

Series AV05



AVENTICS Series AV05 Valve Systems

The AVENTICS Series AV03/AV05 provide a reliable basis for both compact handling systems and complex automation solutions. Within machine safety the Series AV03/AV05 offers intelligent solutions that significantly reduce your effort in creating a safe design. With the integration of the fieldbus and I/O-modules of the Series AES, also all requirements for distributed control are available. The Series AV03/AV05 is easy to configure, easy to use and easy to extend as well as IIoT futureproof thanks to the integration of OPC UA and the Digital Twin

- Modular concept
- Intelligent solutions for machine safety demands
- Suits compact handling systems and complex automation solutions
- High connectivity through Multipol or Fieldbus connection
- Integration of a wide range of I/O-modules
- Low weight
- Low energy consumption
- Covers requirements of global automation technology, even under UL specifications and in ATEX-areas
- The Series AV03/AV05-BP offers the possibility of assembly into cabinets
- Easy and flexible custom specific configurations via online configurator
- OPC UA integration allows for easy access to data and analytics without changing or touching the PLC
- The integrated Digital Twin improves your productivity and efficiency



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2x2/2-directional valve, Series AV05

Flow: 580 l/min

Activation: Electrically

Control pressure min./max.: 3 bar ... 8 bar

Duty cycle: 100 %

Type: Spool valve, positive overlapping

Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C

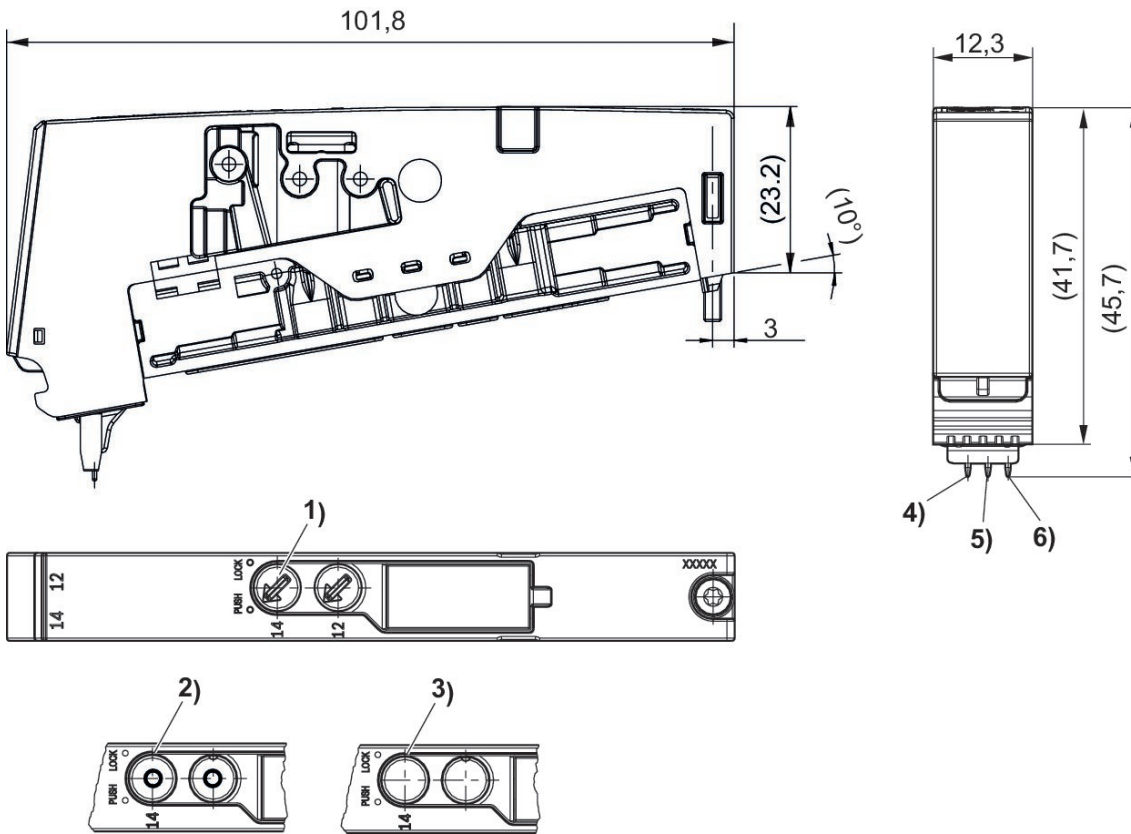
Working pressure min./max.: -0.9 bar ... 10 bar



	Valve function	Switching principle	Operational voltage	Pilot	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
	NC/NC	2x 2/2 NC/NC, with spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103315
	NC/NC	2x 2/2 NC/NC, with spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103316
	NC/NC	2x 2/2 NC/NC, with spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103317

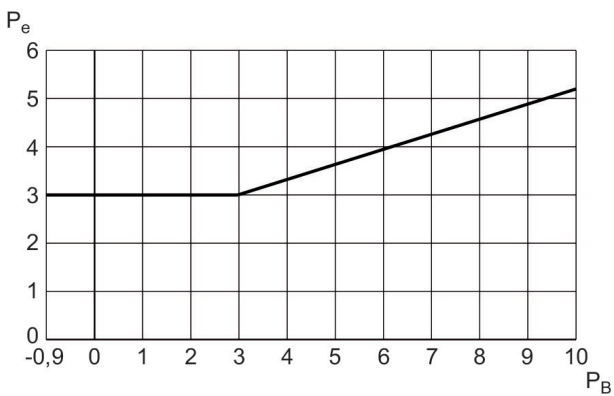
Nominal flow Q _n 1 to 2 [l/min]	Part No.
580	R422103315
580	R422103316
580	R422103317

Dimensions



- 1) Manual override: with detent
- 2) manual override: without detent
- 3) Manual override: without detent
- 4) Coil 12
- 5) Coil 14
- 6) Ground

Control pressure: see diagram for min., max. 8 bar



P_B = Working pressure
P_e = external control pressure, min.

2x3/2-directional valve, Series AV05

Activation: Electrically

Control pressure min./max.: 3 bar ... 8 bar

Duty cycle: 100 %

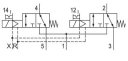
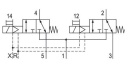
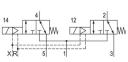
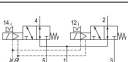
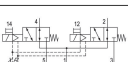
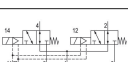
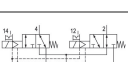


Type: Spool valve, positive overlapping

Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.9 bar ... 10 bar

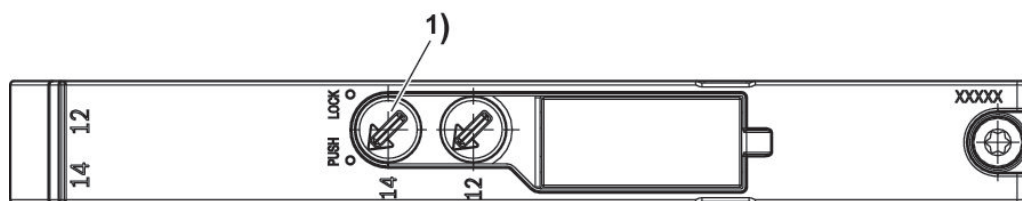
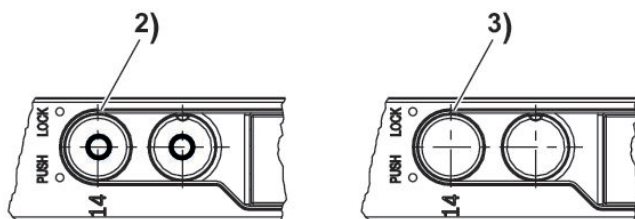
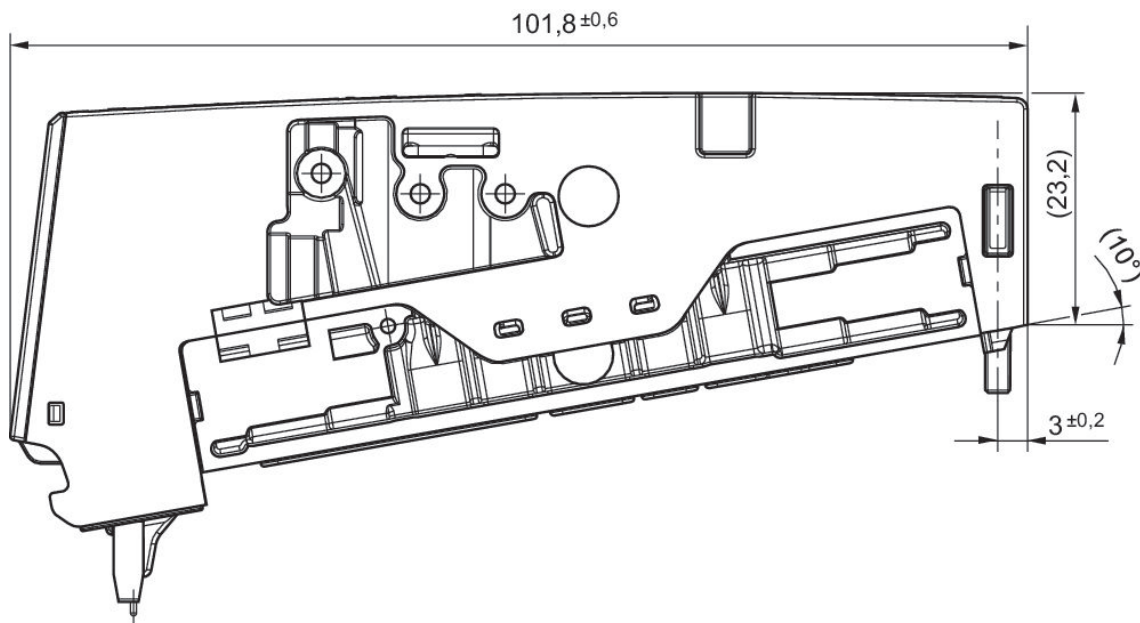


	Valve function	Switching principle	Operational voltage	Pilot	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
	NC/NC	2x 3/2 NC/NC, with spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103006
	NC/NC	2x 3/2 NC/NC, with spring return	24 V DC	External	0.55	-10 % / +10 %	without detent	R422103007
	NC/NC	2x 3/2 NC/NC, with spring return	24 V DC	External	0.55	-10 % / +10 %	without	R422103080
	NO/NO	2x 3/2 NO/NO, with spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103008
	NO/NO	2x 3/2 NO/NO, with spring return	24 V DC	External	0.55	-10 % / +10 %	without detent	R422103009
	NO/NO	2x 3/2 NO/NO, with spring return	24 V DC	External	0.55	-10 % / +10 %	without	R422103081
	NC/NO	2x 3/2 NC/NO, with spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103010
	NC/NO	2x 3/2 NC/NO, with spring return	24 V DC	External	0.55	-10 % / +10 %	without detent	R422103011
	NC/NO	2x 3/2 NC/NO, with spring return	24 V DC	External	0.55	-10 % / +10 %	without	R422103082

Nominal flow Q _n 1 to 2 [l/min]	Part No.
650	R422103006
650	R422103007
650	R422103080
600	R422103008
600	R422103009
600	R422103081
650	R422103010

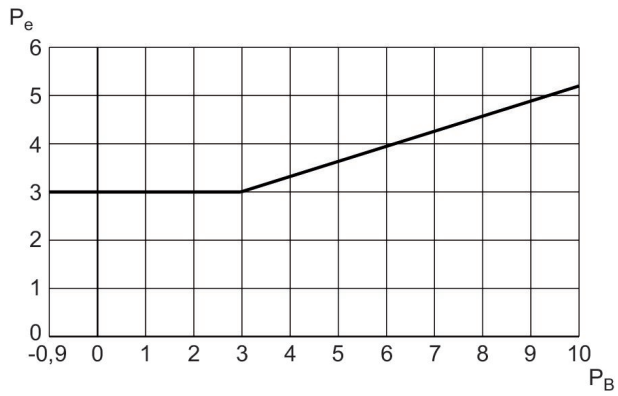
Nominal flow Qn 1 to 2 [l/min]	Part No.
650	R422103011
650	R422103082

Dimensions



- 1) Manual override: with detent
- 2) manual override: without detent
- 3) Manual override: without detent

Control pressure: see diagram for min., max. 8 bar



P_B = Working pressure
 P_e = external control pressure, min.

5/2-directional valve, Series AV05

Activation: Electrically

Control pressure min./max.: 3 bar ... 8 bar

Duty cycle: 100 %

Type: Spool valve, positive overlapping

Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.9 bar ... 10 bar

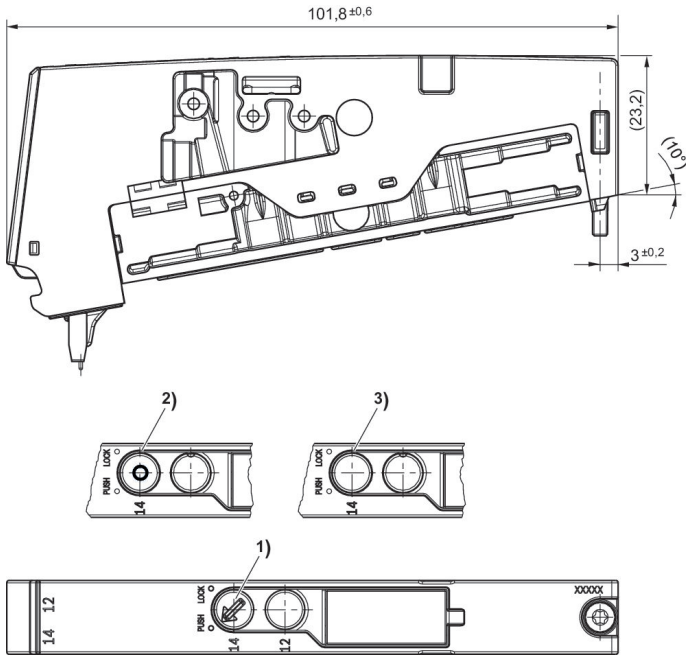


	Switching principle	Operational voltage	Pilot	Power consumption DC [W]	Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Part No.
	2/2, with spring/air spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	700	R422103000
	2/2, with spring/air spring return	24 V DC	External	0.55	-10 % / +10 %	without detent	700	R422103001
	2/2, with spring/air spring return	24 V DC	External	0.55	-10 % / +10 %	without	700	R422103077
	5/2, with air spring return	24 V DC	External	0.55	-10 % / +10 %	with detent	700	R422103012
	5/2, with air spring return	24 V DC	External	0.55	-10 % / +10 %	without detent	700	R422103013
	5/2, with air spring return	24 V DC	External	0.55	-10 % / +10 %	without	700	R422103083
	5/2, double solenoid	24 V DC	External	0.55	-10 % / +10 %	with detent	700	R422103002
	5/2, double solenoid	24 V DC	External	0.55	-10 % / +10 %	without detent	700	R422103003
	5/2, double solenoid	24 V DC	External	0.55	-10 % / +10 %	without	700	R422103078

**R422103000, R422103001, R422103077,
R422103012, R422103083**

Dimensions

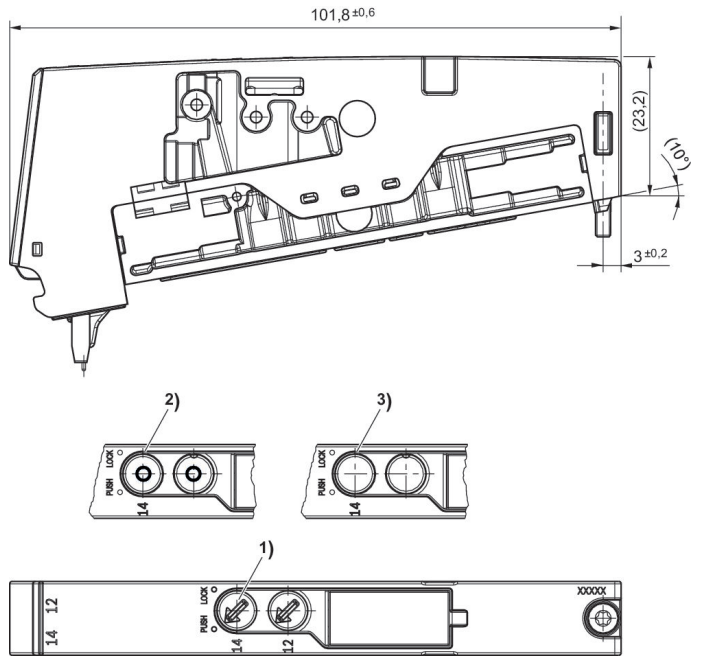
Double Solenoid



- 1) Manual override: with detent
- 2) manual override: without detent
- 3) Manual override: without detent

R422103002, R422103003, R422103078

Dimensions



- 1) Manual override: with detent
- 2) manual override: without detent
- 3) Manual override: without detent

5/3-directional valve, Series AV05

Activation: Electrically

Control pressure min./max.: 3 bar ... 8 bar

Duty cycle: 100 %

Type: Spool valve, positive overlapping

Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C

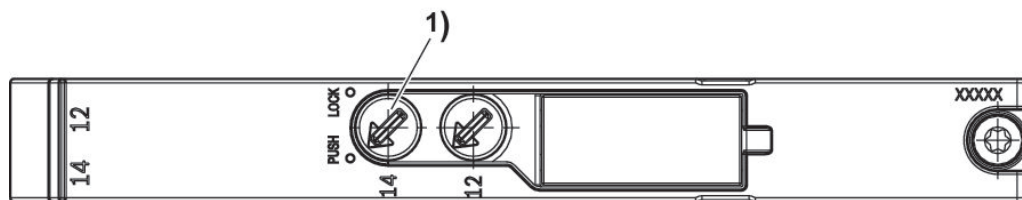
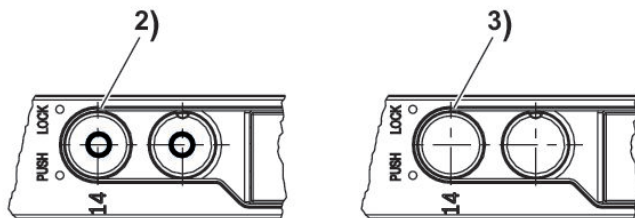
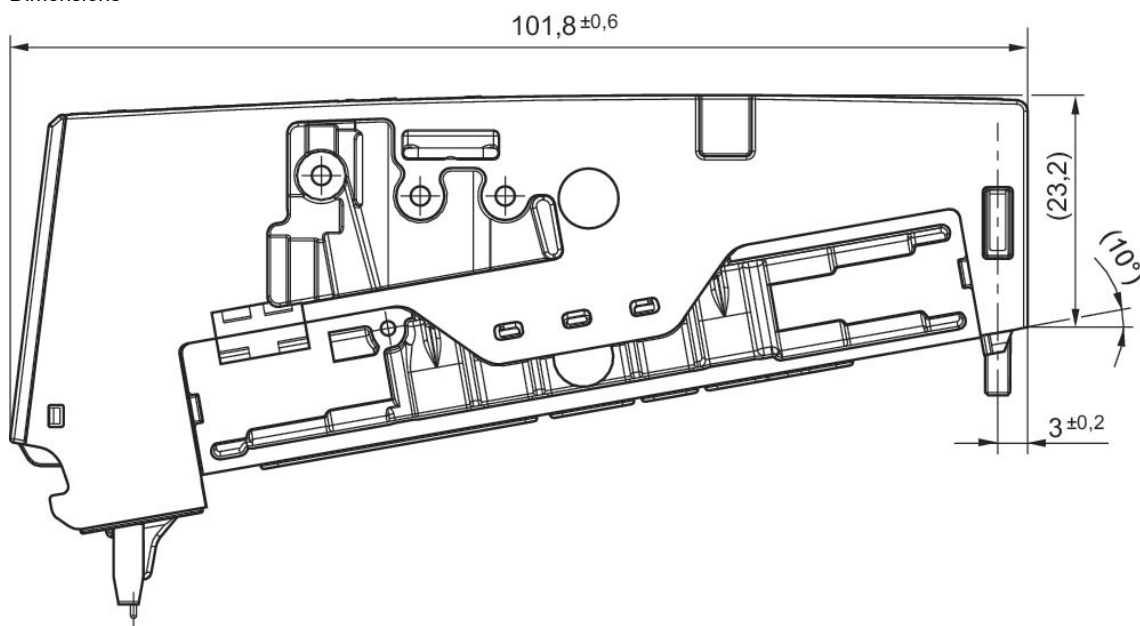
Working pressure min./max.: -0.9 bar ... 10 bar



	Valve function	Switching principle	Operational voltage	Pilot	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
	Closed Center	5/3, closed center	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103004
	Closed Center	5/3, closed center	24 V DC	External	0.55	-10 % / +10 %	without detent	R422103005
		5/3, closed center	24 V DC	External	0.55	-10 % / +10 %	without	R422103079
	Exhausted Center	5/3, exhausted center	24 V DC	External	0.55	-10 % / +10 %	without detent	R422103320
	Exhausted Center	5/3, exhausted center	24 V DC	External	0.55	-10 % / +10 %	with detent	R422103321

Nominal flow Q _n 1 to 2 [l/min]	Part No.
650	R422103004
650	R422103005
650	R422103079
650	R422103320
650	R422103321

Dimensions



- 1) Manual override: with detent
- 2) manual override: without detent
- 3) Manual override: without detent

E/P pressure regulator, Series AV05-EP

Mounting orientation: Any

Electrical connection 2, thread size: M12

Electrical connection 2, number of poles: 5-pin

Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 11 bar

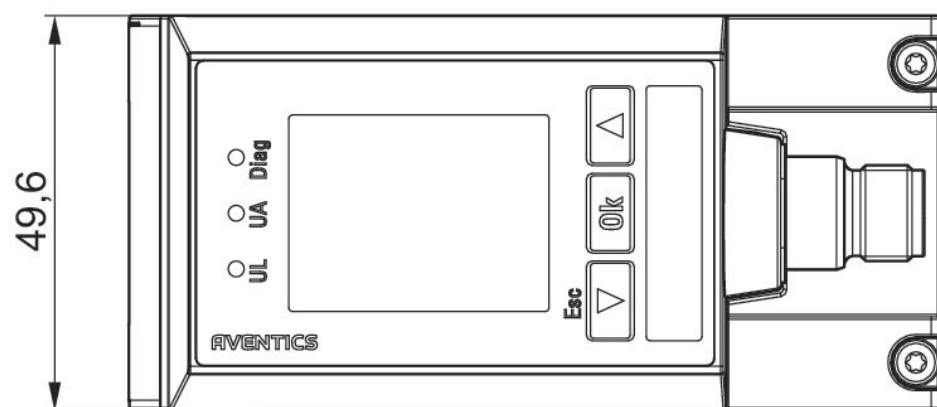
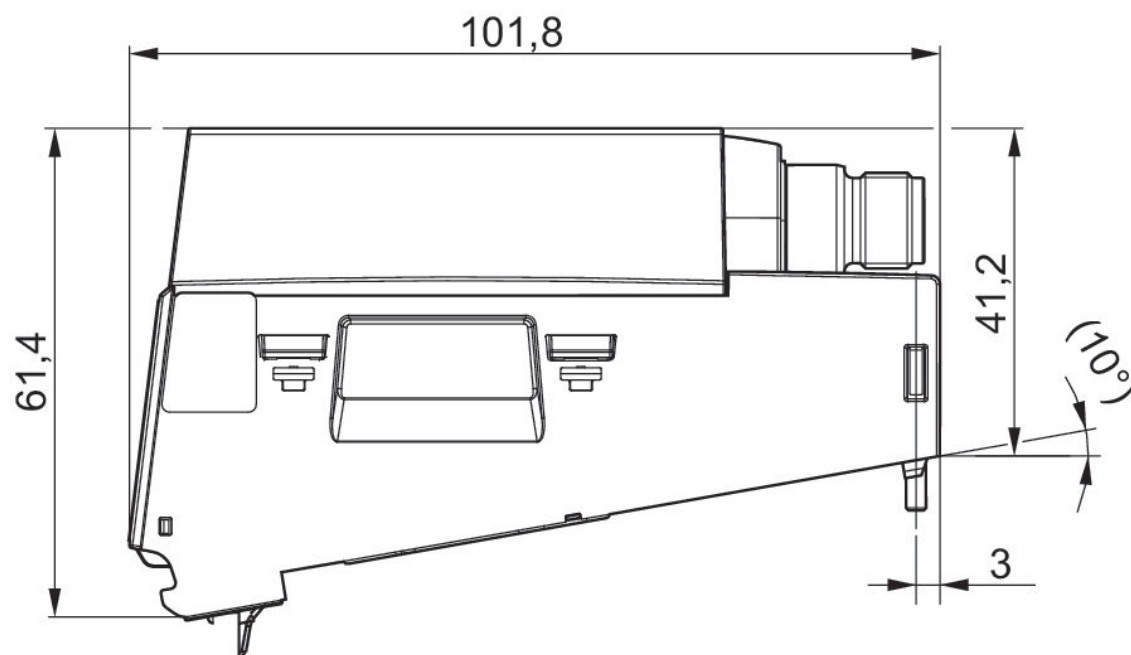


	Min. working pressure [bar]	Max. working pressure [bar]	Min. regulation range [bar]	Max. regulation range [bar]	Nominal input value	Actual output value	Max. current consumption [mA]	Part No.
	0	11	0.5	6	0 ... 10 V	0 ... 10 V	220	R414007402
	0	11	0.5	6	4 ... 20 mA	4 ... 20 mA	220	R414007407
	0	11	0.5	10	0 ... 10 V	0 ... 10 V	220	R414007413
	0	11	0.5	10	4 ... 20 mA	4 ... 20 mA	220	R414007418
	0	11	0.5	6	0 ... 10 V	0 ... 10 V	160	R414007403
	0	11	0.5	6	4 ... 20 mA	4 ... 20 mA	160	R414007408
	0	11	0.5	10	0 ... 10 V	0 ... 10 V	160	R414007414
	0	11	0.5	10	4 ... 20 mA	4 ... 20 mA	160	R414007419
	0	11	0.5	10	0 ... 10 V	0 ... 10 V	160	R414007392
	0	11	0.5	10	4 ... 20 mA	4 ... 20 mA	160	R414007396

Hysteresis	Part No.
< 0,05 bar	R414007402

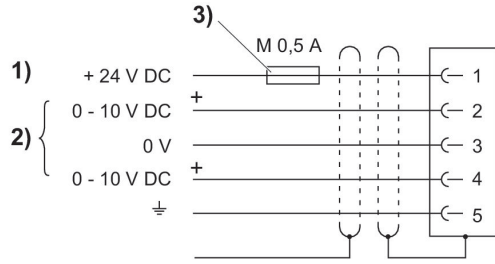
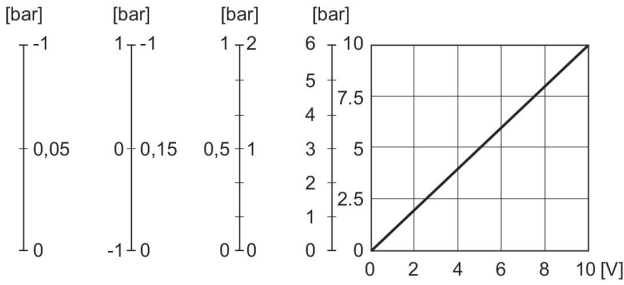
Hysteresis	Part No.
< 0,05 bar	R414007407
< 0,05 bar	R414007413
< 0,05 bar	R414007418
< 0,05 bar	R414007403
< 0,05 bar	R414007408
< 0,05 bar	R414007414
< 0,05 bar	R414007419
< 0,2 bar	R414007392
< 0,2 bar	R414007396

Dimensions



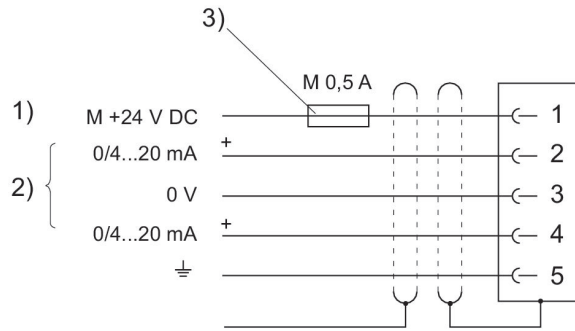
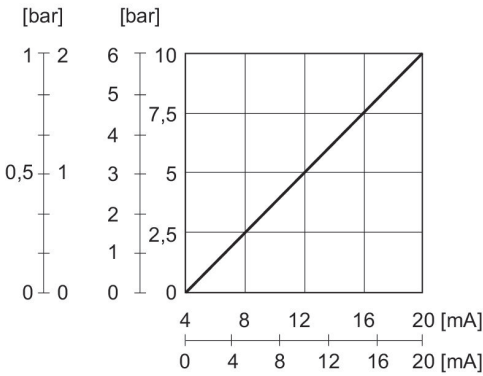
Port for plug M12x1

Characteristic and pin assignment for voltage control with actual output value



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.

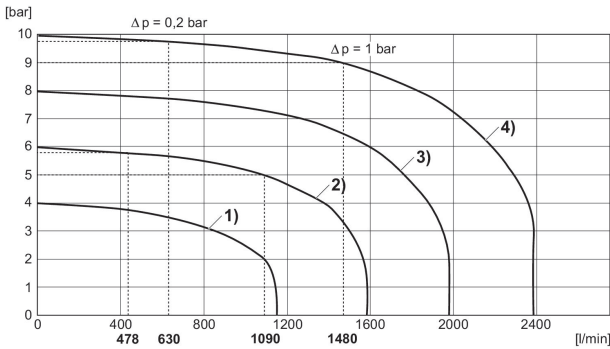
Characteristic and pin assignment for current control with actual output value



1) power supply
2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load < 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Flow characteristic curve

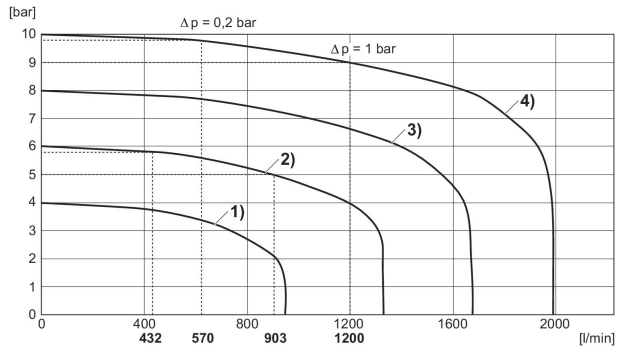
Pressure zone control



- 1) Pv = [[5] bar], controlled: [[4] bar]
- 2) Pv = [[7] bar], controlled: [[6] bar]
- 3) Pv = [[9] bar], controlled: [[8] bar]
- 4) Pv = [[11] bar], controlled: [[10] bar]

Flow characteristic curve

Single pressure control



- 1) Pv = [[5] bar], controlled: [[4] bar]
- 2) Pv = [[7] bar], controlled: [[6] bar]
- 3) Pv = [[9] bar], controlled: [[8] bar]
- 4) Pv = [[11] bar], controlled: [[10] bar]

E/P pressure regulator, Series AV05-EP

Mounting orientation: Any

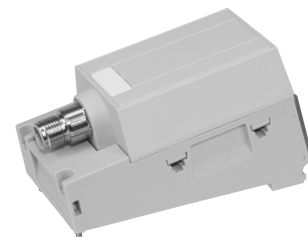
Electrical connection 2, thread size: M12

Electrical connection 2, number of poles: 4-pin

Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 11 bar

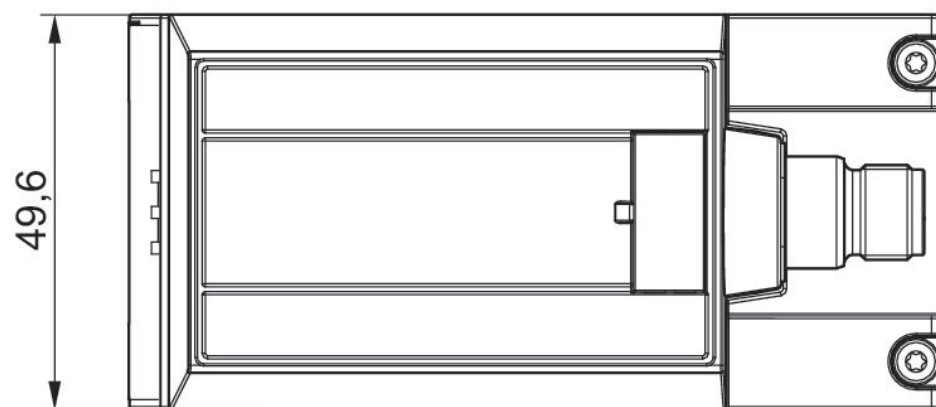
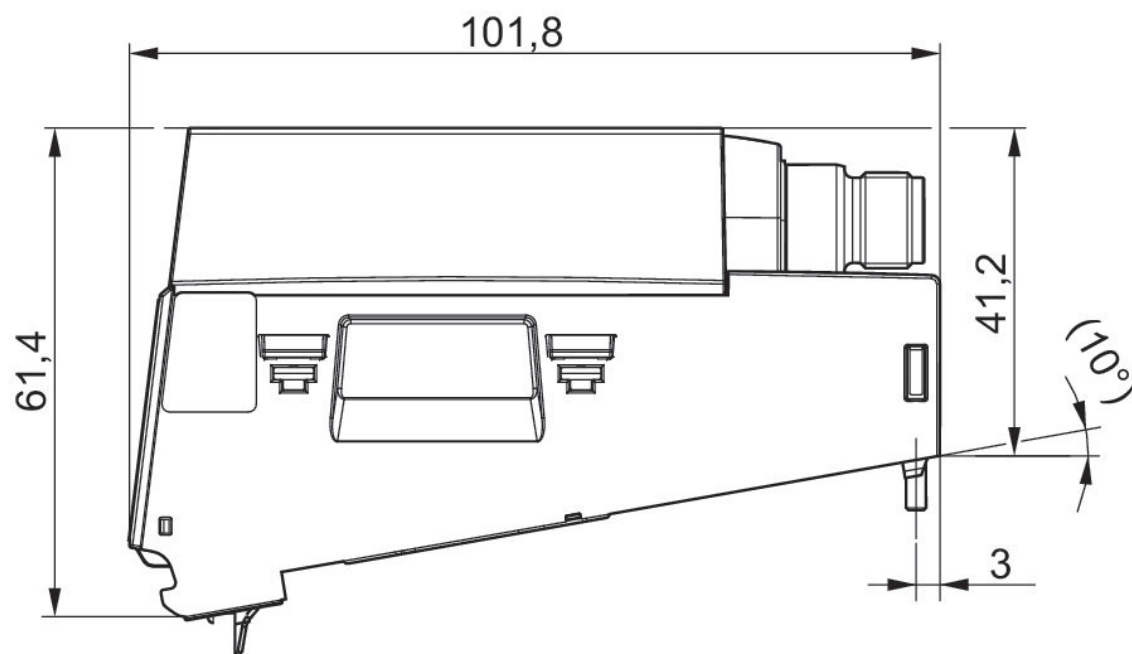


	Min. working pressure [bar]	Max. working pressure [bar]	Min. regulation range [bar]	Max. regulation range [bar]	Nominal input value	Actual output value	Max. current consumption [mA]	Part No.
	0	11	0.5	6	0 ... 10 V	0 ... 10 V	180	R414007399
	0	11	0.5	6	4 ... 20 mA	4 ... 20 mA	180	R414007404
	0	11	0.5	10	0 ... 10 V	0 ... 10 V	180	R414007410
	0	11	0.5	10	4 ... 20 mA	4 ... 20 mA	180	R414007415
	0	11	0.5	6	0 ... 10 V	0 ... 10 V	120	R414007400
	0	11	0.5	6	4 ... 20 mA	4 ... 20 mA	120	R414007405
	0	11	0.5	10	0 ... 10 V	0 ... 10 V	120	R414007411
	0	11	0.5	10	4 ... 20 mA	4 ... 20 mA	120	R414007416
	0	11	0.5	10	0 ... 10 V	0 ... 10 V	120	R414007390
	0	11	0.5	10	4 ... 20 mA	4 ... 20 mA	120	R414007394

Hysteresis	Part No.
< 0,05 bar	R414007399
< 0,05 bar	R414007404

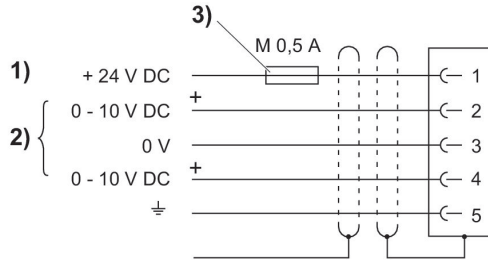
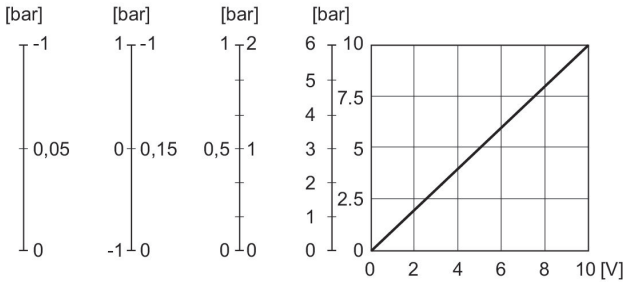
Hysteresis	Part No.
< 0,05 bar	R414007410
< 0,05 bar	R414007415
< 0,05 bar	R414007400
< 0,05 bar	R414007405
< 0,05 bar	R414007411
< 0,05 bar	R414007416
< 0,2 bar	R414007390
< 0,2 bar	R414007394

Dimensions



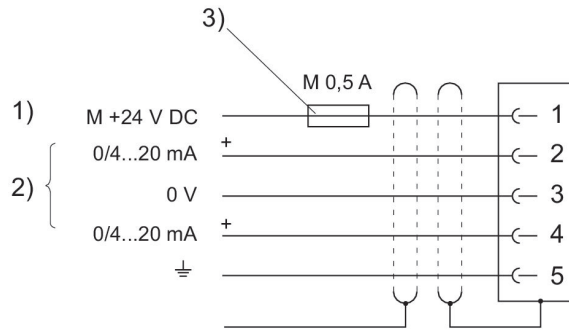
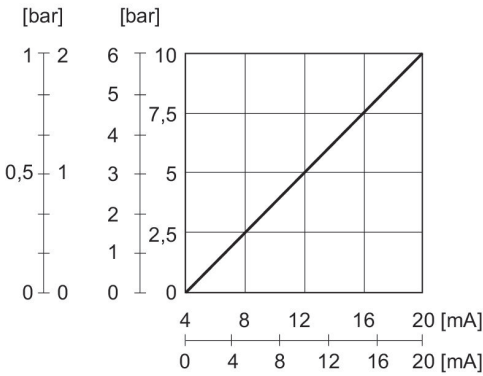
Port for plug M12x1

Characteristic and pin assignment for voltage control with actual output value



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.

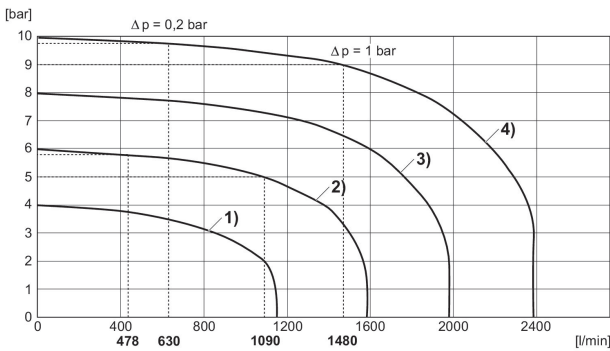
Characteristic and pin assignment for current control with actual output value



1) power supply
2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load < 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Flow characteristic curve

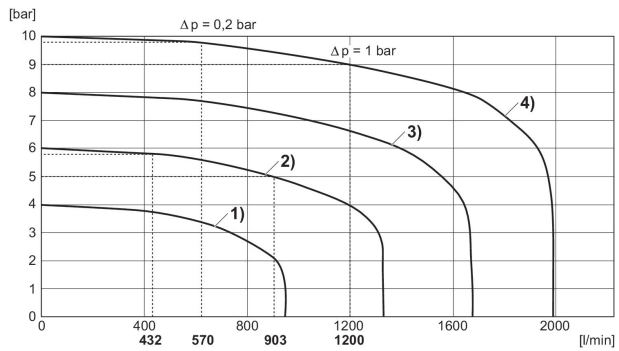
Pressure zone control



- 1) Pv = [[5] bar], controlled: [[4] bar]
- 2) Pv = [[7] bar], controlled: [[6] bar]
- 3) Pv = [[9] bar], controlled: [[8] bar]
- 4) Pv = [[11] bar], controlled: [[10] bar]

Flow characteristic curve

Single pressure control



- 1) Pv = [[5] bar], controlled: [[4] bar]
- 2) Pv = [[7] bar], controlled: [[6] bar]
- 3) Pv = [[9] bar], controlled: [[8] bar]
- 4) Pv = [[11] bar], controlled: [[10] bar]

E/P pressure regulator, Series AV05-EP

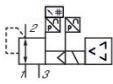
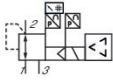
Mounting orientation: Any

Ambient temperature min./max.: -10 °C ... 60 °C

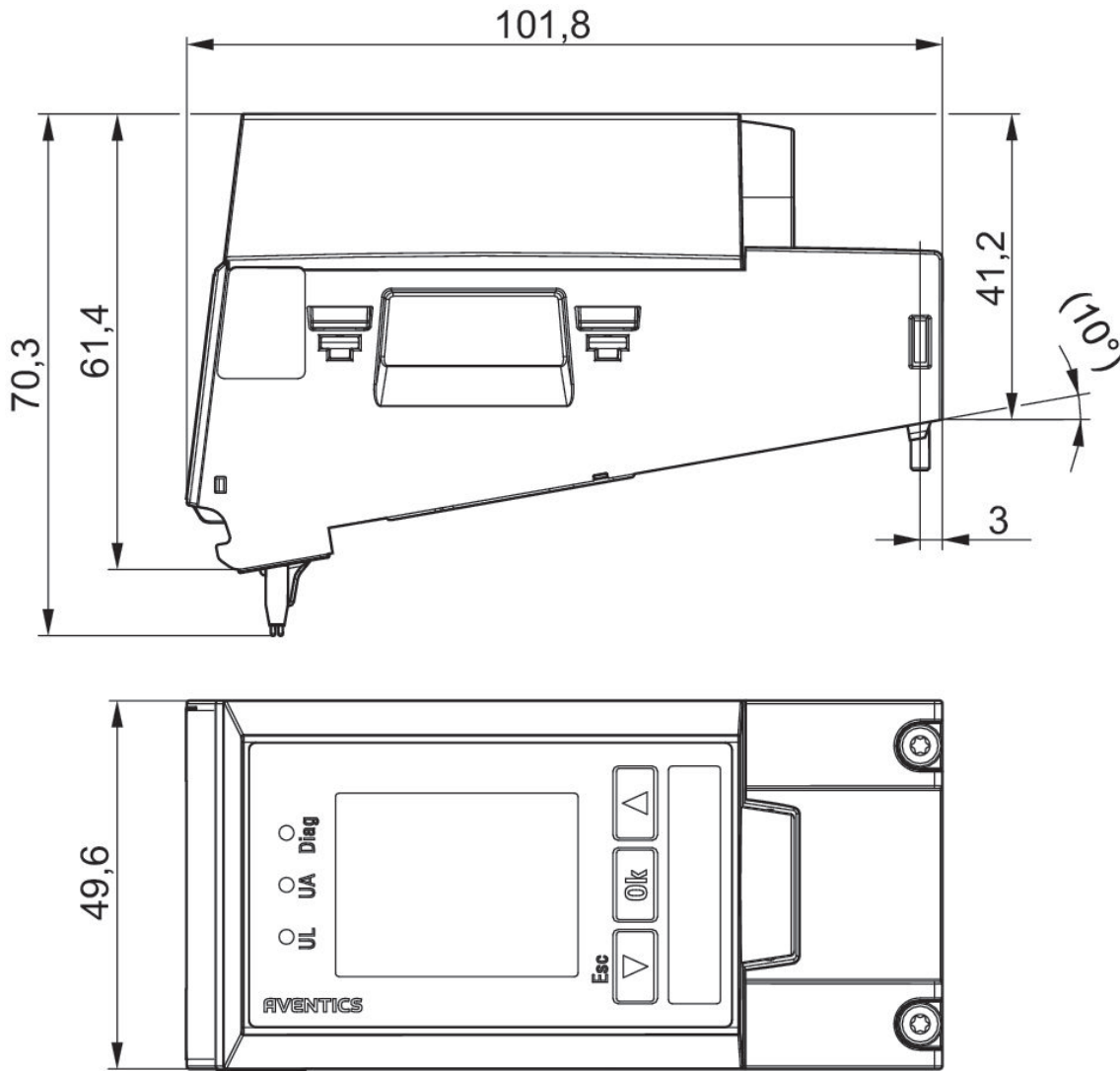
Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 11 bar



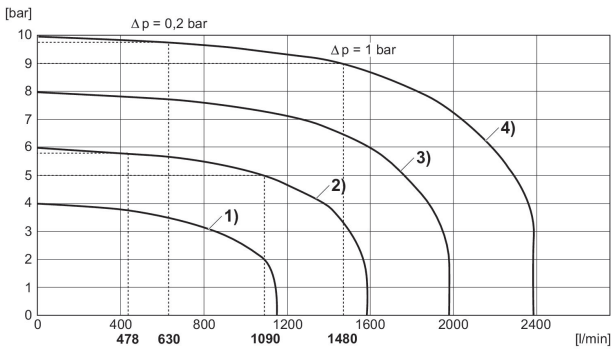
	Min. working pressure [bar]	Max. working pressure [bar]	Min. regulation range [bar]	Max. regulation range [bar]	Max. current consumption [mA]	Hysteresis	Part No.
	0	11	0.5	10	220	< 0,05 bar	R414007920
	0	11	0.5	10	160	< 0,05 bar	R414007886

Dimensions



Flow characteristic curve

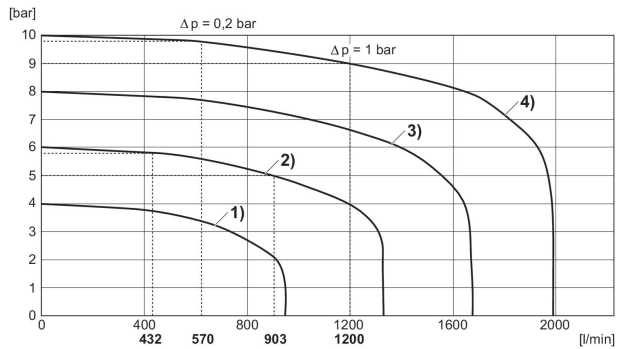
Pressure zone control



- 1) $P_v = [[5 \text{ bar}]]$, controlled: $[[4 \text{ bar}]]$
- 2) $P_v = [[7 \text{ bar}]]$, controlled: $[[6 \text{ bar}]]$
- 3) $P_v = [[9 \text{ bar}]]$, controlled: $[[8 \text{ bar}]]$
- 4) $P_v = [[11 \text{ bar}]]$, controlled: $[[10 \text{ bar}]]$

Flow characteristic curve

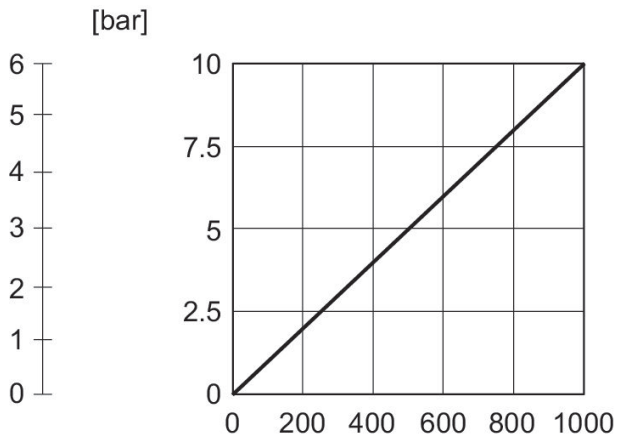
Single pressure control



- 1) $P_v = [[5 \text{ bar}]]$, controlled: $[[4 \text{ bar}]]$
- 2) $P_v = [[7 \text{ bar}]]$, controlled: $[[6 \text{ bar}]]$
- 3) $P_v = [[9 \text{ bar}]]$, controlled: $[[8 \text{ bar}]]$
- 4) $P_v = [[11 \text{ bar}]]$, controlled: $[[10 \text{ bar}]]$

Characteristics

Further information can be found in the operating instructions.



The regulator features a resolution of 10 bits (bit 0 to 9) for the serial nominal value and serial actual value: The nominal value and actual value range for the 10 bar version lies in the range of 0 to 1000 at a resolution of 10 mbar.

