

# Operating Instructions

Filter ventilator FL-ExVENT



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## 1 Use

The FL-ExVENT filter fan is manufactured according to Directive 2014/34/EU and is used for the aeration and ventilation of housings. It consists of an encapsulated shaded pole motor ExVENT 3025 in a stainless steel housing, or optionally in a GFK housing, which is approved for Ex zone 1 of equipment category G in temperature class T4, and an outlet or intake filter.

EC type examination certificates PTB 10 ATEX 2023 with appendices and supplements in German and English, as well as IEC Scheme Certificate IECEx PTB 11.0016X.

See <http://www.intertec.info>

## 2 Explanation of symbols for warnings and signal words

The safety information warns the user about risks and provide information on how risks can be avoided.

Safety information can be found at the start of the chapter before the instructions which may lead to a hazardous situation. Additional safety information can be found at the beginning of this manual.

Safety instructions which must be adhered to are highlighted as follows:

### DANGER

#### DANGER

This sign is warning about an extremely hazardous situation which, if not heeded, will lead to death or serious irreversible injury.

### WARNING

#### WARNING

This sign is warning about a hazardous situation which, if not heeded, may lead to death or serious irreversible injury.

### CAUTION

#### NOTICE

This sign is warning about a hazardous situation which, if not heeded, may lead to slight, reversible injury.

## NOTICE

### NOTE

It is essential to pay attention to this safety advice as you may otherwise incur material damage.

### INFO

Important notes and useful additional information.

## 3 Safety information

### CAUTION

#### Risk of injury

There is a risk of injury on rotating and/or hot components.

## 4 Technical Data

Rated voltage	max. 230 V AC
Permitted operating voltage	max. 250 V AC
Special voltages with corresponding power adjustment and component selection are possible	
Rated current (in compliance with VDE 0298)	max. 1 A
Rated output	25 W
Protection class <i>IEC EN 60529</i>	IP55*
Ambient temperature	- 60 to + 60°C
Max. permitted operating temperature at rated operation	- 40 to + 55°C
Insulation class	H
Temperature class	T4
Motor	ExVENT 3025 L175 PA.
Rated speed	2500 rpm
Air delivery volume	300 cbm/h*
Installation position	optional
Delivery direction O	blowing out
Delivery direction I	blowing in
Connecting cable	Silicon tube conductor, resistant to notching and oil, 3x 1.5 mm <sup>2</sup> , Ø 8.4 mm

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Connecting cable optionally with AM	Fault alarm opens at >112°C 250 V 1 A AC Silicon tube conductor, resistant to notching and oil, 5x 1.0 mm <sup>2</sup> , Ø 8.8 mm
Filter mat	G4 Only in delivery direction: blowing in
Housing material	Stainless steel or GFK
Dimensions H x W x D	252 x 252 x 165 mm

\*freeblowing; in conjunction with an inlet/outlet filter series PFA 40000 with filter mat G4

The operating temperatures must be adhered to, otherwise the thermal safety fuse will be triggered.

The connection line must be permanently installed up to the inlet in the on-site junction box, taking the permissible bending radius = 5 x outer diameter into consideration.

The connection line must be connected in a housing that complies with the requirements of a recognized type of protection in accordance with EN 60079-0:2009 section 1 if the connection is made in a potentially explosive atmosphere.

The nameplate must always remain easily legible.

## 5 Installation

### NOTICE

#### Risk of Damage

When removing from the packaging and during transport, the connection line must not be stressed or bent.

Any installation location can be chosen for the filter fan. The cut-out is optionally made in the wall or door.

Filter type	Cut-out size (mm)	Overall dimension of filter (mm)	Depth (mm)
PFA 40000	223 x 223	252 x 252	44

- Smooth the edges of the mounting cut-out
- The FL-ExVENT is inserted from the outside through the opening
- The clamping lugs can be perceptibly and audibly clicked into place in all four corners by exerting slight pressure
- Seal the cut-out circumferentially with silicon from the inside of the housing

### NOTICE

#### Risk of Damage

The protection class IP55 can only be guaranteed if the installation position is correct and the seal is not damaged.

