

## GEMÜ 4241 Combi switchbox

EN

## **Operating instructions**







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#### 1 General information

#### 1.1 Information

- The descriptions and instructions apply to the standard versions. For special versions not described in this document the basic information contained herein applies in combination with any additional special documentation.
- Correct installation, operation, maintenance and repair work ensure faultless operation of the product.
- Should there be any doubts or misunderstandings, the German version is the authoritative document.
- Contact us at the address on the last page for staff training information.

#### 1.2 Symbols used

The following symbols are used in this document:

Symbol	Meaning		
•	Tasks to be performed		
•	Response(s) to tasks		
_	Lists		

#### 1.3 Warning notes

Wherever possible, warning notes are organised according to the following scheme:

SIGNAL WORD		
Possible symbol for the specific danger	Type and source of the danger  ▶ Possible consequences of non-observance.  • Measures for avoiding danger.	

Warning notes are always marked with a signal word and sometimes also with a symbol for the specific danger.

The following signal words and danger levels are used:

# <u>^</u>

#### **⚠** DANGER

#### Imminent danger!

 Non-observance can cause death or severe injury.

#### **MARNING**



#### Potentially dangerous situation!

 Non-observance can cause death or severe injury.

#### **A** CAUTION



#### Potentially dangerous situation!

 Non-observance can cause moderate to light injury.

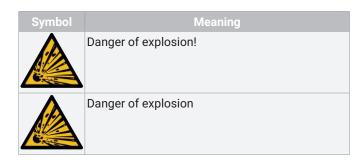
#### **NOTICE**



#### Potentially dangerous situation!

Non-observance can cause damage to property.

The following symbols for the specific dangers can be used within a warning note:



#### 2 Safety information

The safety information in this document refers only to an individual product. Potentially dangerous conditions can arise in combination with other plant components, which need to be considered on the basis of a risk analysis. The operator is responsible for the production of the risk analysis and for compliance with the resulting precautionary measures and regional safety regulations.

The document contains fundamental safety information that must be observed during commissioning, operation and maintenance. Non-compliance with these instructions may cause:

- Personal hazard due to electrical, mechanical and chemical effects
- Hazard to nearby equipment.
- Failure of important functions.
- Hazard to the environment due to the leakage of dangerous substances.

The safety information does not take into account:

- Unexpected incidents and events, which may occur during installation, operation and maintenance.
- Local safety regulations which must be adhered to by the operator and by any additional installation personnel.

#### **Prior to commissioning:**

- 1. Transport and store the product correctly.
- 2. Do not paint the bolts and plastic parts of the product.
- 3. Carry out installation and commissioning using trained personnel.
- 4. Provide adequate training for installation and operating personnel.
- 5. Ensure that the contents of the document have been fully understood by the responsible personnel.
- 6. Define the areas of responsibility.
- 7. Observe the safety data sheets.
- 8. Observe the safety regulations for the media used.

#### **During operation:**

- 9. Keep this document available at the place of use.
- 10. Observe the safety information.
- 11. Operate the product in accordance with this document.
- 12. Operate the product in accordance with the specifications.
- 13. Maintain the product correctly.
- Do not carry out any maintenance work and repairs not described in this document without consulting the manufacturer first.

#### In cases of uncertainty:

15. Consult the nearest GEMÜ sales office.

#### 3 Product description

#### 3.1 Construction



Item	Name	Materials
1	Housing cover	PC
2	Housing base	PPS
3	Electrical connection	SS, PP
4	Adapter piece	SS
5	Mounting kit, valve spe- cific	SS, PP
	Seals	NBR

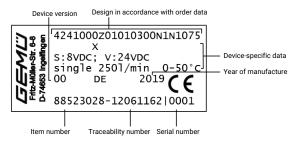
#### 3.2 Description

The GEMÜ 4241 combi switchbox is suitable for mounting to pneumatically operated linear actuators. The position of the valve spindle is reliably electronically detected and fed back via the play-free and non-positive mounting by means of a 2-wire proximity switch (NAMUR). Integrated pilot valves enable direct activation of the process valve connected to them.