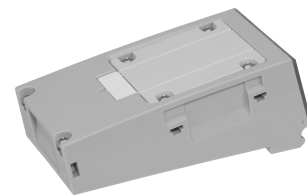
E/P pressure regulator, Series AV05-EP

Mounting orientation: Any

Ambient temperature min./max.: -10 °C ... 60 °C

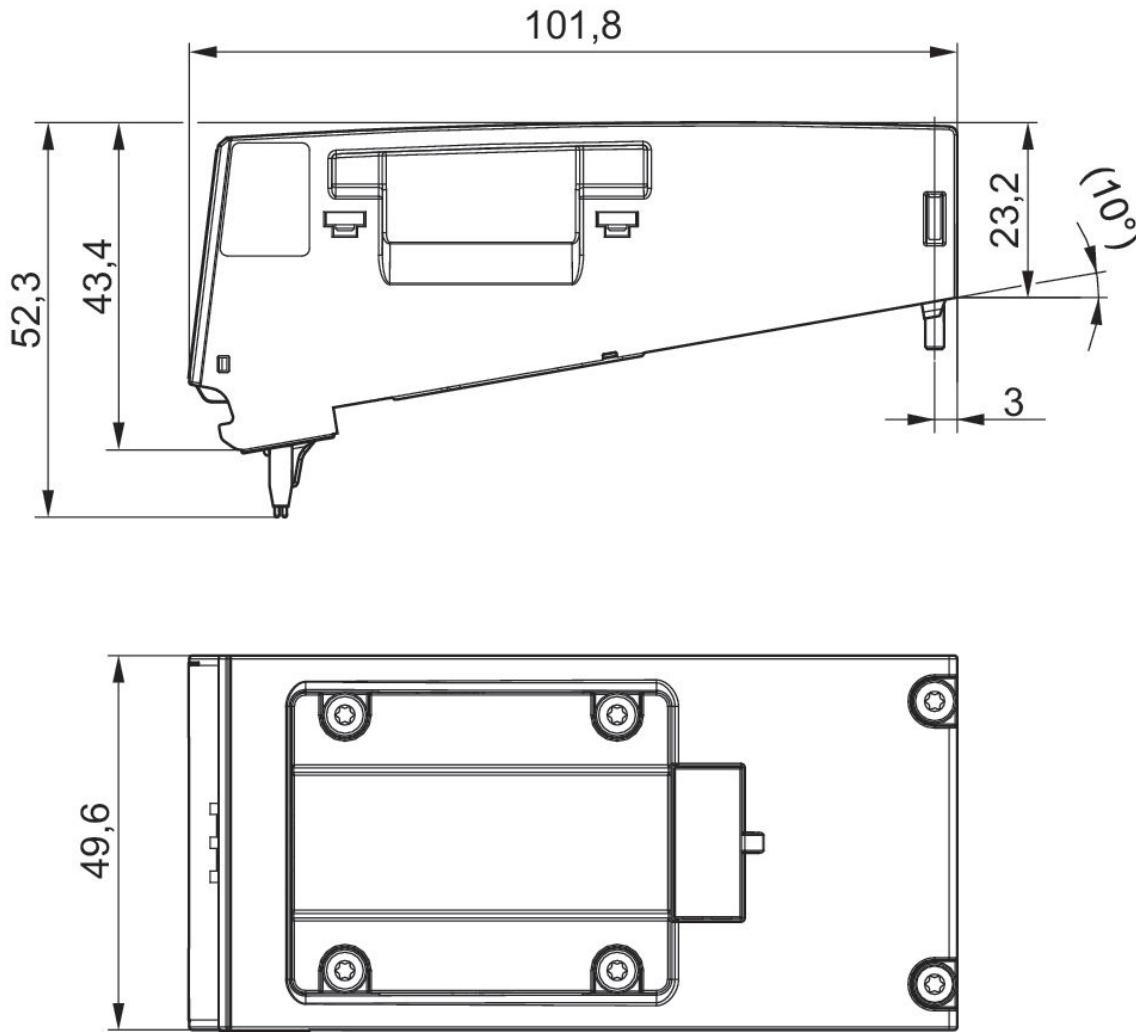
Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 11 bar



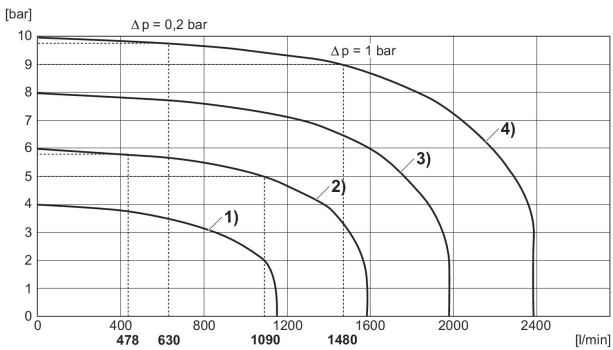
	Min. working pressure [bar]	Max. working pressure [bar]	Min. regulation range [bar]	Max. regulation range [bar]	Max. current consumption [mA]	Hysteresis	Part No.
	0	11	0.5	10	180	< 0,05 bar	R414007919
	0	11	0.5	10	120	< 0,05 bar	R414007421
	0	11	0.5	10	120	< 0,2 bar	R414007397

Dimensions



Flow characteristic curve

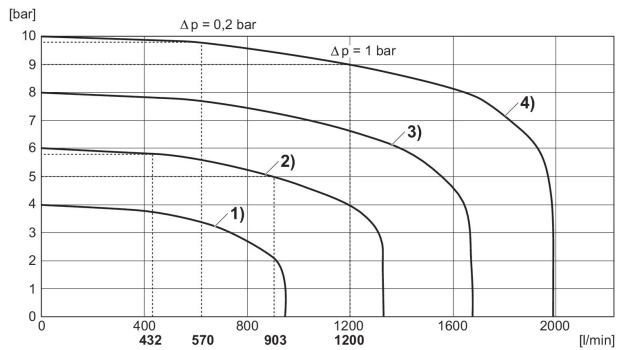
Pressure zone control



- 1) $P_v = [[5]]$ bar, controlled: $[[4]]$ bar
- 2) $P_v = [[7]]$ bar, controlled: $[[6]]$ bar
- 3) $P_v = [[9]]$ bar, controlled: $[[8]]$ bar
- 4) $P_v = [[11]]$ bar, controlled: $[[10]]$ bar

Flow characteristic curve

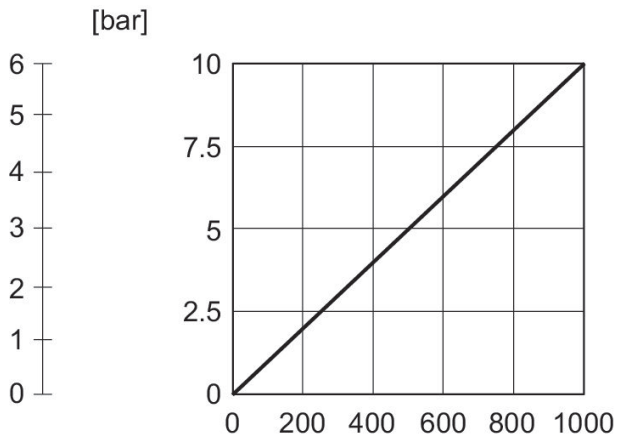
Single pressure control



- 1) $P_v = [[5]]$ bar, controlled: $[[4]]$ bar
- 2) $P_v = [[7]]$ bar, controlled: $[[6]]$ bar
- 3) $P_v = [[9]]$ bar, controlled: $[[8]]$ bar
- 4) $P_v = [[11]]$ bar, controlled: $[[10]]$ bar

Characteristics

Further information can be found in the operating instructions.



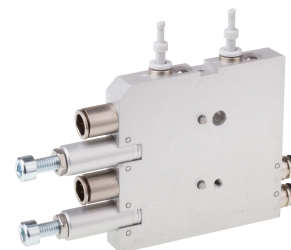
The regulator features a resolution of 10 bits (bit 0 to 9) for the serial nominal value and serial actual value: The nominal value and actual value range for the 10 bar version lies in the range of 0 to 1000 at a resolution of 10 mbar.

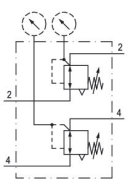
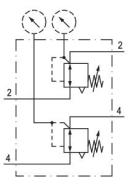
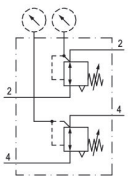
Pressure regulator, Series AV, 2 adjustment screws

Ambient temperature min./max.: -10 °C ... 60 °C

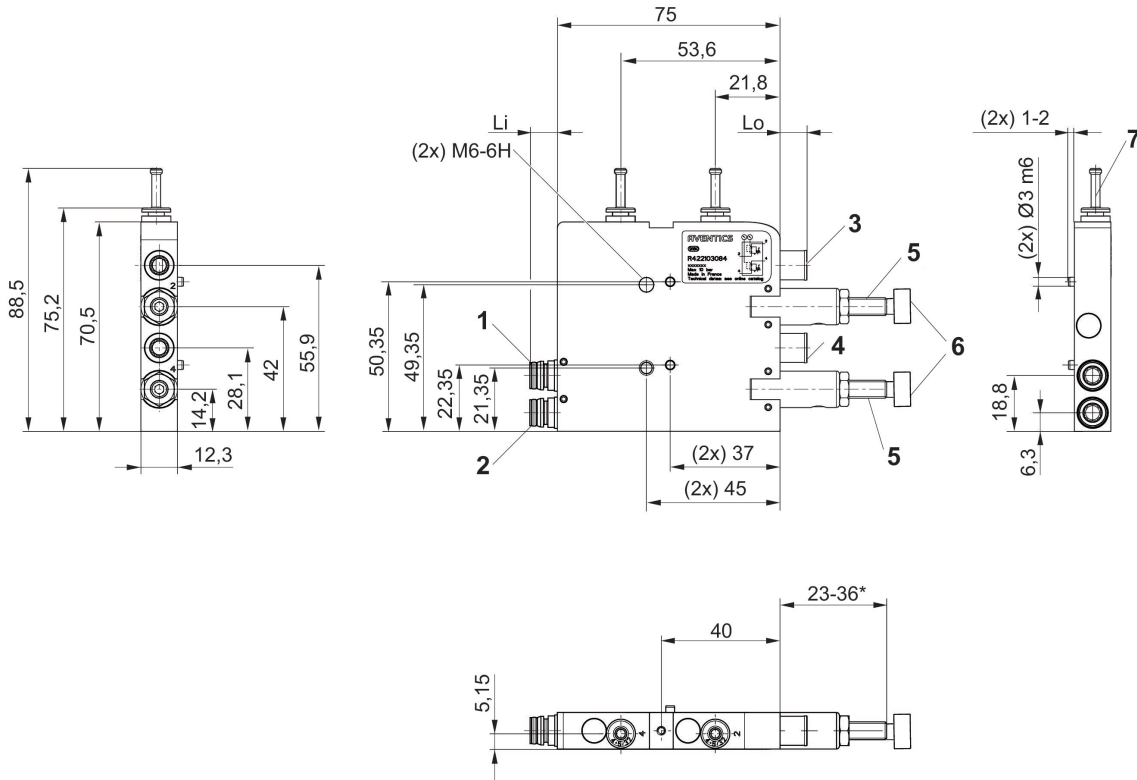
Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 10 bar



	Compressed air connection output	Controlled port	Min. regulation range [bar]	Max. regulation range [bar]	Part No.
	Ø 6	2, 4	0.5	10	R422103084
	Ø 8	2, 4	0.5	10	R422103085
	Ø 1/4"	2, 4	0.5	10	R422103086

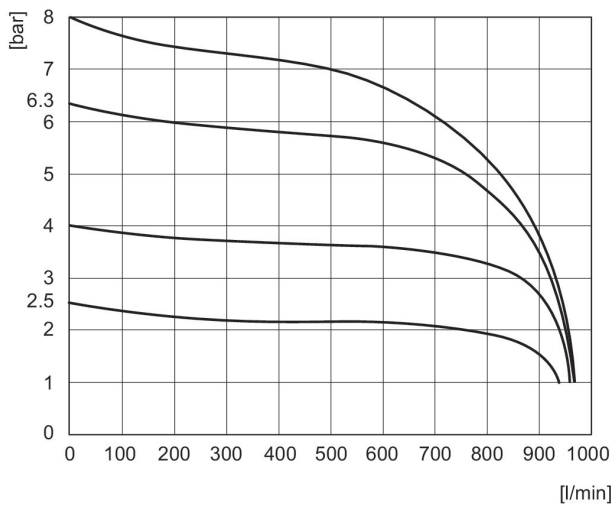
Dimensions



- 1) Connection 2, valve side
- 2) Connection 4, valve side
- 3) Operating line 2
- 4) Operating line 4
- 5) adjustment screw, Port 2
- 6) Adjustment screw, connection 4 7) (blanking plug*) Stroke

Flow diagram

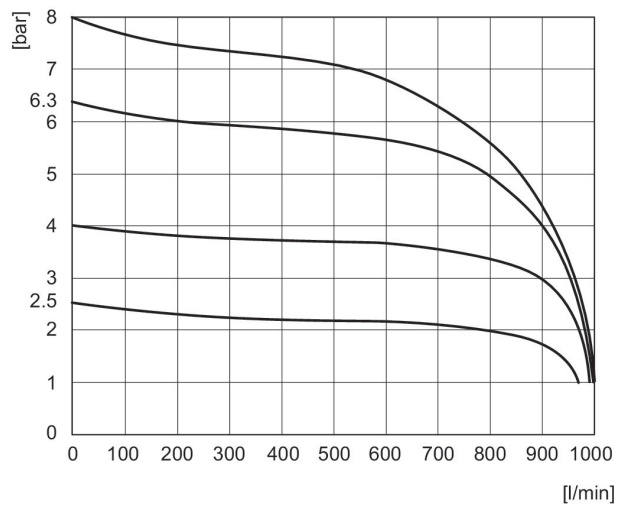
Port 2



Pv = [[9] bar]

Flow diagram

Port 4



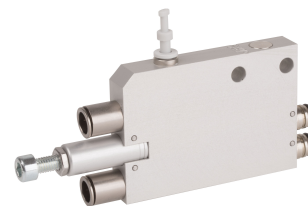
Pv = [[9] bar]

Pressure regulator, Series AV, 1 adjustment screw

Ambient temperature min./max.: -10 °C ... 60 °C

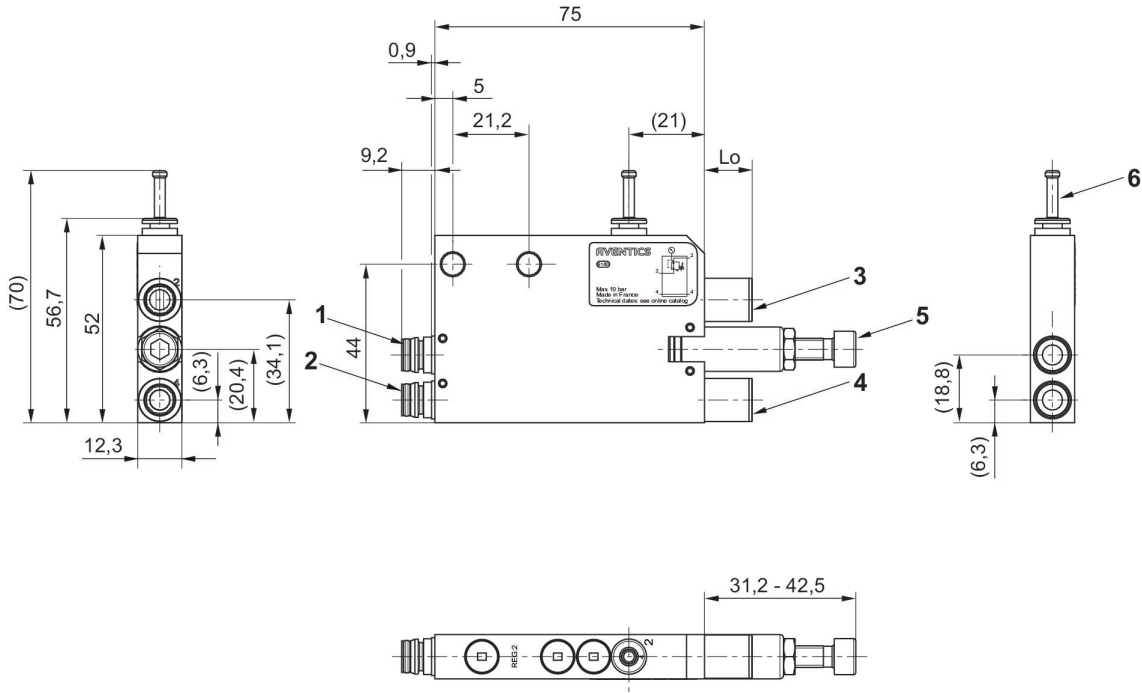
Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 10 bar



	Compressed air connection output	Controlled port	Min. regulation range [bar]	Max. regulation range [bar]	Part No.
	Ø 8	2	0.5	10	R422003560
	Ø 6	2	0.5	10	R422003561
	Ø 8	4	0.5	10	R422003568
	Ø 6	4	0.5	10	R422003569

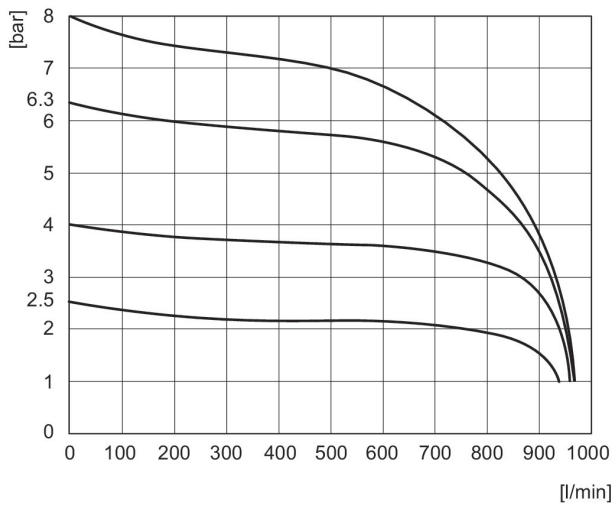
Dimensions



- 1) Connection 2, valve side
- 2) Connection 4, valve side
- 3) Operating line 2
- 4) Operating line 4
- 5) adjustment screw, Port 2, 4
- 6) Orifice plugs

Flow diagram

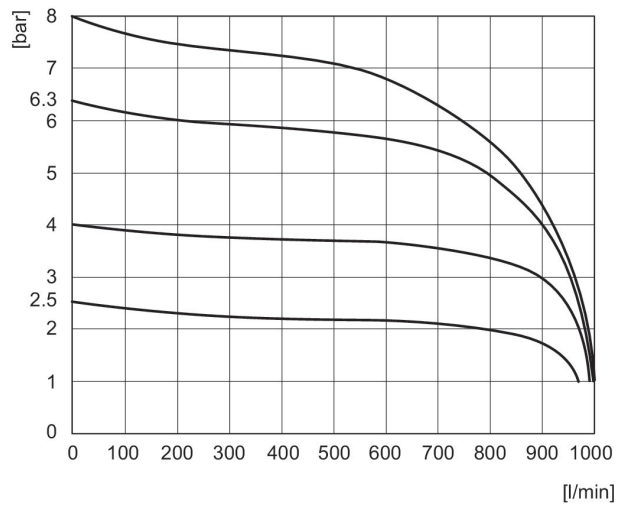
Port 2



Pv = [[9] bar]

Flow diagram

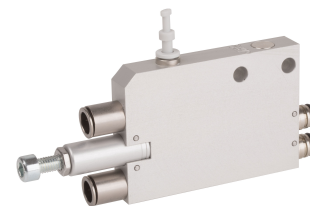
Port 4

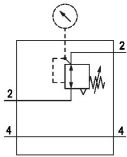
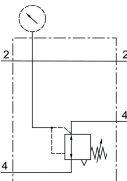


Pv = [[9] bar]

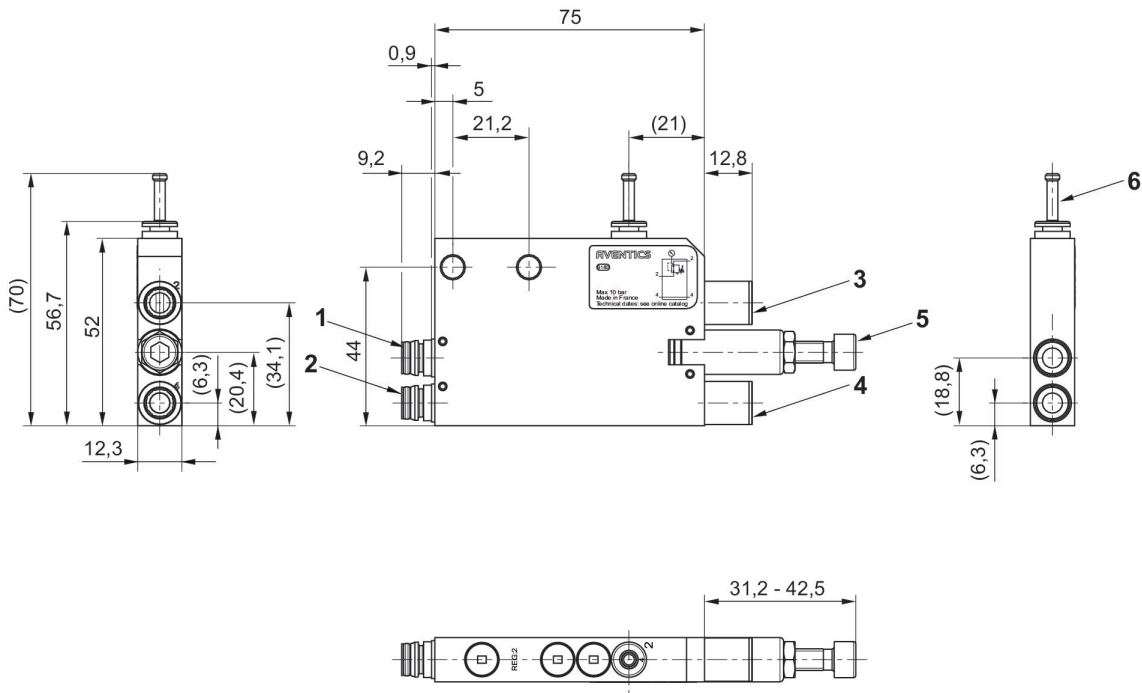
Pressure regulator, Series AV, 1 adjustment screw Inch

Ambient temperature min./max.: -10 °C ... 60 °C
 Medium temperature min./max.: -10 °C ... 60 °C
 Working pressure min./max.: 10 bar



	Compressed air connection output	Controlled port	Min. regulation range [bar]	Max. regulation range [bar]	Part No.
	Ø 1/4"	2	0.5	10	R422003563
	Ø 1/4"	4	0.5	10	R422003571

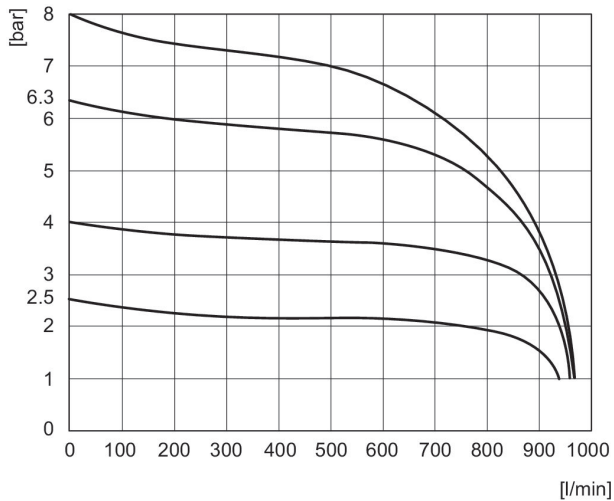
Dimensions



- 1) Connection 2, valve side
- 2) Connection 4, valve side
- 3) Operating line 2
- 4) Operating line 4
- 5) adjustment screw, Port 2, 4
- 6) Orifice plugs
- 7) Logic valves

Flow diagram

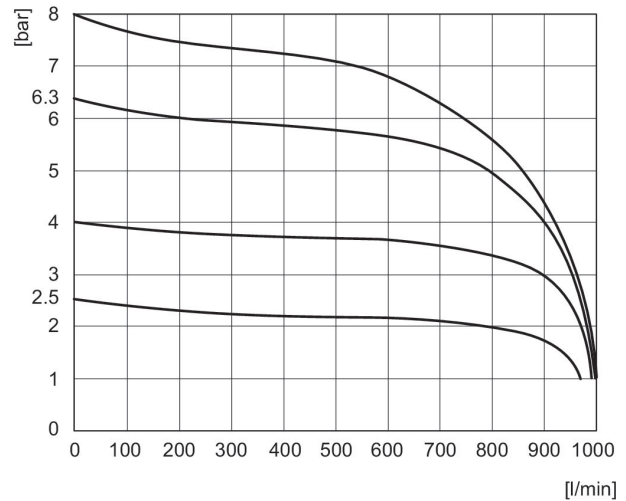
Port 2



Pv = [[9] bar]

Flow diagram

Port 4



Pv = [[9] bar]

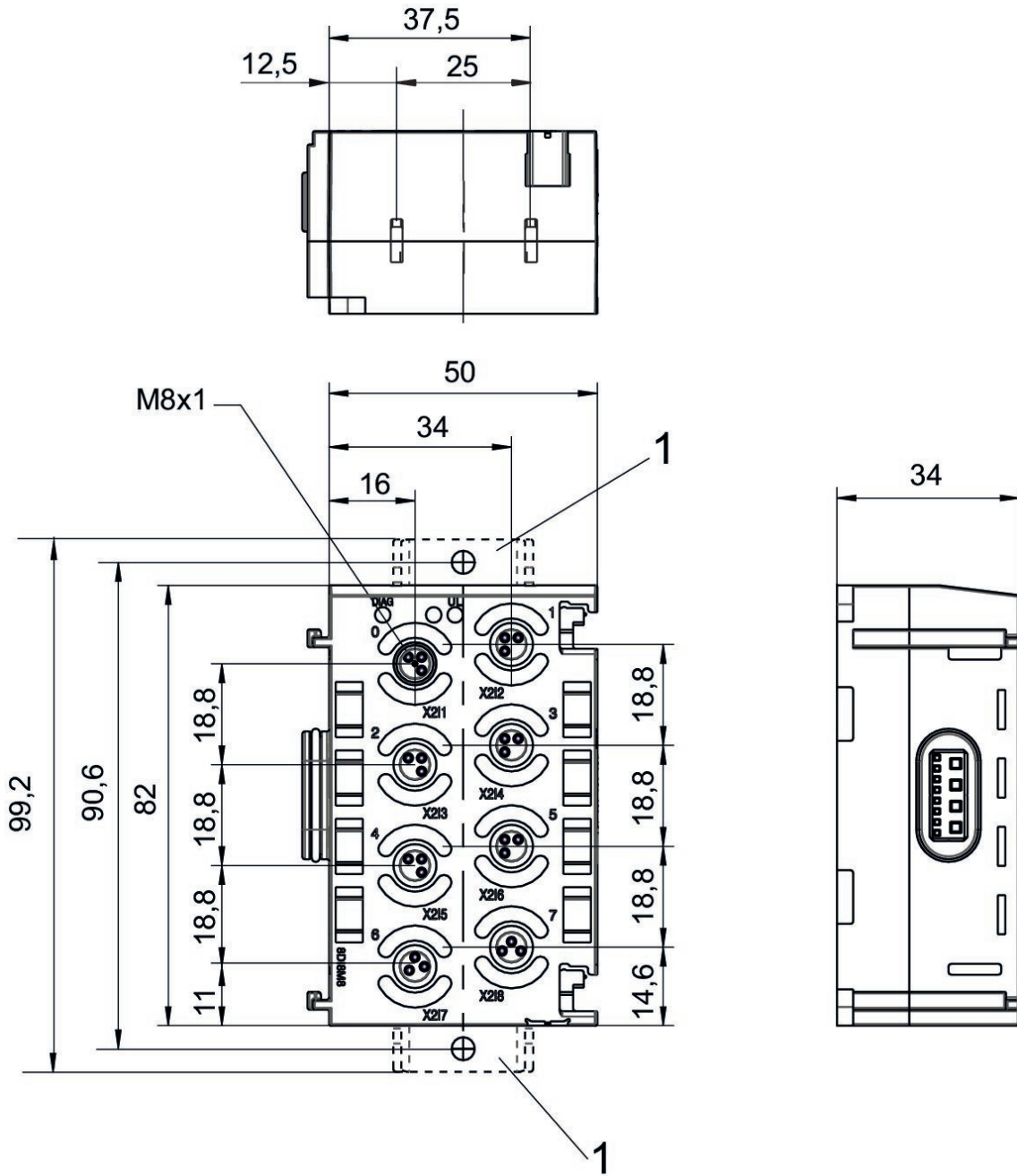
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
8DIDO8M8	8 inputs / 8 outputs	R412018269
8DI8M8	8 inputs	R412018233
8DO8M8	8 outputs	R412018248
16DI8M8	16 inputs	R412018234

Dimensions

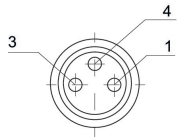


1) Retaining bracket (optional)
Pin assignment M8x1 (3-pin)

R412018269, R412018233, R412018248

Pin assignments

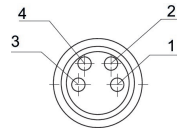
PNP



R412018234

Pin assignments

X211-X218

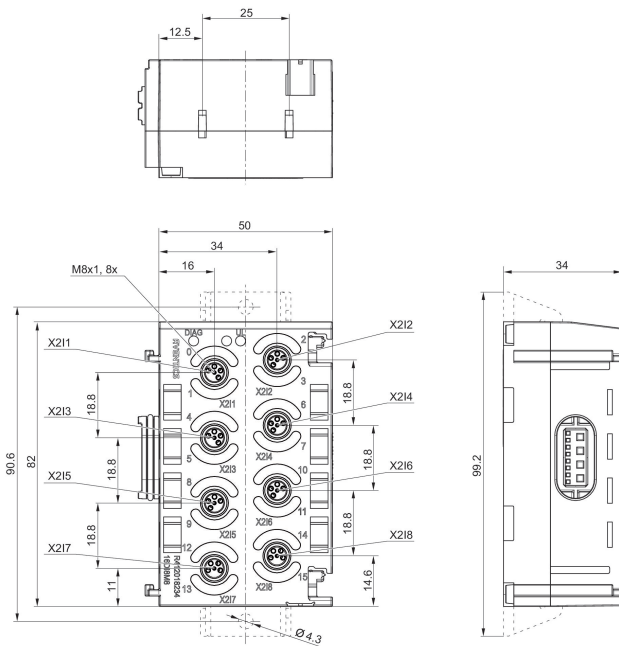


PNP

Pin	Input module
1	24 V DC sensor voltage
2	Input signal (most significant bit)
3	0 V DC sensor voltage
4	Input signal (lower order bit)

R412018234

Dimensions



1) Retaining bracket (optional)
Pin assignment M8x1 (4-pin)

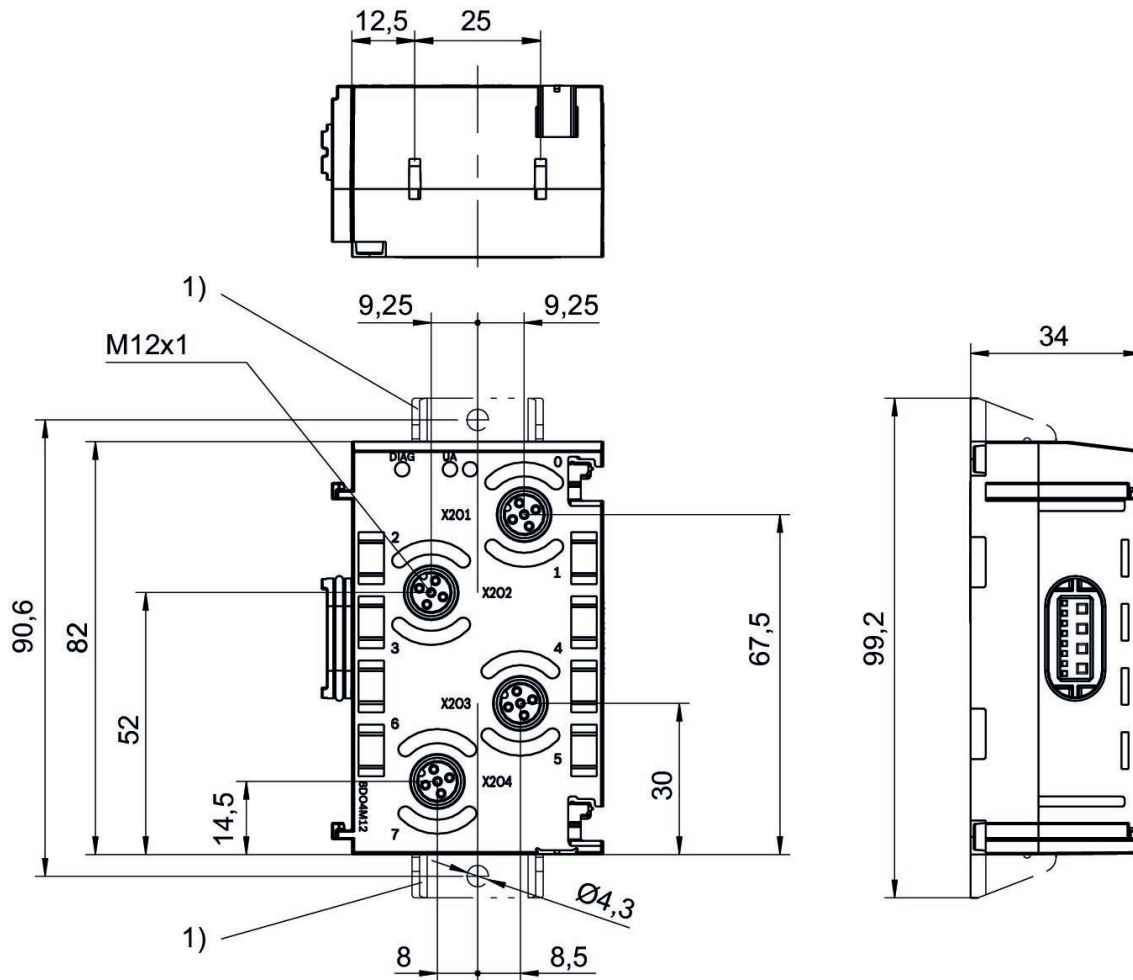
I/O modules, series AES

Power plug IN, Type: Internal
Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
8DI4M12	8 inputs	R412018235
8DO4M12	8 outputs	R412018250
8DIDO4M12	8 inputs / 8 outputs	R412018270

Dimensions

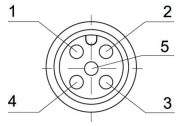


1) Retaining bracket (optional)

R412018235, R412018250, R412018270

Pin assignments

PNP



Pin	Input module	Output module
1	24 V DC	-
2	Input signal [X+1]	Output signal [X+1]
3	0 V DC	0 V DC
4	Input signal [X]	Output signal [X]
5	-	-

X = bit value

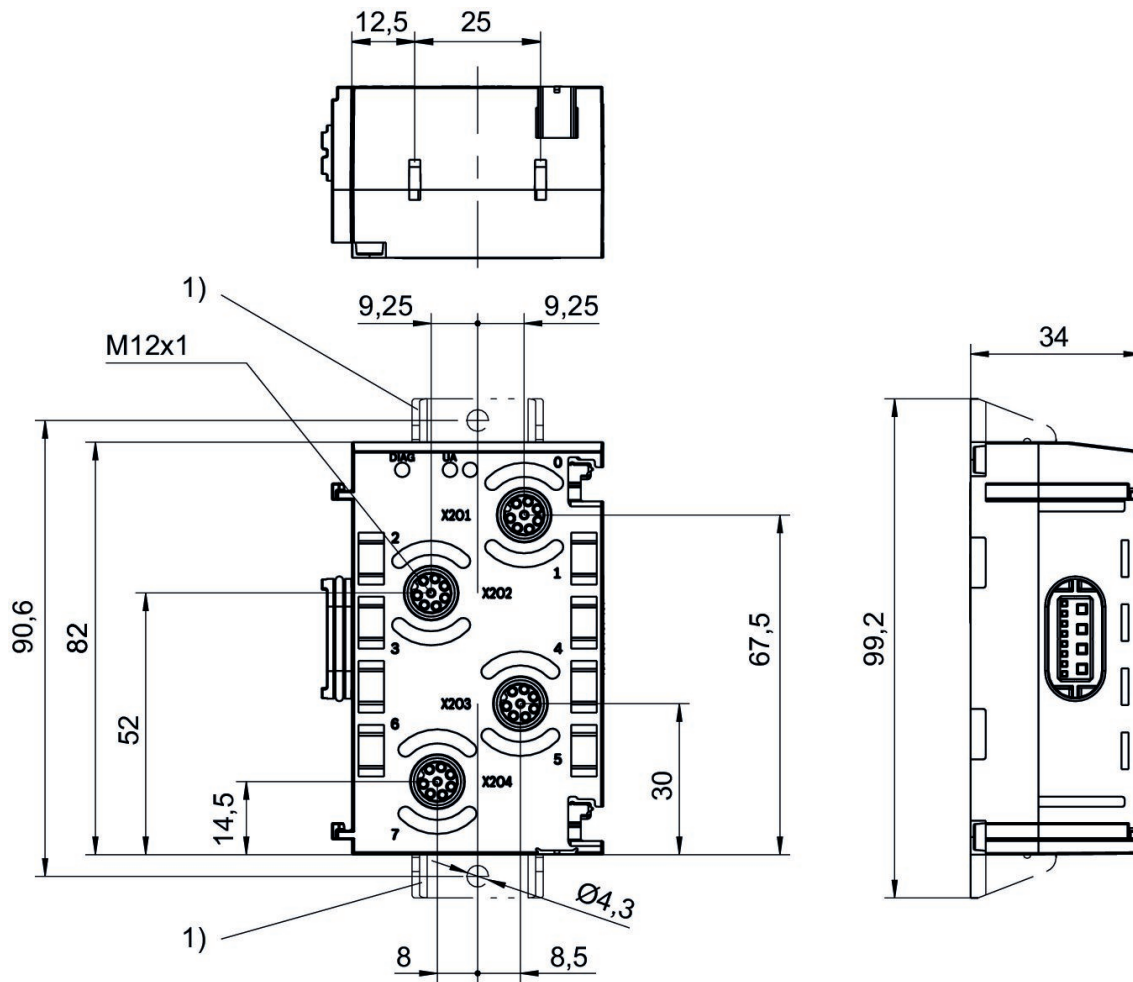
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
16DI4M12	16 inputs	R412018243
16DO4M12	16 outputs	R412018263

Dimensions

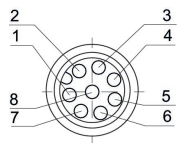


1) Retaining bracket (optional)

R412018243, R412018263

Pin assignments

PNP



Pin	Input module	Output module
1	Input signal [X]	Output signal 24 V DC [X]
2	Input signal [X+1]	Output signal 24 V DC [X+1]
3	Input signal [X+2]	Output signal 24 V DC [X+2]
4	Input signal [X+3]	Output signal 24 V DC [X+3]
5	24 V DC	-
6	-	-
7	0 V DC	0 V DC
8	-	-
X = bit value		

X = bit value

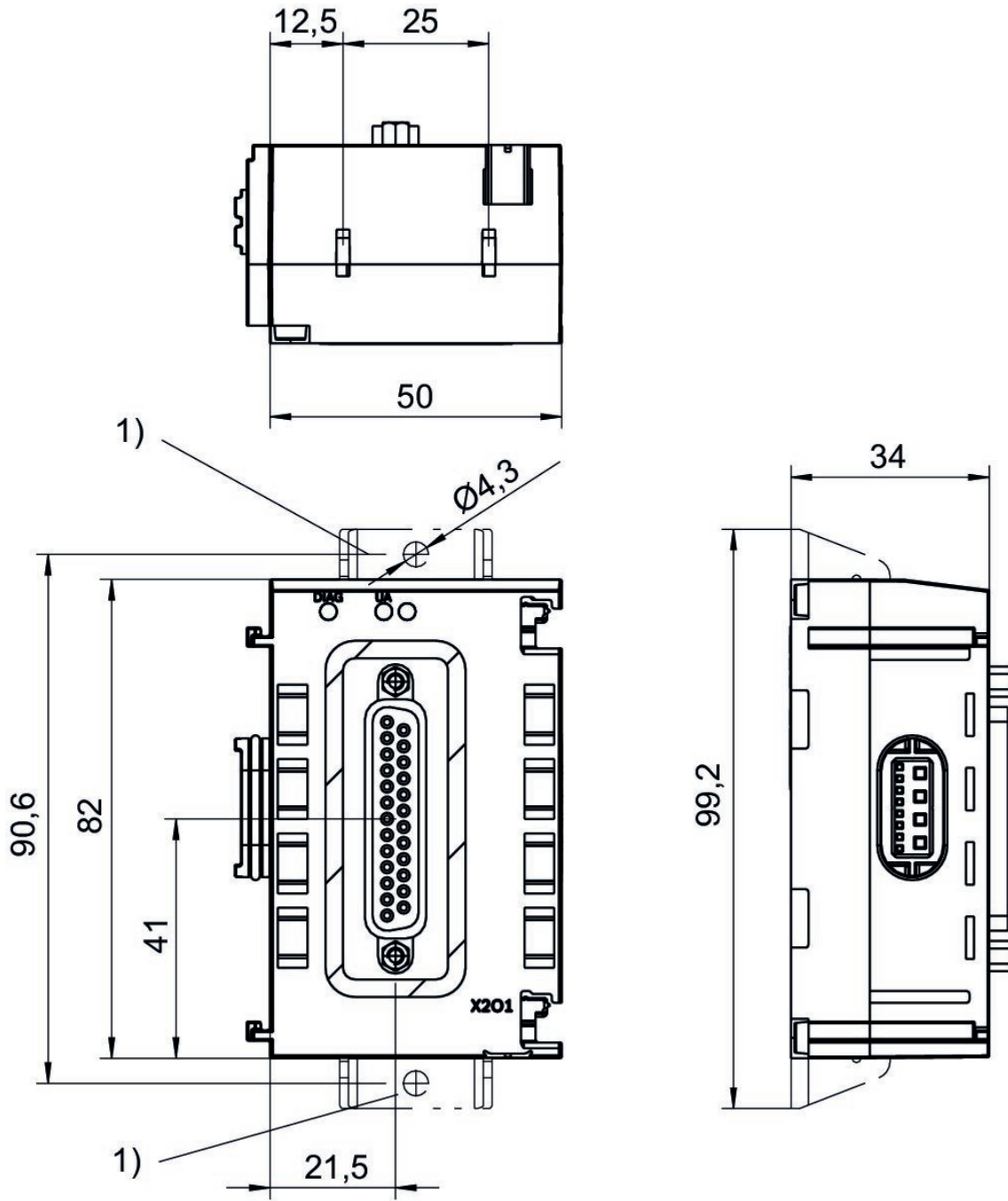
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
24DO1DSUB25	24 outputs	R412018254

Dimensions

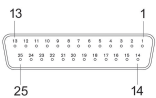


1) Retaining bracket (optional)

R412018254

PIN assignment and cable colors

cable identification as per DIN 47100



Socket

Pin	Output module
1	[X]
2	[X+0.1]
3	[X+0.2]
4	[X+0.3]
5	[X+0.4]
6	[X+0.5]
7	[X+0.6]
8	[X+0.7]
9	[X+1]
10	[X+1.1]
11	[X+1.2]
12	[X+1.3]
13	[X+1.4]
14	[X+1.5]
15	[X+1.6]
16	[X+1.7]
17	[X+2.0]
18	[X+2.1]
19	[X+2.2]
20	[X+2.3]
21	[X+2.4]
22	[X+2.5]
23	[X+2.6]
24	[X+2.7]
25	0 V DC

X = bit value

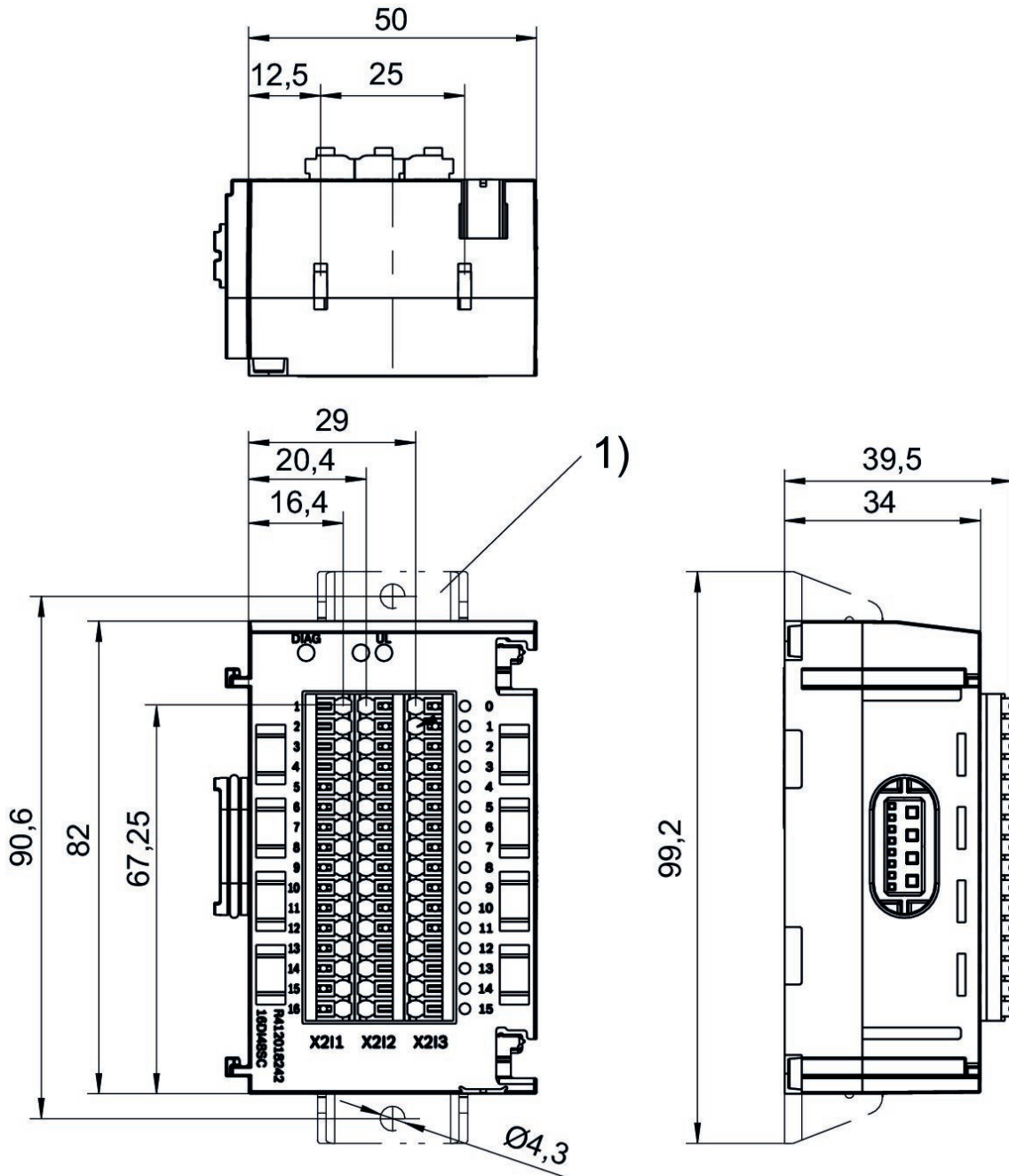
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
16DI48SC	16 inputs	R412018242

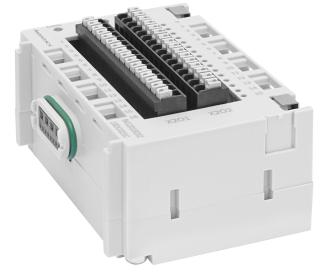
Dimensions



1) Retaining bracket (optional)

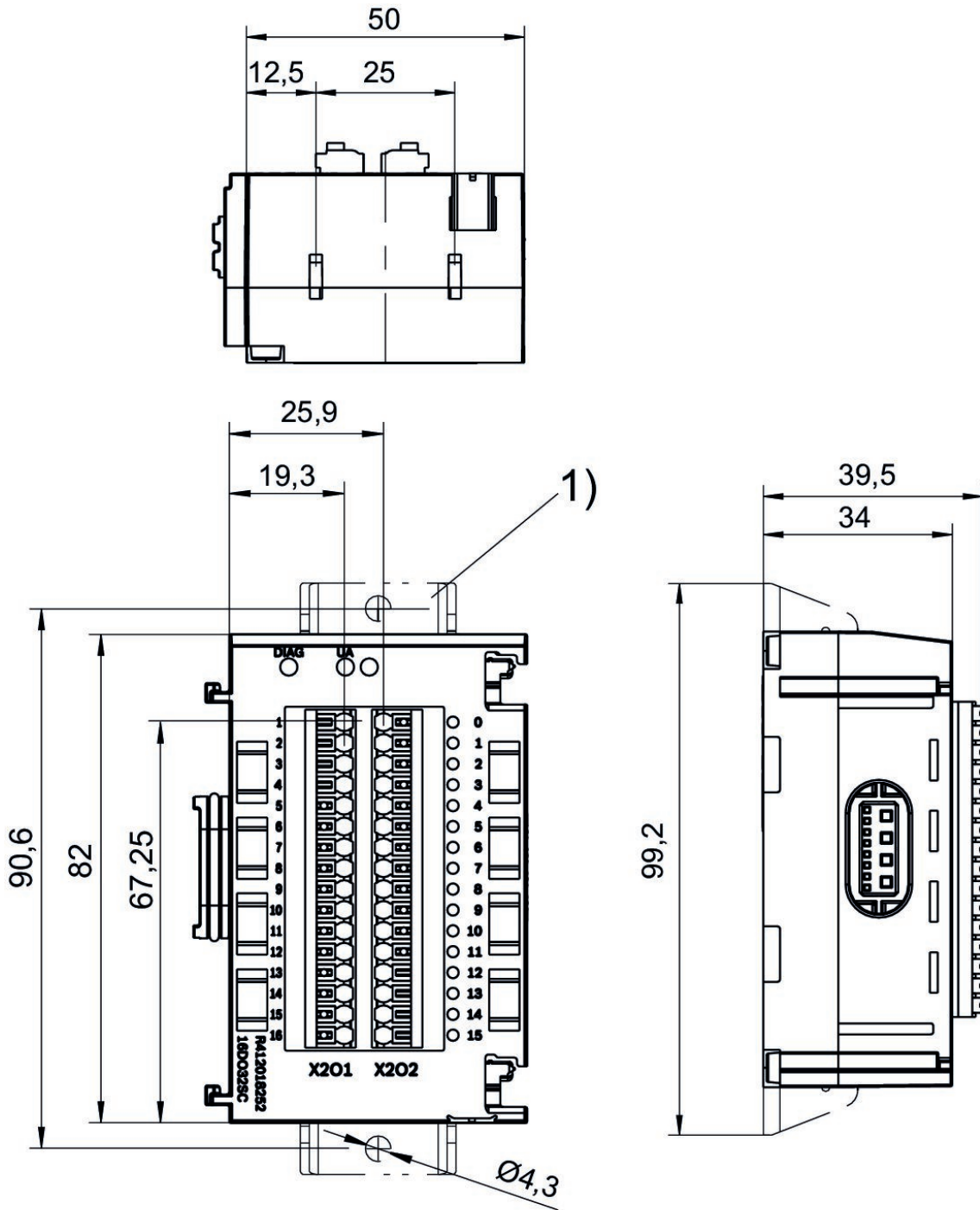
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
16DO32SC	16 outputs	R412018252

Dimensions



1) Retaining bracket (optional)

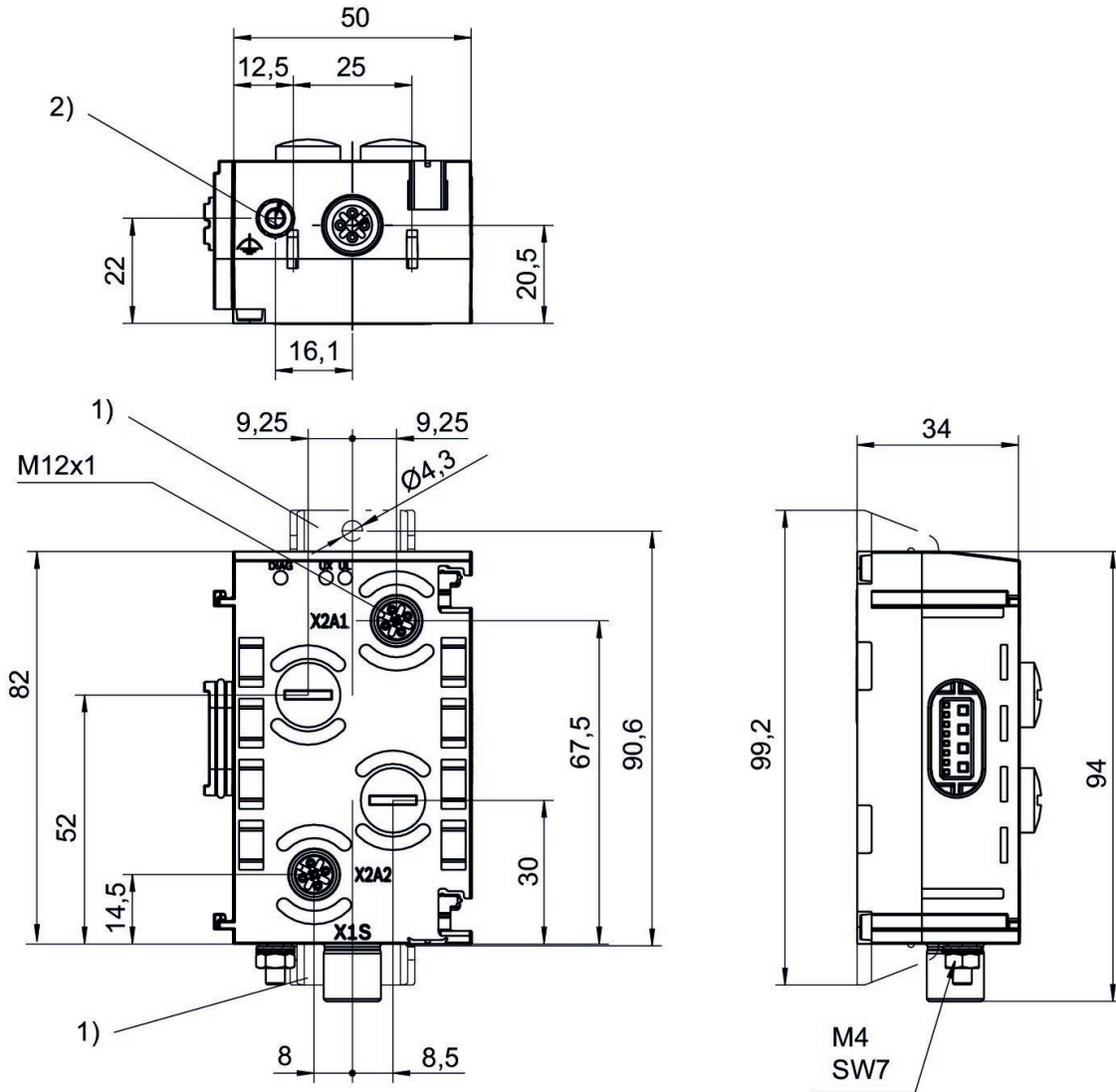
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Power plug IN, Number of poles	Number of I/O connections	Part No.
2AI2AO2M12-AE	4-pin	2 inputs / 2 outputs	R412018287

