

Pressure regulators ▶ E/P pressure regulators

Series ED02

Brochure



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E/P pressure regulator, Series ED02

▶ Qn= 120 l/min ▶ Compressed air connection output: G 1/8, 1/8 NPT ▶ Electr. connection: via signal connection ▶ Signal connection: input and output, Plug, M12, 5-pin

3

Accessories



Connecting cable, Series CN2

▶ Socket, M12, 5-pin, A-coded, angled ▶ without wire end ferrule, tin-plated, 5-pin
▶ screened

9



Socket, M12x1, Series CN2

▶ Socket, M12x1, 5-pin, A-coded, angled ▶ screened

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Kits for linking

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Mounting for TH35-7.5 rail

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Mounting kit, for mounting plate

12

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00123883

Version	Poppet valve
Control	Analog
Certificates	CE declaration of conformity
Ambient temperature min./max.	+0 °C / +50 °C
Medium temperature min./max.	+0 °C / +50 °C
Medium	Compressed air
Max. particle size	50 μm
Max. oil content of compressed air	1 mg/m ³
Qn	120 l/min
Mounting orientation	±α = 0 - 90° ±β = 0 - 90°
DC operating voltage	24 V
Voltage tolerance DC	-20% / +20%
Permissible ripple	5%
Max. power consumption	300 mA
Protection class	IP65
Compressed air connection input	G 1/8, 1/8 NPT
Compressed air connection output	G 1/8, 1/8 NPT
Exhaust type	Uncollected, with silencer
Weight	0.32 kg
Materials:	
Housing	Die-cast aluminum; Steel
Seal	Hydrogenated acrylonitrile butadiene rubber

Nominal flow Qn with working pressure 7 bar, with secondary pressure 6 bar and Δp = 0.2 bar

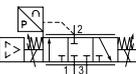
Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- With oil-free, dry air, other installation positions are possible on request.
- ED02 series valves can be assembled into blocks using tie rods (see accessories).
- The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.
- The compressed air connection threads fit both G 1/8 and 1/8 NPTF.

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	Operating pressure max.	Pressure setting range min./max.	Nominal input value		Actual output value		Hysteresis	Fig.	Note	Part No.
	[bar]	[bar]								
	-	0 / -1	0 - 10	V	0 - 10	V	< 0,01 bar	Fig. 2	-	R414001197
	2	-1 / 1	0 - 20	mA	0 - 20	mA	< 0,02 bar	Fig. 1	-	R414001198
	2	-1 / 1	4 - 20	mA	4 - 20	mA	< 0,02 bar	Fig. 1	-	R414001199
	2	-1 / 1	0 - 10	V	0 - 10	V	< 0,02 bar	Fig. 2	-	R414001200
	0.7	0 / 0.3	0 - 20	mA	0 - 20	mA	< 0,003 bar	Fig. 1	-	R414002405
	0.7	0 / 0.3	4 - 20	mA	4 - 20	mA	< 0,003 bar	Fig. 1	-	R414002406
	0.7	0 / 0.3	0 - 10	V	10	V	< 0,003 bar	Fig. 3	1)	R414002407
	0.7	0 / 0.3	0 - 10	V	0 - 10	V	< 0,003 bar	Fig. 2	-	R414002408
	3	0 / 1	0 - 20	mA	0 - 20	mA	< 0,01 bar	Fig. 1	-	R414003364
	3	0 / 1	4 - 20	mA	4 - 20	mA	< 0,01 bar	Fig. 1	-	R414003365
	3	0 / 1	0 - 10	V	10	V	< 0,01 bar	Fig. 3	1)	R414004660
	3	0 / 1	0 - 10	V	0 - 10	V	< 0,01 bar	Fig. 2	-	R414003879
	7	0 / 2	0 - 20	mA	0 - 20	mA	< 0,025 bar	Fig. 1	-	R414003370
	7	0 / 2	4 - 20	mA	4 - 20	mA	< 0,025 bar	Fig. 1	-	R414003371
	7	0 / 2	0 - 10	V	10	V	< 0,025 bar	Fig. 3	1)	R414003372
	7	0 / 2	0 - 10	V	0 - 10	V	< 0,025 bar	Fig. 2	-	R414003373
8	0 / 6	0 - 20	mA	0 - 20	mA	< 0,05 bar	Fig. 1	-	R414002400	
8	0 / 6	4 - 20	mA	4 - 20	mA	< 0,05 bar	Fig. 1	-	R414002401	
8	0 / 6	0 - 10	V	-	-	< 0,05 bar	Fig. 3	1)	R414002402	
8	0 / 6	0 - 10	V	0 - 10	V	< 0,05 bar	Fig. 2	-	R414002403	
12	0 / 10	0 - 20	mA	0 - 20	mA	< 0,05 bar	Fig. 1	-	R414002410	
12	0 / 10	4 - 20	mA	4 - 20	mA	< 0,05 bar	Fig. 1	-	R414002411	
12	0 / 10	0 - 10	V	-	-	< 0,05 bar	Fig. 3	1)	R414002412	
12	0 / 10	0 - 10	V	0 - 10	V	< 0,05 bar	Fig. 2	-	R414002413	

