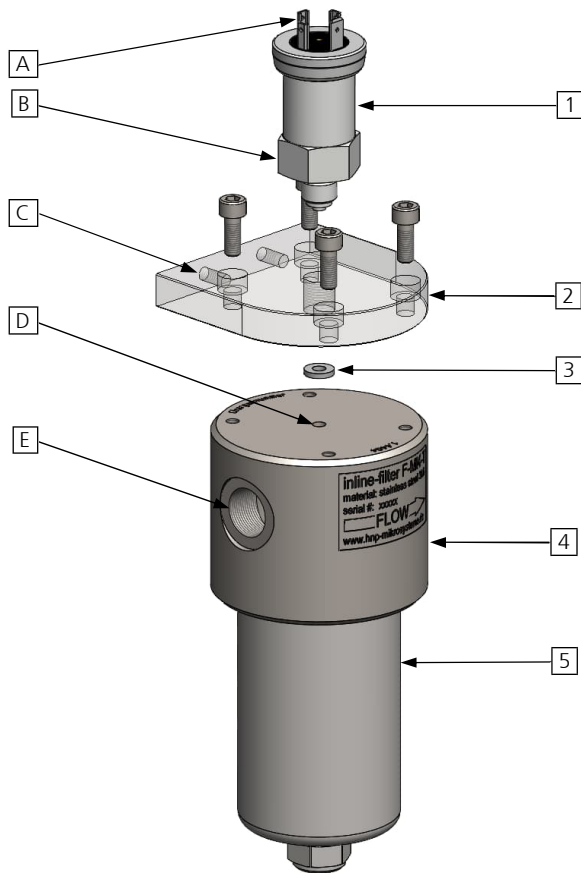
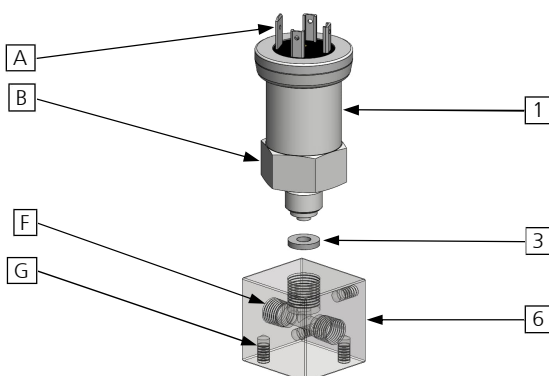


Quick Guide – Filter Monitoring Ex

T-filter



Mounting block



Technical Data

Measuring range	-1 ... 0 bar (-14.5 ... 0 psi)
Overpressure limit	+5 bar (+72.5 psi)
Accuracy	< ±0.5 % measuring range (5 mbar (0.073 psi))
Wetted parts	316L (1.4404, 1.4435), PEEK
Liquid temperature range	-40 ... +125 °C (-40 ... +257 °F)
Operating temperature range	-20 ... +60 °C (-4 ... +140 °F) at p _{atm} 0.8 ... 1.1 bar (11.6 ... 15.95 psi)
Output	1 analog signal: 4 ... 20 mA / 2-wire
Explosion protection approvals of filter monitoring	IBExU 10 ATEX 1068 X / IECEx IBE 12.0027X Zone 0: II 1G Ex ia IIC T4 Ga Zone 20: II 1D Ex ia IIIC T 85°C Da
Fluid connection mounting block pressure sensor	1/4" -28 UNF, 1/8" NPT or 3/8" NPT

Items and descriptions

Item no.	Description	Material
1	Pressure transmitter IMP 331	Stainless steel 316L (1.4404, 1.4435)
2	Mounting plate filter monitoring	Stainless steel 316L (1.4404)
3	Sealing disk Ø 11.2 x 2 mm	Thermoplastic (PEEK)
4	Filter head	Stainless steel 316L (1.4404)
5	Filter housing	Stainless steel 316L (1.4404)
6	Mounting block pressure sensor	Stainless steel 316L (1.4404)
A	Electrical connection ISO 4400 (IP 65)	
B	Hexagon bolt AF 27	
C	Mounting hole M6 (2 times)	
D	Process connection in filter head Ø 5 mm	
E	Fluid connection (2 times, only inlet port shown)	
F	Fluid connection (2 times, connection sizes see above)	
G	Mounting hole M5 (4 times)	

Safety instructions

According to the ignition hazard assessment to DIN EN ISO 80079-36:2016-12, the inline filters of the F-MI series do not have their own potential ignition sources when used as intended and therefore do not fall within the scope of Directive 2014/34/EU (ATEX). Combining the filters with an optionally available filter monitoring system does not result in any additional ignition hazard as a consequence of the assembly. With regard to explosion protection, this case is thus to be regarded as a combination of "individual sub-units". The filter monitoring conforms to Directive 2014/34/EU and can be used in accordance with its explosion protection approval for the potentially explosive atmospheres listed above.

All of the following tasks must be carried out only by professional and qualified personnel.

The filter monitoring must be operated within its specifications. Manipulation, misuse and damaging of the filter monitoring are forbidden. It is only allowed to use original-spare parts. The internal safety instructions for the used medium must be observed. The protective measures listed only achieve the required safety if the filter monitoring is operated as intended and installed and maintained in accordance with the requirements applicable to it.

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Installation/Assembly – T-filter

- **i** For more information, see also the quick guide for the associated inline filter.
- The filter (incl. filter monitoring) should be placed upstream of the component to be protected (e.g. pump)
- Use the mounting holes **C** of the mounting plate **2** to mount the filter (incl. filter monitoring) in the system – filter housing **5** must point downwards
 - ⚠ **Attention!** Fastening the filter only by the fluidic connections **E** is not allowed!
- Ensure a tension free connection of the system tubing to the fluidic connections **E**
- Preferably ground the filter with grounding clamps on the filter housing **5**
 - ⚠ **Attention!** The filter monitoring (incl. filter) must be included in the overall potential equalization!

Installation/Assembly – mounting block

- To avoid pressure deviations, the mounting block **6** (incl. filter monitoring) must be installed in the fluid line as close as possible to the point that is to be monitored

- Use the mounting holes **G** of the mounting block **6** to mount the filter monitoring in the system – pressure transmitter **1** must point upwards
 - ⚠ **Attention!** Fastening the mounting block **6** only by the fluidic connections **F** is not allowed!
- Ensure a tension free connection of the system tubing to the fluidic connections **F**
- Preferably ground the mounting block via one of the mounting holes **G**
 - ⚠ **Attention!** The filter monitoring (incl. mounting block **6**) must be included in the overall potential equalization!

Commissioning

- Ensure media supply
- Switch system on

Decommissioning

- Ensure system is shut down, depressurized and eventually cooled down
- Interrupt media supply

Function filter monitoring

- For filter monitoring by a higher-level controller, it is necessary to program two switch points (SP). For the switching points

SP1 and SP2 -200 mbar and -300 mbar are recommended.

- If switching point SP1 is triggered, this means that the system is still supplied with media, but that a filter change or filter cleaning must be carried out soon.
- If switching point SP2 is triggered during further operation, a filter change or filter cleaning must be carried out to ensure the quality of the media supply.
- Simultaneous triggering of both switch points SP1 and SP2 indicates a blocked or closed suction line – the complete media supply must be checked (e.g. for closed valves).

i Further information

- For detailed information on all functions of the filter monitoring, refer to the enclosed installation instructions and the detailed operating instructions of the pressure transmitter manufacturer.
- The exchange of the filter element is described in detailed steps in the quick guide for the associated inline filter.

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