CLEAHMI21 External HMI

Product Data

GENERAL

The CLEAHMI21 External HMI is a cost effective, versatile mountable HMI for those EAGLE and EAGLEHAWK NX controllers not equipped with a built-in HMI.

The CLEAHMI21 represents a network-independent, comprehensive, and cost-effective operating option.

The CLEAHMI21 can be connected and used with the following EAGLE / EAGLEHAWK NX controllers:

- CLEA2000B31;
- CLEA2014B31;
- CLEA2014B32;
- CLEA2026B31;
- CLAXEHxxND100A;
- CLAXEHSERIESxxND.

FEATURES

- **Local language operation**: The CLEAHMI21 allows the EAGLE controller to be operated in the following languages: English, German, French, Italian, Spanish, Greek, Norwegian, Finnish, Danish, Russian, Ukrainian, and Czech. The default language can be pre-selected, and also changed online.
  In combination with the EAGLEHAWK NX, the languages displayed on the CLEAHMI21 depend upon the languages set up (using COACH NX) in the station which the EAGLEHAWK NX is running.
- **Reduced cost for service, operation and maintenance** Maintenance or upgrade of Operator Interface Software is superfluous because it resides in the EAGLE / EAGLEHAWK NX controller, itself (single-source principle).
- **Application- or user-oriented operation**: A configurable start-screen allows for viewing custom fast access lists, which can contain a random combination of data-point and parameters. In combination with the EAGLEHAWK NX, the start screen and the contents of its icons can be customized (using COACH AX).
- **Intuitive push & turn wheel operation:** Navigation, selecting, and changing values is done using the push & turn wheel, which conforms to industry standards.
- **Backlight with automatic time-out:** The display backlight will automatically turn ON upon pressing any key or operating the push & turn wheel. It will automatically turn OFF if none of the keys or the button are used for two minutes. In combination with the EAGLEHAWK NX, the Auto Logout Delay is adjustable.
- **Full display of long text information:** Automatic left & right scrolling enables lengthy texts to be viewed in their entirety.
- **Versatile mounting options:** The following mounting options are available:
  - Screw mounting into panel door cut-outs;
  - Screw mounting onto panel doors or cabinets;
  - Magnetic mounting onto metal surfaces;
  - Screw mounting onto walls.
- **Standard Ethernet connection cable**: A standard Ethernet connection cable (max. length: 5 m) is used to establish a connection between the RJ45 socket of the CLEAHMI21 and the HMI port on the front of the EAGLE / EAGLEHAWK NX controller. (NOTE: This is not a physical Ethernet interface.)
- **Password protected access:** Changing of values and other data is restricted to registered users, by a multi-digit password. In combination with the EAGLEHAWK NX, the user access is fully embedded in the user management of Niagara (COACH NX).
- **No extra power supply needed:** Rather, the CLEAHMI21 derives needed energy from the controller via the standard Ethernet connection cable.

HARDWARE INTERFACES

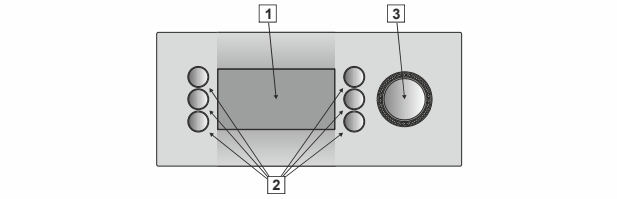

Fig. 1. CLEAHMI21 operating elements

Legend

1 LCD display
2 Six operating keys
3 Push & Turn button

The LCD display presents items for application-specific system information, operator entries, and menus of functions. It can show max. five lines of alphanumeric text with max. 20 characters per line.

The display's backlight is switched ON once an operating key or the push & turn button is pressed, and switched OFF if no operating key or button is used for 2 minutes.

The six operating keys consist of three fixed-function keys (left) and three soft keys (right).

The push & turn button is used to navigate through menus and lists; to highlight items (menu, list, option, value, command symbol), and to adjust options (ON, OFF, etc.) and values (temperature in °C, etc.).

MOUNTING

See also CLEAHMI21 External HMI – Mounting Instructions (MU1Z-0988GE51) for details.