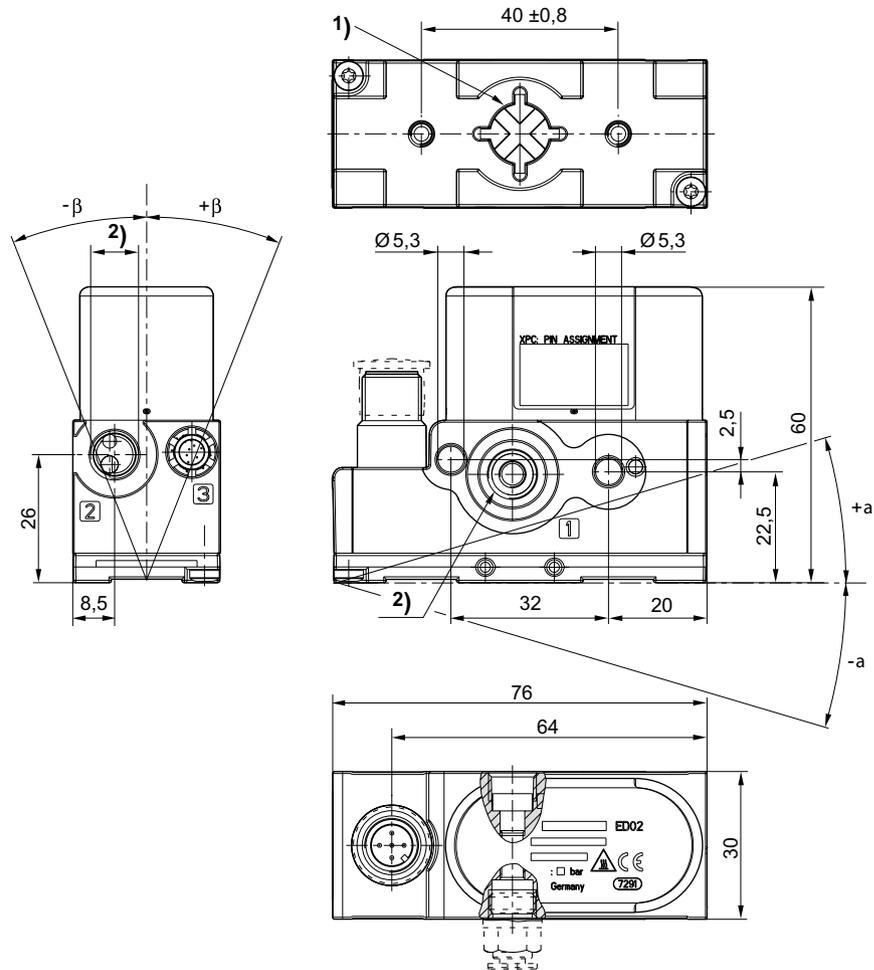
1) Output 10V constant to supply a potentiometer
 Minimum working pressure = 0.5 bar + max. required secondary pressure
 Additional pressure setting ranges available on request

