GEMÜ 4242

Combi switchbox with integrated pilot valve

Features

- Fieldbus connection AS-Interface (3.0), ASi-5 and DeviceNet (optional)
- Communication and programming interface IO-Link
- Adjustable switch point tolerances
- Speed^{-AP} function for fast mounting and initialization
- High visibility position indicator by LED
- Can be fitted to GEMÜ valves or third-party actuators
- On-site or remote end position programming via programming input
- Integrated manual override

Description

The GEMÜ 4242 combi switchbox is suitable for installation on pneumatically operated linear actuators. The position of the valve spindle is reliably electronically detected and evaluated using play-free and non-positive mounting. Integrated pilot valves enable direct activation of the process valve connected to them. Intelligent microprocessor-controlled functions facilitate commissioning and support during operation. The current position of the valve is displayed via high-visibility LEDs and fed back via electrical signals.

Technical specifications

- **Ambient temperature:** 0 to 60 °C
- **Linear measuring range:** 2 to 75 mm
- **Flow rate:** 14 Nl/min l 145 Nl/min l 23 Nl/min l 250 Nl/min
- **Supply voltage:** 24 V DC l or as per fieldbus specification
- **Mode of action:** Double acting l Single acting
- **Communication modes:** ASi-5 l AS-Interface l DeviceNet l IO-Link
- **Electrical connection types:** M12 plug
- **Protection class:** IP 65. IP 67
- **Conformities:** ATEX l EAC l ETL Listed C US l FCC l FMEDA l IECEx

Technical data depends on the respective configuration

further information
webcode: GW-4242

Product line

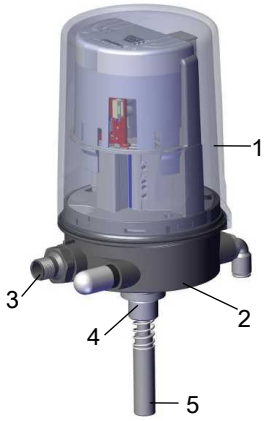
			
	GEMÜ 4240	**GEMÜ 4241**	**GEMÜ 4242**
Linear measuring range	5 to 75 mm	5 to 75 mm	2 to 75 mm
Radial measuring range	0 - 90°	0 - 90°	0 - 90°
Ambient temperature	0 to 60 °C	0 to 50 °C	0 to 60 °C
Flow rate			
14 Nl/min	-	-	●
145 Nl/min	-	-	●
23 Nl/min	-	-	●
250 Nl/min	●	●	●
Electrical connection types			
Cable glands	●	●	-
Connectors	-	-	●
Switch types			
Microswitch	●	-	-
2-wire proximity switch (NAMUR)	●	●	-
3-wire proximity switch	●	-	-
Communication modes			
ASi-5	-	-	●
AS-Interface	-	-	●
DeviceNet	-	-	●
IO-Link	-	-	●
Supply voltage			
24 V DC	●	-	●
250 V AC	●	-	-
8 V DC	●	●	-
or as per fieldbus specification	-	-	●
Conformities			
ATEX	-	●	●
EAC	-	●	●
ETL Listed C US	-	-	●
FCC	-	-	●
FMEDA	-	-	●
IECEx	-	●	●

Product description

Configuration

Size 1, 30 mm

Size 2, 75 mm



Size 2, 30 mm

Item	Name	Materials		
		Size 1, 30 mm	Size 2, 75 mm	Size 2, 30 mm
1	Housing cover – standard version:	PC	PC	PC
	Housing cover – compact version:	PP	-	-
2	Housing base	Anodized aluminium or stainless steel	PPS or stainless steel	PPS or stainless steel
3	Electrical connection	Threaded piece: Stainless steel (1.4305) insert: PA	Threaded piece: PPS or stainless steel (1.4305) insert: PA	Threaded piece: PPS or stainless steel (1.4305) insert: PA
4	Adapter piece	Stainless steel (1.4305)	Stainless steel (1.4305)	Stainless steel (1.4305)
5	Mounting kit, valve-specific	Valve-specific materials	Valve-specific materials	Valve-specific materials
	Seals	EPDM and NBR	NBR with PPS housing base NBR, EPDM and VMQ with stainless steel housing base	NBR with PPS housing base NBR, EPDM and VMQ with stainless steel housing base

GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.

