

Valve systems ▶ Valve systems










Series AV03

Brochure







Series AV03

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Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, top / D-Sub plug, 44-pin, top



18204

Blocking principle	Combination of double and triple base plate principles
Mounting orientation	Any
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Protection class with connection	IP65
Number of valve positionsmax.	24 / 36
Number of solenoid coilsmax.	24 / 40
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%
 Materials:	
End plate	Aluminum; Polyamide
Base plate	Polyamide

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- The combination of double and triple base plates allows a configuration in increments of 1.
- See the following pages on the series for technical data on individual components.
- See the Media Centre for information on pin assignment (version A and version B) of the D-Sub connector.

Configurable product

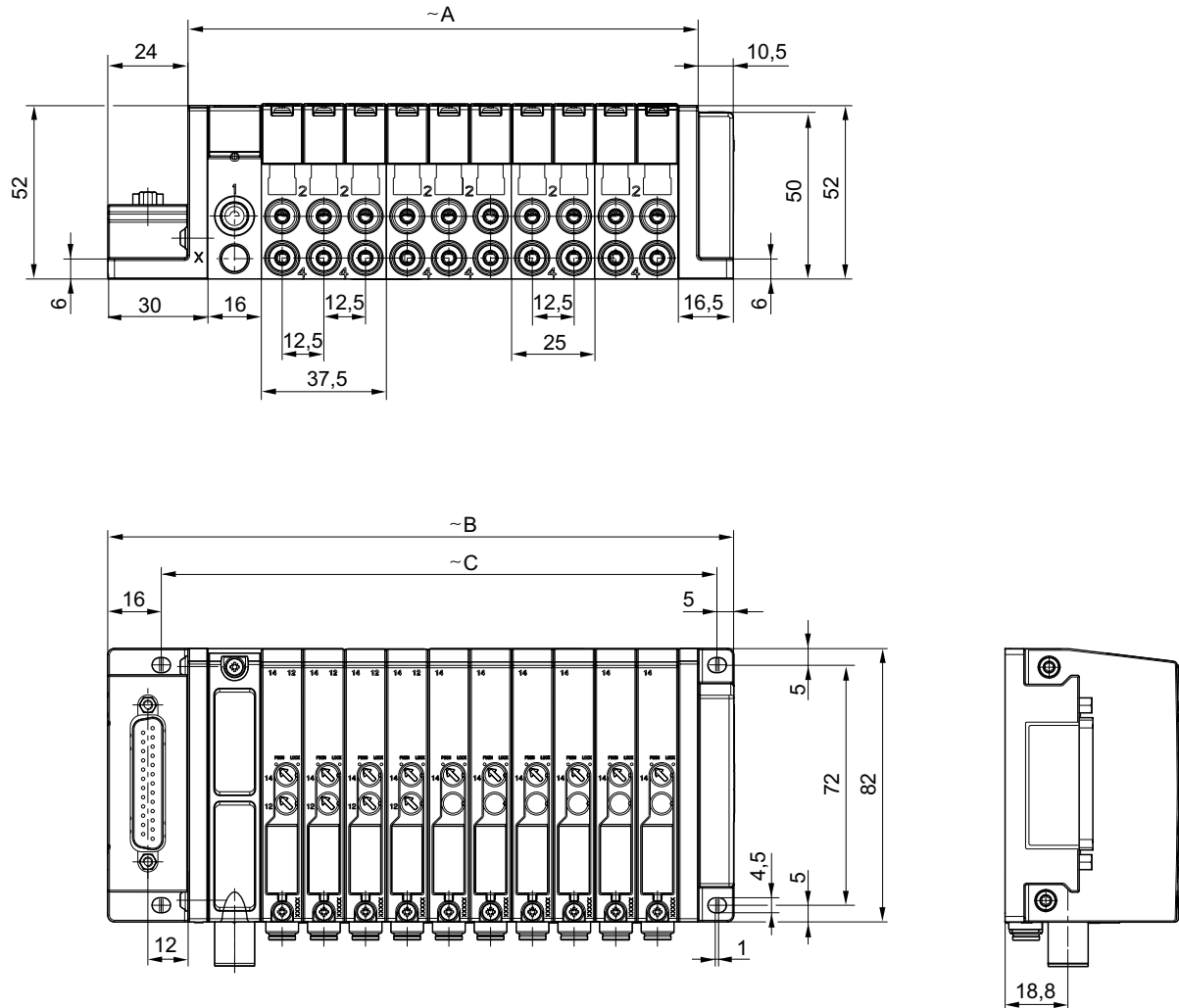
 This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Valve systems

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, top / D-Sub plug, 44-pin, top

Dimensions in mm



A = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 12 mm

B = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 46.5 mm

C = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 25.5 mm

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting Ø 4 mm, Ø 6 mm, and Ø 8 mm. Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting Ø3 mm. Connection angle: 90°

2 and 4 = push-in fitting Ø 4 mm and Ø 6 mm. Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting Ø8 mm. Connection angle: straight

R = collected exhaust air, push-in fitting Ø 4 mm. Connection angle: straight

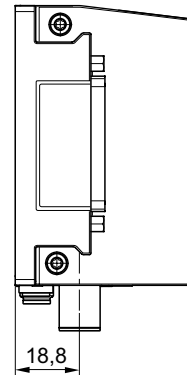
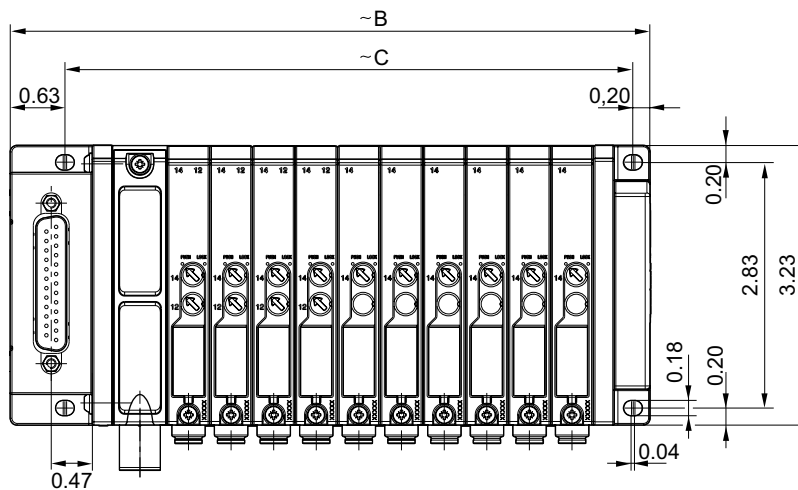
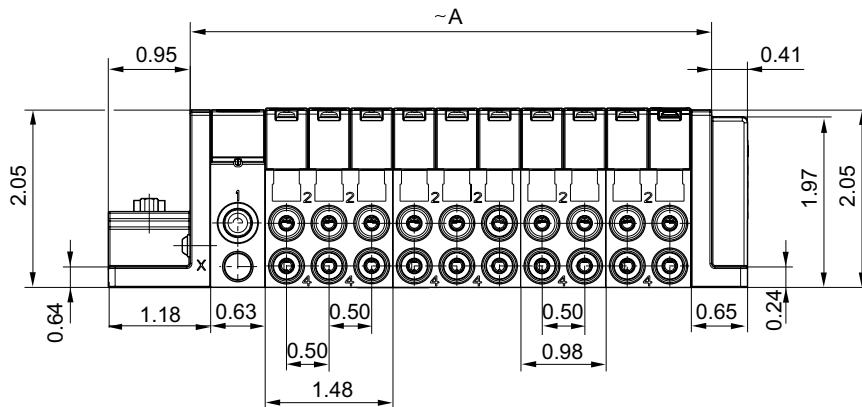
X = external pilot, push-in fitting Ø 4 mm. Connection angle: straight

An example configuration is shown. You can calculate the dimensions for your configuration using the formula or read them directly in the configurator.

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, top / D-Sub plug, 44-pin, top

Dimensions in inches



IM0043853

A = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 0.47 inch

B = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1.83 inch

C = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1 inch

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting 5/32", 1/4", and 5/16". Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting 1/8". Connection angle: 90°

2 and 4 = push-in fitting 5/32" and 1/4". Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting 5/16". Connection angle: straight

R = collected pilot exhaust air, push-in fitting 5/32". Connection angle: straight

X = external pilot, push-in fitting 5/32". Connection angle: straight

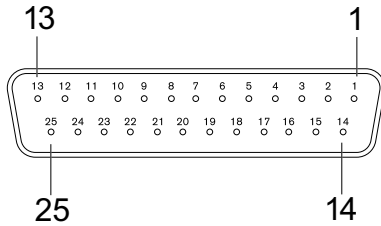
An example configuration is illustrated. The delivered product may thus deviate from the illustration.

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Valve system, Series AV03

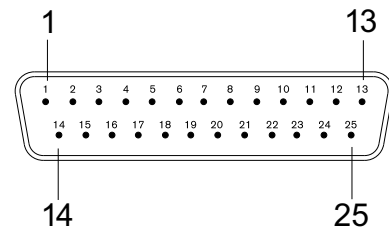
▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, top / D-Sub plug, 44-pin, top

Multipole plug (25-pin), cable identification as per DIN 47100



00136701

Socket (female)



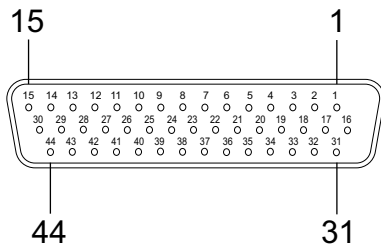
00137724

Plug (male)

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green

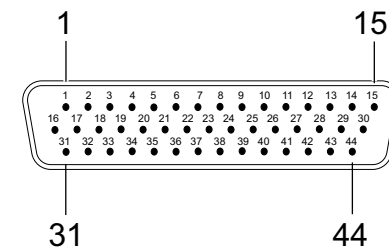
Pin	14	15	16	17	18	19	20	21	22	23	24	25
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

Multipole plug (44-pin), cable identification as per DIN 47100



00137727

Socket (female)



00137727_a

Plug (male)

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green

Pin	14	15	16	17	18	19	20	21	22	23	24	25
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

Pin	26	27	28	29	30	31	32	33	34	35	36	37
Color	brown/black	gray/green	yellow/gray	pink/green	yellow/pink	green/blue	yellow/blue	green/red	yellow/red	green/black	yellow/black	gray/blue

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

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, on the side / D-Sub plug, 44-pin, on the side



18205

Blocking principle	Combination of double and triple base plate principles
Mounting orientation	Any
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 μm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Protection class with connection	IP65
Number of valve positionsmax.	24 / 36
Number of solenoid coilsmax.	24 / 40
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%
Materials:	
End plate	Aluminum; Polyamide
Base plate	Polyamide

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- The combination of double and triple base plates allows a configuration in increments of 1.
- See the following pages on the series for technical data on individual components.
- See the Media Centre for information on pin assignment (version A and version B) of the D-Sub connector.

Configurable product

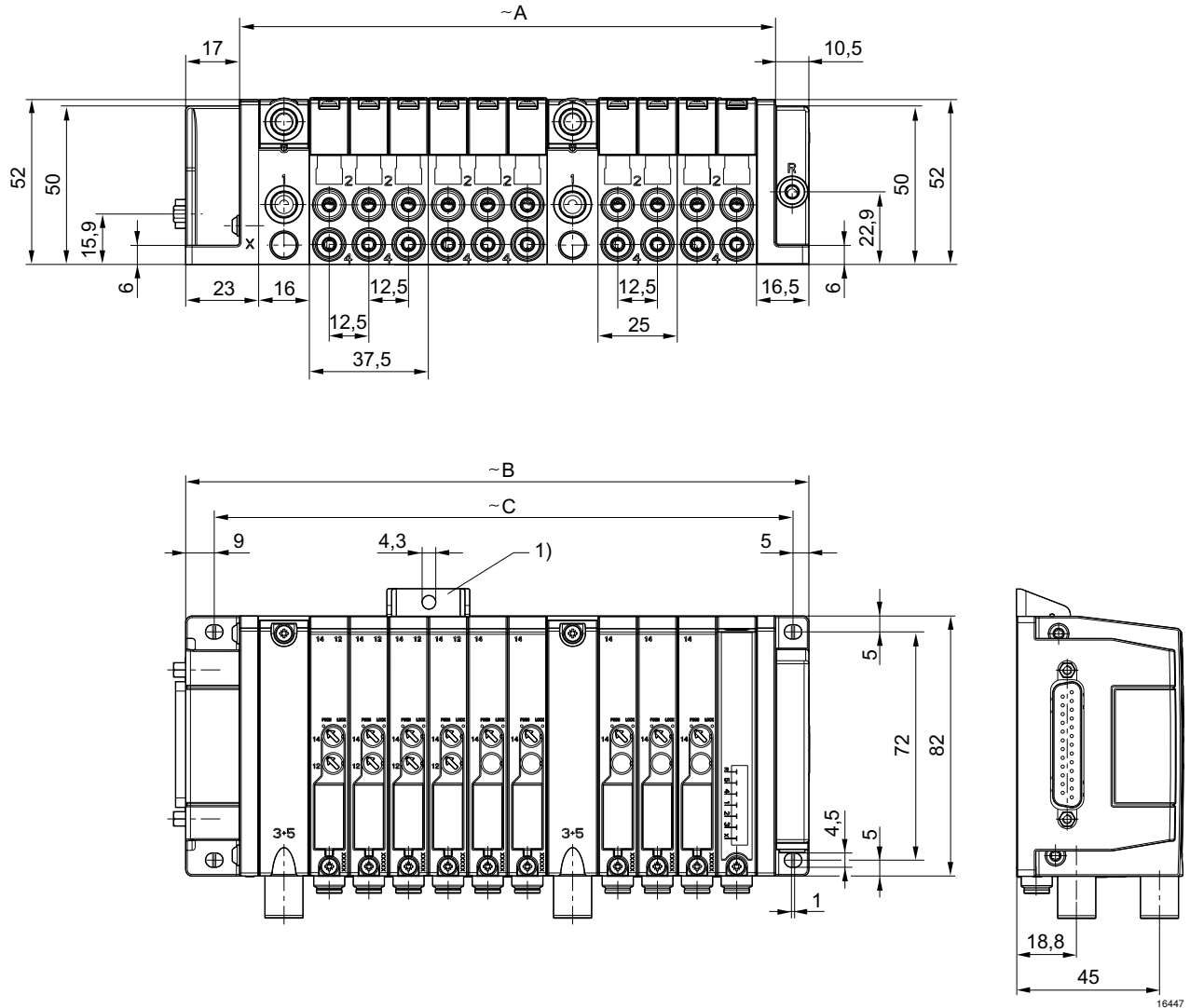

This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

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Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, on the side / D-Sub plug, 44-pin, on the side

Dimensions in mm



1) Retaining bracket (optional)

A = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 12 mm

B = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 39.5 mm

C = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 25.5 mm

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting \varnothing 4 mm, \varnothing 6 mm, and \varnothing 8 mm. Connection angle: straight and 90° (exchangeable)

2 and 4 = push-in fitting \varnothing 3 mm. Connection angle: 90°

2 and 4 = push-in fitting \varnothing 4 mm and \varnothing 6 mm. Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting \varnothing 8 mm. Connection angle: straight

R = collected exhaust air, push-in fitting \varnothing 4 mm. Connection angle: straight

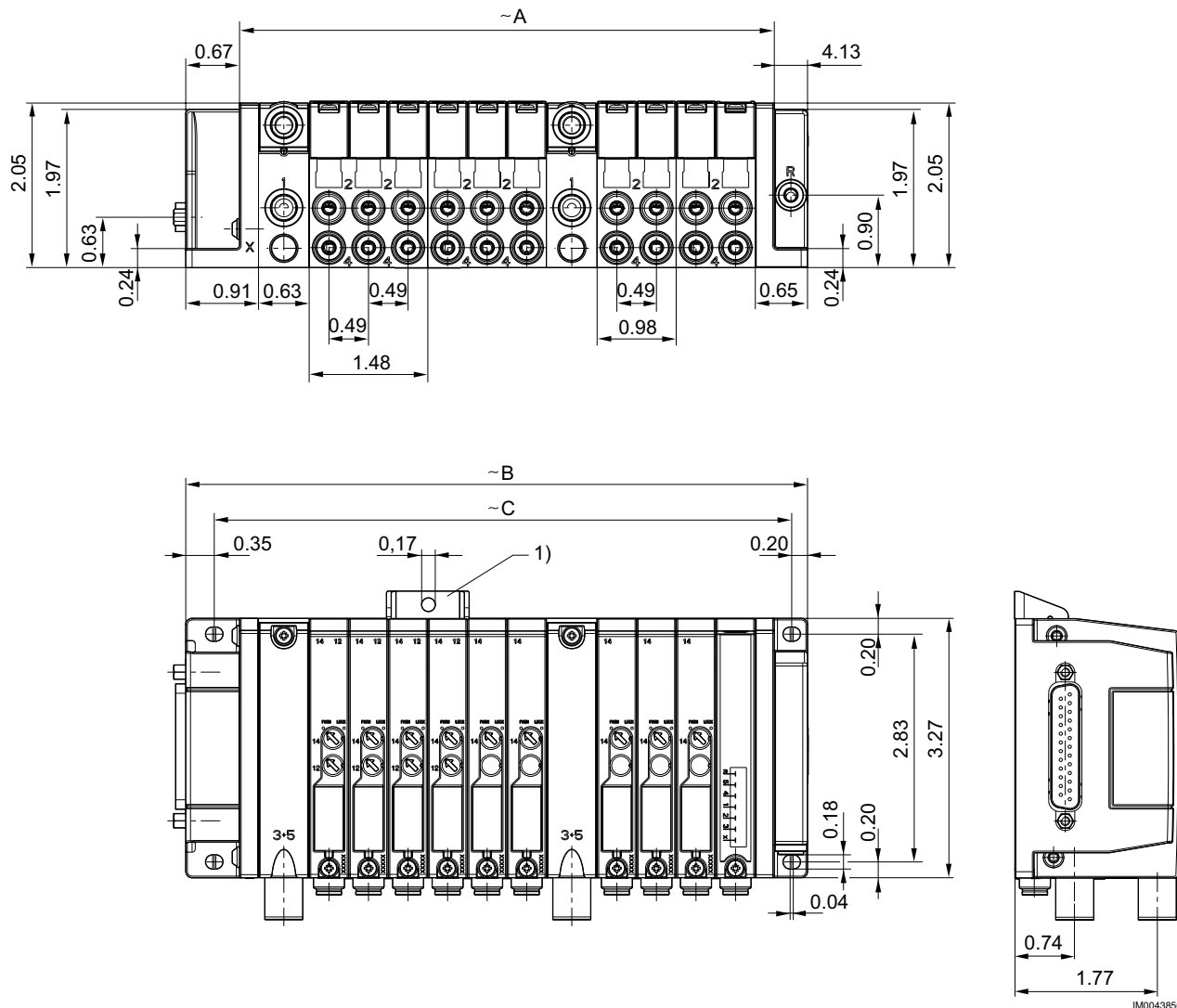
X = external pilot, push-in fitting \varnothing 4 mm. Connection angle: straight

An example configuration is shown. You can calculate the dimensions for your configuration using the formula or read them directly in the configurator.

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, on the side / D-Sub plug, 44-pin, on the side

Dimensions in inches



A = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 0.47 inch

B = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1.83 inch

C = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1 inch

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting 5/32", 1/4", and 5/16". Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting 1/8". Connection angle: 90°

2 and 4 = push-in fitting 5/32" and 1/4". Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting 5/16". Connection angle: straight

R = collected pilot exhaust air, push-in fitting 5/32". Connection angle: straight

X = external pilot, push-in fitting 5/32". Connection angle: straight

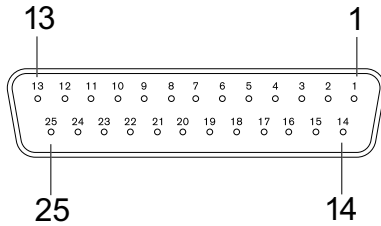
An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Valve systems ▶ Valve systems

Valve system, Series AV03

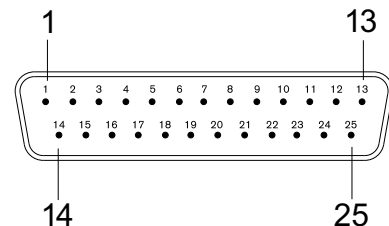
▶ Qn Max. = 300 l/min ▶ Multipole ▶ Electr. connection: D-Sub plug, 25-pin, on the side / D-Sub plug, 44-pin, on the side

Multipole plug (25-pin), cable identification as per DIN 47100



00136701

Socket (female)

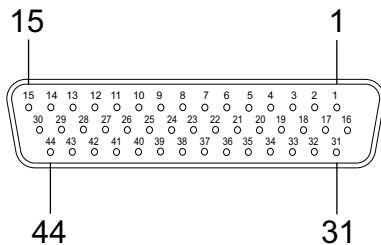


00137724

Plug (male)

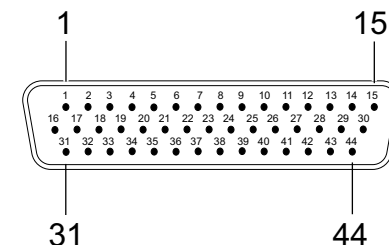
Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green
Pin	14	15	16	17	18	19	20	21	22	23	24	25	
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black	

Multipole plug (44-pin), cable identification as per DIN 47100



00137727

Socket (female)



00137727_a

Plug (male)

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green
Pin	14	15	16	17	18	19	20	21	22	23	24	25	
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black	
Pin	26	27	28	29	30	31	32	33	34	35	36	37	
Color	brown/black	gray/green	yellow/gray	pink/green	yellow/pink	green/blue	yellow/blue	green/red	yellow/red	green/black	yellow/black	gray/blue	
Pin	38	39	40	41	42	43	44						
Color	pink/blue	gray/red	pink/red	gray/black	pink/black	blue/black	red/black						

Valve system, Series AV03

▶ IO-Link



23389

Mounting orientation	Any
Ambient temperature min./max.	-10 °C / +60 °C
Protection class with connection	IP65
Number of valve positionsmax.	24

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- Minimum configuration: 6 valve positions

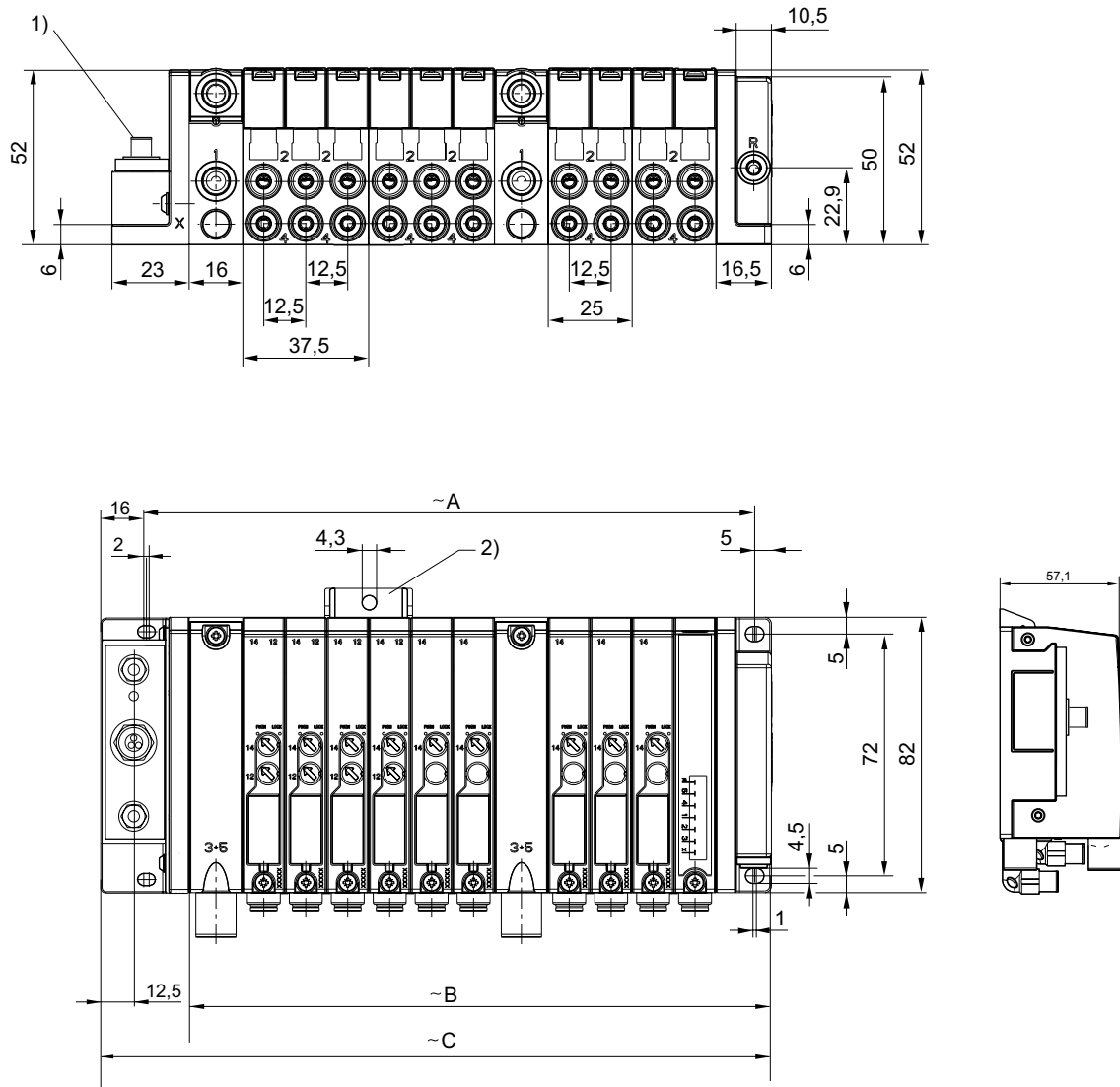
Configurable product


This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve system, Series AV03

▶ IO-Link

Dimensions in mm



1) IO-Link

2) Retaining bracket (optional)

A = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 12 mm

B = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 39.5 mm

C = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 25.5 mm

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting Ø 4 mm, Ø 6 mm, and Ø 8 mm. Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting Ø3 mm. Connection angle: 90°

2 and 4 = push-in fitting Ø 4 mm and Ø 6 mm. Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting Ø8 mm. Connection angle: straight

R = collected exhaust air, push-in fitting Ø 4 mm. Connection angle: straight

X = external pilot, push-in fitting Ø 4 mm. Connection angle: straight

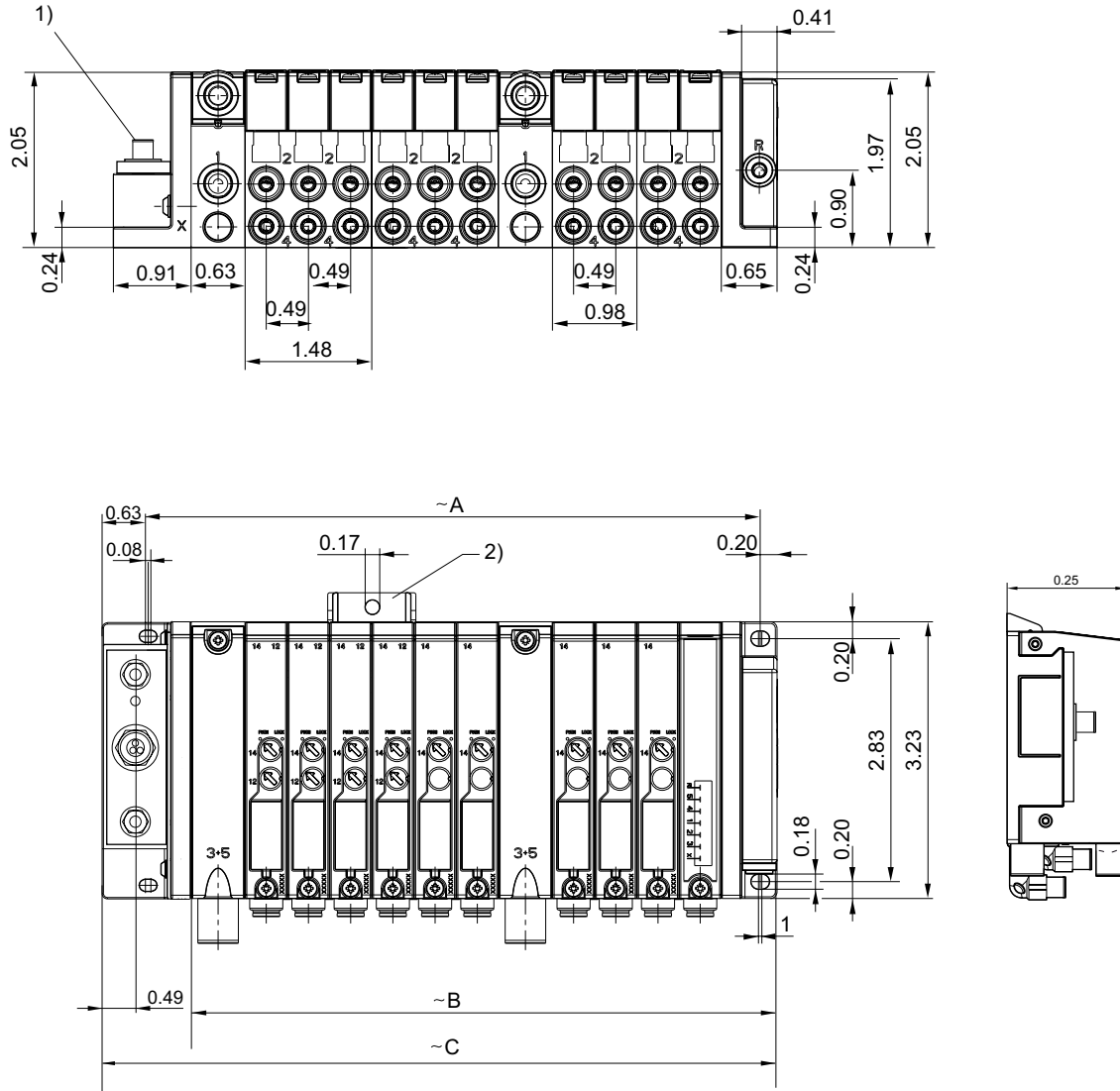
An example configuration is shown. You can calculate the dimensions for your configuration using the formula or read them directly in the configurator.

IM0041549

Valve system, Series AV03

▶ IO-Link

Dimensions in inches



IM0043862

1) IO-Link

2) Retaining bracket (optional)

A = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 0.47 inch

B = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1.83 inch

C = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1 inch

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting 5/32", 1/4", and 5/16". Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting 1/8". Connection angle: 90°

2 and 4 = push-in fitting 5/32" and 1/4". Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting 5/16". Connection angle: straight

R = collected pilot exhaust air, push-in fitting 5/32". Connection angle: straight

X = external pilot, push-in fitting 5/32". Connection angle: straight

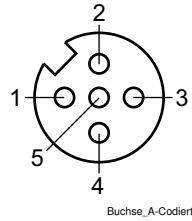
An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Valve systems ▶ Valve systems

Valve system, Series AV03

▶ IO-Link

Pin assignment, A-coded



Pin	Bus, M12x1, A-coded, 5-pin
1	L+
2	UA +24 V
3	L-
4	CQ (IO-Link data)
5	UA 0 V

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Field bus connection with I/O functionality (AES) ▶ Supported fieldbus protocols: PROFINET IO, EtherCAT, DeviceNet, PROFIBUS DP, CANopen, EtherNET/IP, POWERLINK



18455

Version	Link structure AES
Blocking principle	Combination of double and triple base plate principles
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 μm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Protection class, with plug	IP65
Number of valve positions	2 / 64
Number of solenoid coils	2 / 128
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Operational voltage valves	24 V DC
Valve voltage tolerance	-10% / +10%
Power supply connection	M12, A-coded, 4-pin
Materials:	
End plate	Aluminum
Base plate	Polyamide

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- The combination of double and triple base plates allows a configuration in increments of 1.
- See the following pages on the series for technical data on individual components.
- The technical data for the electronics (link structures) can be found in the section “Fieldbus Connections”.

Configurable product



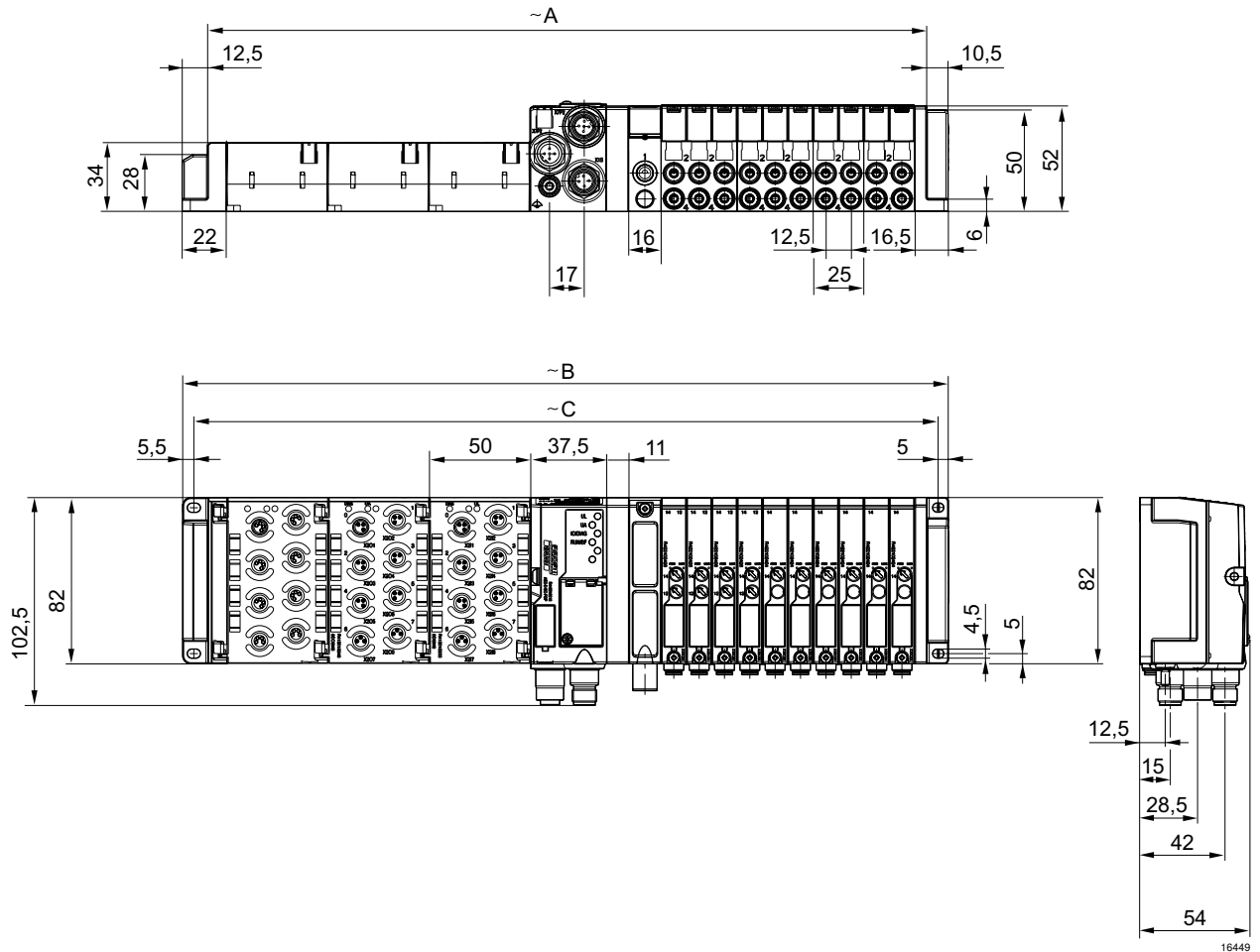
This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve systems ▶ Valve systems

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Field bus connection with I/O functionality (AES) ▶ Supported fieldbus protocols: PROFINET IO, EtherCAT, DeviceNet, PROFIBUS DP, CANopen, EtherNET/IP, POWERLINK

Dimensions in mm, Field bus connection with I/O functionality (AES)



A = number of valve positions x 12.5 mm + number of supply plates x 16 mm + number of I/O x 50 mm + 64 mm
 B = number of valve positions x 12.5 mm + number of supply plates x 16 mm + number of I/O x 50 mm + 87 mm
 C = number of valve positions x 12.5 mm + number of supply plates x 16 mm + number of I/O x 50 mm + 76.5 mm
 The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting Ø 4 mm, Ø 6 mm, and Ø 8 mm. Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting Ø3 mm. Connection angle: 90°

2 and 4 = push-in fitting Ø 4 mm and Ø 6 mm. Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting Ø8 mm. Connection angle: straight

R = collected exhaust air, push-in fitting Ø 4 mm. Connection angle: straight

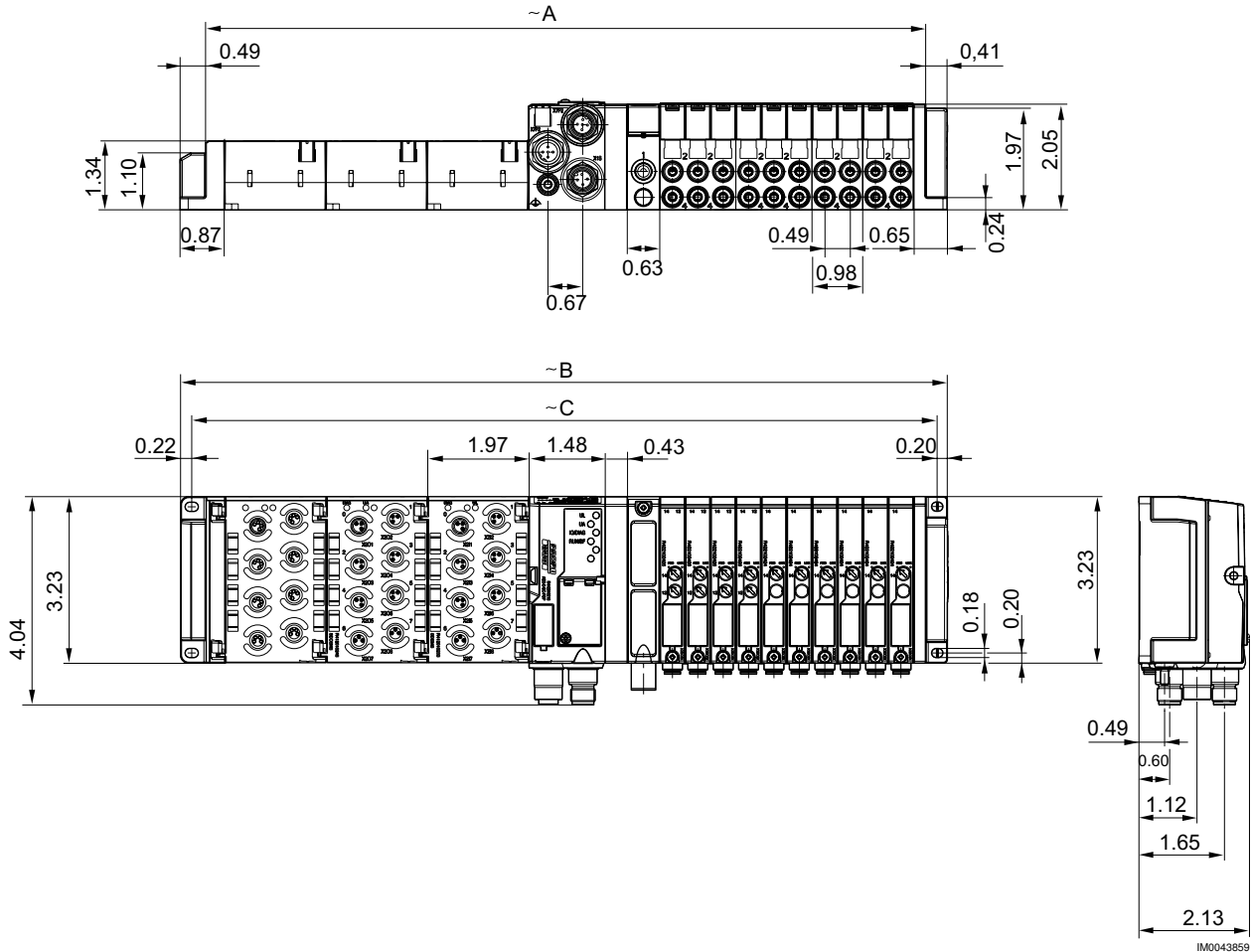
X = external pilot, push-in fitting Ø 4 mm. Connection angle: straight

An example configuration is shown. You can calculate the dimensions for your configuration using the formula or read them directly in the configurator.

Valve system, Series AV03

▶ Qn Max. = 300 l/min ▶ Field bus connection with I/O functionality (AES) ▶ Supported fieldbus protocols: PROFINET IO, EtherCAT, DeviceNet, PROFIBUS DP, CANopen, EtherNET/IP, POWERLINK

Dimensions in inches, Field bus connection with I/O functionality (AES)



IM0043859

A = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + number of I/O x 1.97 inch + 2.48 inch
 B = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + number of I/O x 1.97 inch + 3.56 inch mm
 C = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + number of I/O x 1.97 inch + 3.01 inch
 The supply plate in front of the first valve must be taken into consideration in the dimensions.
 1 = push-in fitting 5/32", 1/4", and 5/16". Connection angle 1: straight and 90° (exchangeable)
 2 and 4 = push-in fitting 1/8". Connection angle: 90°
 2 and 4 = push-in fitting 5/32" and 1/4". Connection angle: straight and 90° (exchangeable)
 3 and 5 = push-in fitting 5/16". Connection angle: straight
 R = collected pilot exhaust air, push-in fitting 5/32". Connection angle: straight
 X = external pilot, push-in fitting 5/32". Connection angle: straight
 An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Valve systems ▶ Valve systems

Valve system, Series AV03 , AV05

▶ AV03/AV05 in combination



23186

Blocking principle	Combination of double and triple base plate principles
Mounting orientation	Any
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-10°C / +60°C
Medium temperature min./max.	-10°C / +60°C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Protection class with connection	IP65
Number of valve positionsmax.	2 / 64
Number of solenoid coilsmax.	2 / 128
 Materials:	
End plate	Polyamide, fiber-glass reinforced
Base plate	Polyamide, fiber-glass reinforced
Lubricant	ISO 21469 (NSF-H1)

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- The combination of double and triple base plates allows a configuration in increments of 1.
- See the following pages on the series for technical data on individual components.
- The technical data for the electronics (link structures) can be found in the section “Fieldbus Connections”.

Configurable product

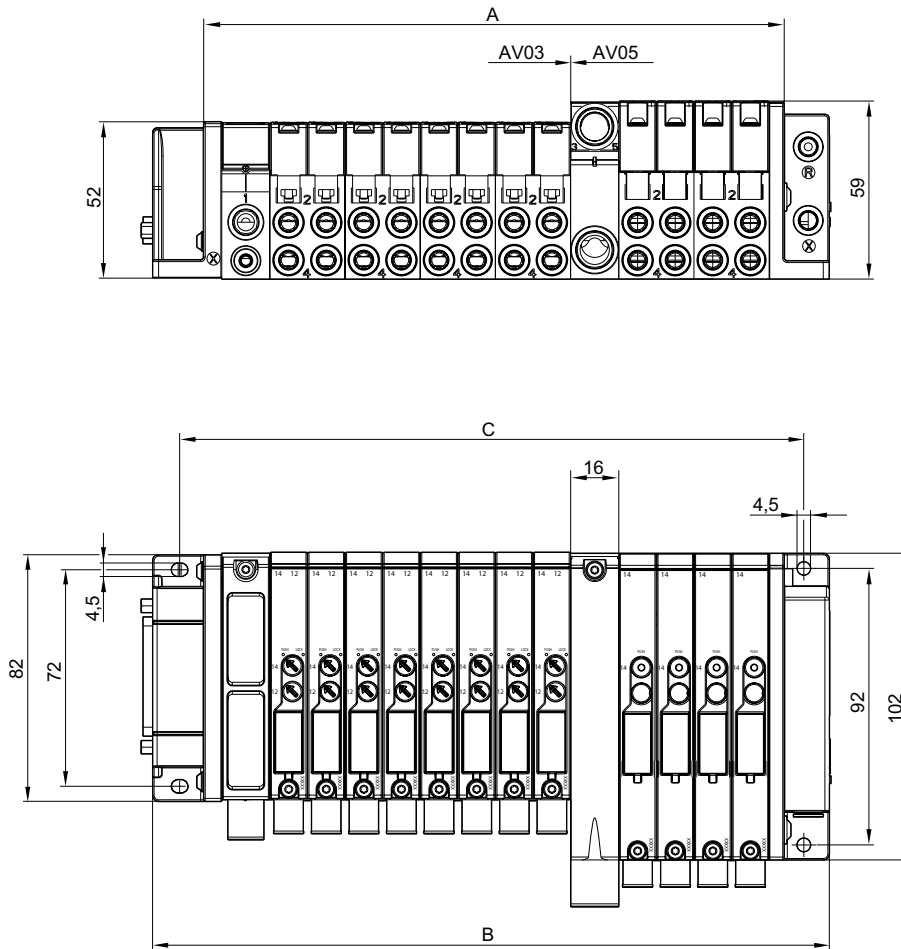


This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Valve system, Series AV03 , AV05

▶ AV03/AV05 in combination

Dimensions in mm



23118

D-Sub plug, top or side

A = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 11 mm

B = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 43 mm

C = number of valve positions x 12.5 mm + number of supply plates x 16 mm + 25.5 mm

Bus coupler

A = number of valve positions x 12.5 mm + number of supply plates x 16 mm + number of I/O x 50 mm + 63 mm

B = number of valve positions x 12.5 mm + number of supply plates x 16 mm + number of I/O x 50 mm + 90.5 mm

C = number of valve positions x 12.5 mm + number of supply plates x 16 mm + number of I/O x 50 mm + 76.5 mm

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting Ø12 mm. Connection angle 1: straight (exchangeable fittings)

2 and 4 = push-in fitting Ø6 mm and Ø8 mm. Connection angle: straight and 90° (exchangeable fittings)

3 and 5 = push-in fitting Ø12 mm. Connection angle: straight

R = collected pilot exhaust air, push-in fitting Ø6 mm. Connection angle: straight

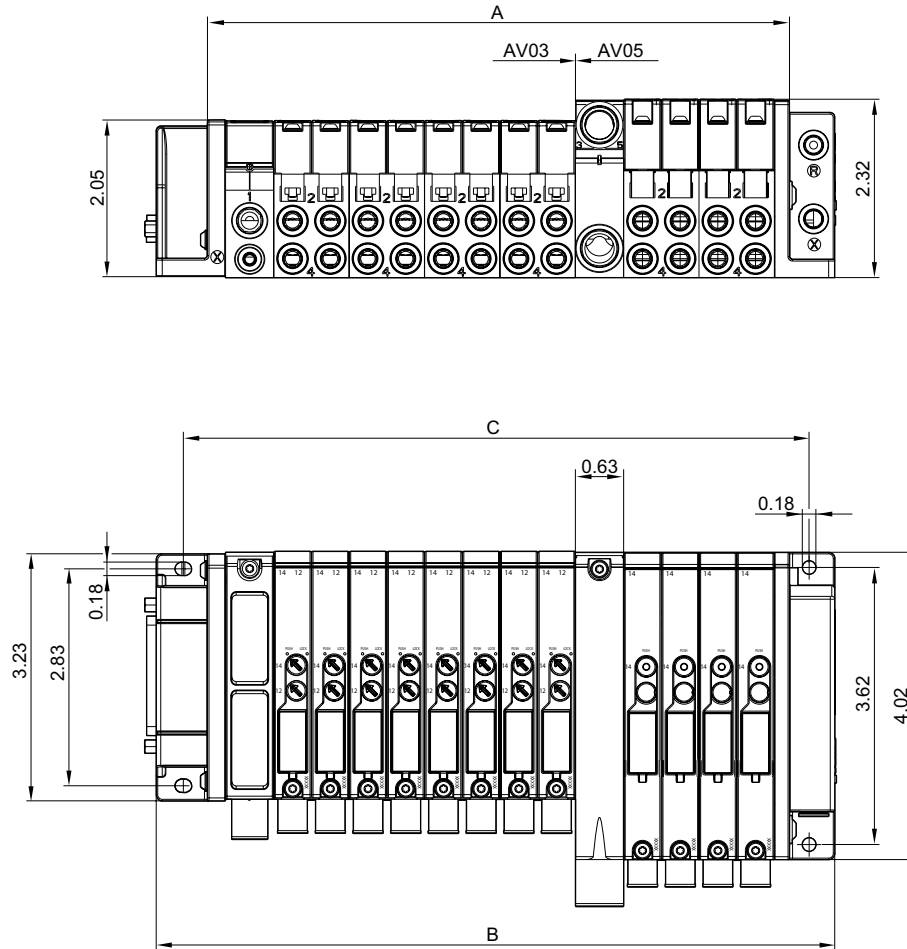
X = external pilot, push-in fitting Ø6 mm. Connection angle: straight

Valve systems ▶ Valve systems

Valve system, Series AV03 , AV05

▶ AV03/AV05 in combination

Dimensions in inches



IM0043865

D-Sub plug, top or side

A = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 0.43 inch

B = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1.70 inch

C = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + 1 inch

Bus coupler

A = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + number of I/O x 1.97 inch + 2.48 inch

B = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + number of I/O x 1.97 inch + 3.56 inch mm

C = number of valve positions x 0.49 inch + number of supply plates x 0.63 inch + number of I/O x 1.97 inch + 3.01 inch

The supply plate in front of the first valve must be taken into consideration in the dimensions.