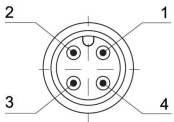
Dimensions



- 1) Retaining bracket (optional)
- 2) Ground

R412018287

Plug (male)



Pin	Socket (female) X2A1 - X2A2	Plug (male) X1S
1	24 V DC	-
2	Output signal	24 V DC
3	0 V DC	-
4	Input signal	0 V DC
5	Shield, connected internally with ground screw 2)	-

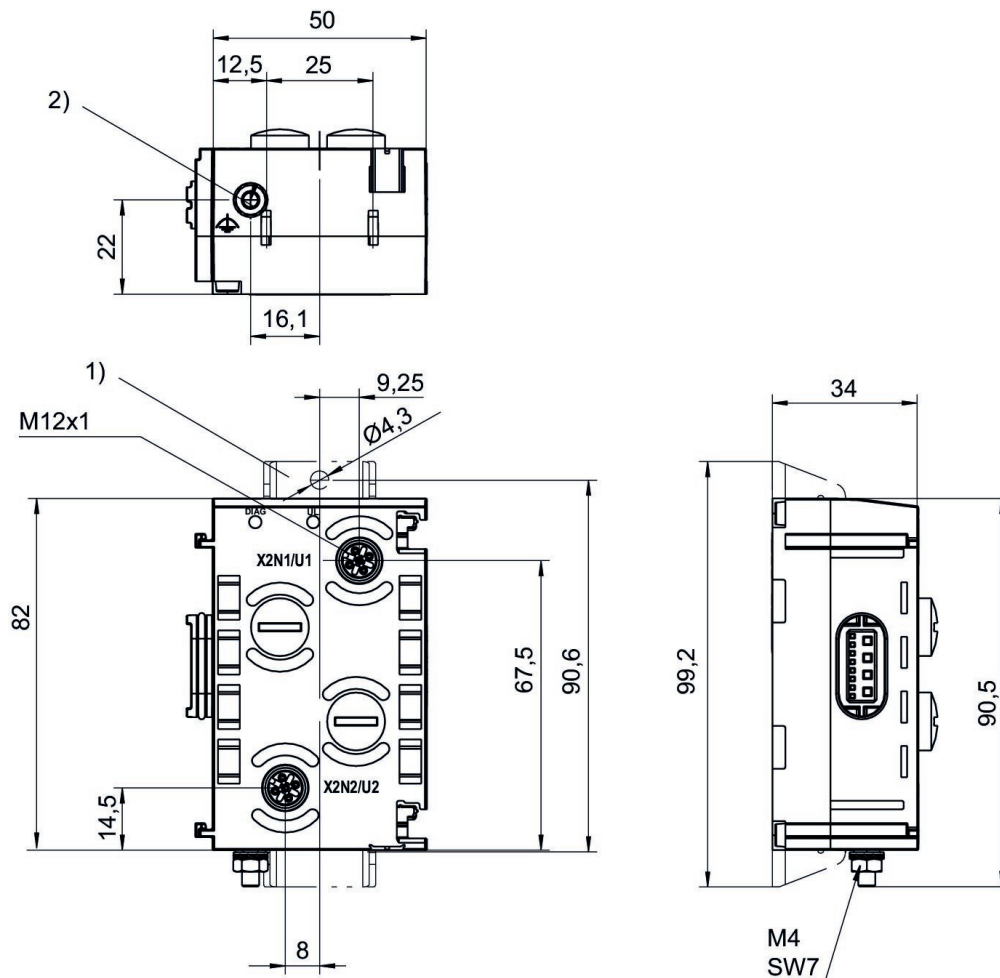
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
2AI2M12-E	2 inputs	R412018277
4AI4M12-E	4 inputs	R412018278
2AO2M12-E	2 outputs	R412018281

Dimensions

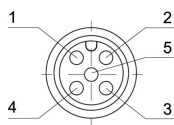


- 1) Retaining bracket (optional)
- 2) Ground

R412018277, R412018278, R412018281

Pin assignments

Socket (female)



Pin	Socket (female) X2N1 - X2N2 2AI2M12-E	Socket (female) X2U1 - X2U4 4AI4M12-E	Socket (female) X2U1 - X2U2 2AO2M12-E
1	24 V DC	24 V DC	not assigned
2	Input signal (differential input, positive signal)	Input signal (differential input, positive signal)	Output signal
3	0 V DC	0 V DC	0 V DC
4	Input signal (differential input, negative signal, or connected externally to 0 V (pin 3))	Input signal (0 V, connected to pin 3 internally)	not assigned
5	Shield, connected internally with ground screw 2)	Shield, connected internally with ground screw 2)	Shield, connected internally with ground screw 2)

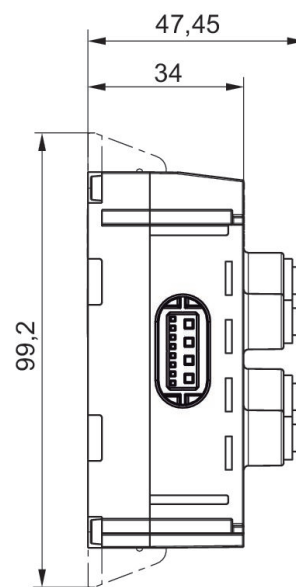
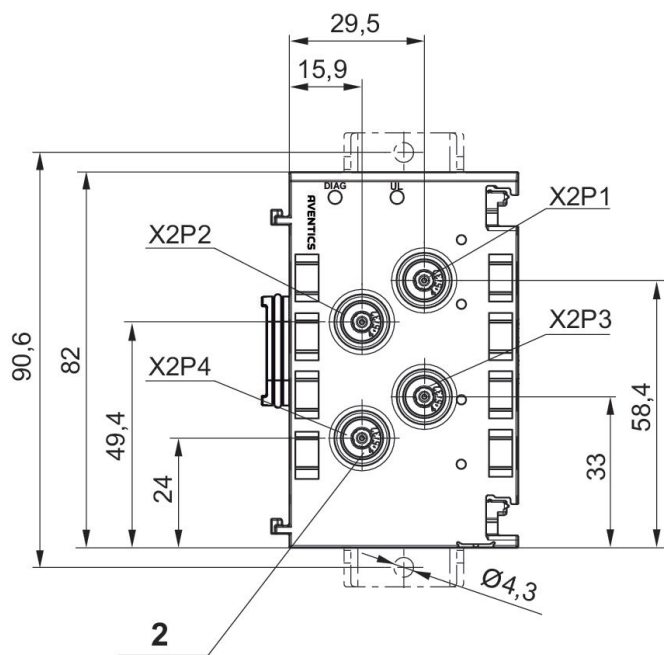
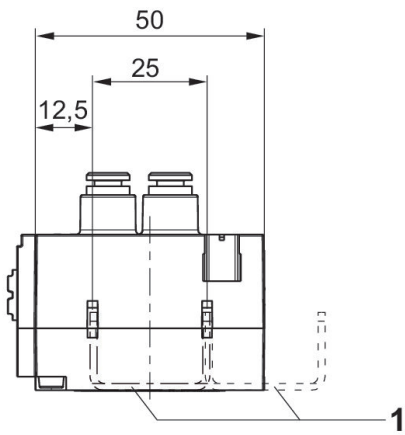
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Number of I/O connections	Part No.
4P4D4	4 inputs	R412018291
4VP4D4	4 inputs	R412018292

Dimensions



- 1) Retaining bracket (optional)
- 2) Blanking plug included in scope of delivery

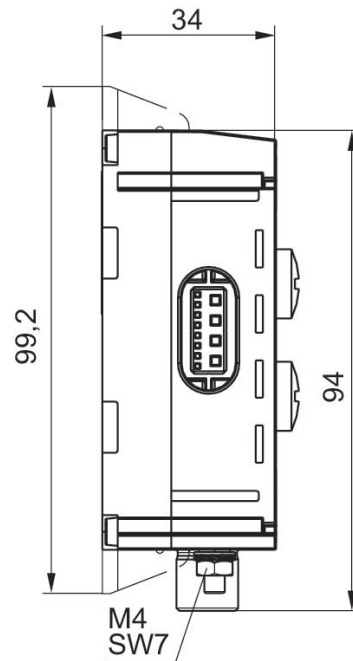
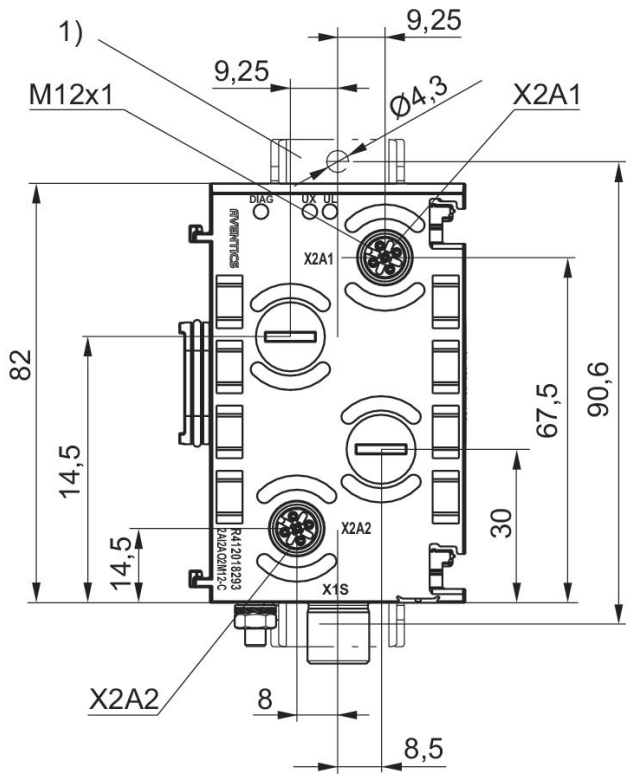
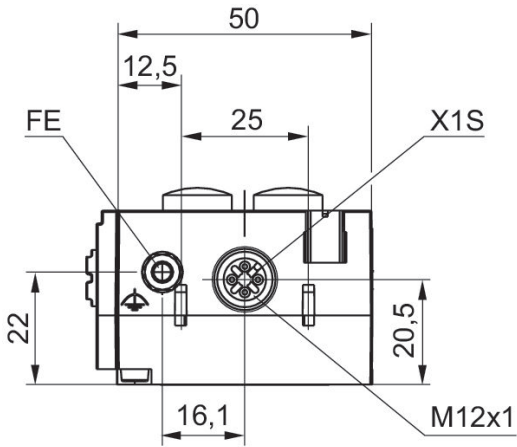
I/O modules, series AES

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Power plug IN, Number of poles	Number of I/O connections	Part No.
2AI2AO2M12-C	4-pin	2 inputs / 2 outputs	R412018293

Dimensions

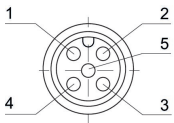


1) Retaining bracket (optional)

R412018293

Pin assignments

Socket (female)



Pin	Socket (female) X2A1 - X2A2	Plug (male) X1S
1	24 V DC	-
2	Output signal	24 V DC
3	0 V DC	-
4	Input signal	0 V DC
5	Shield, connected internally with ground screw 2)	-

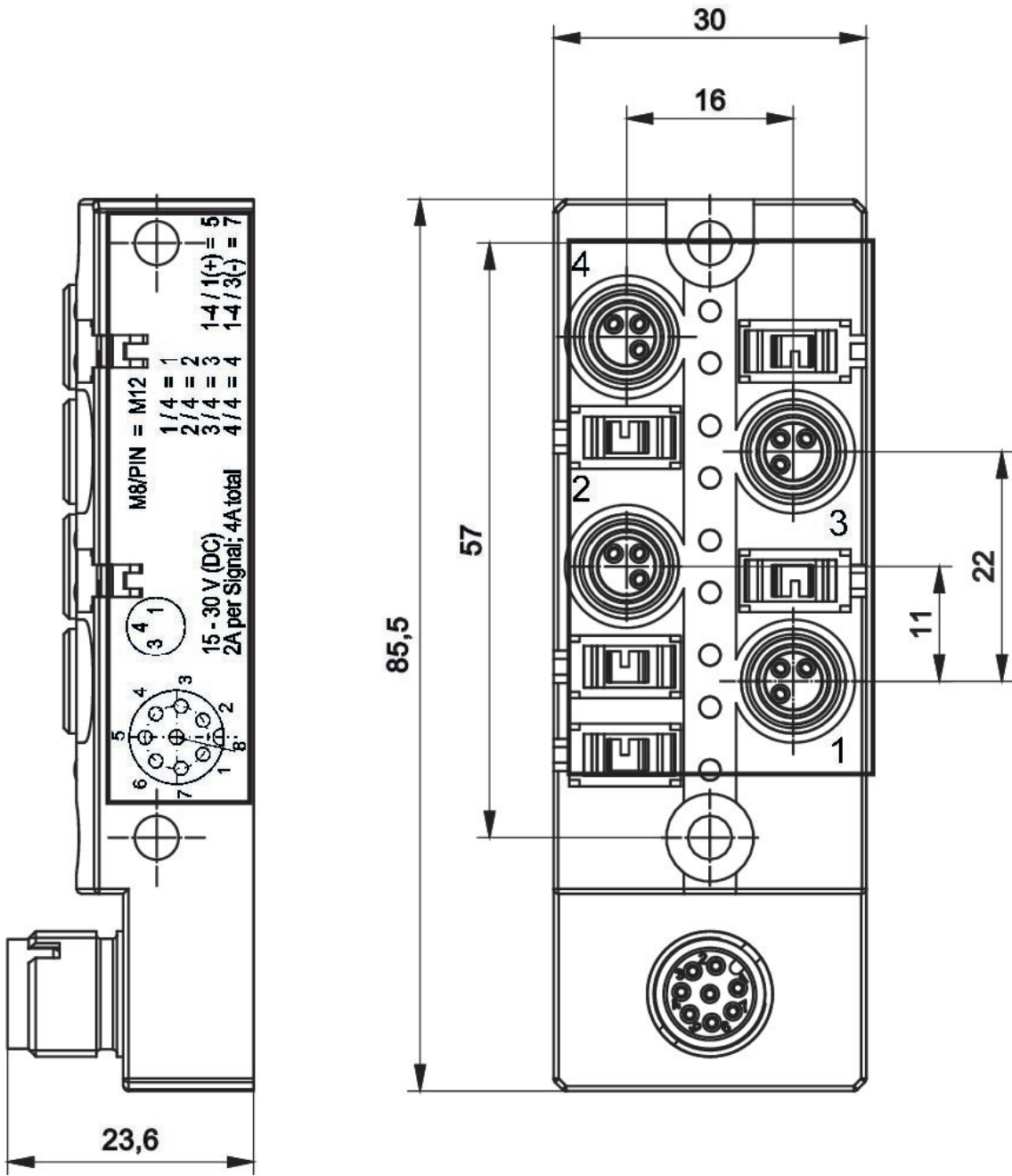
Passive distributor, Series AES

Ambient temperature min./max.: -25 °C ... 80 °C



Number of I/O connections	Part No.
4 inputs / 4 outputs	R412028732

Dimensions



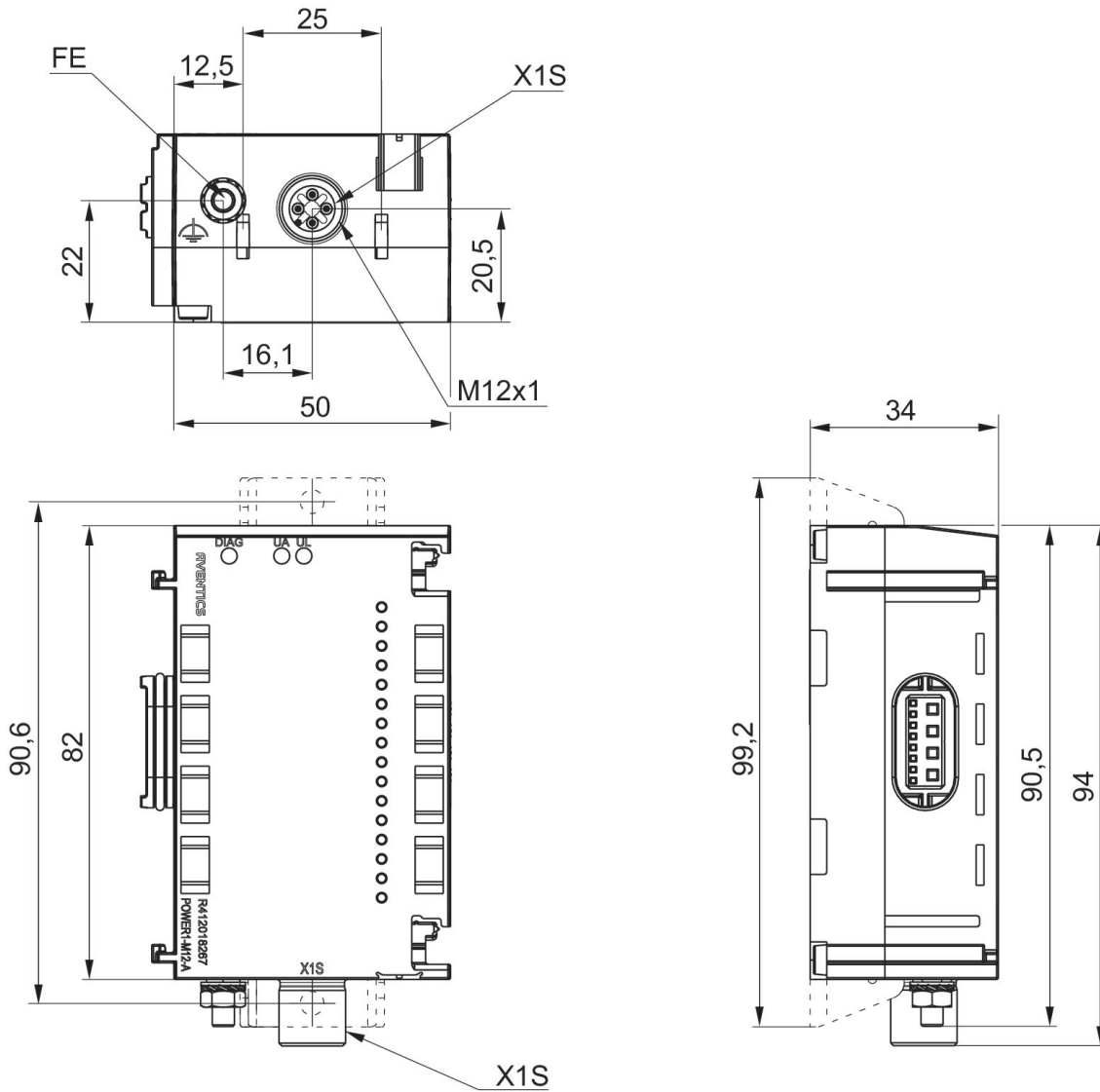
Power module Series AES, M12x1 (4-pin)

Ambient temperature min./max.: -10 °C ... 60 °C



Power plug IN, Number of poles	Power supply direction UA	Power supply direction UL	Part No.
4-pin	left		R412018267
4-pin		left	R412018268

Dimensions

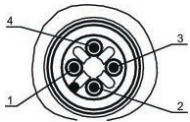


Port 1, X1S

R412018267, R412018268

Pin assignments

PNP



Pin	R412018267 (UA)	R412018268 (UL)
1	-	24 V DC power supply (UL) input
2	24 V DC power supply (UA) input	-
3	-	0 V DC (UL)
4	0 V DC (UA)	-

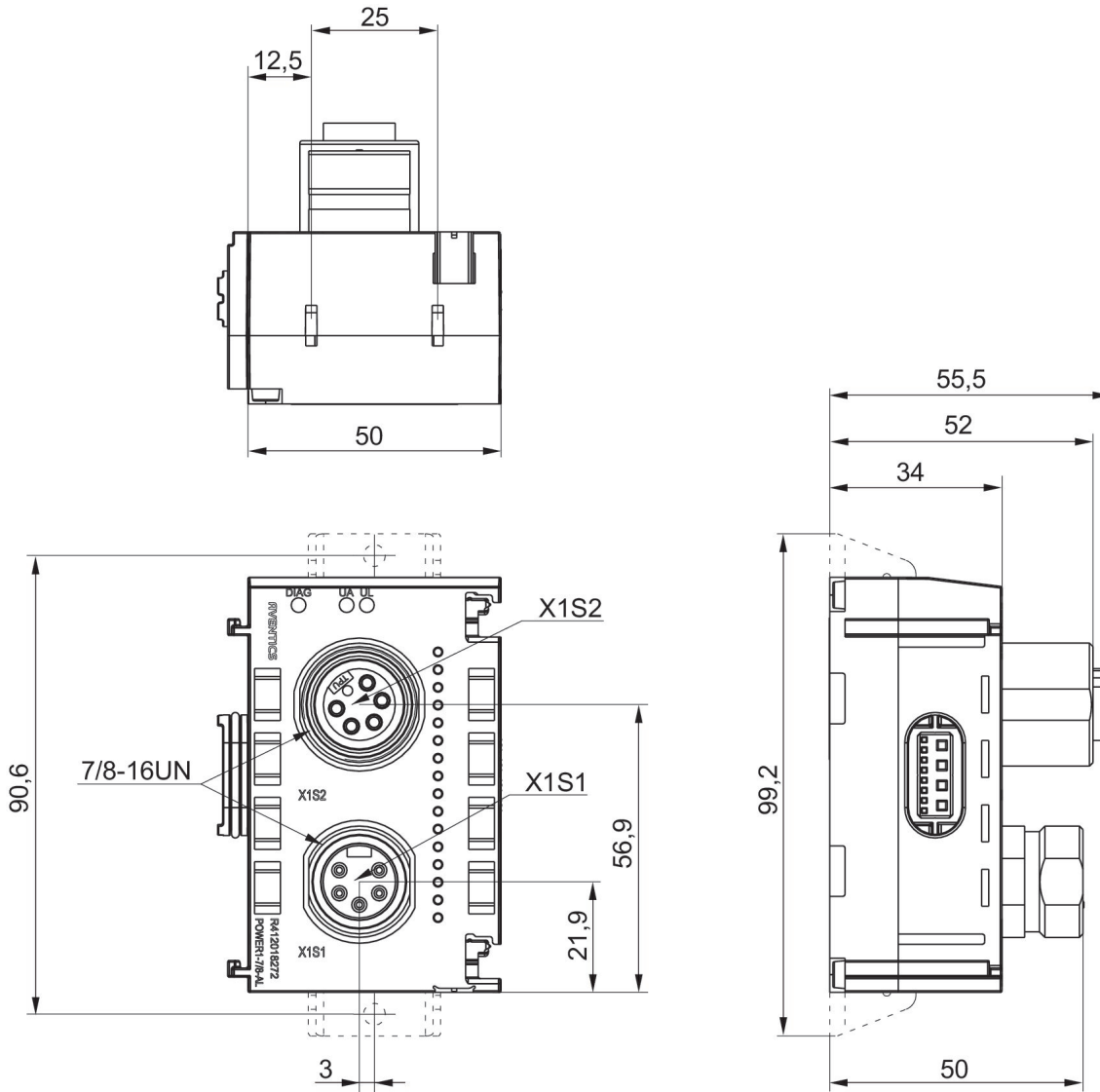
Power module Series AES, 7/8", 5-pin

Ambient temperature min./max.: -10 °C ... 60 °C



Power plug IN, Number of poles	Power plug OUT, Type	Power plug OUT size , Thread size	Part No.
5-pin	Socket	7/8"-16UNF	R412018272

Dimensions

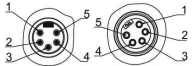


Port 1, X1S1
Port 2, X1S2

R412018272

Pin assignments

PNP



Pin	Plug X1S1	Socket X1S2
1	0 V DC (UA)	0 V DC (UA)
2	0 V DC (UL)	0 V DC (UL)
3	FE	FE
4	24 V DC power supply (UL) input	24 V DC power supply (UL) output
5	24 V DC power supply (UA) input	24 V DC power supply (UA) output

Bus coupler, series AES

Power plug IN, Type: Plug

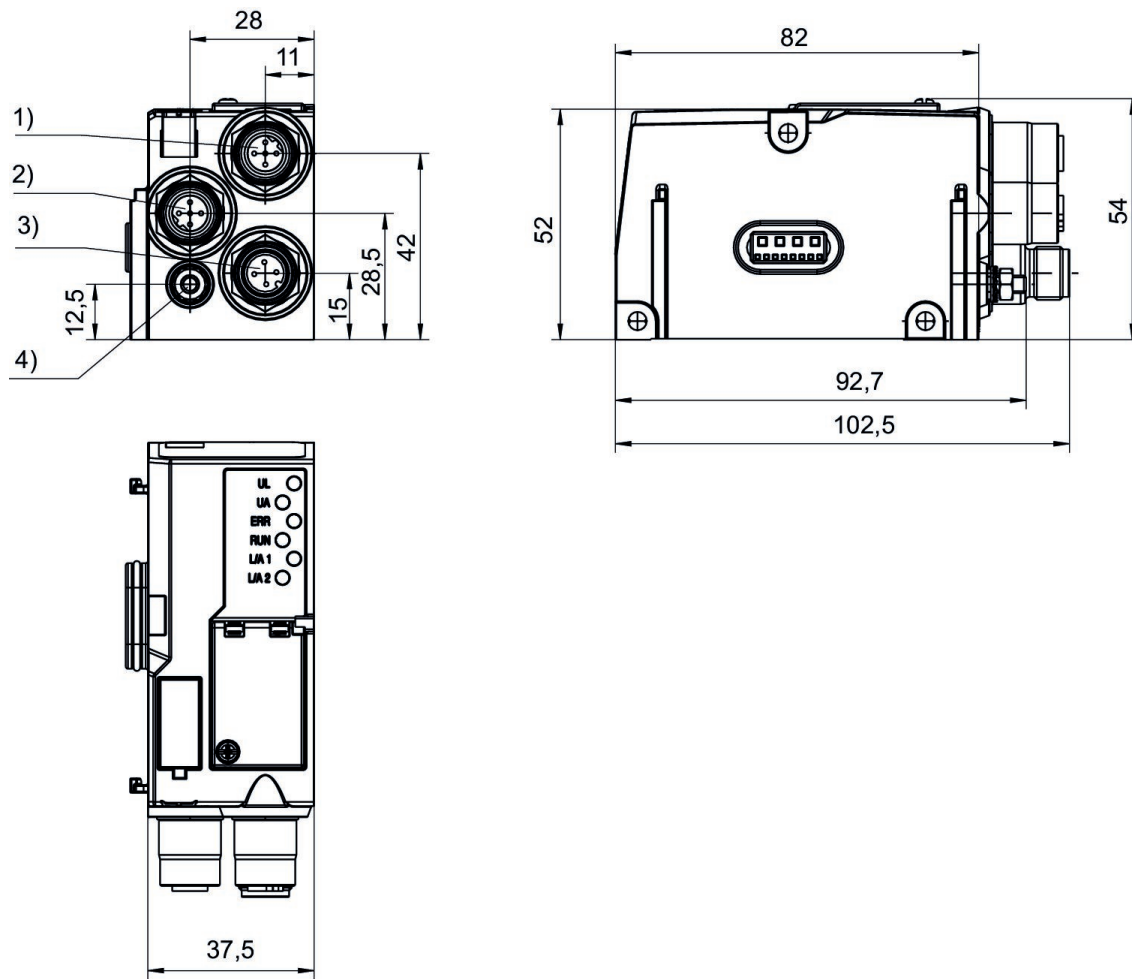
Power plug IN size , Thread size: M12x1

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Fieldbus protocol	Power plug IN, Number of poles	Number of I/O connections	Part No.
	PROFIBUS DP	4-pin	512 inputs / 512 outputs	R412018218
	CANopen	4-pin	512 inputs / 512 outputs	R412018220
	DeviceNet	4-pin	512 inputs / 512 outputs	R412018221
Generation 2, Notice: supports MRP and IRT (RT_CLASS 3)	PROFINET IO	4-pin	512 inputs / 512 outputs	R412088223
Generation 2	EtherCAT	4-pin	512 inputs / 512 outputs	R412088225

Dimensions



1) Fieldbus connection 2) Fieldbus connection 3) Power supply 4) Functional ground

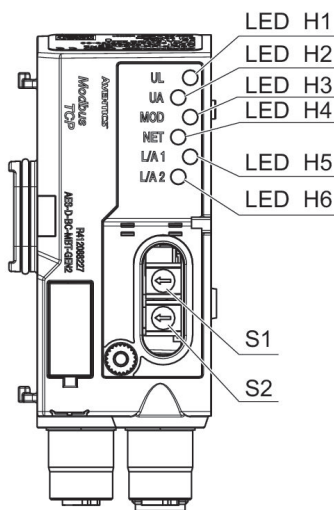
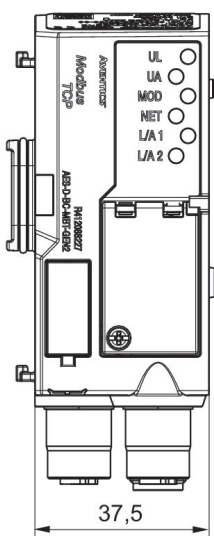
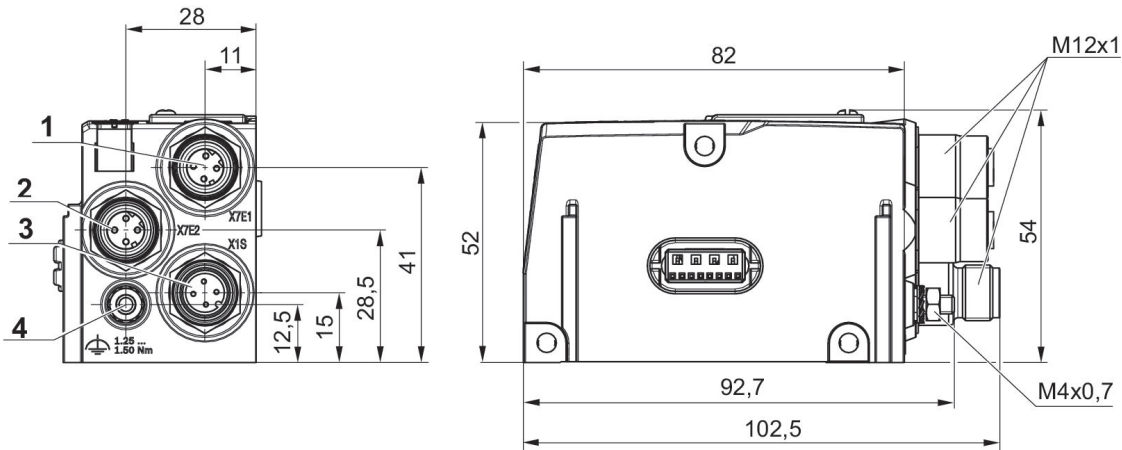
Bus coupler, series AES

Power plug IN, Type: Plug (male)
Power plug IN size , Thread size: M12x1



Type	Fieldbus protocol	Power plug IN, Number of poles	Number of I/O connections	Part No.
Generation 2	MODBUS TCP	4-pin	512 inputs / 512 outputs	R412088227

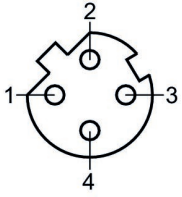
Dimensions



1) Fieldbus connection 2) Fieldbus connection 3) Power supply 4) Functional ground

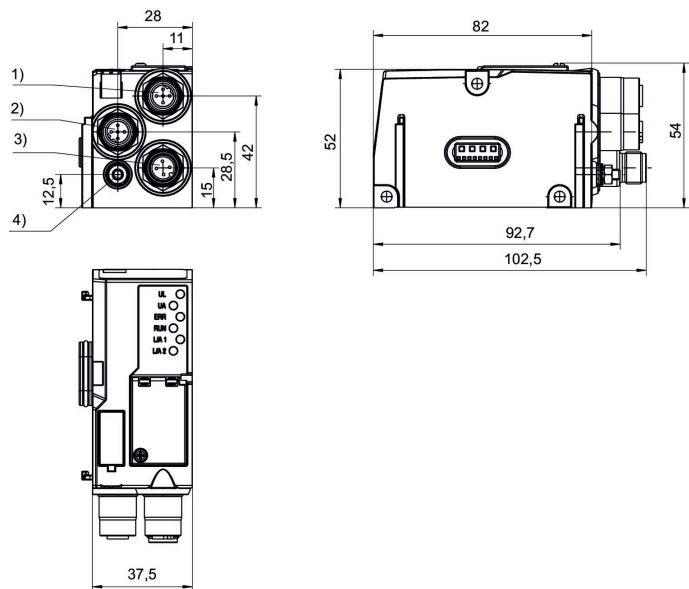
R412088227

Pin assignment, socket



R412088226

Dimensions



1) Fieldbus connection 2) Fieldbus connection 3) Power supply 4) Functional ground

Shut-off module, Series AV

Activation: Electrically

Qn 1 > 2: 400 l/min

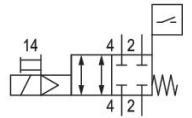
Min. control pressure: 3.5 bar

Max. control pressure: 7 bar

Ambient temperature min./max.: 0 °C ... 50 °C

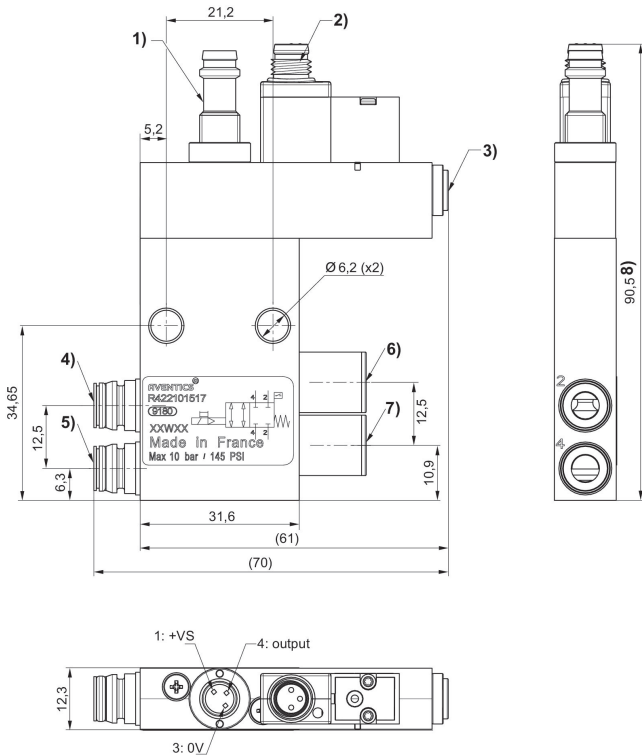
Medium temperature min./max.: 0 °C ... 50 °C

Working pressure min./max.: 0 bar ... 10 bar



Compressed air connection output	Part No.
Ø 6	R422101518
Ø 8	R422101517
Ø 1/4"	R422101520

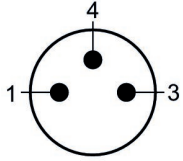
Dimensions



- 1) Sensor plug M8, 3-pin electronic PNP
The orientation of the pins depends on the angular position of the sensor, which is random.
- 2) Pilot valve connection
- 3) Pilot air supply
- 4) Connection 2, valve side 5) Connection 4, valve side 6) Operating line 2 7) Operating line 4
Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series

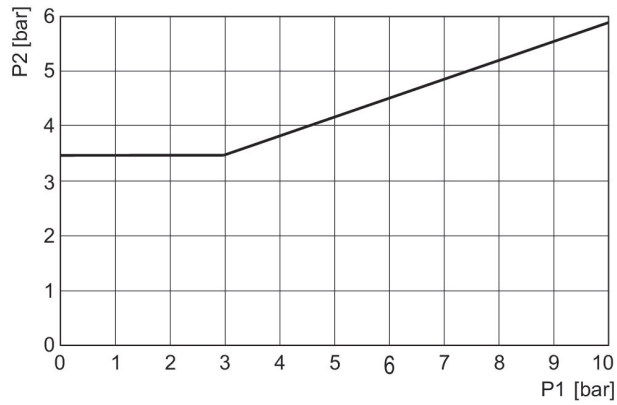
R422101518, R422101517, R422101520

Pilot valve pin assignment M8x1 (3-pin)



(1) BN=brown (3) BU=blue (4) BK=black

Minimum control pressure (depending on operating pressure)



p1 = pressure on connections 2 and 4, p2 = control pressure

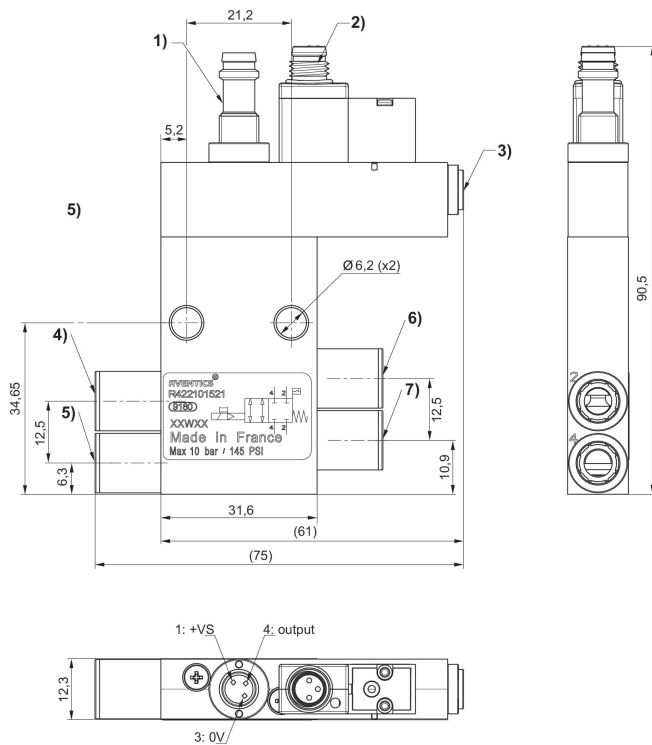
Shut-off module, stand-alone

Activation: Electrically
 Qn 1 > 2: 400 l/min
 Min. control pressure: 3.5 bar
 Max. control pressure: 7 bar
 Ambient temperature min./max.: 0 °C ... 50 °C
 Medium temperature min./max.: 0 °C ... 50 °C
 Working pressure min./max.: 0 bar ... 10 bar



Compressed air connection input	Compressed air connection output	Part No.
Ø 6	Ø 6	R422101522
Ø 8	Ø 8	R422101521
Ø 4	Ø 4	R422101523
Ø 1/4"	Ø 1/4"	R422101524

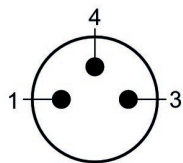
Dimensions



- 1) Sensor plug M8, 3-pin electronic PNP
The orientation of the pins depends on the angular position of the sensor, which is random.
- 4) Fittings
- 5) Pilot air supply
- 4) Connection 2, Input-side 5) Connection 4, Input-side 6) Operating line 2 7) Operating line 4

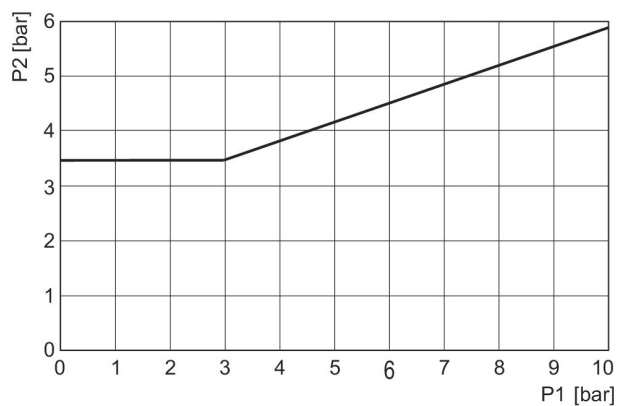
R422101522, R422101521, R422101523, R422101524

Pilot valve pin assignment M8x1 (3-pin)



(1) BN=brown (3) BU=blue (4) BK=black

Minimum control pressure (depending on operating pressure)



p1 = pressure on connections 2 and 4, p2 = control pressure

Shut-off module, Series AV

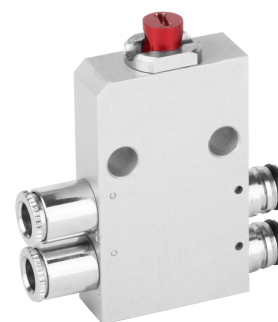
Activation: Mechanical

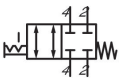
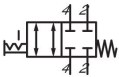
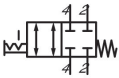
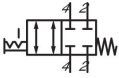
Compressed air connection type: Internal thread

Ambient temperature min./max.: -10 °C ... 60 °C

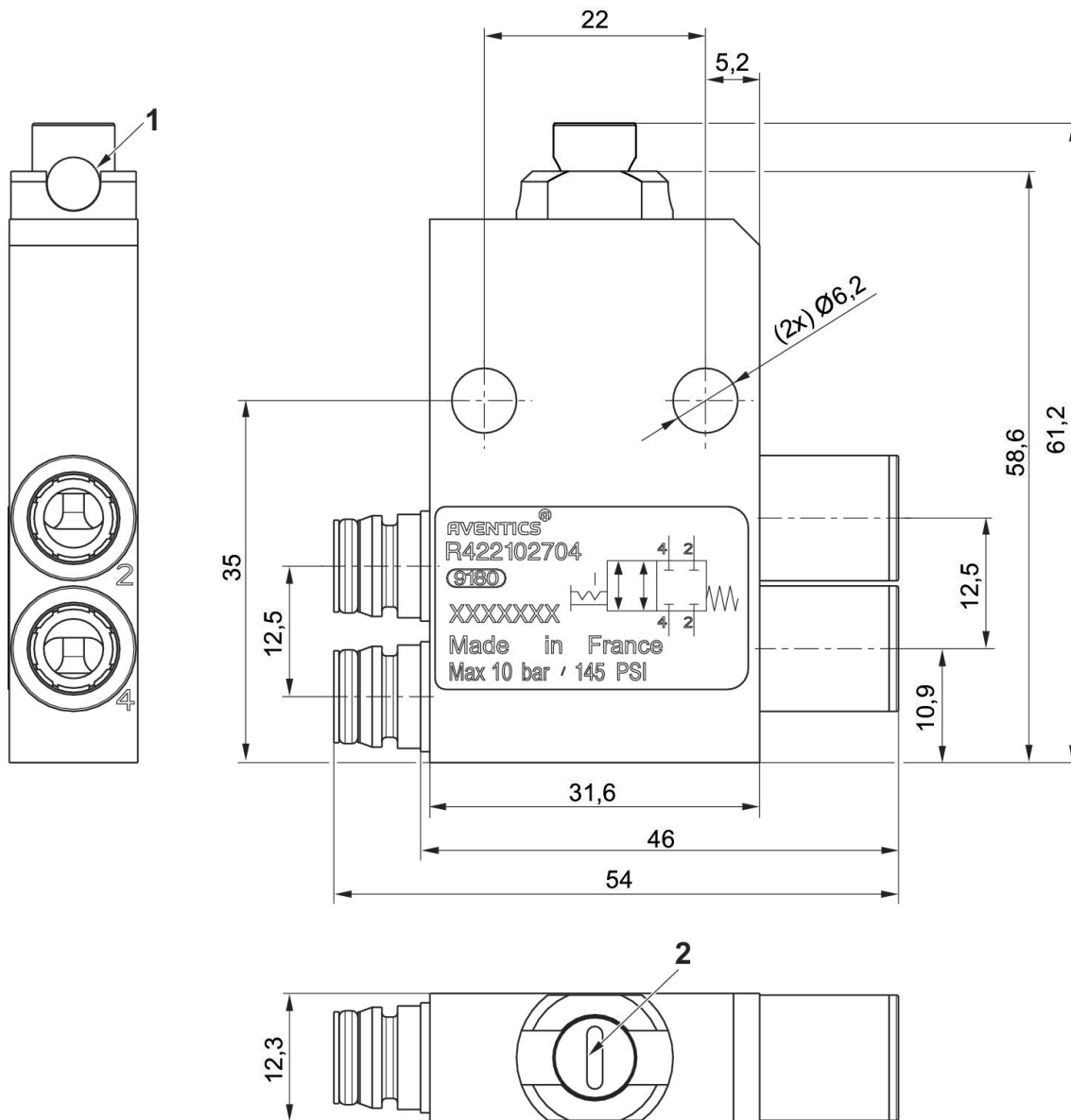
Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 10 bar



	Housing material	Compressed air connection output	Part No.
	Aluminum	Ø 1/4"	R422102699
	Aluminum	Ø 8	R422102704
	Aluminum	Ø 6	R422102705
	Aluminum	Ø 4	R422102706

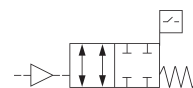
Dimensions



- 1) Through hole for cable lock
Order cable lock 7472D02758 separately
- 2) Manual override lock

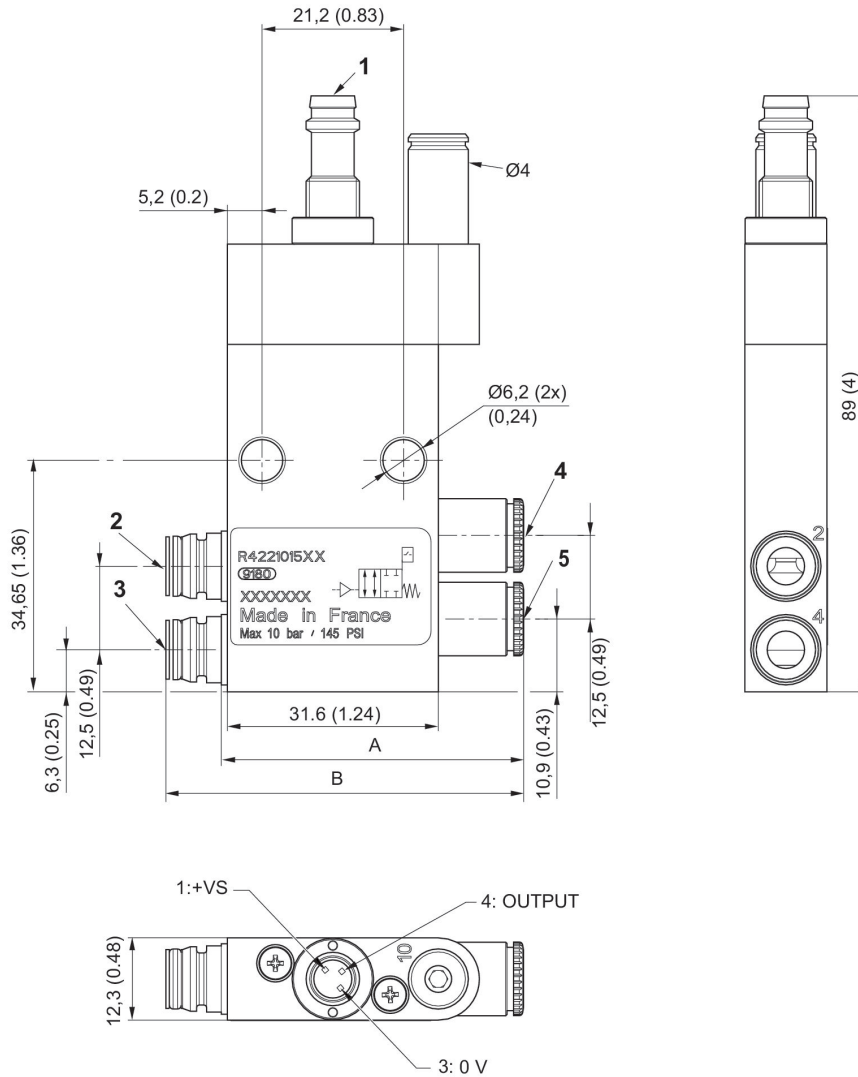
Shut-off module, Series AV

Activation: Pneumatically
Qn 1 > 2: 400 l/min
Compressed air connection type: Internal thread
Ambient temperature min./max.: 0 °C ... 60 °C
Medium temperature min./max.: 0 °C ... 60 °C
Working pressure min./max.: 0 bar ... 10 bar



Compressed air connection output	Part No.
Ø 6	R422101511
Ø 8	R422101510
Ø 1/4"	R422101509

Dimensions

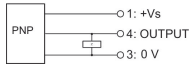


- 1) Sensor plug M8, 3-pin electronic PNP
The orientation of the pins depends on the angular position of the sensor, which is random.
- 2) Connection 2, valve side
- 3) Connection 4, valve side
- 4) Operating line 2
- 5) Operating line 4

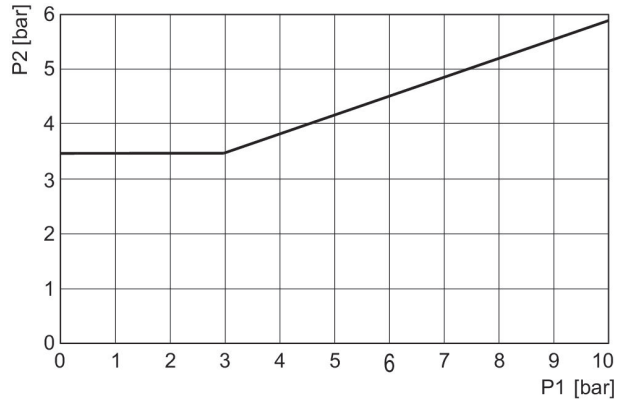
Part No.	A	B
R422101509	45±1	53±1
R422101510	45±1	54±1
R422101511	42±1	50±1
R499101512	38±1	46±1

R422101511, R422101510, R422101509

Sensor circuit diagram



Minimum control pressure (depending on operating pressure)