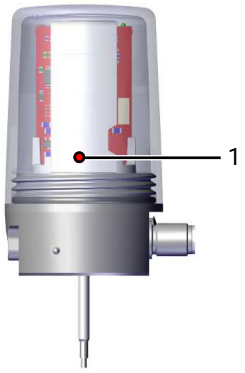
Thanks to serialization, every valve and every relevant valve component such as the body, actuator or diaphragm, and even automation components, can be clearly traced and read using the CONEXO pen RFID reader. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the "installation qualification" process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides him with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

For further information on GEMÜ CONEXO please visit:
www.gemu-group.com/conexo

Ordering

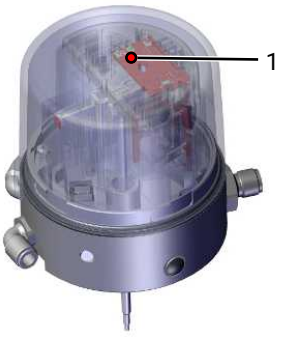
GEMÜ Conexo must be ordered separately with the ordering option "CONEXO".

Installing the RFID chip (1)



Size 1, 30 mm

Size 2, 75 mm



Size 2, 30 mm

Availability

Option	Code	Size 1	Size 2	
			75 mm	30 mm
Housing material [1]	**01**	-	X**	
	07	X	X(**ASi-5 only**)	
	14	X	-	
Function [2]	**01**	X	X	
	02	X**	X*	-
	K1	X**	-	
Flow rate [3]	**01**	X	-	
	02	X	-	
	03	-	X**	
	R3	-	X(**ASi-5 only**)	
Special version [4]	**Y**	X**	X**	On request
	X	X	X	On request

* Double acting for size 2 only possible with PPS base (housing material code 01 or flow rate code 03)

** Not possible in ASi-5 (fieldbus code A5 or A5D)

1) **Housing material**
Code 01: PPS base, PC cover
Code 07: Stainless steel base, PC cover
Code 14: Aluminium base, PC cover

2) **Function**
Code 01: Combi switchbox, single acting
Code 02: Combi switchbox, double acting
Code K1: Combi switchbox, compact version, single acting

3) **Flow rate**
Code 01: 14 Nl/min, size 1
Code 02: 23 Nl/min (Booster), size 1
Code 03: 250 Nl/min, size 2
Code R3: 145 Nl/min, size 2

4) **Special version**
Code Y: NEC 500 and UL/CSA approval
Code X: ATEX (2014/34/EU), IECEx

Overview of available functions

Function	Version						
	24 V	IO-Link	AS-Interface				DeviceNet
			AS-Interface (3.0)			ASi-5	
			A2	A3	A4	A5/A5D	
Optical high visibility position indicator	X	X	X	X	X	X	X
Deactivation of high visibility position indicator	-	X	-	-	X	X	X
On-site programming	X	X	X	X	X	X	X
Deactivation of on-site programming	-	X	-	-	X	X	X
Position feedback open	X	X	X	X	X	X	X
Position feedback closed	X	X	X	X	X	X	X
Feedback for operating mode	-	X	X	X	X	X	X
Location function	-	X	-	-	X	X	X
Inversion of LED colours	*	X	*	*	X	X	X
Inversion of feedback signals	-	X	-	-	X	X	X
Switch point setting (tolerance)	-	X	X	X	X	X	X
Stroke reduction alarm	-	X	-	-	-	X	X
Reading option for initialized end positions	-	X	-	-	-	X	X
Reading option for current position	-	X	-	-	-	X	X
Error signalling	X	X	X	X	X	X	X
Operating hours counter	-	X	-	-	-	X	-
Cycle counter (on-site)	-	X	-	-	-	X	X
Total cycle counter	-	X	-	-	-	X	X
Default	-	X	-	-	-	X	Via DeviceNet
Digital parameter representation	-	X	-	-	-	X	-
Pilot valve actuation counter (on-site)	-	-	-	-	-	X	-
Total actuation counter (pilot valve)	-	-	-	-	-	X	-
Configurable process data variables	-	-	-	-	-	X	-
Autonomous end position detection	-	-	-	-	-	X	-
App operating option (BLE)	-	-	-	-	-	X	-
Condition monitoring sensor system	-	-	-	-	-	X	-
* Function cannot be configured but can be selected as an ordering option							

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.