#### 3.3 Function

The GEMÜ 4241 combi switchbox indicates the current position of the valve. When the valve is opened, the spindle in the combi switchbox moves upwards and indicates that the valve is OPEN using the communication interface. When the valve is closed, the spring in the mounting kit presses the spindle in the combi switchbox downwards and indicates that the valve is CLOSED using the communication interface.

#### 3.4 Product label



The manufacturing month is coded under the traceability number and can be requested from GEMÜ. The product was manufactured in Germany.

#### 4 GEMÜ CONEXO

#### **Order variant**

In the corresponding design with CONEXO, this product has an RFID chip (1) for electronic identification purposes. The position of the RFID chip can be seen below. The CONEXO pen helps read out information stored in the RFID chips. The CONEXO app or CONEXO portal is required to display this information.



For further information please read the operating instructions for CONEXO products or the CONEXO datasheet.

Products such as the CONEXO app, the CONEXO portal and the CONEXO pen are not included in the scope of delivery and need to be ordered separately.

#### 5 Correct use

#### **A** DANGER



#### Danger of explosion!

- ▶ Risk of severe injury or death.
- Do not use the product in potentially explosive zones.
- Only use the product in potentially explosive zones confirmed in the declaration of conformity.

#### **⚠** WARNING

#### Improper use of the product

- Risk of severe injury or death.
- Manufacturer liability and guarantee will be void.
- Only use the product in accordance with the operating conditions specified in the contract documentation and in this document.

The product with the special version X order option is intended for use in potentially explosive areas of zone 2 with gases, mists or vapours and zone 22 with combustible dusts in accordance with EU directive 2014/34/EU (ATEX).

The product has the following explosion protection marking:

#### **ATEX**

Gas: & II 2G Ex ib IIB T4 Gb

Dust: & II 2D Ex ib IIIC T120°C Db

EC type examination certificate: IBExU17ATEX 1160 X

Notified body: IBExU, No. 0637

#### **IECE**x

Gas: ⊕ Ex ib IIB T4 Gb

Dust: ⊕ Ex IIIC T120°C Db

Certificate: IECEx IBE 19.0017 X

The product has been developed in compliance with the following harmonised standards:

- EN 60079-0:2012+A11:2013

- EN 60079-11:2012

Use of the product is permissible in the following ambient temperature ranges: 0  $^{\circ}$ C to +40  $^{\circ}$ C

For use in potentially explosive areas, the following conditions or operation limits must be observed:

#### Special conditions of use

- 1. The special conditions of the Ex components used must be observed.
- 2. The housing must be installed protected against mechanical influences.
- 3. Layers of dust > 5 mm must be avoided.

#### 6 Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Note: A valve specific mounting kit is required for assembly. For designing the mounting kit, the valve type, nominal size, control function and actuator size must be stated.

#### **Order codes**

1 Type	Code
Combi switchbox	4241
2 Fieldbus	Code
Without	000
3 Accessory	Code
Accessory	Z
4 Housing material	Code
PPS base, PC cover	01
5 Action	Code
Single acting, with manual override	01
Double acting, with manual override	02
Single acting, without manual override	E1
6 Electrical connection	Code
M16 Skintop cable gland; connection diagram "N"	03
7 Pneumatic connection	Code
G1/8 connection thread	01
Air supply 6 mm angled connection, exhaust air 6 mm angled connection	04
Air supply 6 mm T-connection, exhaust air 6 mm angled connection	05

7 Pneumatic connection	Code
G1/8 connection thread (for IP67 or piped air outlet)	E1
Air supply 6 mm angled connection, exhaust air 6 mm angled connection (for IP67 or piped air outlet)	E4
Air supply 6 mm T-connection, exhaust air 6 mm angled connection (for IP67 or piped air outlet)	E5