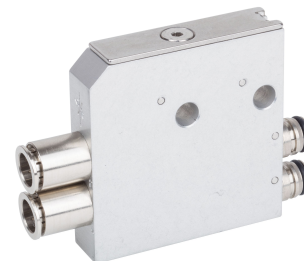


p1 = pressure on connections 2 and 4, p2 = control pressure

Throttle module

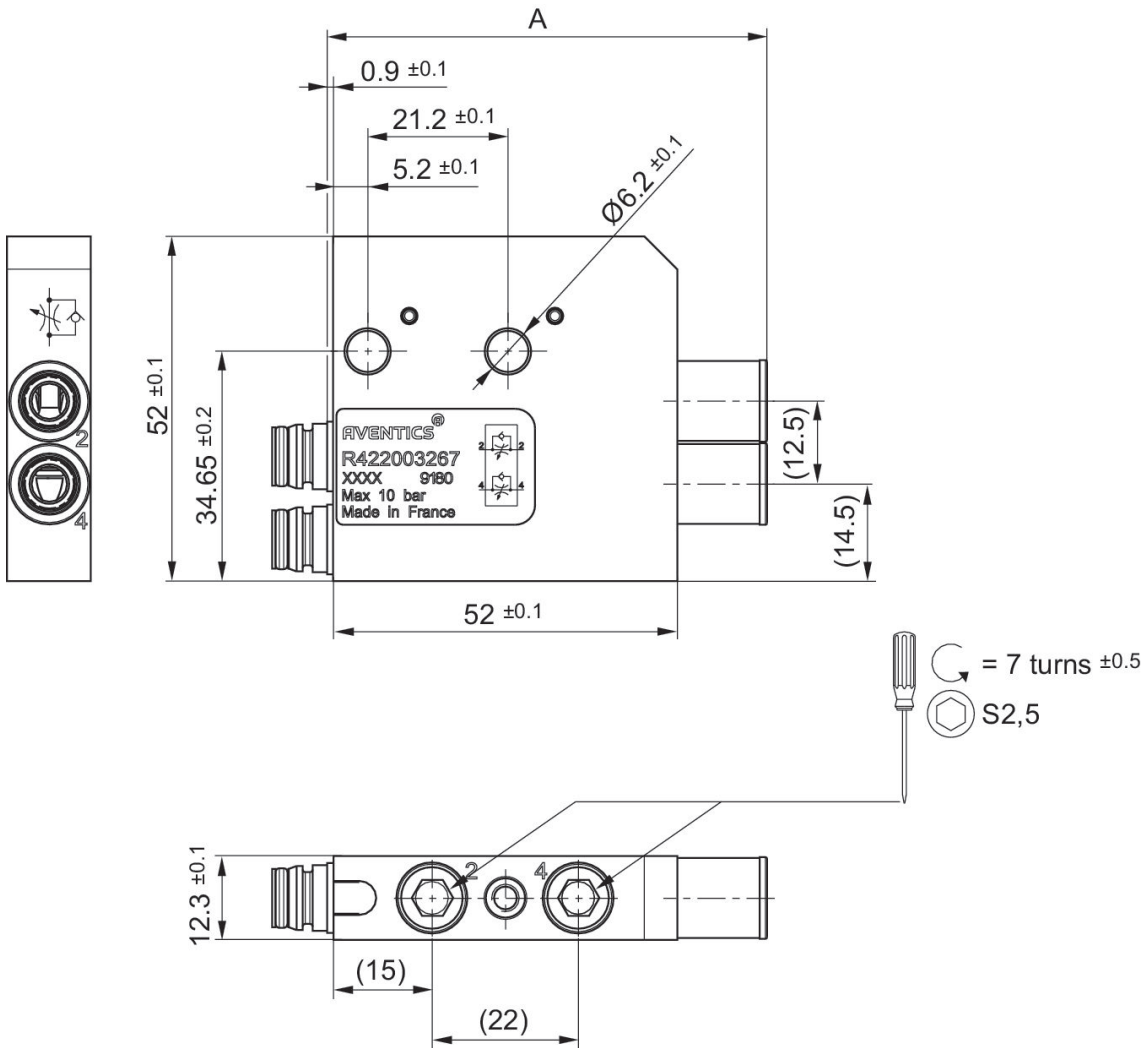
Ambient temperature min./max.: -10 °C ... 60 °C

Medium temperature min./max.: -10 °C ... 60 °C



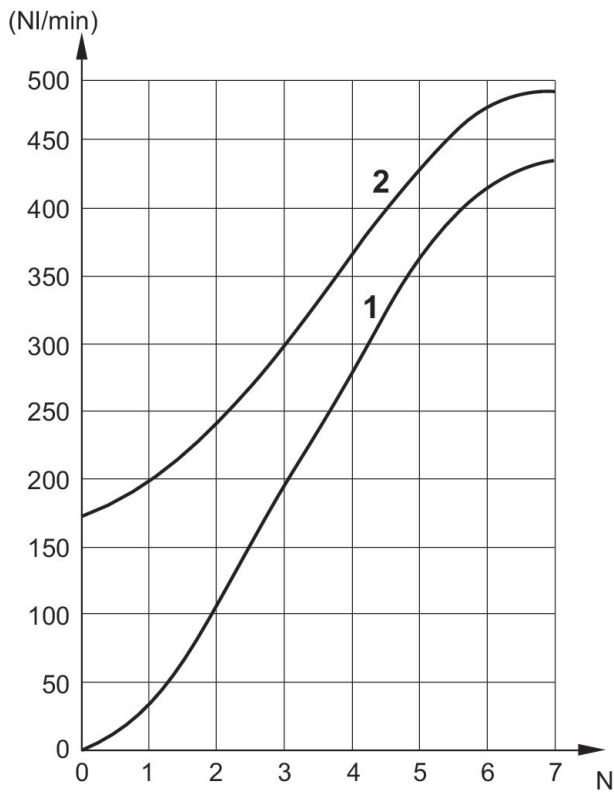
	Compressed air connection output	Type	Fig.	Part No.
	Ø 6	direction of throttle 2 # 1	Fig. 1	R422003311
	Ø 8	direction of throttle 2 # 1	Fig. 1	R422003267
	Ø 1/4"	direction of throttle 2 # 1	Fig. 1	R422003666
	Ø 6	direction of throttle 2 # 1 direction of throttle 1 # 2	Fig. 2	R422003577
	Ø 8	direction of throttle 2 # 1 direction of throttle 1 # 2	Fig. 2	R422003578
	Ø 1/4"	direction of throttle 2 # 1 direction of throttle 1 # 2	Fig. 2	R422003667

Dimensions



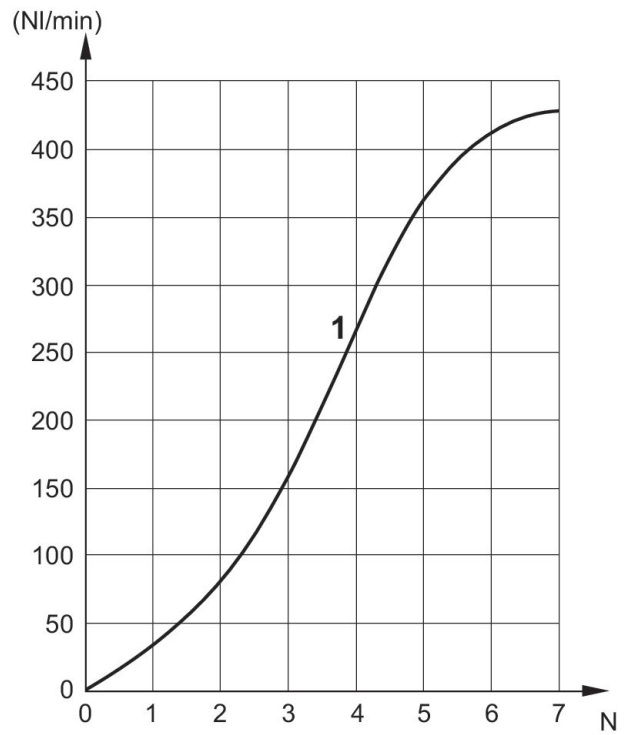
Part No.	Installation length
	A
R422003311	62.2±0.5
R422003267	66.2±0.5
R422003666	65.2±0.5
R422003577	62.2±0.5
R422003578	66.2±0.5
R422003667	65.2±0.5

Fig. 1



1) Controlled flow
2) Uncontrolled flow

Fig. 2

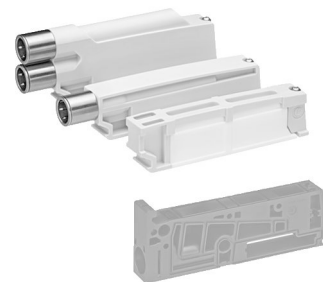


1) Controlled flow

Extension kit, exhaust module for supply plate

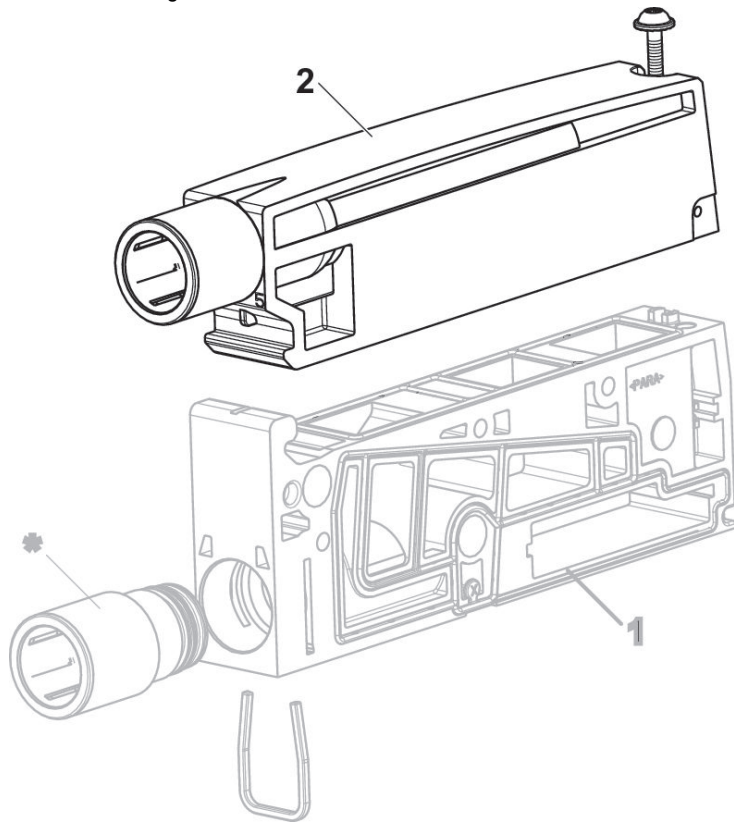
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



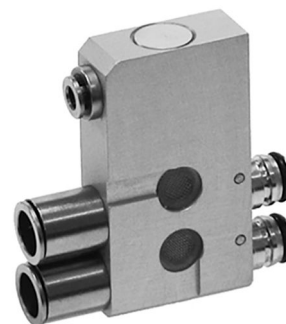
Type	Scope of delivery	Part No.
Exhaust module 3, 5, and R with flat silencer	Exhaust module, including 1 seal, 1 mounting screw	R412020087
Exhaust module with combined collected exhaust 3 and 5	Exhaust module: incl. 1 mounting screw, push-in fitting Ø 12 mm	R412020088
Exhaust module with separate collected exhaust 3 and 5	Exhaust module: incl. 1 mounting screw, push-in fitting Ø 12 mm	R412020089

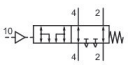
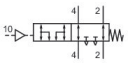
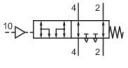
Overview drawing



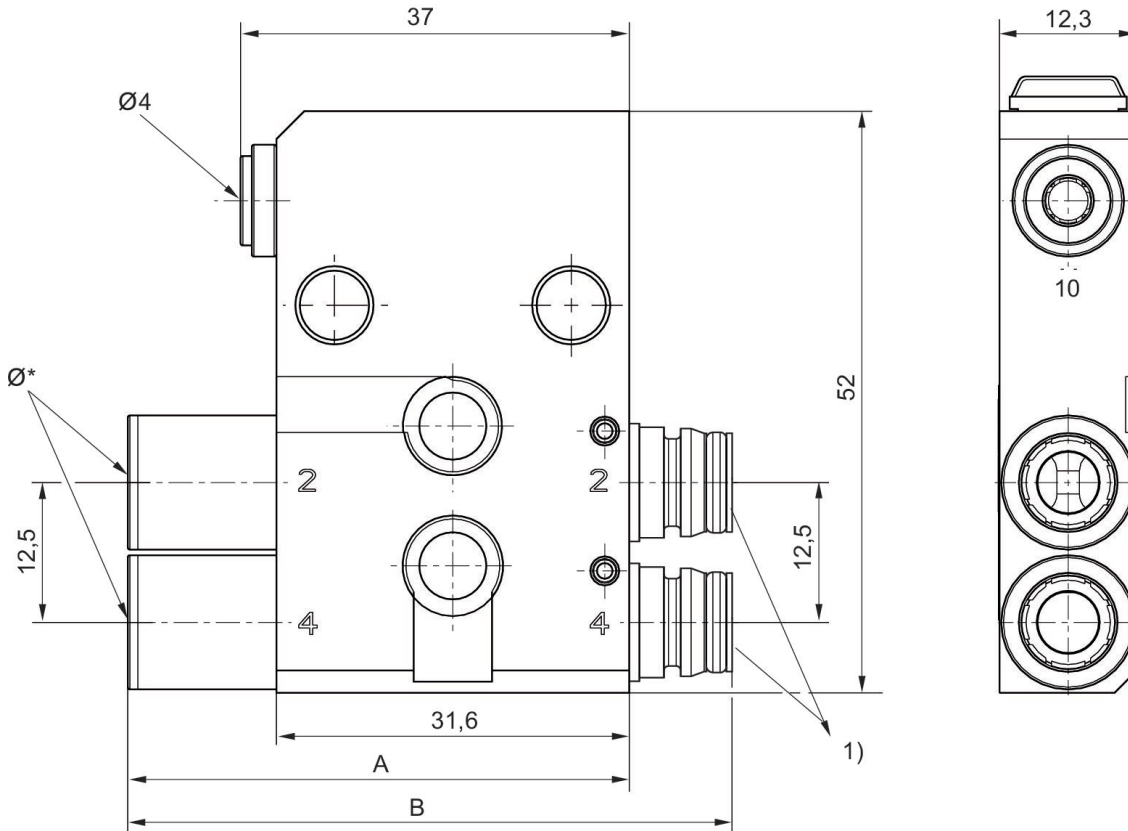
Exhaust module, Series AV

Ambient temperature min./max.: -10 °C ... 60 °C
Working pressure min./max.: 0 bar ... 10 bar



	Housing material	Part No.
	Aluminum	R422003046
	Aluminum	R422003185
	Aluminum	R422003187

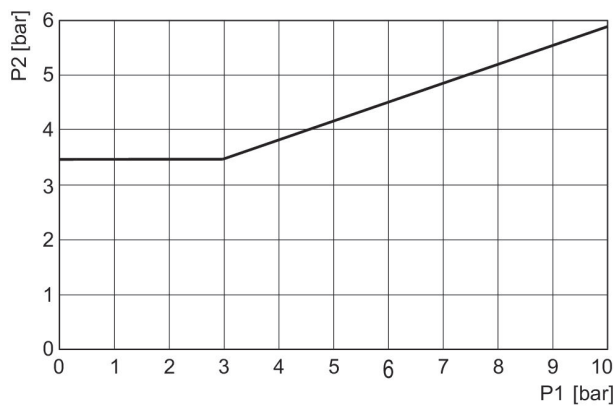
Dimensions



1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series

Part No.	Ø*	A	B
R422003046	8	46	54
R422003185	6	42	50
R422003187	4	38	46

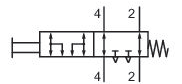
Minimum control pressure (depending on operating pressure)



p1 = pressure on connections 2 and 4, p2 = control pressure

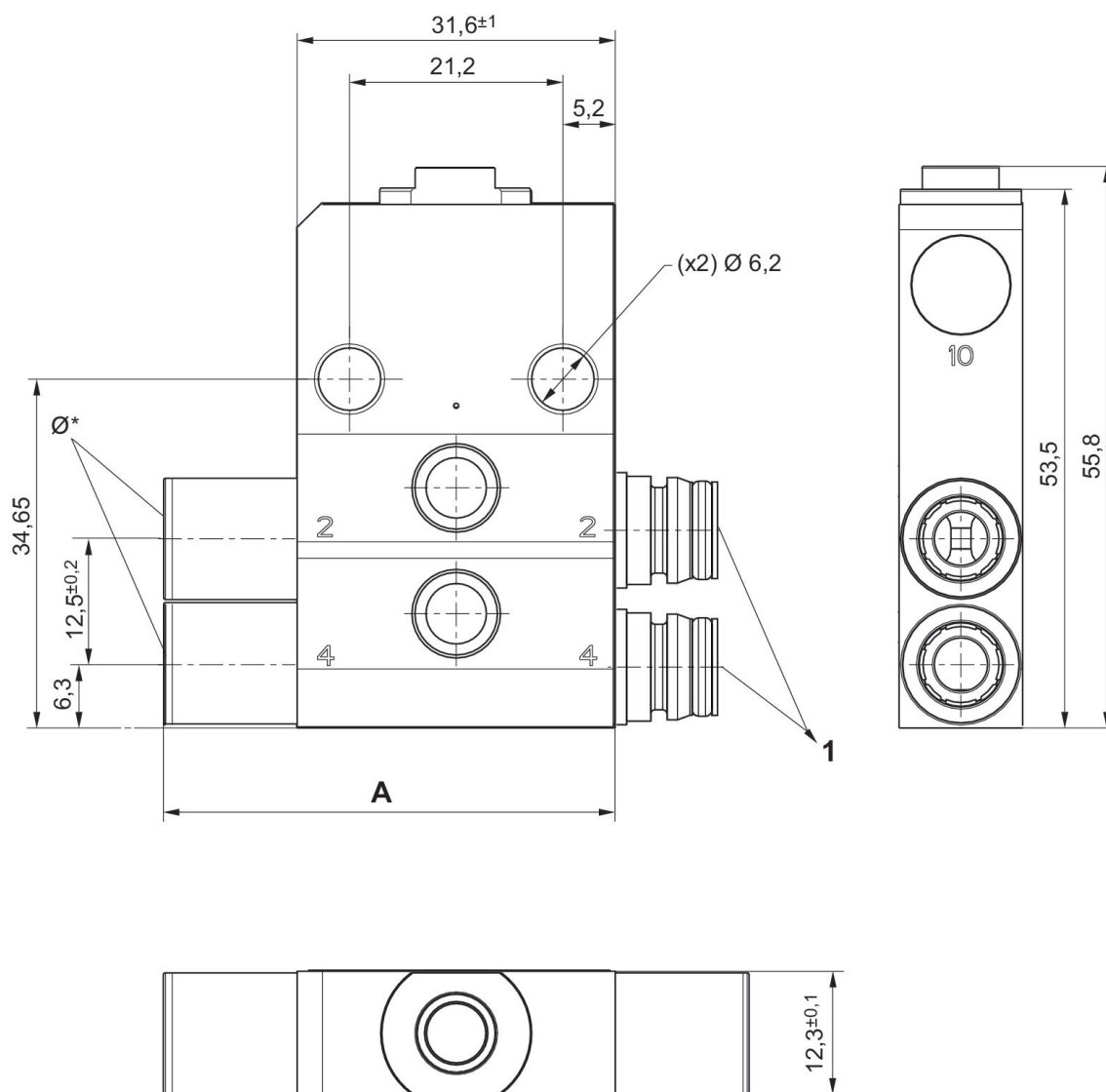
Exhaust module, Series AV

Ambient temperature min./max.: 10 °C ... -60 °C
 Medium temperature min./max.: 10 °C ... -60 °C
 Working pressure min./max.: 0 bar ... 10 bar



Housing material	Part No.
Aluminum	R422003913
Aluminum	R422003915

Dimensions



1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series

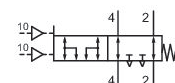
	Ø	A	B
R422003913	8	46±1	54±1
R422003915	6	42±1	50±1

Exhaust module, Series AV

Ambient temperature min./max.: -10 °C ... 60 °C

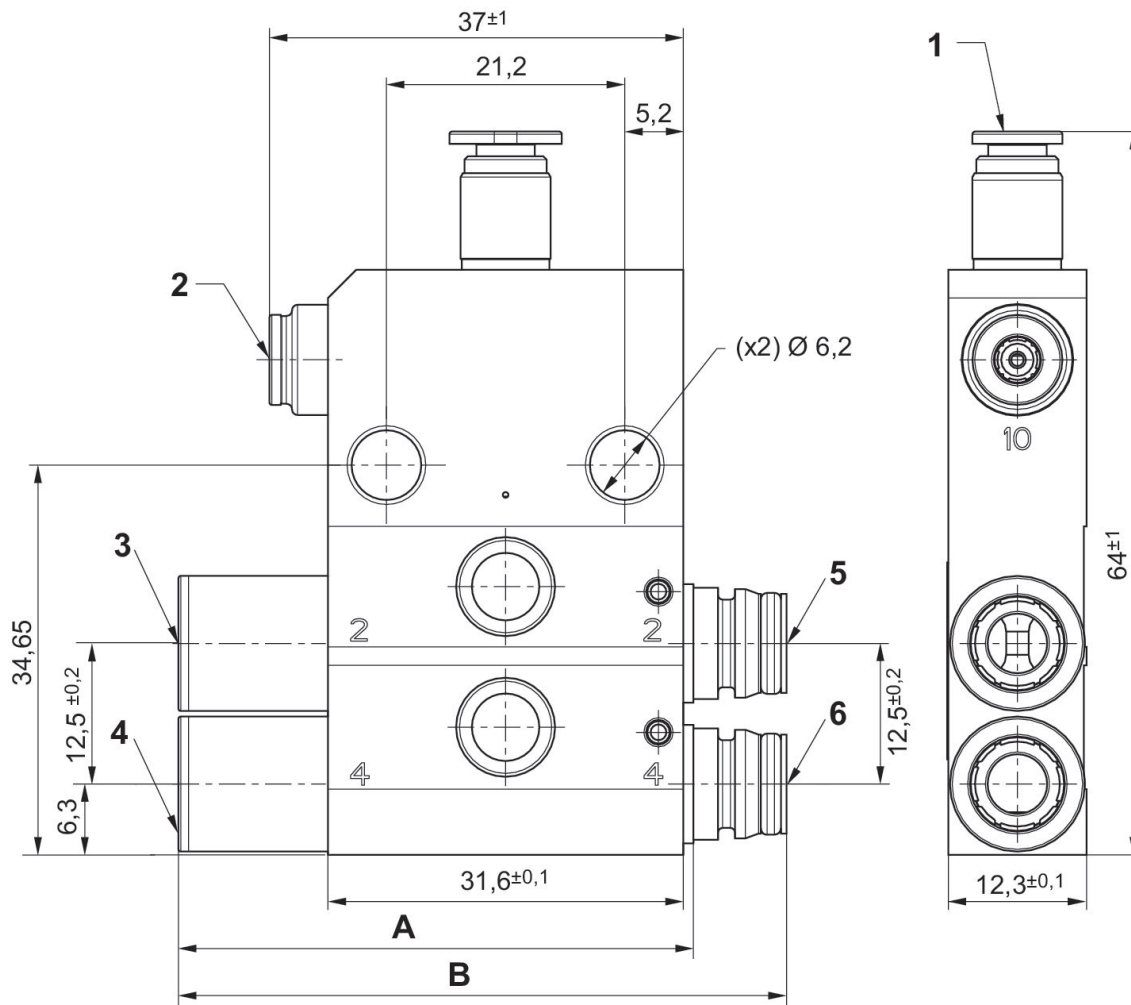
Medium temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 10 bar



Housing material	Part No.
Aluminum	R422003807
Aluminum	R422003805

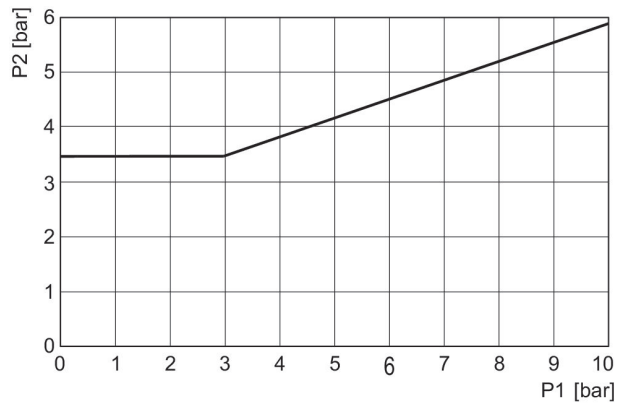
Dimensions



- 1) Port 10 $\varnothing 4$
- 2) Port 10 $\varnothing 4$
- 3) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- 4) Operating line 4
- 5) Connection 2, valve side
- 6) Connection 4, valve side

	A	B
R422003805	46 ± 1	54 ± 1
R422003807	42 ± 1	50 ± 1

Minimum control pressure (depending on operating pressure)

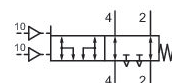


p1 = pressure on connections 2 and 4, p2 = control pressure

p1	p2
0	3.5
3	3.5
10	5.8

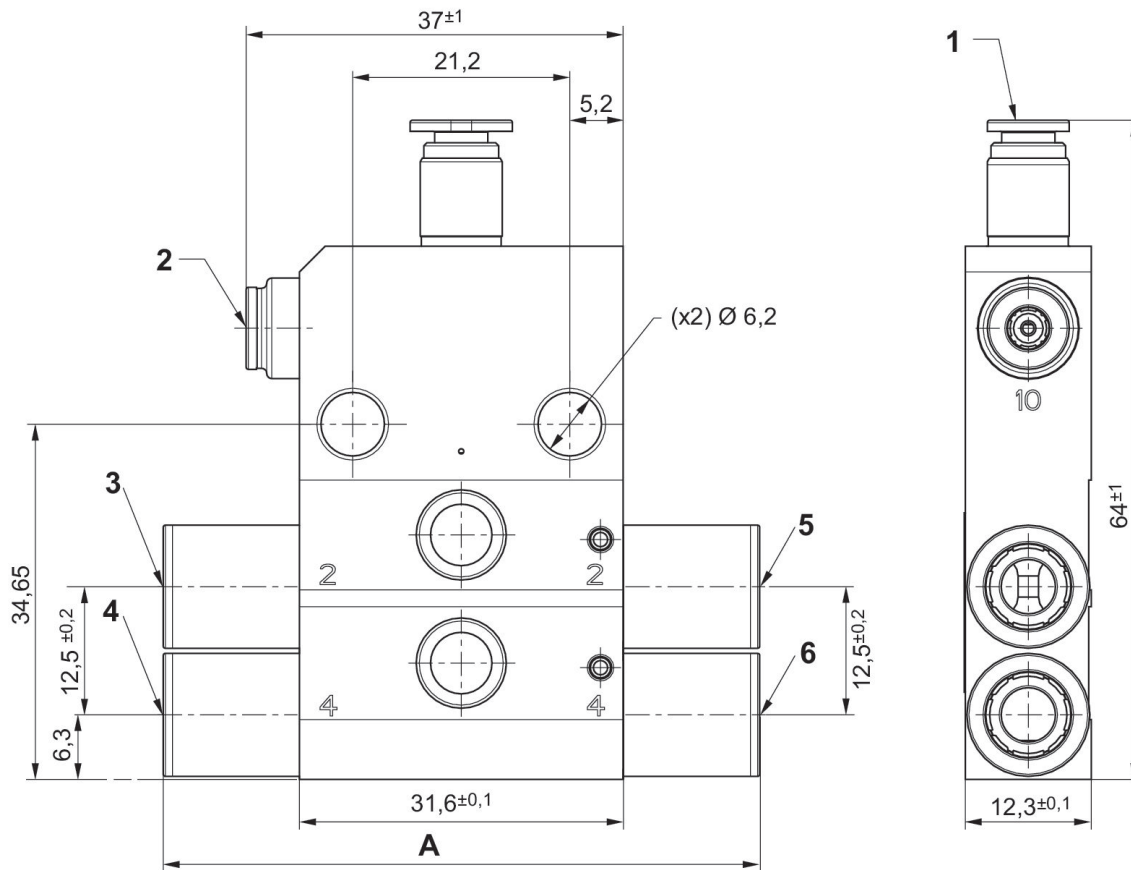
Exhaust module, Stand-Alone

Ambient temperature min./max.: -10 °C ... 60 °C
 Medium temperature min./max.: -10 °C ... 60 °C
 Working pressure min./max.: 0 bar ... 10 bar



Compressed air connection 1	Housing material	Part No.
Ø 6	Aluminum	R422003808
Ø 8	Aluminum	R422003806

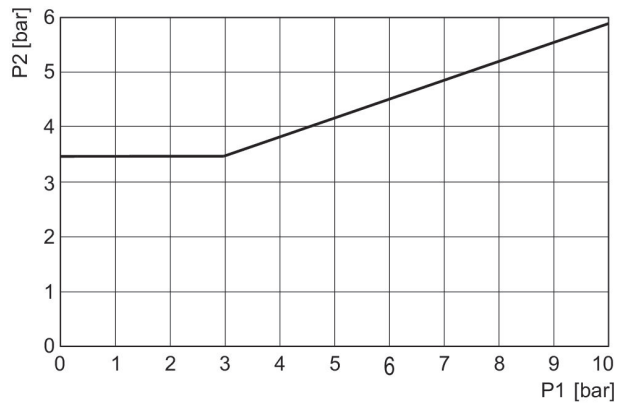
Dimensions



- 1) Port 10 Ø4
 - 2) Port 10 Ø4
 - 3) Operating line 2
 - 4) Operating line 4
 - 5) Connection 2, Input-side
 - 6) Connection 4, Input-side
- Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series

Part No.	A
R422003806	58 ±1
R422003808	50 ±1

Minimum control pressure (depending on operating pressure)

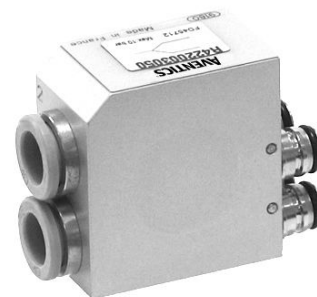


p1 = pressure on connections 2 and 4, p2 = control pressure

Flow rate coupler Series AV

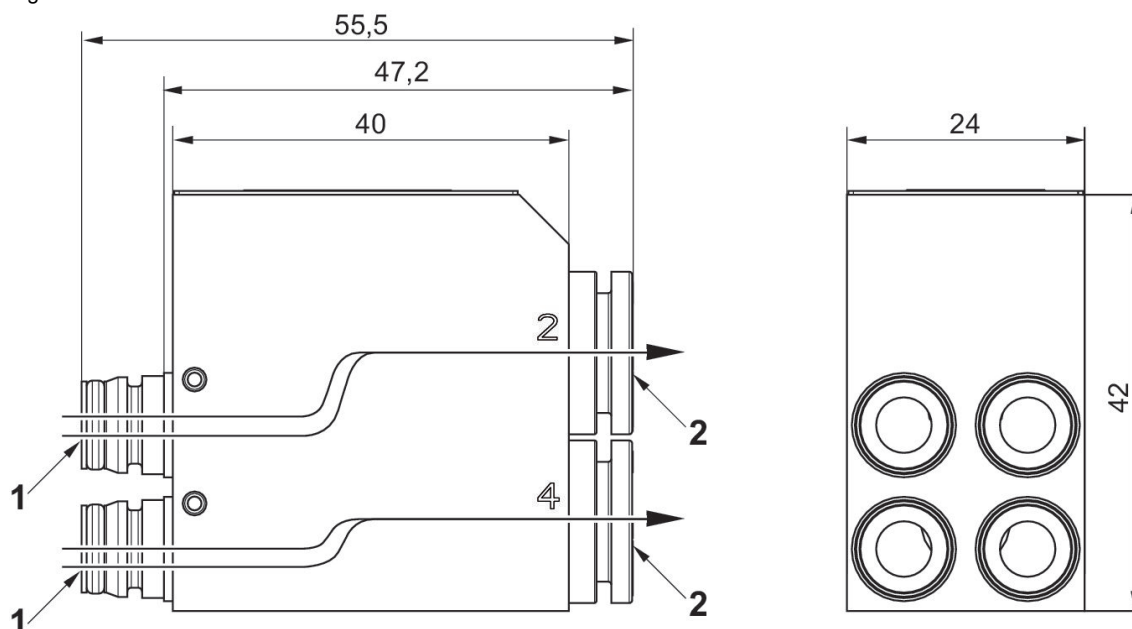
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



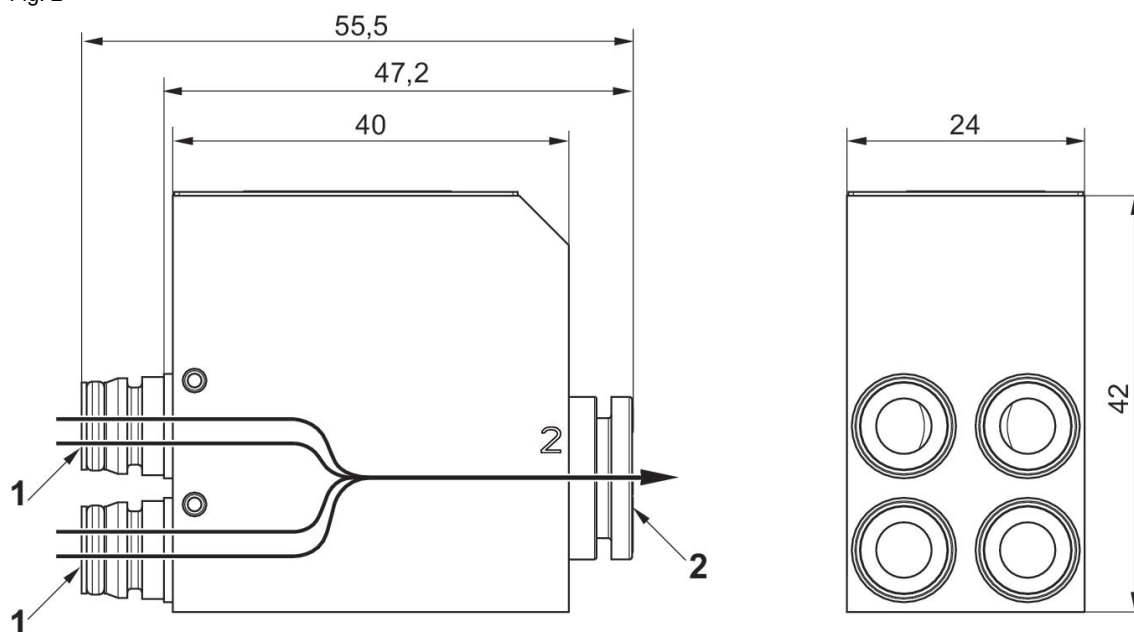
Housing material	Type	Fig.	Part No.
Aluminum	2 x Ø 10	Fig. 1	R422003050
Aluminum	1 x Ø 10	Fig. 2	R422003060

Fig. 1



- 1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- 2) 2 x Ø 10

Fig. 2



- 1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- 2) 1 x Ø 10

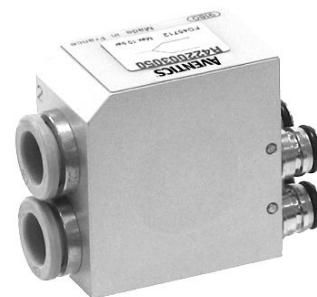
Number of valves	Valve function	Series	Flow [l/min]
2	5/2	AV03	570
2	5/3	AV03	520
2	2x3/2	AV03	500
2	5/2	AV05	1070
2	5/3	AV05	1030
2	2x3/2	AV05	1050

Number of valves	Valve function	Series	Flow [l/min]
2	2x3/2	AV03	730
2	2x3/2	AV05	1400

Flow rate coupler, Series AV Inch version

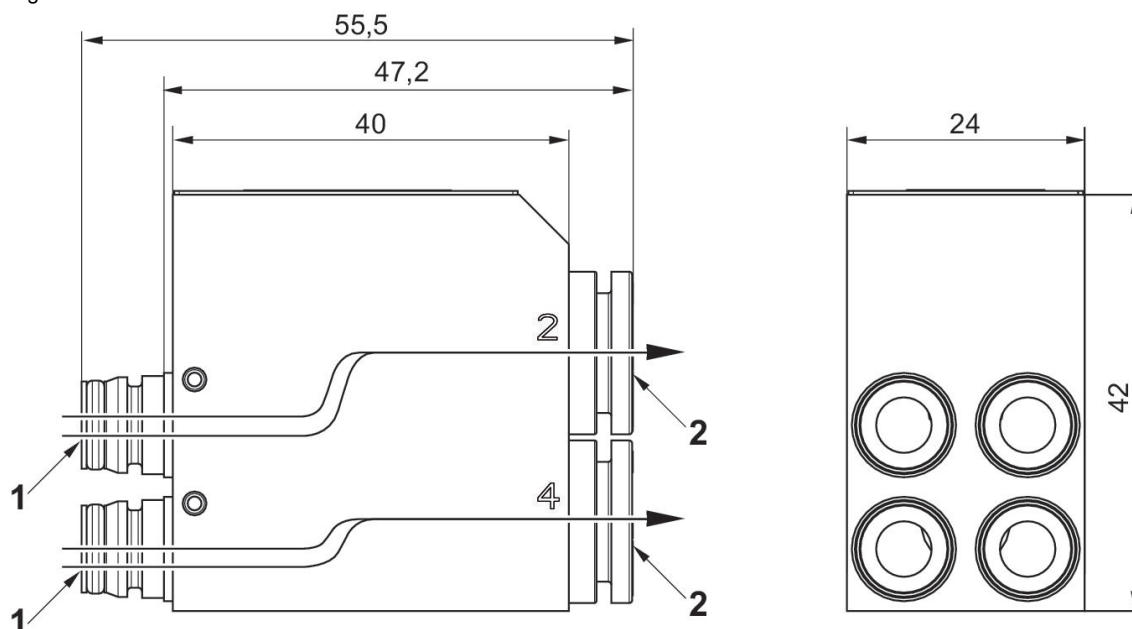
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.9 bar ... 10 bar



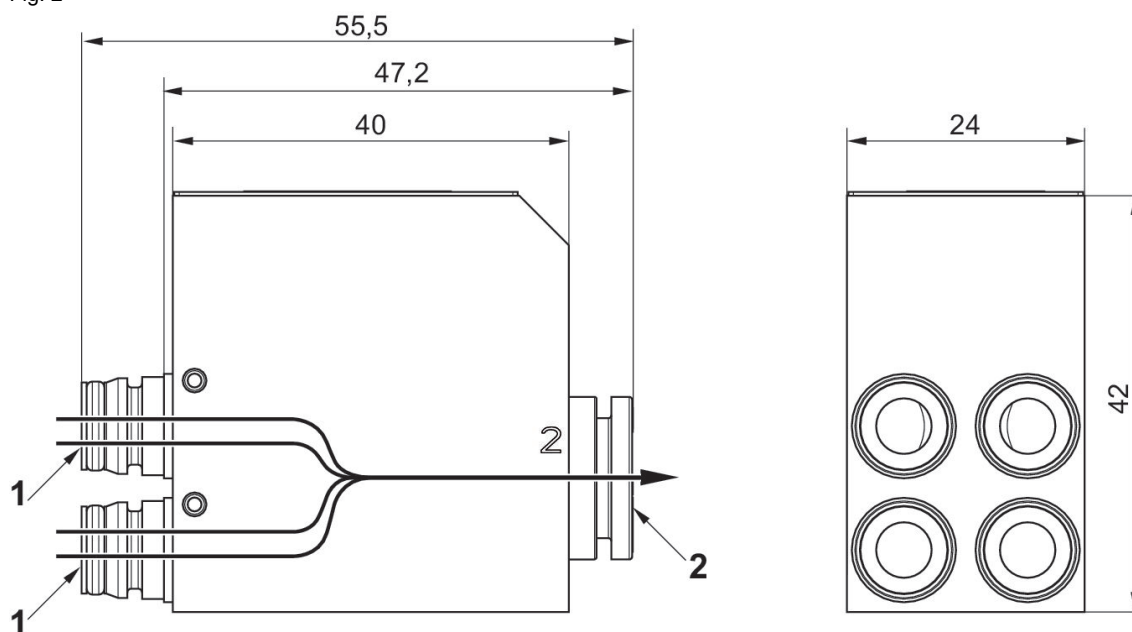
Housing material	Type	Fig.	Part No.
Aluminum	2 x 3/8"	Fig. 1	R422102791
Aluminum	1 x 3/8"	Fig. 2	R422102795

Fig. 1



- 1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- 2) 2 x Ø 10

Fig. 2



1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series

2) 1 x Ø 10

Number of valves	Valve function	Series	Flow [l/min]
2	5/2	AV03	570
2	5/3	AV03	520
2	2x3/2	AV03	500
2	5/2	AV05	1070
2	5/3	AV05	1030
2	2x3/2	AV05	1050

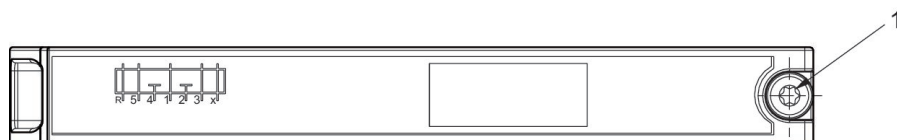
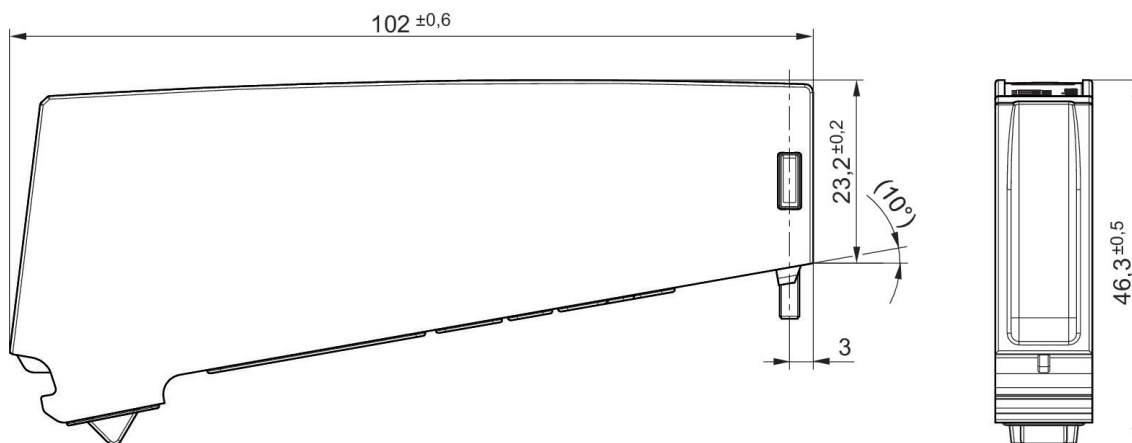
Number of valves	Valve function	Series	Flow [l/min]
2	2x3/2	AV03	730
2	2x3/2	AV05	1400

Blanking plate



Plate type	Part No.
Blanking plate	R422102526

Dimensions



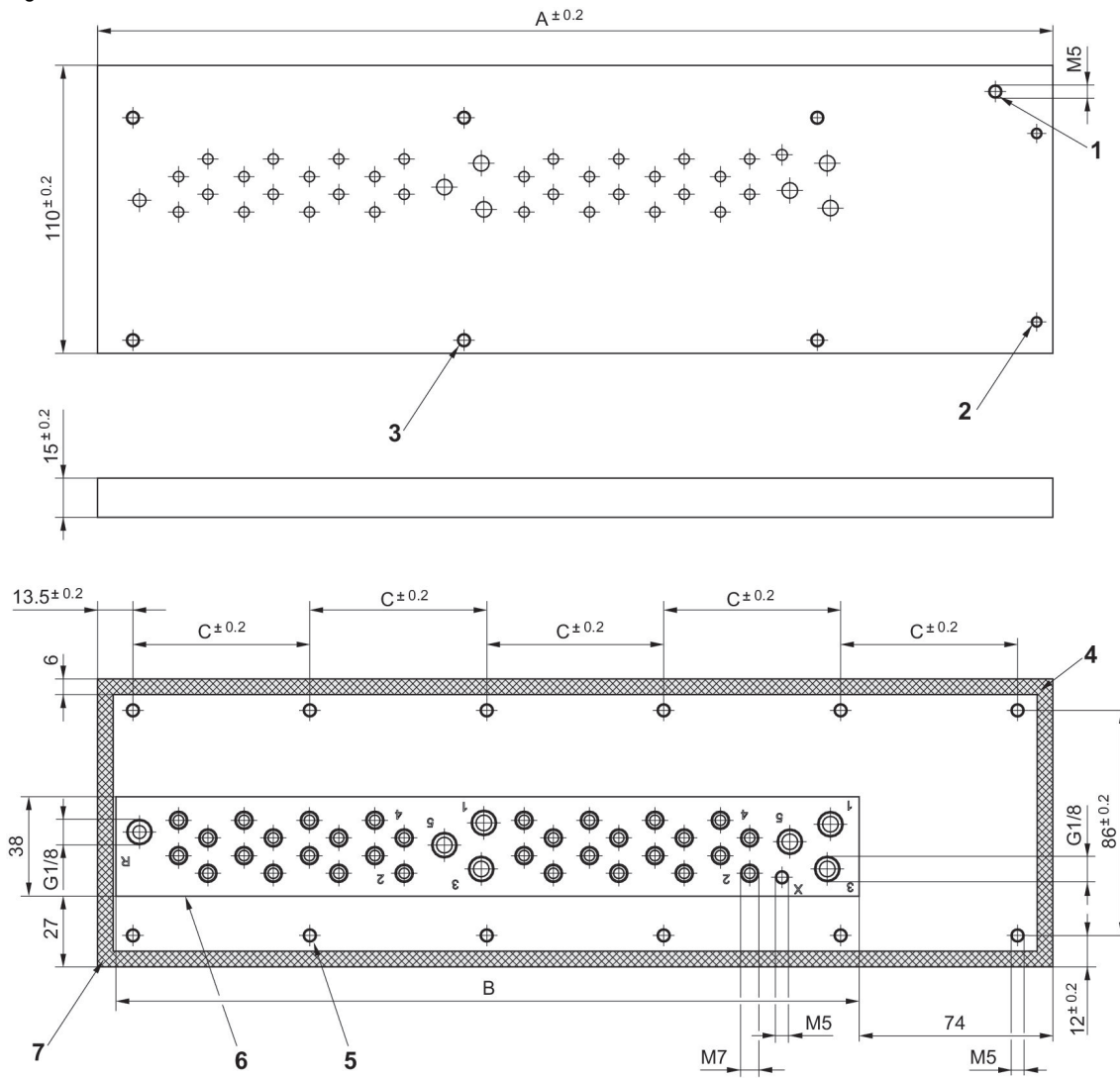
1) Mounting screw

Transition plate



Type	Plate type	Port exhaust	Scope of delivery	Max. number of valve positions	Part No.
Internal assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, sealing tape	4	R412026481
Internal assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, sealing tape	8	R412026482
Internal assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, sealing tape	12	R412026483
Internal assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, sealing tape	16	R412026484
External assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, gasket	4	R412026485
External assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, gasket	8	R412026486
External assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, gasket	12	R412026487
External assembly	Transition plate	G 1/8	Transition plate, sealing kit, mounting screws, gasket	16	R412026488

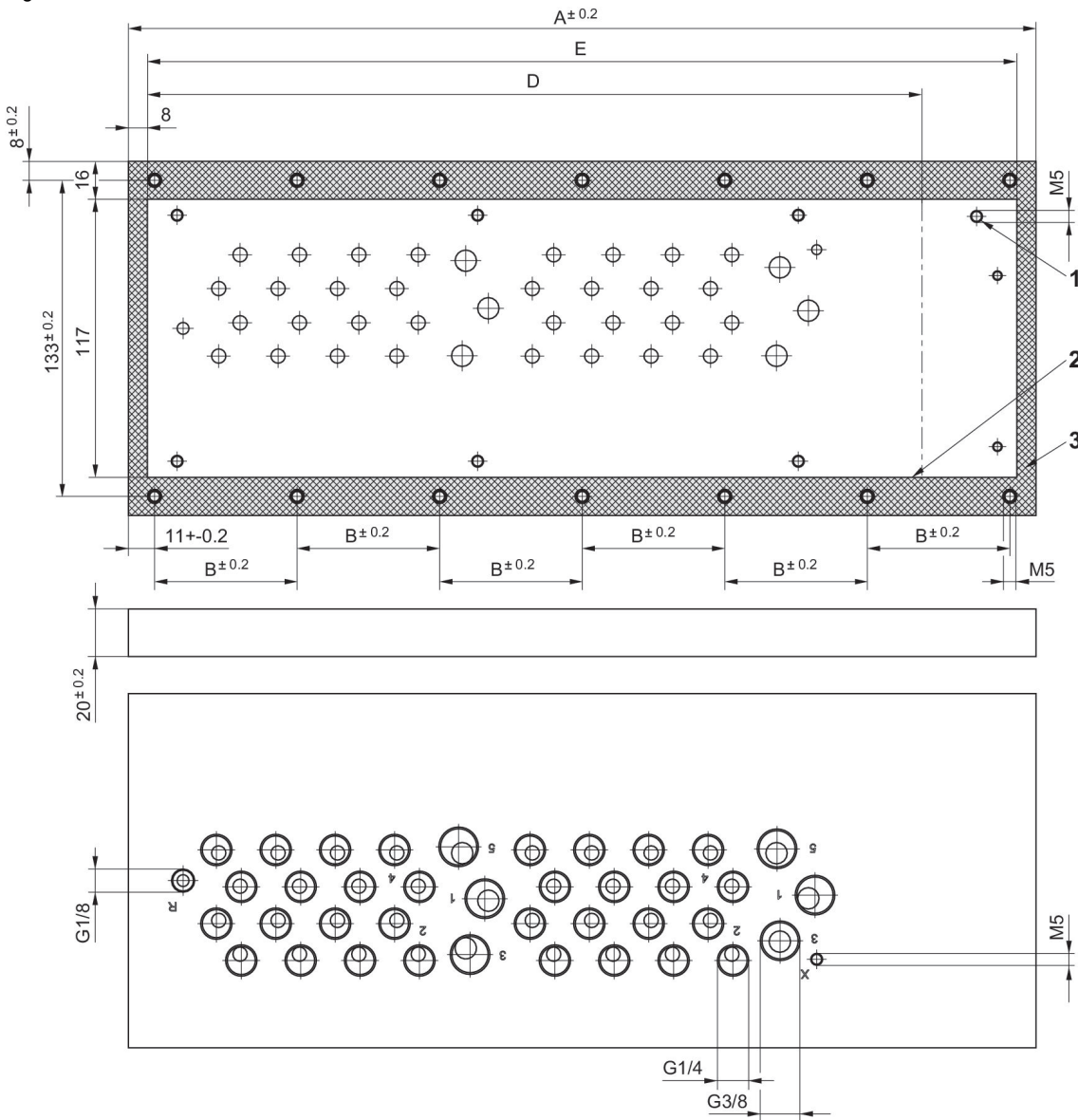
Fig. 1



- 1) Ground screw
- 2) Torque for valve system assembly: M4: [[2.5 Nm]
- 3) Torque for valve system assembly: M5: [[5 Nm]
- 4) sealing surface
- 5) Torque for control cabinet assembly: M5: [[5 Nm]
- 6) Control cabinet cut-out
- 7) Assembly note for sealing strip: see Fig. 3

Part No.	A	B	C
R412026481	183	109	52
R412026482	233	159	51.5
R412026483	315	241	57.6
R412026484	365	291	67.6