Information for AS-Interface 5 versions: If there are customer or system restrictions that prohibit the use of a Bluetooth wireless interface, it is recommended to use an order variant with a deactivated BLE interface. For versions without a deactivated BLE interface, the option also exists to deactivate the interface independently later.

The versions with fieldbus ASi-5 are (temporarily) only available in the following basic configuration:

Size 1:

Fieldbus AS-Interface 5, 96 slaves, BLE (code A5),

Housing material: Stainless steel base (code 07),

Single acting (code 01),

M12 plug, 5-pin (code 01),

Pneumatic 6 mm angled connection (code 04),

Without manual override (code 01).

23 Nl/min flow rate (code 02),

30 mm travel sensor length (code 030),

Without special function (code -) or with ATEX special function (code X)

Size 2:

Fieldbus AS-Interface 5, 96 slaves, BLE (code A5),

Housing material: Stainless steel base (code 07),

Single acting (code 01),

M12 plug, 5-pin, stainless steel (code S1),

Pneumatic 6 mm angled connection (code 04),

No code option (code 00),

145 Nl/min flow rate,

30 mm travel sensor length (code 030) or 75 mm (code 075),

Without special function (code -) or with ATEX special function (code X)

Order codes

1 Type	Code
Combi switchbox	4242

2 Fieldbus	Code
Without, 24 V DC version	000
AS-Interface, 31 slaves, 4I/4O	A2
AS-Interface, 62 slaves, 4I/3O	A3
AS-Interface, 62 slaves, 8I/8O	A4
AS-Interface 5, 96 slaves, BLE	A5
AS-Interface 5, 96 slaves, BLE deactivated	A5D
DeviceNet	DN
IO-Link	IOL

3 Accessory	Code
Accessory	Z

4 Housing material	Code
Stainless steel base, PC cover	07
Aluminium base, PC cover	14
PPS base, PC cover	01

5 Function	Code
Combi switchbox, single acting	01
Combi switchbox, double acting	02
Combi switchbox, compact version, single acting	K1

6 Electrical connection	Code
M12 plug, 5-pin	01
M12 plug, 8-pin	02
M12 plug, 5-pin, stainless steel, size 2	S1
M12 plug, 8-pin, stainless steel, size 2	S2

7 Pneumatic connection	Code
M5 connection thread for size 1, G1/8 connection thread for size 2	01
Air supply 4 mm angled connection, exhaust air 4 mm angled connection	02
Air supply 4 mm T-connection, exhaust air 4 mm angled connection	03
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
M5 connection thread for size 1, G1/8 connection thread for size 2 (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 1/4" angled connection, exhaust air 1/4" angled connection	U8

8 Option	Code
Without	00
Manual override	01

8 Option	Code
Inversed LED colours	40
Inversed LED colours, manual override	41
Inverted LED colours Deactivated high visibility position feedback	80

9 Flow rate	Code
14 Nl/min, size 1	01
23 Nl/min (Booster), size 1	02
250 Nl/min, size 2	03
145 Nl/min, size 2	R3

10 Travel sensor version	Code
Travel sensor 30 mm in length	030
Travel sensor 75 mm in length	075

11 Special version	Code
Without	
ATEX (2014/34/EU), IECEx	X
NEC 500 and UL/CSA approval	Y

Order example

Ordering option	Code	Description
1 Type	4242	Combi switchbox
2 Fieldbus	000	Without, 24 V DC version
3 Accessory	Z	Accessory
4 Housing material	07	Stainless steel base, PC cover
5 Function	01	Combi switchbox, single acting
6 Electrical connection	01	M12 plug, 5-pin
7 Pneumatic connection	01	M5 connection thread for size 1, G1/8 connection thread for size 2
8 Option	01	Manual override
9 Flow rate	01	14 Nl/min, size 1
10 Travel sensor version	030	Travel sensor 30 mm in length
11 Special version		Without

