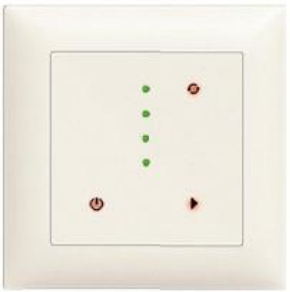
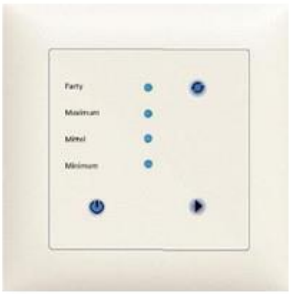
# MZ3-V11
# Controller/positioner for comfort ventilation





## Functions

- Positioner and controller for comfort ventilation with touch panel
- Design according to Feller EDIZIOdue®
- Manual operation with 4 steps, OFF, minimum air, 1st step, 2nd step, maximum air
- AUTO operation: The controller activates the ventilation based on controls curve. The controls curve may be adjusted
- Automatic reset of the maximum air level
- One 0…10 VDC controls output to control the ventilation system
- One 0…10 VDC input to measure CO2 or other sensors
- Password protected controls settings

## Applications

This device is designed to control ventilation systems for comfort applications. For example for well insulated residential areas which are required to be ventilated.

## General description

The MZ3-V11 is a microprocessor controlled precision positioner and controller with touch panel. Through user and engineering parameters the positioner may be configured to work for most of the standard ventilation applications. The device is pre-configured according to this documentation. Settings such as switching levels of the control curve and ventilation strengths for each step may be adjusted. The configuration may be performed using the programming device called OPA-S. This device may be used as well to visualize measuring values.

## Ordering

| Item | Item code | Variant | Features |
|---|---|---|---|
| MZ3-V11-T4-W | 40-100065 | 2 color LED<br>White frame<br>Without lettering | Compact positioner/controller in a Feller EDIZIOdue® frame, with each one 0-10 VDC in- and output for CO2 sensor.<br>Operation as 4-step switch with touch panel and AUTO function. |
| MZ3-V11-T4-S | 40-100066 | 2 color LED<br>Black frame<br>Without lettering | |
| MZ3-V11-B1-T4-W | 40-100213 | Blue LED<br>White frame<br>Lettering: Minimum, Stufe I, Stufe II, Maximum | |
| MZ3-V11-B-T4-W | 40-100209 | Blue LED<br>White frame<br>Lettering: Minimum, Mittel, Maximum, Party | |
| OPA-S | 40-500006 | Programming and display device | LCD display for surface mounting or handheld operation. |

## Interface to the ventilation system

The positioner works with all ventilation systems that are designed with a 0...10 VDC or 2...10 VDC input signal.

## Selection of transmitters

The positioner works with all sensors that provide an output signal of 0...10 VDC or 2...10 VDC. The measuring range needs to be observed.

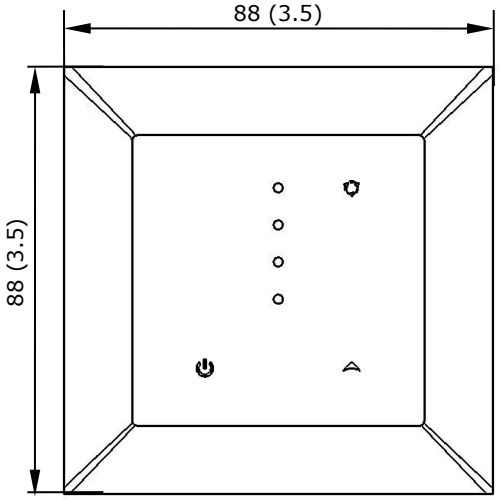
For example: CO2 0...2000 ppm = 0...10 VDC or 2...10 VDC

