Compact controller

DEGA UKA III

ISO 9001
SYSTEM CERTIFICATION
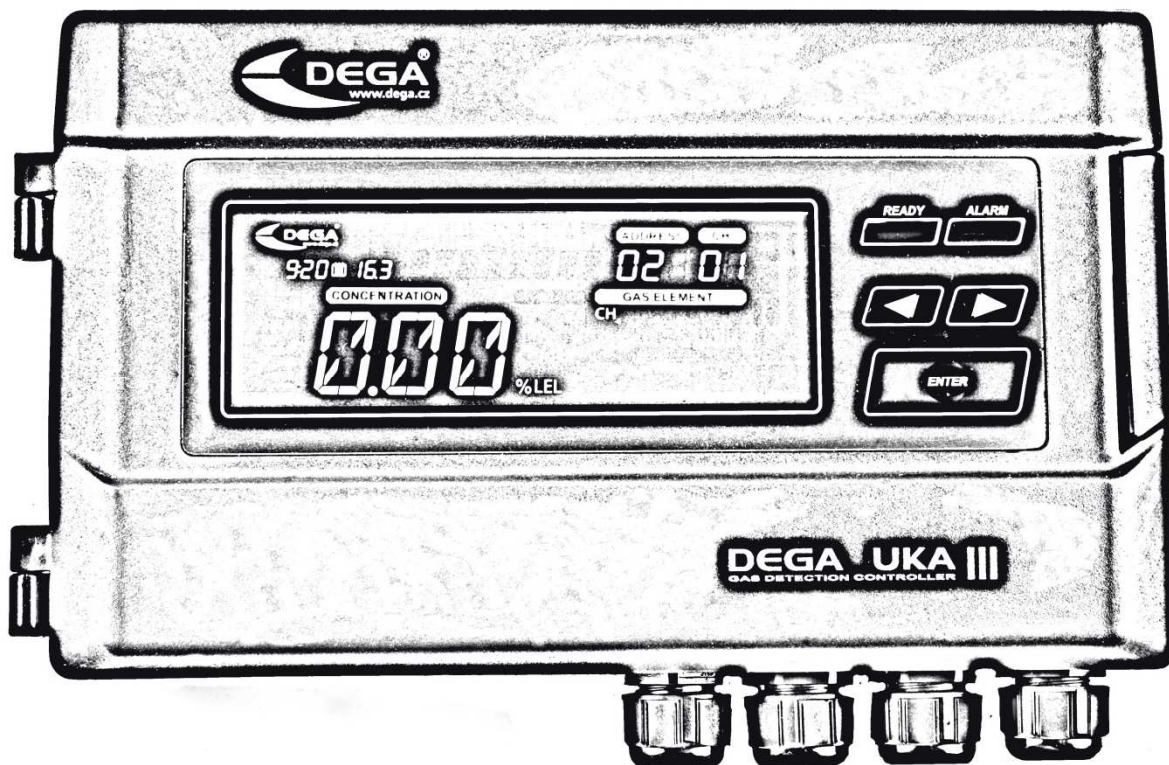SGS

Reproduction of this manual, or any part thereof, in any form, without the prior permission of DEGA.CZ s.r.o. is prohibited

DEGA CZ s.r.o. reserves the right to alter the specifications of the hardware and software described in this manual at any time and without prior notice

DEGA CZ s.r.o. bears no liability for any damage resulting from use of this device

Content

For your safety

Beware of static electricity

Electronic components are sensitive to static electricity. Do not touch them directly - they may get damaged.

The device is intended to be installed by a trained person

The product is designed for installation only by a certified technician. The manufacturer bears no liability for damages resulting from incorrect or improper handling.

In case of malfunction, immediately unplug from the power supply

If you notice an unusual smell or smoke emitting from the product, unplug it from the power supply, battery backup and all other attachments. Continued operation could result in injury or property damage. After disconnecting, have the device inspected by an authorized dealer or manufacturer.

HRW Limited   admin@hrw.hk   www.hrw.hk

Do not disassemble the product and ensure against the contact of its internal components with water

ⓘ Contact with internal components of the product may cause an electric shock. In case of any malfunction entrust the servicing of the product exclusively to a certified service centre. Contact with water can create a short circuit in the product and consequent damage to property or personal injury.

Use appropriate cable types

ⓘ To ensure compliance with the parameters of the product, use only the recommended cables described in this manual to connect the product to other devices or power supply (see technical information - Wiring for connecting sensors).

Dispose of used products with respect to the environment

ⓘ Dispose of the product in accordance with the applicable environmental protection legislation or send it to the manufacturer for disposal.

Technical information

Supply voltage:	230 V AC/ 15VA
	24 V DC/0,63 A nominal, operational range 20-28 V
Cable for connecting of the transmitters:	shielded cable 4 x 0,8 mm (max. 800 m) - see section "Wiring installation for RS485"
Cable for connecting the sensors:	
Temperature sensor DEGA Tc II:	shielded cable 3 x 0,25 mm (max. 10 m)
Float sensor DEGA Zc II:	shielded cable 4 x 0,25 mm (max. 10 m)
Output:	1 x USB for configuration via PC
	1 x output current loop on PLC
	5 x changeover relay 250 V/10 A
	1 x audio output and 1 optical signaling
	<u>For information about maximum load, see chapter "Installation and connection of cabling"</u>
	(point 4 – Zc + Tc + connection)
Dimensions without bushings:	250 x 145 x 65 mm (WxHxD)
Weight:	1,0 kg
Capacity of the internal memory of history:	34 days at 60 s recording interval
Interval of recording storage in memory:	60 s (adjustable range 10-255 s)

Operational and storage conditions

Ambient temperature:	-20 °C to +60 °C
Relative humidity:	0-95 % RH
Air pressure:	80-120 kPa
Cover protection level:	IP 54
Location:	BE1 - non-explosive atmosphere

Product description

DEGA UKA III - The compact evaluating controller is designed as a stand-alone device intended for mounting on a wall or on distributors. It serves to evaluate the signal from up to eight connected gas sensors using RS485. The gas concentration is evaluated at four alarm levels. It is also possible to connect one DEGA ZC II float sensor and a DEGA Tc II temperature sensor. The status of each sensor is indicated on the LCD display of the controller. The controller is equipped with 5 pieces of arbitrarily configurable relays, visual and acoustic alarms, a current loop for controlling analogue input devices and a USB port for configuration.