Technical data

Medium

Working medium:
Compressed air and inert gases
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 or a minimum of 10 °C below the ambient temperature
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

Temperature

Ambient temperature:

Standard or with special version code Y	0–60 °C
Special version code X	0–55 °C

Control medium temperature:
0 — 50 °C

Storage temperature:
-10 — 70 °C

Pressure

Operating pressure:

Size 1	Size 2
1 to 10 bar (at 40 °C) 1 to 8 bar (at 60 °C)	2 to 7 bar

Observe the maximum control pressure of the valve actuator.

Flow rate:

Size 1	Size 2
Flow rate code 01: 14 Nl/min	Flow rate code 03: 250 Nl/min
Flow rate code 02 (Booster): 23 Nl/min	Flow rate code R3: 145 Nl/min

Product conformities

EMC Directive:
2014/30/EU
Class: B
Group: 1
Technical standards used:

AS-Interface 5	
Interference emission:	ASi-5 Spec V1.04
Interference resistance:	ASi-5 Spec V1.04
Interference emission/ interference resistance	EN 62026-2:2013 + A1:2019

RoHS Directive: 2011/65/EU

Radio Equipment Directive (RED): 2014/53/EU

Technical standards used (ASi-5 only):

Standard regarding the use of radio frequencies:	EN 300 328 V2.2.2 (2019-07)
Electromagnetic compatibility (EMC) for radio devices and services:	EN 301 489-1 V2.2.3 (2019-11) EN 301 489-17 V3.2.4 (2020-09)
Electrical safety:	EN 61010-1:2010 + A1:2019 + A1:2019/AC:2019

Explosion protection: ATEX (2014/34/EU) and IECEx, order code Special version X

NEC 500 (ISA 12.12.01), order code Special version Y

ATEX marking: Gas: Ⓔx II 3G Ex ec nC IIC T4 Gc X

Gas: Ⓔx II 3G Ex ec IIC T4 Gc X (ASi-5 version code fieldbus: A5 and A5D)

Dust: Ⓔx II 3D Ex tc IIIC T100°C Dc X

IECEx marking: Gas: Ⓔx Ex ec nC IIC T4 Gc

Gas: Ⓔx Ex ec IIC T4 Gc X (ASi-5 version code fieldbus: A5 and A5D)

Dust: Ⓔx Ex tc IIIC T100°C Dc

Certificate: IECEx IBE 19.0011 X

NEC marking: Class I, Division II, Groups C & D, T4

Approvals:

	24 V	AS-Interface (3.0)	ASi-5	IO-Link	DeviceNet
Fieldbus / communication	-	Travel sensor version 030: AS-Interface certificate no. 96001 Travel sensor version 075: AS-Interface certificate no. 125601	AS-Interface certificate no. 137301	Travel sensor version 030: IO-Link specification V 1.1 Travel sensor version 075: IO-Link specification V 1.1	TBD

FCC:

FCC §15.105 statement:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC § 15.19 Labelling requirements:

This device complies with part 15 of the FCC Rules and ISED license-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received,

including interference that may cause undesired operation.

FCC § 15.21 Information to user:

Changes or modifications not expressly approved by the party responsible

for compliance could void the user’s authority to operate the equipment.

RF Exposure Requirements:

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Contains FCC ID: QOQ-GM220P

IC / ISED (Canada):

IC / ISED (Canada): (Information in English and French required!)

Canada Class A statement:

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

This device complies with part 15 of the FCC Rules and ISED license-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received,

including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

l'appareil ne doit pas produire de brouillage, et

l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Requirements / Déclaration d'exposition aux radiations :

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps. Ce transmetteur ne doit pas être place au même endroit ou utilise simultanément avec un autre transmetteur ou antenne.