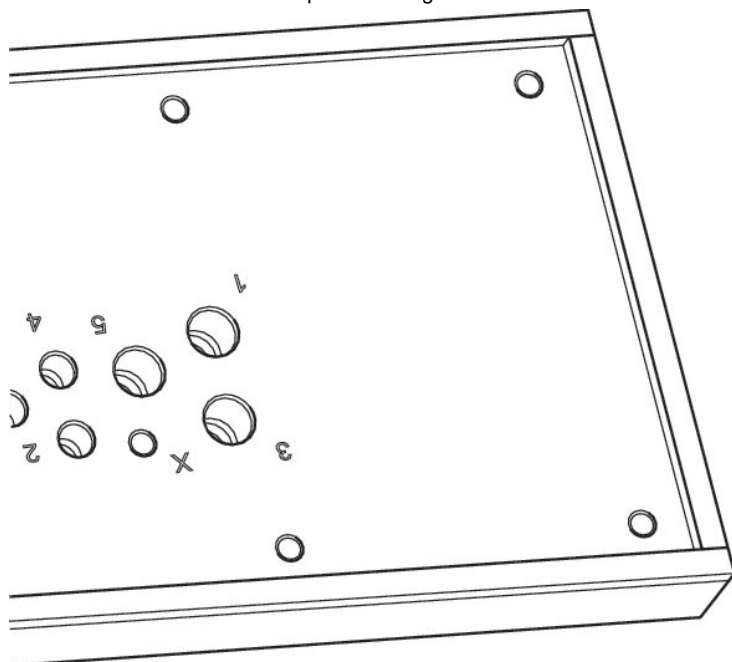
Fig. 2



- 1) Thread for ground screw
- 2) Control cabinet cut-out
- 3) sealing surface

Part No.	A	B	D - Control cab- inet cut-out Multipole	E - Control cab- inet cut-out Fieldbus
R412026485	200	59.33	144	184
R412026486	250	57	194	234
R412026487	332	62	276	316
R412026488	382	60	326	366

Maximum outer dimensions for push-in fitting



Glue sealing strip at the joint

Connection type	Conne- tion thread	Max. exter- nal diameter
2 , 4	G 1/4	19
1, 3 and 5 (on bottom)	G 3/8	24,75
X (top, bottom)	M5	10,9
R (top, bottom)	G 1/8	15,5

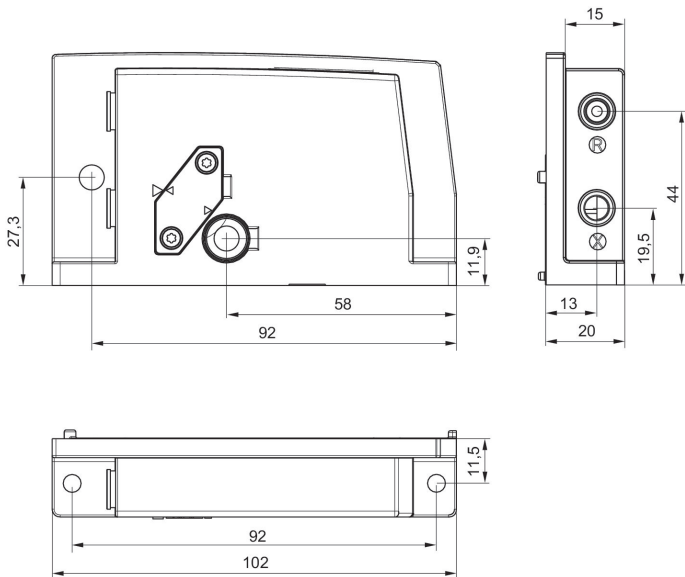
End plate right



Plate type	Port exhaust	Part No.
End plate	Ø 6	R412020078
End plate	Ø 6	R412025508

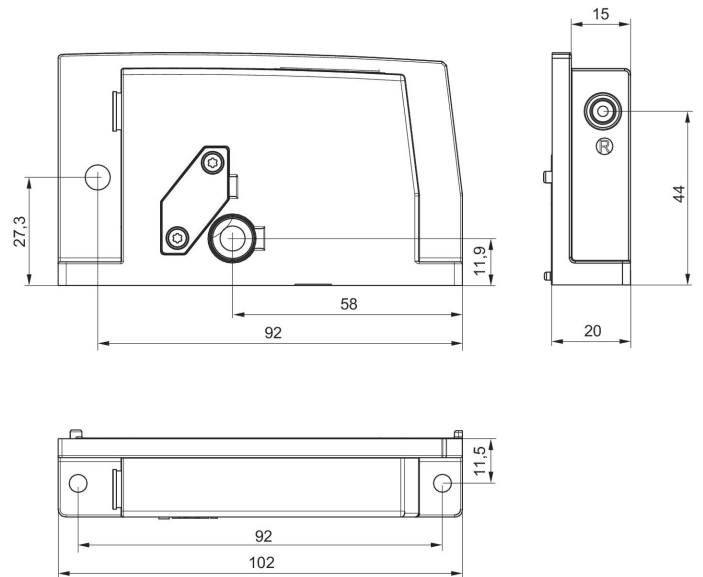
R412020078

Fig. 1

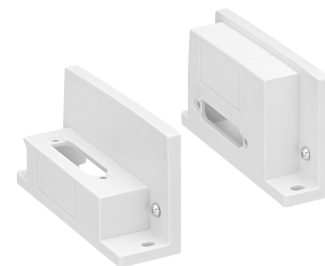


R412025508

Fig. 2



End plate left



Type	Plate type	Part No.
Top connection	End plate	R412020076
Side connection	End plate	R412020077

Dimensions

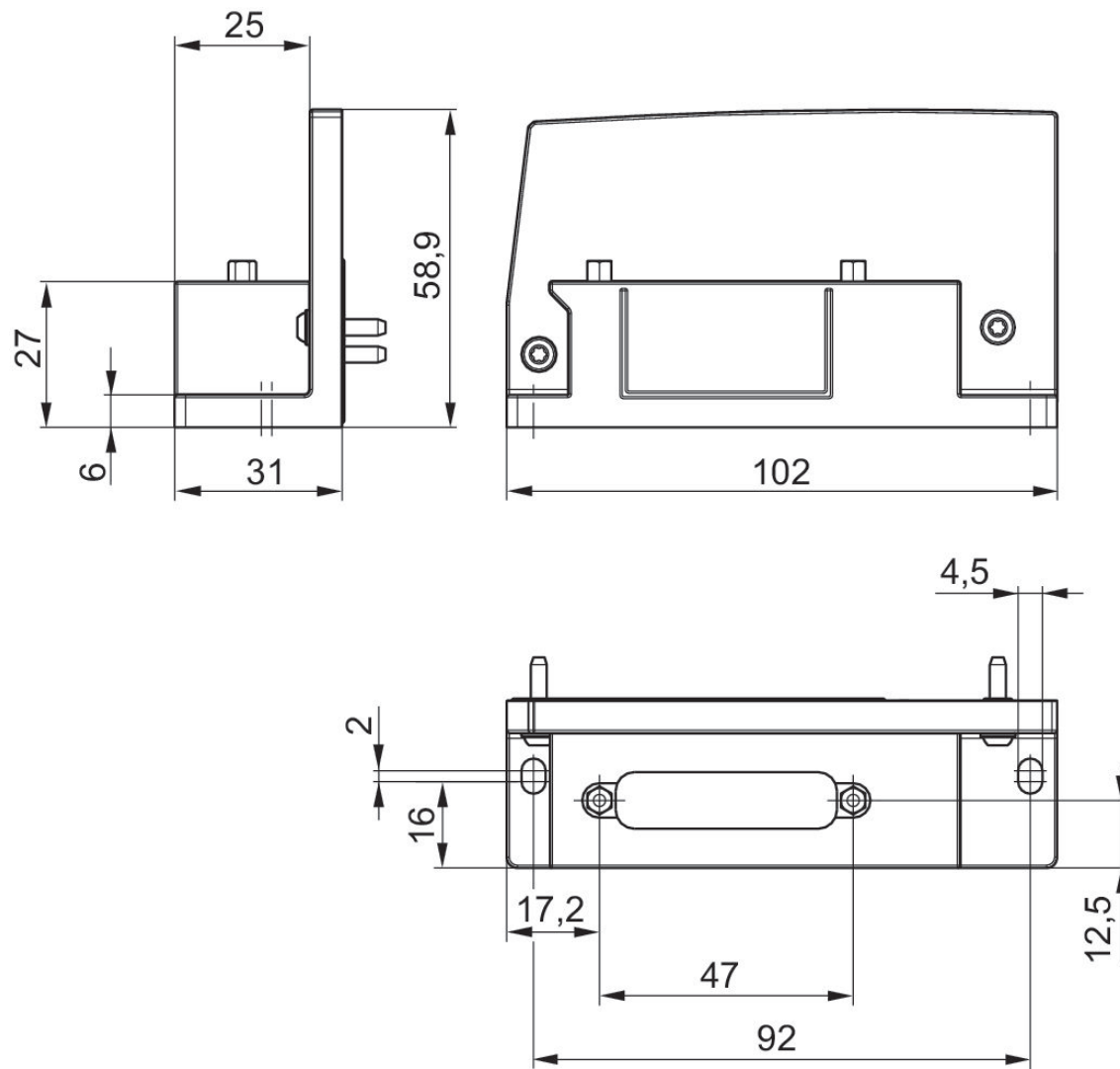
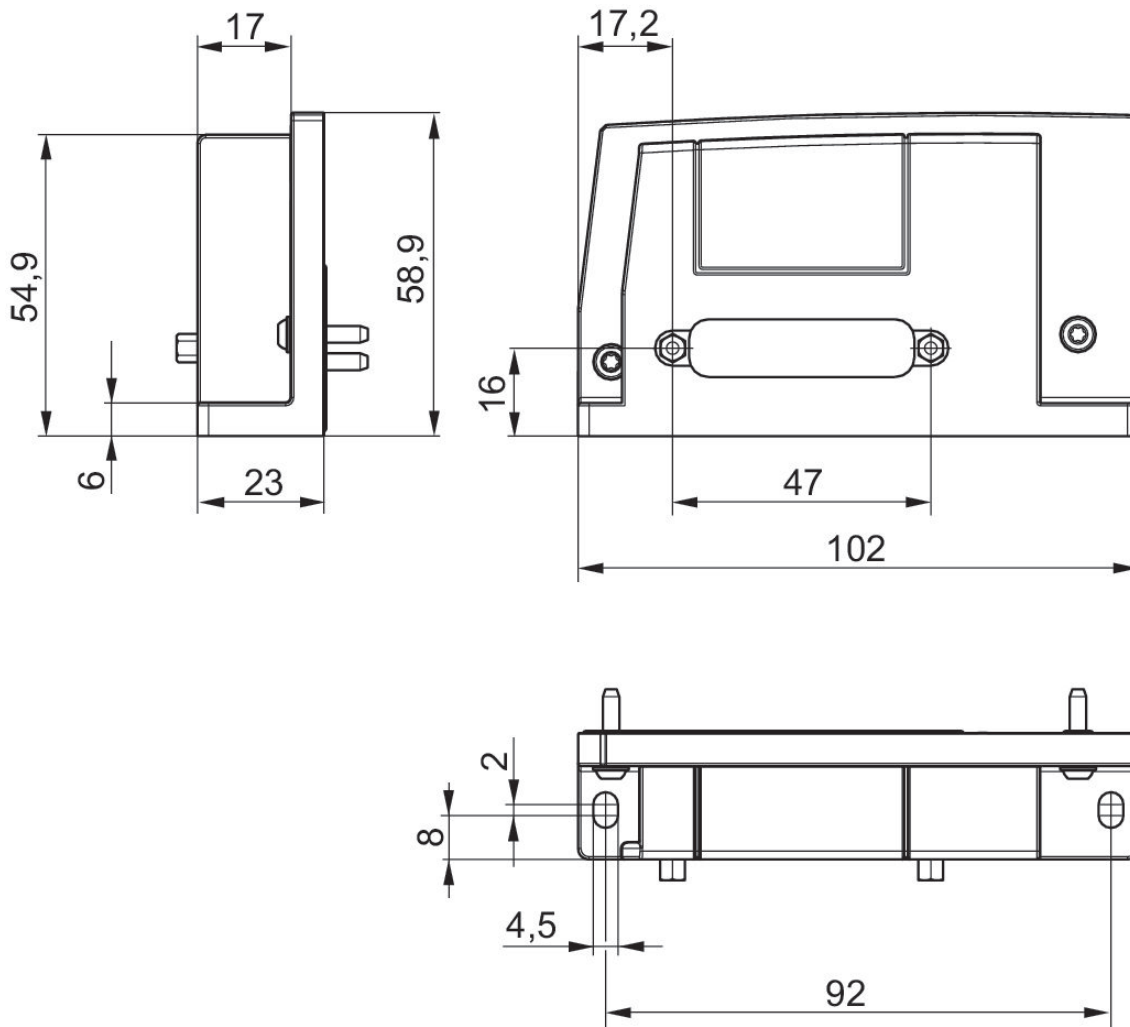


Fig. 2

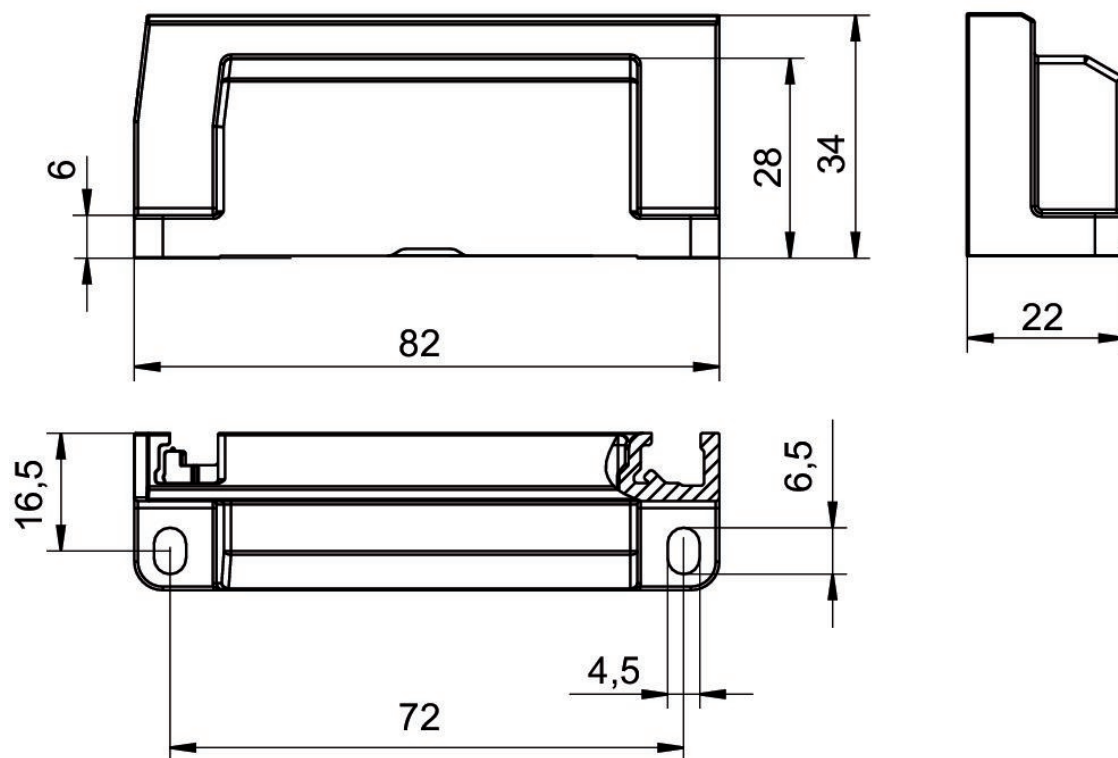


End plate left



Type	Plate type	Part No.
End plate left	End plate	R412015398

Dimensions

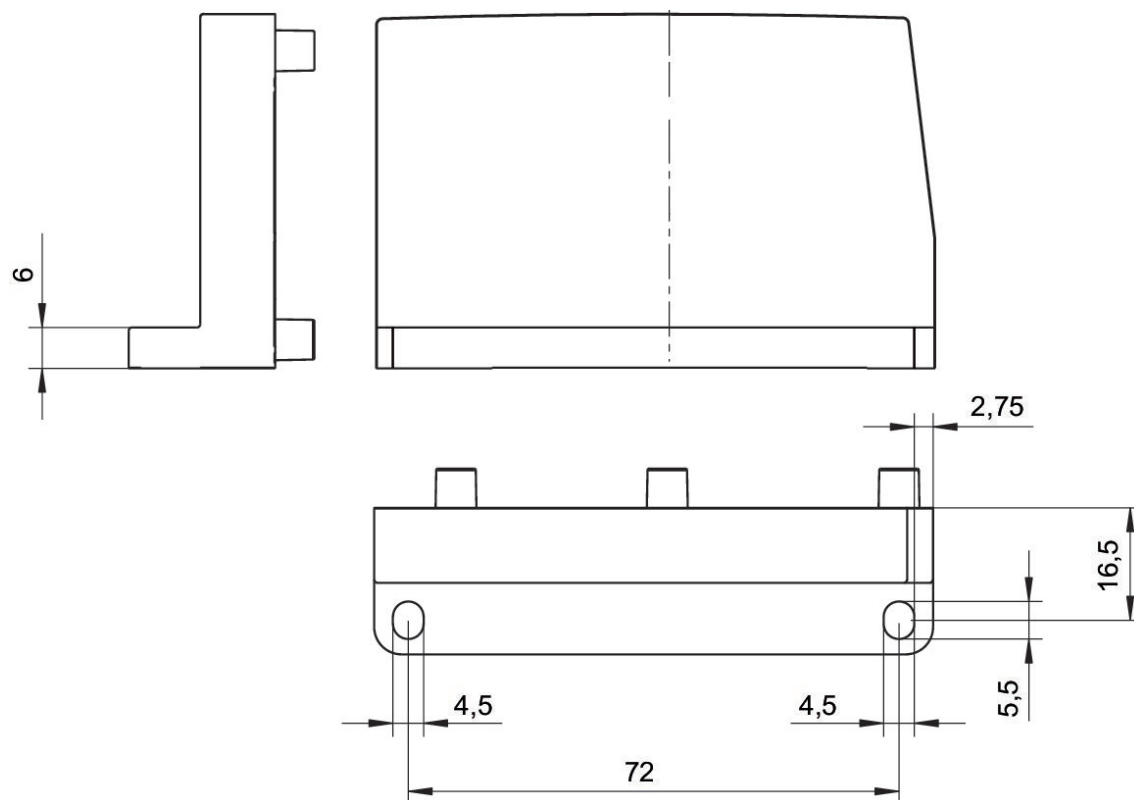


End plate right



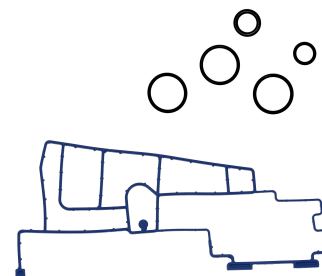
Plate type	Part No.
End plate	R412015741

Dimensions



Sealing kit

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Part No.
sealing kit: Connections "2" and "4"	R412026463
5x Sealing kit: Connections "1", "3", "5", "X" and "R"	R412026465
Sealing kit for base plate	R412026468

Sealing kit

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Material	Part No.
Sealing kit sealing tape 1.25 m	Ethylene propylene di- ene monomer rubber	R412026466

Extension kit for base plate

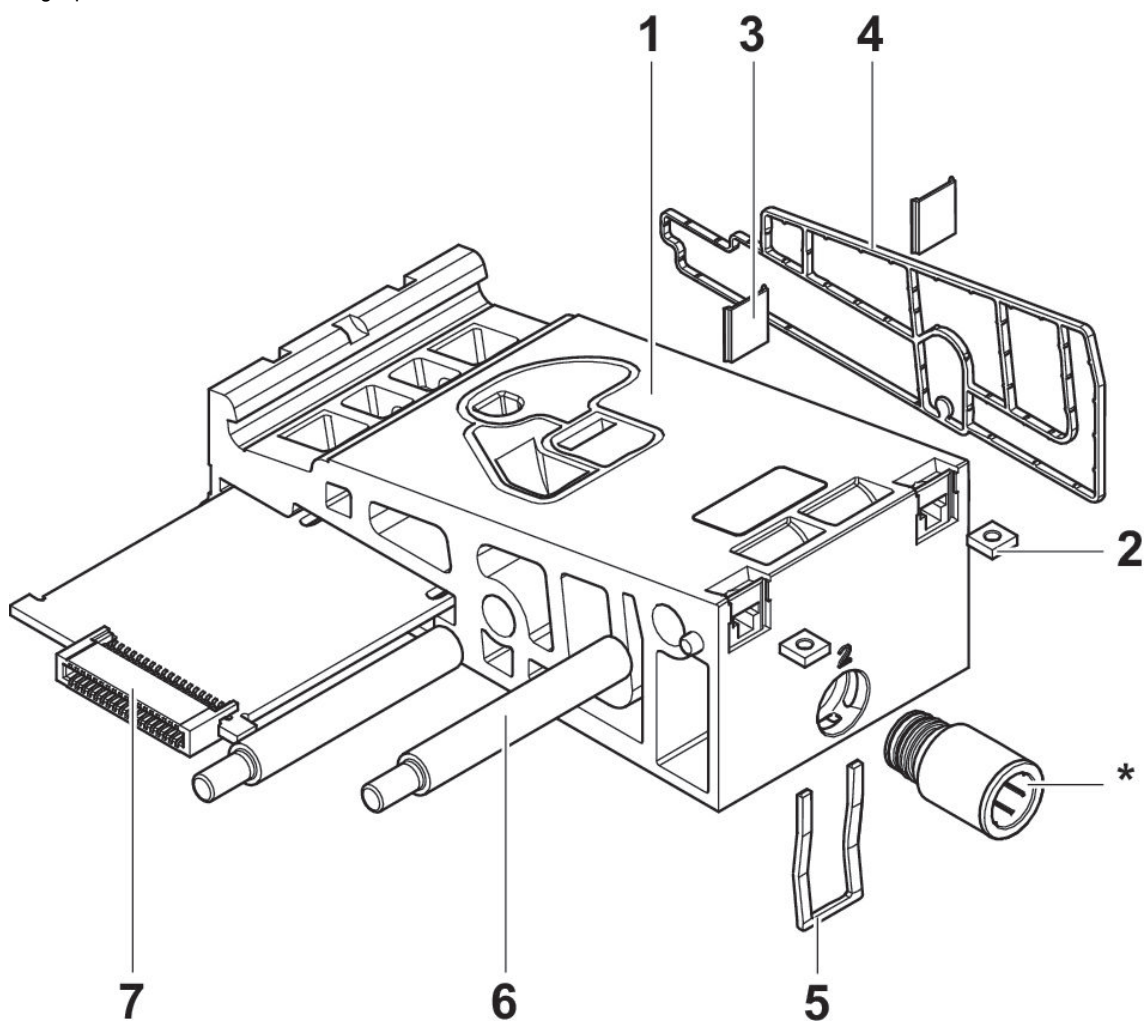
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0 bar ... 11 bar



Type	Scope of delivery	Part No.
Base plate for single pressure control for multipole connection	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R414007182
Base plate for single pressure control for fieldbus connection	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R414007535
Base plate for pressure zone control for multipole connection	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 2 tie rod extensions (5), and 1 extension circuit board (6)	R414007183
Base plate for pressure zone control for fieldbus connection	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 2 tie rod extensions (5), and 1 extension circuit board (6)	R414007536

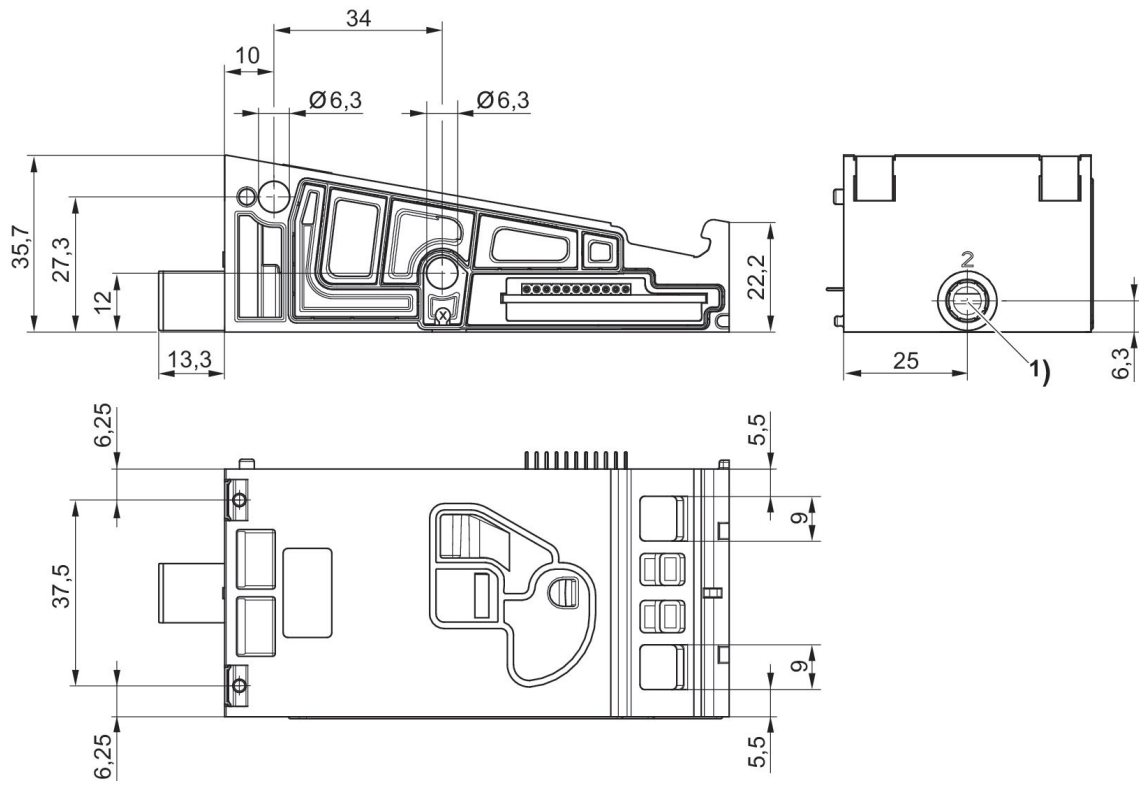
Overview drawing
Single pressure control



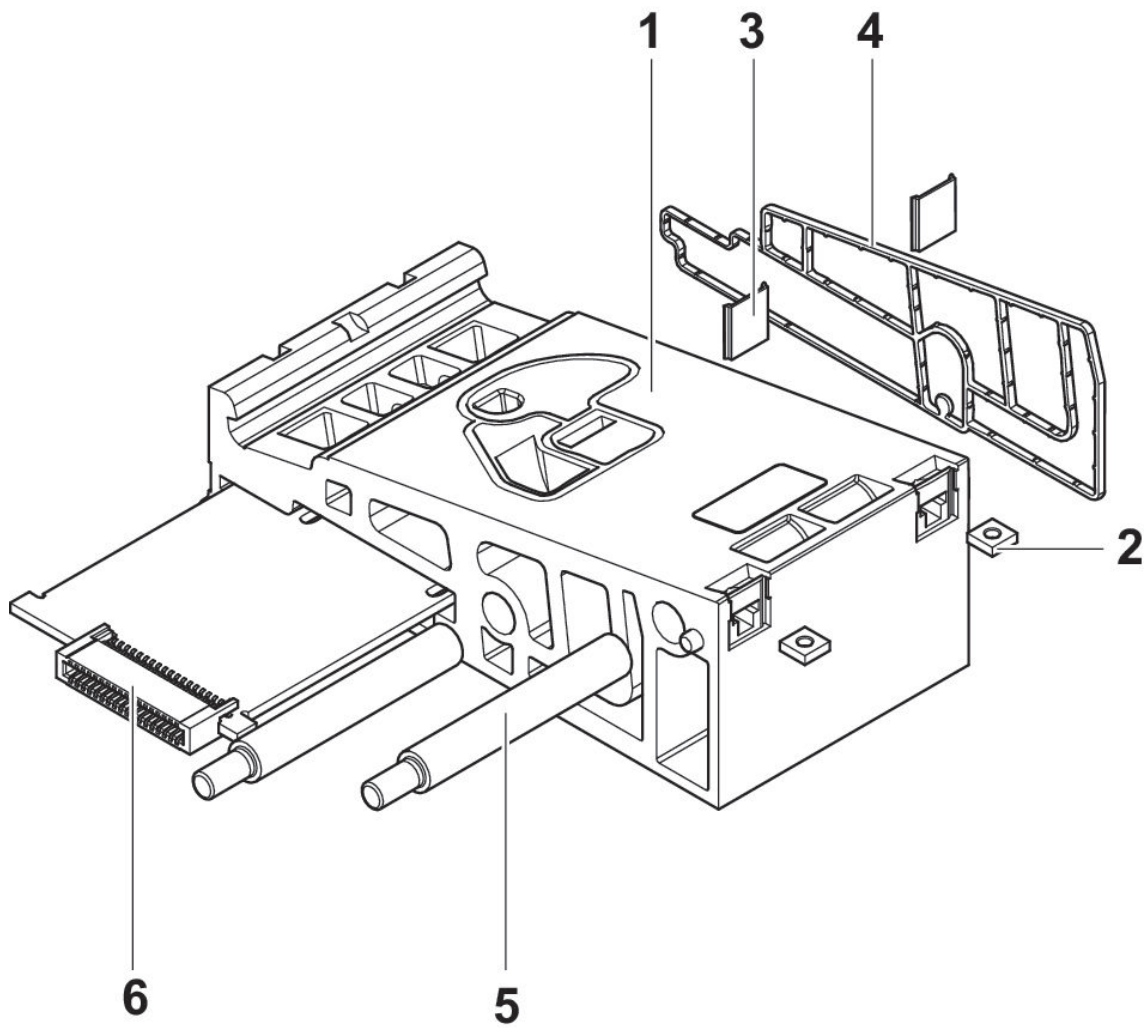
* Push-in fittings not included in the scope of delivery.

* For more information on push-in fittings, see the "Push-in fittings" page in the catalog.

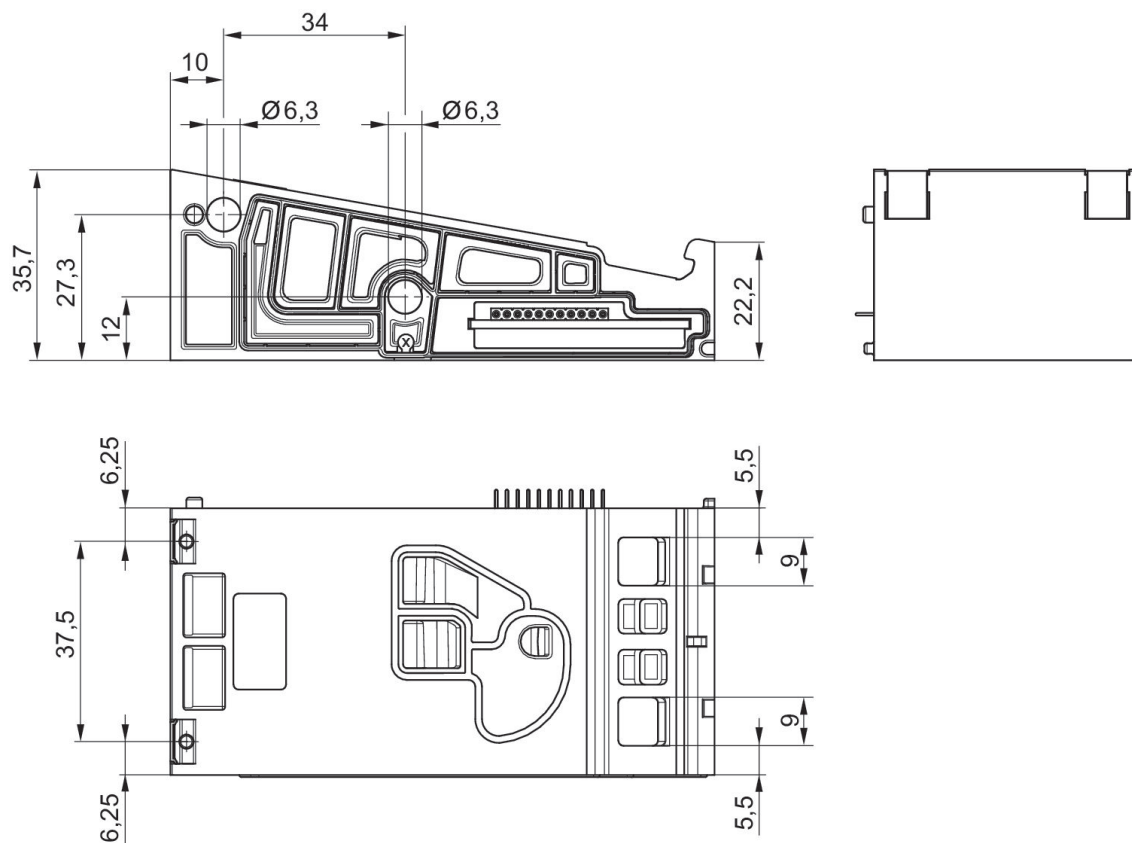
Dimensions
Single pressure control



Overview drawing
Pressure zone control



Dimensions



Extension kit for base plate 2x

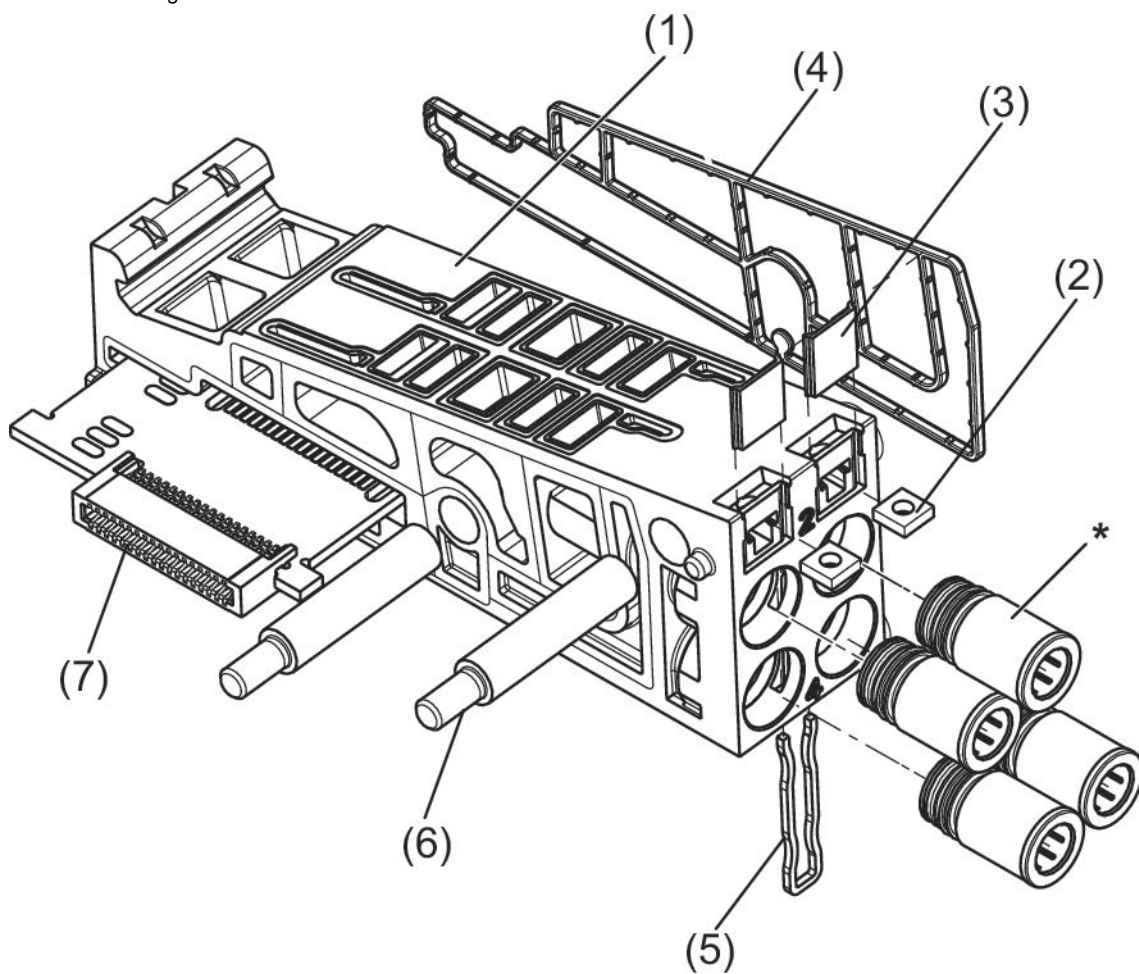
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



Type	Scope of delivery	Part No.
Base plate 2x for single solenoid valves for multipole plug	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412020064
Base plate 2x for double solenoid valves for multipole plug	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412020065
Base plate 2x for bus coupler	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412020068

Overview drawing



Push-in fittings not included in the scope of delivery.

* For more information on push-in fittings, see the "Push-in fittings" page for the AV series in the catalog.

Extension kit for base plate 3x

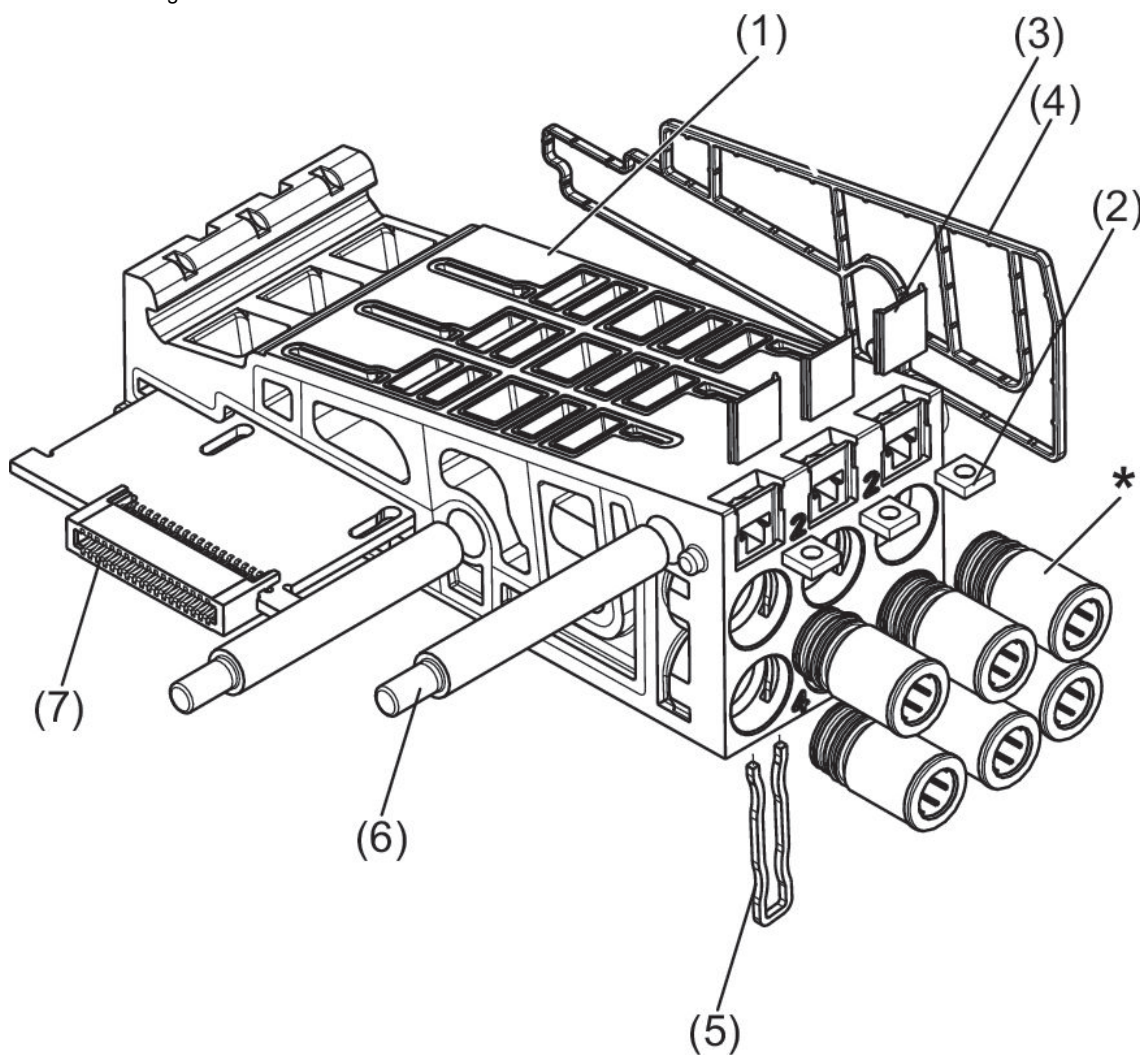
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



Type	Scope of delivery	Part No.
Base plate 3x for bus coupler	Base plate (1), incl. 3 nuts (2), 3 labels (3), 1 seal (4), 2 retaining clips (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412020069
Base plate 3x for single solenoid valves for multipole plug	Base plate (1), incl. 3 nuts (2), 3 labels (3), 1 seal (4), 2 retaining clips (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412020066
Base plate 3x for double solenoid valves for multipole plug	Base plate (1), incl. 3 nuts (2), 3 labels (3), 1 seal (4), 2 retaining clips (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412020067

Overview drawing



Push-in fittings not included in the scope of delivery.

* For more information on push-in fittings, see the "Push-in fittings" page for the AV series in the catalog.

Extension kit for base plate

Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



Type	Scope of delivery	Part No.
Base plate 2x for double solenoid valves for fieldbus	1 base plate (1) incl. 2 labels (2), 1 seal (3), 2 nuts (4), 2 tie rod extensions (5), 2 cable markers (6), and 1 extension circuit board (7)	R412026456
Base plate 4x for double solenoid valves for fieldbus	2 base plates (1) incl. 4 labels (2), 2 seals (3), 4 nuts (4), 4 tie rod extensions (5), 4 cable markers (6), and 1 extension circuit board (7)	R412026457
Base plate 2x for double solenoid valves for multipole plug	1 base plate (1) incl. 2 labels (2), 1 seal (3), 2 nuts (4), 2 tie rod extensions (5), 2 cable markers (6), and 1 extension circuit board (7)	R412026458
Base plate 2x for single solenoid valves for multipole plug	1 base plate (1) incl. 2 labels (2), 1 seal (3), 2 nuts (4), 2 tie rod extensions (5), 2 cable markers (6), and 1 extension circuit board (7)	R412026459

Fig. 1

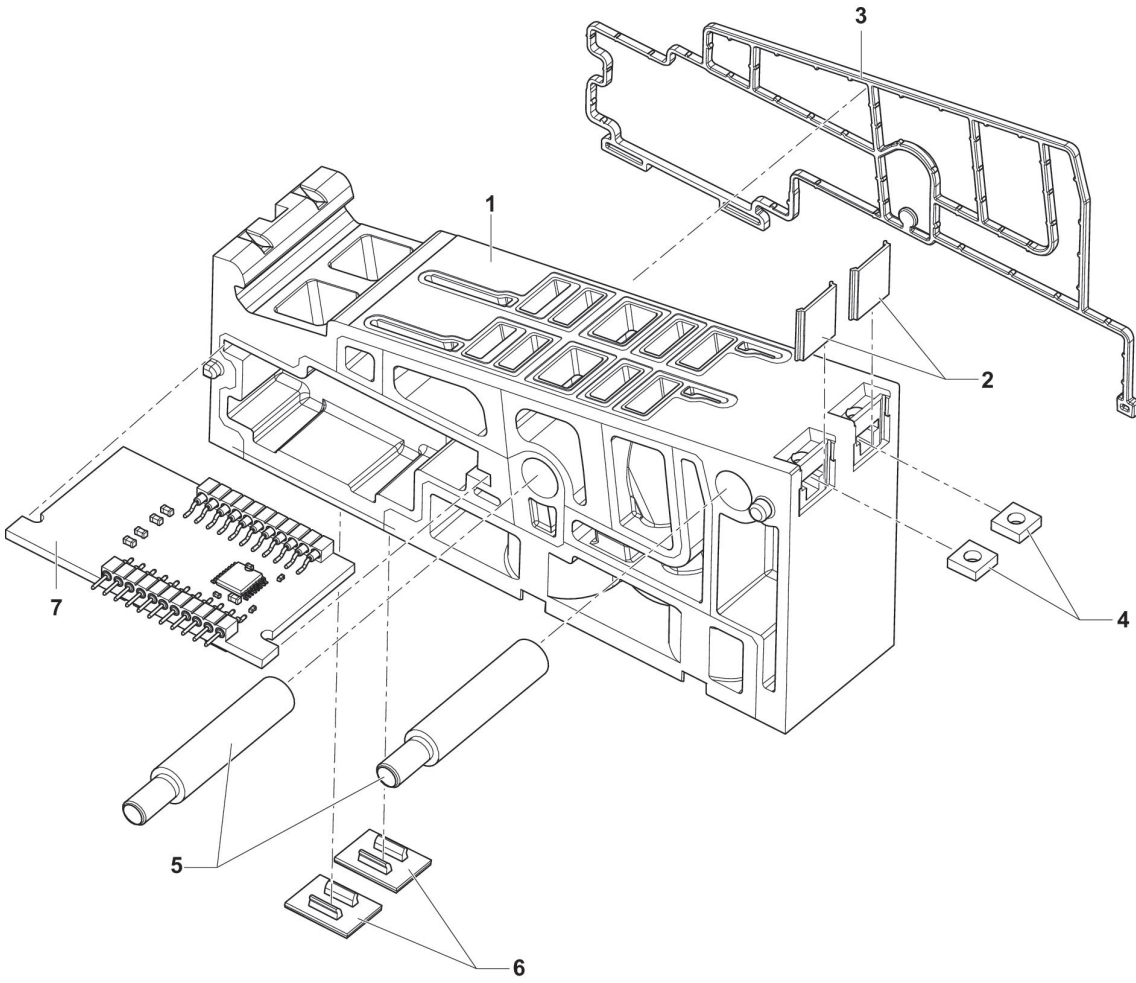
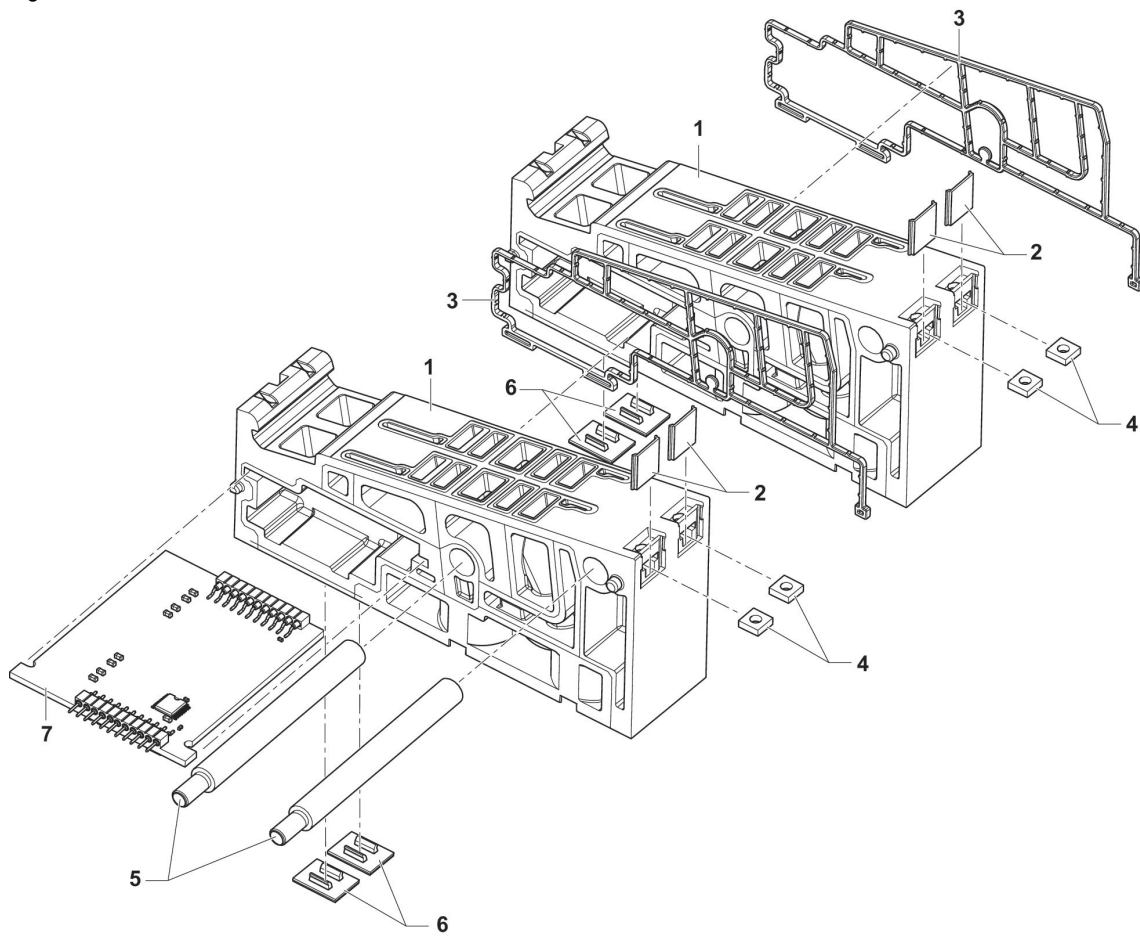


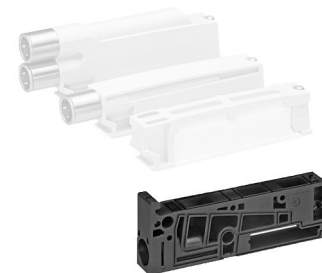
Fig. 2



Extension kit, supply plate

Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar

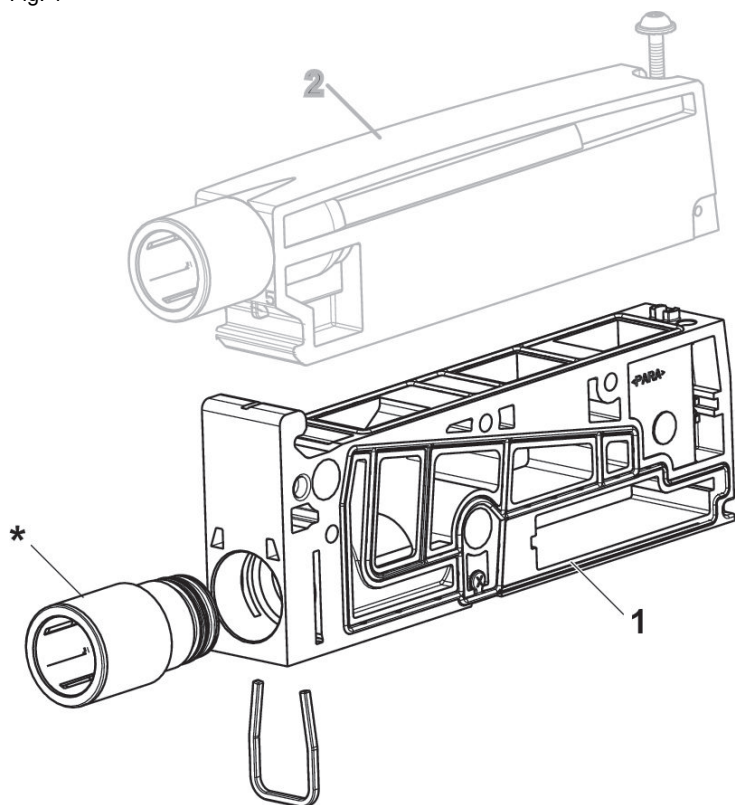


	Type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, no pressure zones	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412020070
	Supply plate, connection 1, no pressure zones	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Multipole	R412022579
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412020071
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Multipole	R412022580

	Type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, separate pressure zone in channel 1	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412020072
	Supply plate, connection 1, separate pressure zone in channel 1	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Multipole	R412022581
	Supply plate, connection 1, separate pressure zones in channels 3/5	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412020073
	Supply plate, connection 1, separate pressure zones in channels 3/5	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Multipole	R412022582
	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412023849

	Type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Multipole	R412023847
	Supply plate, connection 1, external pilot, separate pressure zones in channels 1/3/5/X	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412023851
	Supply plate, connection 1, external pilot, separate pressure zones in channels 1/3/5/X	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Multipole	R412023848

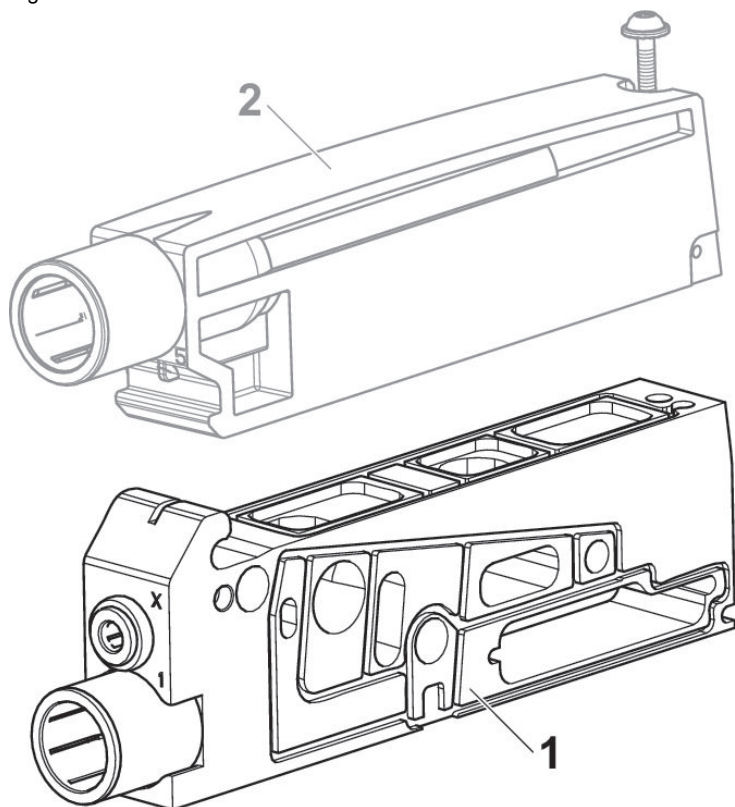
Fig. 1



material: housing: Polyamide, fiber-glass reinforced

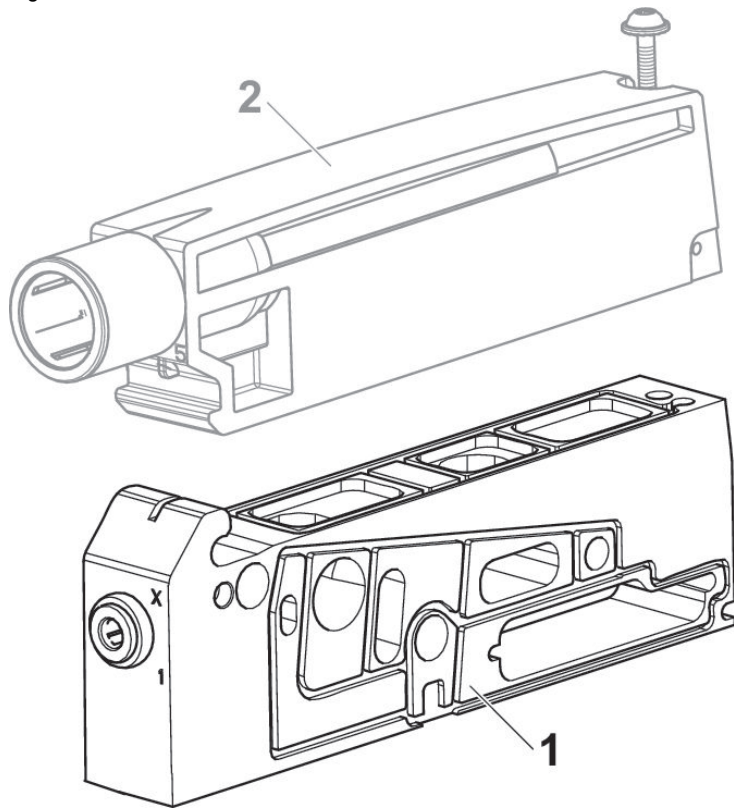
* For more information on push-in fittings, see the "Push-in fittings" page for the AV series in the catalog.

