

KLU 100 - Outdoor humidity transmitter

User Guide

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1 Safety precautions

The product is developed, manufactured and tested according to high quality standards. However, instructions for safe use shall be taken account when installing, using or disposing the product or parts of product.

Read this user guide carefully before commissioning, using or servicing this device. To avoid any kind of damage to people or property, follow the instructions carefully. Produal is not liable for any hazards or damages to people or property which are caused by ignoring the using or installation instructions.





To avoid electrical shock or damage to equipment, disconnect power before installing or servicing the product. Use only a proper wiring rated for the full operating voltage and maximum current in the system even in the event of a fault.

The product condition must be checked before installation. Do not drop the product or use excessive force during installation. Do not use the product if any damages are visible.

After installation the product will be part of a system whose specifications and performance characteristics are not designed or controlled by Produal. Refer to national and local authorities to ensure that the installation is functional and safe.

The product should only be used in professionally designed applications. Unauthorised modifications are not allowed. The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or property.

In this document, there are different kind of warnings and notes. The warning and note types are defined in the following table.

Sign	Description
 WARNING:	The warning symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION:	The caution symbol indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
 Important:	The important symbol indicates a potentially hazardous situation which, if not avoided, could result in damage to the device or property.
 Note:	The note symbol indicates a useful tip or a recommended way to complete a task. These notes also provide information that is useful but not critical to the user.

1.1 Intended use

The KLU 100 outdoor humidity transmitter is intended to be used to measure relative air humidity and temperature in factories, warehouses and other buildings. The product lifetime decreases if the environment is very cold (e.g. freezer rooms) or the air contains chemicals (e.g. chlorine at spas and indoor swimming pools).

These transmitters are intended to be connected to building automation systems in the HVAC/R industry.

2 Commissioning

2.1 Mounting the product



WARNING: Handle the product with care. Dropping the product may cause internal damage and unwanted functions in the connected system.



CAUTION: Place the product outside the reach of children and animals.



Important: The product may only be installed in a location where the ambient conditions meet the operating condition requirements.

Operating conditions

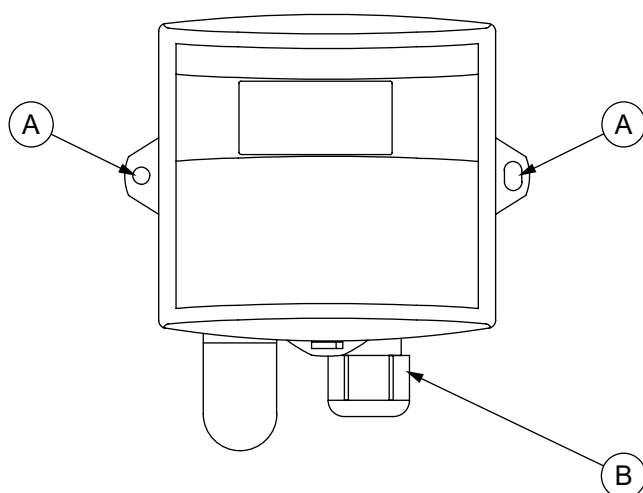
Temperature	-50...50 °C
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Select a mounting position that has good ventilation. To receive accurate readings, do not mount the device in the following positions:

- Direct sunlight
- Adjacent to doors or other drafty positions
- Adjacent to heat sources
- Adjacent to concealed pipes or chimneys

This device is usually mounted inside a building. If you mount the device to an outer wall of a building, select the mounting position carefully.

1. Check that the product is not damaged during transportation.
2. Select the mounting position.
3. Mount the product on a flat surface using the mounting points (A).
 - a. Select the mounting screws according to the mounting surface. The maximum screw diameter is 4.5 mm.
 - b. Make sure that the cable gland (B) points down.
 - c. Mount the product in a vertical position with the screws.Align the device horizontally before you tighten the screw on the right lug.