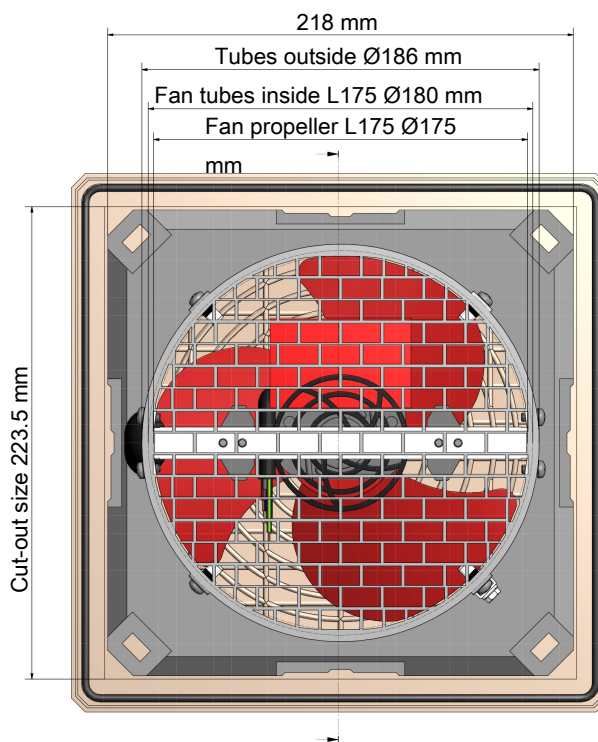


Illustration 1: FL-ExVENT front view blowing out

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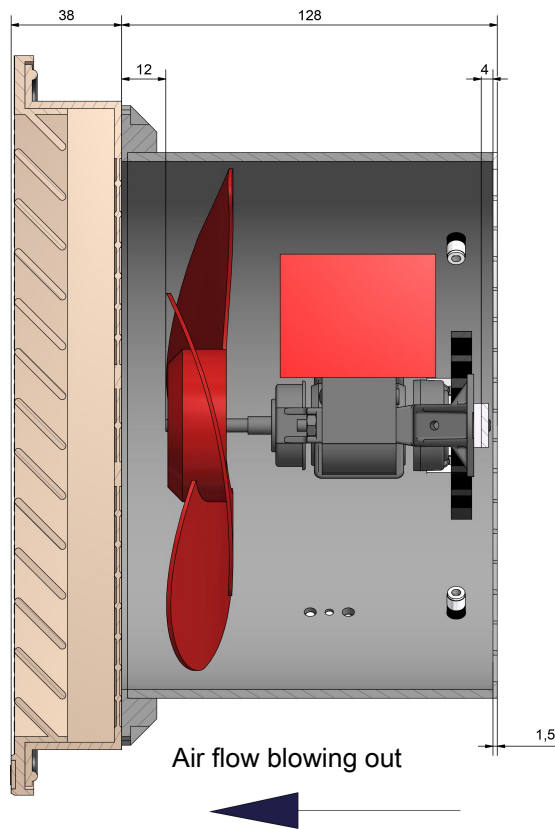


Illustration 2: FL-ExVENT side view blowing out

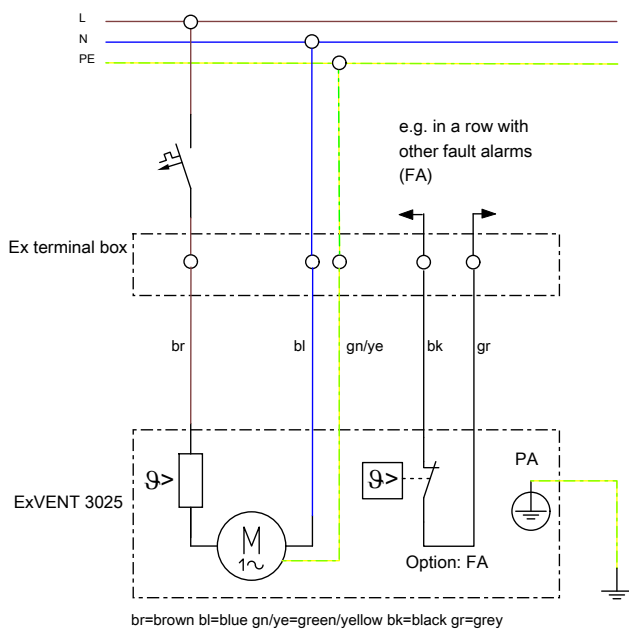


Illustration 3: ExVENT 3025 circuit diagram

## 6 Connection

### **i** INFO

The device may only be connected up and secured by a trained person, taking into account the "rated voltage" and "rated current" specified on the nameplate.

A fuse corresponding to its rated voltage (max. 3 x IB according to IEC 60127-2-1) or a motor protection switch with short-circuit and thermal instantaneous release (setting to rated current) must be upstream of each electric motor. In the case of very low rated currents of the electric motor, the fuse with the lowest current value according to the specified IEC-standard is sufficient. The fuse must be housed in the associated power supply unit or separately upstream. The fuse rated current must be the same as or greater than the specified maximum working voltage of the electric motor. The breaking capacity of the fuse link must be the same as or greater than the maximum short-circuit current expected at the place of installation (normally 1500 A). A connection box with a melting fuse can be used for example.

## 7 Commissioning

If the electric motor was installed according to the guidelines specified under section Installation and section Connection [▶ Page 5] and it is guaranteed that no foreign bodies can reach the rotating components, then the electric motor can be switched on.

A thermal safety fuse is integrated that disconnects the motor from the mains for reasons of explosion protection in the event of external heating or blockage. This also occurs if these installation instructions are not complied with.

We recommend a thermostat upstream at temperatures ranging from 40°C.

## 8 Troubleshooting



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## **⚠ DANGER**

### Risk of fatal injury from electric current!

If contact is made with live components, there is the risk of fatal injury.

For this reason, switch off the voltage supply, secure against being switched on again and check that no more voltage is present.

