Function Guide for the GOLD version E/F/G, Prefilter

1. General

The *Prefilter function* is designed for supervision of an extra filter installed in the outdoor air duct and/or the extract air duct.

The prefilter is used in ventilation systems, in which the extract air and/or the outdoor air is heavily polluted and it is desirable to prevent the fine filter inside the GOLD unit from becoming clogged after a short period of use.

Prefilter supervision is a ready-to-activate function in the control equipment of the GOLD unit.

Prefilter supervision requires the installation of a pressure sensor. Addressing the pressure sensor is important since the alarm limits for supervision of the prefilter are individually adjustable.

The prefilter function requires a filter calibration. The calibration is carried out in the same way as that for the regular filter.

2. Material Specification

Air handling unit **All types of GOLD**

Pre-filter of type **TBFA-1-aaa-aaa-b**

Alternative pre-filter in the TBTF intake air section, or pre-filter of a different type (not Swegon's).

Pressure sensor (set) for pre-filter. **TBLZ-2-23-aa**
Consists of: Pressure sensor.
Communication cable, BC1,
length according to aa code suffix.

Code: **aa** =01 1 m. long cable
= 03 3 m. long cable
= 05 5 m. long cable
= 10 10 m. long cable

3. Function

The *Prefilter function* is a completely independent function for monitoring a filter located outside the GOLD air handling unit.

A pressure sensor continuously measures pressure drop across the filter.

The filter must be calibrated when it is new in order to obtain a reference value for the filter monitoring function. The right high speed airflow setting must be preset first, since the calibration process must be carried out while the fans operate at the preset high flow speed.

On the basis of the reference value for the filter monitoring function and the alarm limit preset in the hand-held micro terminal, the control equipment continuously calculates the alarm point for each current flow.

The encapsulated pressure sensor is available in two variants, one with a function selector switch (variant 1) and one with a DIP switch (variant 2).

Variant 1,
pressure sensor with function selector switch

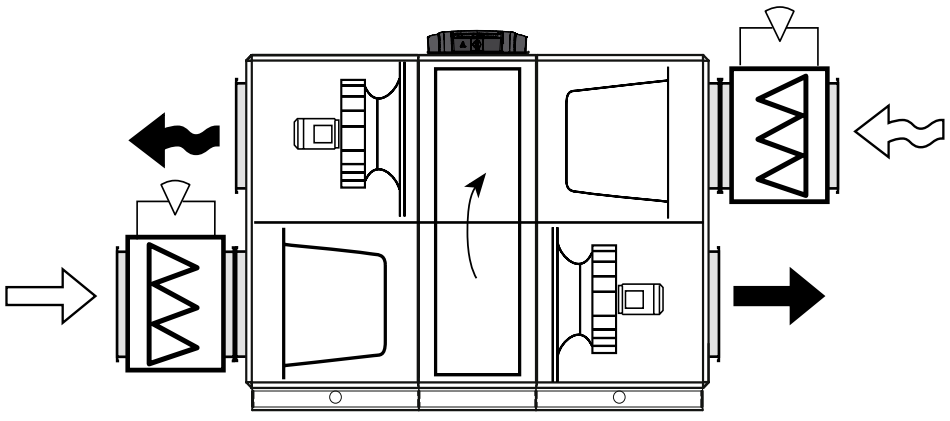
Set the pressure sensor's function switch to position 8 for prefilter supply air, and to position 9 for prefilter extract air.

Variant 2,
pressure sensor with DIP switch

The DIP switch on the pressure sensor is set according to the table below:

	Switch no. (1=ON 0=OFF)				
Function	**1**	**2**	**3**	**4**	**5**
Supply air pre-filter	0	0	0	1	0
Extract air pre-filter	1	0	0	1	0

If the current flow is less than 25% the calibration flow, the filter monitoring function will be blocked.



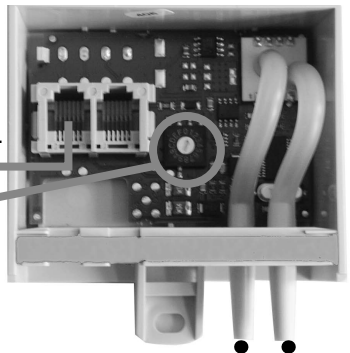
4. Connection.

Pressure sensor

Variant 1. With function selector switch

Communication cable to the control unit of the air handling unit, where it is connected to one of the outlets for COM 6-11.

Addressing function selector switch:
Prefilter in outdoor air duct = 8
Prefilter in extract air duct = 9



Slots for cable routing (2 pcs.)

Connect the hose to the pressure measurement tapping situated downstream of the prefilter.

