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**GEMÜ®**

Combi switchbox with  
integrated  
3/2 way pilot valve

**ATEX**

## Construction

The GEMÜ combi switchbox with integrated 3/2 way pilot valve is suitable for linear valves. It has a corrosion resistant plastic housing and two integrated proximity switches according to NAMUR EN 50227. The integrated 3/2 way pilot valve is a normally closed low power valve.

Switching rod and actuating spindle have a positive connection without axial play.

The electrical connection is via cable gland.

## Features

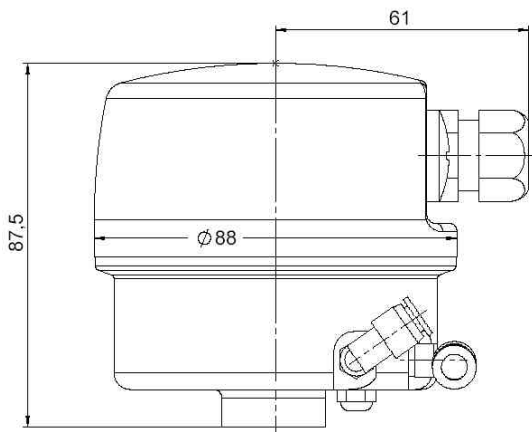
- ATEX-marking:
  - Ex II 2G IIB X
  - Ex EEx II 2G ia IIB T6-T4
- Integrated 3/2 way low power pilot valve
- Both proximity switches can be continuously and precisely adjusted, independent of each other
- Device can be rotated through 360°

## Advantages

- Simple mounting and retrofitting to GEMÜ linear actuators
- Mounting to other valve makes possible
- Compact design in a stable housing
- The switches are not subjected to wear, contactless detection
- Protection class IP 65 to EN 60529



## Dimensions – GEMÜ 4226 [mm]



**GEMÜ® 4226**

## Technical data

### Operating conditions

|   |                                   |  |
|---|-----------------------------------|--|
| Medium  | Quality classes to DIN ISO 8573-1 |  |
|   | Dust content                      | Class 3<br>(max. particle size 5 µm)<br>(max. particle density 5 mg/m <sup>3</sup> ) |
|   | Pressure dew point                | Class 4<br>(max. pressure dew point 3 °C)  |
|   | Oil concentration                 | Class 3<br>(max. oil concentration 1 mg/m <sup>3</sup> )                             |
| Ambient temperature   | -10°C to +50°C                    |  |
| Protection class  | IP 65                             |  |
| Intended for use with process valves whose opening / closing speed does not exceed 1 metre / second.  |                                   |  |
| Metallically isolated components have to be connected to the potential earth via charge eliminators by the user (see directive 1999/92/EC (ATEX 137) and national provisions) |                                   |  |

### Solenoid valve

|                   |                      |
|-------------------|----------------------|
| Rated voltage     | 24V DC -5% / +15%    |
| Power consumption | 0.1 W                |
| Working pressure  | 4-7 bar              |
| Flow rate         | min. 8 l/min / 7 bar |
| Life expectancy   | 20.000.000 cycles    |

### Proximity switch

|                            |                    |
|----------------------------|--------------------|
| Rated voltage              | 8 V NAMUR          |
| Rated current, undamped    | = 3 mA             |
| Rated current, damped      | < 1 mA             |
| Max. switching frequency   | 1.0 kHz            |
| Inductive proximity switch | P+F NJ 1,5-6,5-15N |

### Materials

|                   |                        |
|-------------------|------------------------|
| Housing cover     | Polysulfone PSU        |
| Housing base      | Stainless steel 1.4301 |
| Guide piece       | 1.4305                 |
| Operating spindle | 1.4104                 |
| Damping piece     | 1.4104                 |

### Electrical connection

|                                   |  |
|-----------------------------------|--|
| Electrical connection             | M16 cable gland                        |
| Cable diameter                    | 5.5 to 10 mm                           |
| Recommended cross section of wire | 0.75 mm <sup>2</sup>                   |
| Potential equalisation            | standed wire, yellow/green H07 V-K 4.0 |