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E/P pressure regulator, Series ED02

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Dimensions



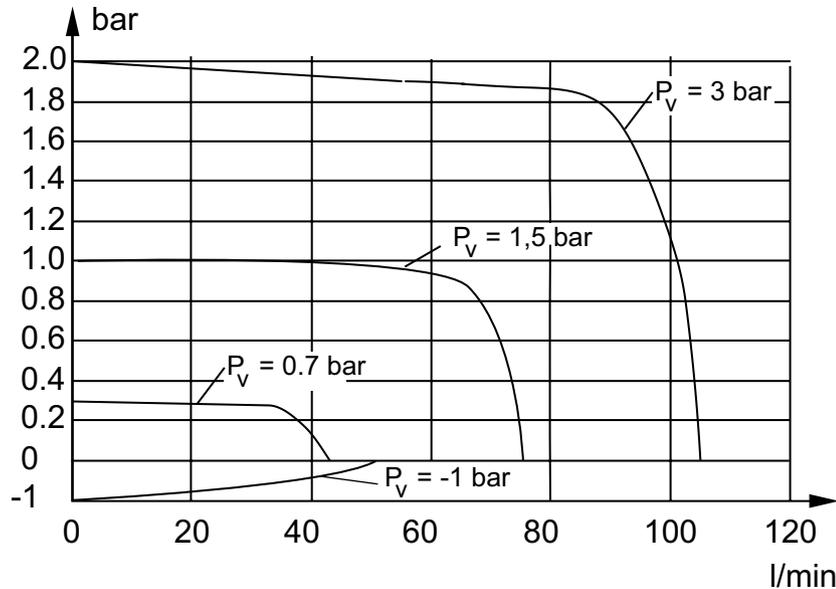
00124910

- 1) Housing exhaust
- 2) Universal threaded connection, suitable for G1/8 according to ISO 228/1:2000 and 1/8-27 NPTF

E/P pressure regulator, Series ED02

- ▶ $Q_n = 120$ l/min ▶ Compressed air connection output: G 1/8, 1/8 NPT ▶ Electr. connection: via signal connection
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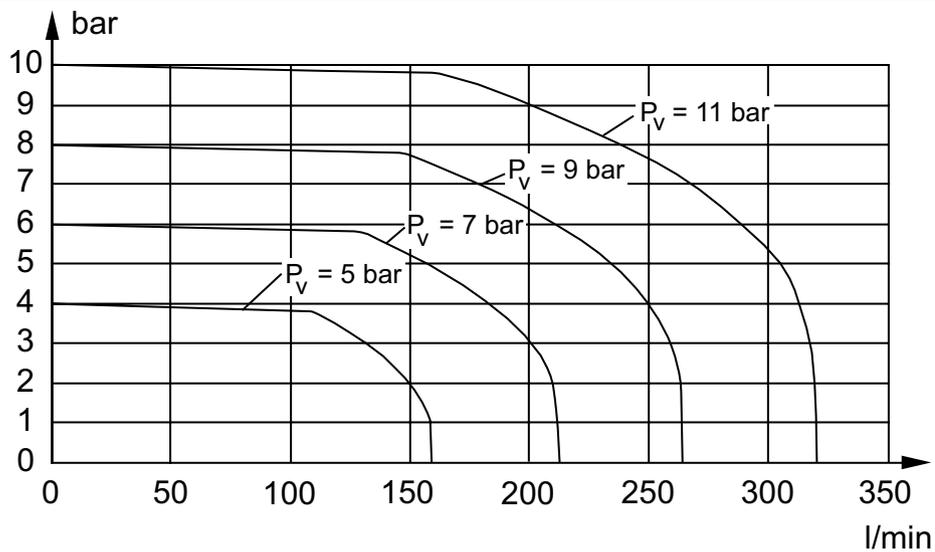
Flow diagram for pressure range up to 2 bar