8 Switch	Code
Proximity switch, 2-wire, NAMUR	N1
P+F, NJ1,5-6,5-15-N-Y180094	

9 Connection diagram	Code
NAMUR terminals OPEN/CLOSED 8 V NAMUR sensor; 24 V DC pilot valve	N1
NAMUR terminals OPEN/CLOSED 8 V NAMUR sensor; 12 V DC pilot valve	N2

10 Travel sensor version	Code
Potentiometer, 75 mm length	075

11 Special version	Code
ATEX (2014/34/EU), IECEx	X

#### Order example

Ordering option	Code	Description	
1 Type	4241	Combi switchbox	
2 Fieldbus	000	Without	
3 Accessory	Z	Accessory	
4 Housing material	01	PPS base, PC cover	
5 Action	01	Single acting, with manual override	
6 Electrical connection	03	M16 Skintop cable gland; connection diagram "N"	
7 Pneumatic connection	E1	G1/8 connection thread (for IP67 or piped air outlet)	
8 Switch	N1	Proximity switch, 2-wire, NAMUR P+F, NJ1,5-6,5-15-N-Y180094	
9 Connection diagram	N1	NAMUR terminals OPEN/CLOSED 8 V NAMUR sensor; 24 V DC pilot valve	
10 Travel sensor version 075		Potentiometer, 75 mm length	
11 Special version	X	ATEX (2014/34/EU), IECEx	

#### 7 Technical data

#### 7.1 Medium

Working medium: Quality classes to DIN ISO 8573-1

**Dust content:** Class 3, max. particle size 5 μm, max. particle density 5 mg/m³

Pressure dew point: Size 1

Class 3, max. pressure dew point -20 °C

Size 2

Class 4, max. pressure dew point +3 °C

Oil content: Size 1

Class 3, max. oil concentration 1 mg/m³

Size 2

Class 5, max. oil concentration 25 mg/m3

#### 7.2 Temperature

Ambient temperature: 0 to 50 °C

**Media temperature:**  $0 - 50 \, ^{\circ}\text{C}$ 

**Storage temperature:**  $0 - 40 \, ^{\circ}\text{C}$ 

#### 7.3 Pressure

**Operating pressure:** 2 to 7 bar

Flow rate: 250 NI/min

The applied pressure must not exceed the maximum control pressure of the process valve.

#### 7.4 Product compliance

Machinery Directive: 2006/42/EC

**Explosion protection:** ATEX (2014/34/EU)

**IECE**x

ATEX marking: Gas: (a) II 2G Ex ib IIB T4 Gb

Dust: 🗟 II 2D Ex ib IIIC T120°C Db

EC type examination certificate: IBExU17ATEX 1160 X

Notified body: IBExU, No. 0637

**IECEx marking:** Gas: **ⓑ** Ex ib IIB T4 Gb

Dust: Ex IIIC T120°C Db
Certificate: IECEx IBE 19.0017 X

#### 7.5 Mechanical data

**Installation position:** Optional

Weight: 420 g

Protection class: IP 65 acc. to EN 60529

IP 67 acc. to EN 60529, is reached with piped air outlet

Stroke: 5 to 75 mm

#### 7.6 Electrical data

#### 7.6.1 2-wire proximity switch (NAMUR)

Supply voltage: 8 V DC

**Current consumption:**  $\leq 0.1 \text{ mA (damped)}$ 

≥ 3 mA (undamped)

**Electrical connection** Connection thread: M16 x 1.5, WAF 19

type: Cable diameter: 4.5 to 10 mm

Recommended wire cross section: 0.75 mm<sup>2</sup> x 8 cables

7.6.2 Pilot valve

Rated voltage: 24 V DC ±10 % (code N1)

12 V DC -5/+10 % (code N2)

Rated power: 0.5 W

**Resistance:**  $1152 \Omega \pm 5 \%$  (code N1)

288  $\Omega$  ± 5 % (code N2)