Terminal block
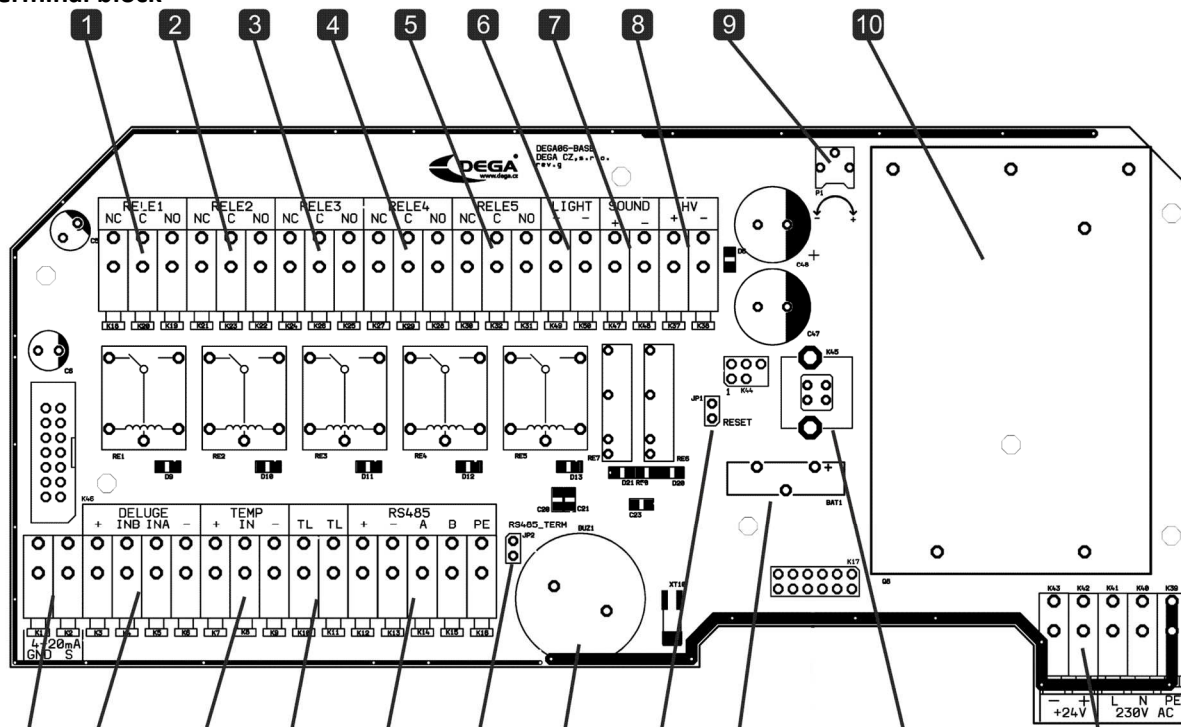
1 Terminal block relay RE1	**2** Terminal block relay RE2	**3** Terminal block relay RE3	**4** Terminal block relay RE4
5 Terminal block relay RE5	**6** Visual alarm output	**7** Acoustic alarm output	**8** Emergency valve output
9 Trimmer for regulating the supply voltage 22-26V	**10** Power supply	**11** Power supply 230VAC or 24VDC	**12** USB connector
14 Backup battery for memory	**15** Detector reset	**16** Internal piezo siren	**17** Terminal jumper RS485
18 Terminal block for digital transmitters	**19** Acoustic alarm lay-key connection	**20** Temperature sensors	**21** Float sensors
22 4-20 mA output for superior system			

Assembly and connecting the wiring

Prior to assembly, read the valid installation standards ČSN EN 60079-29-2 (Selection, installation, use and maintenance of detectors for combustible gases and oxygen) and ČSN EN 45544-4 (Guidelines for the selection, installation, use and maintenance of detectors of toxic substances).

In explosive environments the electrical installation must be performed according to ČSN EN 60079-14 (Electrical installation in hazardous areas).

1. **Assembly of the controller**
   a) Pull the handle on the right side of the controller to unlock the lid, open it slightly, release the handle and finish opening the lid
   b) Drill the required number of holes for the PG11 bushings in the recesses in the top or bottom part, or in the indicated space on the bottom of the box
   c) Anchor the controller on a flat surface using four 6mm fasteners
   d) Connect the wiring
   e) Close the lid of the box slightly, hook the handle, finish closing the lid and secure it with the handle

1. Connecting an external transmitter

DEGA UKA III

DEGA NSx-yL II
DEGA NSx-yL III
DEGA NBx-yL III

DEGA NSx-yL II
DEGA NSx-yL III
DEGA NBx-yL III
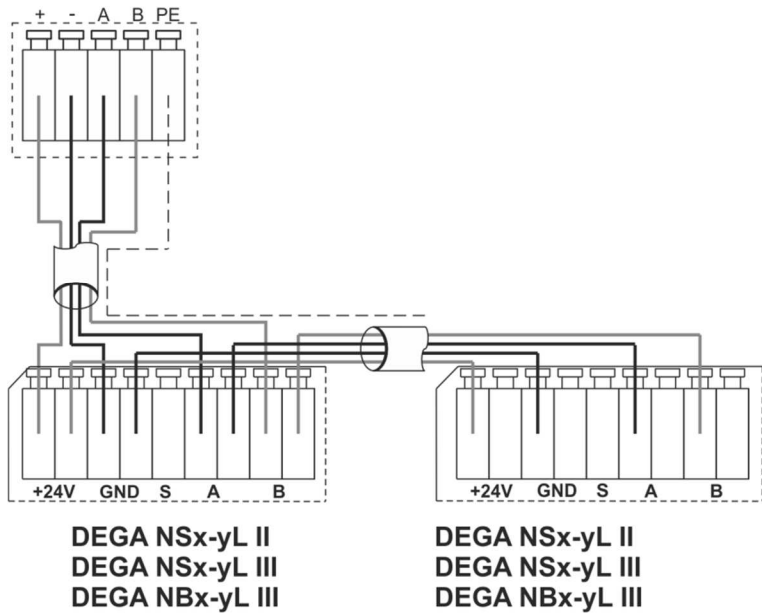
Wiring installation for RS485

Wiring must be installed using bus topology and according to the RS485 principles.