00137864

P_v = Supply pressure

Durchflussdiagramm für Druckbereich bis 10 bar



00131775

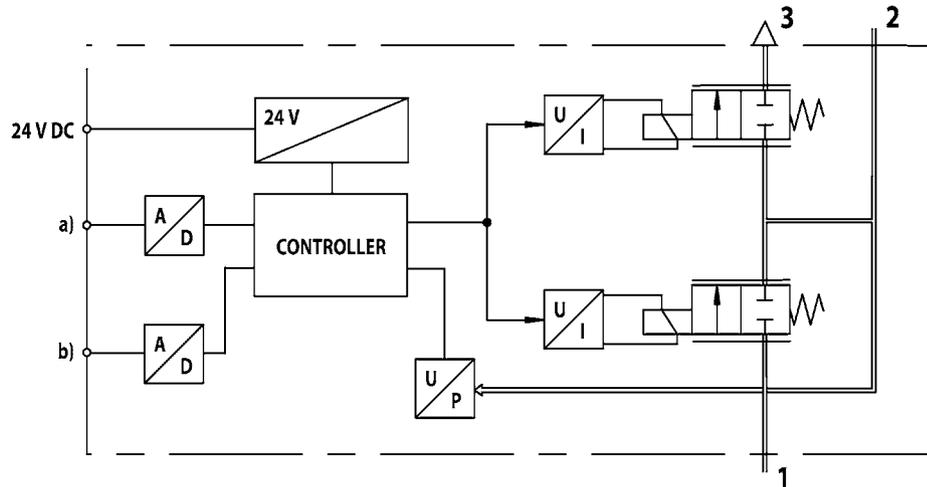
P_v = Supply pressure

Pressure regulators ▶ E/P pressure regulators

E/P pressure regulator, Series ED02

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Functional diagram



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a) Nominal input value b) Actual output value

- 1) Operating pressure
- 2) Working pressure
- 3) Exhaust

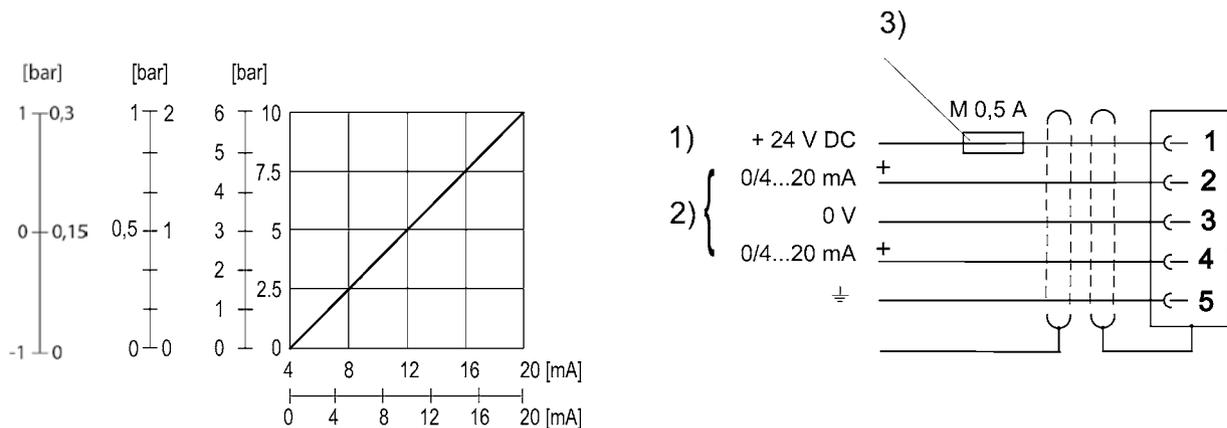
For pressure range -1/1:

- 1) Operating pressure
- 2) Working pressure
- 3) Vacuum

For pressure range 0/-1:

- 1) Vacuum
- 2) Working pressure
- 3) Atmosphere (use 5 μm filter)

Fig. 1. Characteristic and pin assignment for current control with actual output value



00125467

1) Supply Voltage

2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V.