**Duty cycle:** Continuous duty

#### 7.7 Intrinsically safe characteristic values

#### 7.7.1 Proximity switch

**Proximity switch:** Ui = 16 V

Ii = 52 mA Pi = 169 mW  $Li = 50 \mu\text{H}$ Ci = 30 nF

7.7.2 Pilot valve

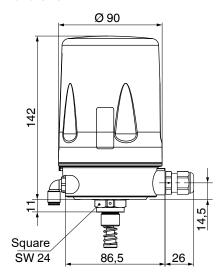
Pilot valve, code N1: Ui = 30 V

Ii = 330 mA Li negligible Ci negligible

Pilot valve, code N2: Ui = 30 V

Ii = 330 mA Li negligible Ci negligible

### **8 Dimensions**



Dimensions in mm

#### 9 Manufacturer's information

#### 9.1 Delivery

 Check that all parts are present and check for any damage immediately upon receipt.

The product's performance is tested at the factory. The scope of delivery is apparent from the dispatch documents and the design from the order number.

#### 9.2 Packaging

The product is packaged in a cardboard box which can be recycled as paper.

#### 9.3 Transport

- Only transport the product by suitable means. Do not drop. Handle carefully.
- 2. After the installation dispose of transport packaging material according to relevant local or national disposal regulations / environmental protection laws.

#### 9.4 Storage

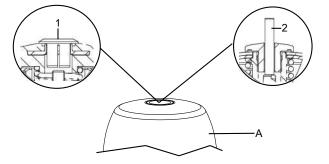
- 1. Store the product free from dust and moisture in its original packaging.
- 2. Avoid UV rays and direct sunlight.
- 3. Do not exceed the maximum storage temperature (see chapter "Technical data").
- 4. Do not store solvents, chemicals, acids, fuels or similar fluids in the same room as GEMÜ products and their spare parts.

#### 10 Assembly and installation

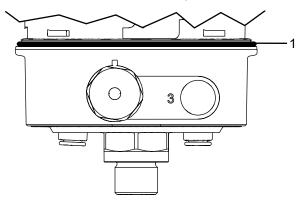
- 1. Observe the national regulations and provisions.
- 2. Observe the installer provisions.
- 3. Lay cables securely and protect them from damage.
- 4. Connect open wire ends in a junction box with protection class IP20 and higher or outside the EX area

## 10.1 Preparations for installing the valve (linear actuator)

- 1. Move the actuator **A** into zero position (actuator vented).
- Remove optical position indicator 2 and / or protective cap 1 from the actuator top.



#### 10.2 Information on use in damp conditions



The following information is intended to help when installing and operating the product in damp conditions.

- 1. Lay cables and pipework so that no condensate or rain water that remains on the pipework / cables can enter the cable glands or plugs of the product.
- 2. Check that all cable glands or plugs are positioned correctly
- 3. Check the sealing ring 1 for any damage and correct positioning before tightening the cover.

#### 10.3 Mounting kit assembly

Item	Name	Item	Name
1	Spindle	7	Flange plate
2	Spring	8	Screws
3	Operating bush	9	Pressure disc*
4	Distance piece	10	O-ring*
5	O-ring	11	O-ring*
6	Adapter		

<sup>\*</sup> Included depending on version.

#### **A** CAUTION

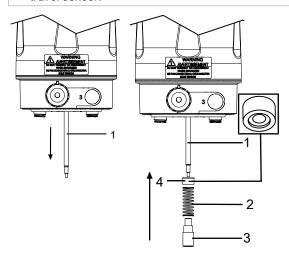
#### Pretensioned spring!

- Damage to the device.
- Slowly release the tension in the spring.