Maximum number of connected transmitters is 8 (may be less depending on the configuration), while the total length of the controller (electrical distance between the switchboard and the last transmitter) should not exceed 800 m. The cross section of the used cable in relation to the distance from the switchboard are provided in the manuals for the relevant sensors.

Terminal resistor
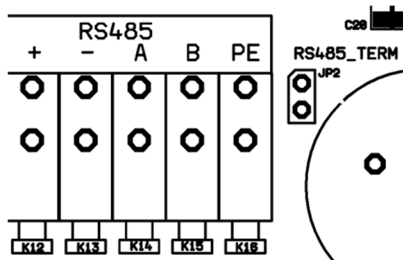
According to the RS485 specifications, the last device on the controller must be ending with a terminating resistor 120R. In the default configuration the jumper connector is not plugged. For each controller there is a separate termination resistor located behind the terminal block of the respective controller.

2. Connecting the temperature sensor, float sensor and lay-off button of the beeper

DEGA UKA III

DEGA ZC II   DEGA TC II   DEGA TL II
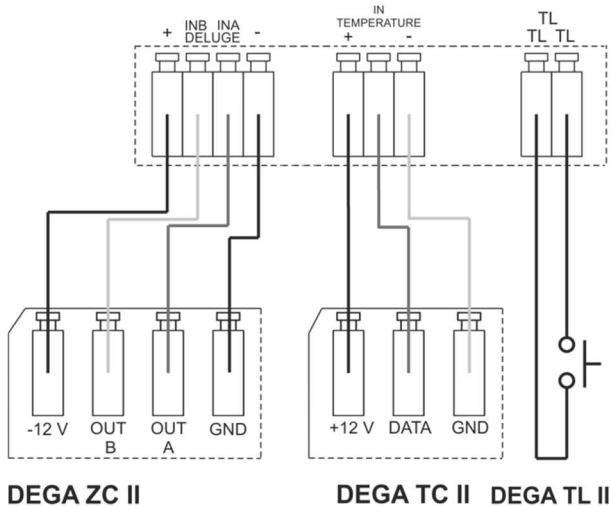
3. Connecting the visual and acoustic alarms and the emergency valve

DEGA UKA III

optická signalizace | zvuková signalizace | havarijní ventil

4. Selecting the supply voltage and the maximum current load

Supply voltage 230V AC

The highest current load of the controller is 430 mA. This current serves to power the connected transmitters and the visual and acoustic alarms, which are connected to the terminal blocks „LIGHT_SIG" and „SOUND_SIG".
Example: There are 4 transmitters connected to the detector with a consumption of 60 mA each, which leaves us with 190mA (I=430-4x60) to supply the visual and acoustic alarms.

Supply voltage 24V DC

The consumption of the controller's electronics is 200 mA. The maximum current on terminal blocks „+24V IN/OUT" is 8 A. The maximum current load on each output of the terminal blocks „LIGHT_SIG" and „SOUND_SIG" is 4 A.

Example: We have connected 4 transmitters with a consumption of 60 mA. The controller has a consumption of 200 mA. We have 7.46 A (I=8000-300-4x60) for powering optical and sound signaling.
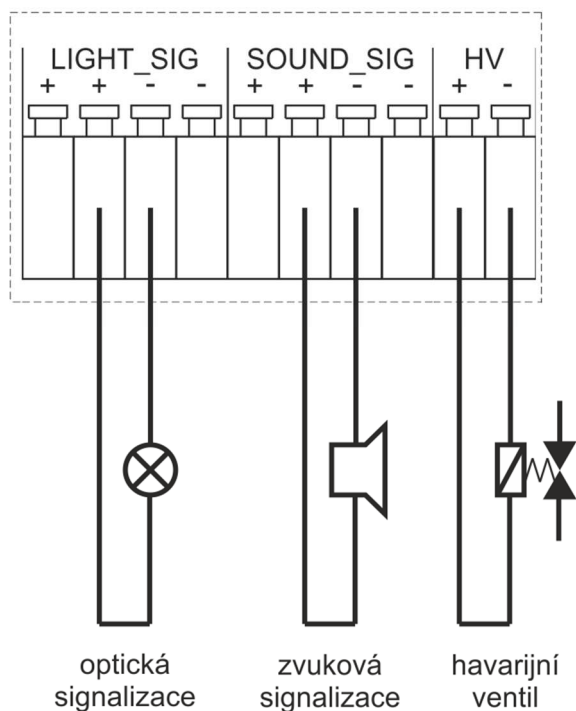
Information on the consumption of each transmitter and component of the visual and acoustic alarms is provided in the respective manuals.

<u>**Never connect the supply voltage 24V and 230V simultaneously.**</u>

5. Output relay

Each relay can, by default, be configured to activate on any number and any combination of events:
4 gas leak alarm levels, PEL, STEL, malfunction of the transmitter 2 temperature levels, float, switchboard malfunction.
After activation, relays can be configured for the following output functions: normally closed, normally open, cycling of open/close, automatic deactivation of outputs after a certain time or after pressing a button.

Specific configurations of the relays can be found in the configuration protocol provided with the controller.