Contains IC: 5123A-GM220P

Mechanical data

Installation position: Optional

Weight:

Size 1	Size 2	
	75 mm	30 mm
Housing material code 14 (aluminium base): 320 g	Housing material code 01 (PPS base): 420 g	Housing material code 01 (PPS base): 350 g
Housing material code 07 (stainless steel base): 600 g	Housing material code 07 (stainless steel base): 1150 g	Housing material code 07 (stainless steel base): 1080 g

Travel sensor:

	Size 1	Size 2	
		75 mm	30 mm
Minimum stroke:	2 mm	5 mm	2 mm
Maximum stroke:	30 mm*	75 mm	30 mm
Hysteresis:	0.2 mm	0.5 mm	0.2 mm
Accuracy:	0.2% Full Scale		

* For ASi-5, the theoretical maximum stroke is 40 mm. However, it is limited to 30 mm by the mounting kit.

Vibration:

Size 1	Size 2	
	75 mm	30 mm
3g acc. to EN 60068-2-6:2008 Test FC	5g acc. to EN 60068-2-6:2008 Test FC	5g acc. to EN 60068-2-6:2008 Test FC

Shock:

Size 1	Size 2	
	75 mm	30 mm
15g acc. to EN 60068-2-27:2009 Test Ea	25g acc. to EN 60068-2-27:2009 Test Ea	25g acc. to EN 60068-2-27:2009 Test Ea

Operating conditions

Ambient conditions: Use indoors and outdoors

Dry and wet environments

Height: Up to 2000 m (above sea level)

Relative air humidity: 0–100%

Protection class: IP 65

IP 67 is achieved by piping away the exhausting air

IP NEMA 4X (UL 61010-1, UL 50E), only available as special version code Y

Degree of contamination: 4 (pollution degree)

Electrical data

Electrical connection type:

24 V	IO-Link/AS-Interface (3.0)/ ASi-5/DeviceNet
1 x 8-pin M12 plug (A-coded)	1 x 5-pin M12 plug (A-coded)*

* The number of pins may vary depending on the fieldbus version (see chapter "Electrical connection").

Supply voltage:

24 V	IO-Link	AS-Interface (3.0) and ASi-5	DeviceNet
18 to 30 V DC	18 to 30 V DC	26.5 to 31.6 V DC	11 to 25 V DC
(typically 24 V DC)	(in accordance with IO-Link specification)	(in accordance with AS-Interface specifications)	(in accordance with DeviceNet specifications)

Current consumption:

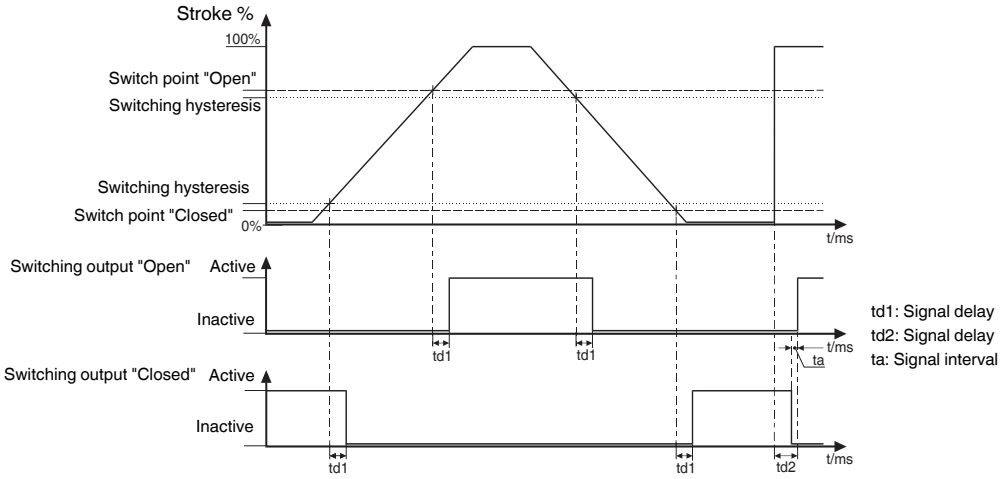
Flow rate code	24 V	IO-Link	AS-Interface order code: A2, A3, A4	ASi-5 order code: A5, A5D	DeviceNet
01	typically 80 mA	typically 80 mA	typically 100 mA	typically 80 mA	typically 65 mA
02	typically 120 mA	typically 120 mA	typically 150 mA	typically 120 mA	typically 100 mA
03	typically 100 mA	typically 100 mA	typically 120 mA	-	typically 85 mA
R3	-	-	-	typically 90 mA	-

