

General instructions to Dimmer LDD 1225-C2

Read the instruction manual carefully before using the device.

The manual provides information about the installation and usage of the device.

The instruction manual should always be kept next to the device.

When the device is sold, lent or hired the instruction manual should be kept at hand.

Warning!

- **Do not place** any flammable substance or water near the device.
- If any liquid gets in the device, it must be switched off immediately and unplugged from the mains.
- If there occur any program failure during usage, the device must **immediately be switched off**. Contact your dealer or service to have your device mended.
- **Do not open** the device - only special parts and components can be found inside, which may only be replaced by qualified persons.
- **Do not try to fix** the device by yourself – repairing only by qualified technicians.

Precautions:

- **Do not leave** the packing material (plastic bags, polystyrene etc.) within the reach of children.
- Check the device after unpacking whether it is damaged. If you find any damage **do not use** the device and immediately contact your dealer.
- The device may only be used and installed by qualified persons.
- The device may only be used for its designed purpose and should be kept away from unqualified persons.
- **Never use the device :**
 - in high humidity circumstances,
 - outdoors in stormy weather,
 - in surroundings where the temperature is higher than 45 °C or lower than 2 °C.
 - in too dry or humid places (ideal conditions : between 35% - 80% humidity)
- **Do not fix or replace** the components of the device. Contact your service when needed.

Installation

- unpack the device
- inspect of the device
- connect loads (fixtures) to the dimmer unit
- connect the controller board/device to the dimmer
- connect the dimmer unit to the supply network (mains)
- Switch on the device and the lighting controller, and make the required adjustments of the dimmer
- Dismounting: in reverse order

Operation of Dimmer LDD1225

Signs and controls of the Controlling Unit LDD-C2:

CONTROL 1-12	Control LEDs displaying selection and control of 1-12 channels
DISPLAY 8888	Numerical LED display
STORE, SELECT, UP/DOWN	Mode setting buttons
MAINS L1, L2, L3	Power voltage input signals (R, S, T)
STANDBY ON switch	Standby / Power On switch

Default Displays:

CONTROL 1-12	light-proportional LED of input control light-proportional signal of the adjusted pre-heating level
DISPLAY 8XXX	>_< lowest segment blinks: No DMX-512 signal.
DISPLAY 8XXX	DMX-512 signal received normally: No blinking and no special status signal
DISPLAY 8XXX	The upper segment continuously lights. The fan is On, the operating temperature has reached the lower limit temperature.
DISPLAY 8XXX	The upper segment does not light. The operating temperature has not reached the temperature needed for fan starting.
L1, L2, L3	The three-current-phase display is continuously On: our device is connected to the live mains!
STANDBY-ON	<u>When set to 'ON':</u> The input signals and the all the test settings of the menu can be seen at the output. Display fully lights. <u>When set to 'OFF':</u> The input signals and the all the test settings of the menu cannot be seen at the output. Display is dimmed to 50% .

Setting possibilities:

8888	1. DMX address setting
PH--	2. setting pre-heating
CuL	3. setting of control curves (control characteristics)
[+. 50	4. test
[° xx	5. status of temperature

1. Setting of DMX address:

Setting possibilities:

- A. setting of DMX address by continuous increasing or decreasing (1-512)
- B. *digit by digit* setting in case of high address numbers (e.g. 300...)
- C. Addressing dimmers by *unit by unit*: for easy addressing many dimmers in one system (first unit 1-12, second unit 13-24 etc.) max. 43 units
- D. Quick addressing: reaching the previously used addressing mode

A. Selecting the addressing mode and setting the DMX address:

Press the **Store** button : >001< blinks on the display,
Select the desired address with the **UP-DOWN** button,
Finally by pressing the **Store** button again you store the selected DMX value.

B. Digit by digit setting of DMX address:

Press the **Select** button once. 0.001 appears on the display.
After pressing **Store**, the first adjustable digit appears on the display.
Digit stepping: with **UP / DOWN** buttons
Digit place stepping: with **Select** button
Storing: with **Store** button
Releasing: pressing **Select** button more times until the default mode.

C. Addressing dimmers unit by unit:

Press **Select** and **UP** together. You can see on the display: 00. >01<. The two digits blink.
Unit address setting: with buttons **UP / DOWN** (max. 43)
Storing: with **Store** button. The starting address of the dimmer unit can be seen on the display.
Releasing: press **Select** button more times until the default mode.