Cabling

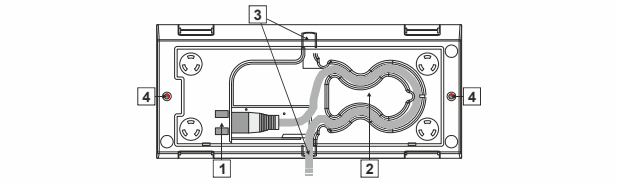

Fig. 2. Rear view of CLEAHMI21, with connector cable

Legend

1 RJ45 socket for connection cable (see also WARNING in section "Electrical Data" on pg. 4)
2 Cable guide for strain relief
3 Cable outlets
4 Screw holes (for mounting into panel doors)

Magnetic Mounting onto Metal Surfaces

For magnetic mounting, proceed as follows:

1. Remove the cover (see Fig. 3). Observe precautions for handling electrostatic sensitive devices so as not to damage the open printed wiring assembly.

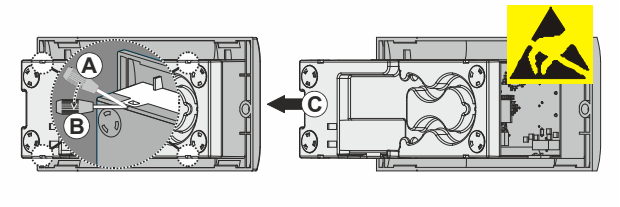

Fig. 3. Removing cover

2. Insert the four magnets (incl. in delivery) (see Fig. 4).

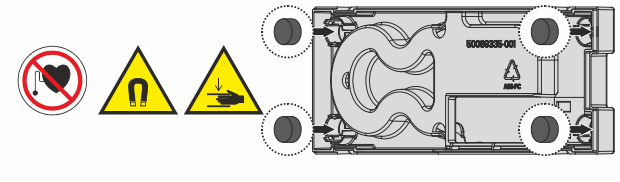

Fig. 4. Inserting magnets into cover

3. Click the cover back into place (see Fig. 5).

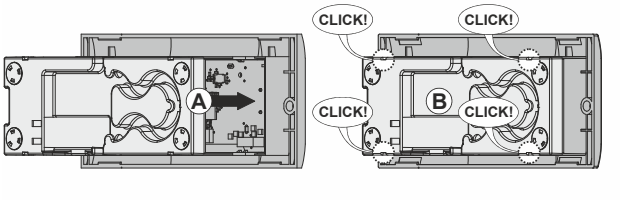

Fig. 5. Clicking cover back into place

4. Click the sub-base into place (see Fig. 6).

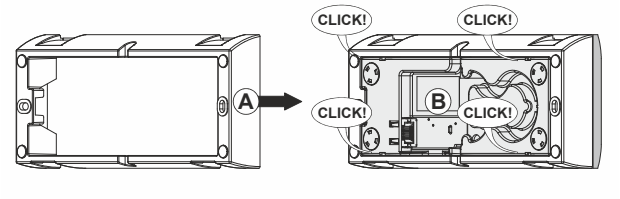

Fig. 6. Clicking sub-base into place

5. Plug the connection cable into the RJ45 socket and loop through the cable guide for strain relief (see Fig. 7). The cable can exit the unit either through the upper (B) or lower (B') outlet.

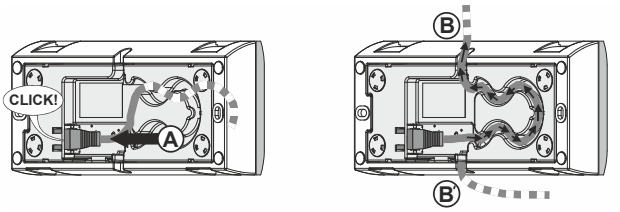

Fig. 7. Plugging cable and looping through guide

6. The unit can then be conveniently attached to any metal surface (see Fig. 8).

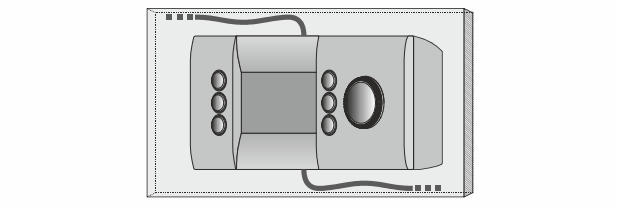

Fig. 8. Wall mounting example (magnet option)

Alternatively, a metal plate (incl. in delivery) can be attached for handheld use (see section "Handheld Option" below).