1 = push-in fitting 5/32", 1/4", and 5/16". Connection angle 1: straight and 90° (exchangeable)

2 and 4 = push-in fitting 1/8". Connection angle: 90°

2 and 4 = push-in fitting 5/32" and 1/4". Connection angle: straight and 90° (exchangeable)

3 and 5 = push-in fitting 5/16". Connection angle: straight

R = collected pilot exhaust air, push-in fitting 5/32". Connection angle: straight

X = external pilot, push-in fitting 5/32". Connection angle: straight

2x2/2-directional valve, Series AV03

▶ Qn = 280 l/min ▶ NC/NC ▶ plate connection ▶ Manual override: with detent ▶ double solenoid ▶ Pilot: external



18437

Version	Spool valve, zero overlap
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Nominal flow Qn	280 l/min
	with directional pilot air exhaust
Protection class with connection	IP65
Protective circuit	Z-diode
	Protected against polarity reversal
Status display LED	Yellow
Duty cycle	100 %
Typ. switch-on time	16 ms
Typ. switch-off time	20 ms
Mounting screw	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.52 Nm
Materials:	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber; Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.55

		MO	Operating voltage	Power consumption	Flow conductance		Weight	Part No.
					b	C		
			DC	DC				
				[W]		[l/(s*bar)]	[kg]	
	NC/NC		24 V	0.55	0.4	1.17	0.052	R422102436

MO = Manual override

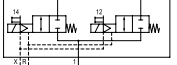

Basic valve with pilot valve

Nominal flow Qn at 6 bar and Δp = 1 bar

Valve systems ▶ Valve systems

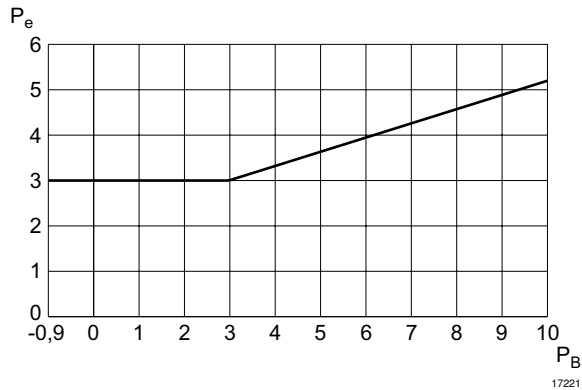
2x2/2-directional valve, Series AV03

▶ Qn = 280 l/min ▶ NC/NC ▶ plate connection ▶ Manual override: with detent ▶ double solenoid ▶ Pilot: external

		MO	Operating voltage	Power consumption	Flow conductance		Weight	Part No.
			DC	DC	b	C		
				[W]		[l/(s*bar)]		
	NC/NC		24 V	0.55	0.4	1.17	0.052	R422102437

MO = Manual override
 Basic valve with pilot valve
 Nominal flow Qn at 6 bar and Δp = 1 bar

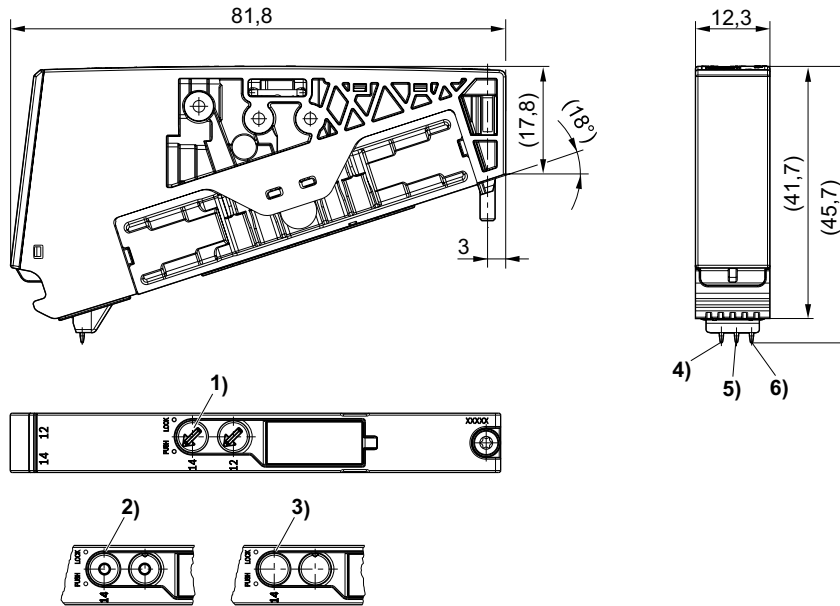
Control pressure: see diagram for min., max. 8 bar



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

2x2/2-directional valve, Series AV03

▶ Qn = 280 l/min ▶ NC/NC ▶ plate connection ▶ Manual override: with detent ▶ double solenoid ▶ Pilot: external

Dimensions


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

24292

Valve systems ▶ Valve systems

2x3/2-directional valve, Series AV03

- ▶ Qn = 250 - 300 l/min ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid
- ▶ Pilot: external



18437

<p>Version</p> <p>Sealing principle</p> <p>Blocking principle</p> <p>Working pressure min./max.</p> <p>Control pressure min./max.</p> <p>Ambient temperature min./max.</p> <p>Medium temperature min./max.</p> <p>Medium</p> <p>Max. particle size</p> <p>Oil content of compressed air</p> <p>Nominal flow Qn</p> <p>Protection class with connection</p> <p>Protective circuit</p> <p>Status display LED</p> <p>Duty cycle</p> <p>Typ. switch-on time</p> <p>Typ. switch-off time</p> <p>Mounting screw</p> <p>Mounting screw tightening torque</p> <p>Weight</p> <p>Materials:</p> <p>Housing</p> <p>Seals</p> <p>Front plate</p> <p>End plate</p>	<p>Spool valve, zero overlap</p> <p>Soft sealing</p> <p>Base plate principle, multiple</p> <p>-0.9 bar / 10 bar</p> <p>3 bar / 8 bar</p> <p>-10 °C / +60 °C</p> <p>-10 °C / +60 °C</p> <p>Compressed air</p> <p>40 μm</p> <p>0 mg/m³ - 5 mg/m³</p> <p>See table below</p> <p>with directional pilot air exhaust</p> <p>IP65</p> <p>Z-diode</p> <p>Protected against polarity reversal</p> <p>Yellow</p> <p>100 %</p> <p>16 ms</p> <p>20 ms</p> <p>Hexalobular socket (TORX) ISO 10664-8</p> <p>0.5 Nm</p> <p>See table below</p> <p>Polyamide, fiber-glass reinforced</p> <p>Acrylonitrile butadiene rubber; Hydrogenated acrylonitrile butadiene rubber</p> <p>Polyamide, fiber-glass reinforced</p> <p>Polyamide</p>
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Technical Remarks	
■	The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■	The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■	The oil content of compressed air must remain constant during the life cycle.
■	Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.55

	MO	Operating voltage	Power consumption	Flow conductance		Flow rate value	Weight	Part No.	
		DC	DC	b	C	Qn			
			[W]		[l/(s*bar)]	[l/min]	[kg]		
	NC/NC		24 V	0.55	0.29	1.17	300	0.05	R422102430

MO = Manual override
 Basic valve with pilot valve
 Nominal flow Qn at 6 bar and Δp = 1 bar

2x3/2-directional valve, Series AV03

- ▶ $Q_n = 250 - 300$ l/min ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid
- ▶ Pilot: external

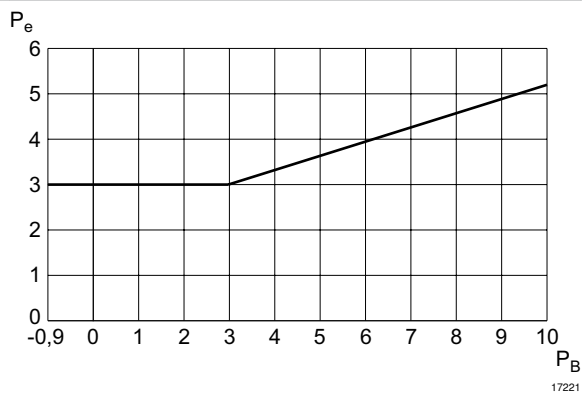
		MO	Operating voltage	Power consumption	Flow conductance		Flow rate value	Weight	Part No.		
					DC	[W]				b	C
										[l/(s*bar)]	[l/min]
	NO/NO		24 V	0.55	0.38	0.92	250	0.049	R422102432		
	NC/NO		24 V	0.55	0.38	0.92	250	0.05	R422102434		
	NC/NC		24 V	0.55	0.29	1.17	300	0.05	R422102431		
	NO/NO		24 V	0.55	0.38	0.92	250	0.049	R422102433		
	NC/NO		24 V	0.55	0.38	0.92	250	0.05	R422102435		

MO = Manual override

Basic valve with pilot valve

Nominal flow Q_n at 6 bar and $\Delta p = 1$ bar

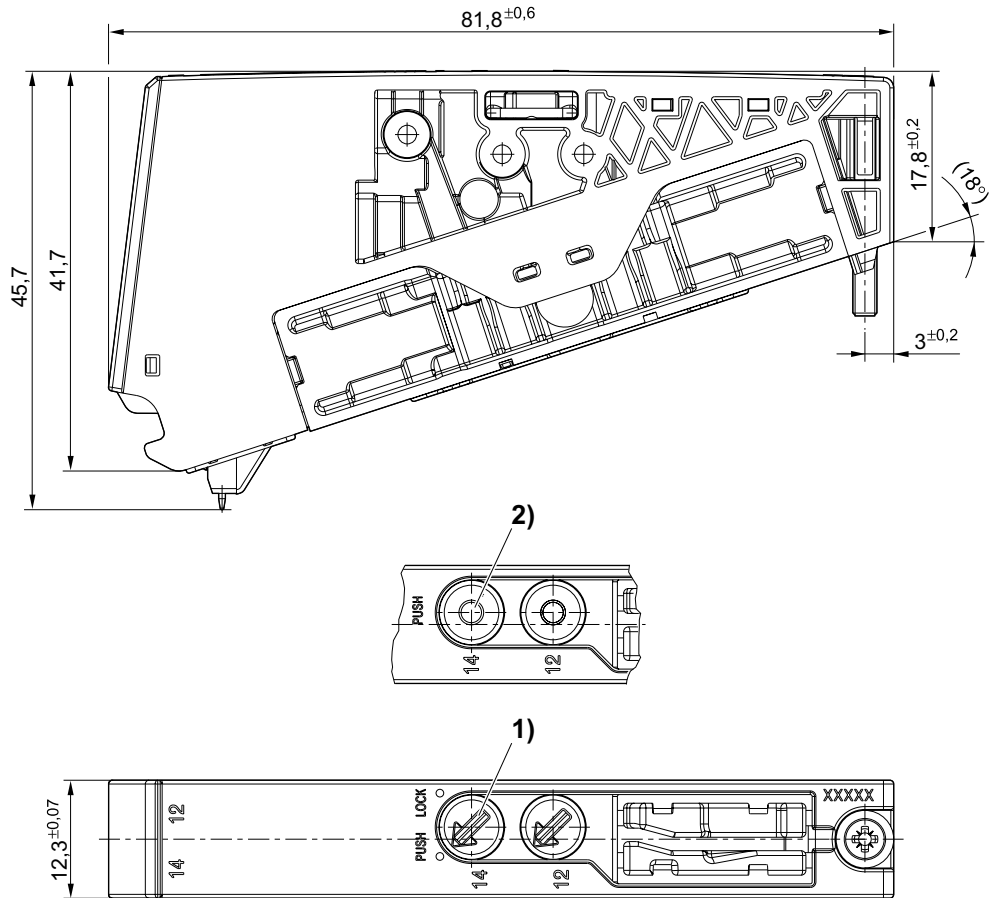
Control pressure: see diagram for min., max. 8 bar

P_B = Working pressureP_e = external control pressure, min.

2x3/2-directional valve, Series AV03

- ▶ Qn = 250 - 300 l/min ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid
- ▶ Pilot: external

Dimensions



- 1) with detent
- 2) without detent

15842

5/2-directional valve, Series AV03

▶ Qn = 300 l/min ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid, single solenoid ▶ Pilot: external



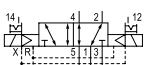

18434

Version	Spool valve, zero overlap
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-0.9 bar / 10 bar
Control pressure min./max.	3 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Nominal flow Qn	300 l/min
	with directional pilot air exhaust
Protection class with connection	IP65
Protective circuit	Z-diode
	Protected against polarity reversal
Status display LED	Yellow
Duty cycle	100 %
Mounting screw	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.5 Nm
Weight	See table below
Materials:	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber; Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve system.

Operational voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.55

	MO	Operating voltage	Power consumption	Flow conductance		Switch-on time	Switch-off time	Weight	Part No.
				b	C				
		DC	[W]		[l/(s*bar)]	[ms]	[ms]	[kg]	
		24 V	0.55	0.29	1.17	8	8	0.048	R422102426

MO = Manual override
 Basic valve with pilot valve
 Nominal flow Qn at 6 bar and Δp = 1 bar

Valve systems ▶ Valve systems

5/2-directional valve, Series AV03

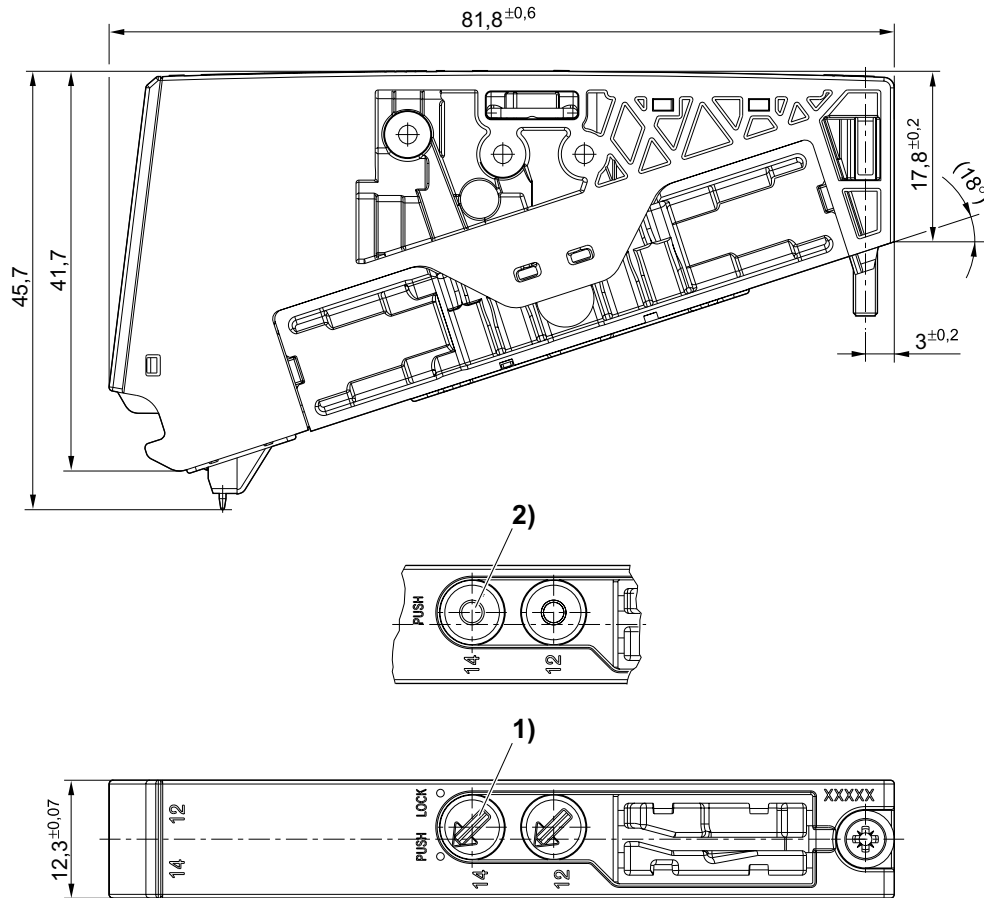
▶ Qn = 300 l/min ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid, single solenoid ▶ Pilot: external

	MO	Oper- ating voltage	Power consumption		Flow conductance		Switch-on time	Switch-off time	Weight	Part No.
			DC	DC	b	C				
		24 V	0.55	0.29	1.17	10	17	0.045	R422102503	
		24 V	0.55	0.29	1.17	12	17	0.043	R422102424	
		24 V	0.55	0.29	1.17	8	8	0.048	R422102427	
		24 V	0.55	0.29	1.17	10	17	0.045	R422102504	
		24 V	0.55	0.29	1.17	12	17	0.043	R422102425	

MO = Manual override
 Basic valve with pilot valve
 Nominal flow Qn at 6 bar and Δp = 1 bar

5/2-directional valve, Series AV03

▶ $Q_n = 300$ l/min ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid, single solenoid ▶ Pilot: external

Dimensions


15842

- 1) with detent
2) without detent

Valve systems ▶ Valve systems

5/3-directional valve, Series AV03

▶ Qn = 240 l/min ▶ closed center ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid ▶ Pilot: external



18436

Version Sealing principle Blocking principle Working pressure min./max. Control pressure min./max. Ambient temperature min./max. Medium temperature min./max. Medium Max. particle size Oil content of compressed air Nominal flow Qn Protection class with connection Protective circuit Status display LED Duty cycle Typ. switch-on time Typ. switch-off time Mounting screw Mounting screw tightening torque Weight Materials: Housing Seals Front plate End plate	Spool valve, zero overlap Soft sealing Base plate principle, multiple -0.9 bar / 10 bar 3 bar / 8 bar -10 °C / +60 °C -10 °C / +60 °C Compressed air 40 µm 0 mg/m³ - 5 mg/m³ 240 l/min with directional pilot air exhaust IP65 Z-diode Protected against polarity reversal Yellow 100 % 12 ms 12 ms Hexalobular socket (TORX) ISO 10664-8 0.5 Nm 0.046 kg Polyamide, fiber-glass reinforced Acrylonitrile butadiene rubber; Hydrogenated acrylonitrile butadiene rubber Polyamide, fiber-glass reinforced Polyamide
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Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve system.

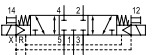

Operational voltage	Voltage tolerance	Power consumption
DC	DC	DC
		W
24 V	-10% / +10%	0.55

	MO	Operating voltage	Power consumption		Flow conductance		Part No.
			DC	DC	b	C	
			[W]		[l/(s*bar)]		
		24 V	0.55	0.32	0.92	R422102428	

MO = Manual override
 Basic valve with pilot valve
 Nominal flow Qn at 6 bar and Δp = 1 bar

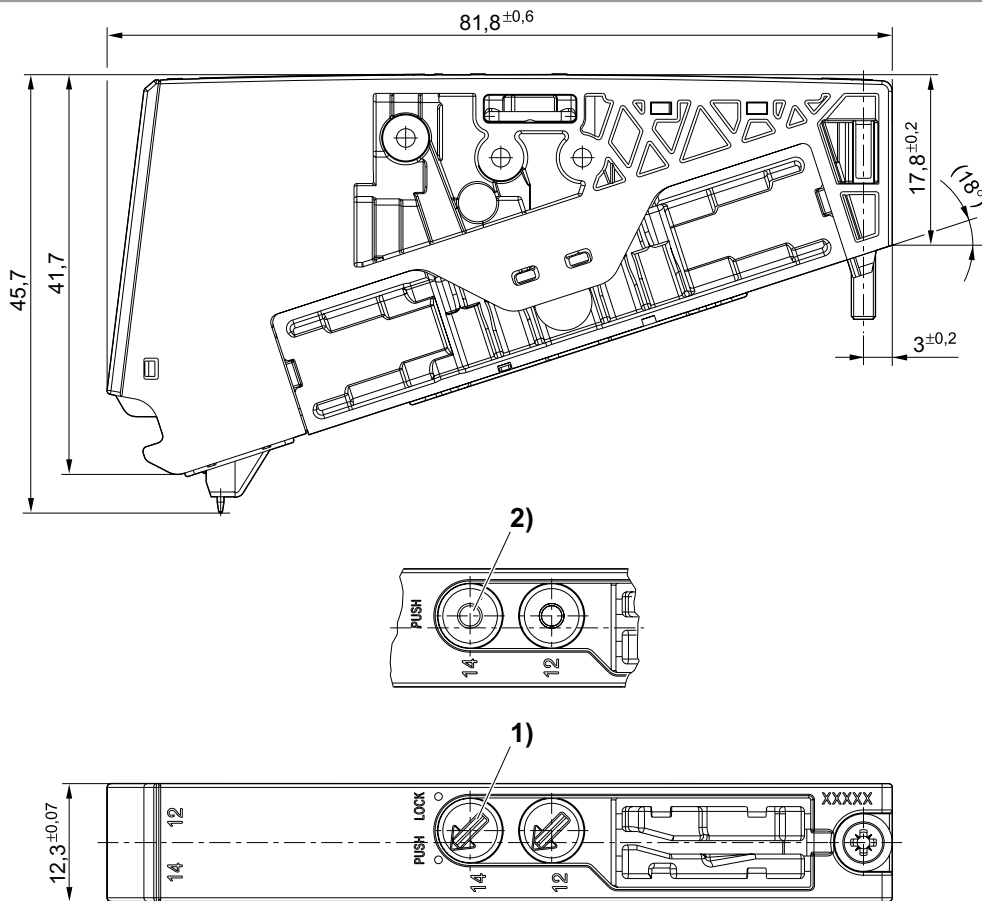
5/3-directional valve, Series AV03

▶ $Q_n = 240$ l/min ▶ closed center ▶ plate connection ▶ Manual override: with detent, without detent ▶ double solenoid ▶ Pilot: external

	MO	Operating voltage	Power consumption	Flow conductance		Part No.		
				DC	DC		b	C
		24 V	0.55 [W]	0.32	0.92	R422102429		

MO = Manual override
Basic valve with pilot valve
Nominal flow Q_n at 6 bar and $\Delta p = 1$ bar

Dimensions



15842

- 1) with detent
2) without detent

Valve systems ▶ Valve systems

E/P pressure regulator, Series AV03-EP

▶ For multipole control, Display: display ▶ Electr. connection: M12, 5-pin, A-coded



24735

Version	Piloted pressure regulator
Ambient temperature min./max.	-10°C / +60°C
Medium temperature min./max.	-10°C / +60°C
Medium	Compressed air
Max. particle size	40 µm
Max. oil content of compressed air	0 mg/m³ - 5 mg/m³ With collective pilot air exhaust
Mounting orientation	Any
Operating pressure	0 / 11 bar
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.22 kg
Materials:	
Housing	Polyarylamide
Seal	Nitrile butadiene rubber

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

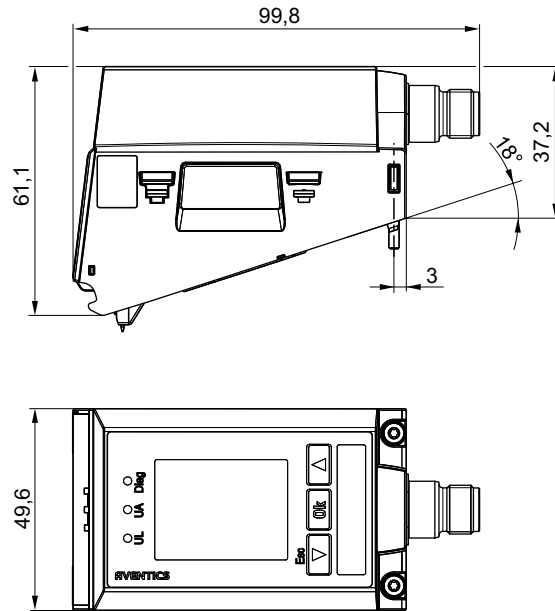
	Pressure setting range min./max.	Nominal input value		Actual output value		Max. power consumption	Repetitive precision	Hysteresis	Note	Part No.
		[bar]								
	0 / 6	0 - 10	V	0 - 10	V	220	< 0,04 bar	< 0,05 bar	1); 3)	R414007364
	0 / 6	4 - 20	mA	4 - 20	mA	220				R414007369
	0 / 10	0 - 10	V	0 - 10	V	220				R414007375
	0 / 10	4 - 20	mA	4 - 20	mA	220				R414007380
	0 / 6	0 - 10	V	0 - 10	V	160				R414007365
	0 / 6	4 - 20	mA	4 - 20	mA	160				R414007370
	0 / 10	0 - 10	V	0 - 10	V	160				R414007376
	0 / 10	4 - 20	mA	4 - 20	mA	160				R414007381
	0 / 10	0 - 10	V	0 - 10	V	160	< 0,18 bar	< 0,2 bar	2); 3)	R414007354
		4 - 20	mA	4 - 20	mA					R414007358

1) Power outage: operating line exhaust
 2) Power outage: maintain pressure
 3) See diagrams for flow characteristic curve

E/P pressure regulator, Series AV03-EP

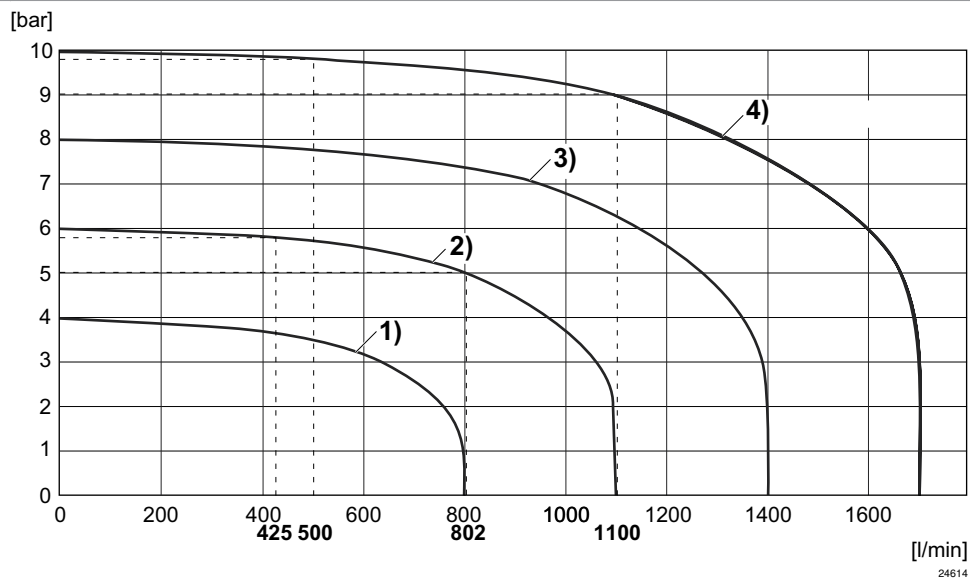
▶ For multipole control, Display: display ▶ Electr. connection: M12, 5-pin, A-coded

