

Fact sheet | VLT® Pressure Transmitter PTU 025

# Optimized airflow control saves energy and improves indoor climate



Mount VLT® Pressure Transmitter PTU 025 directly onto the VLT® HVAC Drive FC 102 enclosure, and connect easily to achieve seamless BMS integration.

### Optimize indoor climate

Optimizing indoor climate in for instance office buildings or hospitals will ensure a healthy work environment for optimal staff performance and increase overall well-being for both staff and patients by ensuring access to clean and fresh air.

The VLT® HVAC Drive FC 102 has a built-in airflow controller. Combining the control with the filter monitoring, via the VLT® Pressure Transmitter PTU 025, will create a solution that is easy to install and that provides great indoor climate with minimal energy consumption.

### Save energy and costs

Cut operation costs by ensuring airflow based on the actual demand and system design – whether this is based on the airflow through the fan or the pressure in the connected air distribution system.

The control solution can handle different control logics from simple pressure measurement to advanced flow or pressure control in air-handling units (AHUs)/roof top units (RTUs).

### Four PID loops for full control

The FC 102 has a total of four PID loops to support different air conditioning needs in the AHU/RTU, e.g. heating, cooling, humidification, or energy recovery. The advanced, programmable smart logic controller with four independent control loops will cover many simple AHU/RTU control solutions.

### Easy to install

The VLT® Pressure Transmitter is fast and easy to install, commission and operate. Avoid complexity in installation and system integration thanks to the simplicity of this compact design. It is built specifically for AHU and RTU applications, for reliable operation both indoors and outdoors.

### Communicate seamlessly

When combined into a single unit, the VLT® Pressure Transmitter and the VLT® HVAC Drive ensure that airflow and pressure level are handled by the drive according to predefined control parameters and sensor inputs. Communication to the connected network or building management system (BMS) is automatic and seamless.

Ensure

# clean

air and win the  
benefits of an optimal  
indoor climate

Features	Benefits
Optimizes energy consumption by aiding correct airflow and pressure in air distribution system.	Reduces operating costs to demand.
Easy to install, with dedicated software for airflow control in different combinations.	Complexity reduction. Easy control and monitoring on the local control panel of the VLT® HVAC Drive or via fieldbus network.
Three additional PID controllers for special requirements in the actual application, like integrated controller for air conditioning in AHUs and RTUs, for instance heating or cooling.	Reduce installation cost and complexity with the built-in software features.
Connects to building management system (BMS) via network, analog interface, or digital and relay outputs.	Easy to harvest, correlate and present performance data.
4 pressure sensors.	Monitoring of filter and airflow in one unit.

### Electrical connection

The VLT® Pressure Transmitter PTU 025 module is easily integrated into the VLT® HVAC Drive, and suitable for IP55/66 enclosures. It is easily mounted onto the enclosure of the VLT® HVAC Drive, and suitable for retrofitting existing drives.

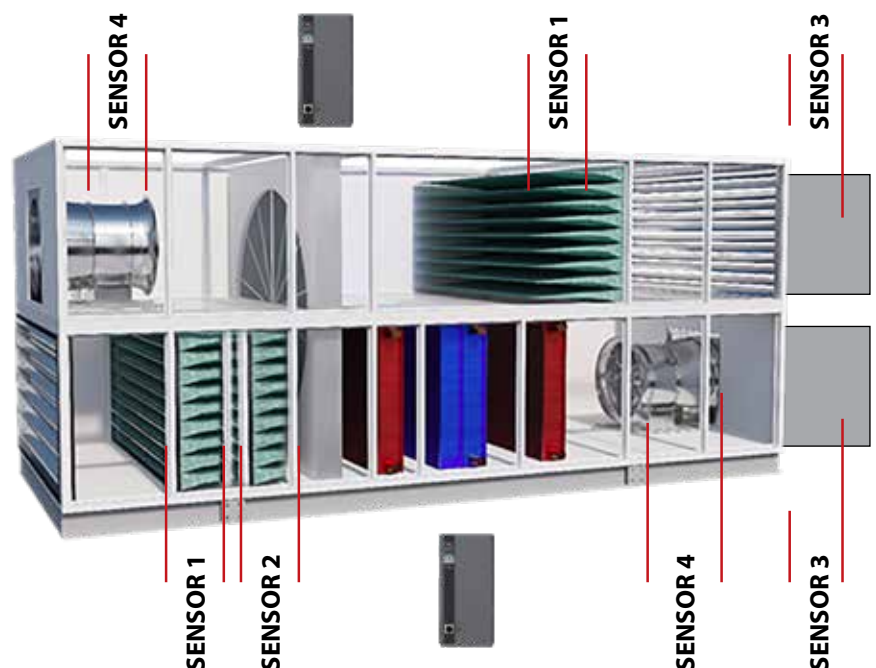


### Ordering number

Order with code number 134B5925. Includes pressure transmitter with tube relief and internal C-option connection cable with cable binder.

### Specifications

System integration	
Pressure sensor inputs	<ul style="list-style-type: none"> <li>▪ Sensors 1 and 2; working area of 0-500 Pa.</li> <li>▪ Sensor 3; working area of 0-1000 Pa.</li> <li>▪ Sensor 4; working area of 0-2500 Pa.</li> </ul> 5 mm pressure tube tap connection and holder for the tubes.
Pressure sensor outputs	Pressure signals on fieldbus and digital output, relay or as analogue values.
Control method	Airflow control with closed-loop PID regulator on air volume or pressure level in air channel.
Communication	Data communication via different fieldbus networks.
Compatibility	VLT® HVAC Drive FC 102 with minimum software version 5.12. Retrofit solution with minimum MK II new control card for older version. Internal connection to C-option slot on VLT® HVAC Drive FC 102.
Control parameterization	
Differential air pressure flow control	Use the capacity K-factor, provided by the AHU/RTU manufacture for the fan, to control the demanded airflow, or provide detailed information of the AHU/RTU to calculate the flow.
Pressure level flow control	Define the pressure level the AHU/RTU must provide to the air distribution ducting.
Performance	
Measuring accuracy	Pressure compensated to altitude, and absolute accuracy of $\pm 2.5\%$ of sensor FS value and temperature range.
Environment	
Temperature Range	-25 to +50 °C
IP class	IP66



Example of installation: The supply and exhaust air strings in the AHU are controlled by separate VLT® HVAC Drives measuring in total seven pressure points in the AHU.

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