Fig. 2



material housing: aluminum

Fig. 3

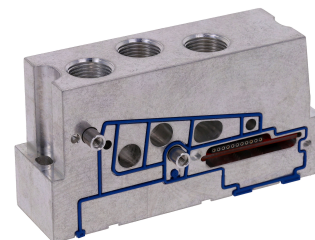


material housing: aluminum

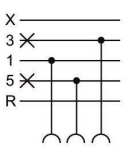
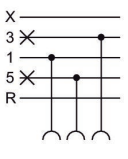
Extension kit, supply plate

Ambient temperature min./max.: -10 °C ... 60 °C

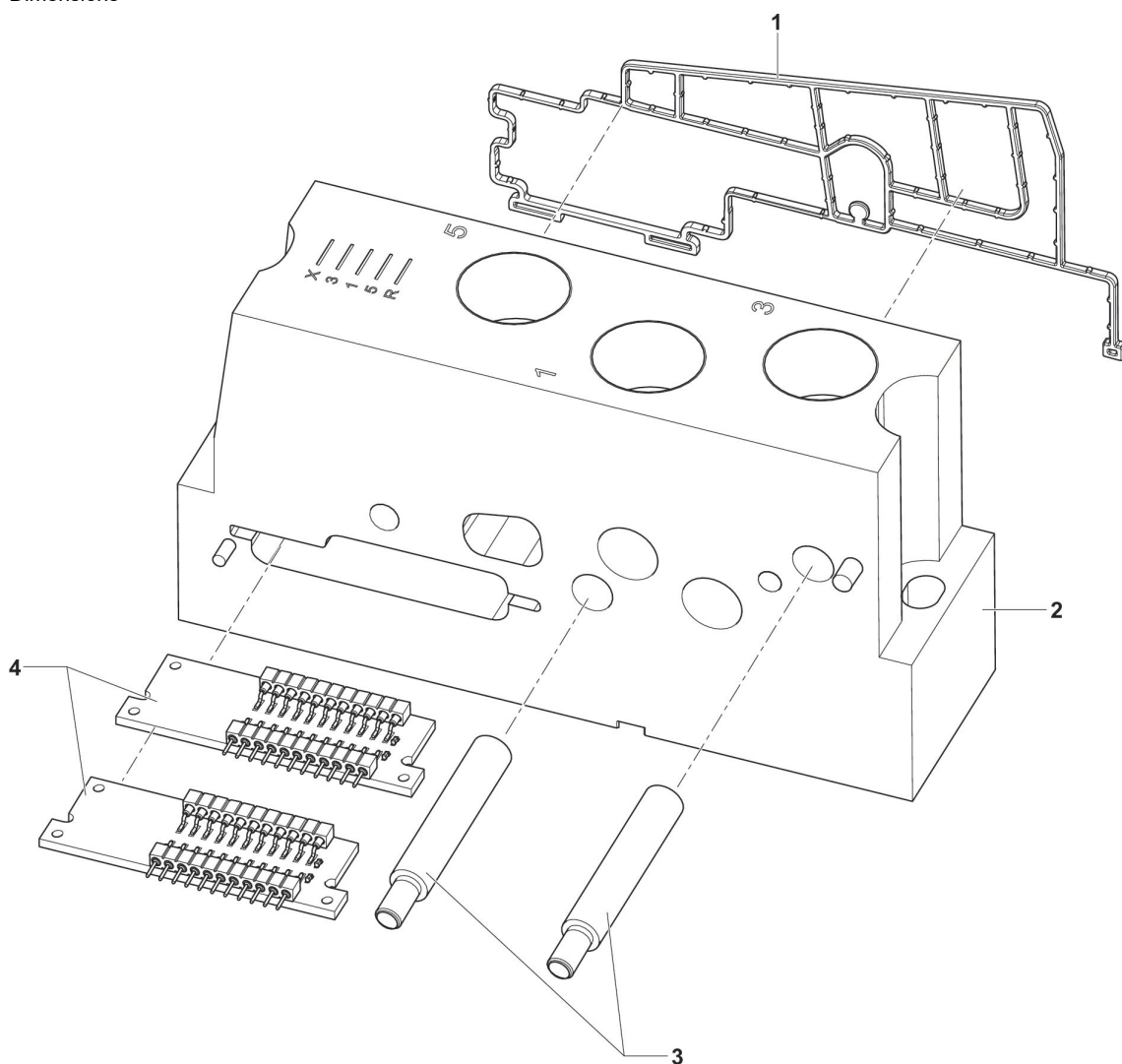
Working pressure min./max.: -0.09 bar ... 10 bar



	Type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, 3, 5, no pressure zones	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Fieldbus	R412026442
	Supply plate, connection 1, 3, 5, no pressure zones	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Multipole	R412026446
	Supply plate, connection 1, 3, 5 separate pressure zones in channels 1/3/5	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Fieldbus	R412026443
	Supply plate, connection 1, 3, 5 separate pressure zones in channels 1/3/5	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Multipole	R412026447
	Supply plate, connection 1, 3, 5 separate pressure zones in channels 1	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Fieldbus	R412026444
	Supply plate, connection 1, 3, 5 separate pressure zones in channels 1	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3)	Multipole	R412026448

	Type	Scope of delivery	Version	Part No.
		and 2 extension circuit boards (4)		
 <p>X 3 ✕ 1 5 ✕ R</p>	Supply plate, connection 1, 3, 5 separate pressure zones in channels 3/5	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Fieldbus	R412026445
 <p>X 3 ✕ 1 5 ✕ R</p>	Supply plate, connection 1, 3, 5 separate pressure zones in channels 3/5	Supply plate (2) incl. 1 seal (1), 2 tie rod extensions (3) and 2 extension circuit boards (4)	Multipole	R412026449

Dimensions

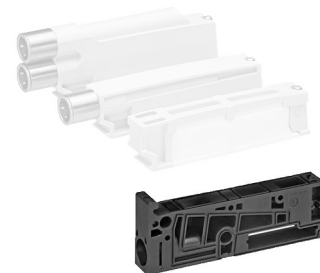


- 1) Seal
- 2) Housing
- 3) Tie rod extension, 2 piece
- 4) Extension circuit board

Extension kit, supply plate with switch-off voltage monitoring

Ambient temperature min./max.: -10 °C ... 60 °C

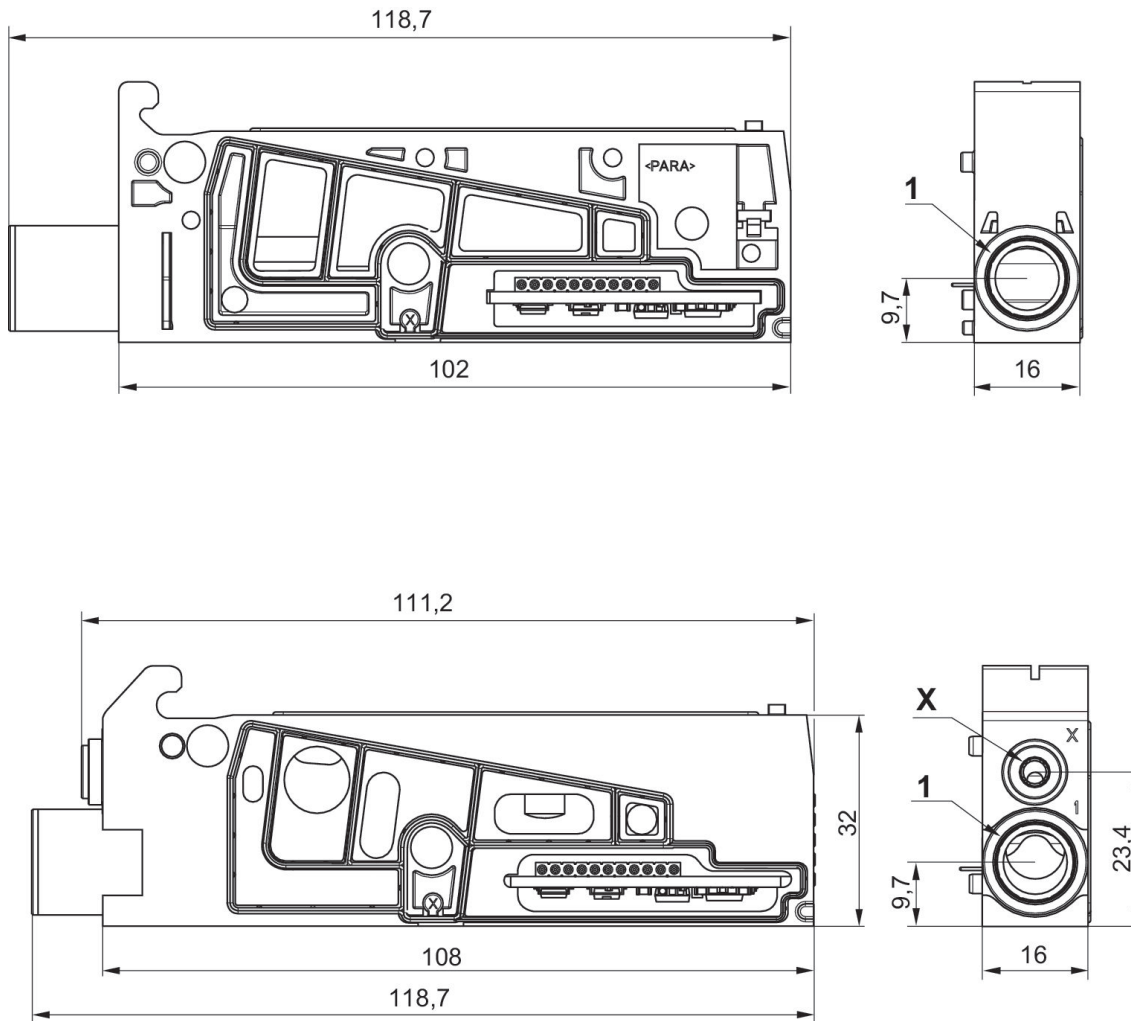
Working pressure min./max.: -0.95 bar ... 10 bar



	Type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412025072
	Supply plate, connection 1, external pilot, separate pressure zones in channels 1/3/5/X	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412025073
	Supply plate, connection 1, no pressure zones	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412025074
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412025075

	Type	Scope of delivery	Version	Part No.
<p>The diagram shows a vertical supply plate with five horizontal channels. Channel 1 is marked with an 'X' and a dot. Channel 3 is marked with an 'X'. Channel 5 is marked with an 'X'. Channel R is marked with an 'X'. A vertical line connects the channels, with a hook at the bottom.</p>	Supply plate, connection 1, separate pressure zone in channel 1	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412025076
<p>The diagram shows a vertical supply plate with five horizontal channels. Channel 1 is marked with an 'X' and a dot. Channel 3 is marked with an 'X'. Channel 5 is marked with an 'X'. Channel R is marked with an 'X'. A vertical line connects the channels, with a hook at the bottom.</p>	Supply plate, connection 1, separate pressure zones in channels 3/5	Supply plate incl. 1 nut, 2 seals, 1 retaining clip, 2 screws, 2 tie rod extensions, 1 push-in fitting Ø 12 mm, straight, and 1 extension circuit board	Fieldbus	R412025077

Dimensions



1) Push-in connector, Ø 12 mm

X) Push-in connector Ø 4 mm, straight 5/32

For more information on push-in fittings, see the "Push-in fittings" page for the AV series in the catalog.

Extension kit, electrical supply plate

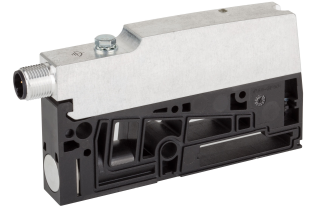
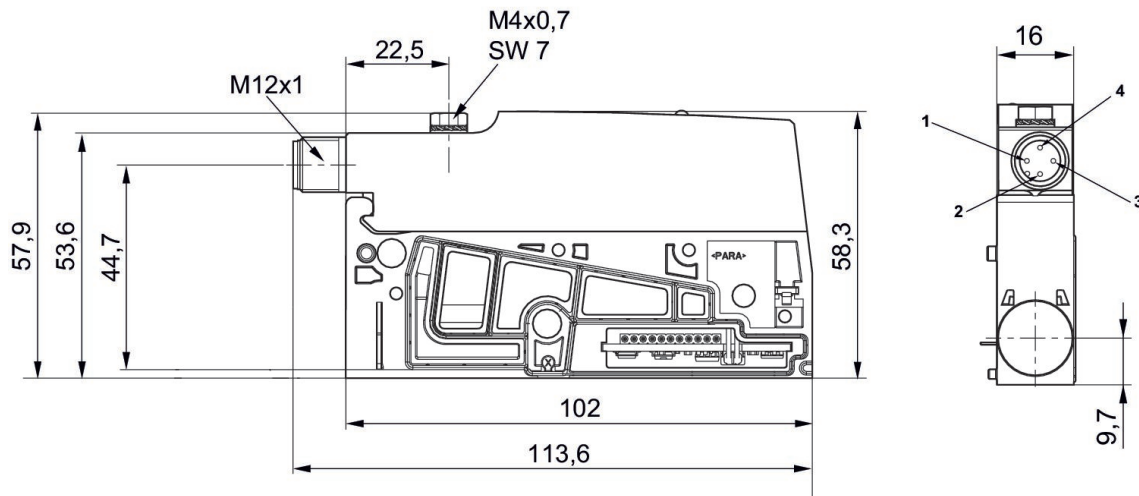


	Plate type	Scope of delivery	Part No.
X 3 1 5 R	Assembly kit	Supply plate, incl. 1 seal, 2 tie rods, and 2 screws for extension	R412021778

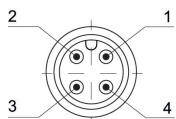
Dimensions



Pin assignment: 1 = (-), 2 = (24 V DC), 3 = (-), 4 = (0 V DC)

R412021778

Plug (male)



Pin	Plug X1S
1	not assigned
2	24 V DC
3	not assigned
4	0 V DC (UA)

Extension kit, Electrical valve control module

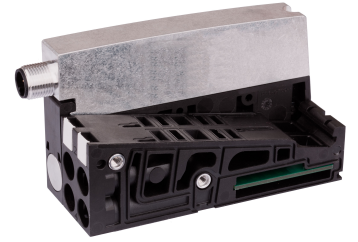
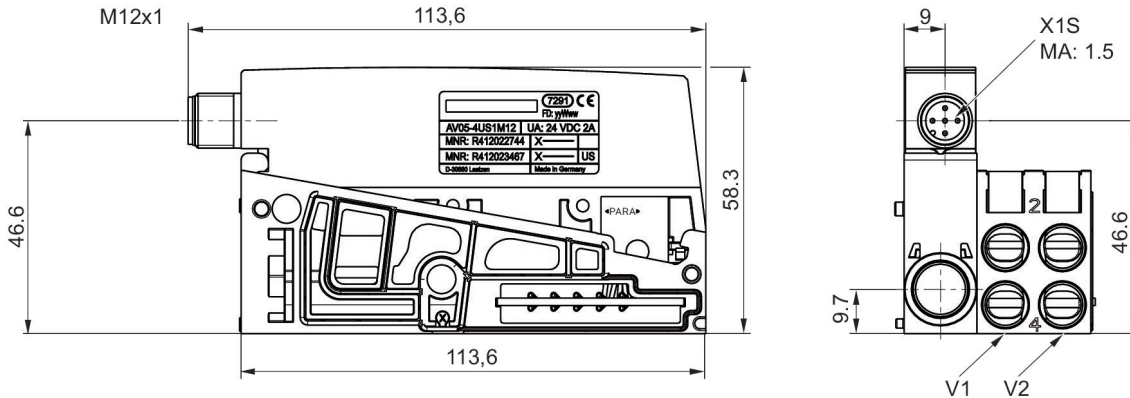


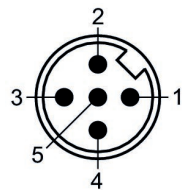
	Plate type	Scope of delivery	Part No.
X 3 1 5 R	Assembly kit	M12 control module (incl. base plate for 2 valve positions incl. 2 nuts, 2 labels), 2 tie rod extensions 16 mm, 2 tie rod extensions 25 mm, 2 retaining clips, and 2 seals	R412022744

Dimensions



R412022744

Plug pin assignment

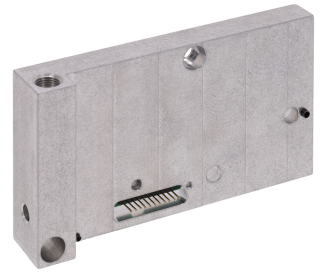


(1) BN=brown (2) WH=white (3) BU=blue (4) BK=black (5) GY=grey

Pin	Valve	Coil
1	V1	14
2	V1	12
3	GND	GND
4	V2	14
5	V2	12

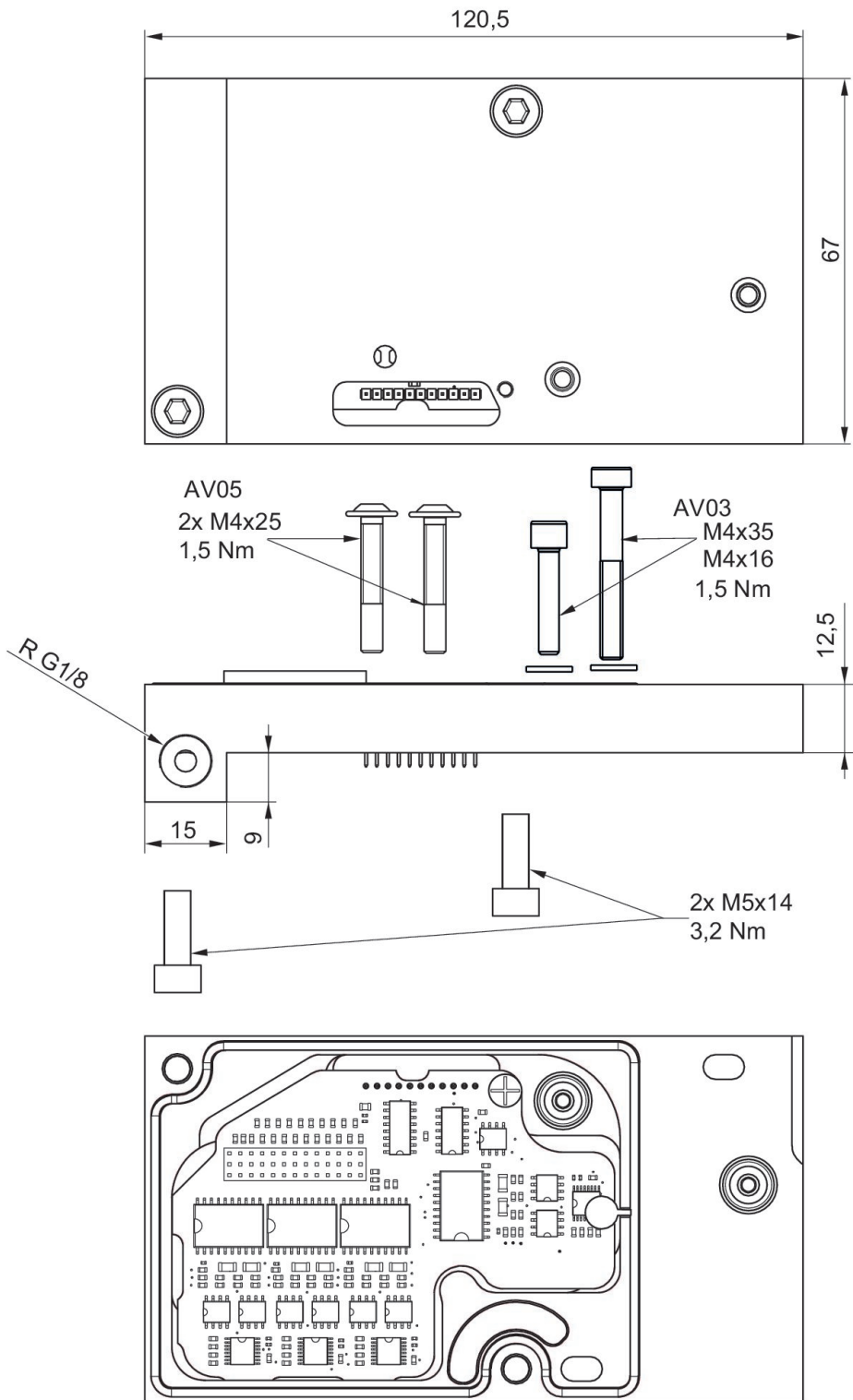
Extension kit, combination plate

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Scope of delivery	Version	Part No.
32 outputs	Includes screws and seals.	Fieldbus	R422004007
30 outputs	Includes screws and seals.	Multipole	R422004056

Dimensions



Extension kit for base plate 4x

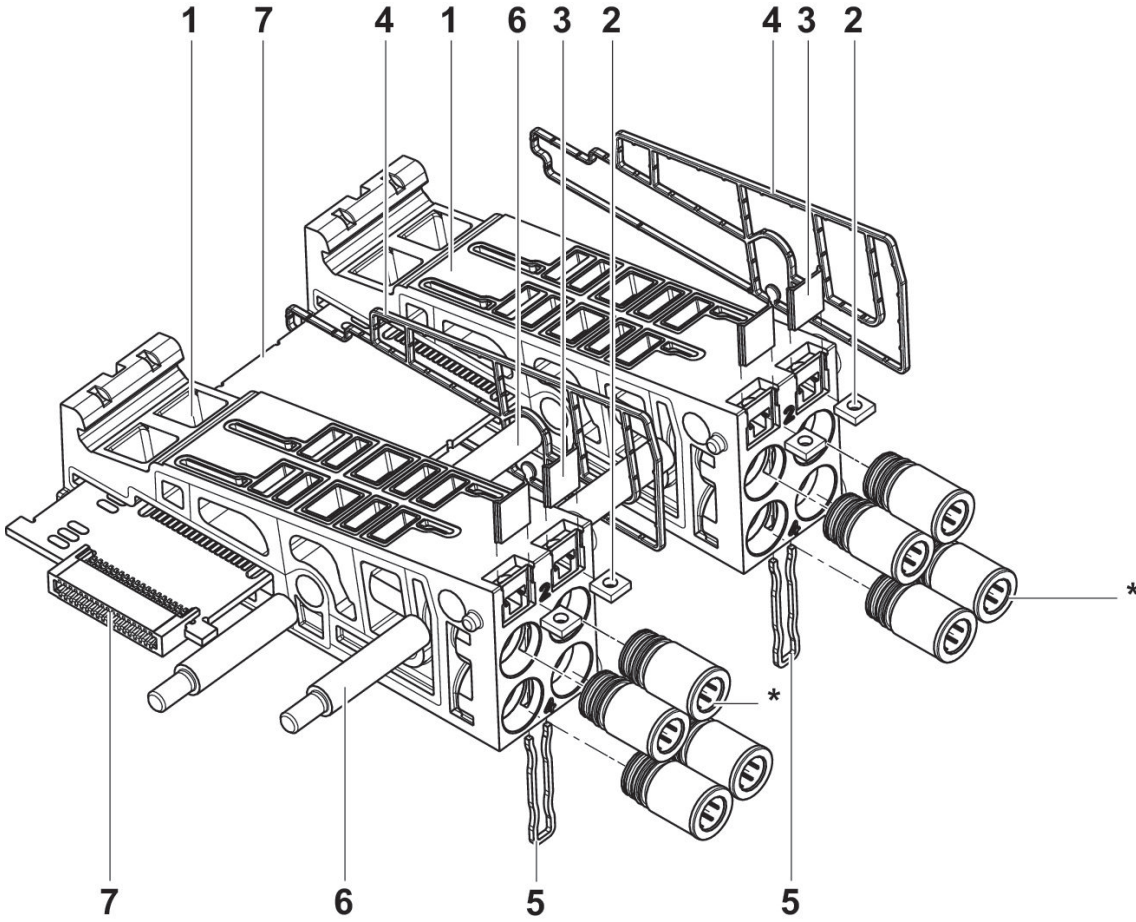
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



Type	Scope of delivery	Part No.
Base plate 4x for bus coupler	2 base plates (1), incl. 4 nuts (2), 4 labels (3), 2 seals (4), 2 retaining clips (5), 2 tie rod extensions (6), and 1 extension circuit board (7)	R412022824

Overview drawing



Push-in fittings not included in the scope of delivery.

* For more information on push-in fittings, see the "Push-in fittings" page for the AV series in the catalog.

Extension kit transition plate AES - AV05

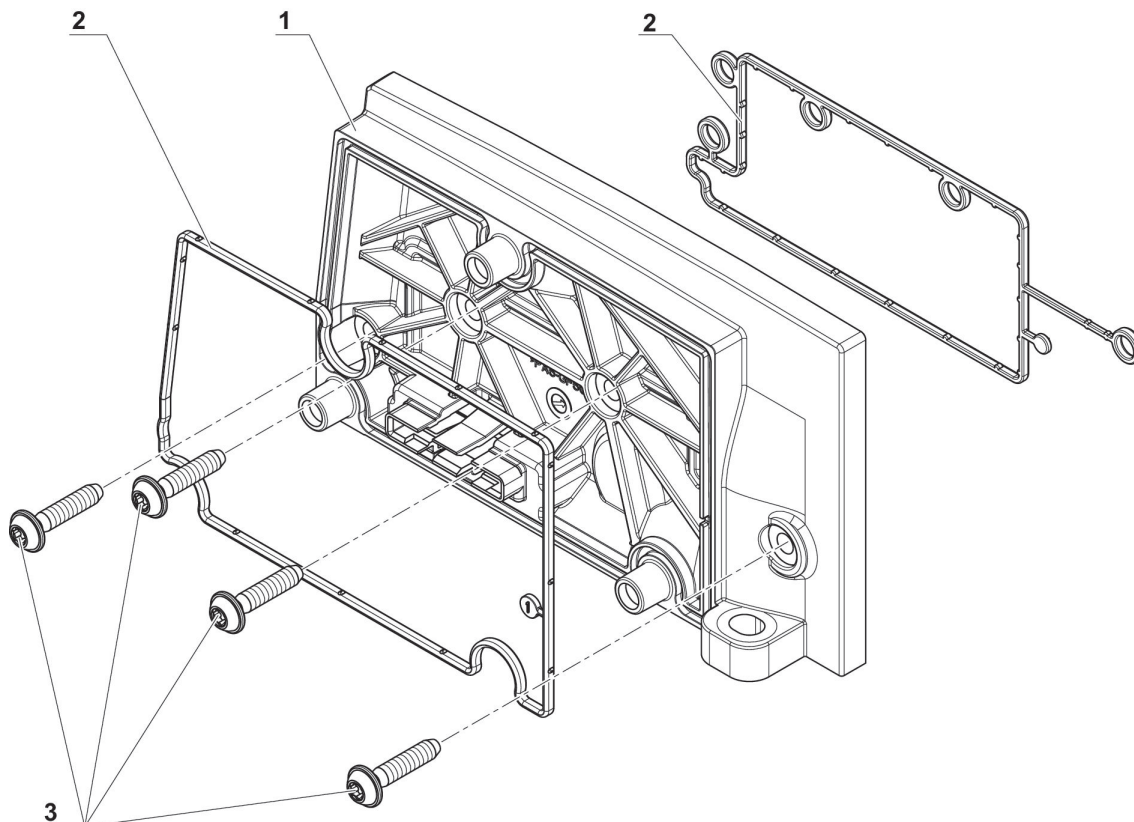
Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: -0.95 bar ... 10 bar



Scope of delivery	Part No.
Adapter plate incl. 2x sealings, 4x screws, 1x tie rod nut, 1x circuit board	R412018216

Dimensions



MA: 0.95±0.1 Nm

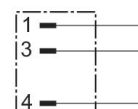
- 1) Transition plate
- 2) Seal
- 3) Screws

Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M8x1 ... 3-pin ... straight

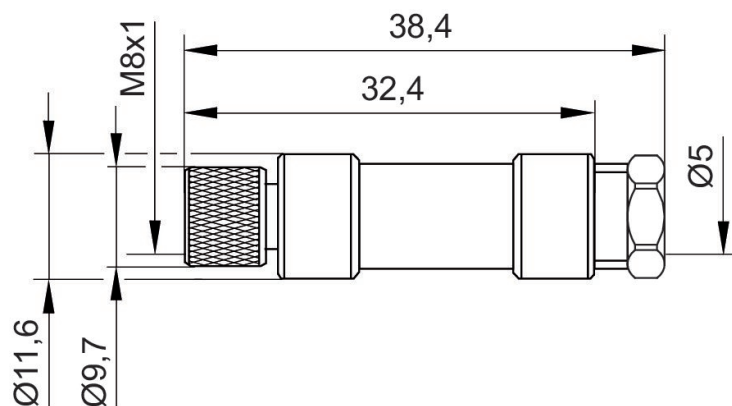
Connection type: Screws

Ambient temperature min./max.: -40 °C ... 85 °C



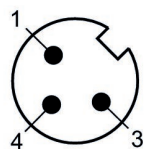
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	3.5	5	R412021676

Dimensions



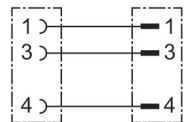
R412021676

Plug pin assignment



Round plug connector, Series CON-RD, Plug M8x1

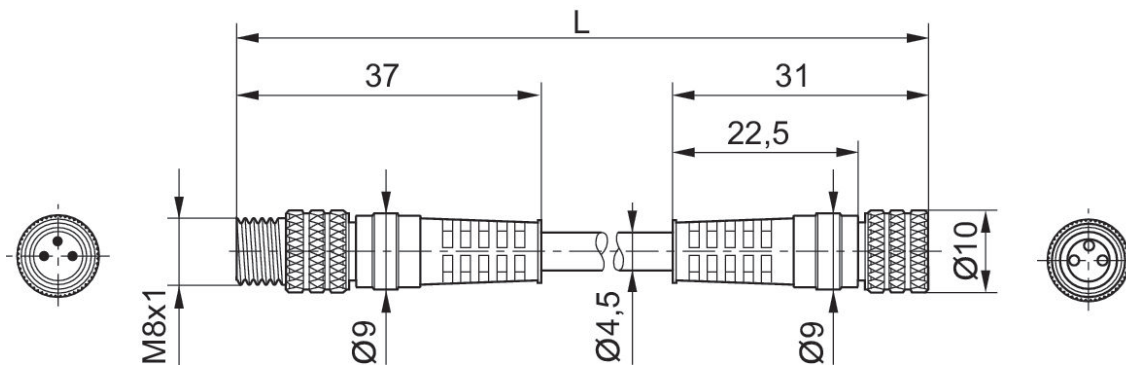
Electrical connection 1: Plug ... M8x1 ... 3-pin ... straight
Electrical connection 2: Socket ... M8x1 ... 3-pin ... straight



Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Electrical connection 2, coding	Part No.
Socket	M8x1	3-pin	A-coded	Plug	M8x1	3-pin	A-coded	8946203702
Socket	M8x1	3-pin	A-coded	Plug	M8x1	3-pin	A-coded	8946203712
Socket	M8x1	3-pin	A-coded	Plug	M8x1	3-pin	A-coded	8946203722

Cable length [m]	Part No.
1	8946203702
2	8946203712
5	8946203722

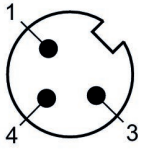
Dimensions



L = length

8946203702, 8946203712, 8946203722

Plug pin assignment



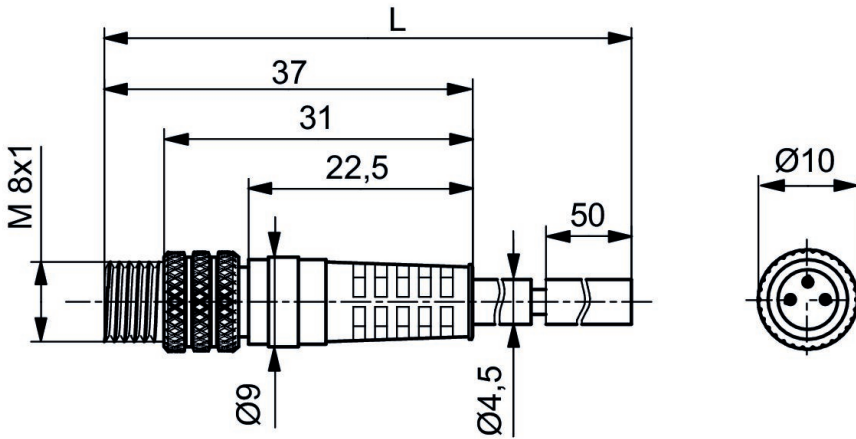
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M8x1 ... 3-pin ... straight
Electrical connection 2: open cable ends ... 3-pin



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
30 V AC/DC	Plug	M8x1	3-pin	A-coded	open cable ends	3-pin	3	8946203602
30 V AC/DC	Plug	M8x1	3-pin	A-coded	open cable ends	3-pin	5	8946203612
30 V AC/DC	Plug	M8x1	3-pin	A-coded	open cable ends	3-pin	10	8946203622

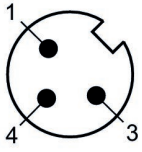
Dimensions



L = length

8946203602, 8946203612, 8946203622

Plug pin assignment



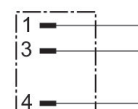
(1) BN=brown (3) BU=blue (4) BK=black

Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M8x1 ... 3-pin ... angled

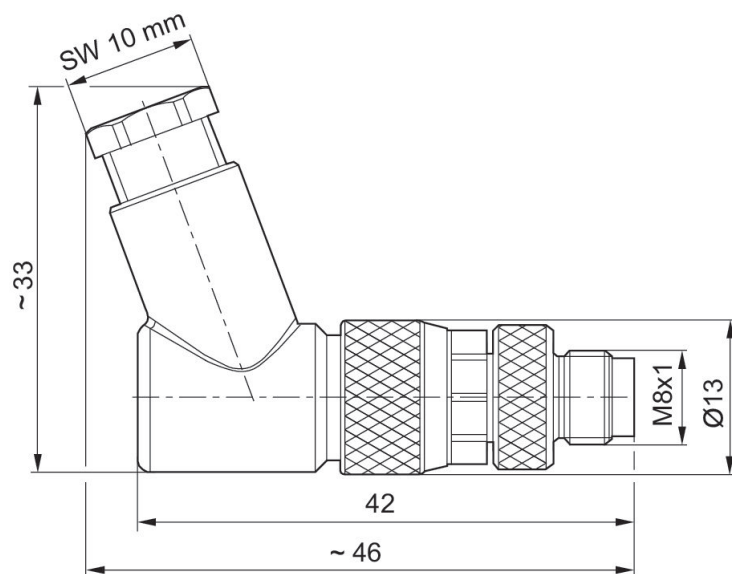
Connection type: Screws

Ambient temperature min./max.: -25 °C ... 80 °C



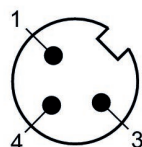
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	3.5	6	R412021677

Dimensions



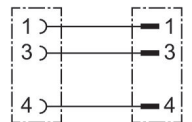
R412021677

Plug pin assignment



Round plug connector, Series CON-RD

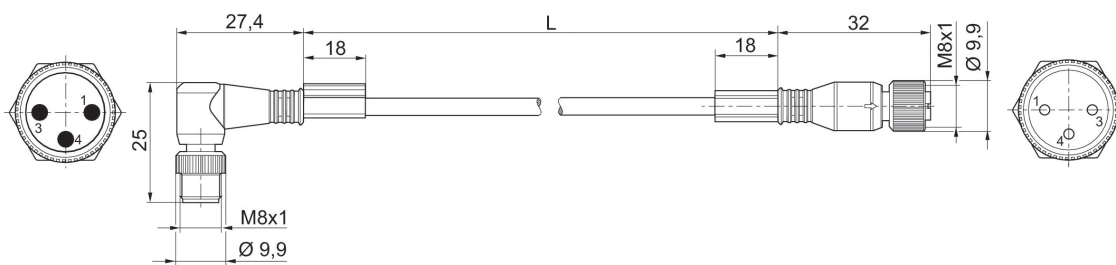
Electrical connection 1: Plug ... M8x1 ... 3-pin ... angled
 Electrical connection 2: Socket ... M8x1 ... 3-pin ... straight
 Ambient temperature min./max.: -25 °C ... 85 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Part No.
48 V AC/DC	Socket	M8x1	3-pin	A-coded	Plug	M8x1	3-pin	R412021681
48 V AC/DC	Socket	M8x1	3-pin	A-coded	Plug	M8x1	3-pin	R412021682
48 V AC/DC	Socket	M8x1	3-pin	A-coded	Plug	M8x1	3-pin	R412021683

Electrical connection 2, coding	Cable length [m]	Part No.
A-coded	1	R412021681
A-coded	2	R412021682
A-coded	5	R412021683

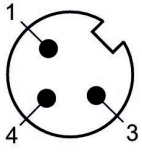
Dimensions



L = length

R412021681, R412021682, R412021683

Plug pin assignment



Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M8x1 ... 3-pin ... angled

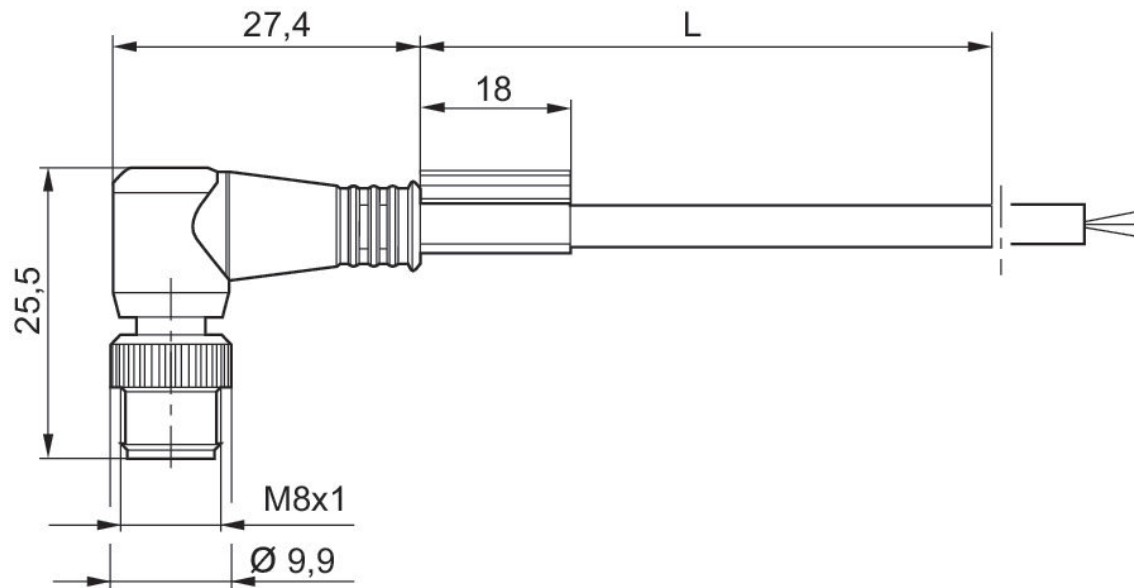
Electrical connection 2: open cable ends ... 3-pin

Ambient temperature min./max.: -25 °C ... 85 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
48 V AC/DC	Plug	M8x1	3-pin	A-coded	open cable ends	3-pin	2	R412021678
48 V AC/DC	Plug	M8x1	3-pin	A-coded	open cable ends	3-pin	5	R412021679
48 V AC/DC	Plug	M8x1	3-pin	A-coded	open cable ends	3-pin	10	R412021680

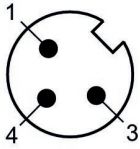
Dimensions



L = length

R412021678, R412021679, R412021680

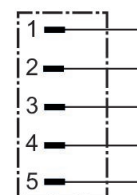
Plug pin assignment



(1) BN=brown (3) BU=blue (4) BK=black

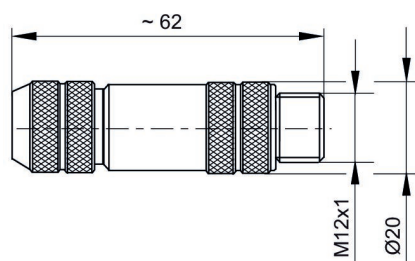
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 5-pin ... A-coded ... straight
 Protocol: CANopen, DeviceNet
 Ambient temperature min./max.: -40 °C ... 85 °C



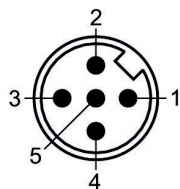
Operational voltage	Coding	Shielding	Protocol	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	shielded	CANopen, DeviceNet	Screws	4	6	8	8942051612

Dimensions



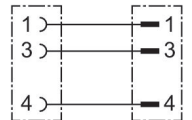
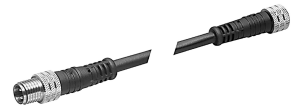
8942051612

Plug pin assignment



Round plug connector, Series CON-RD

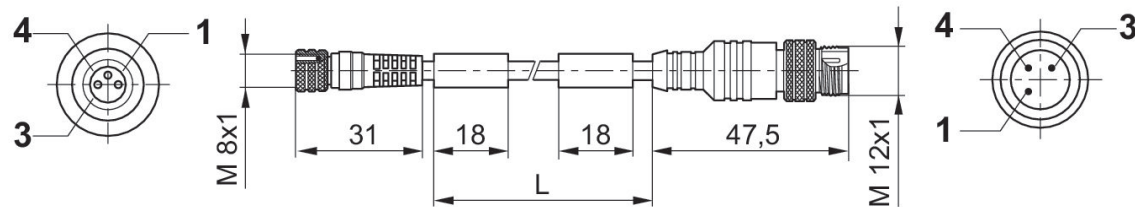
Electrical connection 1: Plug ... M12x1 ... 3-pin ... A-coded ... straight
 Electrical connection 2: Socket ... M8x1 ... 3-pin ... A-coded ... straight



Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Electrical connection 2, coding	Part No.
Socket	M8x1	3-pin	A-coded	Plug	M12x1	3-pin	A-coded	8946203462

Cable length [m]	Part No.
2	8946203462

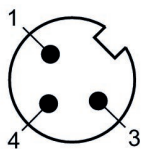
Dimensions



L = length

8946203462

Plug pin assignment



Round plug connector, Series CON-RD

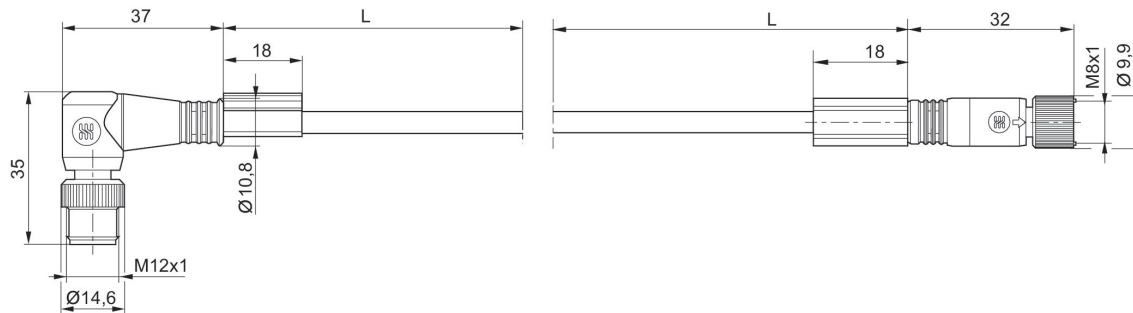
Electrical connection 1: Plug ... M12x1 ... 3-pin ... angled ... 90°
 Electrical connection 2: Socket ... M8x1 ... 3-pin ... straight
 Ambient temperature min./max.: -25 °C ... 80 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Part No.
48 V AC/DC	Socket	M8x1	3-pin	A-coded	Plug	M12x1	3-pin	R412021696
48 V AC/DC	Socket	M8x1	3-pin	A-coded	Plug	M12x1	3-pin	R412021697

Electrical connection 2, coding	Cable length [m]	Part No.
A-coded	2	R412021696
A-coded	5	R412021697

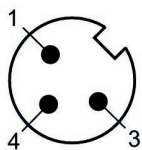
Dimensions



L = length

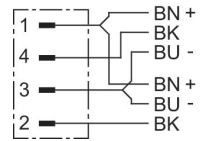
R412021696, R412021697

Plug pin assignment



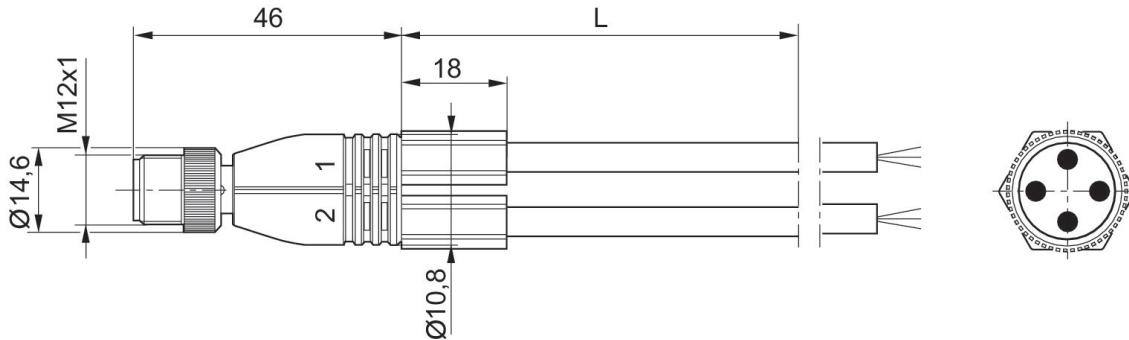
Y-Plug connector, series CON-RD

Electrical connection 1: Plug ... M12x1 ... 4-pin ... straight
 Electrical connection 2: 2 x open cable ends ... 3-pin
 Ambient temperature min./max.: -25 °C ... 80 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
48 V AC/DC	Plug	M12x1	4-pin	A-coded	2 x open cable ends	3-pin	2	R412021688

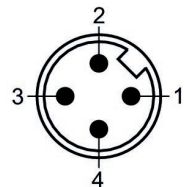
Dimensions



L = length

R412021688

Plug pin assignment



Line 1: (1) BN = brown, (3) BU =blue, (4) BK = black
 Line 2: (1) BN = brown, (3) BU =blue, (2) BK = black

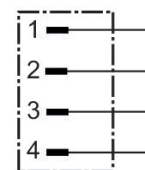
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 4-pin ... A-coded ... straight

Connection type: Screws

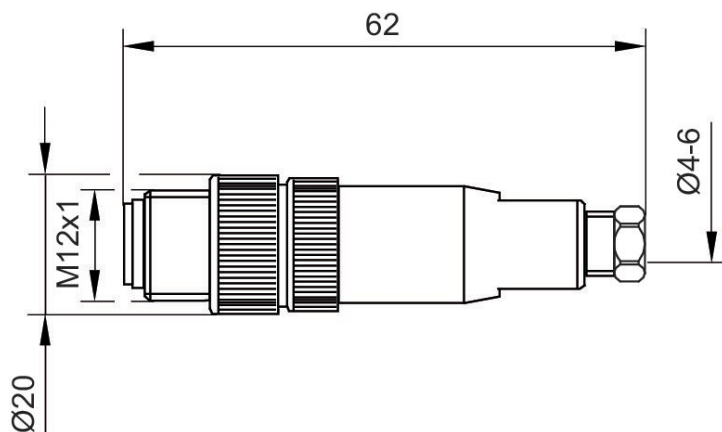
Shielding: unshielded

Ambient temperature min./max.: -40 °C ... 85 °C



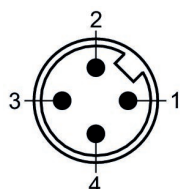
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	4	6	1834484222