Dimensions



Port for plug M12x1

Flow characteristic curve, Pressure zone control

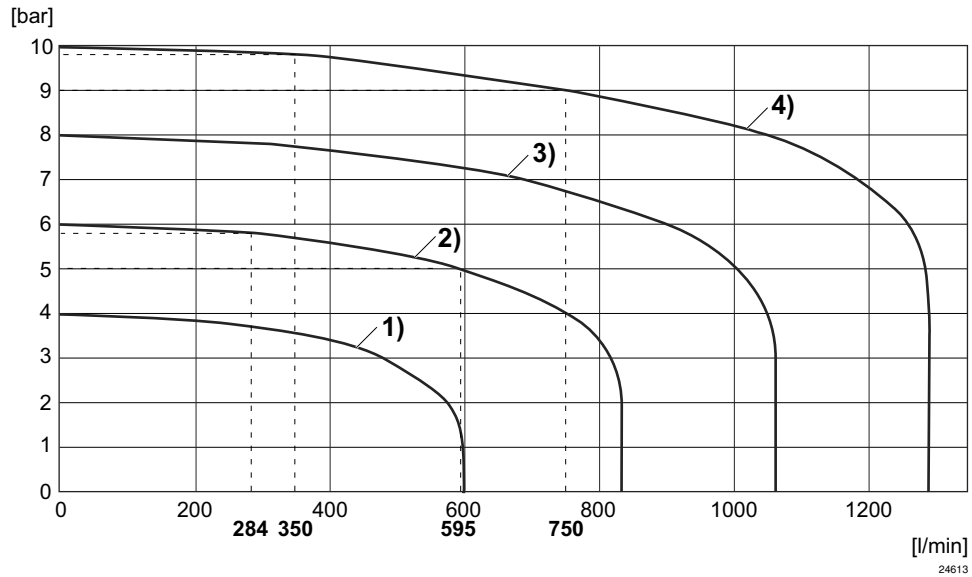


- 1) Pv = 5 bar, controlled: 4 bar
- 2) Pv = 7 bar, controlled: 6 bar
- 3) Pv = 9 bar, controlled: 8 bar
- 4) Pv = 11 bar, controlled: 10 bar

E/P pressure regulator, Series AV03-EP

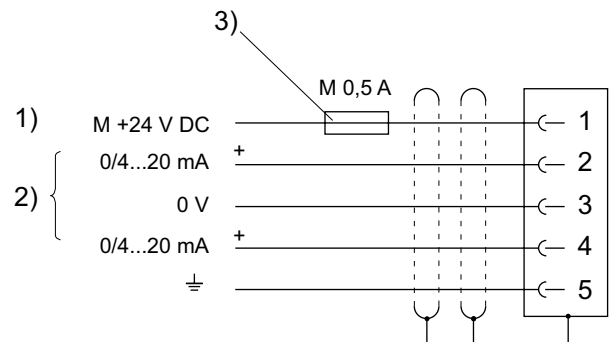
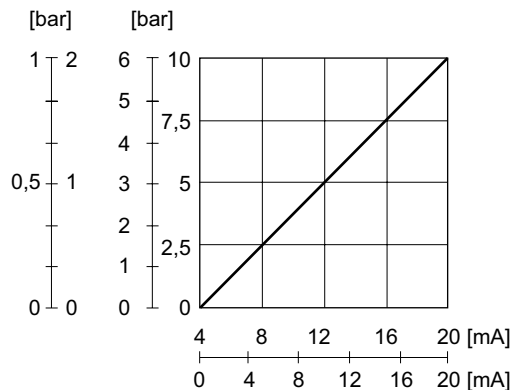
▶ For multipole control, Display: display ▶ Electr. connection: M12, 5-pin, A-coded

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

Characteristic and pin assignment for current control with actual output value

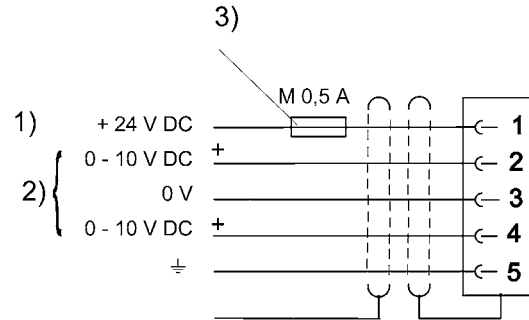
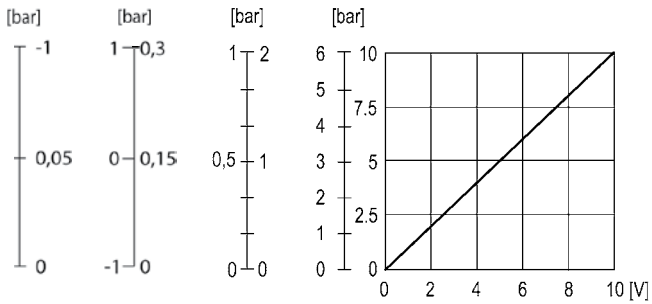


- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3).
Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load < 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected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

23427

E/P pressure regulator, Series AV03-EP

▶ For multipole control, Display: display ▶ Electr. connection: M12, 5-pin, A-coded

Characteristic and pin assignment for voltage control with actual output value


00125468

1) power supply

2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3).

Nominal input value ($R = 1 \text{ M}\Omega$), actual output value: min. load resistance $> 10 \text{ K}\Omega$. 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.

Valve systems ▶ Valve systems

E/P pressure regulator, Series AV03-EP

▶ For multipole control, Display: LED ▶ Electr. connection: M12, 5-pin, A-coded



24733

Version	Piloted pressure regulator
Ambient temperature min./max.	-10°C / +60°C
Medium temperature min./max.	-10°C / +60°C
Medium	Compressed air
Max. particle size	40 µm
Max. oil content of compressed air	0 mg/m³ - 5 mg/m³
	With collective pilot air exhaust
Mounting orientation	Any
Operating pressure	0 / 11 bar
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.21 kg
Materials:	
Housing	Polyarylamide
Seal	Nitrile butadiene rubber

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

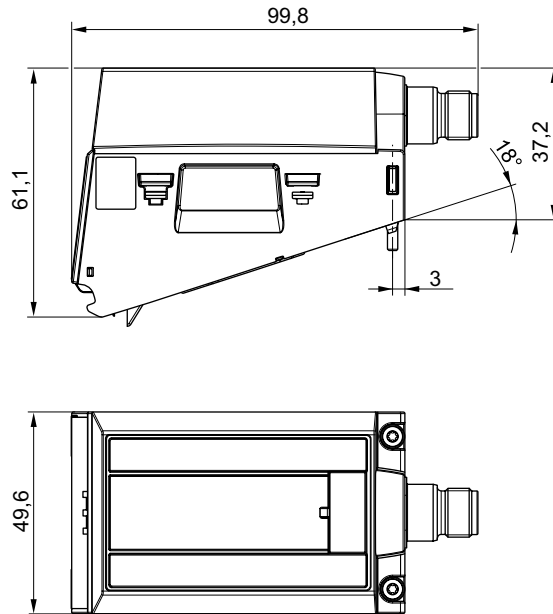
	Pressure setting range min./max.	Nominal input value		Actual output value		Max. power consumption	Repetitive precision	Hysteresis	Note	Part No.
		[bar]								
	0 / 6	0 - 10	V	0 - 10	V	180	< 0,04 bar	< 0,05 bar	1); 3)	R414007361
	0 / 6	4 - 20	mA	4 - 20	mA	180			1); 3)	R414007366
	0 / 10	0 - 10	V	0 - 10	V	180			1); 3)	R414007372
	0 / 10	4 - 20	mA	4 - 20	mA	180			1); 3)	R414007377
	0 / 6	0 - 10	V	0 - 10	V	120			2); 3)	R414007362
	0 / 6	4 - 20	mA	4 - 20	mA	120			2); 3)	R414007367
	0 / 10	0 - 10	V	0 - 10	V	120			2); 3)	R414007373
	0 / 10	4 - 20	mA	4 - 20	mA	120			2); 3)	R414007378
	0 / 10	0 - 10	V	0 - 10	V	120	< 0,18 bar	< 0,2 bar	2); 3)	R414007352
		4 - 20	mA	4 - 20	mA					R414007356

1) Power outage: operating line exhaust
 2) Power outage: maintain pressure
 3) See diagrams for flow characteristic curve

E/P pressure regulator, Series AV03-EP

▶ For multipole control, Display: LED ▶ Electr. connection: M12, 5-pin, A-coded

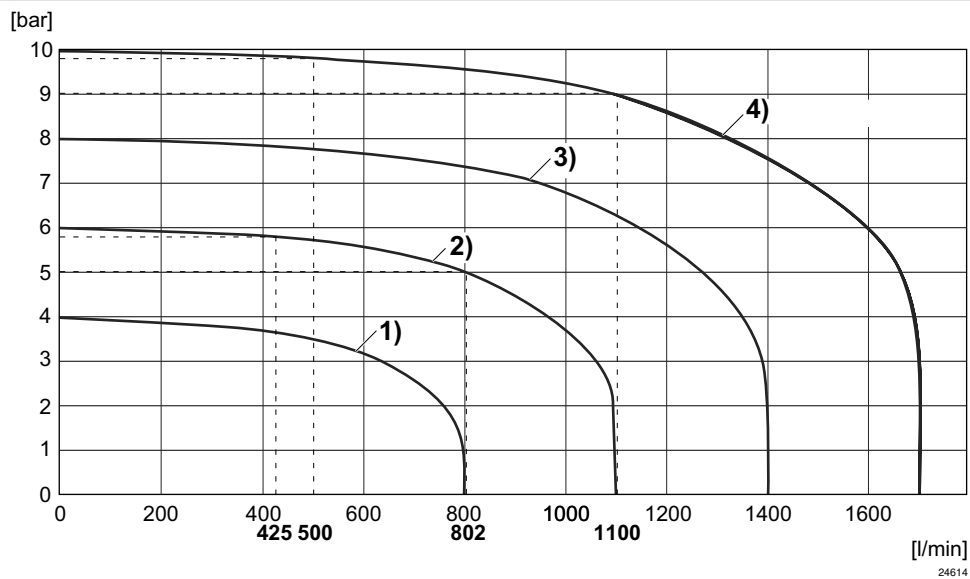
Dimensions



24603

Port for plug M12x1

Flow characteristic curve, Pressure zone control



24614

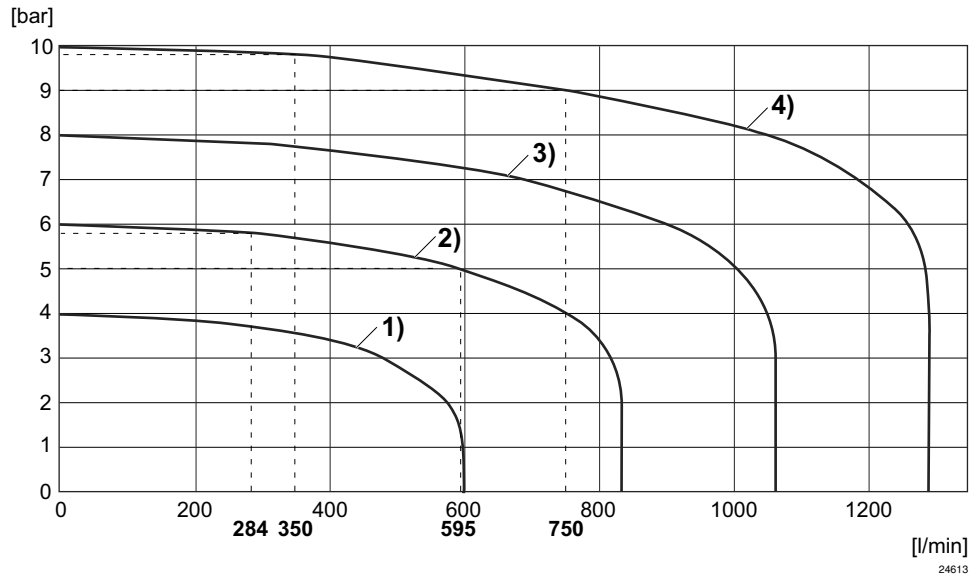
- 1) $P_v = 5$ bar, controlled: 4 bar
- 2) $P_v = 7$ bar, controlled: 6 bar
- 3) $P_v = 9$ bar, controlled: 8 bar
- 4) $P_v = 11$ bar, controlled: 10 bar

Valve systems ▶ Valve systems

E/P pressure regulator, Series AV03-EP

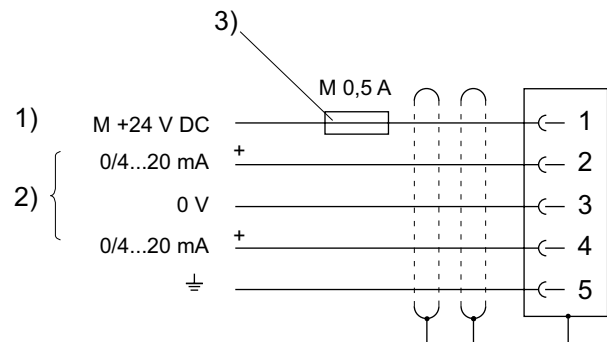
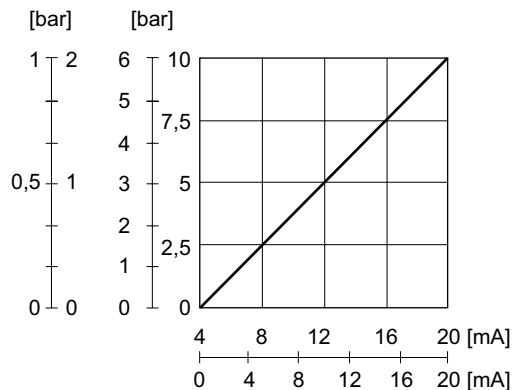
▶ For multipole control, Display: LED ▶ Electr. connection: M12, 5-pin, A-coded

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

Characteristic and pin assignment for current control with actual output value



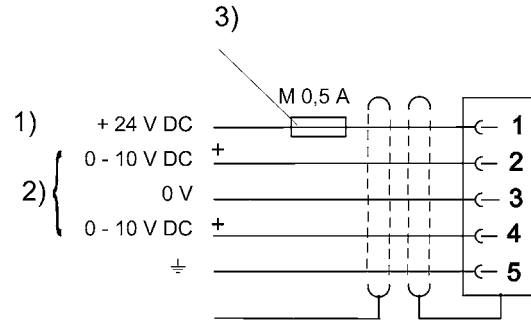
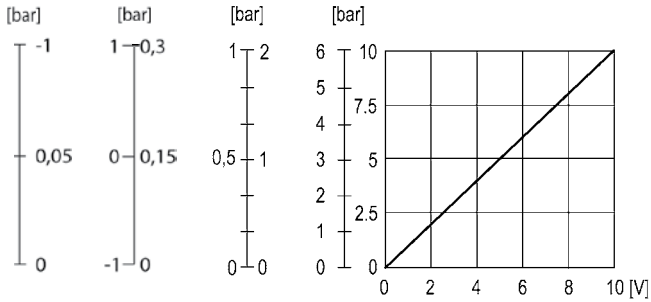
- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3).
Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load < 300 Ω . If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected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

23427

E/P pressure regulator, Series AV03-EP

▶ For multipole control, Display: LED ▶ Electr. connection: M12, 5-pin, A-coded

Characteristic and pin assignment for voltage control with actual output value



00125468

1) power supply

2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3).

Nominal input value ($R = 1 \text{ M}\Omega$), actual output value: min. load resistance $> 10 \text{ K}\Omega$. 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.

Valve systems ▶ Valve systems

E/P pressure regulator, Series AV03-EP

▶ For fieldbus connection, Display: display



24734

Version	Piloted pressure regulator
Ambient temperature min./max.	-10°C / +60°C
Medium temperature min./max.	-10°C / +60°C
Medium	Compressed air
Max. particle size	40 µm
Max. oil content of compressed air	0 mg/m³ - 5 mg/m³ with directional pilot air exhaust
Mounting orientation	Any
Operating pressure	0 / 11 bar
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.21 kg
Materials:	
Housing	Polyarylamide
Seal	Nitrile butadiene rubber

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

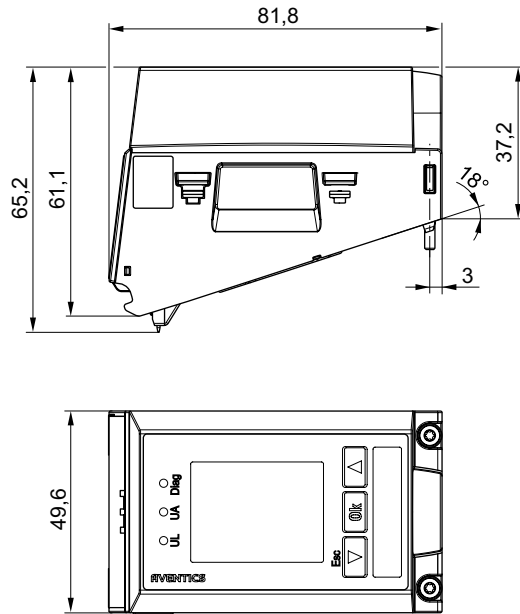
	Pressure setting range min./max.	Max. power consumption	Repetitive precision	Hysteresis	Note	Part No.
	[bar]	[mA]				
	0 / 10	220	< 0,04 bar	< 0,05 bar	1); 3)	R414007915
		160			2); 3)	R414007916
	0 / 10	160	< 0,18 bar	< 0,2 bar	2); 3)	R414007360

- 1) Power outage: operating line exhaust
 2) Power outage: maintain pressure
 3) See diagrams for flow characteristic curve

E/P pressure regulator, Series AV03-EP

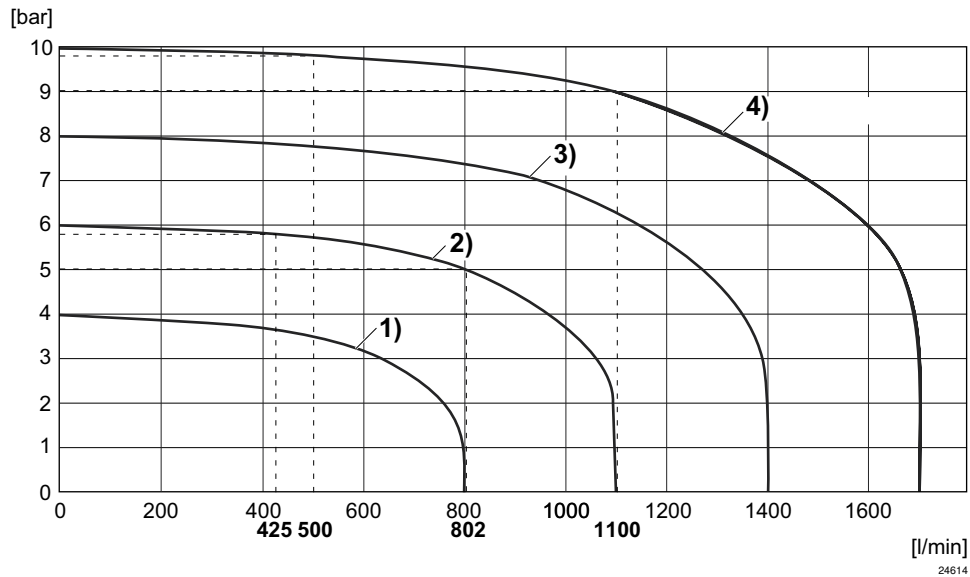
▶ For fieldbus connection, Display: display

Dimensions



24602

Flow characteristic curve, Pressure zone control



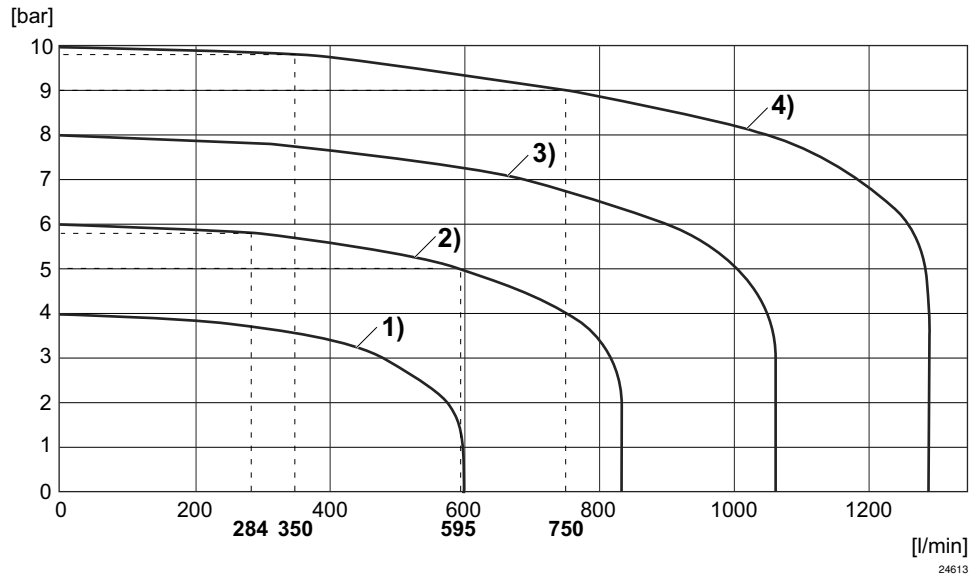
24614

- 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 AV03-EP

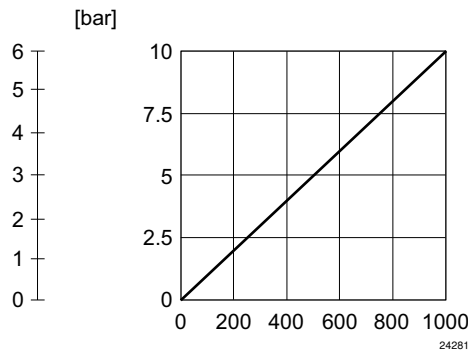
▶ For fieldbus connection, Display: display

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



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. Further information can be found in the operating instructions.

E/P pressure regulator, Series AV03-EP

▶ For fieldbus connection, Display: LED





24732

Version	Piloted pressure regulator
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 µm
Max. oil content of compressed air	0 mg/m ³ - 5 mg/m ³ with directional pilot air exhaust
Mounting orientation	Any
Operating pressure	0 / 11 bar
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.16 kg
Materials:	
Housing	Polyarylamide
Seal	Nitrile butadiene rubber

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

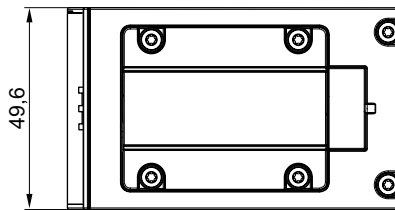
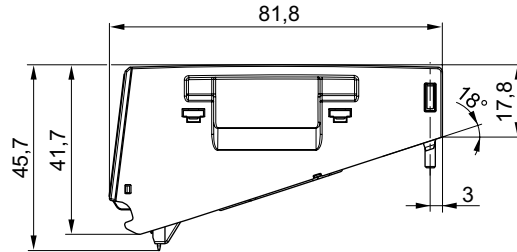
	Pressure setting range min./max.	Max. power consumption	Repetitive precision	Hysteresis	Note	Part No.
	[bar]	[mA]				
	0 / 10	180 120	< 0,04 bar	< 0,05 bar	1); 3) 2); 3)	R414007914 R414007383
	0 / 10	120	< 0,18 bar	< 0,2 bar	2); 3)	R414007359

- 1) Power outage: operating line exhaust
 2) Power outage: maintain pressure
 3) See diagrams for flow characteristic curve

E/P pressure regulator, Series AV03-EP

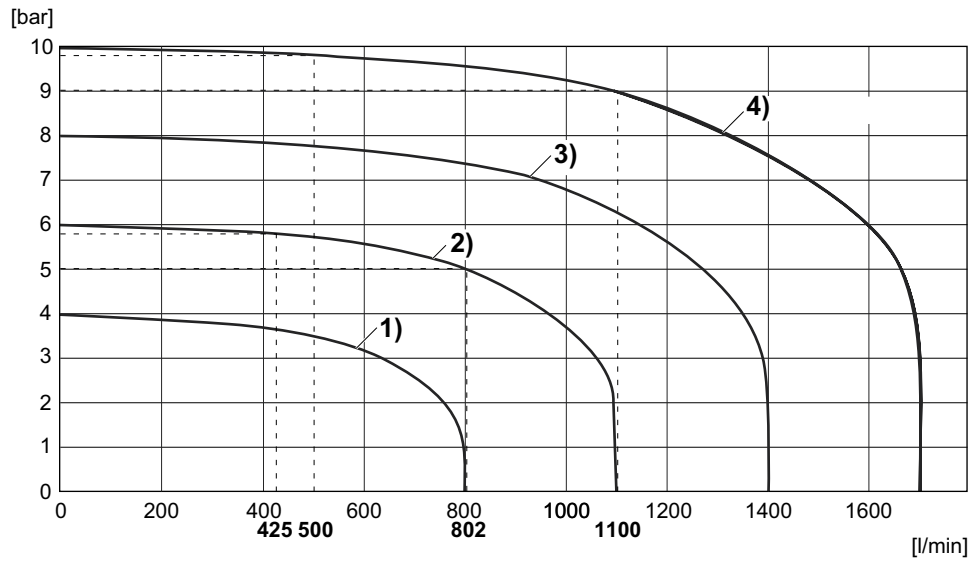
▶ For fieldbus connection, Display: LED

Dimensions



24601

Flow characteristic curve, Pressure zone control

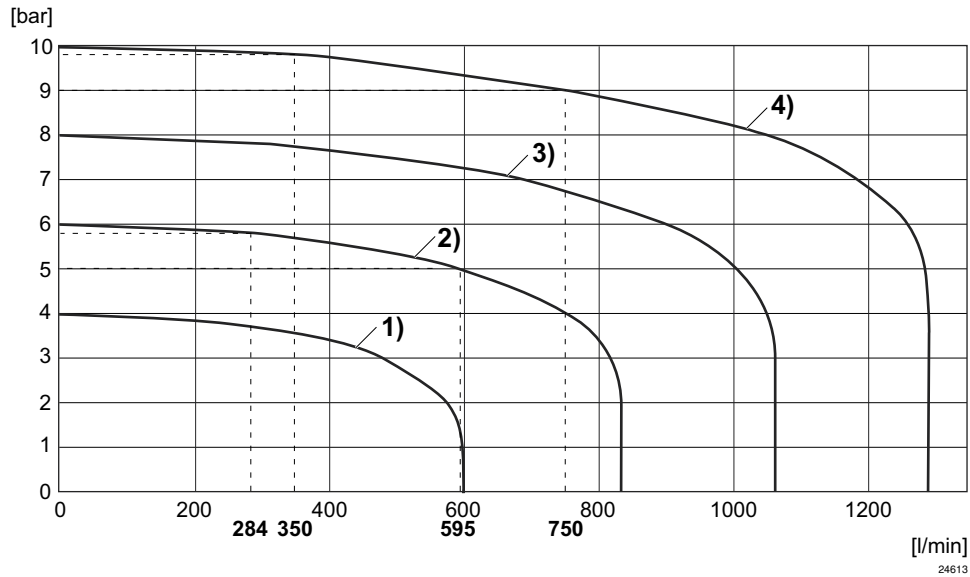


24614

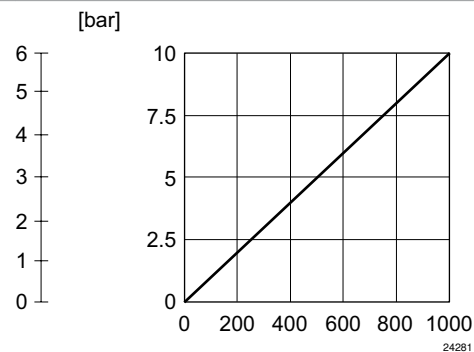
- 1) Pv = 5 bar, controlled: 4 bar
- 2) Pv = 7 bar, controlled: 6 bar
- 3) Pv = 9 bar, controlled: 8 bar
- 4) Pv = 11 bar, controlled: 10 bar

E/P pressure regulator, Series AV03-EP

▶ For fieldbus connection, Display: LED

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.