Duty cycle: Continuous duty

Electrical protection class: III

Reverse battery protection: yes

Switching characteristic:



Switch points: 24 V, IO-Link, AS-Interface, DeviceNet: The data in percent refer to the programmed stroke, before each end position

Switch points: ASi-5: The data in percent refers to the programmed stroke, with reference to the lower end position (0%)

Switch points:

	Size 1	Size 2	
		75 mm	30 mm
Default setting switch point CLOSED	12%	12%	12%
Default setting switch point OPEN	25% (75%)	25% (75%)	25% (75%)
Min. switch point CLOSED	0.8 mm	2 mm	0.8 mm
Min. switch point OPEN	0.5 mm	1.25 mm	0.5 mm

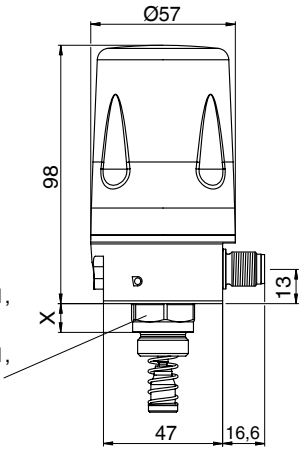
If the percentage switch points dependent on the programmed stroke are smaller than the permissible min. switch points, the min. switch points apply automatically.

The values in brackets apply to the ASi-5 version.

Dimensions

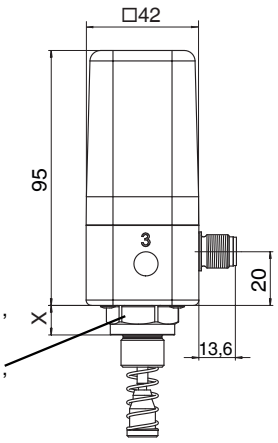
Size 1

Only 30 mm travel sensor length available



WAF 20 for mounting kit M12x1,
x = 9 mm
WAF 24 for mounting kit M16x1,
x = 11 mm
dependent on valve used

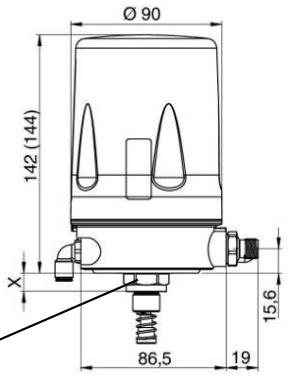
Standard
Dimensions in mm



WAF 20 for mounting kit M12x1,
x = 9 mm
WAF 24 for mounting kit M16x1,
x = 11 mm
dependent on valve used

Compact
Dimensions in mm

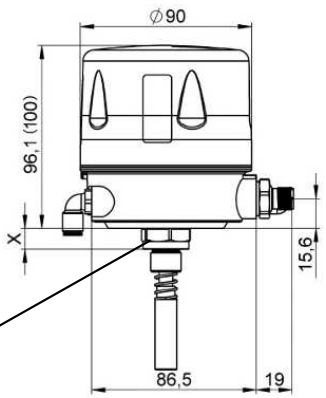
Size 2



WAF 20 for mounting kit M12x1,
x = 9 mm
WAF 24 for mounting kit M16x1,
x = 11 mm
dependent on the valve that is used

Travel sensor 75 mm in length

Dimensions in mm



WAF 20 for mounting kit M12x1,
x = 9 mm
WAF 24 for mounting kit M16x1,
x = 11 mm
dependent on the valve that is used

