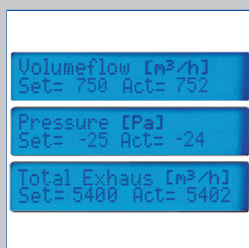# Control panels
Type BE-LCD

Display, function buttons
with status display

Text display

Control panel

For EASYLAB fume cupboard controllers or room controllers, with text display

Control panels to be used with fume cupboard controllers or room controllers, for displaying operating values, activating functions and signalling operating states

- Signalling of safety-related functions for fume cupboards according to EN 14175 or of operating states for rooms
- Display of actual values, setpoint values and status messages
- Wireless communication with Bluetooth module
- 40-character text display
- Push buttons for the operating mode default setting and for specific functions
- Project-specific range of functions with configurable push buttons
- Integral service socket for configuration and diagnosis
- Casing suitable for flush mounting to fume cupboard side frame, or for surface mounting on a wall

Application

Application
– Control panels Type BE-LCD for displaying and operating the aerodynamic functions of fume cupboards or rooms
– Display of actual values, setpoint values, and operating states either as text or on the status display
– Optical and acoustic alarms
– Operating mode default setting
– Operation of lighting, automatic sash device or blinds without additional installation or wiring

Control panel for fume cupboard control
– Status display to EN 14175
– Connection to fume cupboard controller EASYLAB TCU3

Room control panel
– Status display for the volume flow rate or differential pressure control of a room
– Connection to room controller EASYLAB TCU3 or TAM with active room management function

Special characteristics
– Large three-colour status display
– Push buttons and functions can be configured individually
– Easy to use – available function buttons are visible, unavailable function buttons are not visible
– Excellent operating reliability as a result of continuous self monitoring of the communication between controller and control panel
– Pluggable adapter which can provide four different viewing angles
– Mounting on side frame or wall

Description

Parts and characteristics
– 40-character display, backlit (blue)
– Three-colour status display (green, yellow, red) with text HIGH and LOW
– Sash monitoring warning display
– 8 function button fields, can be individually activated
– Alarm sounder
– Connection socket for EASYLAB controller
– Integral service socket for configuration and diagnosis of the controller
– Wireless communication with Bluetooth module BlueCon
– 5 m connecting cable
– Rectangular casing suitable for flush mounting or surface mounting

Useful additions
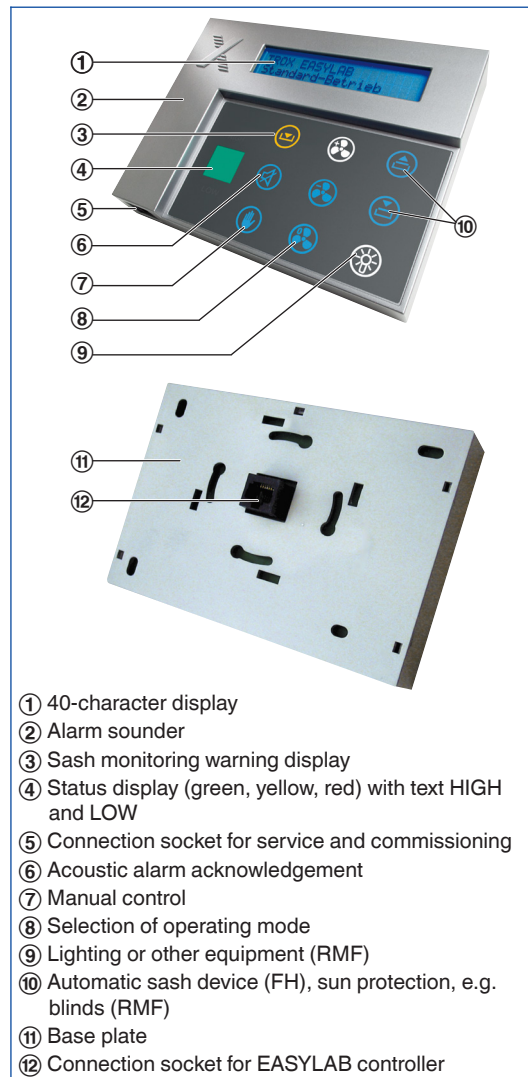– EasyConnect: Configuration software for the commissioning and diagnosis of EASYLAB components