Series AV03
Accessories

Fieldbus connection, Series AES

▶ Bus coupler ▶ Field bus connection with I/O functionality ▶ Field bus protocol: PROFIBUS DP / CANopen / DeviceNet / EtherNET/IP / PROFINET IO / EtherCAT / POWERLINK



16456

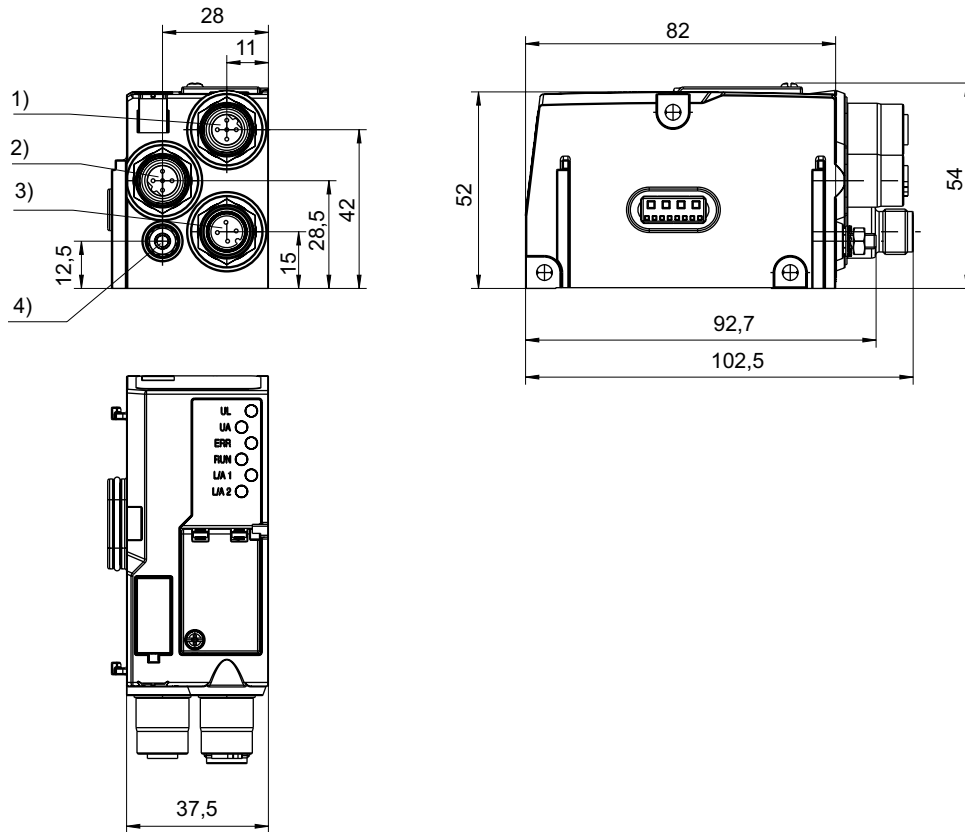
Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Power consumption electronics	0.1 A
Operating voltage, actuators	24 V DC
Total current for actuators	4 A
Cycle time at 256 bits	< 1 ms
Number of solenoid coils max.	128
Number of valve positions	64
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit Undervoltage
I/O module extension max.	10
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- Voltage and short-circuit monitoring per LED.
- During cyclical data transfer, the bus coupler can send 512 bits of input data to the controller and receive 512 bits of output data from the controller.

Field bus protocol	Port 1 Bus IN	Port 2 Bus OUT	power supply	Weight	Part No.
				[kg]	
PROFIBUS DP	Plug (male), M12, 5-pin, B-coded	Socket (female), M12, 5-pin, B-coded	Plug (male), M12, 4-pin, A-coded	0.16	R412018218
CANopen	Plug (male), M12, 5-pin, A-coded	Socket (female), M12, 5-pin, A-coded	Plug (male), M12, 4-pin, A-coded	0.16	R412018220
DeviceNet	Plug (male), M12, 5-pin, A-coded	Socket (female), M12, 5-pin, A-coded	Plug (male), M12, 4-pin, A-coded	0.16	R412018221
EtherNET/IP	Socket (female), M12, 4-pin, D-coded	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded	0.175	R412018222
PROFINET IO	Socket (female), M12, 4-pin, D-coded	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded	0.175	R412018223
EtherCAT	Socket (female), M12, 4-pin, D-coded	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded	0.175	R412018225
POWERLINK	Socket (female), M12, 4-pin, D-coded	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded	0.175	R412018226

Scope of delivery: Incl. mounting screws 3x

Series AV03
Accessories
Dimensions


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

16457

Series AV03
Accessories

Fieldbus connection, Series AES

▶ Stand-Alone variant ▶ Field bus protocol: PROFIBUS DP / CANopen / DeviceNet / PROFINET IO / EtherCAT / EtherNET/IP / POWERLINK



21399

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Power consumption electronics	0.1 A
Operating voltage, actuators	24 V DC
Power supply connection	M12, A-coded, 4-pin
Total current for actuators	4 A
Cycle time at 256 bits	< 1 ms
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit Undervoltage
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2

Materials:

Housing Polyamide, fiber-glass reinforced

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

Technical Remarks

- The maximum number of I/O modules is 10.

Configurable product

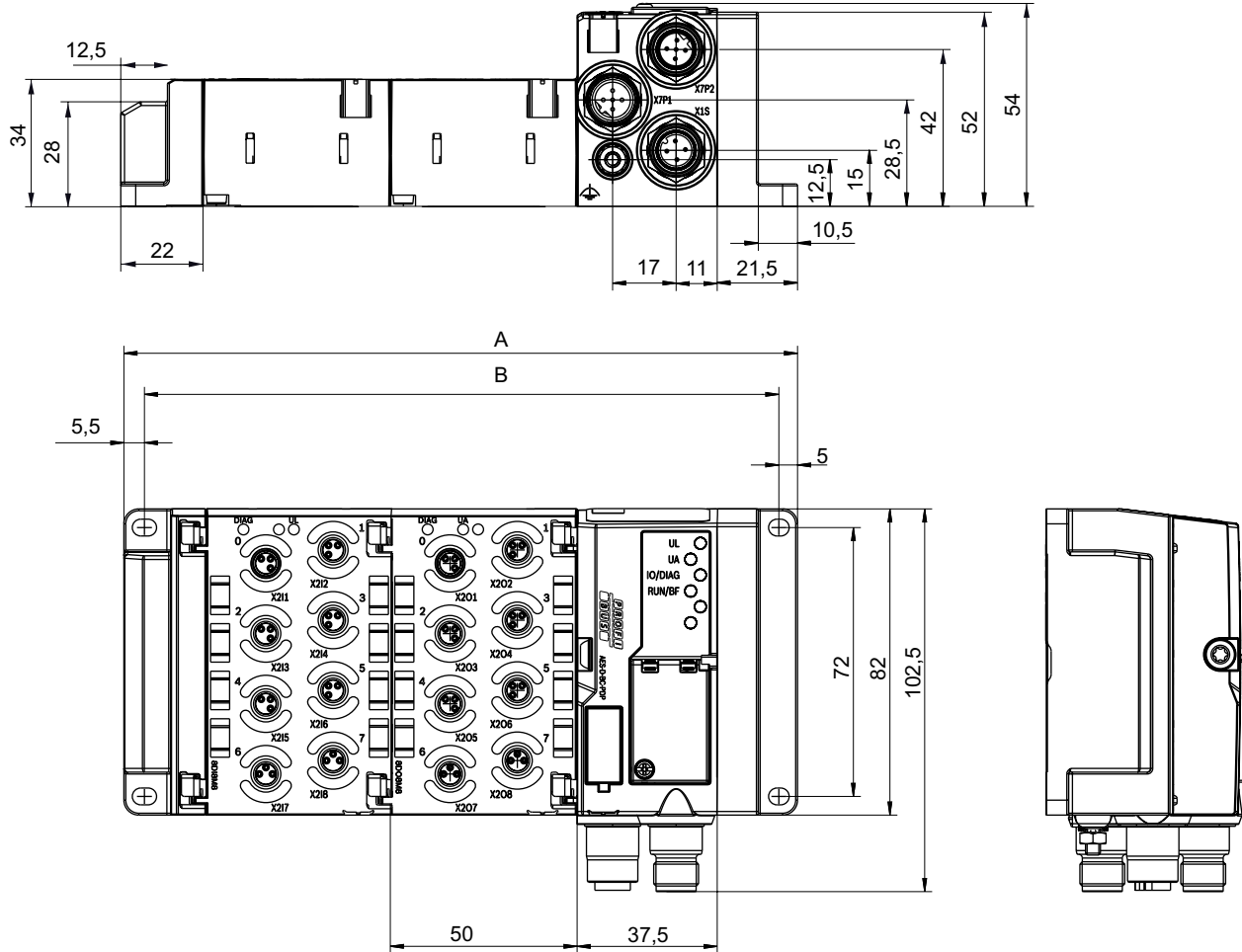


This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Series AV03

Accessories

Dimensions



A = number of I/O modules x 50 mm + 81 mm
 B = number of I/O modules x 50 mm + 70.5 mm

21272

Series AV03
Accessories

Fieldbus connection, Series AES
▶ M8x1 digital inputs/outputs, 3-pin, 4-pin



21397

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Total current for actuators	4 A
Total current of sensors max.	1 A
Filter time	3 ms
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit Undervoltage
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- Voltage and short-circuit monitoring per LED.

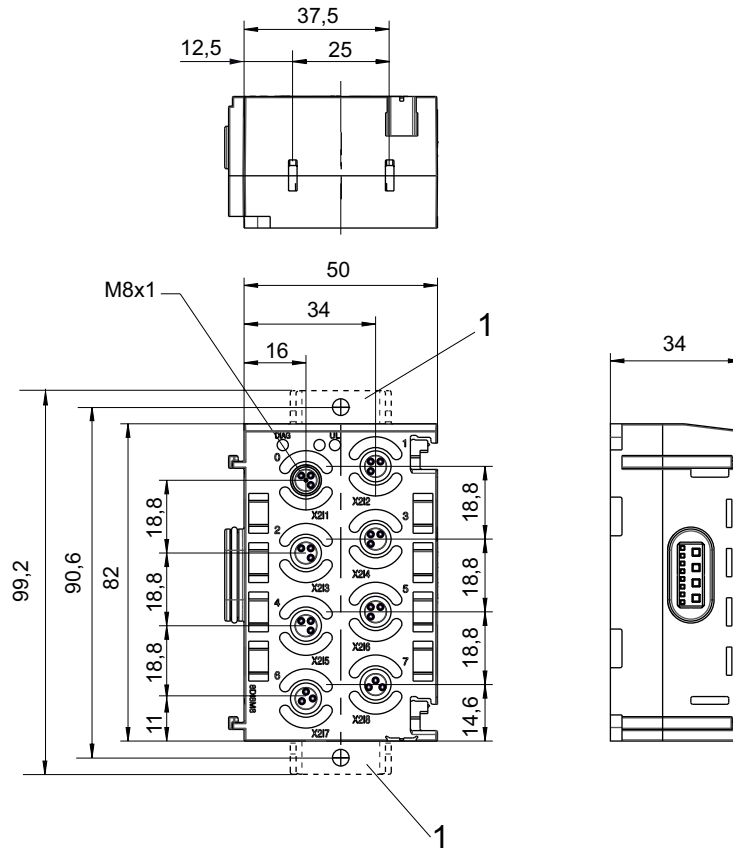
for Type	Port 1 Bus IN	power supply	Number of inputs	Number of outputs	I/O module version	[kg]	Fig.	Note	Part No.
8DIDO8M8	Socket (female), M8x1, 3-pin	internal	8	8	Digital inputs Digital outputs Combination module	0.11	Fig. 1	1)	R412018269
8DI8M8	Socket (female), M8x1, 3-pin	internal	8	-	Digital inputs	0.11	Fig. 1	-	R412018233
8DO8M8	Socket (female), M8x1, 3-pin	internal	-	8	Digital outputs	0.11	Fig. 1	-	R412018248
16DI8M8	Socket (female), M8x1, 4-pin	internal	16	-	Digital inputs	0.11	Fig. 2	-	R412018234

1) Function specification for fieldbus configuration.
Delivery contents: incl. 2 spring clamp elements and seal

Series AV03

Accessories

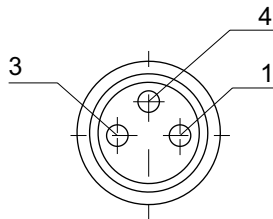
Dimensions, Fig. 1



16474

1) Retaining bracket (optional)

Pin assignments, PNP, 3-pin

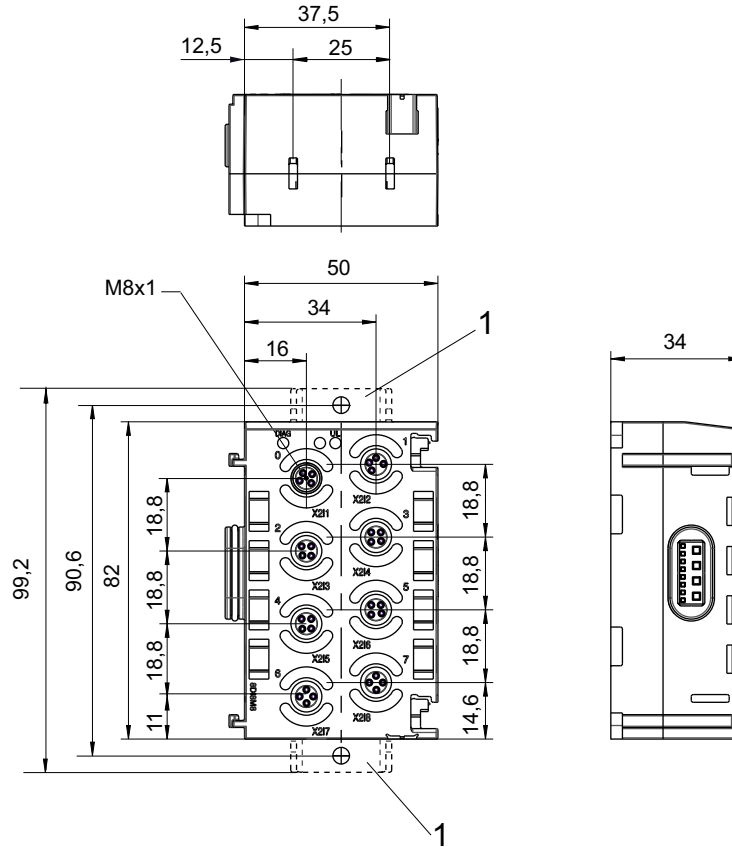


22771

Pin	Input module	Output module
1	24 V DC	-
3	0 V DC	0 V DC
4	Input signal	Output signal

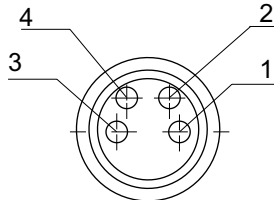
Series AV03
Accessories

Dimensions, Fig. 2



24597

Pin assignments, PNP, 4-pin



24598

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)

Series AV03

Accessories

Fieldbus connection, Series AES

▶ digital inputs/outputs, M12x1, 5-pin



21351

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Power supply for actuators	8x0,5 A
Max. current per channel	0.5 A
Total current for actuators	4 A
Total current of sensors max.	1 A
Filter time	3 ms
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- Voltage and short-circuit monitoring per LED.

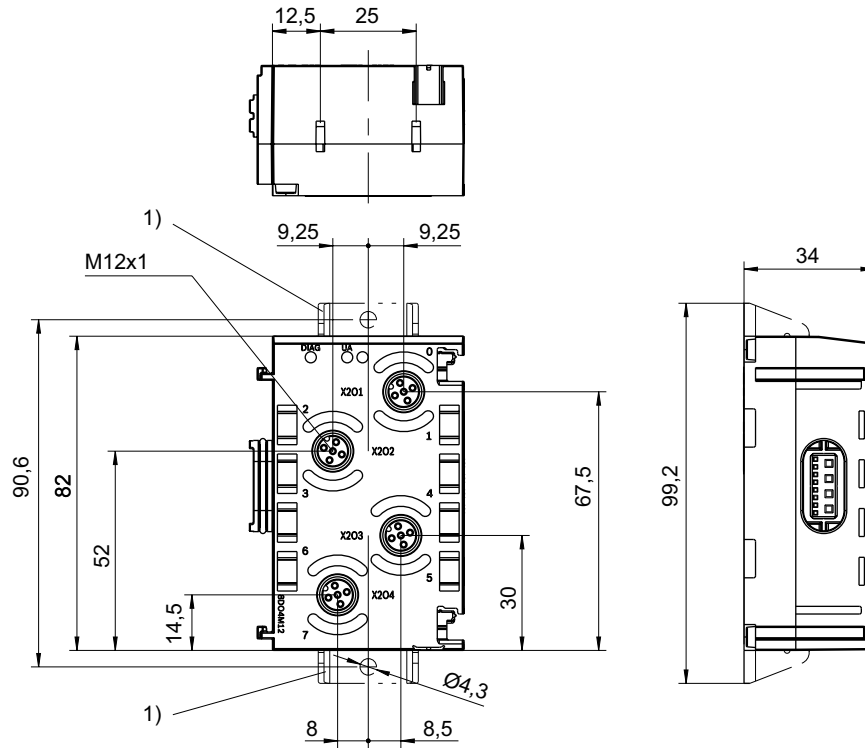
for Type	Port 1 Bus IN	power supply	Number of inputs	Number of outputs	I/O module version	Weight [kg]	Note	Part No.
8DI4M12	Socket (female), M12x1, 5-pin	internal	8	-	Digital inputs	0.11	-	R412018235
8DO4M12	Socket (female), M12x1, 5-pin	internal	-	8	Digital outputs	0.11	-	R412018250
8DIDO4M12	Socket (female), M12x1, 5-pin	internal	8	8	Digital inputs Digital outputs Combination module	0.11	1)	R412018270

1) Function specification for fieldbus configuration.

Delivery contents: incl. 2 spring clamp elements and seal

Series AV03 Accessories

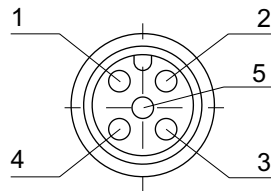
Dimensions



1) Retaining bracket (optional)

21348

Pin assignments, PNP



22772

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

Series AV03
Accessories
Fieldbus connection, Series AES
▶ M12x1 digital inputs/outputs, 8-pin


22817

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Max. current per channel	0.5 A
Total current for actuators	4 A
Total current of sensors max.	1 A
Filter time	3 ms
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

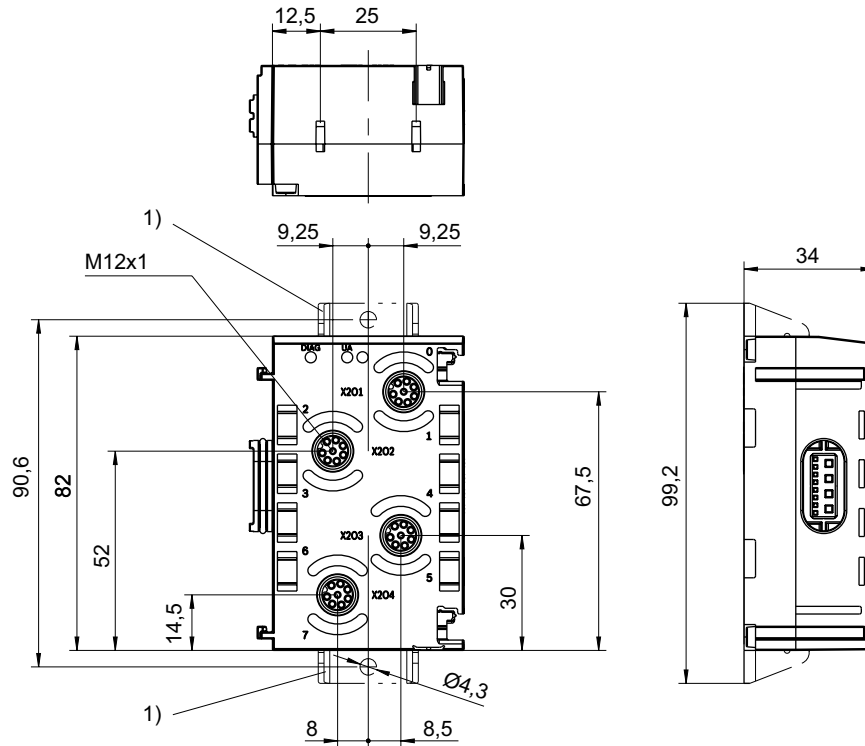
- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- Voltage and short-circuit monitoring per LED.

for Type	Port 1 Bus IN	power supply	Number of inputs	Number of outputs	I/O module version	Weight	Part No.
						[kg]	
16DI4M12	Socket (female), M12, 8-pin	internal	16	-	Digital inputs	0.11	R412018243
16DO4M12	Socket (female), M12, 8-pin	internal	-	16	Digital outputs	0.11	R412018263

Delivery contents: incl. 2 spring clamp elements and seal

Series AV03 Accessories

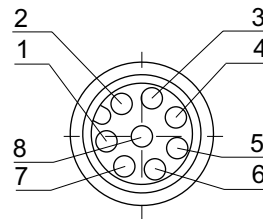
Dimensions



1) Retaining bracket (optional)

22823

Pin assignments, PNP



22824

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

Series AV03
 Accessories

Fieldbus connection, Series AES
 ▶ digital outputs D-Sub, 25-pin


23123

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Max. current per channel	0.5 A
Total current for actuators	4 A
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit Undervoltage
Number of outputs	24
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

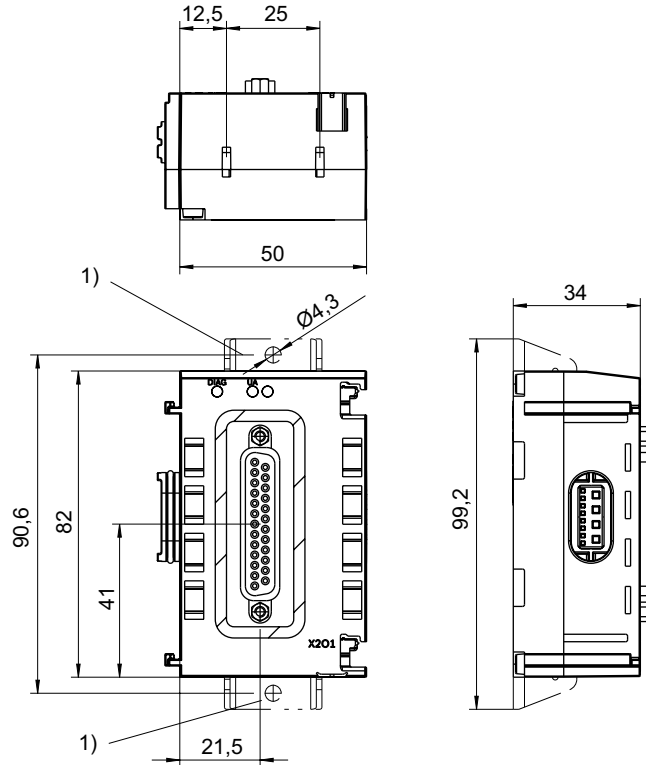
- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- Voltage and short-circuit monitoring per LED.

for Type	Port 1 Bus IN	power supply	Weight	Part No.
			[kg]	
24DO1DSUB25	Socket, D-Sub, 25-pin	internal	0.115	R412018254

Delivery contents: incl. 2 spring clamp elements and seal

Series AV03 Accessories

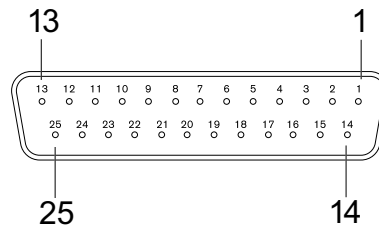
Dimensions



23124

1) Retaining bracket (optional)