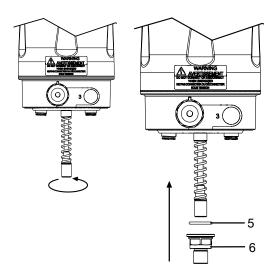
#### **A** CAUTION

#### Do not scratch the spindle!

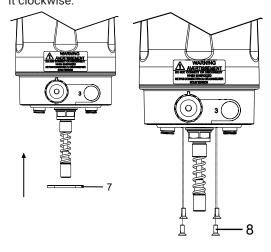
A damaged spindle surface may cause failure of the travel sensor.



Pull out the spindle 2. Align the indentation of the distance
 piece 4 to the spring and push it over the spindle 1 using the spring 2 and fix it in place using the operating bush 3.



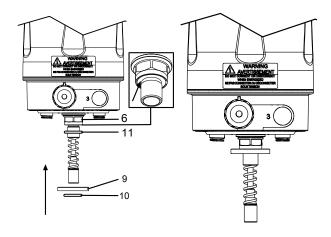
3. Tighten the operat- 4. Affix the O-ring **5** and the adapter **6**. ing bush **3** by turning it clockwise.



- 5. Attach the flange plate **7** s
- 6. Screw the flange plate on tight using screws **8** (1 1.5 Nm).
- Push in the spindle until it pushes against the spring and then slowly release the pressure on the spring.

#### **NOTICE**

- ► For some valves (e.g. GEMÜ 650 and GEMÜ 687) it is necessary to fit a pressure disc between the threaded adapter and the actuator head. This is included in the required mounting kits, sometimes with an additional O-ring (only GEMÜ 650 with normally open and double acting control function code 2+3).
- ► If the pressure disc does not have a groove for a seal, this will already be inserted in the groove provided at the adapter opening of the actuator head (e.g. GEMÜ 687 with normally open control function – code 2).

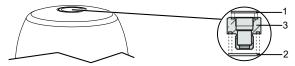


Insert the O-ring 11 (if included) into the corresponding disc 9 over the adapter 6 and groove on the adapter 6.

If included: Push the pressure insert the O-ring 10 in the intended groove of the pressure disc.

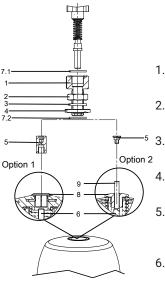
#### 10.4 Threaded adapter assembly (linear actuator)

With some mounting kits, it is necessary to install a threaded adapter as well. This threaded adapter is enclosed with the required mounting kits. Valves with a normally open and double acting control function (code 2+3) also include additional Orings (1+2).



- 1. Move the actuator to the closed position.
- 2. Place O-rings 1 and 2 into threaded adapter 3.
- 3. Screw threaded adapter 3 into the actuator opening as far as it will go and tighten.

#### 10.5 Assembling the stroke limiter (linear actuator)



- 1. Screw distance piece 5 onto/ into actuator spindle 6.
- 2. Move the actuator to the closed position.
- <sup>-5</sup> 3. Insert the O-ring **7.1** in the stroke limiter 1.
  - 4. Insert the O-ring 7.2 in the washer 4.
  - 5. Screw stroke limiter 1 with nut 2, seal 3 and washer 4 into the actuator opening.
  - 6. Set stroke limiter 1 to the required stroke.
  - 7. Make sure that the minimum stroke is reached.
  - 8. Secure stroke limiter 1 with nut 2.

	Кеу			
1	Stroke limiter	7.1 1)	O-ring	
		7.2		
2	Nut	8	Protective cap	
3 1)	Seal	9	Position indicator	
<b>4</b> <sup>1)</sup>	Washer	10	Operating bush	
5 <sup>2)</sup>	Distance piece	11	Spindle	
6	Actuator spindle	12	Travel sensor	

- 1) Only available for valves with the NO and DA control functions.
- 2) Only included in required mounting kits. The design depends on the valve.