Construction features
– Casing with base plate and pluggable adapter to facilitate mounting
– Adapter allows for mounting even on small side frames of fume cupboards
– Pluggable adapter which can provide four different viewing angles: from the right, from the left, from top, from bottom
– Pluggable connections

Materials and surfaces
– Casing in ABS plastic
– Casing: pearl light grey (RAL 9022)
– Front plastic: anthracite grey (RAL 7016)

EASYLAB control panel BE-LCD

① 40-character display
② Alarm sounder
③ Sash monitoring warning display
④ Status display (green, yellow, red) with text HIGH and LOW
⑤ Connection socket for service and commissioning
⑥ Acoustic alarm acknowledgement
⑦ Manual control
⑧ Selection of operating mode
⑨ Lighting or other equipment (RMF)
⑩ Automatic sash device (FH), sun protection, e.g. blinds (RMF)
⑪ Base plate
⑫ Connection socket for EASYLAB controller

The BE-LCD control panel is used to display and control the most critical aerodynamic and safety-related functions of a fume cupboard or a room. Users obtain information regarding the condition of the fume cupboard or room and can select among various operating modes. The individual display elements and controls are as follows:
– Three-colour status display
– Warning display
– 40-character display
– Alarm sounder
– 8 function button fields: 1 acoustic alarm acknowledgement, 3 operating mode buttons, 2 buttons for the automatic sash device, 1 button for the fume cupboard lighting, 1 button for manual control

– Service socket
The range of functions of the control panel can be adapted to project-specific requirements using the EasyConnect configuration software. The range of functions may vary for different fume cupboards or rooms.
The function button fields are used for display and for operation. The available functions are highlighted in blue.
A required function can be selected by pressing the corresponding button.
– Selecting an operating mode
– Automatic sash device
– Fume cupboard lighting on/off
The 40-character display shows system messages or, if enabled, actual values.

Supply voltage	24 V DC from the controller TCU3 or adapter module TAM
Connecting cable	Approx. 5 m standard network patch cable, SF-UTP, extendable to 40 m
Operating temperature	10 – 50 °C
IEC protection class	III (protective extra-low voltage)
Protection level	IP 20
EC conformity	EMC according to 2004/108/EC
Dimensions	145 × 111 × 23 mm
Weight	0.280 kg

Control panels with adjustable status display for the EASYLAB system, used to display and control the most critical aerodynamic and safety-related functions of a fume cupboard or a room. The control panel includes a backlit 40-character display, function buttons, a three-colour status display, an alarm sounder, and a service socket. Mounting on side frame or wall
Functions
– Configurable, optical and acoustic signalling of the safety-related functions
– Text displays in several languages
– Large three-colour status display; green, yellow or red with text LOW or HIGH (red: either blinking or permanent)
– Continuous self monitoring of the communication between controller and control panel
– Integral service socket for configuration and diagnosis
– Wireless communication with Bluetooth module BlueCON
– Two control panels can be connected simultaneously to a controller
Configurable functions
– Available (configured) function buttons are visible
– Unavailable function buttons are not visible

Control panel for fume cupboard controller
Function buttons that can be activated
– Warning display that the 'maximum operational sash opening' has been exceeded
– Increased volume flow
– Reduced volume flow
– Shut-off mode
– Automatic sash device
– Fume cupboard lighting
– Manual mode (override operating mode default setting)
Text display
– Service is due (option)
– Power supply failure (EASYLAB controller with expansion module EM-TRF-USV)
– Smoke extract is active
– Extract air scrubber is active
– Device faults (various codes)
– Display of face velocity actual value at fume cupboards (option for fume cupboards with face velocity transducer)

