse Series keyboard can be service keyboard if it is not currently connected and enrolled to the system configuration.
The service keyboard can be connected to the control panel in two ways:
- Via specialized cable for connection of service keyboard to the interface connector Service KBD on the control panel PCB.
- To the system bus of the control panel.

The indication of a keyboard when used as service keyboard in the system, depends on its type:

Keyboard	LED	Indication
LED 8 LED 16A	⚙	Blinks fast in red.
LED 16A VG LED32 LCD 32 LCD 32 Sensitive	🔒 ○	Blinks in red and green in turn.

- **Using a service keyboard cable**

This is a specialized cable for quick connection of service keyboard to an Eclipse series control panel. The cable is factory prepared for connection to interface connector “Service KBD” on the panel’s PCB from the one side and for connection to the keyboard terminals at the other – Figure 26.

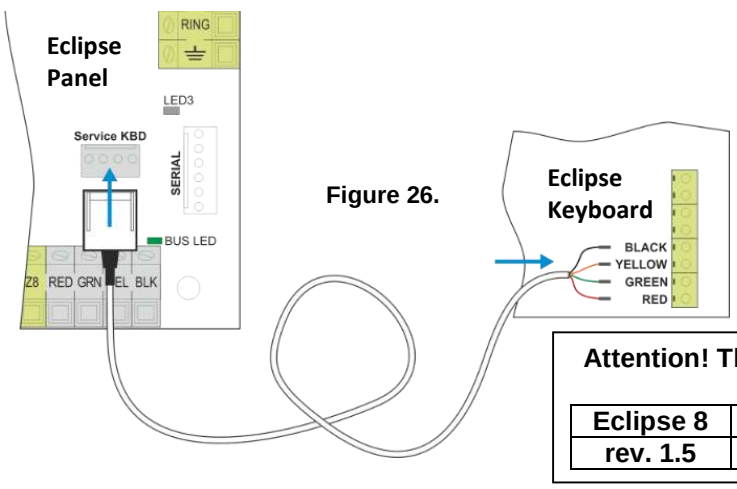


Figure 26.

To enter in the service keyboard mode:
- Connect the interface connector to “Service KBD” terminals on the panel.
- Connect the color wires to the keyboard terminals as observe the polarity of the connection.
- Wait the initial initialization to complete.
- Single press the PRG button (⚙).
- When you finish with the engineer programming, exit to the main screen.
- Unplug the interface connector from the “Service KBD” terminal.

Attention! The interface connector Service KBD is available in the following hardware versions:

Eclipse 8	Eclipse 8+	Eclipse 16	Eclipse 32	Eclipse 99
rev. 1.5	rev. 1.1	rev. 1.1	rev. 1.8	rev. 1.2

- **Using the system bus of the panel**

To enter the “Service keyboard” mode **with a new keyboard**:

- Connect the keyboard to the system bus and wait the initial initialization to complete.
- Single press the PRG button (⚙).
- When you finish with the engineer programming, exit to the main screen.
- Power off the keyboard and disconnect it from the system bus.

To enter the “Service keyboard” mode **with a present keyboard in the system configuration**:

- Use one of the other keyboards in the system configuration to delete the unique ID number of the one selected for service keyboard – enter the keyboard ID address 8xx0, where “xx” is the device number from 02 to 32 (01 is always the PCB of the control panel), and delete the ID number with pressing the “0” button for 2-3 seconds. It is not necessary to confirm with ENTER.
- Press the PRG (⚙) button.
- When you finish with the engineer programming, exit to the main screen.

ATTENTION: If the engineer access is disabled from the manager programming menu the access will be denied and for the service keyboard!

- **Adding of service keyboard to the system configuration**

Every service keyboard, connected to the panel can be added to the system configuration and to be available for operation from users. Whether the service keyboard is connected to “Service KBD” connector or to the system bus of the panel, it can be added to the system configuration as follows:

- Enter the engineer programming menu using the service keyboard.
- Choose a free position for device enrollment (free address)
- Press in sequence the tamper-switch and the ✓ (ENTER) button of the service keyboard.
- After the initial initialization is complete the keyboard will ready for additional settings and user operation.