6. Output 4-20mA
The 4-20 mA circuit transmits the highest measured concentration of the connected sensors.
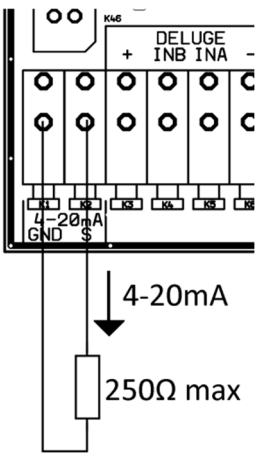
Signaling transmitted by a current loop of 4-20 mA

Measurement: The measured concentration is directly proportional to the current output of 4-20 mA.
Exceeding the measured concentration range: The current output ranges from 20 to 22 mA.
Malfunction: The current output is set to 0.5 mA.
Rendering service (heating sequence of the transmitter**):** The current output is set to 1 mA.

7. Regulating the supply voltage
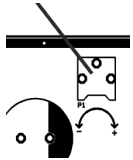
Using a trimmer, we can control the output voltage of the source in the 22-26 V range.
If the sensors are connected over a long distance, it may be necessary to increase the supply voltage for proper operation.

Controls

The controller is equipped with a segmented LCD display and can be controlled using the LEFT, RIGHT and ENTER buttons. In Basic mode the controller displays the concentration and the states of the configured channels. The channels are being switched over in 3s intervals. In the case of manual channel selection using the arrows, it will be displayed for 30 s. The ENTER button also serves as a deactivation button for **DEACTIVATING** the outputs that are set to control the audible alarm.

1. Panel
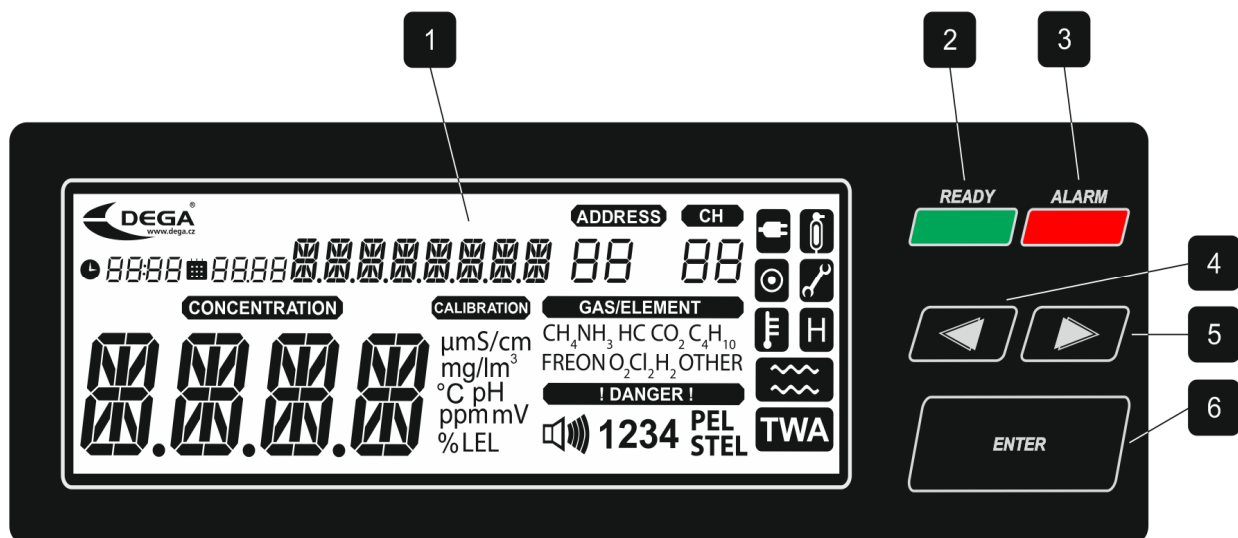
1 LCD dispay	**2** Indication of proper operation of the controller	**3** Gas leak, alarm status indication	**4** LEFT button (move through menus, switch between transmitters)
5 RIGHT button (move through menus, switch between transmitters)	**6** ENTER button (deactivation of the acoustic alarms, selection of transmitter, confirm selection)		