D. Quick addressing:

By pressing button **Store** you will access the last used addressing mode and you may edit it.
The two different addressing modes: by digit / by unit.

Warning!

The unit by unit and the digit by digit addressing are stored separately.
The selected addressing mode determines the DMX address that is used by the unit.

2. Setting the pre-heating:

The pre-heating output voltage may be set between 1-99 Volts.

The default value is 10 V.

Setting possibilities:

- A. setting of ***grouped*** channel pre-heating
- B. setting of ***individual*** channel pre-heating

Press button **Select** twice, the display shows: PH ---. Normally the last used pre-heating value can be read e.g. PH 10.

A. *grouped* setting:

Select setting mode with **UP / DOWN** buttons.

Press button **DOWN**. PH --- on the display. Control LED's 1-12 do not light.

Meaning: No pre-heating on the output.

Releasing: press **Select** button more times until you reach the default mode.

Press button **DOWN**. PH 10 can be seen on the display. Control LED's 1-12 light.

Meaning: you have chosen channels 1-12 to be pre-heated. The pre-heating voltage is 10 V.

Changing the pre-heating:

Press the **Store** button: the set voltage blinks on the display,

Select the desired voltage with the **UP-DOWN** buttons,

Finally by pressing the **Store** button again you store the selected values. The display will not blink.

Releasing: press **Select** button more times until you reach the default mode.

B. *individual* channel setting:

Press **Select**. The default PH. 10 and control LED 1 light. Meaning: the pre-heating voltage of channel #1 is 10 V.

By pressing button **UP** you may step the channels # one by one and see the previous voltage settings or even re-adjust them.

By pressing button **UP / DOWN**. You can select the adjustable channel. The display shows: PH. 10 and the selected channel's control LED lights.

Meaning: You have selected the channel to be pre-heated. Pre-heating voltage is 10 V, which may be changed as described above.

Releasing: press **Select** button more times until you reach the default mode.

Warning!

Once ***grouped*** or ***individual*** pre-heating values are stored, they are not cleared by the new settings of the other mode. The saved settings may only be changed in their own mode.

E.g.: ***individual*** setting may be 1,2, 8 channels: 13 V, the rest of the channels 10 V.

grouped setting may be: channels 1-12 9V.

currently at the output PH ---, that is No pre-heating.

When you return to modes ***individual*** or ***grouped***, the pre-set values are used.

3. Setting the control curve:

Setting possibilities:

A. **grouped** curve (characteristic) setting

B. **individual** curve setting

1. \square L linear - linear output characteristic
2. \square S square - square output characteristic
3. \square d direct - switched (relay) characteristic
(at 60% control - switches outputs to 100%,
at 40% control switches outputs to 0%)
4. \square - Logen - former logen characteristic
(phase-angle linear)

A. grouped setting:

Press the **Select** button three times. The display shows: \square L as a default setting or the last set characteristic.

Control LED's 1-12 light.

Press the **Store** button and the sign of characteristics will blink e.g. \square > L <

Press the **UP** button to select the required characteristic.

Press the **Store** button to store the characteristics into channels 1-12.

Releasing: press **Select** button more times until you reach the default mode.

B. individual setting:

Press the **Select** button three times. The display shows: \square L as a default setting or the last set characteristic e.g. \square S.

Control LED's 1-12 light.

Press **UP / DOWN** to step channels and the display shows their correspondent characteristics that can be modify.

By pressing **UP / DOWN** you can choose the channel to be set. The control LED of the chosen channel lights.

Press the **Store** button and the sign of characteristics will blink e.g. \square > L <

Press the **UP** button to select the desired control curve.

Press the **Store** button to store the characteristic.

Releasing: press **Select** button more times until you reach the default mode.

Warning!

After the 12th channel you return to *grouped* setting again.
(Control LED's 1-12 light.)

Warning!

When you choose characteristics *individually* or *grouped*, the settings will be saved and will not be cleared by new settings of the other mode
The saved settings may only be altered in their own mode.

E.g. Setting 1 in *individual* setting mode: 1 – 2 – 8 channels : \square d
Setting 2 in *grouped* setting mode 1-12 channels : \square L

When you return to *individual* or *grouped* setting mode these values are used.