Pin assignments



00136701

Socket (female)

	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9	Pin10	Pin11	Pin12	Pin13
Output module	[X]	[X+0.1]	[X+0.2]	[X+0.3]	[X+0.4]	[X+0.5]	[X+0.6]	[X+0.7]	[X+1]	[X+1.1]	[X+1.2]	[X+1.3]	[X+1.4]

	Pin14	Pin15	Pin16	Pin17	Pin18	Pin19	Pin20	Pin21	Pin22	Pin23	Pin24	Pin25
Output module	[X+1.5]	[X+1.6]	[X+1.7]	[X+2.0]	[X+2.1]	[X+2.2]	[X+2.3]	[X+2.4]	[X+2.5]	[X+2.6]	[X+2.7]	0 V DC

X = bit value

Series AV03
 Accessories

Fieldbus connection, Series AES

▶ digital inputs ▶ Spring clamp connections (IP20) ▶ Field bus protocol: Digital inputs



23388

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP20
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Total current of sensors max.	4 A
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

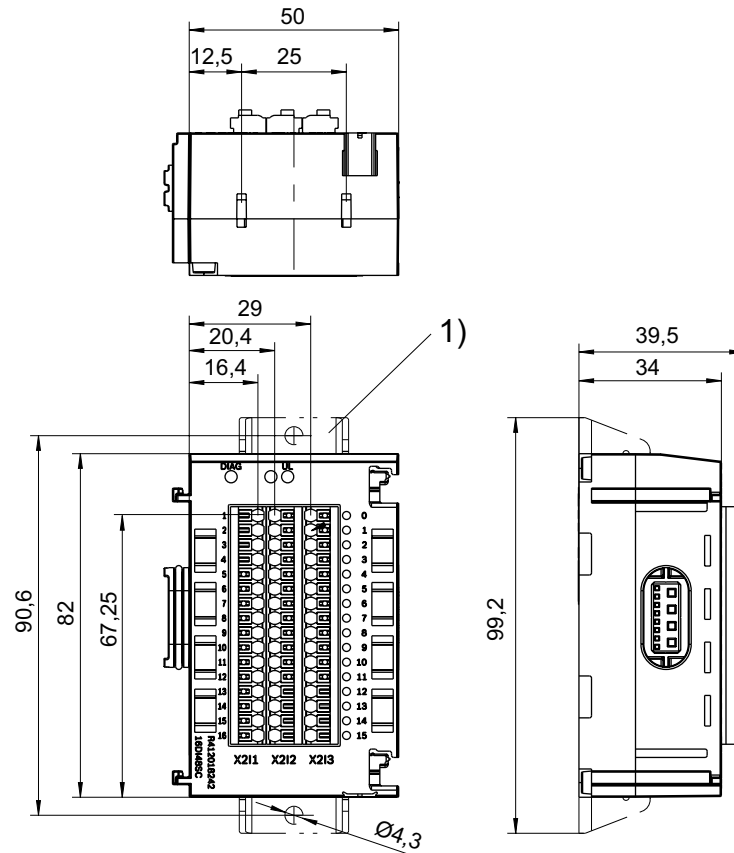
Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- Voltage and short-circuit monitoring per LED.
- The clamp area for stranded wires is between 0.2 and 1.5 mm².

for Type	Port 1 Bus IN	power supply	Number of inputs	Weight	Part No.
				[kg]	
16DI48SC	Spring clamp connections, 48x	internal	16	0.115	R412018242
Delivery contents: incl. 2 spring clamp elements and seal					

Series AV03 Accessories

Dimensions



23260

1) Retaining bracket (optional)

Port	Contact	Function
X211	1	Input signal 24 V DC bit 0.0
	2	Input signal 24 V DC bit 0.1
	3	Input signal 24 V DC bit 0.2
	4	Input signal 24 V DC bit 0.3
	5	Input signal 24 V DC bit 0.4
	6	Input signal 24 V DC bit 0.5
	7	Input signal 24 V DC bit 0.6
	8	Input signal 24 V DC bit 0.7
	9	Input signal 24 V DC bit 1.0
	10	Input signal 24 V DC bit 1.1
	11	Input signal 24 V DC bit 1.2
	12	Input signal 24 V DC bit 1.3
	13	Input signal 24 V DC bit 1.4
	14	Input signal 24 V DC bit 1.5
	15	Input signal 24 V DC bit 1.6
	16	Input signal 24 V DC bit 1.7
X212	1-16	24 V DC
X213	1-16	0 V DC

Series AV03
 Accessories

Fieldbus connection, Series AES

▶ digital outputs ▶ Spring clamp connections (IP20) ▶ Field bus protocol: Digital outputs



23387

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP20
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Total current for actuators	4 A
Logic/actuator voltage	Galvanically isolated
Diagnosis	Short circuit
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

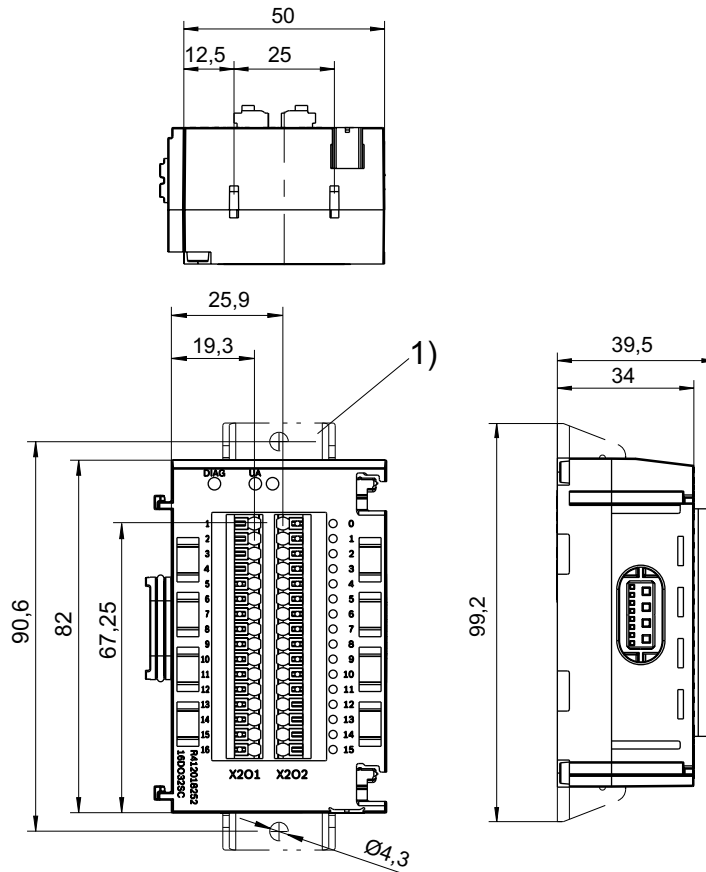
Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- Voltage and short-circuit monitoring per LED.
- The clamp area for stranded wires is between 0.2 and 1.5 mm².

Type	Port 1	power supply	Number of outputs	Weight	Part No.
16DO32SC	Spring clamp connections, 32x	internal	16	[kg]	R412018252
Delivery contents: incl. 2 spring clamp elements and seal					

Series AV03 Accessories

Dimensions



23261

1) Retaining bracket (optional)

Port	Contact	Function
X201	1	Output signal 24 V DC bit 0.0
	2	Output signal 24 V DC bit 0.1
	3	Output signal 24 V DC bit 0.2
	4	Output signal 24 V DC bit 0.3
	5	Output signal 24 V DC bit 0.4
	6	Output signal 24 V DC bit 0.5
	7	Output signal 24 V DC bit 0.6
	8	Output signal 24 V DC bit 0.7
	9	Output signal 24 V DC bit 1.0
	10	Output signal 24 V DC bit 1.1
	11	Output signal 24 V DC bit 1.2
	12	Output signal 24 V DC bit 1.3
	13	Output signal 24 V DC bit 1.4
	14	Output signal 24 V DC bit 1.5
	15	Output signal 24 V DC bit 1.6
	16	Output signal 24 V DC bit 1.7
X202	1-16	0 V DC

Series AV03

Accessories

Fieldbus connection, Series AES

▶ analog inputs/outputs M12x1, 5-pin ▶ with external power supply ▶ control of E/P pressure regulators ▶ Field bus protocol: Analog inputs, Analog outputs



23136

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Diagnosis	Short circuit Undervoltage
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- Suitable for direct connection of an electropneumatic pressure regulator from the ED series.

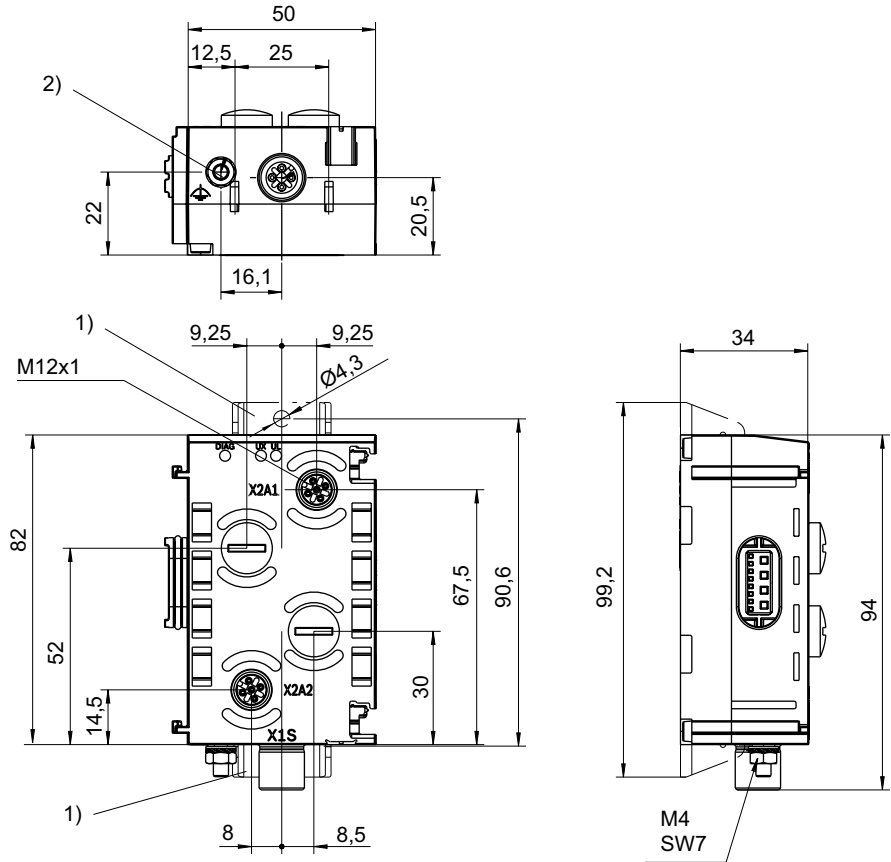
for Type	Port 1 Bus IN	power supply	Number of inputs	Number of outputs	Analog inputs	Analog outputs	Part No.
2AI2AO2M12-AE	M12x1, 5-pin, Socket (female)	Plug (male), M12, 4-pin, A-coded	2	2	0 - 10 V / ± 10 V 2 - 10 V / ± 10 V 0 - 20 mA / ± 20 mA 4 - 20 mA / ± 20 mA	0 - 10 V / ± 10 V 0 - 20 mA 4 - 20 mA	R412018287

Part No.	Weight [kg]	Note
R412018287	0.11	1)

1) freely selectable signals, configurable
Delivery contents: incl. 2 spring clamp elements and seal

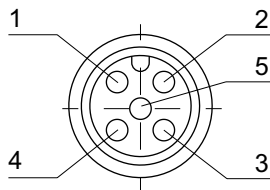
Series AV03 Accessories

Dimensions



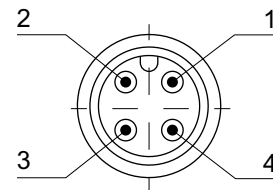
- 1) Retaining bracket (optional)
2) Ground

Pin assignments, Socket (female)



23122

Plug (male)



23125

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	Ground	-

Series AV03 Accessories

Fieldbus connection, Series AES

▶ analog inputs/outputs, M12x1, 5-pin ▶ I/O module version



23380

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Max. current per channel	0.5 A
Diagnosis	Short circuit Undervoltage
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2

Materials:

Housing

Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- Voltage and short-circuit monitoring per LED.
- The input channels have an input resistance of 120 ohms in the current range and 100 kilohms in the voltage range.
- The output channels can drive a maximum ohmic load of 450 ohms in the current range. The minimum resistance in the voltage range is 1 kilohm.

for Type	Port 1 Bus IN	power supply	Number of inputs	Number of outputs	Analog inputs	Analog outputs	[kg]	Part No.
2AI2M12-E	Socket (female), M12, 5-pin	internal	2	-	0 - 10 V / ± 10 V 2 - 10 V / ± 10 V 0 - 20 mA / ± 20 mA 4 - 20 mA / ± 20 mA	-	0.11	R412018277
4AI4M12-E	Socket (female), M12, 5-pin	internal	4	-	0 - 10 V 2 - 10 V 0 - 20 mA 4 - 20 mA	-	0.11	R412018278
2AO2M12-E	Socket (female), M12, 5-pin	internal	-	2	-	0 - 10 V / ± 10 V 0 - 20 mA 4 - 20 mA	0.11	R412018281

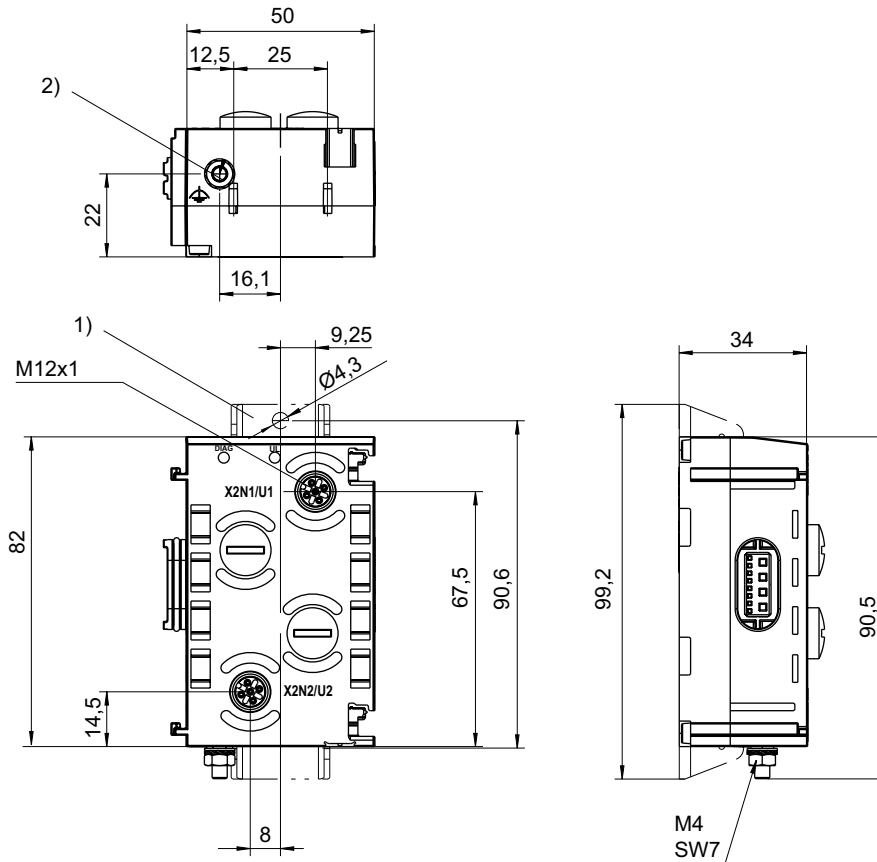
Part No.	Note
R412018277	1)
R412018278	-
R412018281	1)

1) freely selectable signals, configurable

Delivery contents: incl. 2 spring clamp elements and seal

Series AV03
Accessories

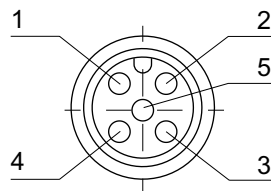
Dimensions



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

23262

Pin assignments, Socket (female)



23122

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	Ground	Ground	Shield, connected internally with ground screw (12)

Series AV03 Accessories

Link structure AES, Series AES

▶ control module M12x1, 5-pin ▶ with external power supply ▶ control of E/P pressure regulators ▶ position control ▶ superordinate control ▶ I/O module version ▶ Field bus protocol: Analog inputs, Analog outputs



23136

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Diagnosis	Short circuit Undervoltage
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Materials:	
Housing	Polyamide, fiber-glass reinforced

Technical Remarks

- Information on the assignment scheme and control parameters can be found in the operating instructions. Or, contact your nearest AVENTICS sales office.
- The total current of all outputs (including valves) must not exceed 4 A in the overall system.
- After direct connection to an electropneumatic pressure regulator suitable for controlling positions or superior control circuits.
- Suitable for direct connection of an electropneumatic pressure regulator from the ED series.

for Type	Port 1 Bus IN	power supply	Number of inputs	Number of outputs	Analog inputs	Analog outputs	Part No.
2AI2AO2M12-C	M12x1, 5-pin, Socket (female)	Plug (male), M12, 4-pin, A-coded	2	2	0 - 10 V / ± 10 V 2 - 10 V / ± 10 V 0 - 20 mA / ± 20 mA 4 - 20 mA / ± 20 mA	0 - 10 V / ± 10 V 0 - 20 mA 4 - 20 mA	R412018293

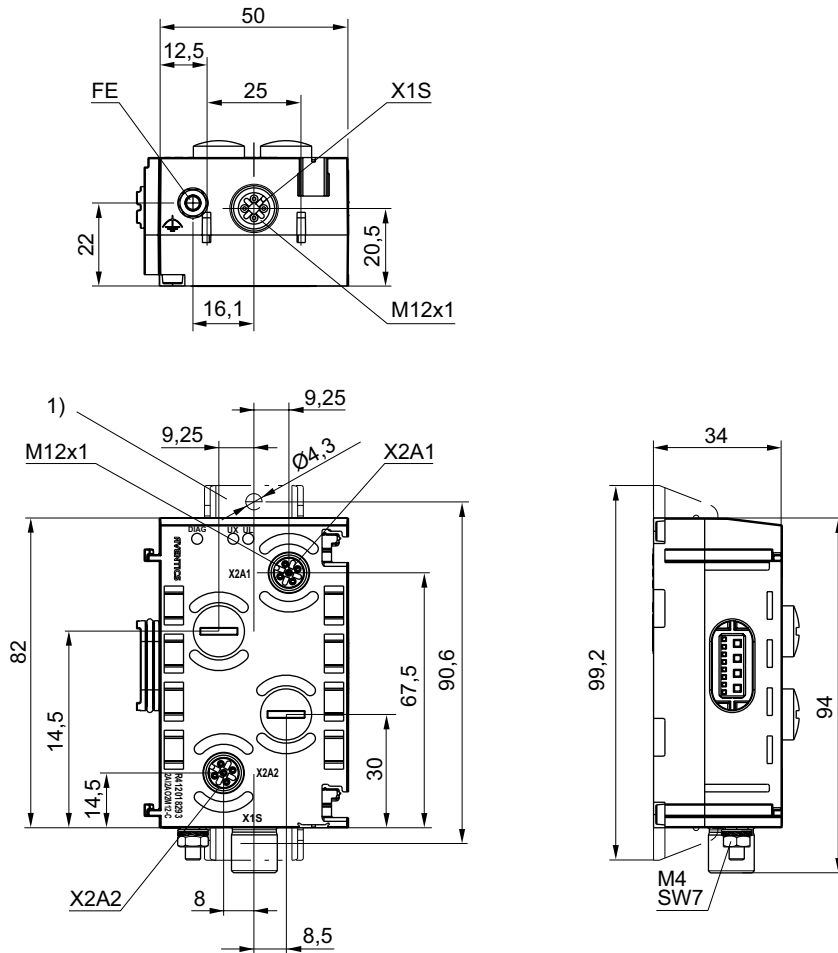
Part No.	Weight	Note
	[kg]	
R412018293	0.11	1)

1) freely selectable signals, configurable

Delivery contents: incl. 2 spring clamp elements and seal

Series AV03 Accessories

Dimensions



IM0041568

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	Ground	-

Series AV03
Accessories
Fieldbus connection, Series AES

▶ Pressure measurement module with 4 compressed air connection ▶ Compressed air connection: push-in fitting, Ø 4



24546

Measurement	Relative pressure
Measurement range min./max.	0 bar / 10 bar
Working pressure min./max.	0 bar / 15 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Max. particle size	40 µm
Repeatability (% of full scale value)	± 2 %
DC operating voltage min./max.	24 V DC
Protection class	IP65
Weight	0.115 kg
Resolution	8 bit
Materials:	
Housing	Polyamide, fiber-glass reinforced

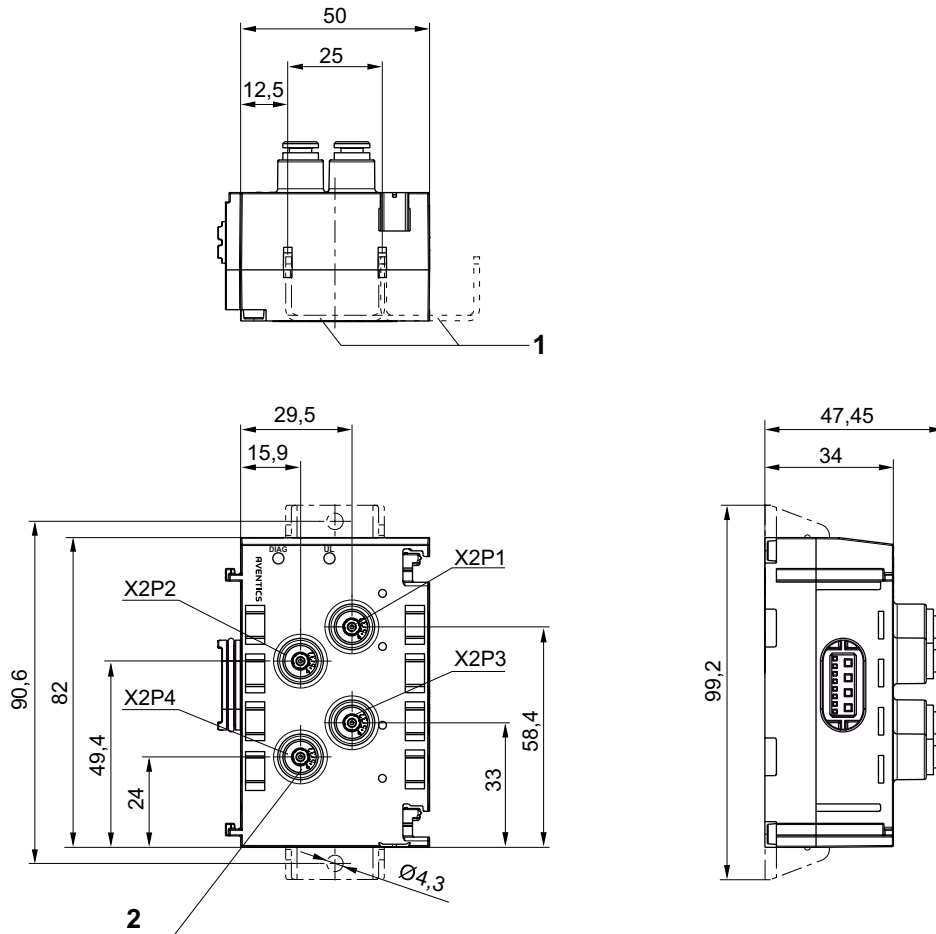
Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.

for Type	Number Compressed air connection	Part No.
4P4D4	4	R412018291

Series AV03 Accessories

Dimensions



24596

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

Series AV03

Accessories

Fieldbus connection, Series AES

▶ power supply 7/8" , 5-pin ▶ Power module



IM0043955

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-20% / +20%
Operating voltage, actuators	24 V DC
Actuator voltage tolerance	-10% / +10%
Total current for actuators	4 A
Total current of sensors max.	4 A
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2

Materials:

Housing Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
- The supply voltage from X1S1 is available at X1S2 (without modification)
- The total internal current (UA or UL) and consumption at X1S2 must not exceed 8A at X1S1.