- A. Mounting point
B. Cable gland

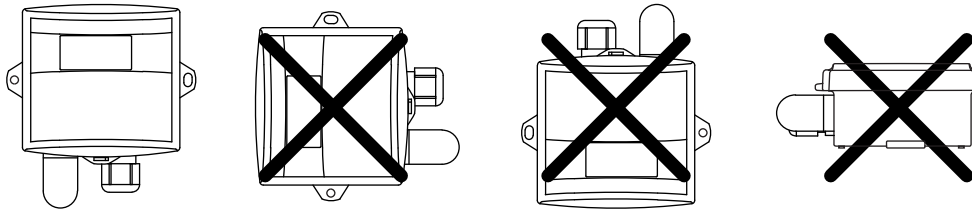
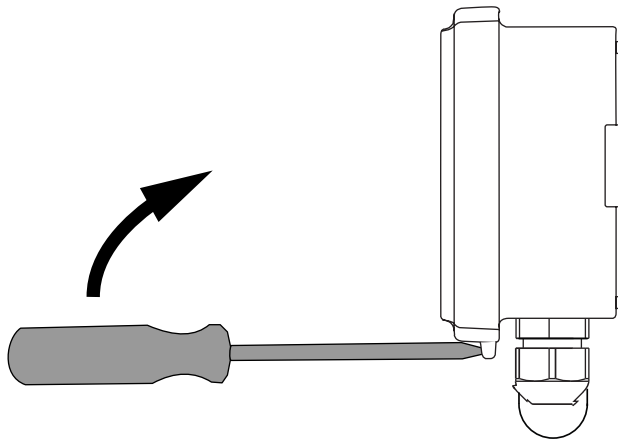


Figure 1: Mounting orientation

2.2 Opening the cover





If the device has a display, be very careful when you open the cover. The display board is connected to the circuit board with a cable.

1. Put the tip of a flat-head screwdriver into the slot on the cover.
2. Hold the cover and push the screwdriver handle towards the device to open the cover.



2.3 Selecting the output mode

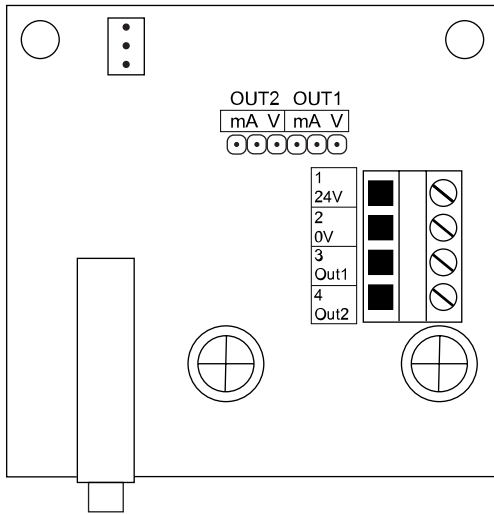
The device has two jumpers for output mode selection on the circuit board. Select the voltage or the current output mode based on the system requirements. Set the jumpers in the correct position to select the output mode for humidity and temperature.

Output		0...10 Vdc (factory setting)	4...20 mA
Humidity output	OUT1		
Temperature output	OUT2		

2.4 Wiring



CAUTION: Device wiring and commissioning can only be carried out by qualified professionals. Always make the wirings while the power is switched off.

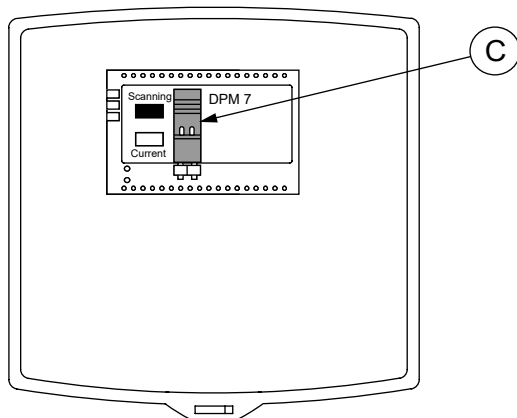


24V	24 Vac/dc, < 1 VA supply
0V	0 V
Out1	Output 1: humidity output (%rH), 0...10 Vdc, 2 mA / 4...20 mA
Out2	Output 2: temperature output (°C), 0...10 Vdc, 2 mA / 4...20 mA

2.5 Setting the display mode (KLU 100-N only)

In KLU 100-N humidity transmitter, the display switches between humidity and temperature by default. If you want the device to show only temperature or humidity on the display, set the display mode as follows:

1. Make sure that the wires are correctly connected.
2. Switch the power on.
3. Find the jumper behind the display.



4. Wait until the display shows the measurement you want to select.
5. Remove the jumper (C).
The display shows either humidity or temperature depending on the measurement it showed when you removed the jumper.
6. Align the cover with the housing and press the cover until it clicks closed.

3 Disposal

The device is considered as electrical and electronic equipment for disposal in terms of the applicable European Directive. At the end of life the product must enter the recycling system at an appropriate collection point.

- The device must be disposed through channels provided for this purpose.
- The disposal must be completed according to the local and currently applicable laws and regulations.

Generally all metals can be recycled as material. Plastics and cardboard packaging material can be used in energy recovery. Printed circuit boards need selective treatment according to IEC 62635 guidelines. To aid recycling, plastic parts are marked with an appropriate identification code. Contact your local Produal distributor for further information on environmental aspects and recycling instructions for professional recyclers.