Handheld Option

In the case of the handheld option, proceed as described in Fig. 3 to Fig. 7). Finally, attach the metal plate (see Fig. 9), which completely covers the rear of the device.

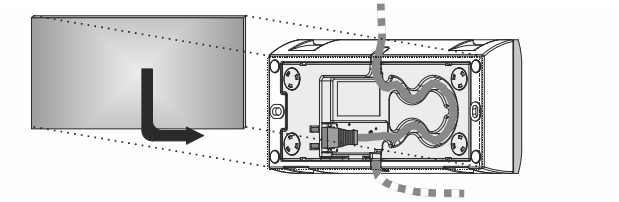

Fig. 9. Attaching metal plate

Screw-Mounting into Panel Door Cut-Out

In the case of screw-mounting into a panel door cut-out (door thickness: 1…2.5 mm), proceed as follows (see also Fig. 10):

1. Prepare a suitably dimensioned (157 X 58 mm) cut-out with bore-holes (Ø 5 mm) at a distance of 166 mm apart and slide the CLEAHMI21 into place.
2. Insert and fasten the two M4x6 (DIN 7985A) screws (incl. in delivery).
3. Finally, plug the connection cable into the RJ45 socket and loop it through the cable guide and cable outlet (see Fig. 7).

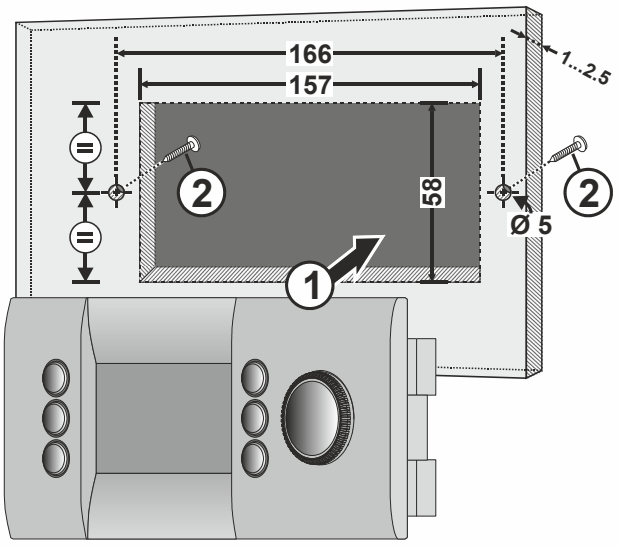

Fig. 10. Panel door mounting (in mm)

Wall-Mounting (Screw Option)

In the case of wall-mounting with screws, proceed as follows (see also Fig. 11 and Fig. 13):

1. Place two suitably dimensioned bore-holes (Ø 6 mm, with a min. depth of 35 mm) at a distance of 164 mm apart. Installation over a standard flush-mounted box (max. 140 X 35 mm) is optional.
2. Insert the two dowels (incl. in delivery) until snug.

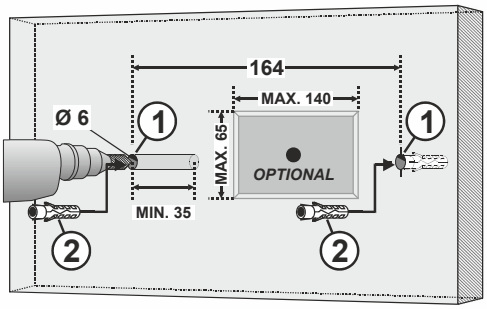

Fig. 11. Wall-mounting (screw option), steps 1+2

3. Position the sub-base (with the connection cable already in position through the upper [a'] or lower [a] cable outlet or from the flush-mounted box [a"]) over the two bore holes and insert and fasten using the two screws (incl. in delivery).

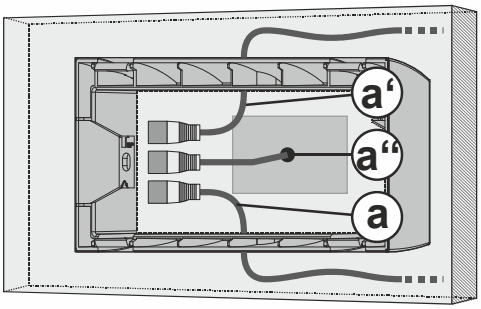

Fig. 12. Positioning sub-base and cables

4. Finally, plug the connection cable into the RJ45 socket, loop it through the cable guide and cable outlet (see Fig. 7), and then click the CLEAHMI21 into the sub-base.

