

## MOUNTING ON FUME HOOD

The FLLb Flow Regulator is primarily intended for exhaust airflow control in fume hoods. Other applications may occur.

### For all installations, ensure:

- The flow sensor in the regulator is connected to a measuring flange via hoses.
- A damper with a damper motor is connected using the damper motor's wiring.
- Power supply wiring is connected. Optionally, the communication loop should be connected.

## Equipment

- 2 x** Hose 8x5 (1 m):
- For connecting to the + and - on the measuring flange.
  - Included as an accessory to the FLLb.
- 1 x** Wiring: 4-conductor FLAQQBR
- An accessory used for connecting regulators to the power supply and communication loop.
  - Also used as wiring for connecting peripheral equipment to the regulator.
  - Follow the color code on the conductors according to the external wiring diagram.

- 1 x** Circular Damper with Measuring Flange SPMF
- 1 x** Damper Motor DA4
- 1 x** Regulator FLLb Mounting Options:
1. On damper motor DA4
  2. Via mounting plate MPLb
- 1 x** Fume Hood Monitor FLOCHECK F Version B02:
- An accessory ordered separately.
  - The panel is equipped with pre-wired cabling with a 4-pin connector for connection to the FLLb.
- NOTE:** Version B02 can be used with previous versions of the FLLb regulator.

## 1. MOUNTING ON DAMPER MOTOR COVER

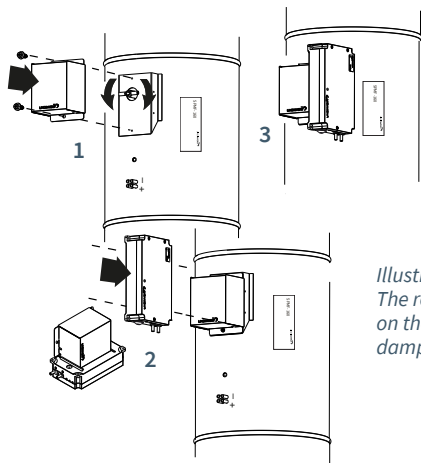
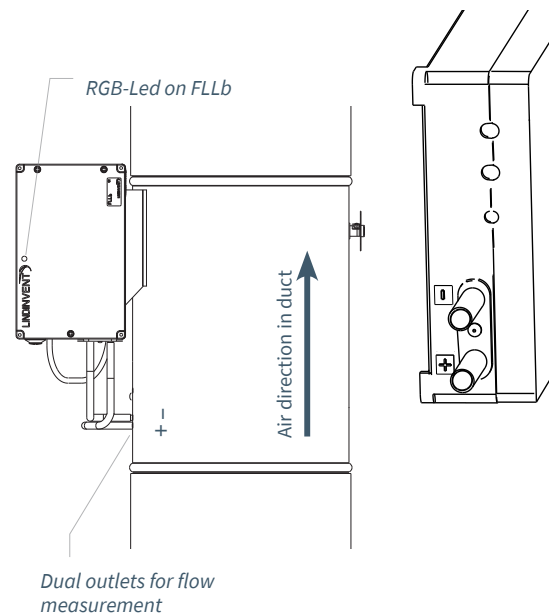


Illustration M2:  
The regulator is mounted on the damper via the damper motor cover.

1. The damper motor is mounted on the damper via the motor shelf so that the damper pin fits into the damper motor. Check that the damper can rotate freely before mounting.
2. The FLLb is mounted on the DA4 damper motor by fitting it over the lugs on either side of the damper motor cover.
3. FLLb with damper motor on the exhaust duct.

## 2. CONNECTING HOSES TO THE MEASURING FLANGE

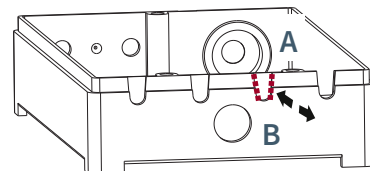
Klipp til slange (5x8) i nødvendig lengde.  
Tilkoble måleflensen til sensoren; (+) til (+) og (-) til (-).



## 3. WIRING

Follow the external wiring diagram for the FLLb: see inside the regulator cover.

- The regulator is connected to 24 VAC and the network (CAN) via Lindinvent's standard cable with 2 conductors for power supply and 2 conductors for communication. Lindinvent's standard cable is also used for connecting presence sensors and several other devices.
- Make openings for each cable: use wire cutters to open a suitable outlet for the cable as illustrated.
- When wiring: use a two-wire hose for the screen.
- After wiring: Replace the cover, ensuring the cables are securely clamped for a safe installation.



A: Cut x 2  
B: Bend back and forth/break off  
(Cut/clean the outlet with wire cutters)

Illustration 11: Outlets are made according to A and B for wiring.