7. UPDATING THE FIRMWARE

Attention: Always use the last actual version of ProsTE Specialized Programming Software downloaded from the official web page of the manufacturer!

Actual files (SPF) for firmware update are available for download for registered and authorized users only from the official web page of the manufacturer: *http://www.teletek-electronics.com*

To do a firmware update of your ECLIPSE panel:

1. Download the last actual file for firmware update from the official web page of the manufacturer and save it to your local computer or laptop.
2. Connect the ECLIPSE panel to the computer – you can use the SERIAL connector with cable ProsTE kit; or a standard micro USB cable available for the following or higher hardware revisions: Eclipse 8 – HW 2.0, Eclipse 8+ – HW 1.1, Eclipse 16 – HW 1.5, Eclipse 32 – HW 2.3, Eclipse 99 – HW 1.4.
3. Run the ProsTE software.
4. Choose ECLIPSE system, according the type of the panel.
5. Read and save the system configuration to your local computer as *.TDF file format.
6. Click with the right button of the mouse and choose from the option list “Firmware update” menu.
7. In the new dialogue window press the Browse button and select the SPF file from your local computer.
8. Press “Update” button in the dialogue window.
9. In the “Communication” dialogue window choose a COM port (to which the panel is physically connected) and press OK button for confirmation.
10. Wait the firmware update process to complete.
11. Press the Finish button in the dialogue window.
12. Perform a full hardware reset of the panel – see item 3.2.
13. Update the language strings of the panel – start ProsTE at your language, choose “Eclipse Strings” and write them down to the panel.
14. Write down the saved earlier system configuration (*.TDF file).