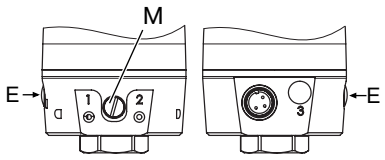
Travel sensor 30 mm in length

Dimensions in mm

- The dimensions in brackets apply to the ASi-5 version

Pneumatic connection

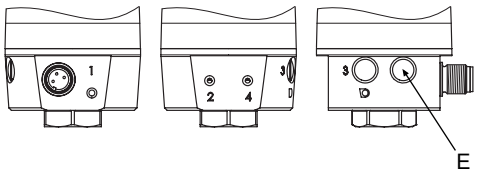
Size 1, standard, single acting



Connection	Designation	Connection size
1	Air supply connection	M5
2	Working connection for process valve	M5
3	Venting connection with integrated check valve	M6 x 0.75 [1)]
E	Housing ventilation with integrated check valve	M6 x 0.75
M	Manual override	-

1) only relevant for exhaust air duct and/or increase of protection class

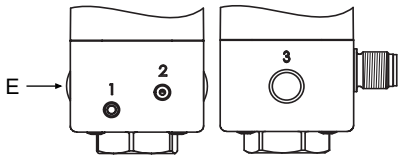
Size 1, standard, double acting



Connection	Designation	Connection size
1	Air supply connection	M5
2	Working connection for process valve	M5
3	Venting connection with integrated check valve	M6 x 0.75 [1)]
4	Working connection for process valve	M5
E	Housing ventilation with integrated check valve	M6 x 0.75

1) only relevant for exhaust air duct and/or increase of protection class

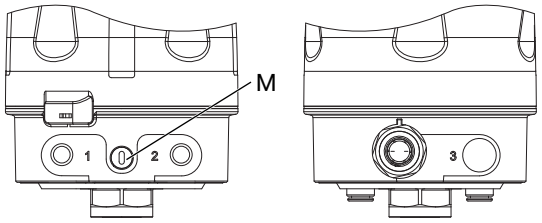
Size 1, compact version



Connection	Designation	Connection size
1	Air supply connection	M5
2	Working connection for process valve	M5
3	Venting connection with integrated check valve	M6 x 0.75 [1)]
E	Housing ventilation with integrated check valve	M6 x 0.75

1) only relevant for exhaust air duct and/or increase of protection class

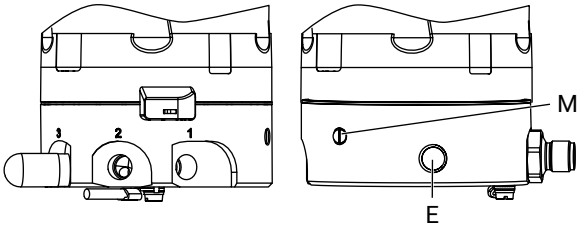
Size 2, PPS (code 01), single acting



Connection	Designation	Connection size
1	Air supply connection	G 1/8
2	Working connection for process valve	G 1/8
3	Venting connection with silencer (integrated housing ventilation)	G 1/8 [1)]
M	Manual override	-

1) only relevant for exhaust air duct and/or increase of protection class

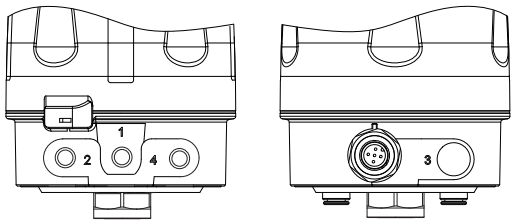
Size 2, stainless steel (code 07), single acting



Connection	Designation	Connection size
1	Air supply connection	G 1/8
2	Working connection for process valve	G 1/8
3	Venting connection with silencer	G 1/8 [1)]
M	Manual override	-
E	Housing ventilation with integrated check valve	M6 x 0.75

1) only relevant for exhaust air duct and/or increase of protection class

Size 2, PPS (code 01), double acting (only available for 75 mm version)



Connection	Designation	Connection size
1	Air supply connection	G 1/8
2	Working connection for process valve	G 1/8
3	Venting connection with silencer (integrated housing ventilation)	G 1/8 [1)]
4	Working connection for process valve	G 1/8

1) only relevant for exhaust air duct and/or increase of protection class

Electrical connection

24 V, ordering option Fieldbus, code 000

Pin assignment

Pin	Signal name
1	U, 24 V DC, supply voltage
2	24 V DC, Open end position output
3	U, GND
4	24 V DC, Closed end position output
5	24 V DC, programming input
6	24 V DC, control input
7	24 V DC, error output
8	n.c.