HRW Limited   admin@hrw.hk   www.hrw.hk

2. LCD display

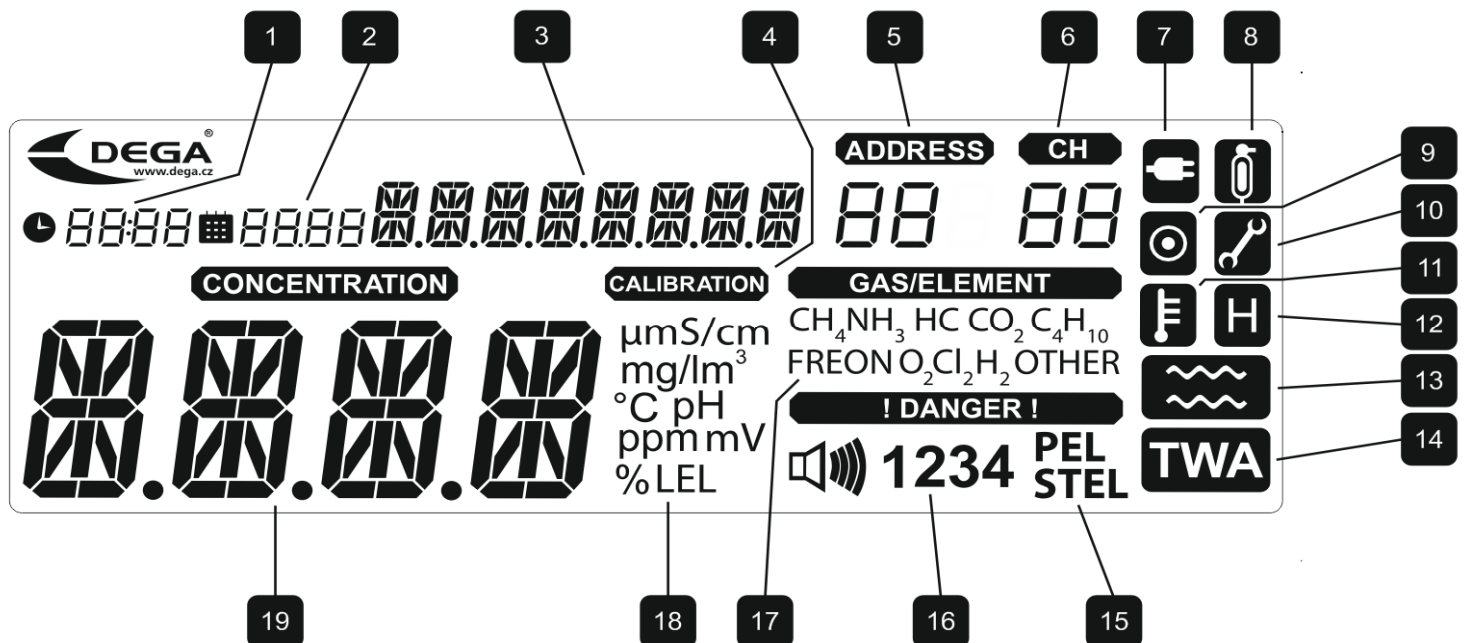| 1	Time	2	Date	3	Auxiliary display, transmitter description (optional)	4	Warning: calibration required
5	RS485 address of the current transmitter	6	„Channel" of the currently displayed transmitter	7	Interrupted controller RS485 indication	8	Transmitter calibration via RS485
9	Marker (selecting a transmitter in the menu)	10	Malfunction of the controller or a connected transmitter	11	Exceeding the critical temperature level	12	Indication of an alarm record in the history
13	Float indication	14	Exceeding the time-weighted average	15	Alarm PEL - long-term exposure limit Alarm STEL - short-term exposure limit	16	Gas leak alarm, alarm levels
17	Type of detected gas / substance	18	Measured units	18	Main segments of the display, currently measured concentration		

3. Launch of the controller

When the power supply is turned on, the entire LCD display will light up, the internal memory will be checked and the controller will switch to the sensor heating mode, with the display showing the countdown to the end of preheating on the main screen and the inscription "HEATING" on auxiliary segments.

4. Basic status/alarms

The controller displays the concentration on the 4 main segments. To its right, units and the detected gas are being displayed. The 8 auxiliary segments display the location or an eventual error. The transmitters are displayed channels **CH** (1 to 8); the address **ADDRESS** of the connected transmitter is also displayed. The controller switches the configured channels over in 3 s intervals. If you want to select a transmitter manually, you can do so using the arrows LEFT and RIGHT. After 30 seconds, the channels will be switched over in sequence.

The status of the sensor bundled with output relays (alarms, time-weighted averages, statuses of temperature sensors and floats, malfunctions) is displayed in the right part of the LCD.

In the case of an increased concentration, the LED ALARM lights up and the controller switches over to the channel, which measured this concentration.

The ENTER button also serves as a confirmation button for the acoustic alarm.

5. Malfunction

If a malfunction should occur, the LCD displays the measured values, an error code and also a key symbol . The meaning of individual error codes can be found in Attachment no.2.

6. Monitoring the calibration periods

After 12 months since the last calibration (max. calibration interval), the inscription **CALIBRATION** starts flashing on the LCD display. The connected transmitters must be calibrated immediately.

7. Reading the record of measured concentrations and alarms

The current detected concentration is stored in the internal memory periodically, after 60s. The internal memory retains data from the last 49 000 measurements (cca 34 days). In order to read this information, the program DegaConfig is required. See the DegaConfig program manual.

8. Indication of past alarms

The controller is equipped with an indication of alarms that have already gone off. If such an alarm was activated, the icon **H** is displayed. To view these alarms, enter the menu HIST → HILA, where the date and time since the highest measured alarm since resetting HIST → _RST is displayed for each transmitter. After viewing the history it's possible to reset the counter through HIST → _RST and the icon **H** disappears.

9. Automatic adjustment of the 0 point

The connected digital transmitters have an inner diagnostic, which detects whether or not the transmitter's zero point is in disbalance. If so, they perform an automatic comparison and this is indicated on the display by **⊙**.

10. Menu

The menu can be accessed by pressing the ENTER button and holding it for cca 5 s. The main segments of the display show the required menu functions. Use the arrows to move from one entry to another and press ENTER for selecting an entry.

The last entry is always EXIT, which returns you to a level up in the menu. You can also return to the basic display by pressing ENTER and holding it for an extended period of time.