8. APPENDIX – Quick Guide of the Engineer Programming Menus

Text Menu	Address Menu	Eclipse 8	Eclipse 16	Eclipse 8+
1. Maintenance				
1. View Log	0040	Review the memory log of the system.		
2. Walk Test	0020	Perform test for operation of all devices in the system.		
3. PGM Test	0021	Perform test of the operation of the PGM outputs in the system.		
4. Comm. Test	0023	Perform test of the operation of the built-in digital communicator.		
5. Software Revision	0098	Review the software version of the panel.		
2. Settings				
01. Ambush Code	0010	[Disable/Enable]	[Disable/Enable]	[Disable/Enable]
02. Chime	0012	[Disable/Enable]	-	-
03. Trouble Sounds	0013	[Disable/Enable]	[Disable/Enable]	[Disable/Enable]
04. Conf. Timer	0014	-	Enter time in range 010-180 seconds. Default: 010	
05. AC Delay	0015	Enter time in range 000-254 minutes. Default: 030		
06. Sound Tamper	0016	[Disable/Enable]	[Disable/Enable]	[Disable/Enable]
08. Hardware reset	0030	[Disable/Enable]	[Disable/Enable]	[Disable/Enable]
09. Part. Default	0031	Perform a reset for a selected menu. *Confirm with code 123456.*		
1. Settings	0031 [0]	Returns to default parameters of all general settings in the system.		
2. Codes	0031 [1]	Returns to default parameters and access codes of Users.		
3. Inputs	0031 [2]	Returns to default parameters and operation of Inputs and Zones.		
4. Outputs	0031 [3]	Returns to default parameters and operation of PGM outputs.		
5. Partitions	0031 [4]	Returns to default parameters and operation of Areas.		
7. Communication	0031 [6]	Returns to default parameters and operation of all communication devices.		
8. Devices	0031 [8]	Deletes all devices connected to the system bus, except the PCB of the panel.		
10. Reset Manager	0032	Perform a reset of the Manager code. Default: 0000 *Confirm with 123456.*		
11. System Name	0050	Enter a unique name for the system. The menu is accessible via LCD keyboard.		
12. Time	0051	Set the actual time.		
13. Date	0052	Set the actual date.		
14. Menu Style	0097	Select the type of the programming menus: 4-digit Addresses [1], 3-digit operations [2], Text [3]		
15. Standard	0096	-	-	Grade 2
3. Codes				
1. Users	1XXY	Programming of user rights and options; XX - user number; Y - option number.		
XX. User	1XXY	XX: 01-08	XX: 01-32	XX: 01-32
1. Options	1XX0	1.Disarm/2.Part. Arm/3.Zone Bypass/4.Programming		
2. Areas	1XX1	-	1-3	1-3
3. Name	1XX2	Enter a unique name for the User. The menu is accessible via LCD keyboard.		
4. Proxy Options	1XX3	1. Disarm/2+3.Proxy card arming options		
6. RC✻(A) Function	1XX5	-	0.Unused/1.Sleep Arm/2.Stay Arm/3.Fire Alarm/ 4.Medical Alarm/5.Police Alarm/6.PGM Switch	
7. RC(B) Function	1XX6	-		
2. Engineer				
1. ENG1 Code	0000	Change the Engineer code. Default: 7777. To change – press and hold “0”.		
4. Inputs				
1. Wiring (Default: 2)	2000	Set connection style 1-5.		Set connection style 1-9.
4. Pulse Count				
1. Pulses	2003	-	Number of activations 2-9. Default: 0 (Disabled).	
2. Time Out	2004	-	Time for zones in pulse count: 000-255 sec. Default: 000 sec.	
5. Zones	2XXY	Programming of zone options; XX - zone number; Y - option number.		
XX. Zone	2XXY	XX: 01-08	XX: 01-16	XX: 01-16
1. Attach	2XX0	-	[DD] [TT] – DD: device number; TT: terminal number	
2. Type	2XX1	00.Unused/01.Entry-Exit/02.Follow/03.Instant/04.Fire/05.Panic/ 06.Tamper/07.Medical/08.Key-Switch/09.Auxiliary/10.Entry-Exit 2		
3. Areas	2XX2	-	1-3	1-3
4. Options 1	2XX4	2.Bypass/3.Stay Arm/4.Sleep Arm/5.Force Arm/6.Double Knock		
5. Options 2	2XX5	3.Report Only/6.Chime/ 8.Power Up Delay	3.Report Only/6.Chime/7.Pulse Count/8.Power Up Delay	
6. Key Switch	2XX6	1.Pulse-Latch/2-3.Key Switch Arming types (Disabled, Full, Stay, Sleep)/ 4.Disarm/5.Normal-Invert/6.Ignore Exit Time		
8. Name	2XX8	Enter a unique name for the Zone. The menu is accessible via LCD keyboard.		
9. Line Resistance	2XX9	Menu for viewing the resistance of the line.		
5. Outputs				
1. PGM Option (PGM 4)	3000	Serial Link	-	Serial Link
2. PGMs	3XXY	Programming of outputs options; XX - PGM number; Y - option number.		
XX. PGM	3XXY	XX: 1-5	XX: 1-8	XX: 1-8
1. Attach	3XX0	-	[DD] [PP] – DD: device number; PP: PGM number*	