Port 1	Port 2	Power supply direction		Weight	Note	Part No.
		UL	UA			
				[kg]		
Plug, 7/8", 5-pin	Socket, 7/8", 5-pin	left, right	left, right	0.15	1); 3)	R412018272
Plug, 7/8", 5-pin	Socket, 7/8", 5-pin	-	left	0.15	2); 3)	R412018273
Plug, 7/8", 5-pin	Socket, 7/8", 5-pin	left	-	0.15	2); 3)	R412018274

UL: Logic voltage (power supply for electronic components and sensors)

UA: Actuator voltage (power supply for valves and outputs)

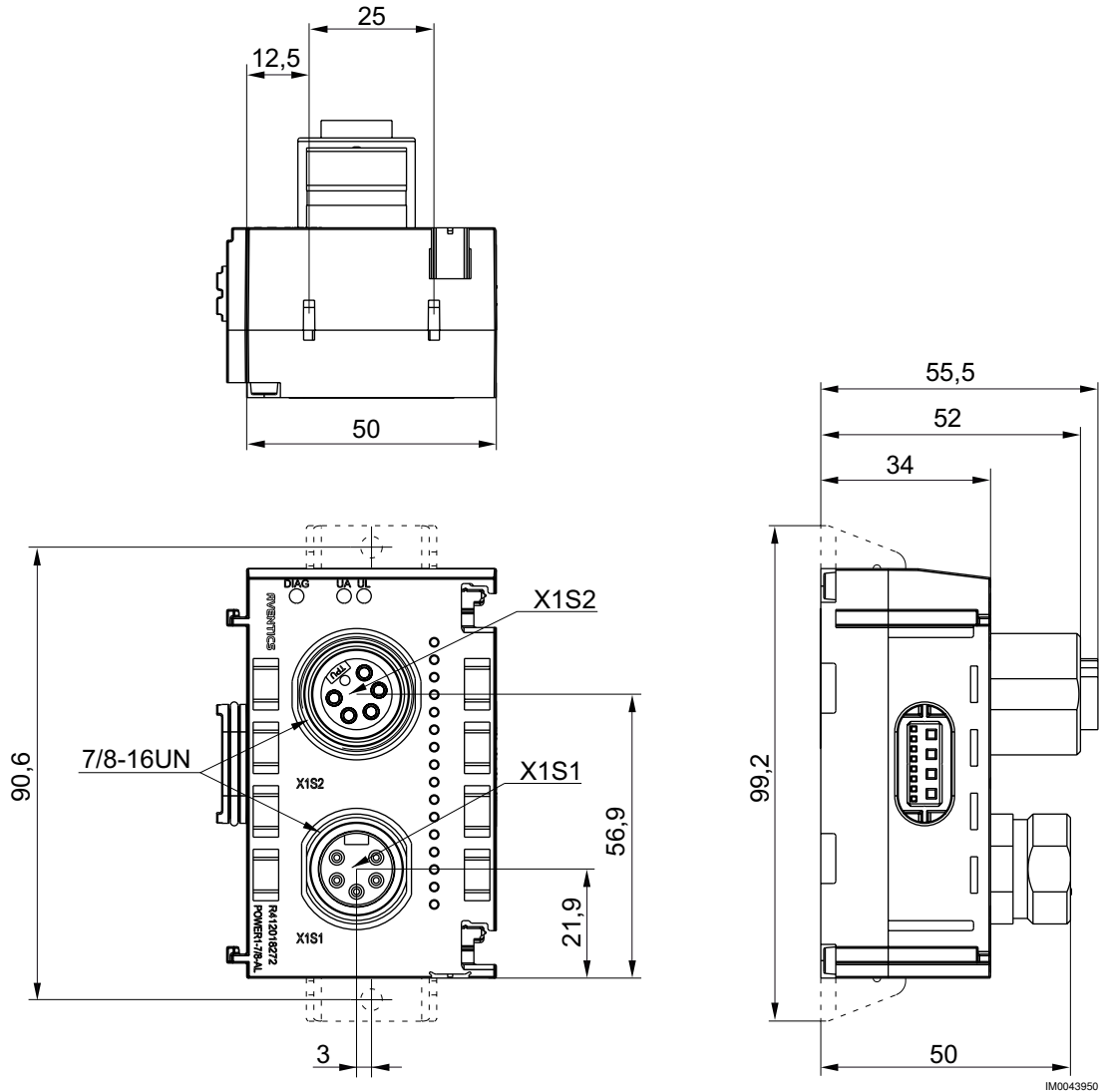
1) Power plug X1S on the bus coupler must be closed with sealing cap R412024837.

2) The supply voltage is galvanically isolated from the right-hand module.

3) If connection 2 is not used for forwarding, it must be closed with sealing cap R412024838.

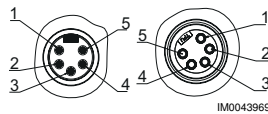
Series AV03 Accessories

Dimensions



Port 1, X1S1
Port 2, X1S2

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

Series AV03
Accessories
Fieldbus connection, Series AES
▶ power supply, M12 plug, 4-pin ▶ Power module


IM0045847

Ambient temperature min./max.	-10°C / +60°C
Protection class	IP65
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-20% / +20%
Operating voltage, actuators	24 V DC
Actuator voltage tolerance	-10% / +10%
Total current for actuators	4 A
Total current of sensors max.	4 A
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2

Materials:

Housing Polyamide, fiber-glass reinforced

Technical Remarks

- You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.

Port 1	Power supply direction		Weight [kg]	Part No.
	UL	UA		
Plug, M12x1, 4-pin	-	left	0.15	R412018267
Plug, M12x1, 4-pin	left	-	0.15	R412018268

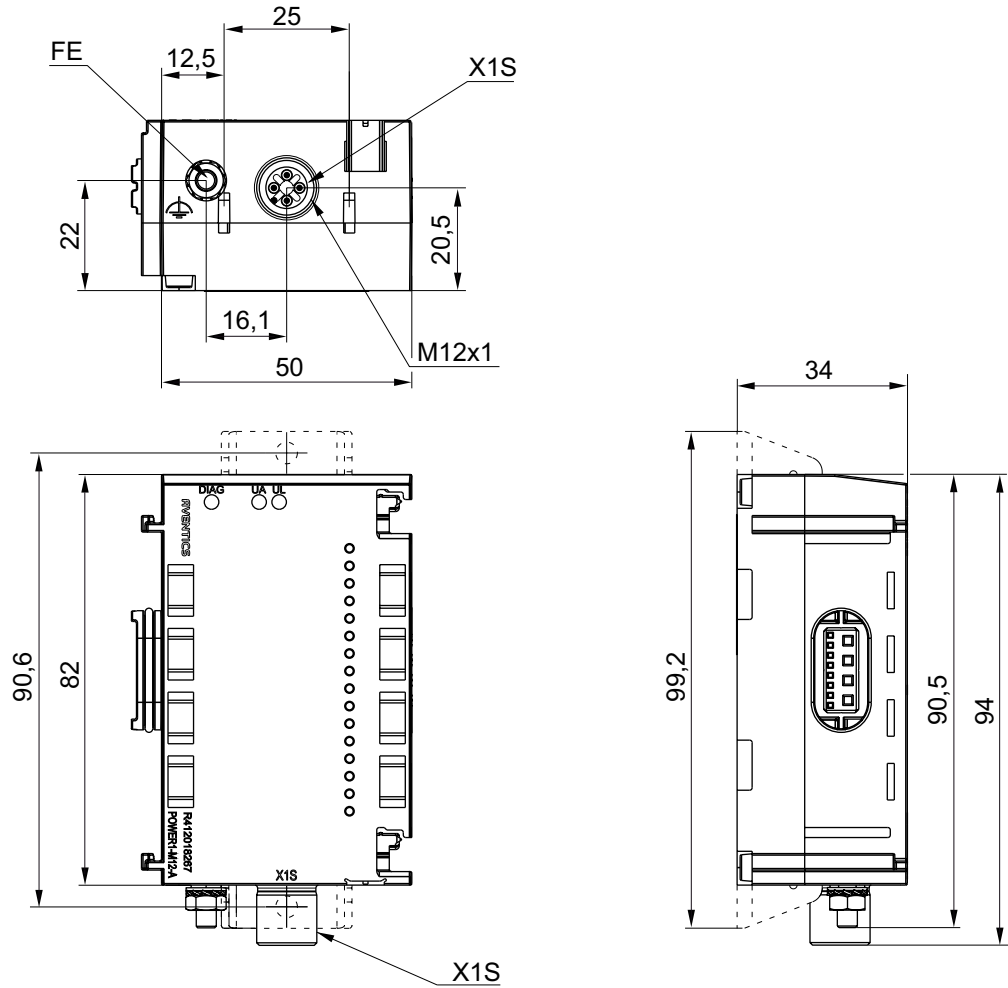
UL: Logic voltage (power supply for electronic components and sensors)

UA: Actuator voltage (power supply for valves and outputs)

The supply voltage is galvanically isolated from the right-hand module.

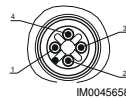
Series AV03 Accessories

Dimensions



Port 1, X1S

Pin assignments, PNP



Pin	R412018267 (UA)	R412018267 (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)	-

Series AV03
Accessories
Blanking plate

- ▶ Base plate principle, multiple ▶ Reversed pressure supply permissible ▶ With collective pilot air exhaust
▶ for AV03



18435

Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Working pressure min./max.	-0.9 bar / 10 bar
Protection class	IP65
Mounting screw	Hexalobular socket (TORX) ISO 10664-8
Tightening torque for mounting screws	0.7 Nm±0,1
Materials:	
Base plate	Polyamide, fiber-glass reinforced
Seals	Nitrile rubber
Screws	Steel, galvanized

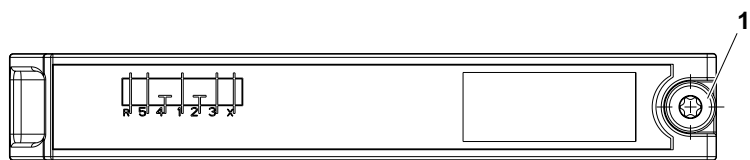
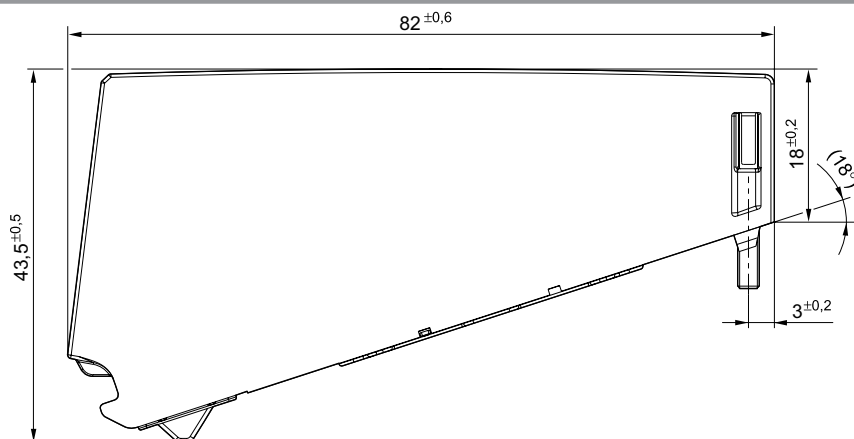
Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

	Weight	Part No.
	[kg]	
	0.028	R422102462
Delivery includes sealing kit and 1x mounting screw		

Series AV03
Accessories

Dimensions

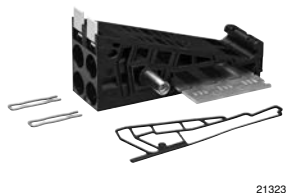


1) Mounting screw

Extension kit for base plate 2x
▶ for Series AV03

Working pressure min./max. -0.95 bar / 10 bar
 Ambient temperature min./max. -10 °C / +60 °C
 Medium Compressed air

Materials:
 Housing Polyamide
 Seals Nitrile rubber



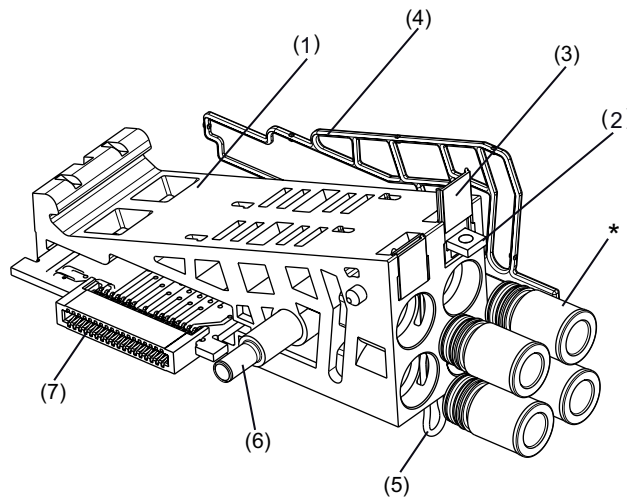
21323

Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Series AV03
Accessories

Type	Scope of delivery	Delivery quantity	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), 1 tie rod extensions (6), and 1 valve driver board, 2x (7)	1	R412015422
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), 1 tie rod extensions (6), and 1 valve driver board, 2x (7)	1	R412015423
Base plate 2x for bus coupler	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 1 tie rod extensions (6), and 1 valve driver board, 2x (7)	1	R412018088

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
 ▶ for Series AV03


21322

Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-10°C / +60°C
Medium	Compressed air

Materials:
 Housing
 Seals

Polyamide
 Nitrile rubber

Technical Remarks

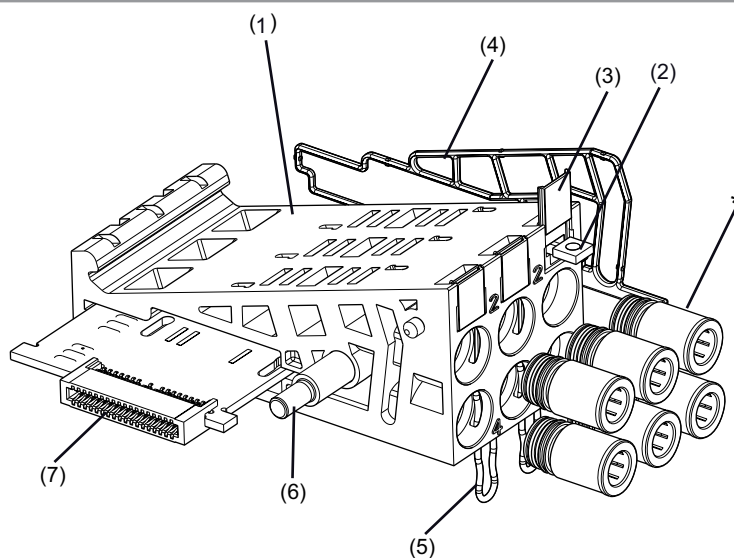
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Valve systems ▶ Valve systems

Series AV03
Accessories

Type	Scope of delivery	Delivery quantity	Part No.
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), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R412018378
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), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R412018379
Base plate 3x for bus coupler	Base plate (1), incl. 3 nuts (2), 3 labels (3), 1 seal (4), 2 retaining clips (5), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R412018380

Overview drawing



15849

* 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 4x
▶ for Series AV03



24510

Working pressure min./max.
Ambient temperature min./max.
Medium

-0.95 bar / 10 bar
-10 °C / +60 °C
Compressed air

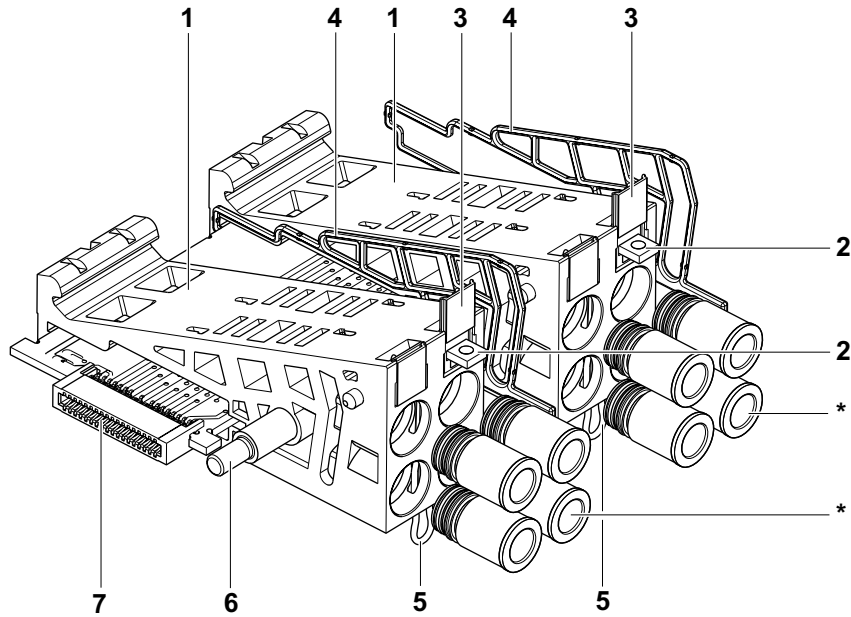
Materials:
Housing
Seals

Polyamide, fiber-glass reinforced
Nitrile rubber

Series AV03
Accessories
Technical Remarks

- After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Type	Scope of delivery	Delivery quantity	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), 1 tie rod extension (6), and 1 extension circuit board (7)	1	R412018205

Overview drawing


24204

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
▶ for Series AV03-EP


2323415

Working pressure min./max.
 Ambient temperature min./max.
 Medium

0 bar / 11 bar
 -10°C / +60°C
 Compressed air

Materials:
 Housing
 Seals

Polyamide
 Nitrile butadiene rubber

Valve systems ▶ Valve systems

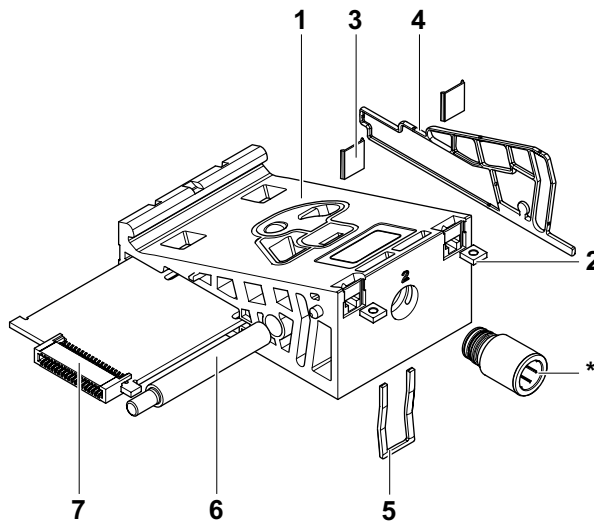
Series AV03 Accessories

Technical Remarks

- Depending on the selected base plate, you can either use the pressure regulator as a pressure zone control or single pressure control.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Type	Scope of delivery	Delivery quantity	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), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R414007343
Base plate for pressure zone control for multipole connection	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R414007344
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), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R414007533
Base plate for pressure zone control for fieldbus connection	Base plate (1), incl. 2 nuts (2), 2 labels (3), 1 seal (4), 1 retaining clip (5), 1 tie rod extensions (6), and 1 extension circuit board (7)	1	R414007534

Overview drawing



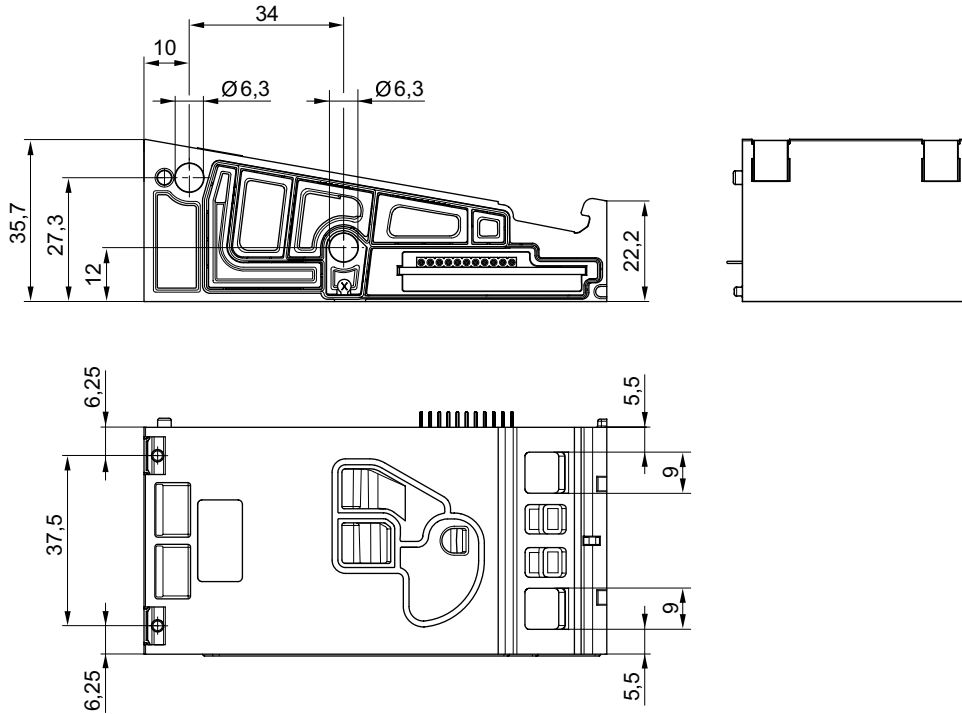
24280

* 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.

Series AV03 Accessories

Dimensions



23296

Extension kit, supply plate ▶ for Series AV03



IM0046167

Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-10°C / +60°C
Medium	Compressed air
Materials:	
Housing	Polyamide
Seals	Nitrile rubber

Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- The exhaust module (item 2) is not included in the scope of delivery for the supply plate (item 1). You must order the exhaust modules separately.
- Position 1: Push-in fittings not included in the scope of delivery.

	Position	Type	Scope of delivery	Delivery quantity	Valve system version	Part No.
	1	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X/R	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412018347
					Multipole	R412022573

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

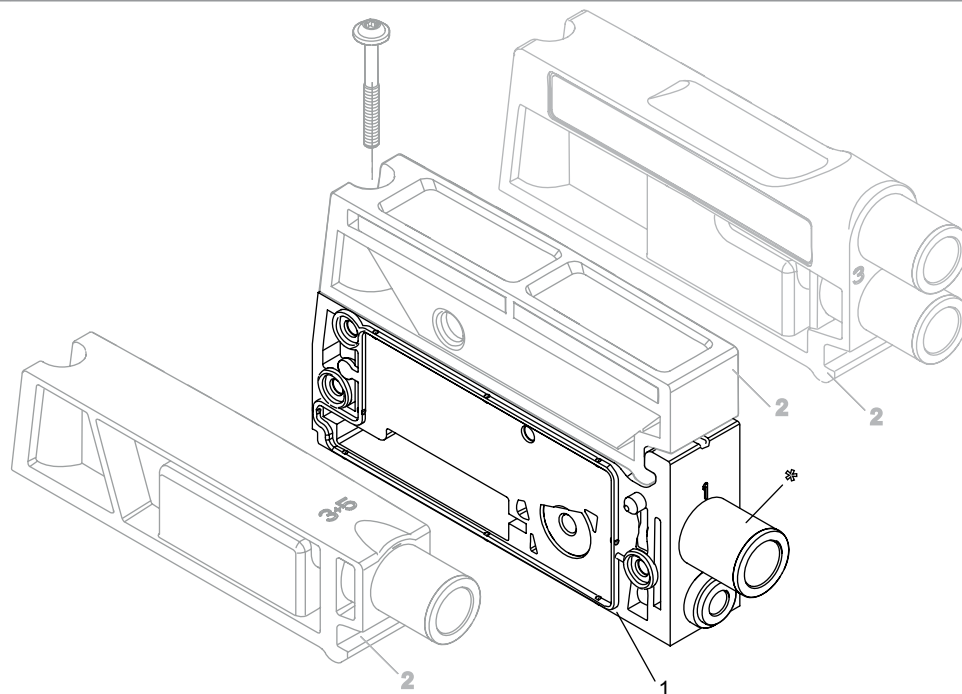
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Valve systems ▶ Valve systems

Series AV03
Accessories

	Position	Type	Scope of delivery	Delivery quantity	Valve system version	Part No.
	1	Supply plate, connection 1, external pilot, separate pressure zones in channels 1/3/5/X/R	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus Multipole	R412018348 R412022574
	1	Supply plate, connection 1, no pressure zones	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus Multipole	R412018337 R412022575
	1	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus Multipole	R412018613 R412022576
	1	Supply plate, connection 1, separate pressure zone in channel 1	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus Multipole	R412018614 R412022577
	1	Supply plate, connection 1, separate pressure zones in channels 3/5	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus Multipole	R412018615 R412022578

Overview drawing



IM0046171

* Position 1: 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.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Series AV03
Accessories
Extension kit, supply plate with switch-off voltage monitoring
 ▶ for Series AV03


IM0046167

Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-10°C / +60°C
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³

Materials:	
Housing	Polyamide
Seals	Nitrile rubber

Technical Remarks

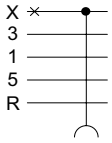
- The supply plates with switch-off voltage monitoring are equipped with electronics that monitor if the voltage falls safely below the switch-off voltage threshold. The supply plate must be positioned to the left of the valves to be monitored.
- The supply plates can only be used in conjunction with an AV valve system with fieldbus connection.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.

	Type	Scope of delivery	Delivery quantity	Valve system version	Part No.
	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X/R	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025065
	Supply plate, connection 1, X, external pilot, separate pressure zones in channels 1/3/5/X/R	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025066
	Supply plate, connection 1, no pressure zones	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025067
	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025068
	Supply plate, connection 1, separate pressure zone in channel 1	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025069
	Supply plate, connection 1, separate pressure zones in channels 3/5	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025070

You must order the exhaust modules separately.