Dimensions



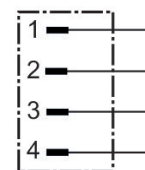
1834484222

Plug pin assignment



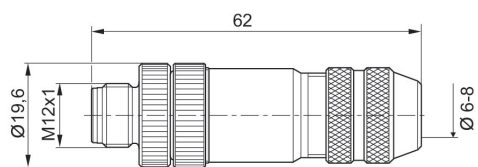
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 4-pin ... D-coded ... straight
 Protocol: Ethernet, EtherNet/IP, EtherCAT, POWERLINK, sercos III
 Connection type: Thread cutting
 Ambient temperature min./max.: -25 °C ... 85 °C



Operational voltage	Coding	Shielding	Protocol	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	D-coded	shielded	Ethernet, EtherNet/IP, EtherCAT, POWERLINK, sercos III	Thread cutting	4	6	8	R419801401

Dimensions



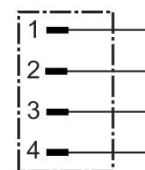
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 4-pin ... A-coded ... angled

Connection type: Screws

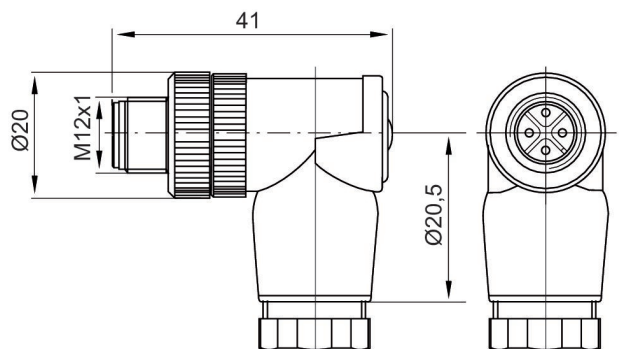
Shielding: unshielded

Ambient temperature min./max.: -40 °C ... 85 °C



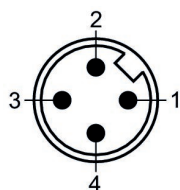
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	4	6	1834484223

1834484223



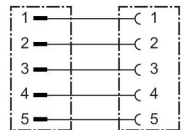
1834484223

Plug pin assignment



Round plug connector, Series CON-RD

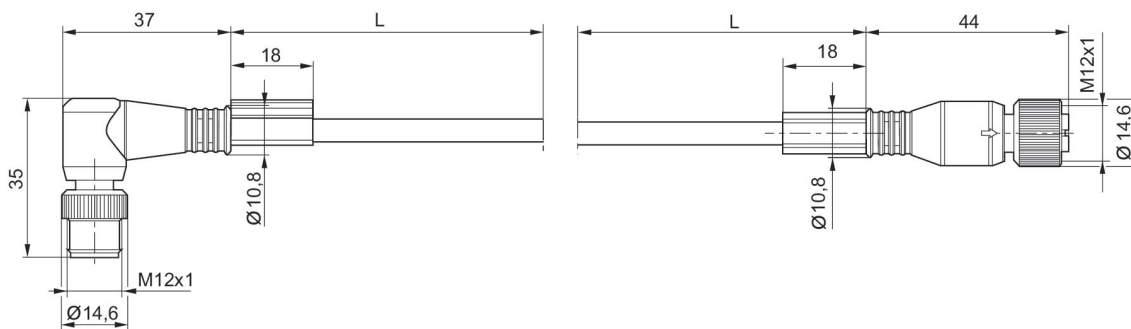
Electrical connection 1: Plug ... M12x1 ... 5-pin ... A-coded ... angled ... 90°
 Electrical connection 2: Socket ... M12x1 ... 5-pin ... A-coded ... straight
 Ambient temperature min./max.: -25 °C ... 80 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Part No.
48 V AC/DC	Socket	M12x1	5-pin	A-coded	Plug	M12x1	5-pin	R412021694
48 V AC/DC	Socket	M12x1	5-pin	A-coded	Plug	M12x1	5-pin	R412021695

Electrical connection 2, coding	Cable length [m]	Part No.
A-coded	2	R412021694
A-coded	5	R412021695

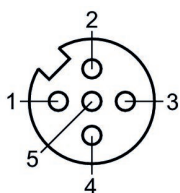
Dimensions



L = length

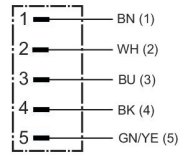
R412021694, R412021695

Pin assignment, socket



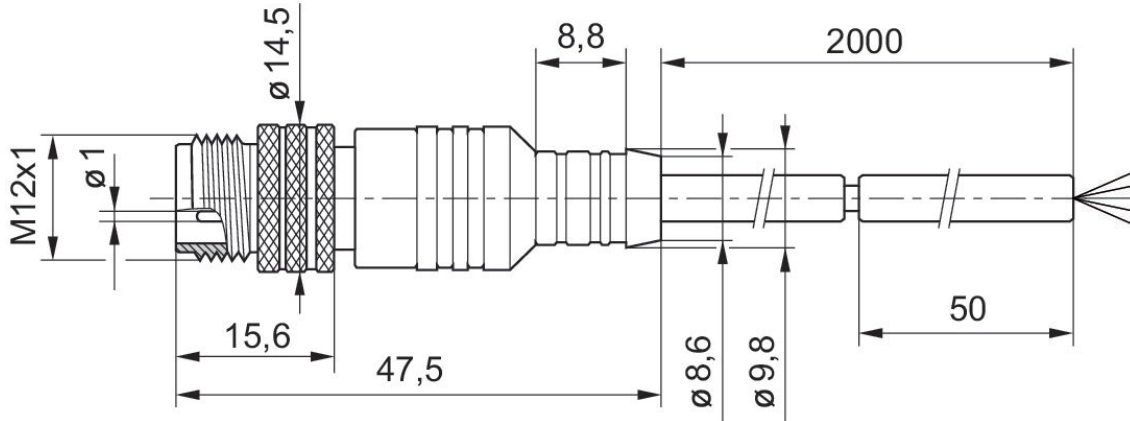
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 5-pin ... straight
Electrical connection 2: open cable ends ... 5-pin



Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
Plug	M12x1	5-pin	A-coded	open cable ends	5-pin	2	8946203432
Plug	M12x1	5-pin	A-coded	open cable ends	5-pin	5	8946203442

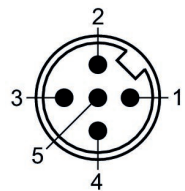
Dimensions



L = length

8946203432, 8946203442

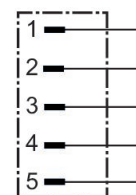
Plug pin assignment



(1) BN=brown (2) WH=white (3) BU=blue (4) BK=black (5) GY=green-yellow

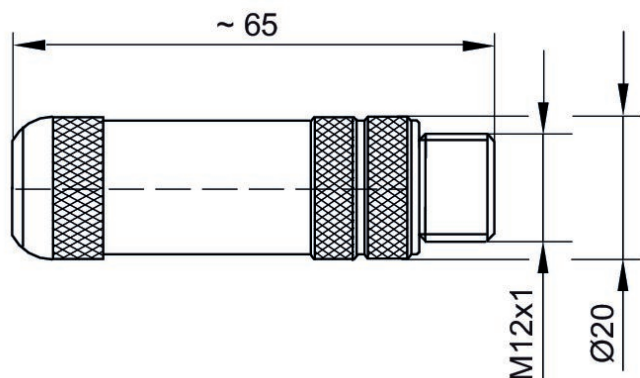
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 5-pin ... B-coded ... straight
Ambient temperature min./max.: -25 °C ... 90 °C



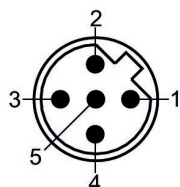
Operational voltage	Coding	Shielding	Protocol	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	B-coded	shielded	PROFIBUS DP	Screws	4	4	9	8941054054

Dimensions



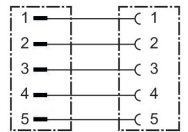
8941054054

Plug pin assignment



Round plug connector, Series CON-RD

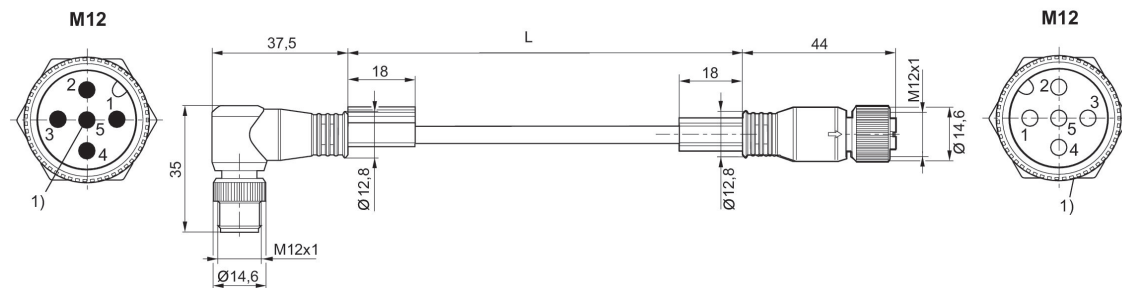
Electrical connection 1: Plug ... M12x1 ... 5-pin ... A-coded ... angled ... 90°
 Electrical connection 2: Socket ... M12x1 ... 5-pin ... A-coded ... straight
 Ambient temperature min./max.: -25 °C ... 80 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Part No.
48 V AC/DC	Socket	M12x1	5-pin	A-coded	Plug	M12x1	5-pin	R412022193

Electrical connection 2, coding	Cable length [m]	Part No.
A-coded	2	R412022193

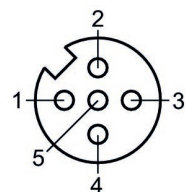
Dimensions



L = length
 PIN assignment 1:1
 1) Shield is connected to pin 5 of the plug and the knurled screw of the socket.

R412022193

Pin assignment, socket

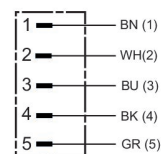


Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 5-pin ... A-coded ... angled ... 90°

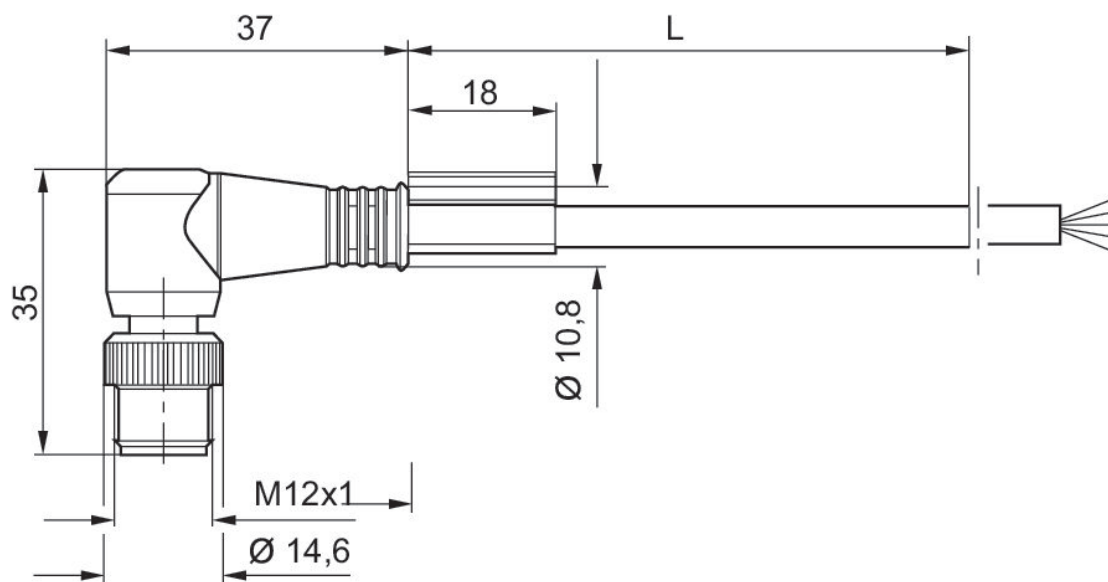
Electrical connection 2: open cable ends ... 5-pin

Ambient temperature min./max.: -25 °C ... 80 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
48 V AC/DC	Plug	M12x1	5-pin	A-coded	open cable ends	5-pin	2	R412021691
48 V AC/DC	Plug	M12x1	5-pin	A-coded	open cable ends	5-pin	5	R412021692
48 V AC/DC	Plug	M12x1	5-pin	A-coded	open cable ends	5-pin	10	R412021693

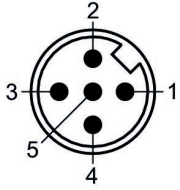
Dimensions



L = length

R412021691, R412021692, R412021693

Plug pin assignment



(1) BN=brown (2) WH=white (3) BU=blue (4) BK=black (5) GY=grey

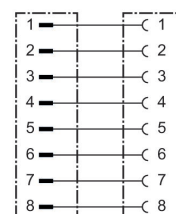
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 8-pin ... A-coded ... straight ... 180°

Electrical connection 2: Socket ... M12x1 ... 8-pin ... A-coded ... straight

Certification: CE declaration of conformity, UL (Underwriters Laboratories)

Ambient temperature min./max.: -25 °C ... 85 °C



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, number of poles	Part No.
36 V DC / 30 V AC	Socket	M12x1	8-pin	A-coded	Plug	M12x1	8-pin	8946202802
36 V DC / 30 V AC	Socket	M12x1	8-pin	A-coded	Plug	M12x1	8-pin	8946202812
36 V DC / 30 V AC	Socket	M12x1	8-pin	A-coded	Plug	M12x1	8-pin	8946202822
36 V DC / 30 V AC	Socket	M12x1	8-pin	A-coded	Plug	M12x1	8-pin	8946202832
36 V DC / 30 V AC	Socket	M12x1	8-pin	A-coded	Plug	M12x1	8-pin	8946202842

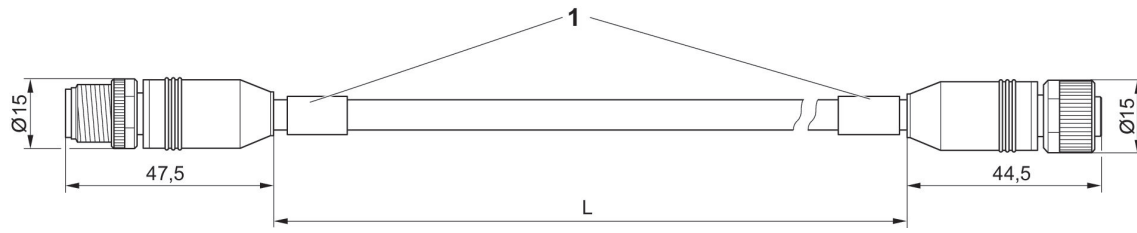
Electrical connection 2, coding	Cable length [m]	Part No.
A-coded	0.5	8946202802
A-coded	1	8946202812
A-coded	2	8946202822
A-coded	5	8946202832
A-coded	10	8946202842

Dimensions

M12



M12



1) Cable sleeve

Multipole plug, series CON-MP

Electrical connection 1: Socket ... D-Sub ... 25-pin
Ambient temperature min./max.: -20 °C ... 80 °C

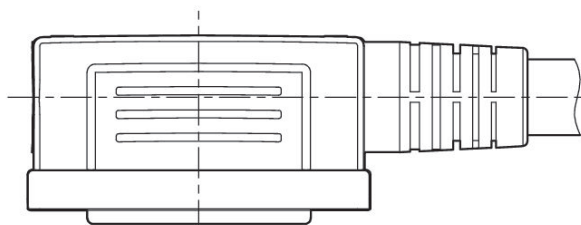
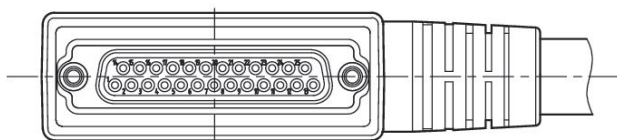


Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Part No.
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	8.5	R419500454
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	8.5	R419500455
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	8.5	R419500456
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	15	8.5	R412022156
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	10.5	R419500457
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	10.5	R419500458
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	10.5	R419500459
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	8.5	R419500460
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	8.5	R419500461
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	8.5	R419500462
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	15	8.5	R412022352
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	10.5	R419500463
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	10.5	R419500464
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	10.5	R419500465

Wire cross-section [mm²]	Suitable for dynamic laying	Material cable sheath	Part No.
0.22		Polyvinyl chloride	R419500454
0.22		Polyvinyl chloride	R419500455

Wire cross-section [mm ²]	Suitable for dynamic laying	Material cable sheath	Part No.
0.22		Polyvinyl chloride	R419500456
0.22		Polyvinyl chloride	R412022156
0.25	suitable for dynamic laying	Polyurethane	R419500457
0.25	suitable for dynamic laying	Polyurethane	R419500458
0.25	suitable for dynamic laying	Polyurethane	R419500459
0.22		Polyvinyl chloride	R419500460
0.22		Polyvinyl chloride	R419500461
0.22		Polyvinyl chloride	R419500462
0.22		Polyvinyl chloride	R412022352
0.25	suitable for dynamic laying	Polyurethane	R419500463
0.25	suitable for dynamic laying	Polyurethane	R419500464
0.25	suitable for dynamic laying	Polyurethane	R419500465

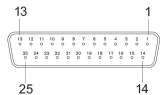
Dimensions



R419500454, R419500455, R419500456, R412022156, R419500457, R419500458, R419500459, R419500460, R419500461, R419500462, R412022352, R419500463, R419500464, R419500465

PIN assignment and cable colors

cable identification as per DIN 47100



Socket

Pin	1	2	3	4	5	6	7	8	9	10
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet

Pin	11	12	13	14	15	16	17	18	19	20
Color	gray/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown

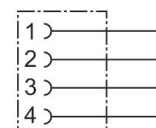
Pin	21	22	23	24	25
Color	white/blue	brown/blue	white/red	brown/red	white/black

Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M12x1 ... 4-pin ... A-coded ... straight

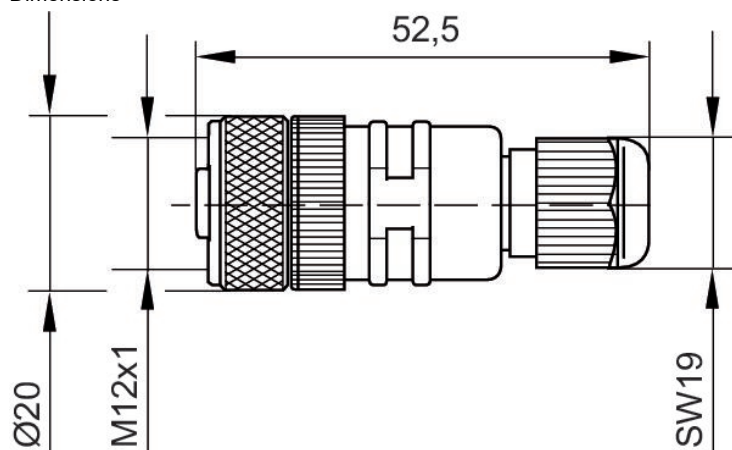
Connection type: Screws

Ambient temperature min./max.: -25 °C ... 90 °C



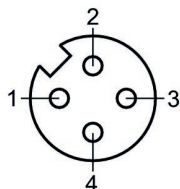
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	4	8941054324

Dimensions



8941054324

Pin assignment, socket

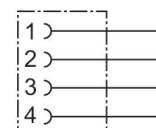


Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M12x1 ... 4-pin ... A-coded ... angled

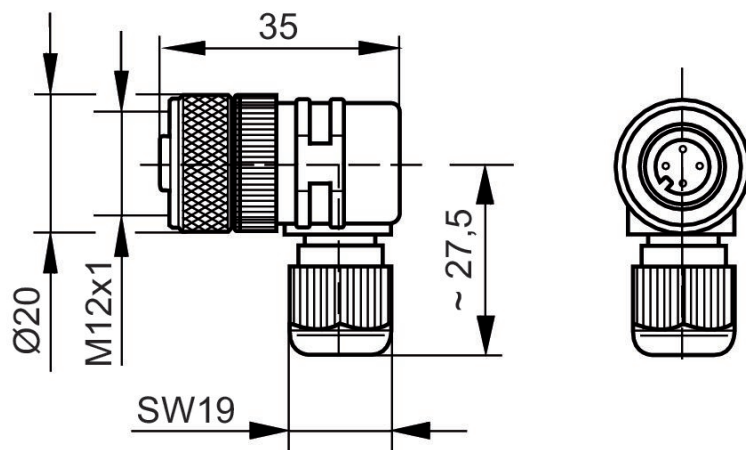
Connection type: Screws

Ambient temperature min./max.: -25 °C ... 90 °C



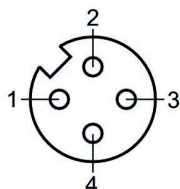
Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	4	8941054424

Dimensions



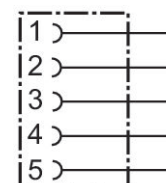
8941054424

Pin assignment, socket



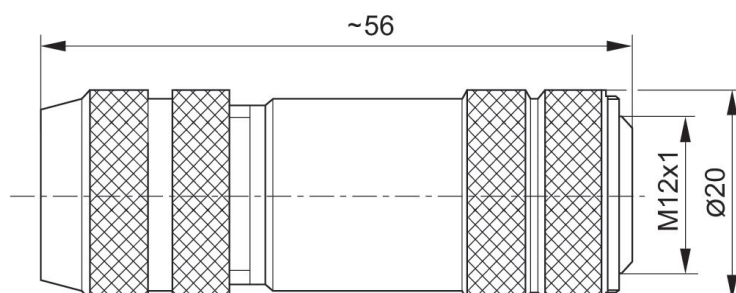
Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M12x1 ... 5-pin ... A-coded ... straight
 Protocol: CANopen, DeviceNet
 Connection type: Screws
 Ambient temperature min./max.: -40 °C ... 85 °C



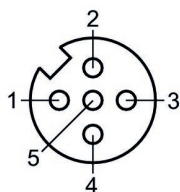
Operational voltage	Coding	Shielding	Protocol	Connection type	Max. current [A]	min. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	shielded	CANopen, DeviceNet	Screws	4	6	8942051602

Dimensions



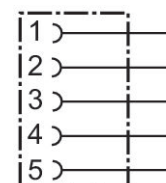
8942051602

Pin assignment, socket



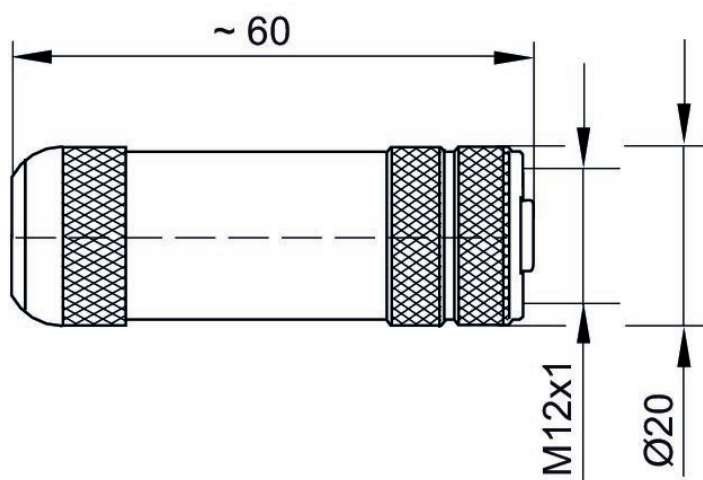
Round plug connector, Series CON-RD

Electrical connection 1: Socket ... M12x1 ... 5-pin ... B-coded ... straight
 Protocol: PROFIBUS DP
 Connection type: Screws
 Shielding: shielded
 Ambient temperature min./max.: -25 °C ... 90 °C



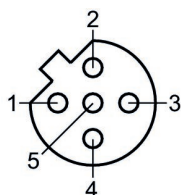
Operational voltage	Coding	Shielding	Protocol	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	B-coded	shielded	PROFIBUS DP	Screws	4	6	8	8941054044

Dimensions



8941054044

Pin assignment, socket



Multipole plug, series CON-MP

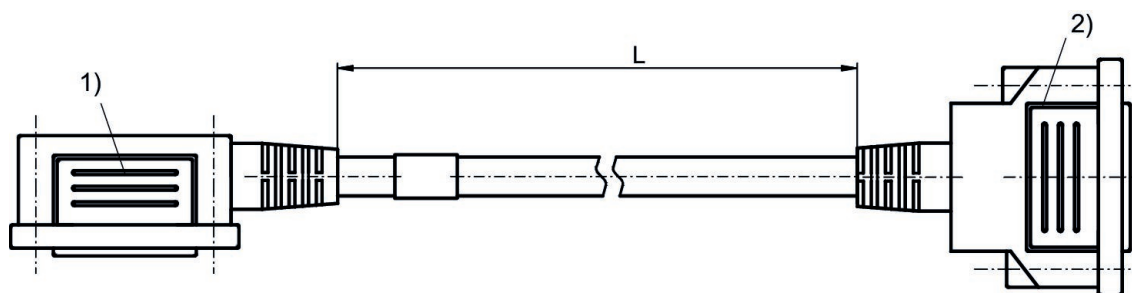
Electrical connection 1: Plug ... D-Sub ... 25-pin ... angled 90°
Ambient temperature min./max.: -5 °C ... 50 °C



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 2, type	Electrical connection 2, thread size	Cable length [m]	Part No.
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	0.5	R412020635
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	1	R412020636
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	2	R412020637
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	5	R412020638
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	10	R412020639

Cable-Ø [mm]	Wire cross-section [mm²]	Material cable sheath	Part No.
8.5	0.22	Polyvinyl chloride	R412020635
8.5	0.22	Polyvinyl chloride	R412020636
8.5	0.22	Polyvinyl chloride	R412020637
8.5	0.22	Polyvinyl chloride	R412020638
8.5	0.22	Polyvinyl chloride	R412020639

Dimensions



- 1) Port 1 (Plug)
- 2) Port 2 (Socket)

D-Sub plug, 25-pin

Pin	1	2	3	4	5	6	7	8	9
Color	white	brown	green	yellow	gray	pink	blue	red	black

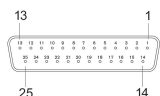
Pin	10	11	12	13	14	15	16	17	18
Color	violet	gray/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/gray	gray/brown

Pin	19	20	21	22	23	24	25
Color	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

R412020635, R412020636, R412020637, R412020638, R412020639

PIN assignment and cable colors

cable identification as per DIN 47100



Socket

Pin	1	2	3	4	5	6	7	8	9	10
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet

Pin	11	12	13	14	15	16	17	18	19	20
Color	gray/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown

Pin	21	22	23	24	25
Color	white/blue	brown/blue	white/red	brown/red	white/black

Multipole plug, series CON-MP

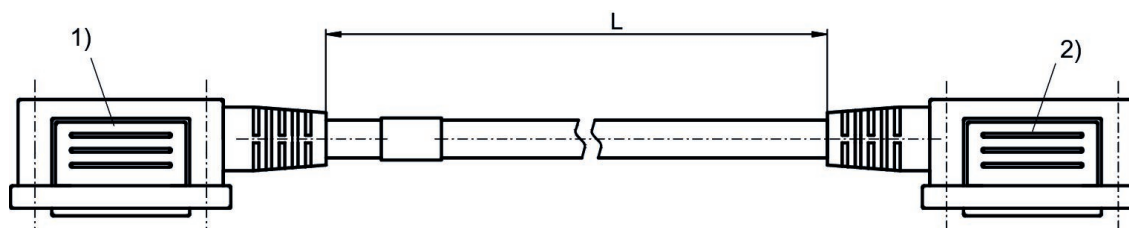
Electrical connection 1: Plug ... D-Sub ... 25-pin ... angled 90°
Ambient temperature min./max.: -5 °C ... 50 °C



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 2, type	Electrical connection 2, thread size	Cable length [m]	Part No.
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	0.5	R412020630
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	1	R412020631
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	2	R412020632
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	5	R412020633
24 V DC	3	unshielded	Plug	D-Sub	Socket	D-Sub	10	R412020634

Cable-Ø [mm]	Wire cross-section [mm²]	Material cable sheath	Part No.
8.5	0.22	Polyvinyl chloride	R412020630
8.5	0.22	Polyvinyl chloride	R412020631
8.5	0.22	Polyvinyl chloride	R412020632
8.5	0.22	Polyvinyl chloride	R412020633
8.5	0.22	Polyvinyl chloride	R412020634

Dimensions



- 1) Port 1 (Plug)
- 2) Port 2 (Socket)

D-Sub plug, 25-pin

Pin	1	2	3	4	5	6	7	8	9
Color	white	brown	green	yellow	gray	pink	blue	red	black

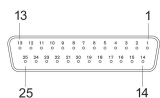
Pin	10	11	12	13	14	15	16	17	18
Color	violet	gray/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/gray	gray/brown

Pin	19	20	21	22	23	24	25
Color	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

R412020630, R412020631, R412020632, R412020633, R412020634

PIN assignment and cable colors

cable identification as per DIN 47100



Socket

Pin	1	2	3	4	5	6	7	8	9	10
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet

Pin	11	12	13	14	15	16	17	18	19	20
Color	gray/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown

Pin	21	22	23	24	25
Color	white/blue	brown/blue	white/red	brown/red	white/black

Multipole plug, series CON-MP

Electrical connection 1: Socket ... D-Sub ... 44-pin
Ambient temperature min./max.: -20 °C ... 80 °C

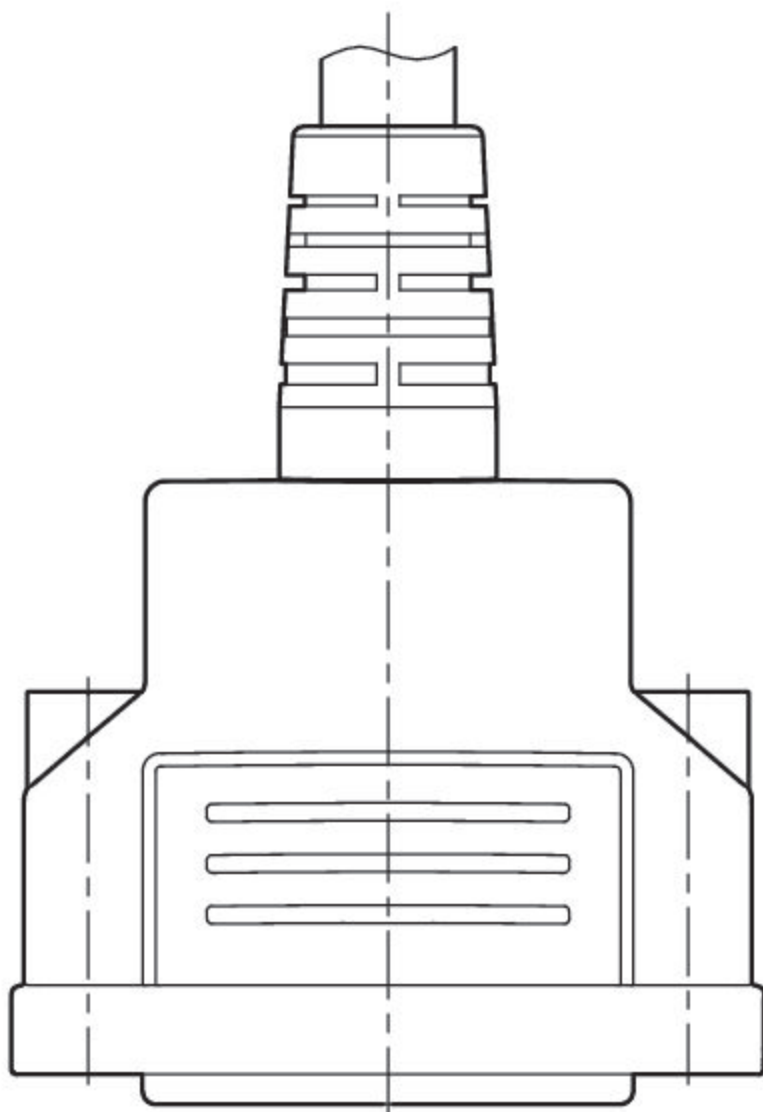
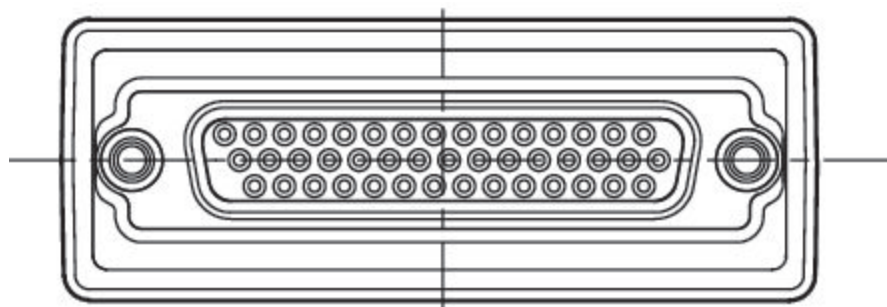


Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Part No.
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	10.3	R419500466
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	10.3	R419500467
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	10.3	R419500468
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	13.3	R419500469
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	13.3	R419500470
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	13.3	R419500471
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	10.3	R419500472
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	10.3	R419500473
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	10.3	R419500474
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	3	13.3	R419500475
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	5	13.3	R419500476
24 V DC	3	unshielded	Socket	D-Sub	open cable ends	10	13.3	R419500477

Wire cross-section [mm ²]	Suitable for dynamic laying	Material cable sheath	Part No.
0.22		Polyvinyl chloride	R419500466
0.22		Polyvinyl chloride	R419500467
0.22		Polyvinyl chloride	R419500468
0.25	suitable for dynamic laying	Polyurethane	R419500469

Wire cross-section [mm ²]	Suitable for dynamic laying	Material cable sheath	Part No.
0.25	suitable for dynamic laying	Polyurethane	R419500470
0.25	suitable for dynamic laying	Polyurethane	R419500471
0.22		Polyvinyl chloride	R419500472
0.22		Polyvinyl chloride	R419500473
0.22		Polyvinyl chloride	R419500474
0.25	suitable for dynamic laying	Polyurethane	R419500475
0.25	suitable for dynamic laying	Polyurethane	R419500476
0.25	suitable for dynamic laying	Polyurethane	R419500477

Dimensions



D-Sub socket, 44 pin

Pin	1	2	3	4	5	6	7	8	9
Color	white	brown	green	yellow	gray	pink	blue	red	black

Pin	10	11	12	13	14	15	16	17	18
Color	violet	gray/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/gray	gray/brown

Pin	19	20	21	22	23	24	25	26	27
Color	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black	brown/black	gray/green

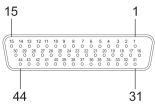
Pin	28	29	30	31	32	33	34	35	36
Color	yellow/gray	pink/green	yellow/pink	green/blue	yellow/blue	green/red	yellow/red	gray/black	yellow/black

Pin	37	38	39	40	41	42	43	44
Color	gray/blue	pink/blue	gray/red	pink/red	gray/black	pink/black	blue/black	red/black

R419500466, R419500467, R419500468, R419500469, R419500470, R419500471, R419500472, R419500473, R419500474, R419500475, R419500476, R419500477

PIN assignment and cable colors

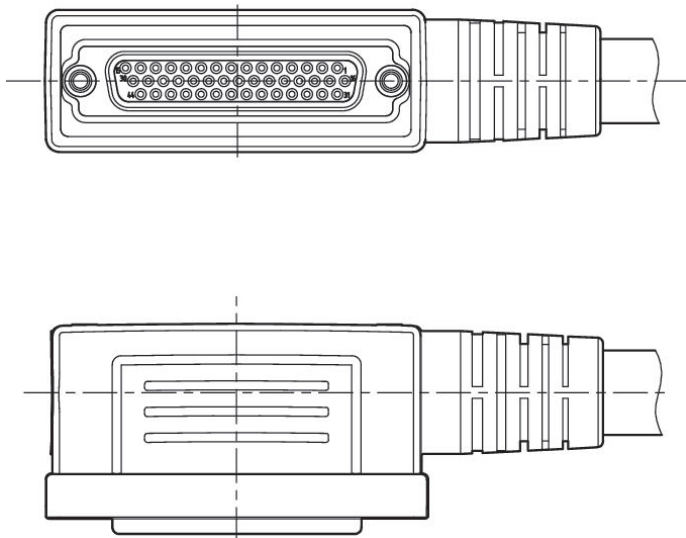
cable identification as per DIN 47100



Socket

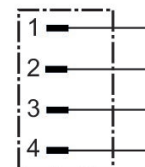
R419500472, R419500473, R419500474, R419500475, R419500476, R419500477

Dimensions



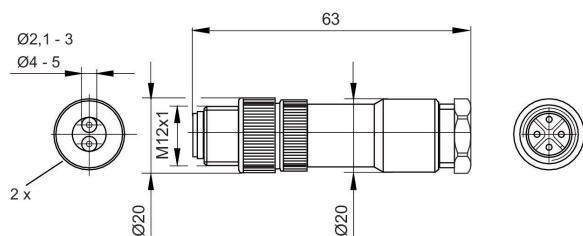
Round plug connector, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 4-pin ... A-coded
 Connection type: Screws
 Shielding: unshielded
 Ambient temperature min./max.: -40 °C ... 85 °C



Operational voltage	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
48 V AC/DC	A-coded	unshielded	Screws	4	2.1	3	1834484246

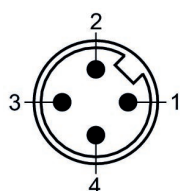
1834484246



duo plug

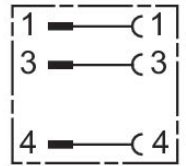
1834484246

Plug pin assignment



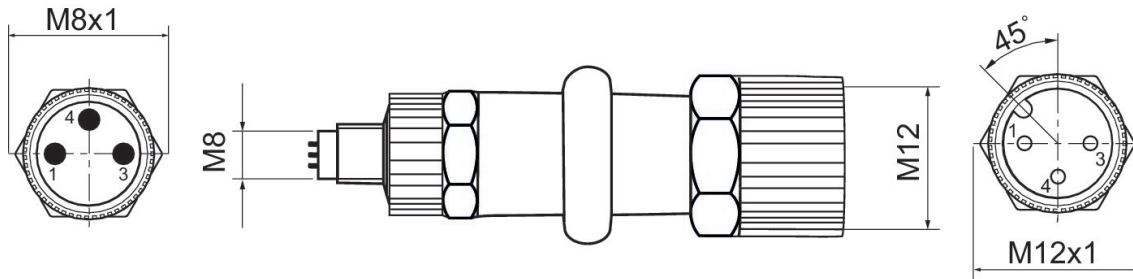
Adapter, Series CON-AP

Electrical connection 1: Plug ... M8x1 ... 3-pin ... A-coded ... straight ... 180°
 Electrical connection 2: Socket ... M12x1 ... 3-pin ... A-coded ... straight ... 180°
 Ambient temperature min./max.: -25 °C ... 50 °C



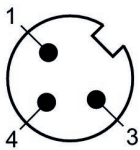
Max. current [A]	Part No.
4	R412021684

Dimensions



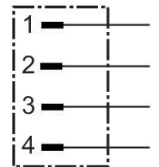
R412021684

Plug pin assignment



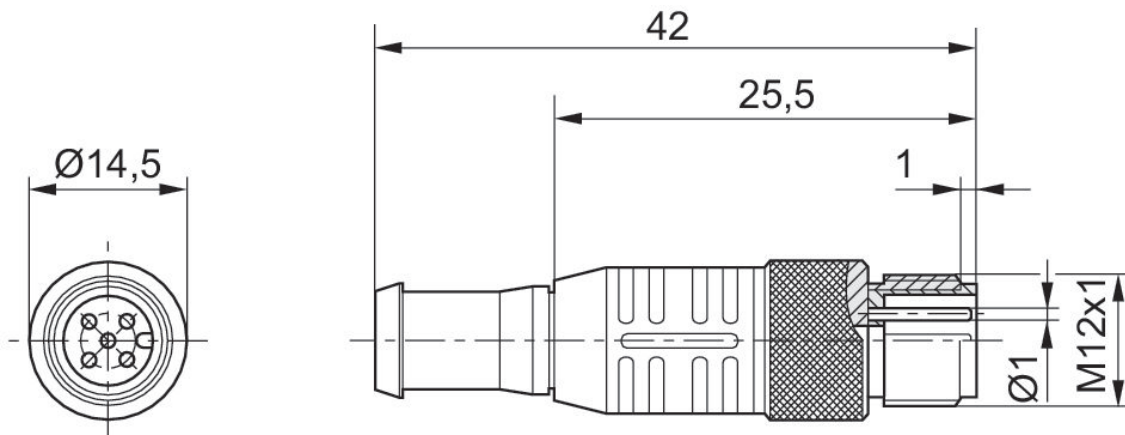
Data final plug, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 4-pin ... B-coded
 Protocol: PROFIBUS DP
 Ambient temperature min./max.: -25 °C ... 80 °C



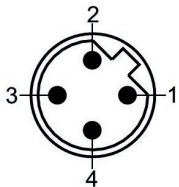
Coding	Protocol	Part No.
B-coded	PROFIBUS DP	8941054064

Dimensions



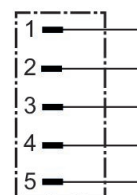
8941054064

Plug pin assignment



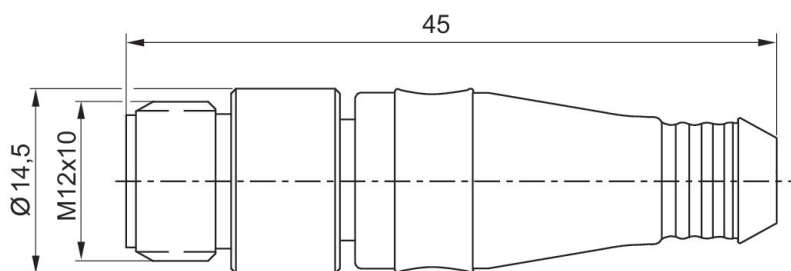
Data final plug, Series CON-RD

Electrical connection 1: Plug ... M12x1 ... 5-pin ... A-coded
 Protocol: CANopen, DeviceNet
 Ambient temperature min./max.: 0 °C ... 60 °C



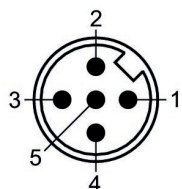
Coding	Protocol	Part No.
A-coded	CANopen, DeviceNet	8941054264

Dimensions



8941054264

Plug pin assignment



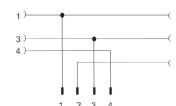
Y-Plug connector, series CON-RD

Electrical connection 1: 2 x Socket ... M8x1 ... 3-pin

Electrical connection 2: Plug ... M8x1 ... 4-pin

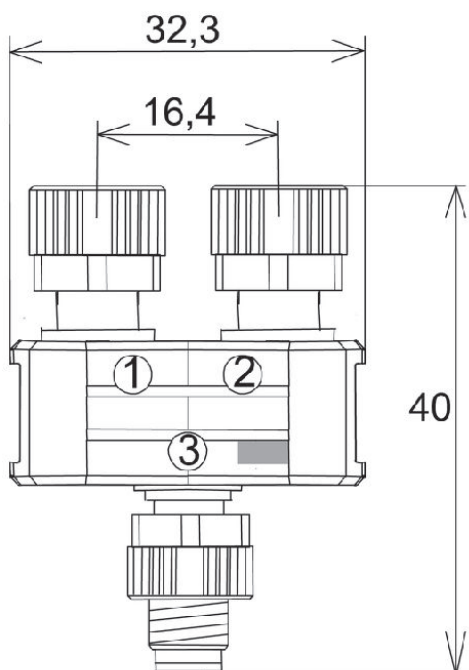
Shielding: unshielded

Ambient temperature min./max.: -25 °C ... 85 °C



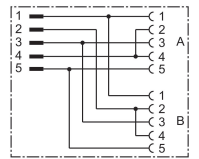
Operational voltage	Shielding	Max. current [A]	Part No.
24 V AC/DC	unshielded	4	R412028723

Dimensions



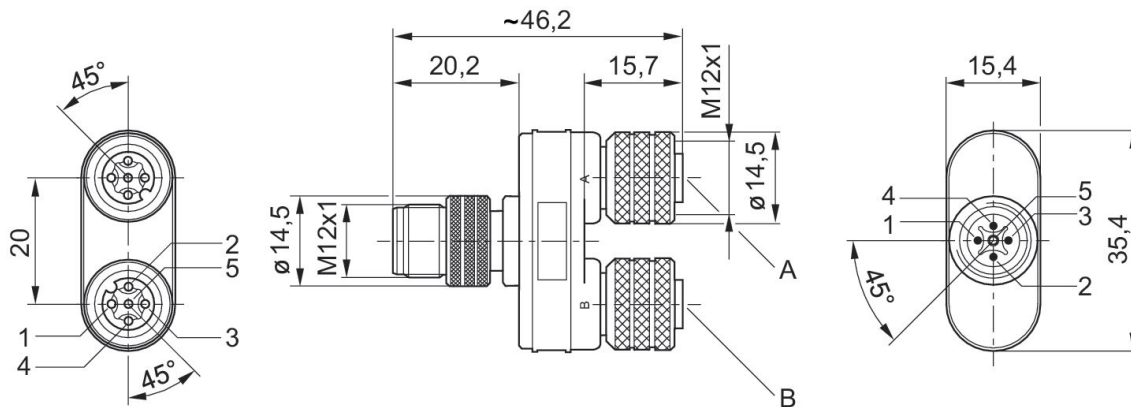
Y-Plug connector, series CON-AP

Electrical connection 1: Plug ... M12x1 ... 5-pin ... A-coded
 Electrical connection 2: 2x Socket ... M12x1 ... 5-pin ... A-coded
 Ambient temperature min./max.: -25 °C ... 50 °C



Operational voltage	Coding	Shielding	Max. current [A]	Part No.
48 V AC/DC	A-coded	unshielded	4	8941002392

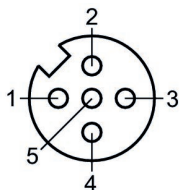
Dimensions



Sockets: Pin 2 and 4 bridged.