### Explosion protection

#### Marking according to ATEX:

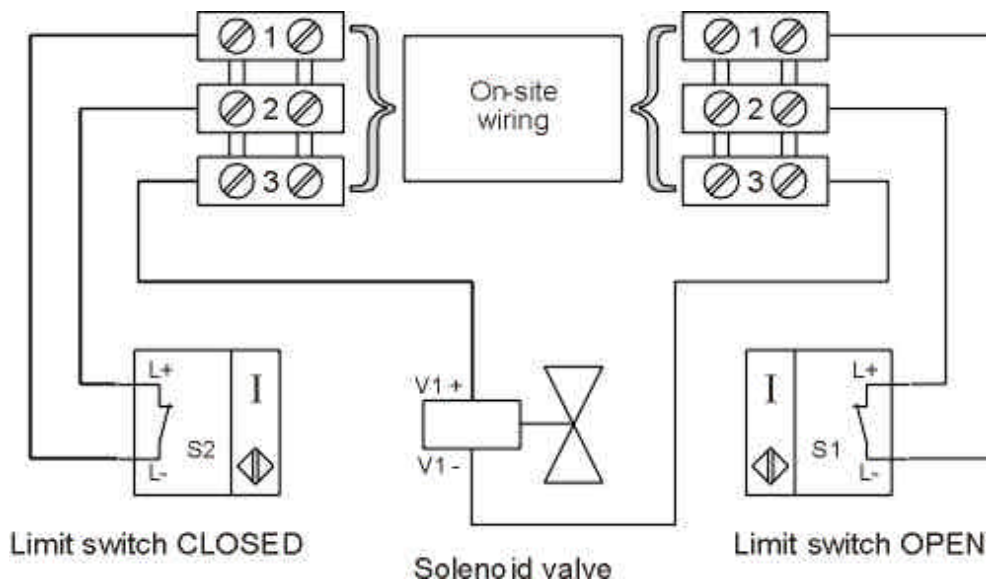
|                       |                        |
|-----------------------|------------------------|
| Mechanical device     | II 2G IIB X            |
| Electrical components | EEx II 2G ia IIB T6-T4 |

**Note on index X:** The original manufacturer's EC type examination data for the electrical components of the intrinsically safe electrical circuit must be observed.

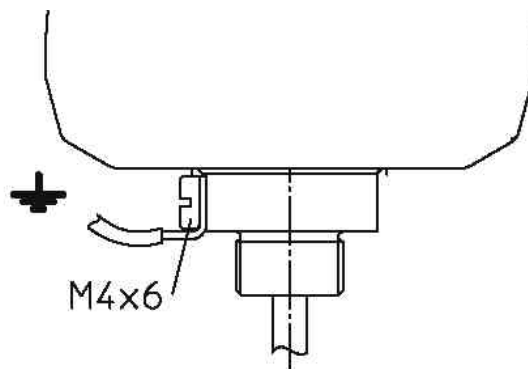
#### Electrical OEM-components:

|                  |  |                                |
|------------------|--|--------------------------------|
| Solenoid valve   | ATEX marking                           | EEX ia IIC T6                  |
|                  | EC type examination certificate number | INERIS 00ATEX0031X             |
| Proximity switch | ATEX marking                           | II 2G EEx ia IIC T6            |
|                  | EC type examination certificate number | PTB 00 ATEX 2048 X             |
| Cable gland      | ATEX marking                           | II 2G EEx e II                 |
|                  | EC type examination certificate number | PTB 99 ATEX 3101 X             |
| Terminal         | ATEX marking                           | II 2G EEx e II or I M2 EEx e I |
|                  | EC type examination certificate number | PTB 99 ATEX 3117 U             |

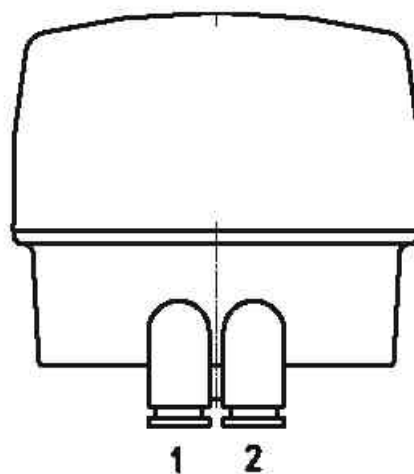
### Connection diagramm



### Ground connection (Earth)



### Pneumatic connections



**Key**  
 1 (P) = air supply  
 2 = outlet

Air supply: 4...7 bar  
 Attention: Note maximum control pressure of pneumatic valve actuator!

Subject to alteration 04/2007