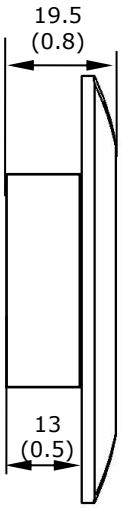
## Technical data

| | | |
|---|---|---|
| Power supply | Operating voltage | 24 V AC/DC ± 10%, 50/60 Hz, Class 2 48 VA max |
| | Power consumption | Max. 1,0 VA |
| | Power backup for real time clock | Supercap, keeps clock running for 24 h without power |
| | Electrical connection | Terminal connectors,<br>wire 0,34-2,5 mm$^2$ (AWG 22…13) |
| Signal inputs | Analog input | 0..10 VDC |
| Signal outputs | Analog outputs<br>Output signal<br>Resolution<br>Maximum load | <br>DC 0...10 VDC<br>9.76 mV (10 Bit)<br>10 mA or 1 kΩ |
| Environment | Operation<br>Climatic conditions<br>Temperature<br>Humidity | To IEC 721-3-3<br>class 3K5<br>0...50 ° C (32...122 ° F)<br>< 95% RH non-condensing |
| | Transport & storage<br>Climatic conditions<br>Temperature<br>Humidity<br>Mechanical conditions | To IEC 721-3-2 and IEC 721-3-1<br>class 3K3 and class 1K3<br>-25…70 °C (-13…158 °F)<br>< 95% RH non-condensing<br>class 2MT2 |
| Standards | CE Conform to EMC Directive 2004/108/EC | EN 61000-6-1 / EN 61000-6-3 |
| | Product standards<br>Automatic electrical controls for household and similar use | EN 60730-1 |
| | Degree of protection | Wall mounted: IP40 acc. EN 60529<br>Not installed: IP00 acc. EN 60529 |
| | Safety class | III (IEC 60536) |
| General | Housing material: | Fireproof ABS+PC plastic (UL94 class V-0) |
| | Dimensions (H x W x D) | Front part: 88 x 88 x 6,5 mm (3,5” x 3,5” x 0,25”)<br>Back part: ø 58 x 13 mm (ø 2,3” x 0,5”) |
| | Weight (incl. packaging) | 120 g (4.2 oz) |

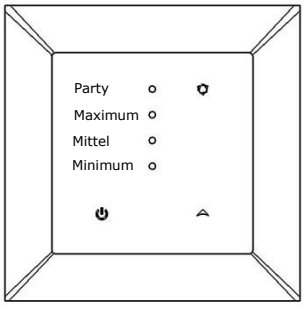
### Dimensions mm (in)

The MZ3-V11 is so designed that it can be incorporated into a commercially available flush box (Feller EDIZIOdue® frame and mounting plate are included).

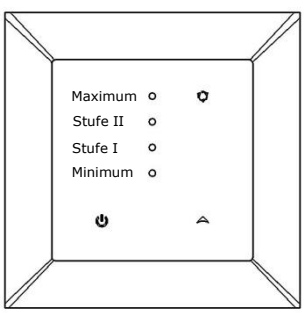


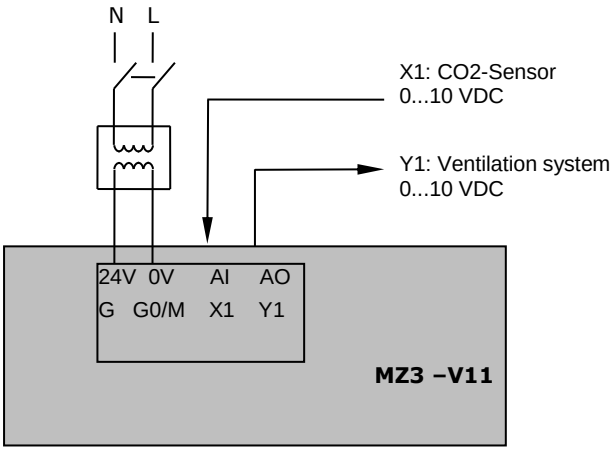

**MZ3-V11-B-T4-W**




**MZ3-V11-B1-T4-W**



## Connection diagram




Description:

| | | |
|---|---|---|
| **G0** | Power supply: | 0 V, -24 VDC, internally connected to signal common |
| **G** | Power supply: | 24 VAC, +24 VDC |
| **X1** | Analog input for sensor | 0…10 VDC |
| **Y1** | Analog output ventilation: | 0…10 VDC |

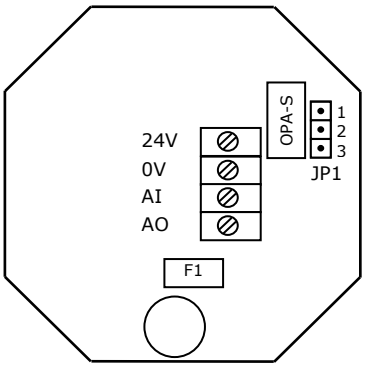
## Installation and safety advice

This device is intended to be used as positioner for comfort ventilation systems. Where a device failure endangers human life and/or property, it is the responsibility of the client to add additional safety devices to prevent or detect a system failure caused by such a device failure.
The device contains electronic components and must not be disposed of with household waste.

