

**MZ3-FU-V01
3-Step Switch**

Functions

- Electronic 3-step switch with touch panel
- Manual operation with up to 3 Levels: MIN, MID, MAX
- Automatic reset of the level MAX to MID
- One 0...10 VDC output to output defined step levels
- Password protected settings
- Copy of settings with accessory (AEC-PM2)

Applications

Comfort ventilation, damper or valve positions, control of blinds.

General description

The MZ3-FU-V01 is a microprocessor-controlled precision step switch with touch panel. Through parameters the step switch may be configured. Settings such as switching levels for each step may be adjusted. The step switch is configuration with a programming device called OPA-S. Configuration can as well be updated using a remote memory device called AEC-PM2.



Ordering

Item	Item code	Variant	Features
MZ3-FU-V01-B3-T3	40-100xxx	Blue LED White frame Lettering: MIN, MID, MAX	Compact positioner/controller, with one 0-10 VDC output. Operation as 3-step switch with touch panel.
OPA-S	40-500006	Programming and display device	LCD display for surface mounting or handheld operation.
AEC-PM2	40-500130	Memory-Device. Used for copying settings	Stores settings of MZ3

Installation and safety advice

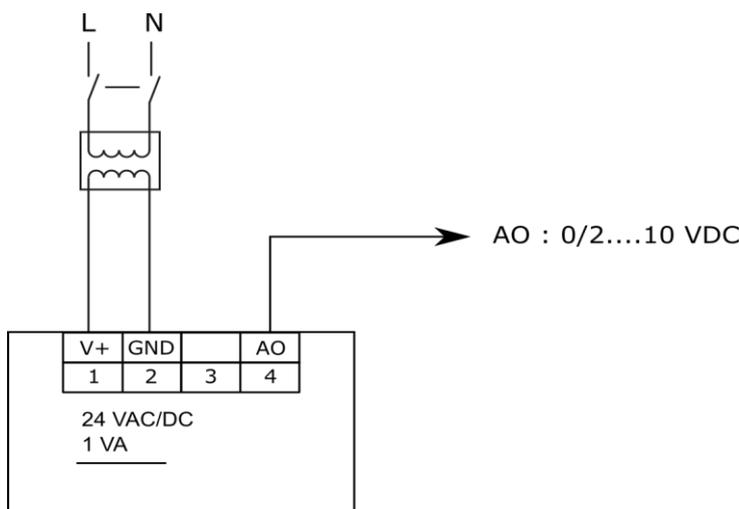
This device is intended to be used as 3-step switch. Where a device failure endangers human life and/or property, it is the responsibility of the client to add additional safety devices to prevent or detect a system failure caused by such a device failure.

The device contains electronic components and must not be disposed of with household waste.

Interface to the ventilation system

The 3-step switch works with all systems that are designed for a 0...10 VDC or 2...10 VDC input signal.

Connection diagram



Description:

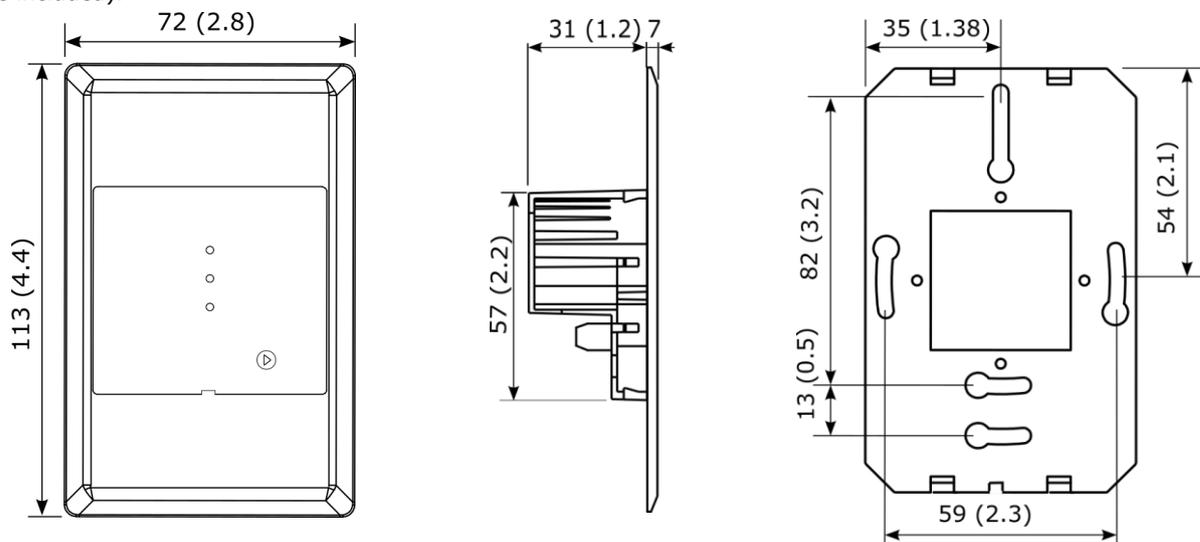
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|----------|----------------------------|---|
| 1 | Power supply: | 24 VAC, +24 VDC |
| 2 | Power supply: | 0 V, -24 VDC, internally connected to signal common |
| 3 | Not used, Do not connect | |
| 4 | Analog output ventilation: | 0...10 VDC |