#### 10.6 Assembling and installing the combi switchbox

#### **⚠** DANGER

#### Danger of explosion

- Risk of death or severe injury.
- Do not use the product as a step or foothold.
- Prior to commissioning, ensure that the cover is fully closed and that the housing and the O-ring are not dam-





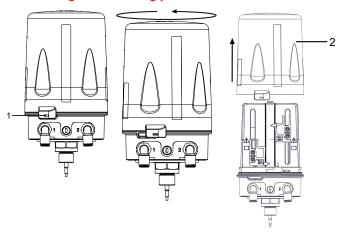
- 1. Move the actuator into the OPEN position.
- 2. Place the product as far as it will go into the actuator opening, insert adapter 3 (see chapter 9.3) or stroke limiter 1 (see chapter 9.4) and screw in clockwise against the initial spring tension.
- 3. Use the spanner flat of the travel sensor to tighten the product.
- 4. Turn the housing clockwise to align the pneumatic or electrical connections.
- 5. Set the switch on the product.

#### **CAUTION**

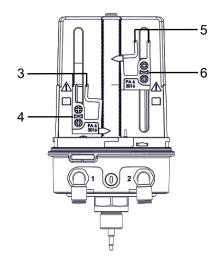
#### Incorrect installation of the product.

- Damage to the housing.
- Only tighten the product using the spanner flats provided for this purpose.

#### 10.7 Setting the switching positions



- 1. Press clamping 2. Turn the cover tie bar 1 in with a screwdriver.
- anticlockwise to open the bayonet fitting.
  - 3. Remove cover 2.

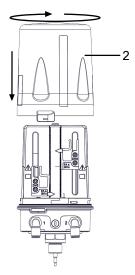


#### Setting the upper switching position:

- 4. Move the valve to the OPEN position.
- 5. Squeeze and hold red levers 3.
- 6. Push switch 4 on the toothed bar into the desired position.
- 7. Release red levers 3.
  - ⇒ Switch 4 engages.
  - ⇒ The upper switching position is set.

#### Setting the lower switching position:

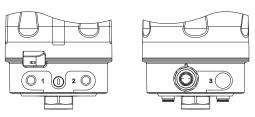
- 8. Move the valve to the CLOSED position.
- 9. Squeeze and hold red levers 5.
- 10. Push switch 6 on the toothed bar into the desired position.
- 11. Release red levers 5.
  - ⇒ Switch 6 engages.
  - ⇒ The lower switching position is set.
- 12. Make the electrical connection (see "Electrical connection", page 17).



- 13. After completing the electrical connection, carefully pull the connection cable taut.
- 14. Make sure that seal **1** is fitted correctly and is not damaged.
- 15. Put on cover **2** so that the bayonet fitting is inserted correctly and turn cover **2** clockwise.
- 16. Restore the power supply.
- 17. To check that everything is working correctly, open and close the valve and observe the signalling.
- 18. If the settings need to be readjusted, switch off power to the product again and repeat the steps in "Setting the switching positions".

#### 11 Pneumatic connection

#### 11.1 Standard, single acting



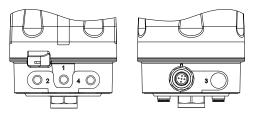
Connec- tion	Designation	Connection size
1	Air supply connection P	G 1/8
2	Working connection for process valve A1	G 1/8
3 1)	Venting connection R with silencer (integrated housing ventilation)	G 1/8 <sup>2)</sup>

#### 

#### Reduction of the flow at the vent connection 3

- ► Increased overpressure in the upper part of the housing
- Do not operate vent connection 3 with chokes, filters or similar.
- Ensure that vent lines are always depressurised.
- Install vent lines free of tension and kinks.
- 2) only relevant for exhaust air duct and/or increase of protection

#### 11.2 Standard, double acting



Connec- tion	Designation	Connection size
1	Air supply connection P	G 1/8
2	Working connection for process valve A1	G 1/8
3 <sup>1)</sup>	Venting connection R with silencer (integrated housing ventilation)	G 1/8 <sup>2)</sup>

Connec- tion	Designation	Connection size
4	Working connection for process valve A2	G 1/8

