



9000 Series Microprocessor Control Unit for Gas Detection

TECHNICAL INFORMATION

Technical Data

- stabilized power supply: switch-mode type 12V/5A
- control mode: microprocessor
- 32 inputs for detectors of gas, temperature etc. with analog 0-5 V output
- possibility of connecting the last 4 inputs to various type of detectors with OC output
- backlighted LCD display
- frontal programming keyboard
- 1 internal buzzer, to indicate an error or a fault, that can be also configured as a keyboard beeper
- 6 internal output relays (5A/24V) that are the following: 2 threshold relays related to the 2 thresholds both with regulable timing and functioning, 1 fault relay with adjustable alarm delay and 3 totally free usage relays
- 3 output adjustable thresholds for gas detectors, thermal sensors etc. with 0-5V analog output
- 5 output leds: power supply, control unit on/off, zone exclusion (flashing), fault, alarm
- 6 led lights to indicate the relay's on/off
- 1000 storable events
- 20 storable alarm setups (storing of all the signal levels valid for a zone during an alarm)
- internal clock for programmed switch-ons and switch-offs
- storekeeping (10 years minimum) of date, time control unit configuration and memory of events in case of power supply failure
- total or partial switch-on
- time slot switch-on with the switch-off only when the activated output relays switch-off
- single zone deactivation
- single zone power down from menu (for maintenance purposes)
- 1 parallel port for printer (Centronics)
- 1 serial RS-485 line for external control (*OPTIONAL*).
- 2 freely settable passwords to get access to the menus
- recognized failures: input failure (sensor failure, cut and short



- circuit between sensors and control unit), clock failure, stabilized power supply failure, net power supply failure
- deactivation of the display backlight in case of net power supply failure
- reduction of power consumption and stop of the functions of the 9000 in the case of a stabilized power supply below 10V or above 15V
- container : industrial box with transparent front and key
- programmable elements :
 - 2 passwords
 - 3 alarm thresholds
 - system configuration (connected sensors type)
 - output relay mode : continuous or cyclic- setting of the alarm delays - setting of the alarm duration
 - switch-on
 - partial switch-on
 - time slot switch-on
 - zone exclusion
 - system test with display visualization
- stored on non volatile internal memory:
 - system configuration
 - output relays configuration (working mode and related zones)
 - settings (alarm thresholds etc.)
 - 1000 events (switch-ons, switch-offs, alarms, change of date and time, alarm thresholds, configuration etc.)



MENUS

There are two available passwords for the menus, one with high priority and one with low priority. With the menus the user has total control of the 9000 and of its storing capabilities : switch-on, time slot activation, test, events visualization, modification of zone parameters, latest events printing. Different menus will be available depending on the password used.

■ Main Menu

Relay stop.
ON/OFF of control unit and activation of time slot
Zone exclusion
Alarms On display
Faults display
Events display
Stop error or fault Buzzer
Keyboard beeper activation
Test activation

■ Menù Configurazione

Zone exclusion
Zone selection-Partial switch-on
Time slot configuration
Zone configuration
Relay configuration
Date change
Time change
Zone elimination
Password activation
Password change

■ Print Menu

Print all events
Print the events of a period of time
Print the latest 50 alarms
Print all the values of the zones related to the latest 20 alarms
Print control unit configuration

EVENTS STORING

The 9000 control unit is able to store all the events that have to be remembered because they have modified the configuration or the working mode of the control unit.

The maximum number of strable events is **1000**. The current date and time, the number of the alarm zone, the modified relay and the threshold involved is stored together with each event.

In case of an alarm also all the zone values are stored so that it is possible to have a complete view of the gas detection installation. The maximum number of the storing is **20**, and it's only available from the print menu.

The events stored are the following:

- ◆ Power off
- ◆ Power restart
- ◆ Total switch-on
- ◆ Partial switch-on
- ◆ Switch-off
- ◆ Time slot activation
- ◆ Alarm
- ◆ Restart from alarm
- ◆ Zone failure
- ◆ 12Volt failure
- ◆ Net power failure
- ◆ Zone exclusion
- ◆ Password exclusion
- ◆ Time slot exclusion
- ◆ Date change
- ◆ Time change
- ◆ Password change
- ◆ Zone change
- ◆ Relay change
- ◆ Time slots change
- ◆ Partialized zones change
- ◆ Zone elimination
- ◆ Control unit stop
- ◆ Relay working stop
- ◆ Control unit test
- ◆ Sensors power down

RELAYS WORKING

The parameters are the following: working mode, activation delay, total working time, on cycle time, off cycle time, activation threshold and related zones.

Relay 1 and Relay 2

They have a fixed threshold and are related to the first and second thresholds.

Relay 3

It's related to all the failures and to eventual contact zones, its working mode is continuous and remains activated until no failure is in place.

Relay 4, Relay 5 and Relay 6

Freely configurable.

Continuous mode

The relay is activated with a new alarm and remains on for the time set even if the alarm that activated it is off. After it goes off it will be only activated by a new alarm.

Cyclic mode

The relay is activated by one or more alarms. When the relay is activated it continues to do an on cycle and an off cycle. After every off time the alarm conditions are tested and if no alarm is present the relay resets itself.