The menu structure is as follows:

```
                ↓                                                    ←                              ↑
submenu    HIST        →    INFO      →    CONF      →    TEST       →    SERV       →    EXIT
                ↓                                                    
   1       HI1H    ←    NCAL    ←    TMP1    ←    RELE    ←    SERV    ←
                ↓              ↓              ↓              ↓              ↓
   2       HI8H         LCAL         TMP2         TRAN         SERV    ↑
                ↓              ↓              ↓              ↓    ↑        ↓
   3       HI12         TEMP  ↑      ALM1         _RST         EXIT
                ↓              ↓              ↓              ↓            →
   4       HI24                      ALM2         EXIT  →
                ↓              ↓              ↓    ↑
   5       HI2D         EXIT  →      ALM3
                ↓                          ↓
   6       HI7D    ↑                 ALM4
                ↓                          ↓
   7       HIAL                      CALI
                ↓                          ↓
   8       HILA                      EXIT  →
                ↓
   9       _RST

                ↓

           EXIT   →
```
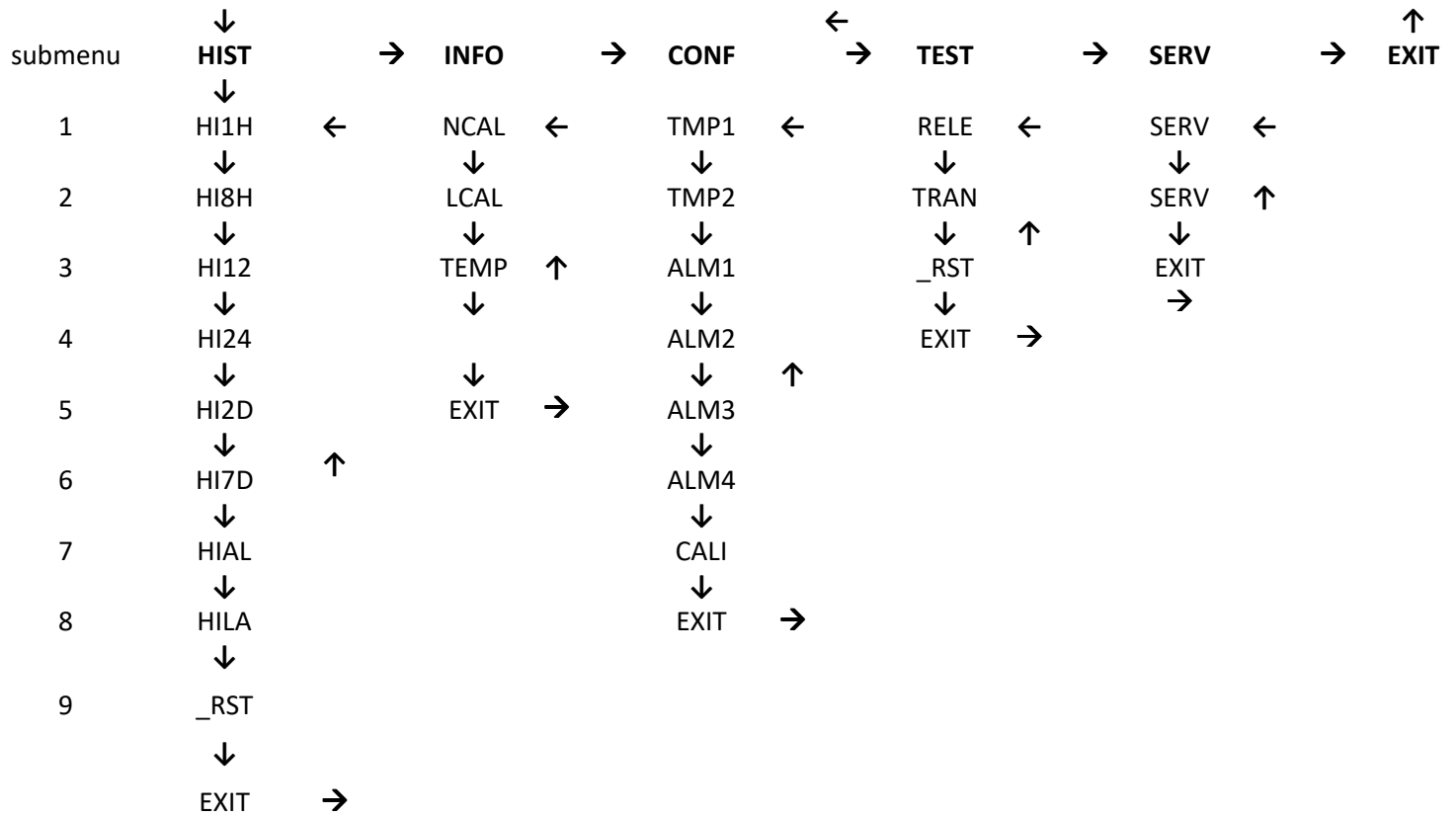
History menu HIST

HI1	Displays the alarm history for the last hour
HI8	Displays the alarm history for the last 8 hours
HI12	Displays the alarm history for the last 12 hours
HI24	Displays the alarm history for the last 24 hours
HI2D	Displays the alarm history for the last 2 days
HI7D	Displays the alarm history for the last week
HIAL	Displays the alarm history for the entire memory (cca 34 days)
HILA	Displays the alarm history since the last reset of the entry _RST
_RST	Resets the time from which „HILA" starts counting
EXIT	Returns one level up in the menu

This menu displays the highest measured concentration for each channel in a selected time interval. You can choose from a total of 8 intervals: - the last 1h (HI1H), 8h (HI8H), 12h (HI12H), 24h (HI24), 2 days (HI2D), 7 days, the entire memory (cca 34 days) and the interval since the last reset of „_RST". Selecting an entry will perform a custom search in the memory for the selected channel. If the concentration hasn't changed and remained on the minimal value during the whole interval, „9999" will be displayed instead of the date and time. Switch between the channels by using the arrows and use ENTER to return to selecting a time interval.

The entry _RST serves for setting the time interval for the user alarm. If an alarm was activated at one of the transmitters since the last change of the entry _RST, the basic status of the controller displays the segment „H". At the entry, the date and time since evaluation of „HILA" are displayed. Pressing ENTER on this entry sets the interval to the current date and time and the segment H disappears from the basic display. Press ENTER again to return the the history menu.

Note.: In the case of equipping a larger quantity of transmitters, the loading of the history may take a few seconds.

Information menu INFO

NCAL	Displays the date of the next transmitter calibration
LCAL	Displays the date of the calibration
TEMP	Displays the temperature of the DEGA Tc II sensor
EXIT	Returns one level up in the menu

For entries „LCAL" and „NCAL" use the arrows to switch between individual transmitters. Moving to „NCAL"displays the date and time of the next calibration for the selected sensor. In addition, the main display shows the amount of hours remaining to the next calibration. In the same way, the entry LCAL shows the date and time of the last calibration for the selected channel. The main display again shows the amount of hours passed since the last calibration. This is a simple amount of hours, not the amount of hours, in which the sensor has been in operation.