Text Menu	Address Menu	Eclipse 8	Eclipse 16	Eclipse 8+
2. Options	3XX1	1.General-Siren Output/2.Polarity Normal-Invert		
3. Areas	3XX2	-	1-3	1-3
4. Activation	3XX3	Set an activation event type, see the Programming manual for details.		
5. Act. Parameter 1	3XX4	Set Parameters 1 for activation event.		
6. Act. Parameter 2	3XX5	Set Parameters 2 for activation event.		
6. Partitions				
1. Account Length	4000	[4/6]		
2. Double Knock	4001	1-5 min. Default: 3 min		
5. Areas	4XXY	Programming of areas options; XX - area number; Y - option number.		
XX. Area	4XXY	XX: 01	XX: 01-03	XX: 01-03
01. Exit Time	4XX0	Enter exit time duration 000-255 sec. Default: 045		
02. Entry Time	4XX1	Enter the Entry time 1 and Entry time 2 duration 000-255 sec. Default: 015 *Note: In Eclipse 8+ control panel the duration of entry times is limited up to 45 seconds, when the requirements of EN50131 for Grade 2 is applied – see menu 2. Settings → 15. Standard (address 0096).*		
03. Alarm Cycle	4XX2	Enter the duration of the Alarm cycle for siren outputs 000-255 sec. Default:001		
04. Account	4XX3	Enter a 4/6-digit account number for communication. Default: FFFF		
05. Bell Options	4XX4	1.Squawk on Arm/2.Squawk on Disarm/5. Fire alarm duration		
06. ON/OFF Options	4XX5	3.Clear Bypass on Disarm/4.Quick Arm		
07. Panics	4XX6	1. Enable Police Panic/2.Police Panic Sound type: Audible-Silent/3. Enable Medical Panic/4.Medical Panic Sound type: Audible-Silent/5.Enable Fire Panic		
08. Name	4XX7	-	Enter a unique name for the Area. The menu is accessible via LCD keyboard.	
8. Communication				
1. Digital Communication	60XX	Menus for settings of the built-in digital communicator of the system (PSTN).		
1. Options	6000	1.Enable Dialer/2.TLM Enable/3.TLM Alarm/4.Pulse-Tone Dial/5.Tone-Blind Dial/ 6.Alternative-All/7-8.Report Channels: PSTN MAIN-GPRS/LAN MAIN		
2. Attempts	6001	Enter a number of communication attempts 1-9. Default: 4		
3. Test Messages	-	Menus for setting of options for test messages.		
1. Time	6003	Enter the hour for transmitting of the test message 00:00-23:59. Default: 00:05		
2. Period	6002	Enter the period between two test messages 000-255 hours. Default: 024		
4. Fault Delay	6004	Enter time delay is case of telephone line fault 000-255 min. Default: 000		
5. Phones	-	Menus for setting of phone numbers options.		
X. Phone	60XY	X:1-2; Y - Option		
1. Phone Number	60X0	Enter a telephone number for communication with central station.		
2. Protocol	60X1	Select the communication protocol CID/SIA. Default: CID		
3. Messages Type	60X2	1.Alarm&Restore/2.Tamper&Restore/3.Panic&Ambush Code/4.Fire/5.Arm, Disarm, Bypass/6.Medical Alarm/7.Trouble&Trouble Restore/8.Special Messages		
4. Areas	60X3	-	1-3	1-3
6. UDL	-	Menus for remote up/download settings via built-in digital communicator.		
2. PC ID	6901	Enter a unique PC identification number for up/download.		
5. Options	6904	-	2.Answering Machine/3.Modem Enabled	
6. Rings	6905	Enter the number of incoming rings 00-99. Default: 04		
2. Voice Dialer (VD)	61XX	Menus for settings of the voice dialer communicator.		
1. VD Options	6100	1.VD Report Enable/2.VD Manage Enable/4.Skip Site Name		
2. VD Message Rep.	6101	Enter the number of times for voice message repetition 1-9. Default: 3		
4. VD Language	6103	[00]-EN;[01]-PT;[02]-IT;[03]-RO;[04]-GR;[05]-Farsi;[06]-FR;[07]-TR;[08]-RS;[09]-ES		
5. VD Phones	-	Menus for setting of Voice Dialer phone numbers options.		
X. Phone	61XY	X:1-8; Y - Option		
1. Phone Number	61X0	Enter a telephone number for communication via Voice Dialer.		
3. Message Type	61X2	1.Alarm&Restore/2.Tamper&Restore/3.Panic&Ambush Code/4.Fire/5.Arm, Disarm, Bypass/6.Medical Alarm/7.Trouble&Trouble Restore/8.Special Messages		
4. Areas	61X1	-	1-3	1-3
9. Devices				
01. Device [MAIN]	-	Menus for Main PCB options. The PCD is always the first device in the system.		
1. ID	8010	Review the identification number of the Main PCB.		
2. Areas	8011	-	1-3	1-3
4. Resources	8013	-	Review the hardware resources of the Main PCB.	
XX. Device [LCD/LED/PRX]	8XXY	XX:02-03	XX:02-06	XX:02-06
1. ID	8XX0	Review the identification number of the LCD Keyboard.		
2. Areas	8XX1	-	1-3	1-3
3. Options	8XX2	-	1.Chime/2.Hiding zone information/3.Confidential Mode/4.Exit Confidential Mode/ 5.Main Screen	
4. Resources	8XX3	-	Review the hardware resources of the device.	
5. Comm Quality	8XX4	-	Review the strength of the communication signal between the device and the control panel.	