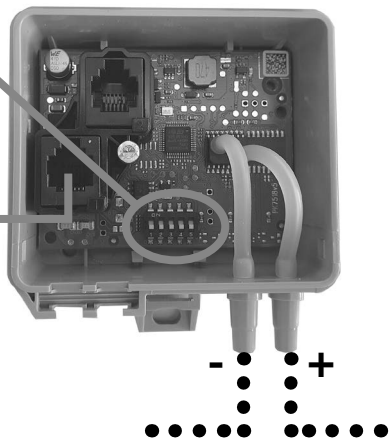
Connect the hose to the pressure measurement tapping situated upstream of the prefilter.

Variant 2. With DIP switch

Addressing

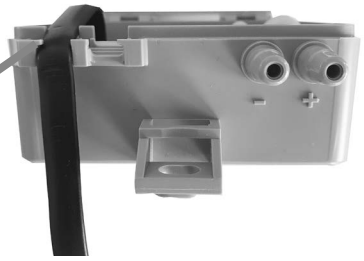
Function	Switch no. (1=ON 0=OFF) 1	2	3	4	5
Supply air pre-filter	0	0	0	1	0
Extract air pre-filter	1	0	0	1	0

Communication cable to the control unit of the air handling unit, where it is connected to one of the outlets for COM 6-11.



Slots for cable routing (2 pcs.)

Dog



Connect the hose to the pressure measurement tapping situated downstream of the prefilter.

Connect the hose to the pressure measurement tapping situated upstream of the prefilter.

Note: *Make sure that the cable is placed correctly in the slot so that it ends up under the dog. Otherwise, the cable may be clamped and damaged by the cover.*

5. To enter settings.

For basic facts on how to use the hand-held terminal, see the Operation and Maintenance Instructions for the GOLD air handling unit.

The Prefilter function must be activated manually under Functions/Core/Filter.

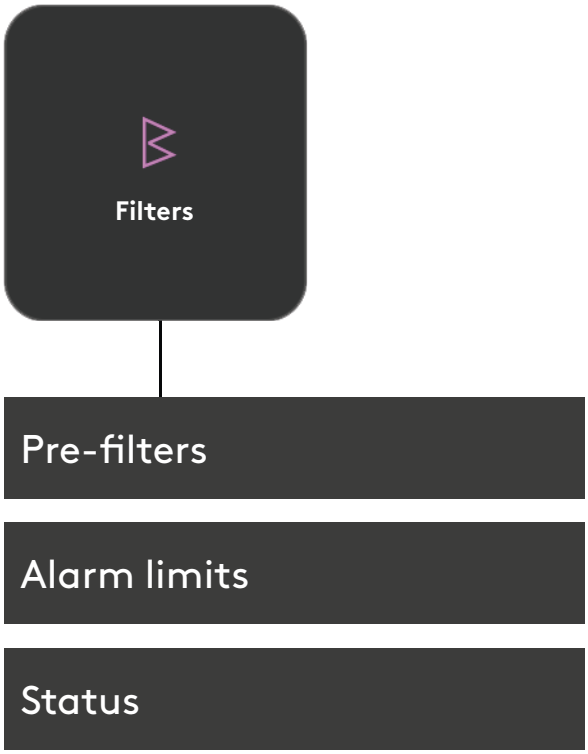
1. Select Pre-filter.

2. Select the pre-filter that is installed, supply air, extract air or supply and extract air.

3. Calibrate the filters (see also the Operation and Maintenance Instructions for the GOLD air handling unit).

4. Adjust possible alarm limits.

The current filter status can be checked under Status.



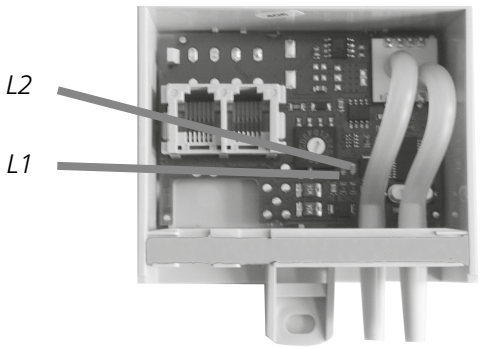
6. Performance checks

Pressure sensor:

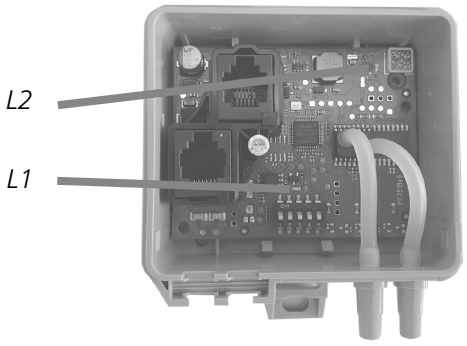
Light-emitting diode L1 lit with a steady green glow indicates that power is being supplied from the GOLD unit's control unit.

A flashing yellow light-emitting diode L2 indicates correct communication with the GOLD unit's control unit.

Variant 1.
Pressure sensor with function selector switch



Variant 2.
Pressure sensor with DIP switch



Specifications are subject to change without notice.