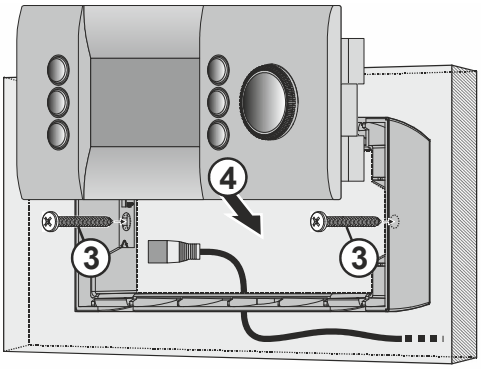

Fig. 13. Wall-mounting (screw option), steps 3+4

SPECIFICATIONS

Table 1. Specifications

Ambient temperature	0 … 50 °C
Storage temperature	-20 … +70 °C
Humidity	5 … 95% r.h. non-condensing
Dimensions	See Fig. 14.
Degree of protection	IP30 (panel- or wall-mounted)
Fire class	V0
Shock protection	Class II
Pollution degree	2
Installation	Class 3
Software class	Class A
Ball-pressure test temperature	Housing parts >75°C
Max. cable length	5 meters
Display	Dot matrix display, black & white, 160 x 80 dots, 5 lines with 20 characters

Electrical Data

Table 2. Electrical data

Power supply	From EAGLE / EAGLEHAWK NX controller attached via standard Ethernet cable to the RJ45 socket of the CLEAHMI21
Increased power consumption of EAGLE / EAGLEHAWK NX	dc: max. 0.2 W; ac: max. 0.2 VA
Increased heat dissipation	max. 0.2 W at dc power supply max. 0.2 W at ac power supply

⚠ WARNING

Risk of electric shock or equipment damage!

► It is prohibited to connect the RJ45 socket of the CLEAHMI21 to a so-called PoE-enabled device ("**P**ower **o**ver **E**thernet").

Mechanical Data

Housing Dimensions (L x B x T): 178 x 78 x 32 mm
Housing Material: ABS blend; flame retardant V0
Weight: 160 g (without sub-base, packaging)
Protection Class: IP 30 (panel- or wall-mounted)

Standards, Approvals, etc.

- Device meets EN 60730-1, EN 60730-2-9
- C UL® US-listed (file E340062)

ORDER NUMBERS

CLEAHMI21: External HMI and two M4x6 (DIN 7985A) screws

CLEAHMI-BASE: Sub-base for wall-mounting and hand-held use. Includes sub-base itself, two screws (4x35 mm) and two dowels (6x30) for wall-mounting, metal cover plate for convenient handheld use, and four magnets for mounting to metal surfaces.

DIMENSIONS

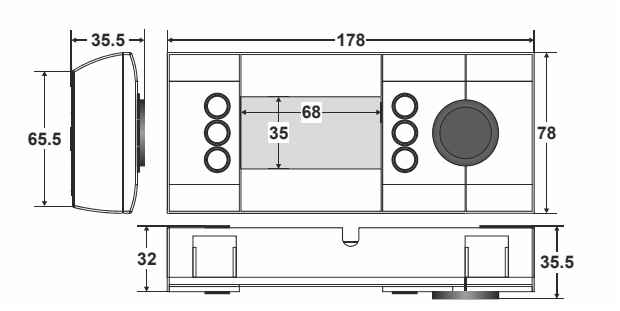

Fig. 14. Dimensions of CLEAHMI21 (in mm)

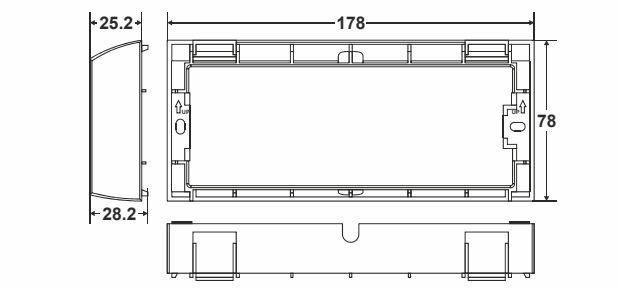

Fig. 15. Dimensions of sub-base CLEAHMI-BASE (in mm)

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Rolle, Z.A. La Pièce 16, Switzerland by its Authorized Representative:

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