Control panel for room controllers
Functions
– Configurable, optical and acoustic signalling of the safety-related functions of a room with up to 24 EASYLAB controllers

– Room pressure monitoring
– Monitoring of the total room extract air (excess will be signalled)
– Monitoring of the minimum room extract air (shortfall will be signalled)
– Consolidated alarm for the room
Function buttons that can be activated
– Increased volume flow
– Reduced volume flow
– Shut-off mode
– Manual mode (override room operating mode default setting)
– Control input signal for an individually usable relay changeover contact, e.g. for lighting
– Control input signal for sun protection/blinds (to be provided by others)
The operating mode default setting applies to all controllers in a room.
Text display
– Room operating mode
– Total room extract air setpoint value and actual value (option)
– Room pressure setpoint value and actual value (option)
– System and device faults
– Power supply failure (EASYLAB controller with expansion module EM-TRF-USV)

Special characteristics
– Large three-colour status display
– Push buttons and functions can be configured individually
– Easy to use – available function buttons are visible, unavailable function buttons are not visible
– Excellent operating reliability as a result of continuous self monitoring of the communication between controller and control panel
– Pluggable adapter which can provide four different viewing angles
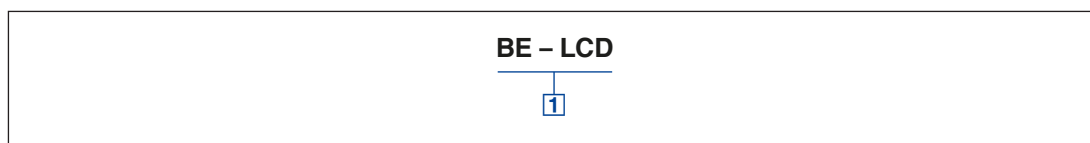– Mounting on side frame or wall

Materials and surfaces
– Casing in ABS plastic
– Casing: pearl light grey (RAL 9022)
– Front plastic: anthracite grey (RAL 7016)

Technical data
– Supply voltage: 24 V DC from the controller TCU3 or adapter module TAM
– Plug-in connection cable, 5 m long, extendable to 40 m (standard network patch cable SF-UTP)
– Protection level: IP 20

BE-LCD

BE – LCD

1

1 Type
BE-LCD Control panel with 40-character display

Application
– Displaying and operating the aerodynamic functions of fume cupboards
– Status display to EN 14175
– Connection to fume cupboard controller EASYLAB TCU3
– Two control panels can be used for each fume cupboard controller, e.g. for fume cupboards with sash windows on two sides

Functions
– Signalling of safety-related functions for fume cupboards according to EN 14175
– Sash distance monitoring

Text displays
– Volume flow rate actual value and setpoint value
– Face velocity actual value (fume cupboards with face velocity transducer, equipment function FH-VS)
– Divesity threshold has been exceeded

The fume cupboard controller monitors the required volume flow rate and, depending on configuration, the face velocity. A relevant deviation is indicated on the three-colour status display, together with the text LOW or HIGH. If the volume flow rate is too low, an acoustic alarm is sounded.

Status display
– Green: Normal operation
– Red with text LOW: Alarm, volume flow rate too low
– Yellow with text HIGH: Warning, volume flow rate too high

– Service is due
– Power supply failure (EASYLAB controller with expansion module EM-TRF-USV)
– Smoke extract
– Extract air scrubber is active

Configurable functions
– Operating modes
– Lighting
– Automatic sash device

Operating modes
– Increased volume flow (emergency operation)
– Reduced volume flow (night-time operation)
– Shut-off (night-time operation, system shutdown)
– Manual mode (permanent override of central settings)
– Increased volume flow and manual mode can be set for a limited period