Text Menu	Address Menu	Eclipse 8	Eclipse 16	Eclipse 8+
7. ARM Mode A**	8XX7**	Set the arm type for every one of the areas (Modes A and B): [d] - Disarm, press button “1”; [f] - Full Arm, press button “2”; [s] - Stay Arm, press button “3”; [S] - Sleep Arm, press button “4”; [✻] - No action, press button “0”.		
8. ARM Mode B**	8XX8**			
XX. Device [ZEXP]***	8XXY***	-	XX:02-06	
XX. Device [WEXP]***		-	XX:02-06	
6. WL Device**** [DD]	8XX5**** [DD]	-	Wireless devices enrolment. DD - device number.	
7. WL Remote**** [RR]	8XX6**** [RR]		Remote key fobs enrolment. RR - key fob number.	

Text Menu	Address Menu	Eclipse 32	Eclipse 99
1. Maintenance			
1. View Log	0040	Review the memory log of the system.	
2. Walk Test	0020	Perform test for operation of all devices in the system.	
3. PGM Test	0021	Perform test of the operation of the PGM outputs in the system.	
4. Comm. Test	0023	Perform test of the operation of the built-in digital communicator.	
5. Software Revision	0098	Review the software version of the panel.	
2. Settings			
01. Ambush Code	0010	[Disable/Enable]	[Disable/Enable]
02. KBD Block	0011	[Disable/Enable]	[Disable/Enable]
03. Trouble Sounds	0013	[Disable/Enable]	[Disable/Enable]
04. Conf. Timer	0014	Enter time in range 010-180 seconds. Default: 010	
05. AC Delay	0015	Enter time in range 000-254 minutes. Default: 030	
06. Sound Tamper	0016	[Disable/Enable]	[Disable/Enable]
07. Alarm Delay	0017	[Disable/Enable]	[Disable/Enable]
08. Hardware reset	0030	[Disable/Enable]	[Disable/Enable]
09. Part. Default	0031	Perform a reset for a selected menu. *Confirm with code 123456.*	
1. Settings	0031 [0]	Returns to default parameters of all general settings in the system.	
2. Codes	0031 [1]	Returns to default parameters and access codes of Users.	
3. Inputs	0031 [2]	Returns to default parameters and operation of Inputs and Zones.	
4. Outputs	0031 [3]	Returns to default parameters and operation of PGM outputs.	
5. Partitions	0031 [4]	Returns to default parameters and operation of Areas.	
6. Schedules	0031 [5]	Return to defaults for Time Slots.	
7. Communication	0031 [6]	Returns to default parameters and operation of all communication devices.	
8. Devices	0031 [8]	Deletes all devices connected to the system bus, except the PCB of the panel.	
10. Reset Manager	0032	Perform a reset of the Manager code. Default: 0000 *Confirm with 123456.*	
11. System Name	0050	Enter a unique name for the system. The menu is accessible via LCD keyboard.	
12. Time	0051	Set the actual time.	
13. Date	0052	Set the actual date.	
14. Menu Style	0097	Select the type of the programming menus: 4-digit Addresses [1], 3-digit operations [2], Text [3]	
15. Standard	0096	Grade 2	Grade 2/Grade 3
3. Codes			
1. Users	1XXY	Programming of user rights and options; XX - user number; Y - option number.	
XX. User	1XXY	XX: 01-64	XX: 01-99
1. Options	1XX0	1.Disarm/2.Part. Arm/3.Zone Bypass/4.Programming/8.Manager	
2. Areas	1XX1	1-8	1-16
3. Name	1XX2	Enter a unique name for the User. The menu is accessible via LCD keyboard.	
4. Proxy Options	1XX3	1. Disarm/2+3.Proxy card arming options	
5. Time Slot	1XX4	1-8	1-16
6. RC✻(A) Function	1XX5	0.Unused/1.Sleep Arm/2.Stay Arm/3.Fire Alarm/4.Medical Alarm/5.Police Alarm/6.PGM Switch	
7. RC(B) Function	1XX6		
2. Engineer			
1. ENG1 Code	0000	Change the Engineer code. Default: 7777. To change – press and hold “0”.	
2. ENG2 Code	0001	Set a Maintenance code.	
3. Code Length	1000	[4/6] – length of the access codes	
4. Code Clone	1001	Copying user options from one to more.	
4. Inputs			
1. Wiring (Default: 2)	2000	Set connection style 1-9.	
2. AutoBypass	2001	Set number 1-9. Default: 6.	
3. Instant (type zones)	2002	[Disable/Enable]	[Disable/Enable]
4. Pulse Count			
1. Pulses	2003	Number of activations 2-9. Default: 0 (Disabled).	
2. Time Out	2004	Time for zones in pulse count: 000-255 sec. Default: 000 sec.	
5. Zones	2XXY	Programming of zone options; XX - zone number; Y - option number.	
XX. Zone	2XXY	XX: 01-32	XX: 01-99
1. Attach	2XX0	[DD] [TT] – DD: device number; TT: terminal number	