Current control (ohmic load 100 Ω). Actual value output (max. total resistance of downstream devices < 500 Ω).

3) The operating voltage must be protected by an external M 0.5 A fuse.

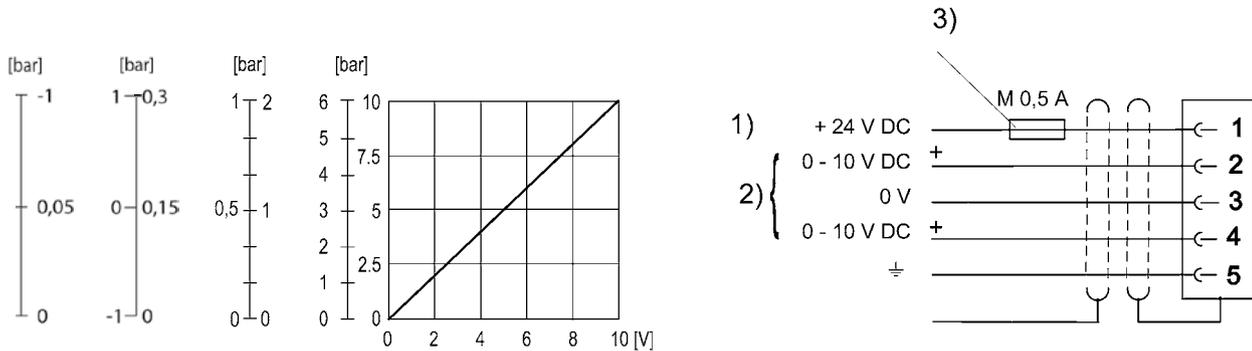
Connect the plug via a shielded cable to ensure EMC.

E/P pressure regulator, Series ED02

▶ Qn= 120 l/min ▶ Compressed air connection output: G 1/8, 1/8 NPT ▶ Electr. connection: via signal connection

▶ Signal connection: input and output, Plug, M12, 5-pin

Fig. 2, Characteristic and pin assignment for voltage control with actual output value

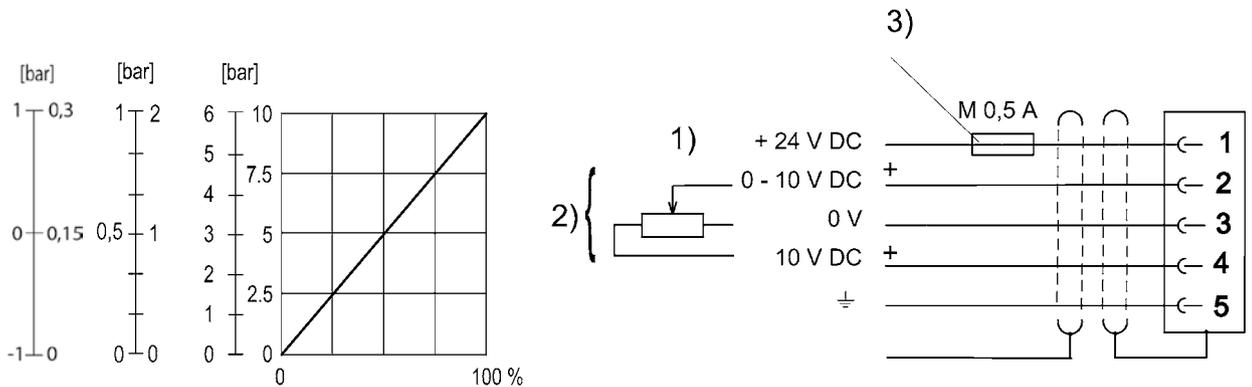


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1) Supply voltage 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V.
Min. load resistance of nominal value output = 1 kΩ.

3) The operating voltage must be protected by an external M 0.5 A fuse.
Connect the plug via a shielded cable to ensure EMC.

Fig. 3, Characteristic and pin assignment for potentiometer control without actual output value



00125469

1) Supply voltage
2) Potentiometer supply (pin 4) and nominal value (pin 2) are related to 0 V.
Potentiometer resistance min. 0-2 kΩ, max. 0-10 kΩ.