The red signal can be configured either as a permanent light or blinking, as recommended by EN 14175
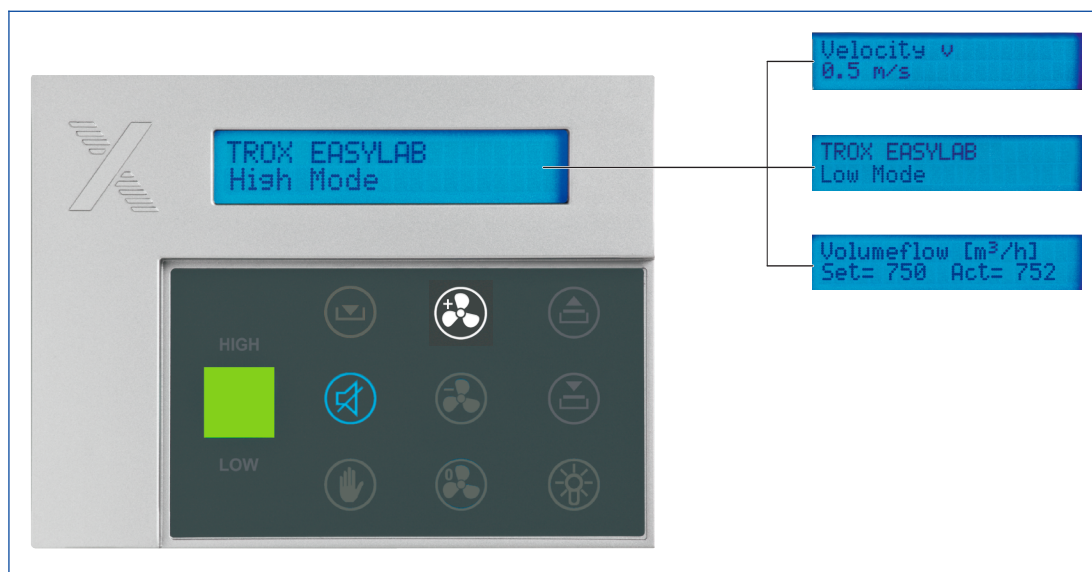
40-character display
– Text display of operating values, system states and faults in various languages
– Information about the safety of the user's workplace

Controls
– Function buttons to switch operating modes, automatic sash device or fume cupboard lighting

BE-LCD as control panel for fume cupboards, typical configuration and display example

Application
– Displaying and operating the aerodynamic functions for rooms with up to 24 EASYLAB controllers TCU3
– Connection to room controller EASYLAB TCU3 or TAM with active room management function
– The room control panel is the main unit for the room operating mode concept within the EASYLAB system
– Two room control panels can be used for each room controller, e.g. on the two doors to a large laboratory

Functions
– State signalling for the configured room functions

Monitoring
– Minimum total room extract air (shortfall will be signalled)
– Total room extract air (excess will be signalled)
– Room or duct pressure control
– Configurable consolidated alarm (volume flow rate deviations, device faults) for all controllers in a room