Text Menu	Address Menu	Eclipse 32	Eclipse 99
2. Type	2XX1	00.Unused/01.Entry-Exit/02.Follow/03.Instant/04.Fire/05.Panic/ 06.Tamper/07.Medical/08.Key-Switch/09.Auxiliary/10.Entry-Exit 2	
3. Areas	2XX2	1-8	1-16
4. Options 1	2XX4	1.AutoBypass/2.Bypass/3.Stay Arm/ 4.Sleep Arm/5.Force Arm/6.Double Knock/7.Instant Exit/8.Fast (64ms)	
5. Options 2	2XX5	1.Bell Delay/2.Fire Delay/3.Report Only/4.Video on Armed/5.Write to log/ 6.Chime/7.Pulse Count/8.Power Up Delay	
6. Key Switch	2XX6	1.Pulse-Latch/2-3.Key Switch Arming types (Disabled, Full, Stay, Sleep)/ 4.Disarm/5.Normal-Invert/6.Ignore Exit Time	
7. Auxiliary	2XX7	0.24h Burglary/1.AC Loss/2.Batt Low/3.Water Leakage/4.Gas Detector/5.GSM Link Trouble/6.Low Bottled Gas Level/7.High Temp/8.Low Temp/9.Loss of Heat	
8. Name	2XX8	Enter a unique name for the Zone. The menu is accessible via LCD keyboard.	
9. Line Resistance	2XX9	Menu for viewing the resistance of the line.	
6. Zone clone	2005	Copying zone options from one to more.	
5. Outputs			
1. PGM Option (PGM 4)	3000	Fire Output	Fire Output
2. PGMs	3XXY	Programming of outputs options; XX - PGM number; Y - option number.	
XX. PGM	3XXY	XX: 1-32	XX: 1-99
1. Attach	3XX0	[DD] [PP] – DD: device number; PP: PGM number*	
2. Options	3XX1	1.General-Siren Output/2.Polarity Normal-Invert/3.Delay sec-min/4.Pulsed Fire Enabled/5.Deact. Timer sec-min	
3. Areas	3XX2	1-8	1-16
4. Activation	3XX3	Set an activation event type, see the Programming manual for details.	
5. Act. Parameter 1	3XX4	Set Parameters 1 for activation event.	
6. Act. Parameter 2	3XX5	Set Parameters 2 for activation event.	
7. Deact. Timer	3XX7	Enter time 000-255 sec-min (depends on the set unit in 2.Options-5). Default:000	
8. Delay	3XX9	Enter time 000-255 sec-min (depends on the set unit in 2.Options-3). Default:000	
6. Partitions			
1. Account Length	4000	[4/6]	
2. Double Knock	4001	1-5 min. Default: 3 min	
3. No Move on ARM	4002	Enter time 001-255 min. Default: 000 (the option is disabled).	
4. Postpone Delay Time	4003	Enter time 010-255 min. Default:010	
