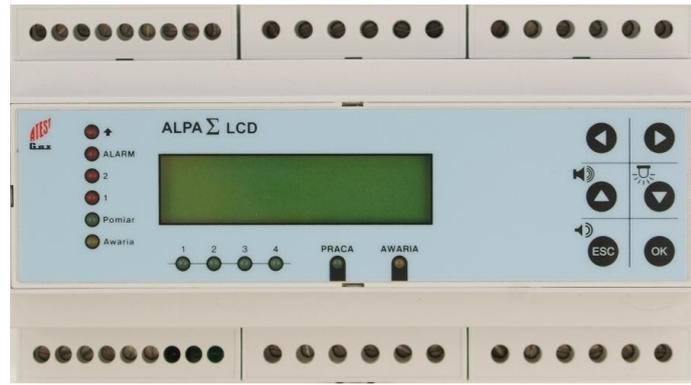


ALPA ΣLCD

Eight Channel Alarm Control Unit



(R1 V3)

ALPA Σ LCD Control Unit is a device dedicated for integration with up to 32 „Gas Detectors” and supporting devices, forming an appropriate „Gas Detection System”.

Features:

- reads information from Gas Detectors (using RS–485 protocol)
- displays information about the atmosphere status (target gas concentrations, gas warnings and alarms)
- displays Gas Detector Status (*Operation Mode, Diagnostic Status*)
- displays information stored in Gas Detectors (Warnings and Alarm settings, serial numbers, detector addresses, type of sensors, target gas names and ranges, location names, calibration date etc)
- enables parametrization of Gas Detectors (Warnings and Alarm Settings, Zeroing, Resetting the sensors, address)
- controls other connected devices by eight universal relays 230V / 3A (floating contacts),
- data gateway for other digital systems (MODBUS ASCII / RTU)
- complex diagnostics.

LED Interface for Gas Detectors:

ALPA ΣLCD is intended for continuous work. The following diodes are located on the front panel:

- detectors status – "detector status" field:

↑ ● - gas overload

ALARM ● - ALARM

2 ● - Warning 2

1 ● - Warning 1

OK ● - detector works properly

FAILURE ● - detector's failure

Information from the following detectors is displayed sequentially, one by one. When an „emergency situation” has been detected on any detector, a sequence stops on it.

LED Interface for Control Unit Status

LED's „Run” and „Failure” shows a Control Unit status.

LED Interface for Digital Inputs

Control Unit ALPA LCD has 4 universal digital inputs. Its status is shown on the „1-2-3-4” LED's. Pre-defined functions are described in the further part of this document

LCD display

Control unit is able to show the gas concentrations, its trends and status of the gas detectors on the LCD display.

The following detectors are displayed sequentially, one by one. When an „emergency situation” has been detected on any detector, a display stops on it.

Of course a LCD Display (with related keyboard) is also a „User Interface” for data settings or review. See „User Manual” for details.

Operating

When a particular signal is activated, then:

- first Warning (1):
 - red LED „1” is on,
 - internal buzzer is on
- second Warning (2):
 - red LED 2 is on,
 - internal buzzer is on
- third threshold - **ALARM**:
 - red ALARM LED is on,
 - internal buzzer is on.

An internal „Buzzer” can always be deactivated by pressing button 

When any of „Warnings” or „Alarms” is activated, an appropriate output is activated. See „Outputs” for details.

Detector failures are signalized by:

- non-critical failures:
 - yellow „Failure” LED flashes,
 - green OK LED is on.

An example of non-critical failure is expiration of the calibration period. Non-critical failure indicates that measuring reliability of an appropriate detector might have been impaired.

- critical failures:
 - yellow „Failure” in ON,
 - green OK LED is OFF (!)

An example of critical failure is „no signal from the detector”.

Memory

When the particular signals deactivates, a flashing MEM note on LCD display appears. It means that history of events is not empty and may be checked.

Outputs

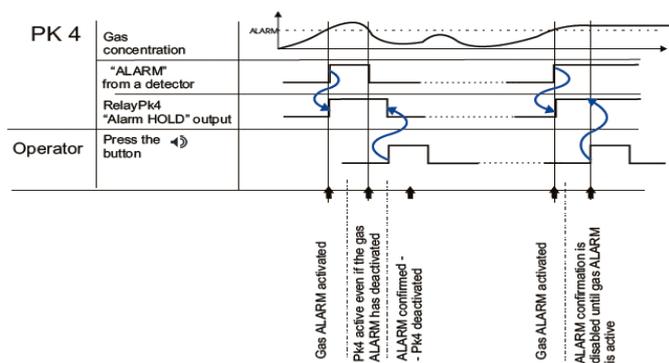
The **ALPA Σ LCD** Control Unit has eight widely configurable relay outputs. It is possible to:

- activate or deactivate a relay on any combination on signals, from one or more detectors (alarms or failure status)
- including time delays when ON or OFF the relay,
- implementing a hysteresis