4. Test:

In this mode you may assign 50% voltage to the outputs of channels chosen individually or grouped.

Press button **Select** four times. The display shows: [+. 50]

By pressing button **UP / DOWN** you may select the desired or all channels. The selected channel's control LED lights, 50 % voltage at the output.

Releasing: press **Select** button more times until you reach the default mode.

5. Checking the temperature

We apply temperature controlled fan operation in Dimmer LDD 1225.

There are temperature sensors on coupled channels each: 1-2. 3-4. 5-6. 7-8. 9-10. 11-12.

You may check temperatures of these coupled channels.

Press button **Select** five times. The display reads e.g. : [° 38]

Control LED's 1-2 light.

Meaning: Temperature of channels #1-2 is 38 C°

By pressing button **UP / DOWN** you may check the temperature of all channels.

By pressing button **Store** continuously, you may check the operation of the fan. The fan will work during the test.

Useful information of the Dimmer LOGEN LDD 1225 and its operation:

The resolution of digital Dimmer LDD 1225 is 10 bit.

What does it mean in practice that a dimmer is digital?

- Digital dimmers develop the DMX-512 signals by microprocessors, and control triacs directly through optical couplers.
That dimmer which has a DMX-512/analogue converter inside, is not a digital dimmer!
- With digital dimmers you may receive exactly the same result at the outputs over several hundred dimmer channels at a time.
- Digital dimmers – as opposed to analogue ones - do not require adjustment maintenance, and do not have components that may become out of setting by temperature or humidity change.

What does resolution - e.g. LOGEN dimmer 10 bit - mean in digital dimmers?

- Digital systems use binary codes:

7 bit = 128

8 bit = 256

10bit = 1024

In brief, digital dimmers divide the input control voltage by the resolution number. The larger the number means the finer resolution.

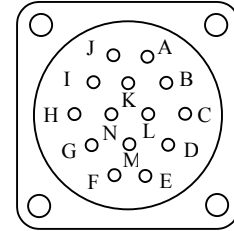
LOGEN LDD 1225 dimmer 10 bit = 1024: that is four times finer resolution than the generally used 8 bit resolution.

If our lighting controller works only with 8 bit, LOGEN LDD 1225 calculates the difference in the light controller's signal and converts it into a 10 bit- system.

Dimmer LOGEN LDD 1225 has a mis-connection protection (phase and neutral mix-up in the feeding), which will protect the device from failure until the error is corrected.

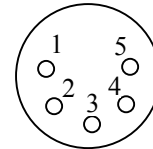
Analogue input connector pins:

- A-L - 1-12 channels
- M - not used
- N - common



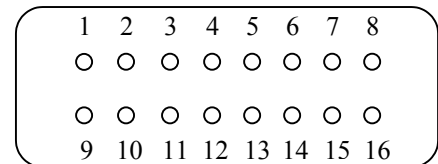
Digital input connector pins:

- 1. common
- 2. - data
- 3. + data
- 4. - feedback (not used)
- 5. + feedback (not used)



Wieland connector pins for 2,5kW dimmer:

láb	funkció	láb	funkció
1.	1 (7) phase	9	1 (7) neutral
2.	2 (8) phase	10	2 (8) neutral
3.	3 (9) phase	11	3 (9) neutral
4.	4 (10) phase	12	4 (10) neutral
5.	5 (11) phase	13	5 (11) neutral
6.	6 (12) phase	14	6 (12) neutral
7.	earth	15.	earth
8.	earth	16.	earth

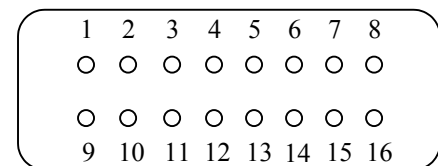


The second connector pins is in the brackets.

Wieland connector pins for 5kW dimmer:

Connector 1

pin	function	pin	function
1-2	1. phase	9-10	1. neutral
3-4	2. phase	11-12	2. neutral
5-6	3. phase	13-14	3. neutral
7-8, 15-16	earth		



Connector 2

pin	function	láb	function
1-2	4. phase	9-10	4. neutral
3-4	5. phase	11-12	5. neutral
5-6	6. phase	13-14	6. neutral
7-8, 15-16	earth		

CAUTION!

At the 5kW dimmer both pins of each channel must be connection!