Pin 5 and pin 6 are highly active. If not used, connect to GND or leave open.
The following errors are indicated via pin 7 (error output): Sensor error, pneumatic error, programming error, internal error

Inputs (pin 5, 6)

Input impedance: min. 27 kΩ

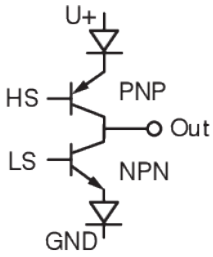
Input voltage: max. 30 V DC

High level: ≥ 18 V DC

Low level: ≤ 5 V DC

Outputs (pin 2, 4, 7)

Internal wiring:



Push-Pull

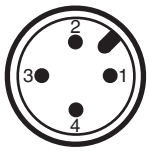
Max. switching current: ± 100 mA

Max. voltage drop Vdrop: 3 V DC at 100 mA

Switching voltage: $+U_v - V_{drop}$ push high
$-U_v + V_{drop}$ pull low

IO-Link, ordering option Fieldbus, code IOL

Pin assignment

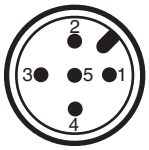


Pin	Signal name
1	U, 24 V DC, supply voltage
2	n.c.*
3	U, GND
4	C/Q IO-Link
5	n.c.*

* Pins 2 and 5 are not relevant for the function and may therefore be populated (visible) or not populated (not present).

AS-Interface (3.0) and ASi-5, ordering option fieldbus, code A2, A3, A4, A5 and A5D

Pin assignment



Pin	Signal name
1	AS-Interface +
2	n.c.*
3	AS-Interface -
4	n.c.*
5	n.c.*

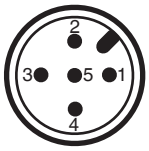
* Pins 2, 4 and 5 are not relevant for the function and may therefore be populated (visible) or not populated (not present).

Ensure a potential equalisation connection for AS-Interface (3.0). Implement the potential equalisation either via a pre-assembled earthing kit or ensure that there is a sufficiently conductive connection (R ≤ 100 Ω) to the system earth via the mechanically connected valve fitting.

Potential equalisation is not required for housing versions with a PPS base and for ASi-5 versions
(except for special functions X and Y).

DeviceNet, ordering option Fieldbus, code DN

Pin assignment



Pin	Signal name
1	Shield
2	V+
3	V-
4	CAN_H
5	CAN_L

Accessories

GEMÜ 1219

Cable socket / cable plug M12

The GEMÜ 1219 is a connector (cable socket / cable plug) M12, 5-pin. Straight and/or 90° angled plug type. Defined cable length or with threaded connection without cable. Various materials available for the threaded ring.

Description	Length	Order number
5-pin, angle	without cable	88205545
	2 m cable	88205534
	5 m cable	88205540
	10 m cable	88210911
	15 m cable	88244667
5-pin, straight	without cable	88205544
	2 m cable	88205542
	5 m cable	88205543
	10 m cable	88270972
	15 m cable	88346791
8-pin, angle	5 m cable	88374574
8-pin, straight	without cable	88304829

GEMÜ 1560

IO-Link master

The GEMÜ 1560 IO-Link master is used for parametrization, actuation, commissioning and for evaluating process and diagnostics data on products with IO-Link interface with communication standard in accordance with IEC 61131-9. The IO-Link master is available with USB port for use on a computer or with a Bluetooth or WLAN interface for use on mobile devices (iOS and Android). GEMÜ 1560 can be ordered separately or as a set for GEMÜ products including the required adapter.

Description	Order designation	Order number
IO-Link master kit (adapter plus cable)	1560USBS 1 A40A12AU A	99072365
IO-Link master kit (adapter plus cable)	1560 BTS 1 A20A12AA A	99130458

GEMÜ 4242000ZMA

Programming magnet

The programming magnet is used to start automatic initialization.

Order number: 88377537

GEMÜ 4180

AS-Interface connector

AS-Interface connector (M12 on AS-Interface, flat cable)

Order number: 88073531

Subject to alteration | 11.2025 | 88345121

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