1)

#### **⚠** CAUTION

#### Reduction of the flow at the vent connection 3

- Increased overpressure in the upper part of the housing
- Do not operate vent connection 3 with chokes, filters or similar.
- Ensure that vent lines are always depressurised.
- Install vent lines free of tension and kinks.
- only relevant for exhaust air duct and/or increase of protection class

#### 12 Electrical connection

#### **⚠** DANGER



#### Danger of explosion

- ► Risk of injury or death!
- Do not connect or disconnect when connected to the power supply.
- Do not disconnect the device until the power has been switched off or the area has been classified as non-hazardous.

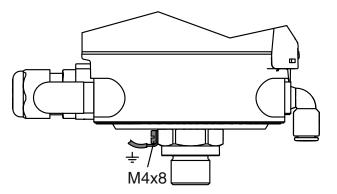
#### **A** DANGER



#### **Danger of explosion**

- Risk of severe injury or death.
- Danger from sparking. Never disconnect the connection cables when live.

#### 12.1 Potential equalization device



Connecting the potential equalization device

- 1. Use a M4x8 screw to attach the potential equalization device to the product.
  - ⇒ Potential equalization device for metal housings in potentially explosive areas: Minimum 4 mm².
- 2. Secure the connection against working itself loose.
  - ⇒ Tighten the screw with a torque of 1.8 Nm.

#### 12.2 Electrical connection

- 1. Run the connection cable through the Skintop cable gland.
- 2. Only strip the connection cable directly before the switch mounting plate.
- 3. Lay the individual wires to the terminals.
- 4. Cut the individual wires to the appropriate length in order to avoid having unnecessarily long cable loops.
- 5. Compress the individual wires with wire end ferrules.
- 6. Connect the individual wires to the terminals in accordance with the connection diagram.

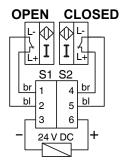
For the electrical connection (M12 plug), we recommend the M12 connectors for EX areas from IFM, series ENC\*\*A.

The M12 plugs may only be assembled, connected and commissioned by trained personnel. The trained personnel must have expertise in types of ignition protection, and regulations and provisions for operating media in EX areas.

- 7. Securely lay the connection cables or ensure sufficient tension relief.
- 8. Refer to the technical data and cable gland documentation for details of the wire cross sections.
- 9. Protect the product and the cables from damage.
- 10. Only clean the product with an anti-static or damp cloth.
- 11. Only operate the product when it is fully assembled.
- 12. Only connect the product to intrinsically safe electric circuits that are approved with an EC type examination certificate and which do not exceed the maximum values of the respective sensors for Ui, Ii, Pi, Ci and Li.

## 12.3 24 V DC pilot valve, ordering option Connection diagram, code N1

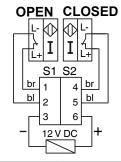
#### 12.3.1 Connection diagram



Pin	Signal name
1	L+, OPEN switch
2	L-, OPEN switch
3	GND, solenoid valve actuation
4	L+, CLOSED switch
5	L-, CLOSED switch
6	24 V DC, solenoid valve actuation

## 12.4 12 V DC pilot valve, ordering option Connection diagram, code N2

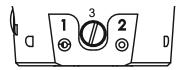
#### 12.4.1 Connection diagram



Pin	Signal name
1	L+, switch S1 OPEN
2	L-, switch S1 OPEN
3	GND, control input
4	L+, switch S2 CLOSED
5	L-, switch S2 CLOSED
6	12 V DC, control input

#### 13 Manual override

The combi switchbox has a manual override which enables manual operation of the process valve.



Activating the manual override:

Use a flathead screwdriver (maximum slot width of 6 mm) to screw in the manual override screw 3 clockwise as far as it will go.

Deactivating the manual override:

Use a flathead screwdriver (maximum slot width of 6 mm) to unscrew the manual override screw **3** anticlockwise as far as it will go.