Text displays

Depending on the control strategy and configuration, the control panel monitors and signals for example the total volume flow rates or pressure conditions for a room that is equipped with up to 24 EASYLAB controllers. Relevant deviations are indicated on the three-colour status
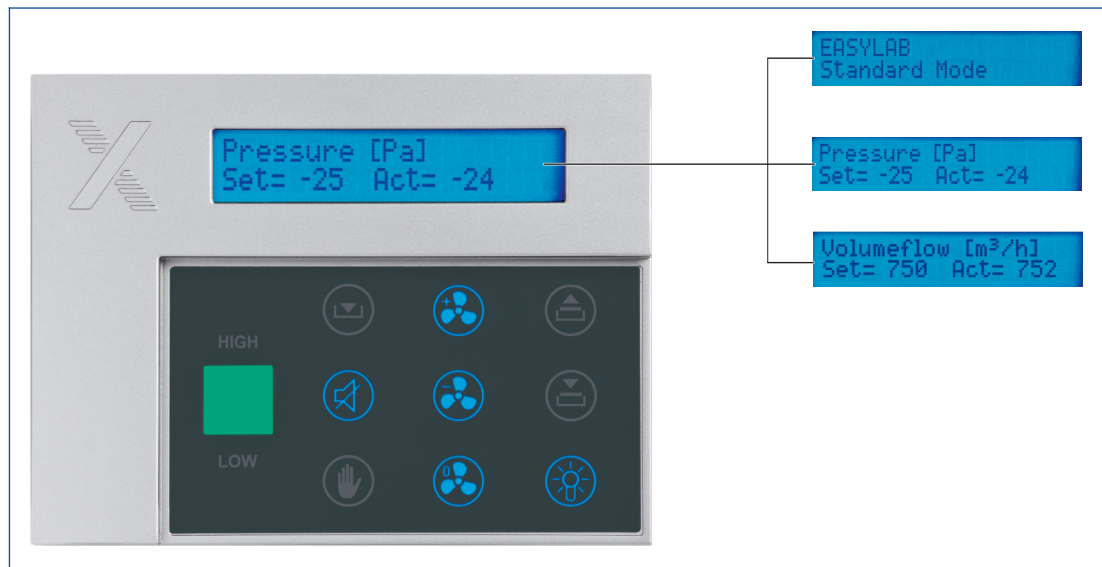
– Room operating mode
– Total room extract air setpoint value and actual value (can be configured)
– Room pressure setpoint value and actual value (can be configured)
– System and device faults
– Power supply failure (EASYLAB controller with expansion module EM-TRF-USV)
– Divesity threshold has been exceeded or diversity control is active (option)

Configurable functions
– Selection of operating mode for all controllers in a room, without additional wiring
– Increased volume flow (emergency operation)
– Reduced volume flow (night-time operation)
– Shut-off (night-time operation, system shutdown)
– Manual mode (permanent override of central settings)
– Control input signal for an individually usable relay changeover contact, e.g. for lighting
– Control input signal for sun protection/blinds (to be provided by others)
– Increased volume flow and manual mode can be set for a limited period

