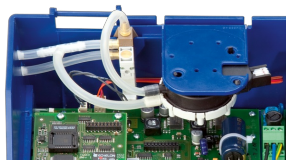**TROX® TECHNIK**
The art of handling air

EXPANSION MODULE EM-
AUTOZERO

EASYLAB CONTROLLER
INCLUDING EM-
AUTOZERO

EM-AUTOZERO

AUTOMATIC ZERO POINT ADJUSTMENT FOR TROX UNIVERSAL AND EASYLAB CONTROLLERS

Extension module for long-term stable volume flow measurement with reduced maintenance effort

- Especially recommended for volume flow measurement and control in critical areas
- Automatic recognition and use by the controller
- Expansion module is integrated into the housing of the EASYLAB or TROX UNIVERSAL controller
- Easy retrofitting
- No additional configuration effort

General information ⬜

Application

- Extension module for EASYLAB and TROX UNIVERSAL controllers based on the TCU3 controller board
- EM-AUTOZERO, automatic zero point correction for longterm stable volume flow rate measurement and reduced maintenance.
- Annua zero point adjustment manually not required

- Suitable for factory or retrofit installation Areas of application:
- For EASYLAB fume cupboard controllers
- For EASYLAB supply air, exhaust air or pressure regulators
- For TROX UNIVERSAL supply air or exhaust air controllers
- For TROX UNIVERSAL pressure regulators with integrated flow rate measurement (requires additional EM-V extension module)

- In areas with high requirements for measuring and controlling the volume flow, e.g. in laboratories, clean rooms for pharmaceuticals and semiconductor production, operating theatres, intensive care units as well as offices

Special features

- Long-term stable volume flow rate measurement and reduced maintenance
- Automatic zero point correction as soon as the supply voltage is applied
- Cyclic zero point adjustment during operation (every 8 h)
- No additional configuration effort
- Expansion module is automatically recognised by the EASYLAB and TROX UNIVERSAL controller

Parts and characteristics

- Solenoid valve
- Connection cable with two-pin plug for connection to the TCU3 controller board
- Tubes for the connection of the static differential pressure transducer

Construction features

- Dimensions and fixing suitable for EASYLAB and TROX UNIVERSAL controller casing
- The expansion module is inserted into a recess of the holder for the differential pressure transducer (no tools required)
- Can be integrated into existing tubing of the differential pressure sensor (connection with static differential pressure transmitter)
- Plug for easy connection to the controller board TCU3

Commissioning

- When ordering an air terminal unit with EASYLAB or TROX UNIVERSAL controller - specifying order option Z: EMAUTOZERO installed, connected and ready for operation
- For retrofitting: installation and connection required; module is then automatically recognised and zero point adjustment is supported
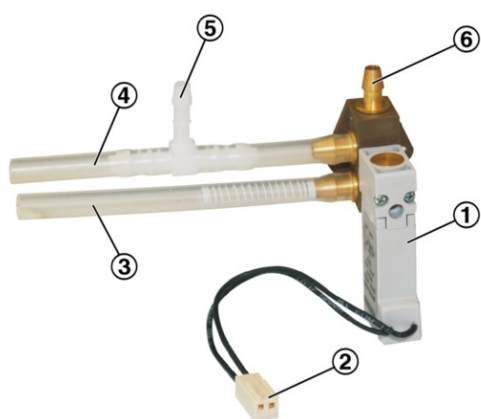
TECHNICAL INFORMATION

Function, Technical data, Specification text, Order code, Related products

The solenoid valve of the EM-AUTOZERO extension module is integrated into the tubing of the static differential pressure transmitter and connected to the differential pressure sensor of the air terminal unit. EASYLAB and TROX UNIVERSAL controllers provide a zero point adjustment at regular intervals. For this purpose, the measuring tubes of the differential pressure transducer are temporarily short circuited, then the zero voltage is measured. This measured value is used as a correction value for the volume flow rate measurement until the next zero point correction.

EM-AUTOZERO

① Solenoid valve
② Plug
③ Differential pressure sensor – plus connection
④ Differential pressure sensor – minus connection
⑤ Pressure transducer – minus connection
⑥ Pressure transducer – plus connection

Supply voltage	24 V DC from EASYLAB or TROX UNIVERSAL controller
Operating temperature	0 – 50 °C
IEC protection class	III (Protective extra-low voltage)
Protection level	IP 20
EC conformity	EMC according to 2014/30/EU with TCU3 controller, RoHs according to 2011/65/EU
Weight	0.1 kg
Storage temperature	-10 °C - +70 °C, humidity max. 90 % (non-condensing)

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design programme.

Extension module for EASYLAB or TROX UNIVERSAL controllers based on TCU3 for automatic zero point adjustment.Long-term stable volume flow rate measurement and reduced maintenance. The expansion module comprises a solenoid valve, the connection cable and connection tubes.

Special features

- Long-term stable volume flow rate measurement and reduced maintenance
- Automatic zero point correction as soon as the supply voltage is applied
- Cyclic zero point adjustment during operation (every 8 h)
- No additional configuration effort
- Extension module is automatically recognised by the controller

Technical data

- Solenoid valve
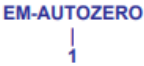- Supply voltage 24 V DC from the controller
- Degree of protection IP 20

1. Product

EM-AUTOZERO Extension module for automatic zero point adjustment

Note:

This is the order code for retrofitting the expansion module into a VAV terminal unit with EASYLAB or TROX UNIVERSAL control component.

Generally, the extension module is ordered with the VAV terminal unit via the order code of the basic unit under the section **Expansion modules** with the order code **Z** set.

EM-AUTOZERO
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Installation details

Commissioning with factory preparation

When ordering the EASYLAB or TROX UNIVERSAL controller with EM-AUTOZERO expansion module, the module is installed at the factory, connected and immediately ready for operation.

Installation and commissioning for retrofitting

- Disconnect the EASYLAB or TROX UNIVERSAL controller from the power supply
- Install the EM-AUTOZERO expansion module and plug the connection cable into the TCU3 controller board
- Extension module is automatically recognised at the next switch-on and the zero point adjustment is carried out

Special requirements for TROX UNIVERSAL pressure regulators:

- EM-AUTOZERO extension module can only be used in combination with the EM-V extension module for simultaneous volume flow recording with pressure control