Technical data

Power supply	Operating voltage	24 V AC/DC \pm 10%, 50/60 Hz, Class 2 48 VA max	
	Power consumption	Max. 1,0 VA	
	Power backup for real time clock	Super cap, keeps clock running for 24 h without power	
	Electrical connection	Terminal connectors, wire 0,34-2,5 mm ² (AWG 22...13)	
Signal outputs	Analog outputs		
	Output signal	DC 0...10 VDC	
	Maximum load	2 mA or 5 k Ω	
Environment	Operation	To IEC 721-3-3	
	Climatic conditions	class 3K5	
	Temperature	0...50 °C (32...122 °F)	
	Humidity	< 95% RH non-condensing	
	Transport & storage	To IEC 721-3-2 and IEC 721-3-1	
	Climatic conditions	class 3K3 and class 1K3	
	Temperature	-25...70 °C (-13...158 °F)	
	Humidity	< 95% RH non-condensing	
	Mechanical conditions	class 2MT2	
Standards	Degree of protection	Wall mounted:	IP40 acc. EN 60529
		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) including packaging	145 x 105 x 70 mm (5,7" x 4,1" x 2,8")	
	Weight (incl. packaging)	155 g (5.5 oz)	

Dimensions mm (in)

The MZ3-FU-V01 is so designed that it can be incorporated into a commercially available flush box (Frame and mounting plate are included).



Selecting the signal from 0-10 VDC to 2-10 VDC with JP1

If JP1 is in position 1-2, the output signal is 0...10 VDC

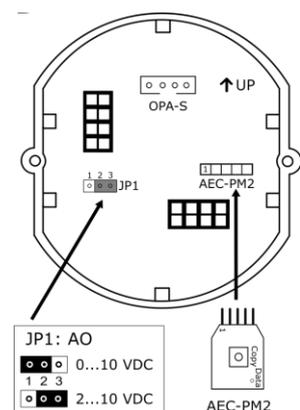
If JP1 is in position 2-3, the output signal is 2...10 VDC

Parameter copy

It is now possible to copy settings to an accessory (AEC-PM2) and to copy them back to other MZ3. For this, remove the front panel of the MZ3, insert AEC-PM2 in the designated plug. Connect OPA-S and copy parameter from MZ3 to AEC-PM2 by setting OP06 to 1.

AEC-PM2 "Data" LED is ON for 5 seconds after successful parameter copy and OP06 is set to 0. If the parameter copy failed the LED blinks for 5 seconds and OP06 is set to 7.

Copy parameter from AEC-PM2 to MZ3 simply by pressing the "Copy" button on the AEC-PM2. AEC-PM2 "Data" LED is ON for 5 seconds after successful parameter copy. If the parameter copy failed the LED blinks for 5 seconds.



Display & Operation

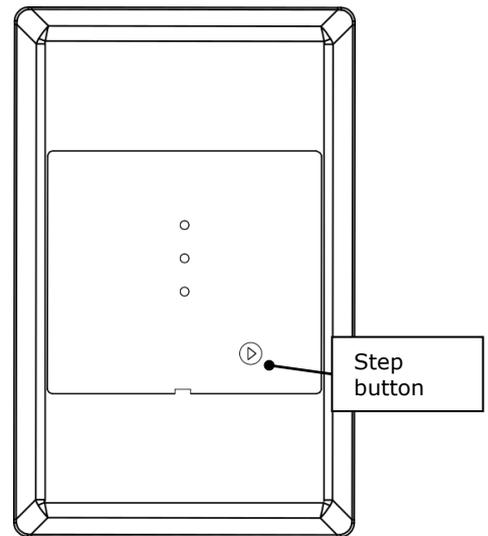
Manual operation

The following operation modes will be activated through repeated pressing of the step button:

- Step 1 = MIN = Minimum
- Step 2 = MID = Medium
- Step 3 = MAX = Maximum

The active step is activated after 3 seconds. This prevents unnecessary switching when setting the device. The step-indication and buttons light up in blue.

The device is equipped with proximity detection. When approaching a distance of approx. 10 cm, the luminosity of the LED increases. After 30 seconds without interaction, the LEDs dim down again and thus save energy.



Software configuration

The MZ3-FU-V01 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. The operating unit OPA-S must be connected for the adjustment of the parameters with the MZ3-FU-V01. This connection must not be disconnected earlier than five seconds after the last keystroke.

Output configuration

Parameter	Description	Range	Default
OP00	Output level step 1: 0...100 % = 0...10.0 VDC	0...100%	0%
OP01	Output level step 2: 0...100 % = 0...10.0 VDC Note: setting a level to 0 disables it	0...100%	50%
OP02	Output level step 3: 0...100 % = 0...10.0 VDC Note: setting a level to 0 disables it	0...100%	100%
OP03	Not used	0...100%	0%
OP04	Automatic reset time of the highest step to the step defined in OP05. The reset is deactivated with setting = 0	0...255 min	0 min (deactivated)
OP05	Step after automatic reset. This step will be activated once the reset time defined in OP04 has expired.	0...2	0
OP06	0: Parameter copy successful; No action 1: Start parameter copy to AEC-PM2 7: Copy fail (no AEC-PM2 or communication error)	0-1 7: display only	0