The entry TEMP displays the current temperature from the temperature sensor, if it's configured and connected to the controller.

Configuration menu CONF

To enter the menu, type in the password (0004). Use the arrows to change the value and use ENTER to move from left to right. Pressing ENTER in the order of units enters the menu. Typing in a wrong password will return us to the measurement mode.

TMP1	Setting the critical temperature level 1
TMP2	Setting the critical temperature level 2
ALM1	Setting the 1. level of gas leak alarm
ALM2	Setting the 2. level of gas leak alarm
ALM3	Setting the 3. level of gas leak alarm
ALM4	Setting the 4. level of gas leak alarm
CALI	Calibration of the digital transmitters
EXIT	Returns one level up in the menu

The entries TMP1 and TMP2 change the temperature value of the external sensor at which an alarm occurs. Pressing LEFT decreases the temperature and pressing RIGHT increases the temperature. Press ENTER to confirm the change.

The entries ALM1 to ALM4 are used to set the alarm. Press ENTER to browse the alarms by using LEFT and RIGHT. Each channel shows the level of the alarm. The auxiliary display shows the text SET AL1 to SET AL4, depending on which type and level of alarm we are working with. Press ENTER again to enter editing mode. Segments 1 to 4 will light up and we will be able to set the value using the LEFT and RIGHT keys. Pressing ENTER again ends the editing and the alarm value is saved in the transmitter.

The entry CALI is used to calibrate the detector and connected transmitters. LEFT and RIGHT changes the displayed channel and ENTER selects the channel (displayed segment "dot in a circle.) Moving to the entry NEXT and pressing ENTER takes you to zero-calibration of the selected transmitters.

In zero calibration mode, the minimum AD transfer value is displayed on the main segments. The maximum is displayed on the auxiliary segments. An exception is the oxygen sensor, which always detects a zero value in the zero mode. By using LEFT and RIGHT, we can check the detected value for all selected sensors selected or wait for it to stabilize. Moving to NEXT and pressing ENTER will get us into the range calibration mode (Span value). A faster way of going directly to NEXT is pressing ENTER.

In range calibration mode, calibration gas is introduced to the sensors. This will result in a calibration gas concentration measurement, the highest AD value of which is displayed again on the main display. On the auxiliary segments, the corresponding Zero value is displayed. If we are satisfied with the values, we can move on to the NEXT item and after pressing ENTER we enter the measured value control mode. You can use ENTER for a quick transition again.

In the measured value control mode, we perform a calibration check. The following data are displayed in the top line: Zero value, Span value and current A/D converter value. The actual value can be used to check that the sensor returns to the Zero value after the airing of the calibration gas. The bottom line shows the difference between the Span and Zero values (absolute value). For transmitters where this difference is greater than 200, a dot is displayed and they are selected for saving. In this way, the transmitters to which calibration gas was not introduced are excluded from saving. You can manually select the transmitters to be saved by pressing ENTER (turns the dot off and on). Use the LEFT and RIGHT keys to move between the transmitters. Moving to NEXT and pressing ENTER will enter the calibration save mode.

Select either YES for saving the NEW values into the transmitters, or NO for finishing the calibration without saving the values.

Controller testing menu TEST

RELE	Setting the relay output
TRAN	Simulation of the measured values
_RST	Restart of the controller
EXIT	Returns one level up in the menu

HRW Limited   admin@hrw.hk   www.hrw.hk

The entry RELE is used for direct setting of the controller outputs. Entering this entry saves the current setting of the outputs, which is later modified by the user. The controller outputs (RE1 to RE5, LIGH, SOUN, HV) can be browsed with LEFT and RIGHT and pressing ENTER will switch over the output state. The outputs will remain in these settings until we press ENTER on the last EXIT entry. That will restore the output state, which existed before the user change.

The entry TRAN is similar to the entry RELE, except for the fact that the user sets the concentration on the given channel. Use LEFT and RIGHT to select a channel and then press ENTER to enter the edit mode. Here we can use the arrows to change the concentration ranging from minimal to maximal value of the configured transmitter. The controller reacts to this set concentration as if it was directly measured, which leads to the activation of alarms and switching of outputs.

The entry _RST resets the controller.

Service Menu SERV

The entry SERV ALL SENS makes the controller go into service mode. The communication with transmitters is terminated. The outputs remain in the last known setting. Use LEFT and RIGHT buttons to set the service interval in a range of 1 to 24 hours. Press ENTER to start it's own regime.

The main segments display a countdown of the set interval in minutes, the time display shows the interval in hours, minutes and seconds. After the countdown has elapsed, the controller returns to the detection mode. You can cancel this mode at any time by pressing the ENTER button. Use LEFT and RIGHT keys to extend and shorten the interval after 10 minutes.

The entry SERV SEL SENS causes a blockage of any transmitter. Use LEFT and RIGHT to select a transmitter and ENTER to block/unblock it. Blocked transmitters are indicated with an inscription DIS on the main segments.

# Maintenance

1. Operation/Maintenance

In case of contamination the surface can be cleaned with a slightly moistened cloth. The connected transmitters require performing of regular checks and calibrations, which can be done in two ways:

a) **1 x every 6 months** carry out a „**calibration**" **and functional control -** adjust the sensitivity of the sensor using calibration gas and check the functionality of the system. The exact interval depends on the purity of the environment, required accuracy and the occurrence of disturbing gases in the atmosphere.

b) **1 x every 12** carry out a „**calibration**" **-** adjust the sensitivity of the sensor using calibration gas and check the functionality of the system. The exact interval depends on the purity of the environment, required accuracy and the occurrence of disturbing gases in the atmosphere. Also carry out a **„functional control" 1 x every 3 months -** check the function of the entire detection system using a test gas, which does not exceed the range of the sensor. We recommend using gas intended for laboratory use.

Do not use means intended for testing fire alarm detectors for the „functional control"!