5. Areas	4XXY	Programming of areas options; XX - area number; Y - option number.	
XX. Area	4XXY	XX: 01-08	XX: 01-16
01. Exit Time	4XX0	Enter exit time duration 000-255 sec. Default: 045	
02. Entry Time	4XX1	Enter the Entry time 1 and Entry time 2 duration 000-255 sec. Default: 015 *Note: In Eclipse 32/99 control panels the duration of entry times is limited up to 45 seconds, when the requirements of EN50131 for Grade 2 or Grade 3 are applied – see menu 2. Settings → 15. Standard (address 0096).*	
03. Alarm Cycle	4XX2	Enter the duration of the Alarm cycle for siren outputs 000-255 sec. Default:001	
04. Account	4XX3	Enter a 4/6-digit account number for communication. Default: FFFF	
05. Bell Options	4XX4	1.Squawk on Arm/2.Squawk on Disarm/3.Alarm memory squawk/ 4. 10 min. warning/5. Fire alarm duration	
06. ON/OFF Options	4XX5	1.Disarm on Timeslot/2.Auto Arm: Full-Stay/3.Clear Bypass on Disarm/ 4.Quick Arm/5.Auto Arm on no movement	
07. Panics	4XX6	1. Enable Police Panic/2.Police Panic Sound type: Audible-Silent/3. Enable Medical Panic/4.Medical Panic Sound type: Audible-Silent/5.Enable Fire Panic	
08. Name	4XX7	Enter a unique name for the Area. The menu is accessible via LCD keyboard.	
09. Bell Delay	4XX8	Enter time 000-255 sec. Default: 000	
10. Time Slot	4XX9	01-08	01-16
7. Schedules			
1. Timeslots	5XXY	Programming of Timeslots; XX - timeslot number; Y - option.	
XX. Timeslot	5XXY	XX: 01-08	XX: 01-16
1. Start	5XX0	Enter start time for the timeslot.	
2. End	5XX1	Enter end time for the timeslot.	
3. Week days	5XX2	Select the active days for timeslot.	
4. Options	5XX3	1.Holidays/2.Invert	
2. Calendar	-	Calendar Settings	
01. January	5**41**1-5**41**4	Submenus for individual setting for every day of the year.	
02. February	5**42**1-5**42**4		
.....	.....		
10. October	5**50**1-5**50**4		
11. November	5**51**1-5**51**4		
12. December	5**52**1-5**52**4		
8. Communication			
1. Digital Communication	60XX	Menus for settings of the built-in digital communicator of the system (PSTN).	
1. Options	6000	1.Enable Dialer/2.TLM Enable/3.TLM Alarm/4.Pulse-Tone Dial/5.Tone-Blind Dial/	