3) The operating voltage must be protected by an external M 0.5 A fuse.
Connect the plug via a shielded cable to ensure EMC.

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Series ED02
Accessories

Connecting cable, Series CN2

▶ Socket, M12, 5-pin, A-coded, angled ▶ without wire end ferrule, tin-plated, 5-pin ▶ screened

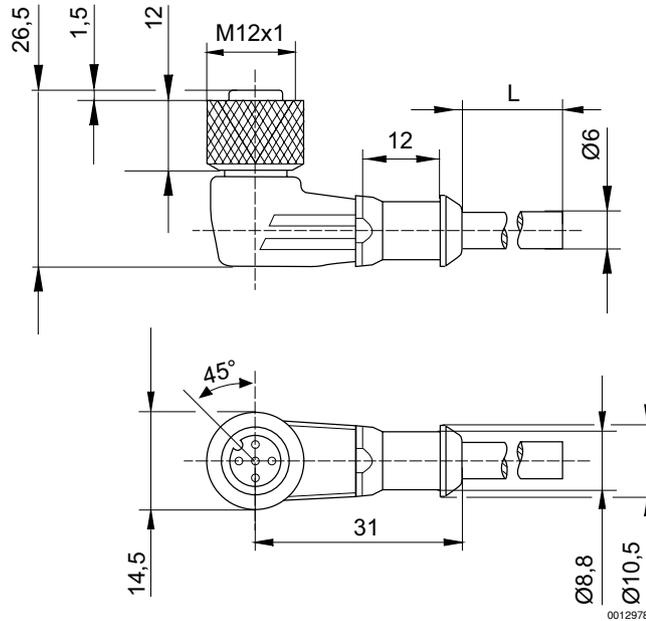


Ambient temperature min./max. -25°C / +80°C
 Wire cross-section 0.34 mm²
 Materials:
 Cable sheath Polyurethane

00129794

Max. current [A]	Number of wires	Cable-Ø [mm]	Cable length L [m]	Weight [kg]	Part No.
4	5	6	2.5	0.153	R419800109
			5	0.285	R419800110
			10	0.542	R419800546

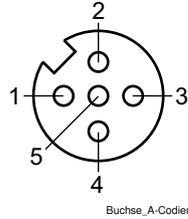
Dimensions



L = length

Series ED02 Accessories

Pin assignment



- (1) = brown
- (2) = white
- (3) = blue
- (4) = black
- (5) = grey

Socket, M12x1, Series CN2

▶ Socket, M12x1, 5-pin, A-coded, angled ▶ screened



00132053

Ambient temperature min./max.	-40°C / +85°C
Protection class	IP67
Cable fitting	PG 9
Materials:	
Housing	Die cast zinc

Technical Remarks

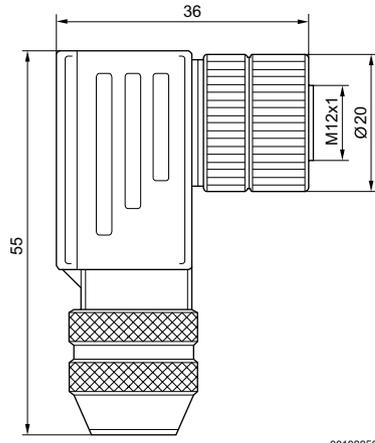
- The specified protection class is only valid in assembled and tested state.