display. As an option, acoustic alarms can be configured. Controller faults are signalled to the room control panel as an configurable consolidated alarm. The necessary data is exchanged between the controllers via the EASYLAB communication cable.
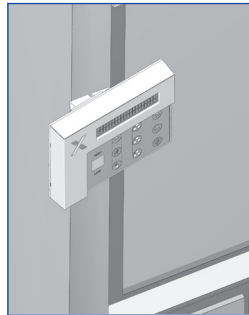
BE-LCD as room control panel, typical configuration and display example
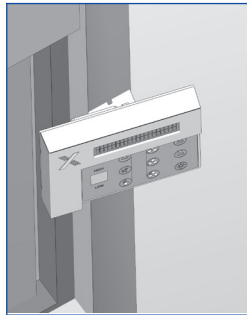
Installation and commissioning
– Mounting on the fume cupboard, using the adapter: right-hand side frame, left-hand side frame, above the sash, or below the sash
– Mounting on walls or furniture, also directly on junction boxes
– Connect the control panel to the EASYLAB controller TCU3 or to TAM
– Controller recognises the control panel
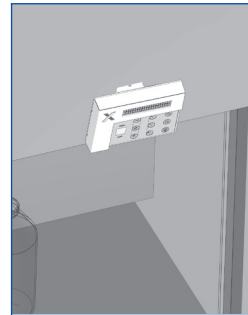– If necessary, make project-specific adjustments using the EasyConnect configuration software
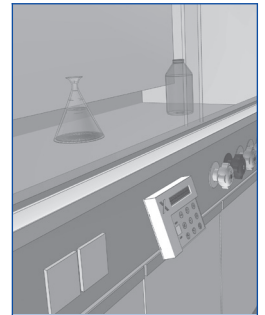
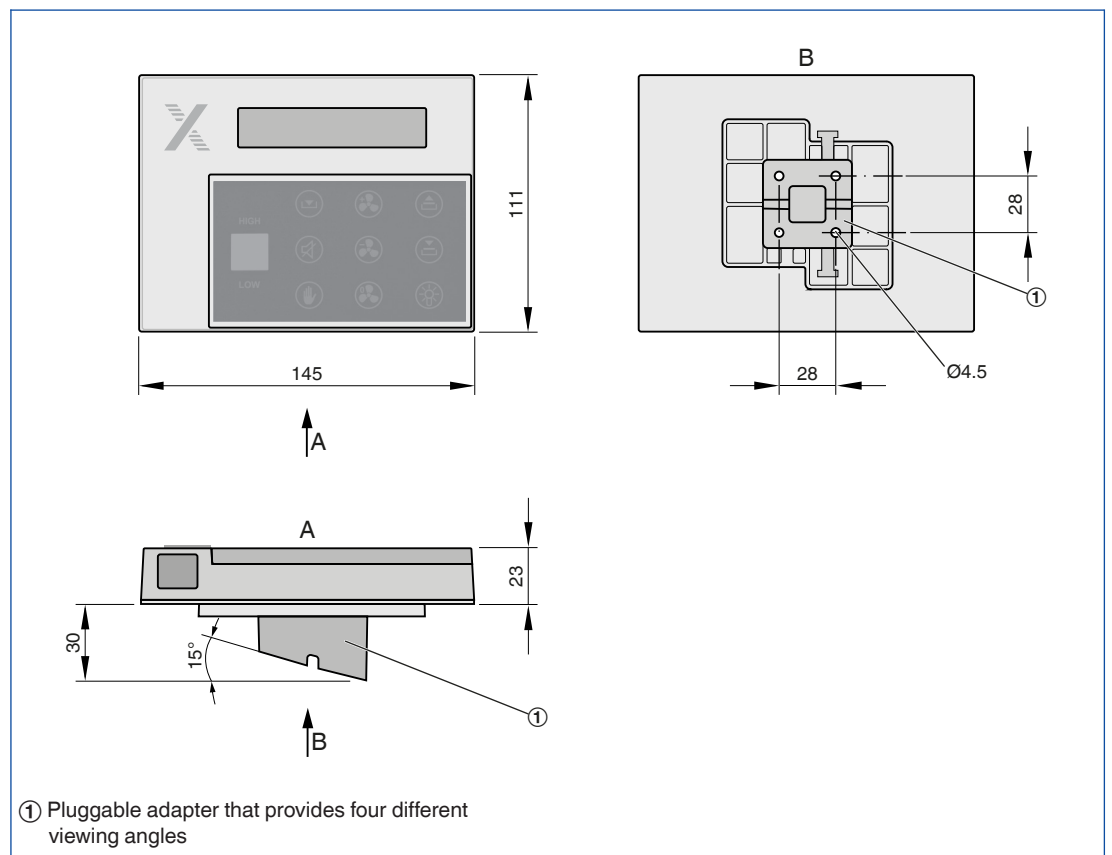**On the left-hand side frame**

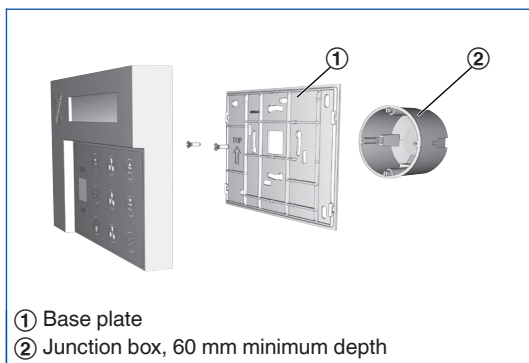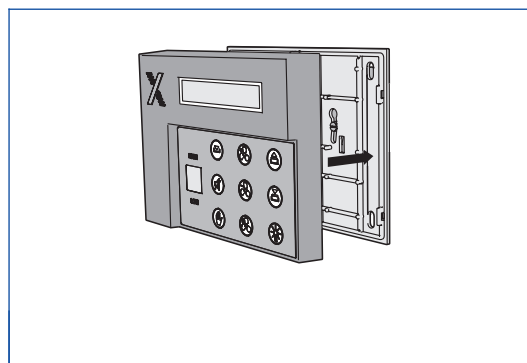**On the right-hand side frame**