#### **NOTICE**

 Control air and the minimum pressure must be available to use the manual override.

#### 14 Troubleshooting

Error	Error cause	Troubleshooting
No stroke	No mounting kit available	Check mounting kit
	Process valve faulty	Replace process valve
	Wrong mounting kit installed	Replace mounting kit
No feedback	Incorrect assembly	Check assembly, wiring and connec- tion
	Switch not set	Set switch
	Wrong mounting kit installed	Replace mounting kit
	Voltage is not con- nected	Connect voltage
Cover cannot be at- tached	Sealing ring inser- ted incorrectly	Insert sealing ring correctly
	Sealing ring dam- aged	Replace sealing ring
	Cables protruding over the edge of the base	Check the cable routing and shorten the cables if necessary

#### 15 Inspection and maintenance

#### **NOTICE**

#### **Exceptional maintenance work!**

- Damage to the GEMÜ product.
- Any maintenance work and repairs not described in these operating instructions must not be performed without consulting the manufacturer first.

The operator must carry out regular visual examination of the products depending on the operating conditions and the potential danger in order to prevent leakage and damage.

- 1. Have servicing and maintenance work performed by trained personnel.
- 2. Wear appropriate protective gear as specified in plant operator's guidelines.
- 3. Shut off plant or plant component.
- Secure plant or plant component against recommissioning.
- 5. Depressurize the plant or plant component.
- 6. Actuate products which are always in the same position four times a year.
- 7. Carry out inspection and maintenance for products in the potentially explosive area to DIN EN 60079-17.

#### 15.1 Spare parts

No spare parts are available for this product. If it is faulty, please return it to GEMÜ for repair.

#### 15.2 Cleaning the product

# **⚠ DANGER**Danger of explosion

- Risk of death or severe injury.
- Danger from sparking. Only clean the product with an anti-static or damp cloth.
- Do not clean the product with a high pressure cleaning device.

#### 16 Disassembly

- 1. Disassemble in reverse order to assembly.
- 2. Unscrew the electrical wiring.
- 3. Disassemble the product. Observe warning notes and safety information.

#### 17 Disposal

- 1. Pay attention to adhered residual material and gas diffusion from penetrated media.
- 2. Dispose of all parts in accordance with the disposal regulations/environmental protection laws.
- 3. Dispose of electronic components separately.

#### 18 Returns

Legal regulations for the protection of the environment and personnel require that the completed and signed return delivery note is included with the dispatch documents. Returned goods can be processed only when this note is completed. If no return delivery note is included with the product, GEMÜ cannot process credits or repair work but will dispose of the goods at the operator's expense.

- 1. Clean the product.
- 2. Request a return delivery note from GEMÜ.
- 3. Complete the return delivery note.
- 4. Send the product with a completed return delivery note to  $\mathsf{GEM}\ddot{\mathsf{U}}.$

#### 19 EU Declaration of conformity in accordance with 2014/34/EU (ATEX)

## **EU Declaration of Conformity**

## in accordance with 2014/34/EU (ATEX)

We, the company GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG

Fritz-Müller-Strasse 6-8

74653 Ingelfingen-Criesbach, Germany

declare that the product listed below complies with the requirements of directive 2014/34/EU for intended use in potentially ex-

plosive areas.

**Description of the product:** GEMÜ combi switchbox 4241

**Explosion protection designation:** Gas: 🗟 II 2G Ex ib IIB T4 Gb

Dust: ⓑ II 2D Ex ib IIIC T120°C Db

EC type examination certificate: IBExU17ATEX 1160 X

Notified body: IBExU, No. 0637

**Explanations:** For special conditions or operation limits see chapter "Correct use" in the operating

instructions.

The Essential Safety and Health Requirements are met by compliance with the standards listed below that are applicable for the above mentioned product:

- EN 60079-0:2012+A11:2013

- EN 60079-11:2012

2023-09-22

Joachim Brien Head of Technical Department