Perform calibration only at **certified service centers with a valid certificate of competence,** or **the manufacturer.**
For the Czech Republic only DEGA CZ s.r.o.

2. Replacement of the battery
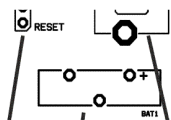
Energizer	2032
Duracell	2032
Varta	2032
Panasonic	2032

The lifetime of the battery in the controller is approximately 5 years. After this time some functions of the controller may not work properly. Remove the battery from the holder and replace it with one of the recommended types. Replacing the battery in the controller, which is not connected to the power supply, will erase the internal clock.

HRW Limited   admin@hrw.hk   www.hrw.hk

Add-on modules and accessories

Product code	Name	Product description
10200002	DEGA UKA III Power	Internal Power Supply 230 V AC/15VA
10200003	DEGA UKA III Relay Module	Internal 3-relays, 250 V/10 A
10200005	DEGA UKA III Memory Modul	Internal memory with battery
10300013	Cable Glades PG11 (10pcs)	

HRW Limited   admin@hrw.hk   www.hrw.hk

Attachments

1. Table of error codes

Displayed on auxiliary segments	Cause	Solution
„SENSOR E"	Interrupted current loop or faulty transmitter	Check the transmitter connection, otherwise contact the manufacturer.
„ NO SENS"	Sensor is not present (EEPROM of the sensor is not communicating)	Disconnect and reconnect the sensor, then restart the sensor by disconnecting and reconnecting the power.
„UNK SENS"	Unknown sensor type	Contact the manufacturer.
„ELCHEM E"	Type 2 sensor ID not found in the settings table LMP91000	Contact the manufacturer - FW update required.
„SENS CRC"	CRC does not match the sensor EEPROM	Sensor error - contact the manufacturer.
„LMP9 ERR"	LMP91000 is not responding	Sensor error - contact the manufacturer.
„SEN MISM"	The set sensor ID does not match with the connected sensor.	Checking the configuration of the sensor required.
„ELFAILED"	EL sensor test error	Sensor error, only informative, subsides by itself.
„ HEATING"	Transmitter is in preheating mode	Wait a few minutes, the transmitter will automatically enter measurement mode.
„EE25 ERR"	Error in reading the internal FLASH	Restart the transmitter. If the error persists, contact the manufacturer.
„FLASHCRC"	Error in reading the internal FLASH	Restart the transmitter. If the error persists, contact the manufacturer.
„EEPR CRC"	Error in reading the internal FLASH	Restart the transmitter. If the error persists, contact the manufacturer.
„INFRA ER"	Infrared sensor error	Replace the sensor.
„ CALIB18"	The device exceeded the maximum calibration interval by 50 %	Calibration is necessary.
„COMM ERR"	The transmitter isn't responding	Check the connection between the controller and the transmitter

General warranty terms and conditions

When following the instructions for installation, operation and maintenance, the manufacturer grants a guarantee of 24 months from the date of receipt for the product. Should the product purchased be put into operation by an entity other than the seller, the warranty period commences from the date that the product is put into operation, provided that the buyer ordered its commissioning within three weeks of its receipt. The customer expressly acknowledges that during the warranty period that extends beyond the length of the warranty period that is specified in the Commercial Code (the statutory warranty) s/he can neither require replacement of the product nor may s/he withdraw from the contract.

1. When claiming a product defect it is necessary to submit a proof of purchase that contains the following information: name and surname, name and business name, address and the warranty card, if the buyer received one from the seller. The validity of the warranty shall not be affected by non-compliance with the obligations related to the issuance of the warranty card.
2. Claims concerning the product (for a warranty repair only complete devices are accepted) may be filed during the warranty period only with the seller from which it was purchased; subsequently the seller is required to forward the product to an authorized service centre or to the manufacturer.
3. A condition for the recognition of the rights under the warranty is the installation of the product having been undertaken by an authorized person in possession of a valid certificate from the manufacturer.
4. Claims regarding a product defect that can be dealt with reasonably quickly and without additional consequences will be resolved by remedying the defect (repair) or by replacement of the damaged product part, because in such a case it is a contradiction of the standard norms that the entire product shall be replaced (§ 616, paragraph 4 of the Commercial Code).
5. The buyer who exercises the right of warranty repair is not entitled to the return of the parts that have been replaced.
6. The warranty period can be extended for up to 48 months and its validity can be extended beyond the standard length on the basis of the conclusion of an individual warranty contract. Further information may be obtained through a specific business meeting.

This warranty is not applicable to:

- a controller that has not **been put into operation by the manufacturer or by a certified employee** in possession of a valid certificate issued by the manufacturer
- a controller that did not have regularly performed calibrations and functional checks by the manufacturer or by a certified employee in possession of a valid certificate issued by the manufacturer
- damage caused by fire, water, static electricity, power surges in the electric supply or in the public network, accident, improper use of the product, wear and tear
- contamination of the product and its subsequent cleaning
- damage caused by **improper installation, any adjustment, modification** or improper manner of use inconsistent with the instruction manual, the technical standards or the applicable safety regulations in the Czech Republic
- damage to the product during transportation caused by improper handling or handling of the product in a manner contrary to the advice provided in the instruction manual
- DEGA products that have **been used in association with other than original DEGA products**, i**ncluding consumables and accessories**
- **calibration of controllers**, i.e. setting the detection limits
- **deterioration or damage of the controller sensors, including the necessity of replacement**
- quickly wearable parts and consumables (such as the key for disassembly of the controller, seals, etc.) that get damaged by normal wear and tear during operation, and the wear and tear of the product and its parts caused by their normal use.

For the complete version of the general business conditions and of the claims procedure go to www.dega.cz

Manufacturer: DEGA CZ s.r.o., Malešická 2850/22c, 130 00 Prague 3, the Czech Republic
VAT ID: CZ 279 029 43, ID: 279 02 943; Phone: +420 774 447 660, E-mail: info@dega.cz, Web: www.dega.cz