Text Menu	Address Menu	Eclipse 32	Eclipse 99
		6.Alternative-All/7-8.Report Channels: PSTN MAIN-GPRS/LAN MAIN	
2. Attempts	6001	Enter a number of communication attempts 1-9. Default: 4	
3. Test Messages	-	Menus for setting of options for test messages.	
1. Time	6003	Enter the hour for transmitting of the test message 00:00-23:59. Default: 00:05	
2. Period	6002	Enter the period between two test messages 000-255 hours. Default: 024	
4. Fault Delay	6004	Enter time delay is case of telephone line fault 000-255 min. Default: 000	
5. Phones	-	Menus for setting of phone numbers options.	
X. Phone	60XY	X:1-4; Y - Option	
1. Phone Number	60X0	Enter a telephone number for communication with central station.	
2. Protocol	60X1	Select the communication protocol CID/SIA. Default: CID	
3. Messages Type	60X2	1.Alarm&Restore/2.Tamper&Restore/3.Panic&Ambush Code/4.Fire/5.Arm, Disarm, Bypass/6.Medical Alarm/7.Trouble&Trouble Restore/8.Special Messages	
4. Areas	60X3	1-8	1-16
6. UDL	-	Menus for remote up/download settings via built-in digital communicator.	
2. PC ID	6901	Enter a unique PC identification number for up/download.	
5. Options	6904	2.Answering Machine/3.Modem Enabled	
6. Rings	6905	Enter the number of incoming rings 00-99. Default: 04	
2. Voice Dialer (VD)	61XX	Menus for settings of the voice dialer communicator.	
1. VD Options	6100	1.VD Report Enable/2.VD Manage Enable/4.Skip Site Name	
2. VD Message Rep.	6101	Enter the number of times for voice message repetition 1-9. Default: 3	
4. VD Language	6103	[00]-EN;[01]-PT;[02]-IT;[03]-RO;[04]-GR;[05]-Farsi;[06]-FR;[07]-TR;[08]-RS;[09]-ES	
5. VD Phones	-	Menus for setting of Voice Dialer phone numbers options.	
X. Phone	61XY	X:1-8; Y - Option	
1. Phone Number	61X0	Enter a telephone number for communication via Voice Dialer.	
3. Message Type	61X2	1.Alarm&Restore/2.Tamper&Restore/3.Panic&Ambush Code/4.Fire/5.Arm, Disarm, Bypass/6.Medical Alarm/7.Trouble&Trouble Restore/8.Special Messages	
4. Areas	61X1	1-8	1-16
9. Devices			
01. Device [MAIN]	-	Menus for Main PCB options. The PCD is always the first device in the system.	
1. ID	8010	Review the identification number of the Main PCB.	
2. Areas	8011	1-8	1-16
4. Resources	8013	Review the hardware resources of the Main PCB.	
XX. Device [LCD/LED/PRX]	8XXY	XX:02-32	XX:02-99
1. ID	8XX0	Review the identification number of the LCD Keyboard.	
2. Areas	8XX1	1-8	1-16
3. Options	8XX2	1.Chime/2.Hiding zone information/3.Confidential Mode/4.Exit Confidential Mode/ 5.Main Screen	
4. Resources	8XX3	Review the hardware resources of the device.	
5. Comm Quality	8XX4	Review the strength of the communication signal between the device and the control panel.	
6. LED Relocation	8XX5	-	Set the 1st zone
7. ARM Mode A**	8XX7**	Set the arm type for every one of the areas (Modes A and B): [d] - Disarm, press button “1”; [f] - Full Arm, press button “2”; [s] - Stay Arm, press button “3”; [S] - Sleep Arm, press button “4”; [*] - No action, press button “0”.	
8. ARM Mode B**	8XX8**		
XX. Device [ZEXP]***	8XXY***	XX:02-32	XX:02-99
XX. Device [PEXP]***			
XX. Device [WEXP]***			
6. WL Device**** [DD]	8XX5**** [DD]	Menu for wireless devices enrolment. DD - device number.	
7. WL Remote**** [RR]	8XX6**** [RR]	Menu for remote key fobs enrolment. RR - key fob number.	

** Note: PGMs 1-5 are fixed and they correspond to the numbers of the hardware outputs of the control panel.*
PGM numbers from 06 and higher are freely programmable.
*** The menus/addresses are available only for Proxy Readers.*
**** The available menus/addresses for ZEXP, PEXP and WEXP expanders are 1, 2, 4 and 5. No options are available for settings.*
***** The menus/addresses are available only for Wireless expander module – WEXP. The address 8XX6 is accessible only from the main screen of the Engineering Programming Menus.*

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18020816, RevF, 02/ 2021