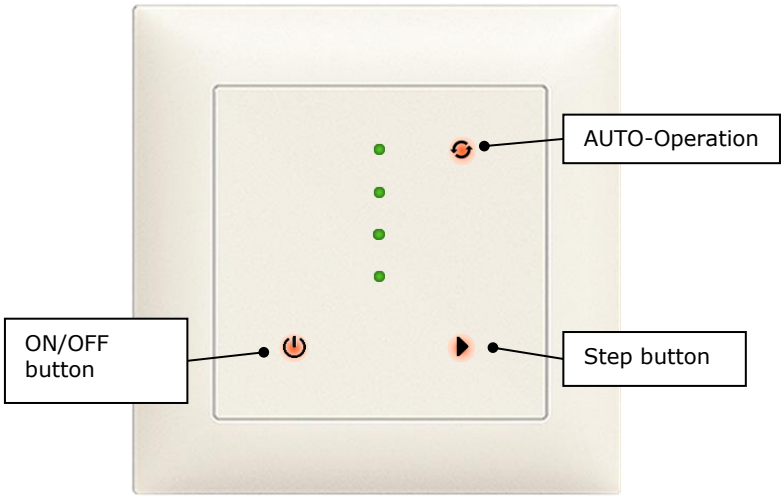
## Setting of the device to keep fan running in minimal volume in OFF mode

If JP1 in position 1-2, the output is off in OFF mode. Ventilation switches off.
If JP1 in position 2-3 or removed, the output stays in OFF mode in step 0 (minimum air volume)

## View back side



## Display & Operation




### ON/OFF operation

The device is activated by pressing the ON/OFF button. Depending on the position of JP1, the minimum air volume remains active even during OFF mode. In OFF mode the mode icon lights up in red. In ON mode it lights up in green color.

### Manual and AUTO operation

If a sensor signal is detected at the input, the automatic operation of the device is enabled.
The following operation modes will be activated through repeated pressing of the step button:
Step 0 = Minimum air volume
Step 1
Step 2
Step 3 = Maximum air volume
AUTO operation
The operating modes are activated only after 10 seconds. This prevents unnecessary switching when setting the device.

## Software configuration

The MZ3-V11 is designed to work for most comfort ventilation applications. It is however possible to fine tune it to fit perfect into the application at hand. The parameters can be changed during operation through an operation unit called OPA-S[1].

### Input configuration

| Parameter | Description | Range | Default |
|---|---|---|---|
| IP00 | Input signal show percent | ON, OFF | ON |
| IP01 | Samples taken for averaging input signal | 1…255 | 10 |
| IP02 | Offset of input signal (Uout = Uset+Offset) | -10…10 | 0 |
| IP03 | Input signal type<br>OFF = 0-10V, ON = 2-10V | ON, OFF | OFF |
| IP04 | Activation for step 1 | 0...100% | 40% |
| IP05 | Activation for step 2 | 0...100% | 60% |
| IP06 | Activation for highest step | 0...100% | 80% |
| IP07 | Hysteresis | 0...100% | 10% |
| IP08 | Reset time manual to auto<br>0: Never reset | 0...255 min | 0 min |

### Output configuration

| Parameter | Description | Range | Default |
|---|---|---|---|
| OP00: | Output step 0 | 0...100% | 20% = 2 V |
| OP01: | Output step 1 | 0...100% | 40% = 4 V |
| OP02: | Output step 2 | 0...100% | 60% = 6 V |
| OP03: | Output step 3 | 0...100% | 100% = 10 V |
| OP04: | Reset time highest step<br>0: Never reset | 0...255 min | 120 min |

[1] The operating unit OPA-S must be connected for the adjustment of the parameters with the MZ3-V11. This connection must not be disconnected earlier than five seconds after the last keystroke.