

User's manual HMI 31 Humidity and temperature indicator unit

1. PRODUCT DESCRIPTION

The HMI 31 is an indicator unit designed for use with Vaisala's relative humidity and temperature probes. The display can be set for RH or temperature indication by pushbutton selection. The unit operates with Vaisala's HMP 35 and HMP 36 combination relative humidity/temperature probes (also HMP 31UT and HMP 32UT), and 0903 and 0904 temperature probes.

The temperature display can be set to indicate temperature in degrees Celsius ($^{\circ}\text{C}$) or degrees Fahrenheit ($^{\circ}\text{F}$).

2. OPERATION

Battery powered operation

The unit is powered from a standard 9 V battery, which is supplied with the unit. Prior to operation, attach the battery to the button-and-knob connector and insert the battery to the battery compartment at the bottom of the unit. The unit can also be powered with a rechargeable NiCd battery, nominal voltage 8.4 V. For charging with a separate charger, the NiCd battery must be removed from the unit. Maximum operating time of approx. 30 h is obtained with an alkaline battery.

Undervoltage indication

When the terminal voltage of the battery falls below a preset alarm limit, indication "LOBAT" starts blinking at the left upper corner of the display. This indicates a need for immediate battery replacement or charging of the NiCd battery.

Function pushbuttons

The left side of the unit has two pushbuttons: power switch and temperature/relative humidity switch with the following functions:

1. red pushbutton: ON/OFF
2. black pushbutton: % RH/°C (°F)
 - selected display mode is indicated in the right side of the display.

Temperature display selection °C/°F

When delivered from the factory, the HMI 31 indicator unit is set to indicate in degrees Celsius (°C). If you wish to set the temperature display for degrees Fahrenheit (°F), open the case and locate the jumpers placed between pins 3 and 4, and pins 6 and 7, respectively (refer to Fig. 1). For the degrees Fahrenheit display, shift the jumpers to connect pins 4 and 5, and pins 7 and 8, respectively.

Linearization

When you use probe types HMP 35 or HMP 36, the linearization block of the indicator unit must be disconnected. (Note: The unit is shipped from the factory with linearization disconnected.) If you use probes HMP 31UT or HMP 32UT, you must then switch in the linearization block (as shown in Fig. 1 with the jumper placed between pins 1 and 2).

Probe attachment

The probe is attached to the indicator unit through a connector located at the lower right corner of the unit. When you attach the connector, make sure the plug is properly seated prior to locking the connector by rotating the lock ring clockwise. The connector is provided with a key, which prevents misalignment of the connector.

3. SPARE PARTS AND ACCESSORIES

	Part no.
Battery 9 V, IEC 6F22	0332
Carrying holder	0639

4. TECHNICAL SPECIFICATIONS

Display range:	
humidity	0 ...100 %RH
temperature	-40 ...+115 °C or -40 ...+199 °F
Display:	3 1/2 -digit LCD
System accuracy (at +20 °C):	
relative humidity	see operating instructions of of the RH probe
temperature	± 0.3 °C (± 0.6 °F)
Resolution:	
humidity	0.1 %RH
temperature	0.1 °C (0.1 °F)
Temperature range:	
operation	+5 ...+55 °C (+41 ...+131 °F)
storage	-20 ...+60 °C (-4 ...+140 °F)
Operating power:	9 V battery, type IEC 6F22
Operating time:	
with disposable battery	25 h
with alkaline battery	30 h

Case material:	ABS plastic
Connector for probes:	Amphenol 3478500
Dimensions:	
width x height x depth	91 x 200 x 27 mm
weight	260 g
Accessory:	carrying holder for indicator unit and probe

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Kuva 1 Linearisoinnin ja lämpötila-asteikon (°C/°F) valinta.