## FUME HOOD MONITOR F

### Mounting

1. Determine the appropriate working height from the bench surface where the panel is to be mounted. Note: The distance from Flocheck F to the connected regulator must not exceed the length of the cable.
2. If pre-drilling in the duct is necessary for attachment, two holes for sheet metal screws should be made according to the hole pattern, see Illustration M1.
3. Fasten the Flocheck F.
4. The pre-wired cable from Flocheck F connects to the FLLb

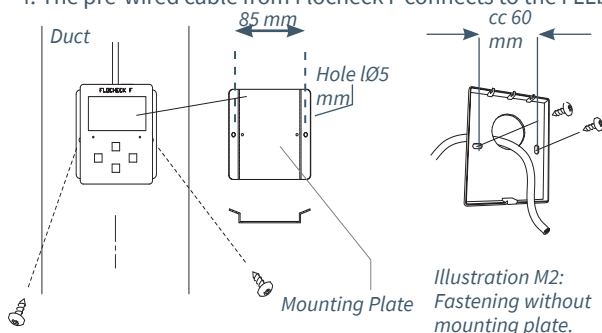


Illustration M1: Mounting on the duct via a pre-installed mounting plate.

Illustration M2: Fastening without mounting plate.

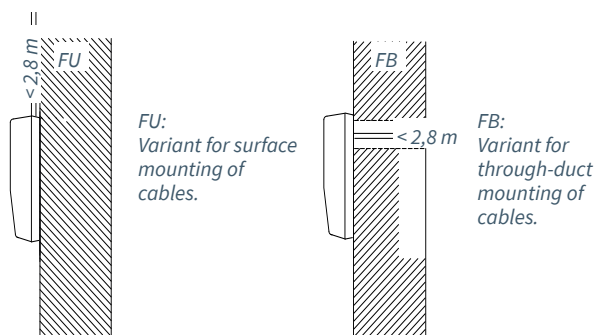


Illustration M3: Flocheck F can be ordered with cables connected at the top of the panel (FU) or via the back (FB). The FU variant can be ordered with or without a mounting plate for duct attachment.

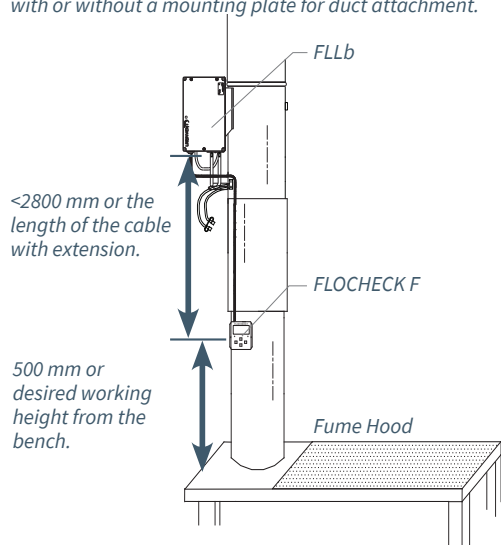


Illustration M4: Finished installation with recommended working height and mounting distance to the regulator.

## FLOW REGULATOR 2-POSITION – FLLb

### Commissioning via Connected User Panel

- The regulator is powered.
- Follow the instructions below for guidance on simple commissioning of the FLLb and fume hood control.
- A description of the actual value display and the complete menu with settings can be found in the FLL commissioning instructions.

**NOTE:** FLLb can also be commissioned via LINDINSIDE.

### Commissioning via Flocheck F

Log in via the connected FLOCHECK F with code 0819. Press <Confirm> to activate login. After logging in, access the main menu via <Confirm>. Select the desired menu option in the main menu using <Up Arrow> or <Down Arrow> followed by <Confirm>. Navigate back in the menu structure using <Back Arrow>.

Note: The main menu in FLLb starts with the menu option Quick Config, which consists of a substructure where necessary settings from the entire menu structure are gathered to facilitate commissioning. If no additional settings are made, the FLLb will otherwise operate with the original factory settings.

## QUICK CONFIGURATION

Settings under the main menu option Quick Configuration:

### Set Node-ID

Set Node-ID (A unique ID; 1-239 that must not be 0 and is chosen according to Lindinvent's recommended Node-ID division). [183]

### Set Flow Zone

If the regulator is part of a flow zone, a Node-ID different from 0 should be set here.

### Set Duct Size

Select duct size: 100 - 630 (Lindinvent's circular dampers/measurement units) otherwise select "Set K-factor".

### Set K-factor

Not relevant for commissioning on a circular duct chosen in the Set Duct Size menu option above.

### Set Location

Set the current sensor location depending on whether the sensor is connected to measure exhaust or supply air. [Exhaust]

### Set Min Flow SP

Set the projected setpoint for minimum flow (l/s). [30]

### Set Flow SP

Set the projected setpoint for normal flow (l/s). [112]

### Spjeldkalibrering (Utfør spjeldkalibrering:

Check that the damper is fully open and <Confirm>. Check that the damper is fully closed and <Confirm>.

## Verify Function

Commissioning concludes with a function check:

- Verify calibration by comparing measured airflows via instruments with the airflows indicated in FLOCHECK F.
- Refer to the user information for FLOCHECK F for guidance on handling and alarm functions.