Max. current	suitable cable-Ø min./max	Weight	Part No.
[A]	[mm]	[kg]	
4	6 / 8	0.072	1824484029

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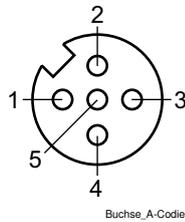
Series ED02
Accessories

Dimensions

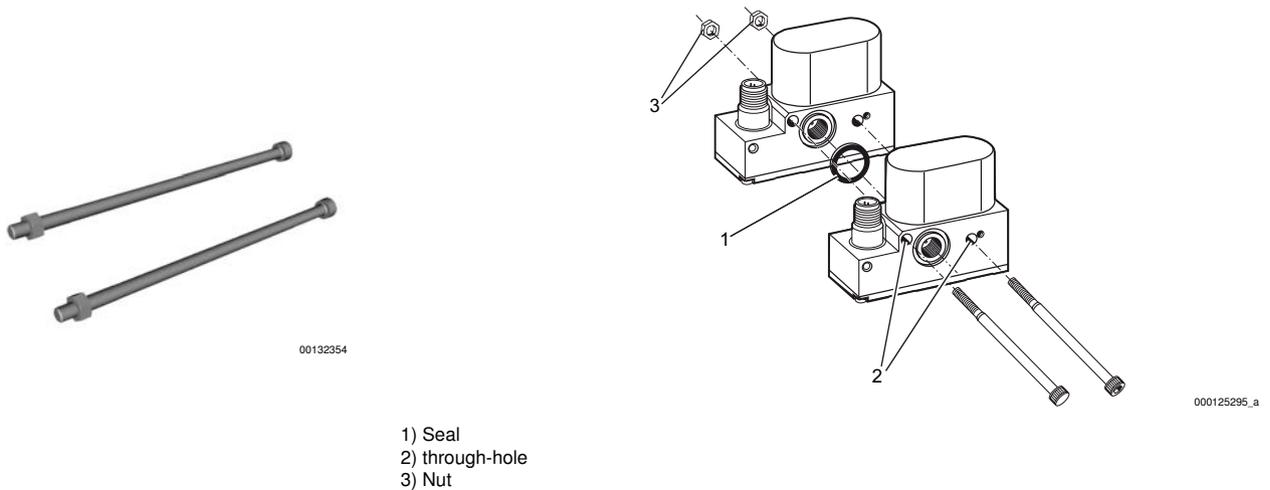


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Pin assignment



Kits for linking



Part No.	Type	Weight [kg]							
R414002579	Kit for linking of 2 units	0.027							
R414002580	Kit for linking of 3 units	0.036							

Scope of delivery: 2 cylinder screws M5, 2 nuts M5 DIN 934, O-rings (quantity depends on kit)

Series ED02

Accessories

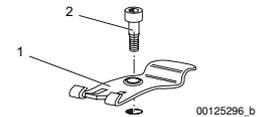
Part No.	Type	Weight [kg]							
R414002581	Kit for linking of 4 units	0.045							
Scope of delivery: 2 cylinder screws M5, 2 nuts M5 DIN 934, O-rings (quantity depends on kit)									

Mounting for TH35-7.5 rail



00132351

- 1) Mounting plate
 - 2) Mounting screw
- Tightening torque: 1 Nm
Further information can be found in the operating instructions.



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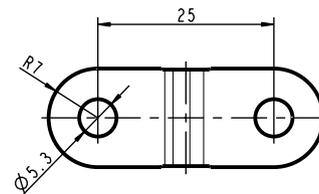
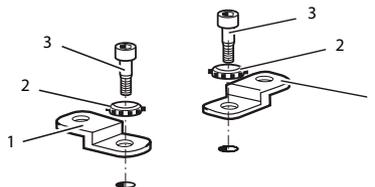
Part No.	Type	Weight [kg]	Delivery quantity [Piece]						
R414002583	Mounting kit for DIN rail	0.008	1						

Mounting kit, for mounting plate



00132352

- 1) Mounting plate
 - 2) toothed ring
 - 3) Mounting screw
- Tightening torque: 6 Nm
Further information can be found in the operating instructions.



00125294_b

Part No.	Type	Weight [kg]	Delivery quantity [Piece]						
R414002582	Mounting kit	0.02	1						

AVENTICS GmbH
Ulmer Straße 4
30880 Laatzen, GERMANY
Phone +49 511 2136-0
Fax +49 511 2136-269
www.aventics.com
info@aventics.com



Find more contact information at
www.aventics.com/contact

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31-01-2017

An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration. Subject to change. © AVENTICS S.à r.l.
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