## **i INFO**

Repairs may only be carried out by the manufacturer (INTERTEC-Hess) in all cases.

Do not disassemble the device! Opening the units will render the warranty invalid.

Fault:	Remedial action:
Connection	
Connection line not connected properly	Check connection
Mains voltage has a different frequency than 230-250 V AC 50 Hz	Check mains voltage and frequency
Fan used for cooling: Power supply is interrupted by external thermostat	Room air is cooler than the temperature set on the thermostat
Connecting cable is damaged	The connecting cable must be protected mechanically
Fan blade	
Foreign bodies in the fan blade	Remove foreign bodies – make sure that the fan can move freely
Blocked fan blade overheats the motor – thermal safety fuse is triggered	Device must be replaced
Auxiliary fan blocked	Use spacers to create space
Temperature	
Temperature of suction medium is greater than +60°C – thermal safety fuse is triggered	The temperature of the pumped medium must always be less than +60°C Device must be replaced
Fault alarm is triggered	Cause: Motor blocked Device must be replaced

## 9 Maintenance

The filter must be changed at regular intervals depending on the degree of contamination of the intake air.

## NOTICE

**Only change the filter from the outside through the filter cover!**

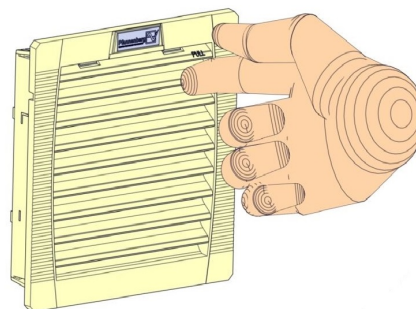


Illustration 4: Open the filter with the aid of the top slat

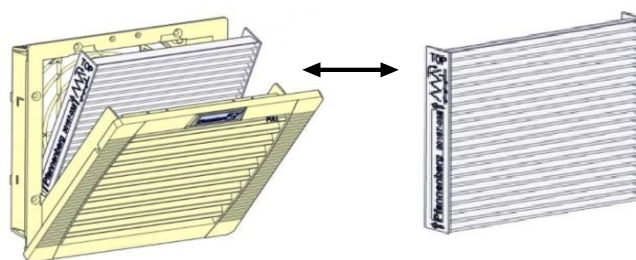


Illustration 5: Replace filter mat – make sure that the filter is positioned correctly

Only the original spare parts must be used, since otherwise the warranty and approval will be rendered invalid. Furthermore, if the original spare parts are not used, protection classes and performance data can no longer be guaranteed.

## 10 Service

To preserve the operational capability and to prevent unplanned downtimes of the device, please observe the following measures:

- **Corrosion:**  
Highly aggressive media must be avoided
- **Pump clean air:**  
If the air is very dusty, you must use a filter upstream

## 11 Deinstallation

Disassembly may only be carried out by a trained person.



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## DANGER

### Risk of fatal injury from electric current!

If contact is made with live components, there is the risk of fatal injury.

For this reason, switch off the voltage supply, secure against being switched on again and check that no more voltage is present.

Disconnect connection line from the clamps and from the connection socket, disconnect device from bracket and remove it.

## 12 Disposal

Disassemble the components of the product, taking the applicable local labour protection and environmental regulations into consideration and make sure that the components are recycled:

- Scrap metal
- Send plastic elements to recycling
- Sort other components according to their material properties and dispose of them.

## NOTICE

### Environmental damage may be caused if disposed of incorrectly!

Electrical scrap and electronics components are subject to hazardous waste treatment and must only be disposed of by certified specialists!

The local community authorities or specialist waste disposal companies can provide information on environmentally friendly disposal.

## 13 EC declaration of conformity

The manufacturer, INTERTEC-Hess GmbH, Raffineriestrasse 8, 93333 Neustadt/Donau, Germany, hereby declares in sole responsibility that the product

### Product / Type designation:

FL-ExVENT

complies with the provisions of the following directives **2014/34/EU (ATEX)**, **2006/95/EC (LVD)**, **2004/108/EC (EMC)**, **2011/65/EU (RoHS)**, **2012/19/EU (WEEE)** complies with the following standards or standardized documents:

EN 60079-0:2012

EN 60079-18:2009

### Designation:

CE 0102

II 2 G Ex mb IIC T4

PTB 10 ATEX 2023

Neustadt, the 13th June 2017

Dipl.-Ing. Martin Hess, Managing Director

## 14 Further information and service

If the information contained in this instruction manual should not be sufficient in any way, then INTERTEC would be glad to be at your disposal to provide further information and service.

Please contact your INTERTEC contact person or directly contact

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Germany

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Website: [www.intertec.info](http://www.intertec.info)

### Warranty

The legally defined warranties and warranty periods of 24 months are applicable to our scope of supply and services.

You will find more detailed information in the manufacturer warranty from INTERTEC for heating systems and accessories.



These instructions do not claim to take all designs, options or changes into consideration, even in association with installation, operation or maintenance. INTERTEC does not accept responsibility for providing information about changes made retrospectively.