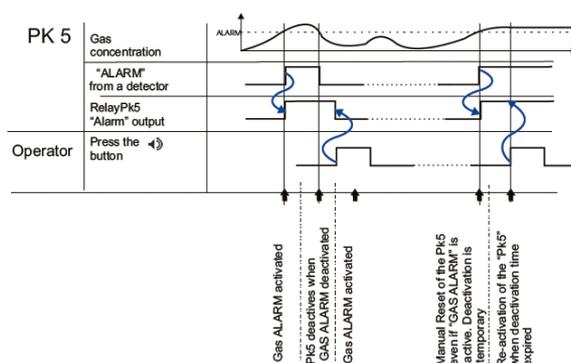
Ask the Manufacturer for details. Below is a „Pre-defined” configuration of outputs:

Basic configuration of relay outputs:

Relay output	Function	Output activated: 	Output deactivated: 
PK1	Warning_1	Warning_1 activated	Warning_1 deactivated
PK2	Warning_2	Warning_2 activated	Warning_2 deactivated
PK3	ALARM	ALARM activated	ALARM deactivated
PK4	HOLD ALARM / VISUAL ALARM	see the picture 1	see the picture 1
PK5	EXT. AUDIBLE ALARM	see the picture 2	see the picture 2
PK6	OK	At least one of the detectors is in the MEASURE („OK“) Mode	None of detectors is in the MEASURE status
PK7	SERVICE	At least one of the detector is in the CAL (or TEST) Mode	None of detectors is in the SERVICE status
PK8	FAILURE	None of devices in the system is in the FAILURE status	At least one device in in Failure mode or powered off.



Picture 1.

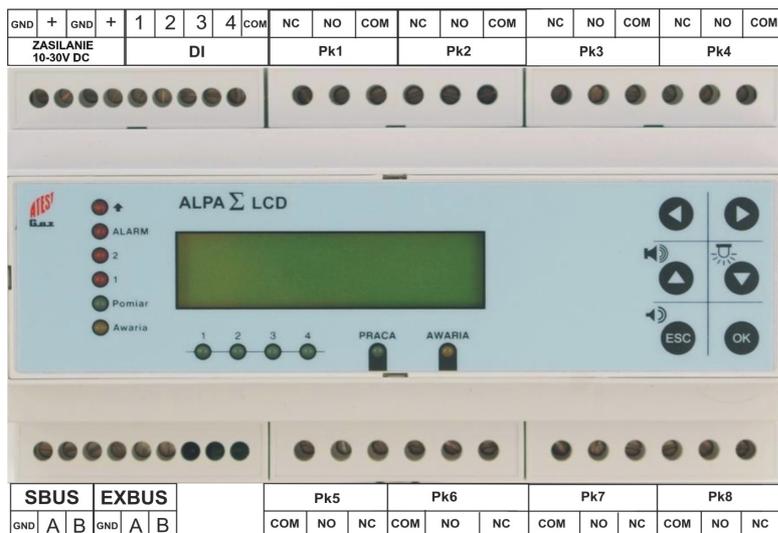


Picture 2.

DIGITAL INPUTS:

Digital input	Function
DI 1	Disable Internal buzzer
DI 2	Deactivate External Audible Alarm
DI 3	Reset Hold (Visual) Alarm
DI 4	Force the ALARM

CONNECTIONS:



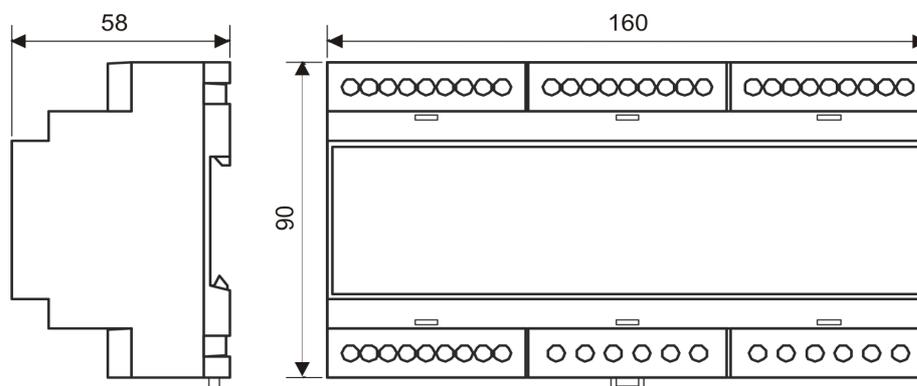
- Power supply 10-30 V DC
- DI Issulated relay output
- PK1
- PK2
- PK3
- PK4
- PK5
- PK6
- PK7
- PK8
- SBUS BUS of control units or detectors
- EXBUS BUS for external devices
- A „RS+”
- B „RS-”

TECHNICAL DATA:

Main Power Supply	10÷30 V, 5 W
Enclosure: IP level	IP 20
Working temperature range	0÷50° C
Mounting	on DIN35 / TS35 rail
Digital inputs	0÷1V not active 10÷30V active
Outputs	Floating, not protected contacts. max 230 V 3A
Relative humidity	10÷90% - without condensation
Weight	0,4kg

Details in the "User Manual".

DIMENSIONS:



ORDER EXAMPLE:

- system control unit

ALPA Σ LCD