Above the sash
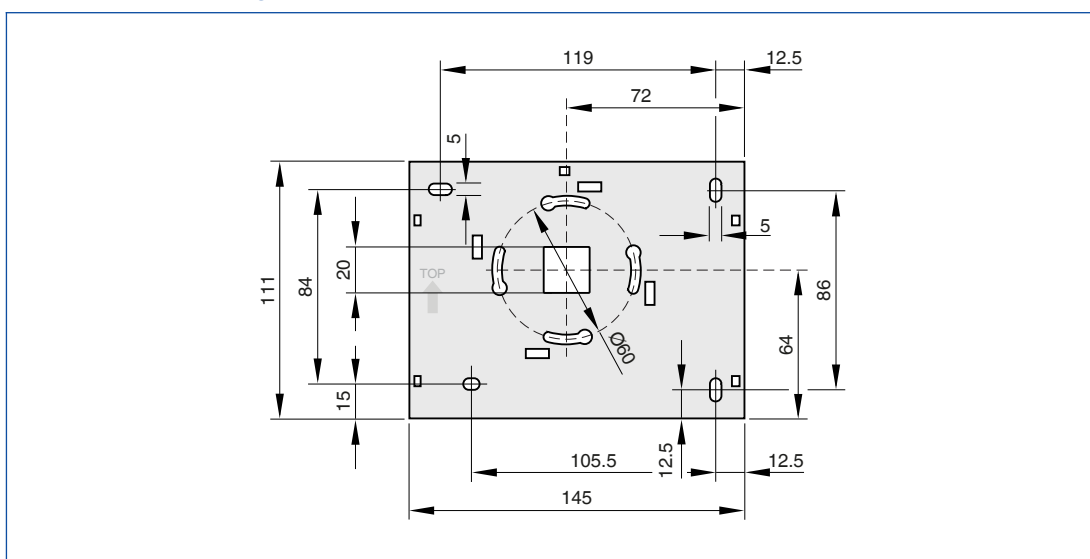

Below the sash

BE-LCD, mounted on a fume cupboard

① Pluggable adapter that provides four different viewing angles

Fixing the base plate to a junction box

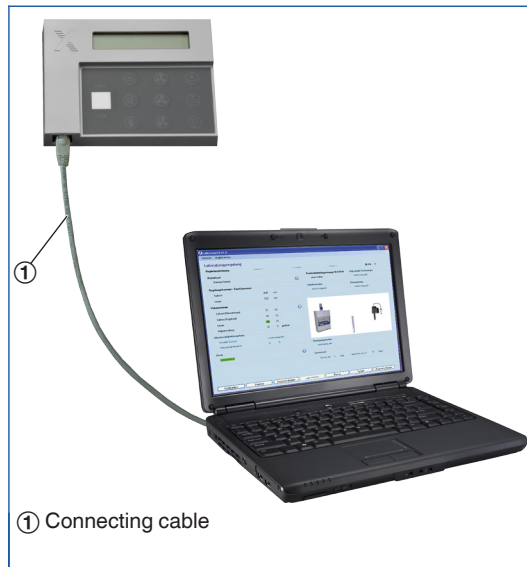① Base plate
② Junction box, 60 mm minimum depth

Fixing the base plate to the wall

BE-LCD, wall mounting without adapter

Connection of commissioning and service devices with a cable

① Connecting cable

Wireless connection of commissioning and service devices

① Connecting cable
② Bluetooth module BlueCON