8941002392

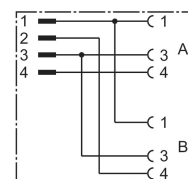
Pin assignment, socket



Plug (male) M 12 Pin	Socket (fe- male) A M12 Pin	Socket (fe- male) B M12 Pin
1	1	1
2	-	2 / 4
3	3	3
4	2 / 4	-
5	5	5

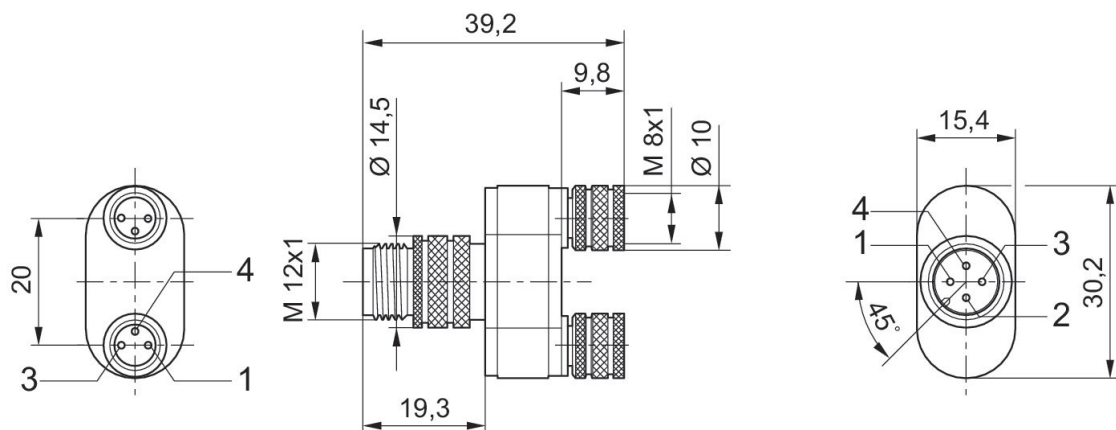
Y-Plug connector, series CON-AP

Electrical connection 1: Plug ... M12x1 ... 4-pin
 Electrical connection 2: 2x Socket ... M8x1 ... 3-pin
 Ambient temperature min./max.: -25 °C ... 50 °C



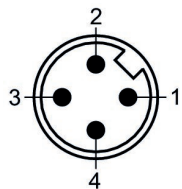
Operational voltage	Coding	Shielding	Max. current [A]	Part No.
48 V AC/DC	A-coded	unshielded	4	8941002382

Dimensions



8941002382

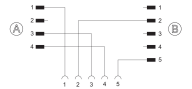
Plug pin assignment



Plug (male) M 12 Pin	Socket (fe- male) M8 A Pin	Socket (fe- male) M8 B Pin
1	1	1
2	-	4
3	3	3
4	4	-

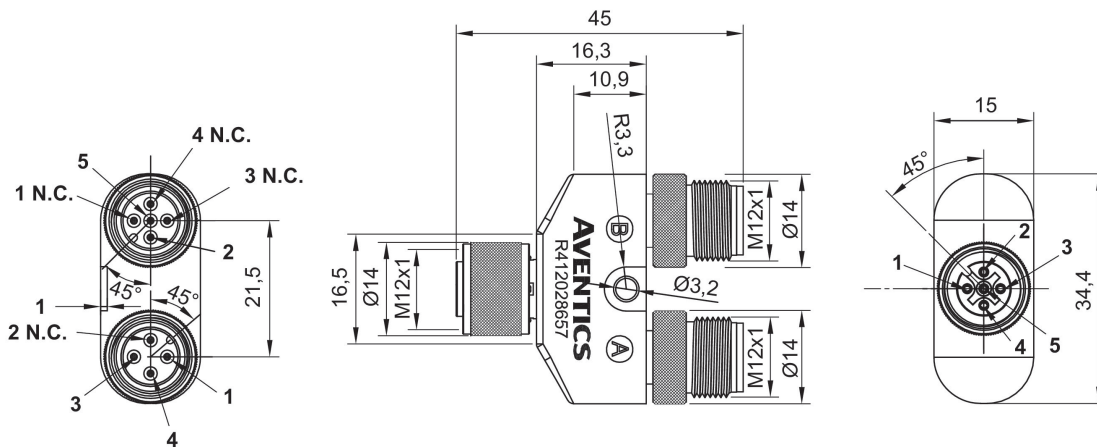
Y-Plug connector, series CON-AP

Electrical connection 1: Socket ... M12x1 ... 5-pin ... straight
 Electrical connection 2: Plug ... M12x1 ... 5-pin ... straight
 Electrical connection 3: Plug ... M12x1 ... 4-pin
 Shielding: unshielded
 Ambient temperature min./max.: -25 °C ... 90 °C



Operational voltage	Coding	Shielding	Max. current [A]	Part No.
60 V DC / 110 V AC	A-coded	unshielded	4	R412028657

Dimensions in mm



A = Electrical connection 2
 B = Electrical connection 3

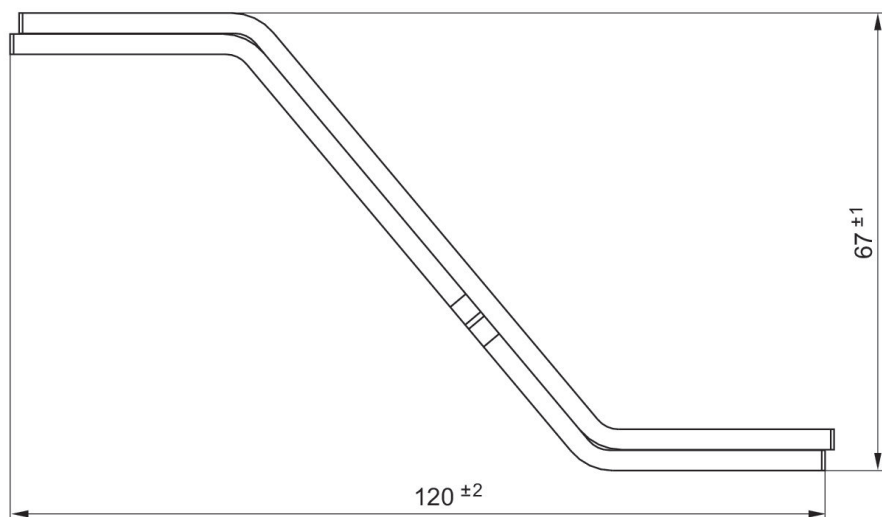
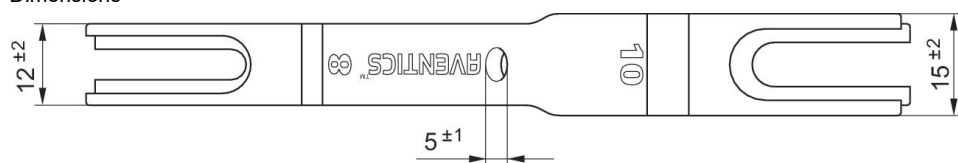
Release tool Ø 4, Ø 6, Ø 8, Ø 10

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Part No.
Ø 4, Ø 6, Ø 8, Ø 10	R422004106

Dimensions



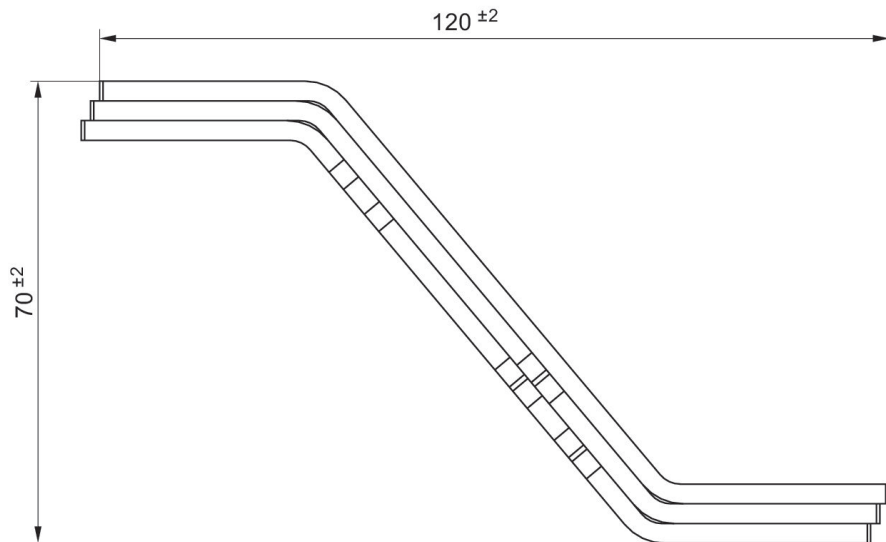
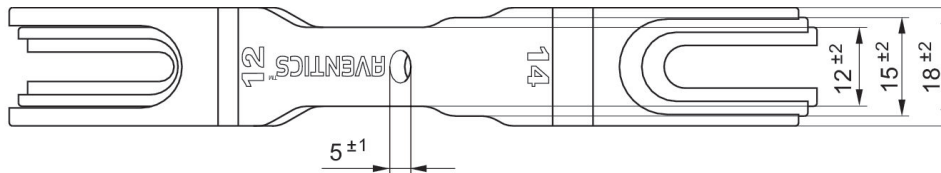
Release tool Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 14

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Part No.
Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 14	R422004107

Dimensions

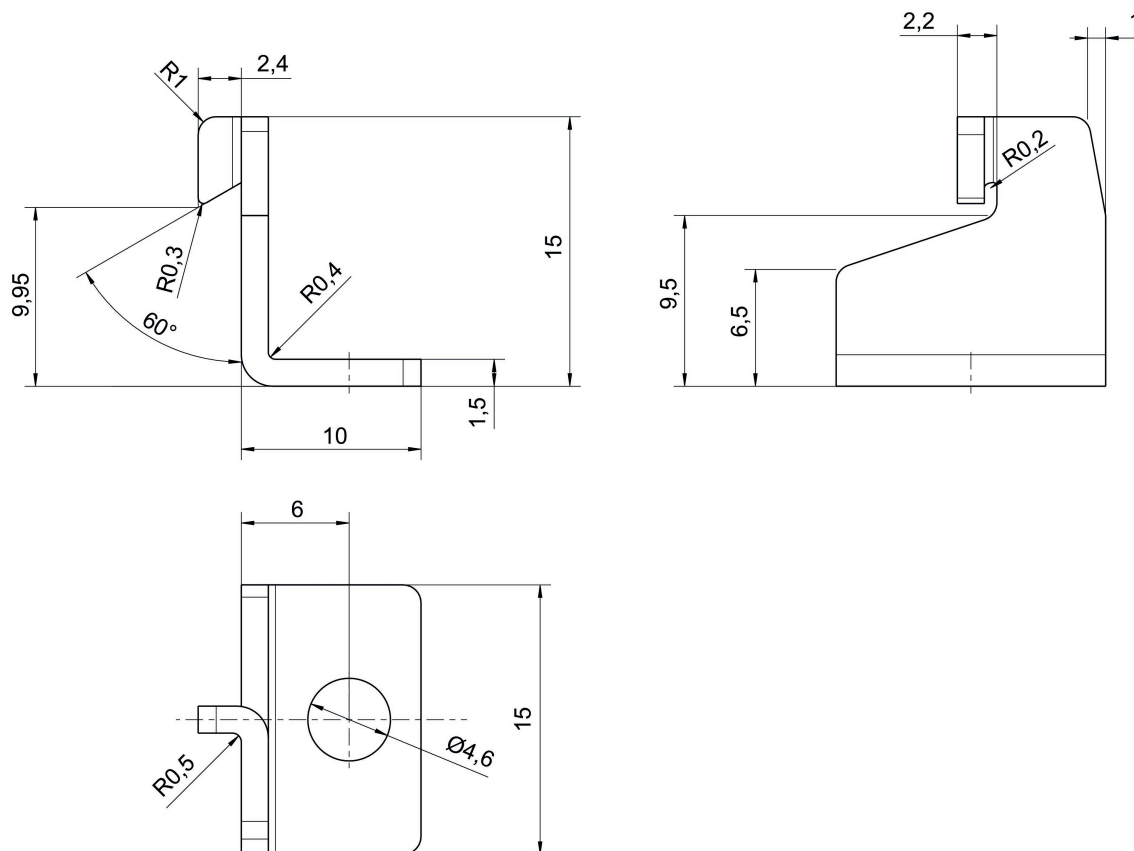


Mounting bracket



Delivery unit [piece]	Weight [kg]	Material	Part No.
10	0.047	Stainless Steel	R412020083

Dimensions in mm

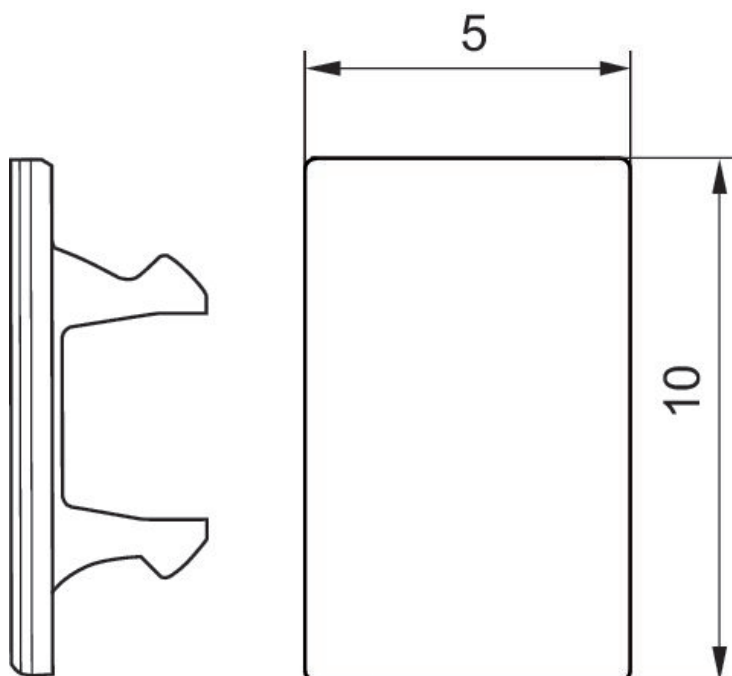


Name plates, AES I/O module



Type	Delivery unit [piece]	Weight [kg]	Material	Part No.
Name plates	60	0.014	Polyamide	R412018192

Dimensions

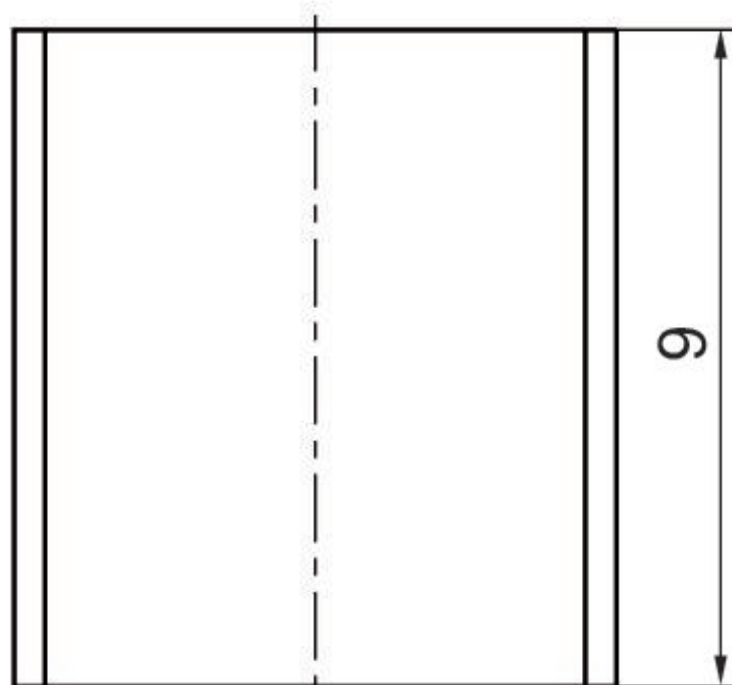
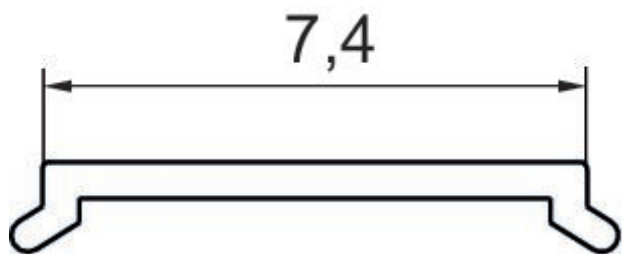


Name plates, AV valve front



Type	Delivery unit [piece]	Weight [kg]	Material	Part No.
Name plates	150	0.014	Polyamide	R412019552

Dimensions



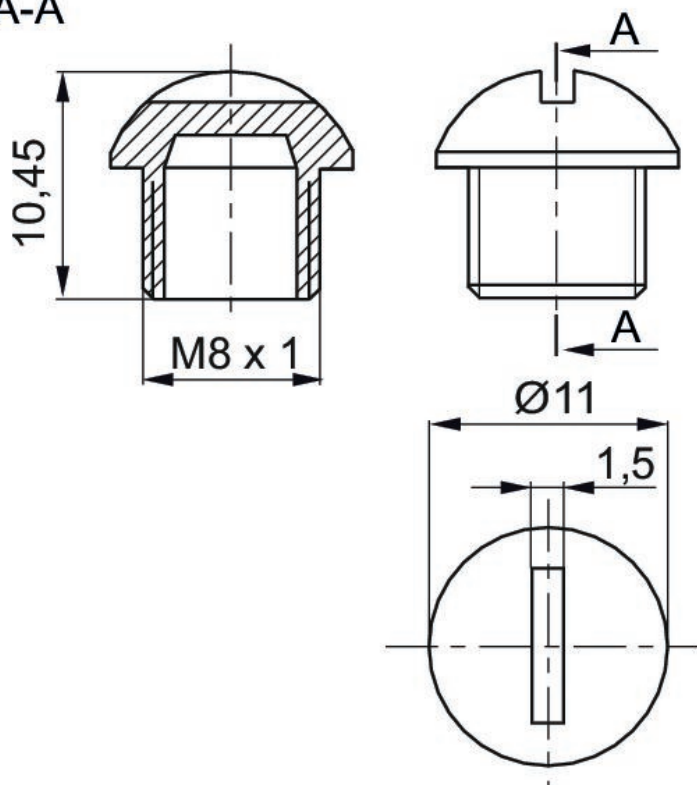
Protective cap, series CON-RD, M8x1



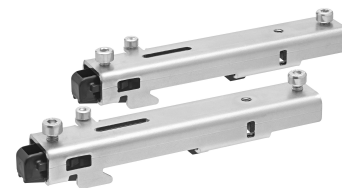
Type	Weight [kg]	Material	Part No.
M8x1	0.001	Polyamide	R412003493

Dimensions

A-A

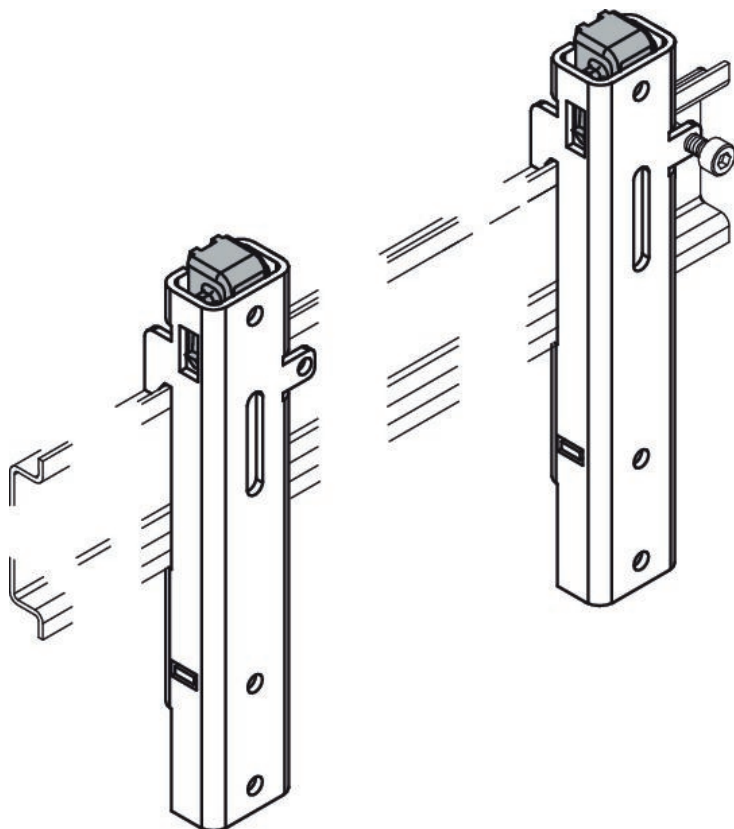


Mounting kit for DIN rail



Material	Part No.
Steel, chrome-plat- ed	R412019468

Dimensions

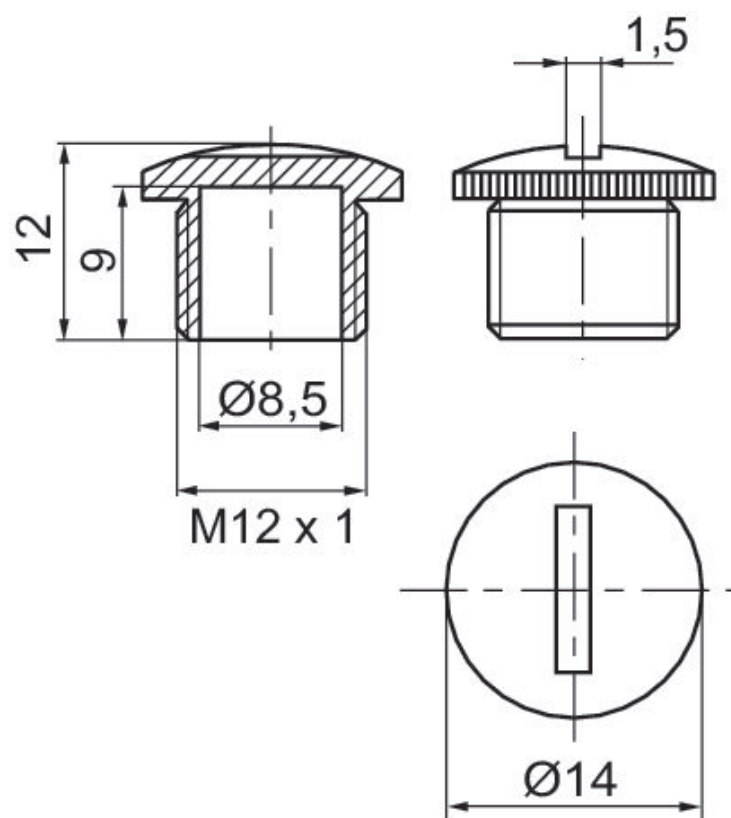


Protective cap, series CON-RD, M12x1



Type	Delivery unit [piece]	Weight [kg]	Material	Part No.
M12x1	50	0.001	Polyamide	1823312001

Dimensions

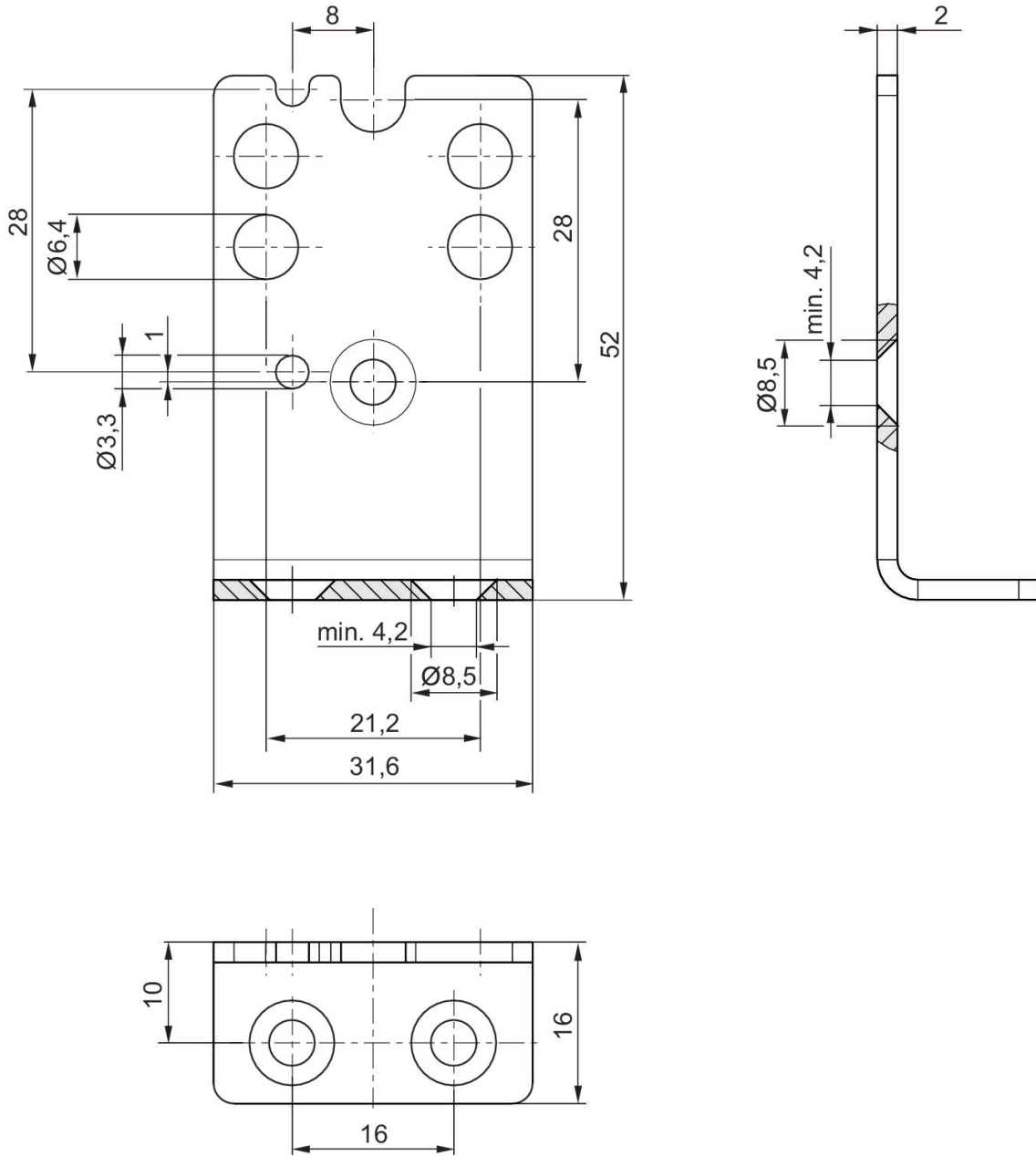


Assembly kit



Type	Delivery unit [piece]	Material	Part No.
Mounting bracket for mounting to the mounting plate	2	Stainless Steel	R422103091

Dimensions



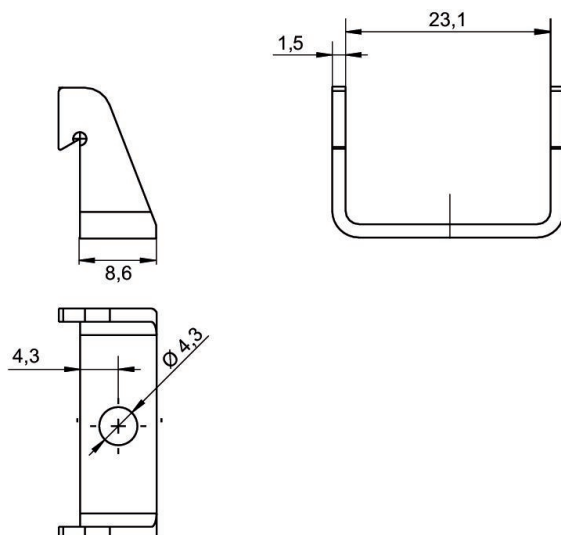
2 countersunk screws DIN 7991 A4 M4x8 for mounting on AV series pressure regulators are included in the scope of delivery. Countersunk screws for mounting on a mounting plate are not included in the scope of delivery.

Retaining bracket for intermediate mounting



Type	Delivery unit [piece]	Material	Part No.
Retaining brackets	10	Stainless Steel	R412018339

Dimensions

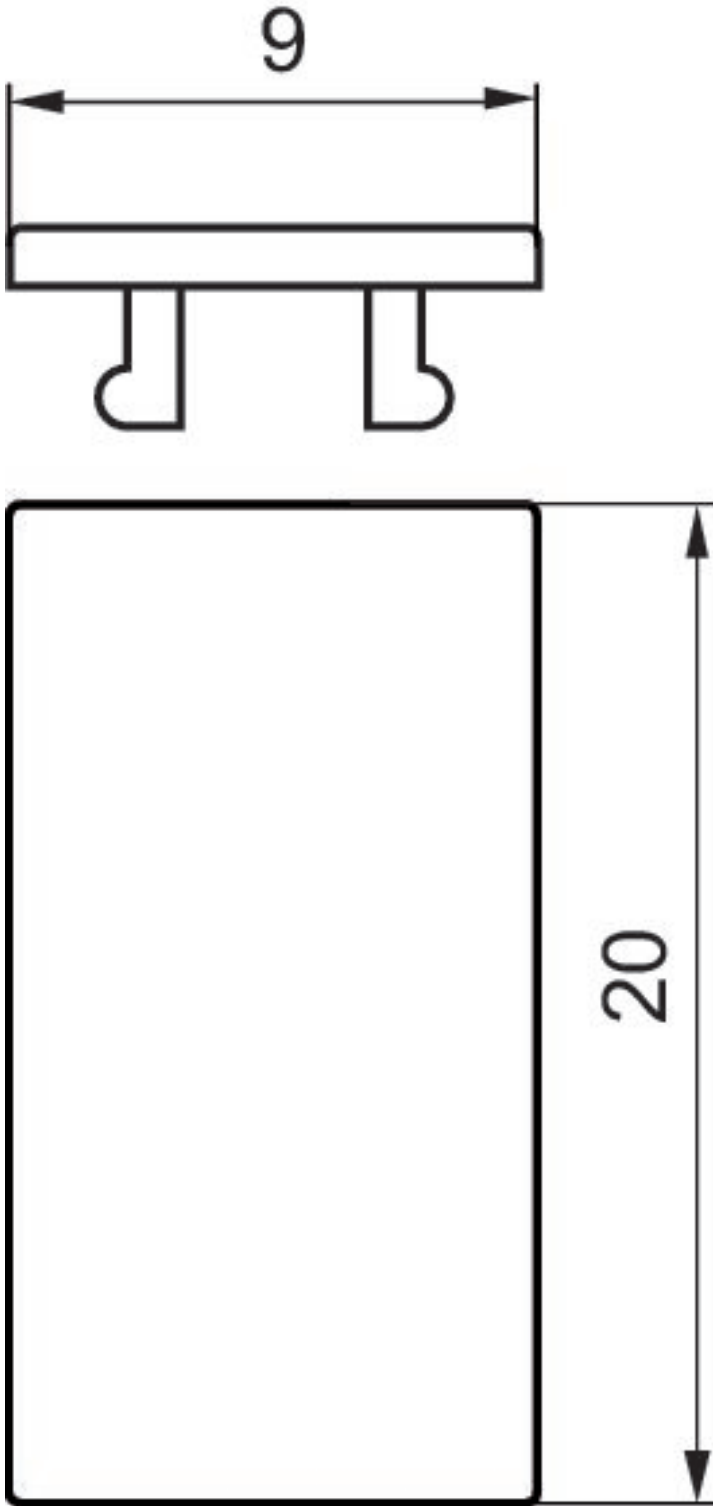


Name plates, AV valve, AES bus coupler above



Type	Delivery unit [piece]	Weight [kg]	Material	Part No.
Name plates	24	0.014	Polycarbonate	R422100889

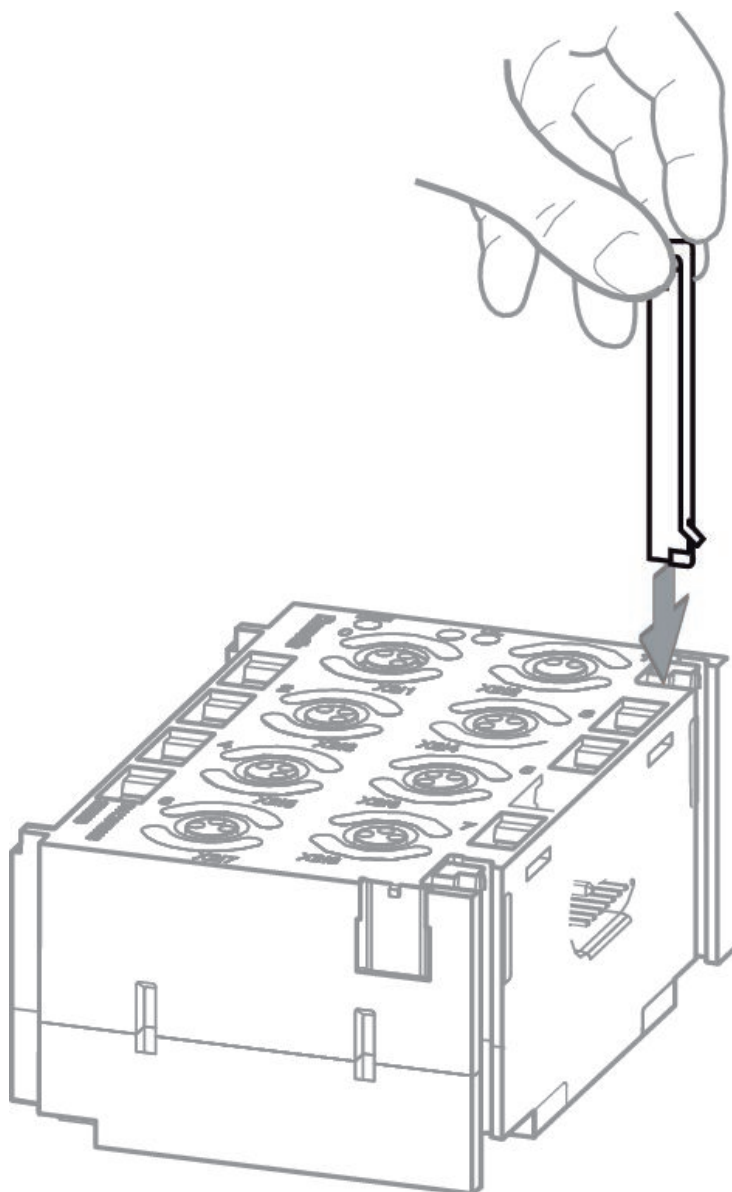
Dimensions



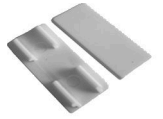
Spring clamp element



Type	Delivery unit [piece]	Material	Part No.
Spring clamp element	10	Steel, chrome-plated	R412015400

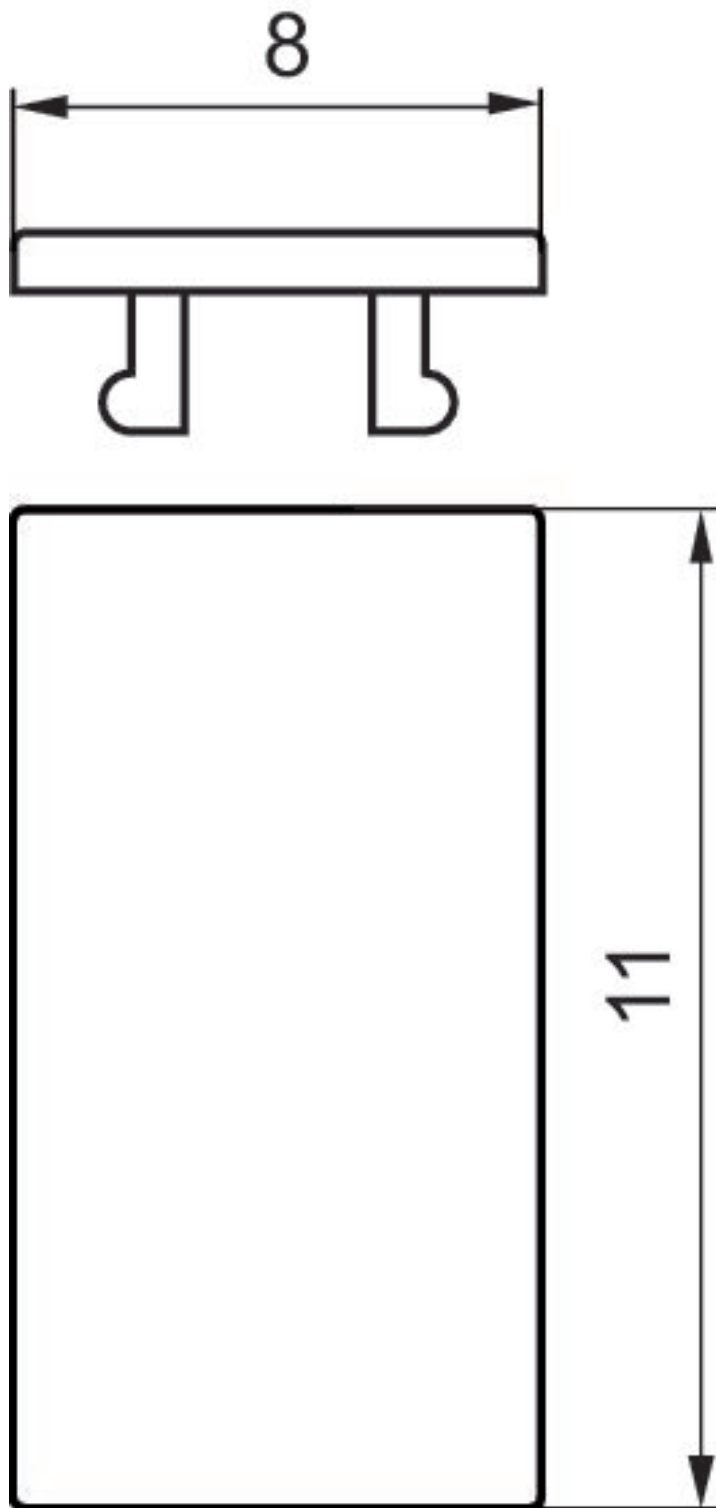


Name plates, AV-BP base plate below



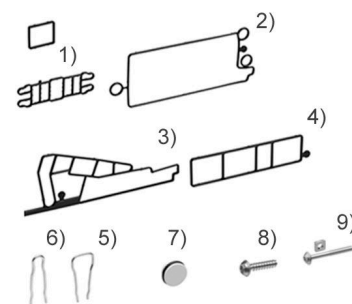
Type	Weight [kg]	Material	Part No.
Name plates	0.014	Polyamide	R412026461

Dimensions



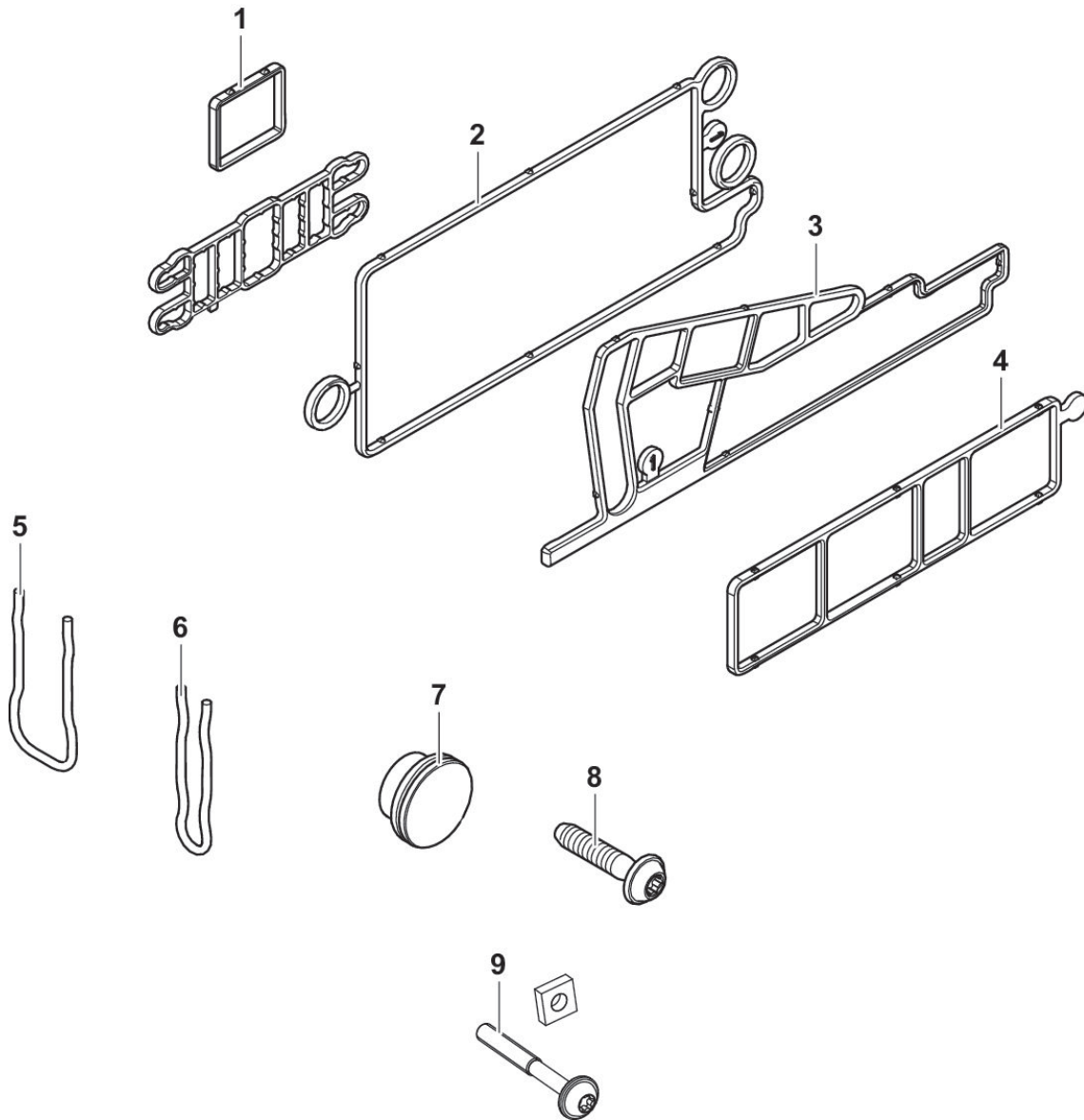
Accessories

Ambient temperature min./max.: -10 °C ... 60 °C



Type	Note	Part No.
AV03, Valve seals	AV03	R412018338
AV05, Valve seals	AV05	R412020084
AV03, Seals for left end plate	AV03	R412018344
AV05, Seals for left end plate	AV05	R412020080
AV03, Seals for base plate	AV03	R412018345
AV05, Seals for base plate	AV05	R412020082
AV03, Seals for function modules	AV03	R412018346
AV05, Seals for function modules	AV05	R412020081
AV03, Retaining clips for supply plate	AV03	R412018746
AV05, Retaining clips for supply plate	AV05	R412020075
AV03 / AV05, Retaining clips for base plate	AV03 / AV05	R412018747
AV03, Sealing cap for right end plate	AV03 / AV05	R412018351
AV03 / AV05, Screws for left end plate	AV03 / AV05	R412015467
AV03, Mounting screw for valve	AV03 / AV05	R412018336

Overview drawing




Position	Type	for series	Part No.
1	Valve seals	AV03	R412018338
1	Valve seals	AV05	R412020084
2	Seals for left end plate	AV03	R412018344
2	Seals for left end plate	AV05	R412020080
3	Seals for base plate	AV03	R412018345
3	Seals for base plate	AV05	R412020082
4	Seals for function modules	AV03	R412018346
4	Seals for function modules	AV05	R412020081
5	Retaining clips for supply plate	AV03 / AV05	R412018746
5	Retaining clips for supply plate	AV05	R412020075
6	Retaining clips for base plate	AV03 / AV05	R412018747
7	Sealing cap for right end plate	AV03	R412018351
8	Screws for left end plate	AV03 / AV05	R412015467
9	Mounting screw for valve	AV03	R412018336
tablefooter repeatColumn			

Pressure gauge, Series PG1-ROB

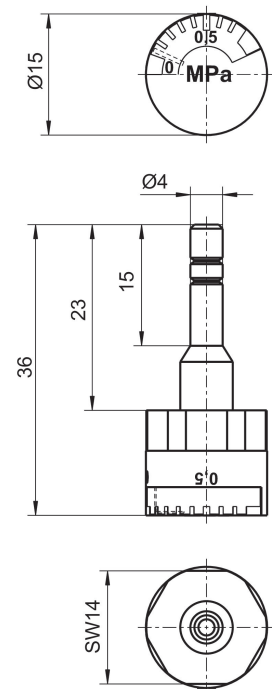
Ambient temperature min./max.: 0 °C ... 60 °C

Working pressure min./max.: 0 bar ... 10 bar



	Type	Nominal diameter [mm]	Port	Min. main scale range of application [bar]	Max. main scale range of application [bar]	Min. main scale display range [bar]	Max. main scale display range [bar]	Part No.
	Bourdon tube pressure gauge	15	Ø 4	0	10	0	10	R412009413

Dimensions in mm



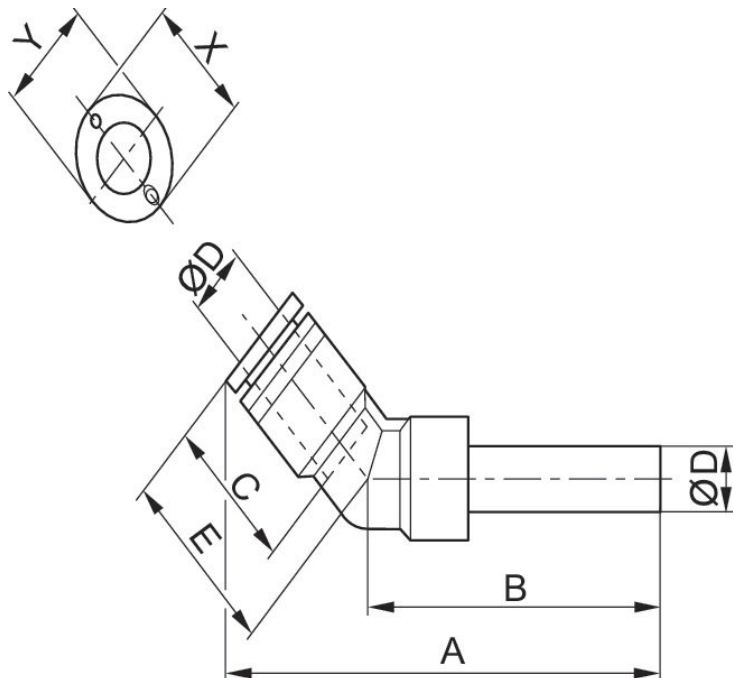
Series QR1-S-RVW Mini

Compressed air connection type: pin bushing
 Compressed air connection type 2: Push-in fitting
 Ambient temperature min./max.: 0 °C ... 60 °C
 Working pressure min./max.: -0.95 bar ... 10 bar



G	Ø D	Delivery unit [piece]	Material	Part No.
Ø 4	Ø 4	10	Polybutyleneterephthalate	R412005046

Dimensions



Part No.	Port D	Port G	A	B	C	E	X	Y
R412005046	Ø 4	Ø 4	56,36	43,6	16	18.1	12	10

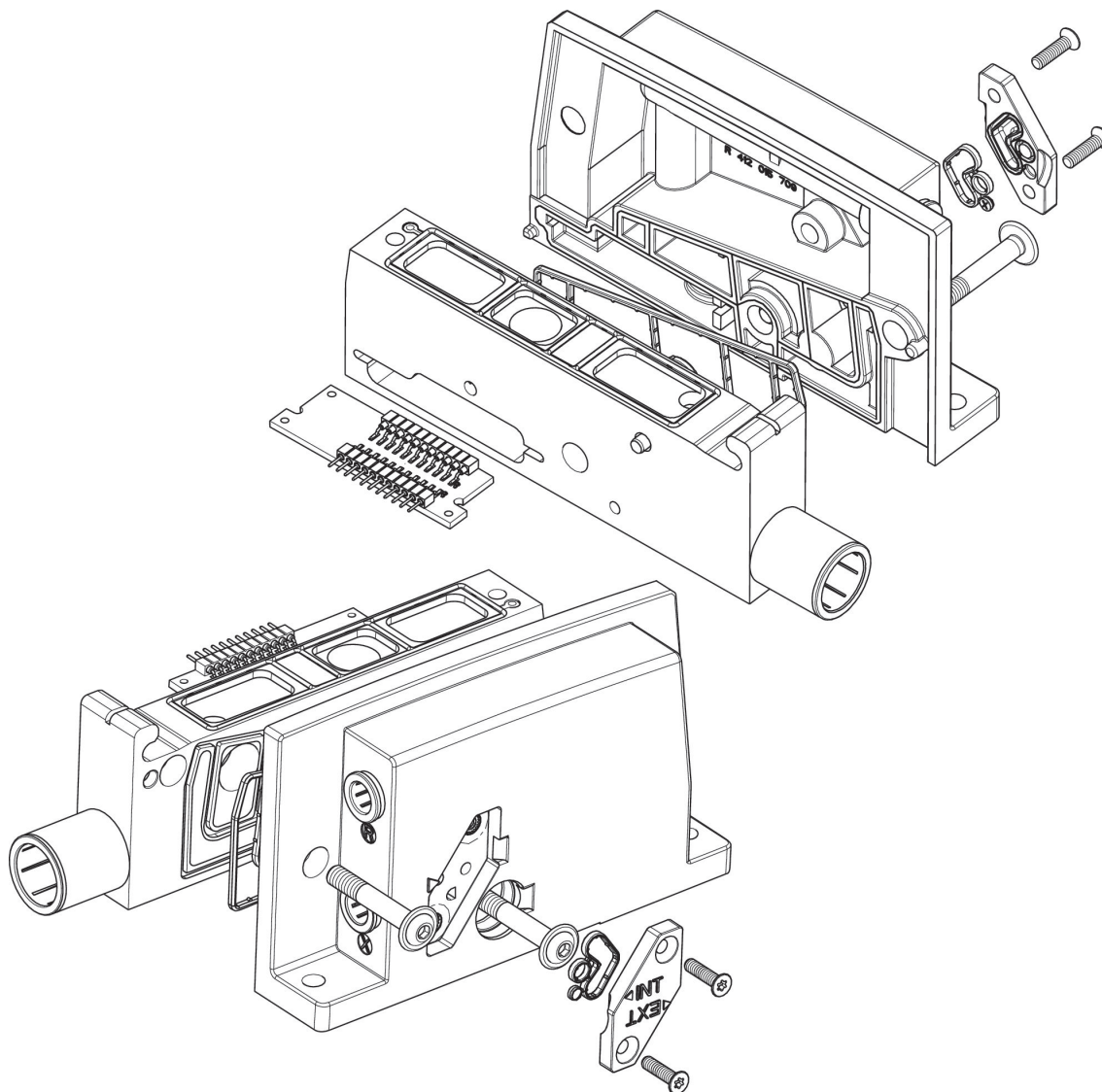
Extension kit, combination plate, Series AV



	Type	Plate type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, no pressure zones	Base plate	Combination module, right end plate AV05, screws, and seal	Fieldbus	R412021780
	Supply plate, connection 1, no pressure zones	Base plate	Combination module, right end plate AV05, screws, and seal	Fieldbus	R412022594
	Supply plate, connection 1, no pressure zones	Base plate	Combination module, right end plate AV05, screws, and seal	Multipole	R412021777
	Supply plate, connection 1, no pressure zones	Base plate	Combination module, right end plate AV05, screws, and seal	Multipole	R412022592
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Base plate	Combination module, right end plate AV05, screws, and seal	Fieldbus	R412021779
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Base plate	Combination module, right end plate AV05, screws, and seal	Fieldbus	R412022593
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Base plate	Combination module, right end plate AV05, screws, and seal	Multipole	R412021776

	Type	Plate type	Scope of delivery	Version	Part No.
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Base plate	Combination module, right end plate AV05, screws, and seal	Multipole	R412022591

Dimensions



Push-in fittings

Ambient temperature min./max.: -10 °C ... 60 °C

Working pressure min./max.: 0.9 bar ... 10 bar

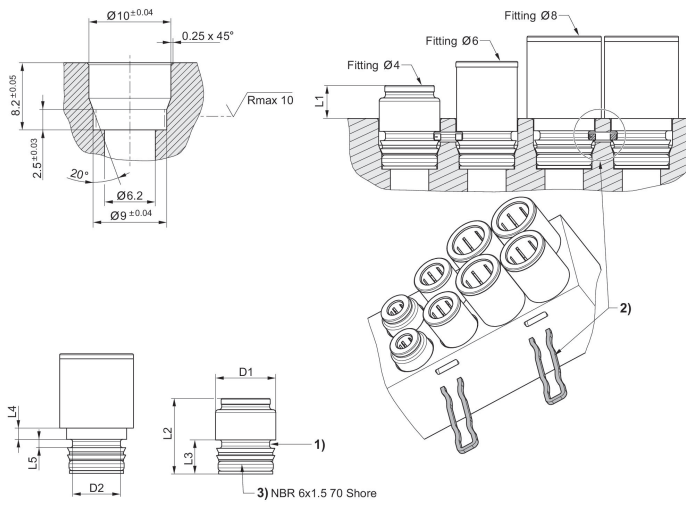


Delivery unit [piece]	Type	Material	Part No.
2	Push-in fitting Ø 4 mm - 5/32", straight	Brass	R412018617
2	Push-in fitting Ø 6 mm, straight	Brass	R412018618
2	Push-in fitting Ø 8 mm - 5/16", straight	Brass	R412018619
1	Push-in fitting Ø 3 mm, angled, short, and push-in fitting Ø 3 mm, angled, long	Brass	R412018621
1	Push-in fitting Ø 4 mm - 5/32", angled, short and push-in fitting Ø 4 mm - 5/32", angled, long	Brass	R412018622
1	Push-in fitting Ø 6 mm, angled, short Push-in fitting Ø 6 mm, angled, long	Brass	R412018623
10	Push-in fitting Ø 3 mm, angled, short	Brass	R422002561
10	Plug connector Ø 3 mm, angled, long	Brass	R422002569
10	Push-in fitting Ø 4 mm - 5/32", straight	Brass	R422002554
10	Push-in fitting Ø 4 mm,	Brass	R422002562

Delivery unit [piece]	Type	Material	Part No.
	5/32", angled, short		
10	Push-in fitting Ø 4 mm, 5/32", angled, long	Brass	R422002570
10	Push-in fitting Ø 6 mm, straight	Brass	R422002555
10	Push-in fitting Ø 6 mm, angled, short	Brass	R422002563
10	Push-in fitting Ø 6 mm, angled, long	Brass	R422002571
10	Push-in fitting Ø 8 mm, 5/16", straight	Brass	R422002557
10	Push-in fitting Ø 8 mm, 5/16", angled, short	Polyamide, fiber-glass reinforced, black	R422002565
10	Push-in fitting Ø 8 mm, 5/16", angled, long	Polyarylamide, fiber-glass reinforced	R422002573
1	Push-in fitting Ø 8 mm, angled, short Push-in fitting Ø 8 mm, angled, long	Polyamide, fiber-glass reinforced, black	R422002944
2	Push-in fitting 1/8", straight	Brass	R412021785
2	Push-in fitting 1/4", straight	Brass	R412018620
10	Push-in fitting 3/8", straight	Brass	R422002560
2	Push-in fitting Ø 12 mm, straight	Brass	R422102508
10	Push-in fitting Ø 12 mm, straight	Brass	R422002559
10	Push-in fitting 1/4", straight	Brass	R422002556
10	Push-in fitting 1/8", straight	Brass	R412021786

**R412018617, R412018618, R412018619,
R422002554, R422002555, R422002557**

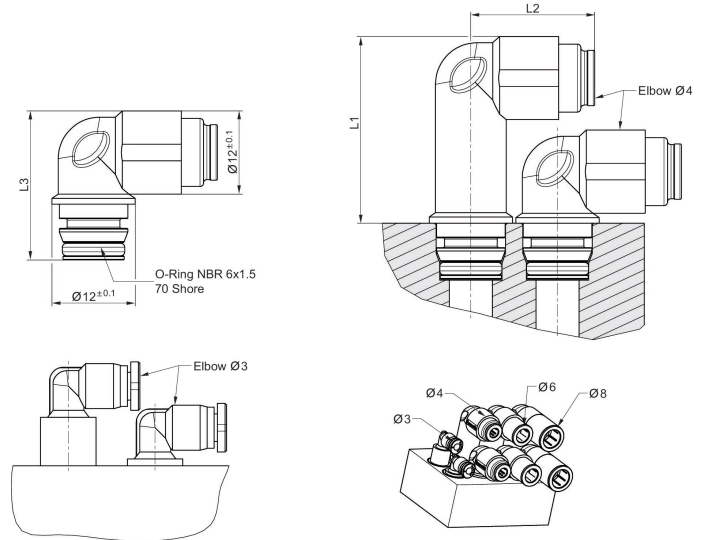
Dimensions



- 1) for adjustable stops
- 2) Staple assembly example
- 3) O-ring

**R412018621, R412018622, R412018623,
R422002561, R422002569, R422002562,
R422002570, R422002563, R422002571,
R422002565, R422002573**





Dimensions



Efficient pneumatic solutions, our program:
cylinders and drives, valves and valve systems,
air supply management, proportional pressure
control valves



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