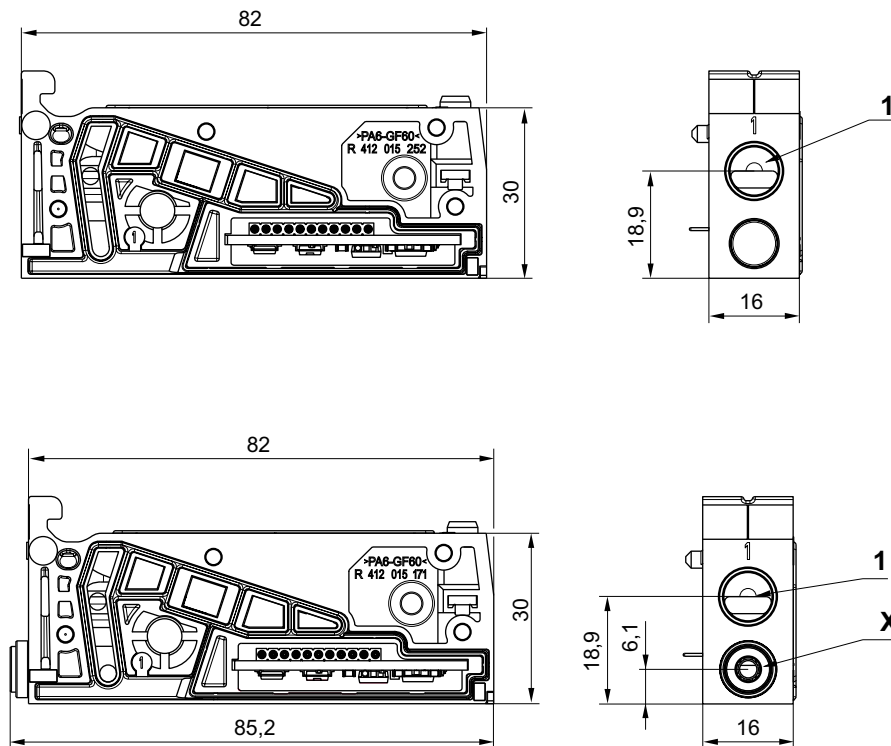
Valve systems ▶ Valve systems

Series AV03 Accessories

	Type	Scope of delivery	Delivery quantity	Valve system version	Part No.
	Supply plate, connection X, external pilot, separate pressure zones in channels X	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	1	Field bus	R412025071

You must order the exhaust modules separately.

Dimensions



IM0045840

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

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.

Series AV03
 Accessories

Extension kit, exhaust module for supply plate
 ▶ for Series AV03


IM0046168

Working pressure min./max.	-0.95 bar / 10 bar
Ambient temperature min./max.	-10 °C / +60 °C
Max. particle size	40 μm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³

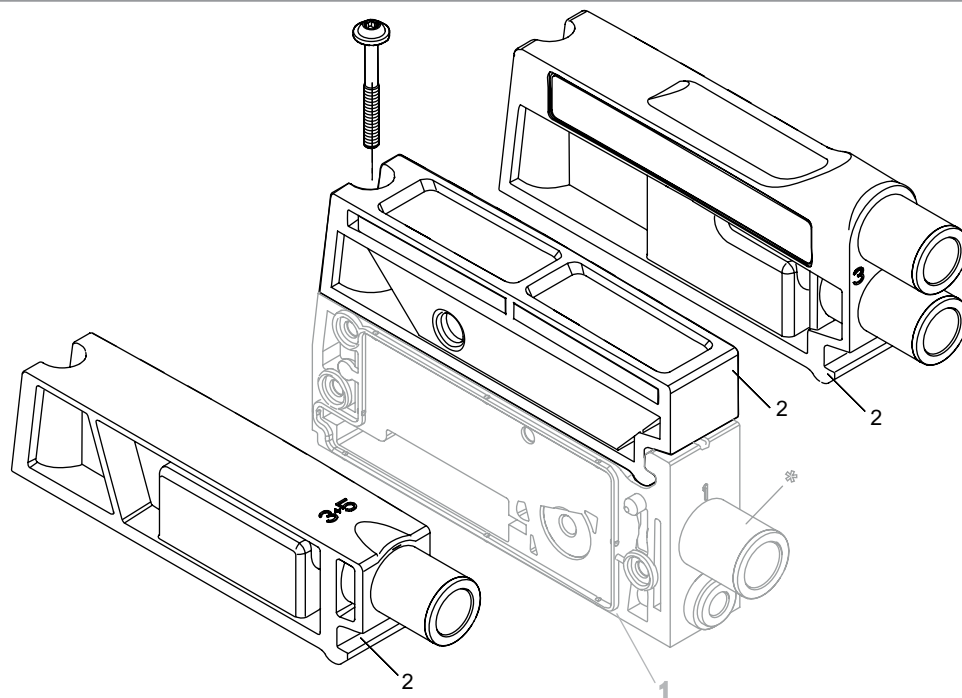
Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.

Type	Scope of delivery	Delivery quantity	Part No.
Exhaust module 3, 5, and R with flat silencer	Exhaust module, including 1 seal, 1 mounting screw	1	R412018331
Exhaust module with combined collected exhaust 3 and 5	Exhaust module, incl. 1 mounting screw, push-in fitting Ø 8 mm	1	R412018332
Exhaust module with separate collected exhaust 3 and 5	Exhaust module, incl. 1 mounting screw, push-in fitting Ø 8 mm	1	R412018333

Series AV03
Accessories

Overview drawing



2) Exhaust module

23258

Extension kit, electrical supply plate
▶ for AV03, AES



IM0042672

Ambient temperature min./max.
Medium temperature min./max.
Power supply connection
Max. power consumption
Protection class

-10°C / +60°C
-10°C / +60°C
M12, 4-pin, A-coded
2 A
IP65

Materials:
Housing
Seals

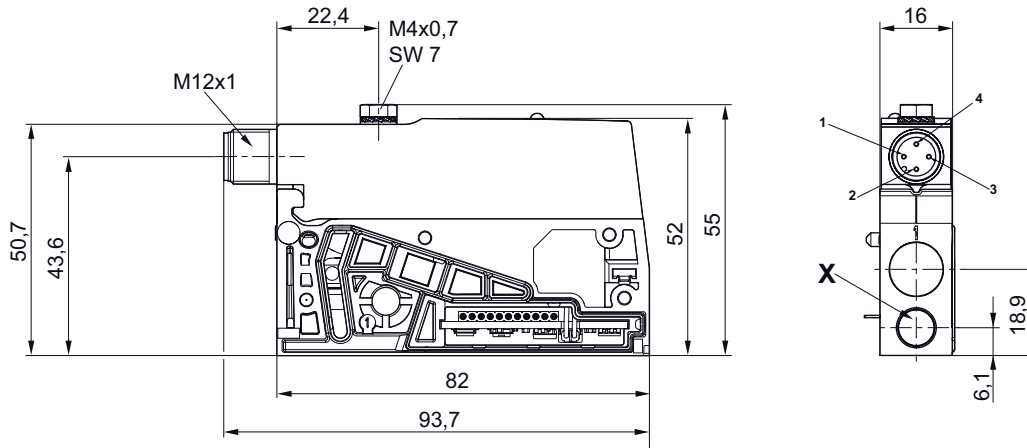
Polyamide; Aluminum
Nitrile rubber

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- Please note that the supply plate may only be used in conjunction with AES series fieldbus modules.

Series AV03
Accessories

	Scope of delivery	DC operating voltage	Voltage tolerance DC	Order quantity	Weight	Part No.
		[V]		[pcs.]	[kg]	
	Supply plate, incl. 1 seal, 1 tie rod, and 1 screw for extension	24 V	-10% / +10%	1	0.12	R412021748
	Supply plate, incl. 1 seal, 1 tie rod, and 1 screw for extension	24 V	-10% / +10%	1	0.12	R412021752

Dimensions


21353

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

Extension kit, Electrical valve control module
 ▶ for AV03


IM0041552

Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Max. power consumption	1 A
Protection class	IP65

Materials:	
Housing	Polyamide; Aluminum
Seals	Nitrile rubber

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Valve systems ▶ Valve systems

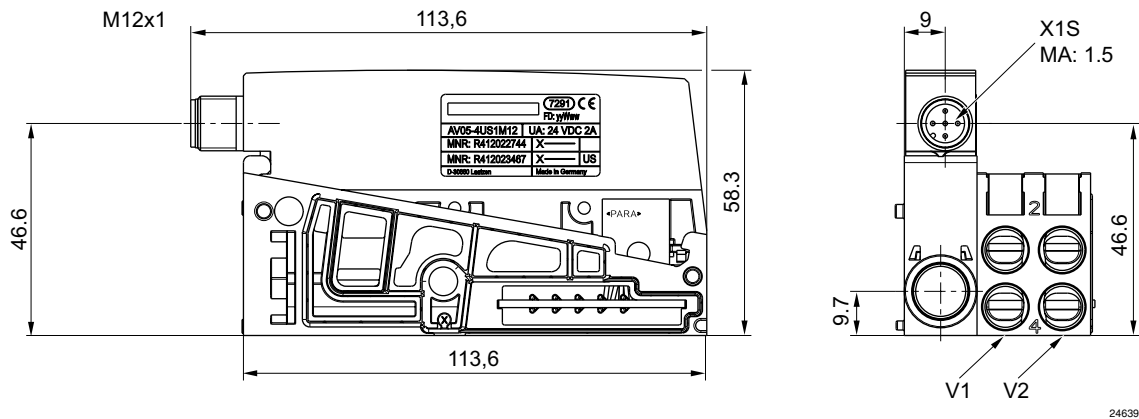
Series AV03 Accessories

Technical Remarks

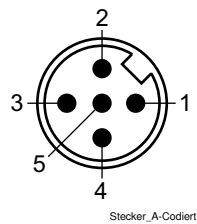
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- When using polyurethane tubing, we recommend using additional stiffener sleeves.

	Scope of delivery	Pilot connection	DC operating voltage	Order quantity	Weight	Part No.					
		[X]	[V]	[pcs.]	[kg]						
<table border="1"> <tr><td>X</td></tr> <tr><td>3</td></tr> <tr><td>1</td></tr> <tr><td>S</td></tr> <tr><td>R</td></tr> </table>	X	3	1	S	R	M12 control module (incl. base plate for 2 valve positions incl. 2 nuts, 2 labels), 1 tie rod extension 16 mm, 1 tie rod extension 25 mm, 1 screw, 1 retaining clip, and 1 seal	Ø 12	24 V	1	0.125	R412022742
X											
3											
1											
S											
R											
Push-in fittings are not included in the scope of delivery and must be ordered separately.											

Dimensions



M12 plug, 5-pin, A-coded



Pin assignments

Series AV03 Accessories

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

Extension kit, combination plate AV03/AV05



23180

Ambient temperature min./max.

-10°C / +60°C

Medium

Compressed air

Working pressure min./max.

-0.95 bar / 10 bar

Materials:

Housing

Polyamide, fiber-glass reinforced

Base plate

Aluminum

Seals

Nitrile rubber

Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- You must order items 1, 2, and 3 respectively in the required quantity.
- Position 1: Push-in fittings not included in the scope of delivery.

	Position	Type	Scope of delivery	Delivery quantity	Note	Valve system version	Part No.
	1	Supply plate, connection 1, no pressure zones	Combination module, connection 1, no pressure zones	1	-	Field bus	R412021780
					1)	Field bus	R412022594
					-	Multi-pole	R412021777
					1)	Multi-pole	R412022592
	1	Supply plate, connection 1, separate pressure zones in channels 1/3/5	Combination module, connection 1, separate pressure zones in channels 1/3/5	1	-	Field bus	R412021779
					1)	Field bus	R412022593
					-	Multi-pole	R412021776
					1)	Multi-pole	R412022591

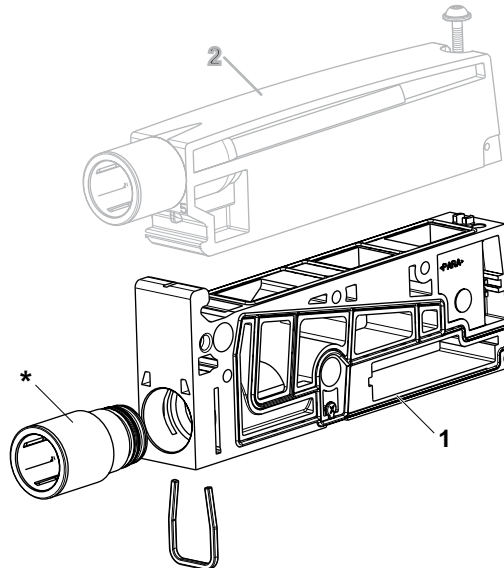
1) Inch version

Series AV03
Accessories

	Position	Type	Scope of delivery	Delivery quantity	Note	Valve system version	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	1	-	-	R412020088
-	-	Exhaust module with separate collected exhaust 3 and 5	Exhaust module: incl. 1 mounting screw, push-in fitting Ø 12 mm				R412020089

1) Inch version

Overview drawing



23048

* 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.

Series AV03

Accessories

Exhaust module Series AV03, AV05

▶ For port channels 2, 4



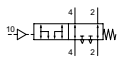
23958

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

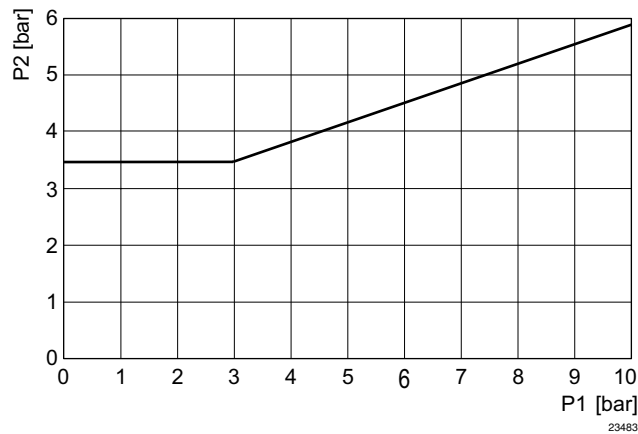
Materials:
 Housing Aluminum
 Seals Nitrile rubber

Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- Particularly suitable for 5/3 CC valves, since the remaining pressure in the actuator can be exhausted when the control pressure is applied.
- The exhaust module and the air circuit should be tested monthly to ensure they function correctly.
- Applications with vertical actuators with exhaust or pressure throttles and a maximum load of 15 kg as well as up to a speed of $V_{max} < 33$ mm/s.

	Port 2, 4	Port 10	Weight	Part No.
			[kg]	
	Ø 8	Ø 4	0.07	R422003046
	Ø 6			R422003185
	Ø 4			R422003187

Minimum control pressure (depending on operating pressure)



p1 = pressure on connections 2 and 4; p2 = switching pressure

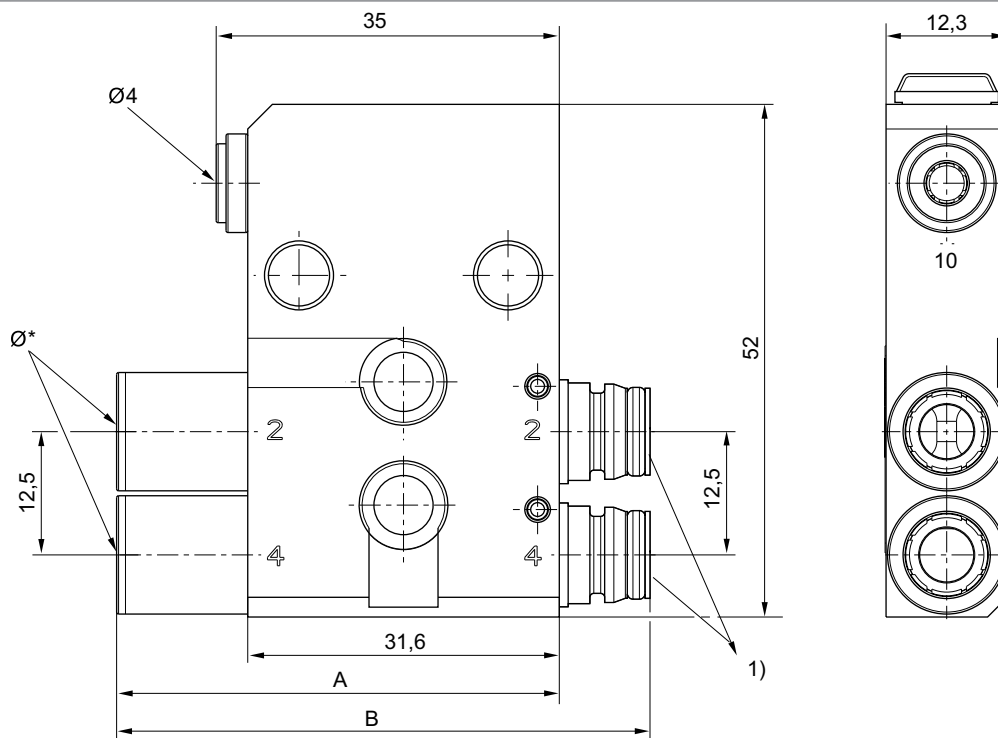
p1	p2
0	3.5
3	3.5
10	5.8

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2017-04-05, ©AVENTICS S.à r.l., subject to change

Series AV03 Accessories

Dimensions



23482

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									

Shut-off module, Series AV03 / AV05

▶ For port channels 2, 4



24571

Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium

0 bar / 10 bar
-10°C / +60°C
-10°C / +60°C
Compressed air

Materials:
Housing
Seals

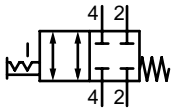
Aluminum
Nitrile butadiene rubber

Series AV03

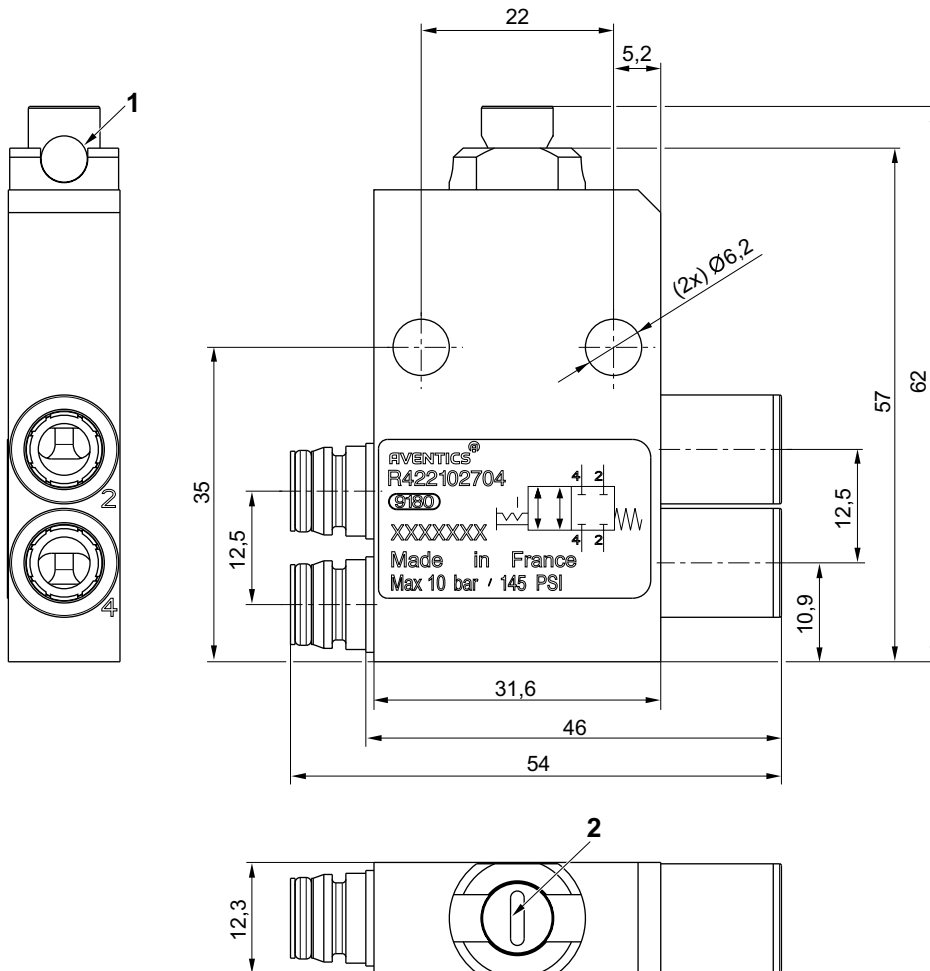
Accessories

Technical Remarks

- When using polyurethane tubing, we recommend using additional stiffener sleeves.
- Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series

	Port 2 / 4	Weight [kg]	Part No.
	1/4"	0.08	R422102699
	Ø 8		R422102704
	Ø 6		R422102705
	Ø 4		R422102706

Dimensions



24816

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

Series AV03
Accessories

Flow rate coupler Series AV03, AV05

▶ For port channels 2, 4



23962

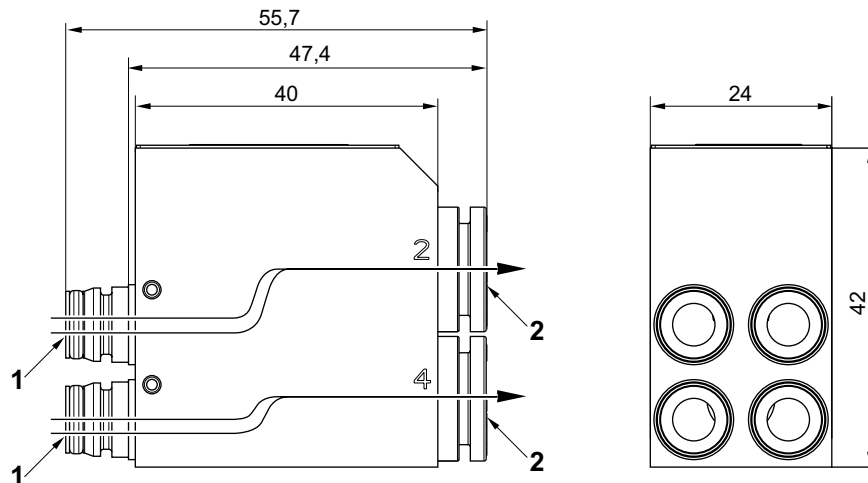
Working pressure min./max. -0.95 bar / 10 bar
Ambient temperature min./max. -10°C / +60°C
Medium Compressed air

Materials:
Housing Aluminum
Seals Nitrile rubber

Technical Remarks	
■	When using polyurethane tubing, we recommend using additional stiffener sleeves.
■	Both valves must be identical models and controlled electrically at the same time.
■	Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
■	Doubling of flow rate performance by connecting the working connections of two valves.

Weight	Fig.	Type	Part No.
[kg]			
0.115	Fig. 1	2 x Ø 10	R422003050
	Fig. 2	1 x Ø 10	R422003060

Fig. 1



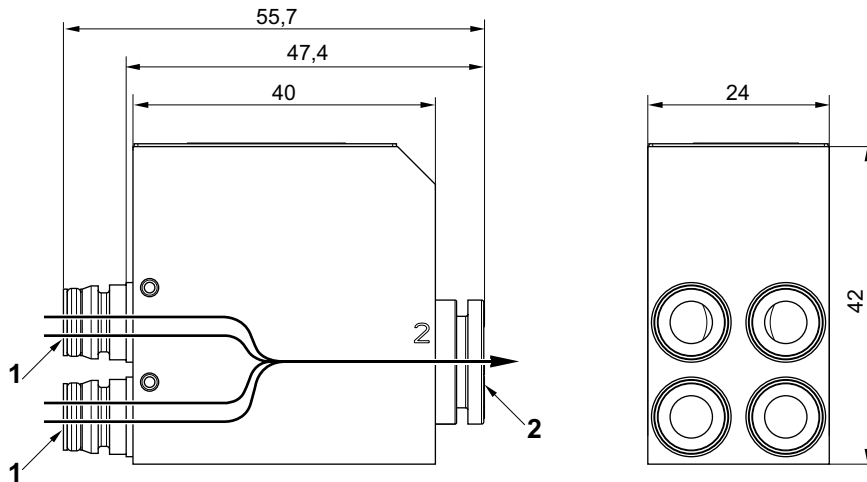
23487

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

Series AV03
Accessories

Number of valves	Valve function	Series	Flow[l/min]
2	5/2	AV03	670
2	5/3	AV03	670
2	2x3/2	AV03	670
2	5/2	AV05	1100
2	5/3	AV05	1100
2	2x3/2	AV05	1100

Fig. 2



23486

- 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	2x3/2	AV03	830
2	2x3/2	AV05	1400

Pressure regulator, Series AV
▶ Controlled port: 2, 4


IM0042673

Working pressure min./max.
 Ambient temperature min./max.
 Medium temperature min./max.
 Medium

-- / 10 bar
 -10°C / +60°C
 -10°C / +60°C
 Compressed air

Materials:
 Housing
 Seals

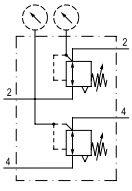
Aluminum
 Acrylonitrile butadiene rubber

Valve systems ▶ Valve systems

Series AV03
Accessories

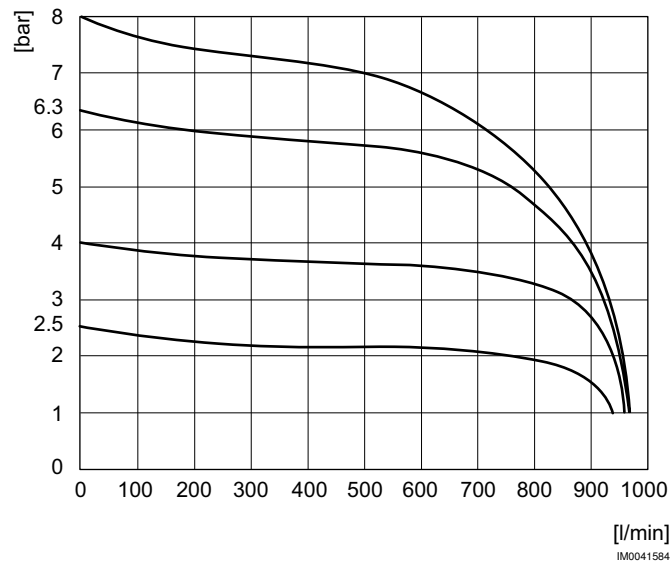
Technical Remarks

- Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- Kit for stacking assembly of up to 6 regulators: R422103090
- Mounting bracket (2x) for mounting to the mounting plate: R422103091

	Compressed air connection		Adjustment range min./max. [bar]	Repetitive precision	Controlled port	Weight [kg]	Part No.
	Input	Output					
	push-in fitting	Ø 6	0.5 / 10	± 10 %	2, 4	0.02	R422103084
		Ø 8					R422103085
		1/4"					R422103086

Order pressure gauge separately

Flow diagram, Port 2

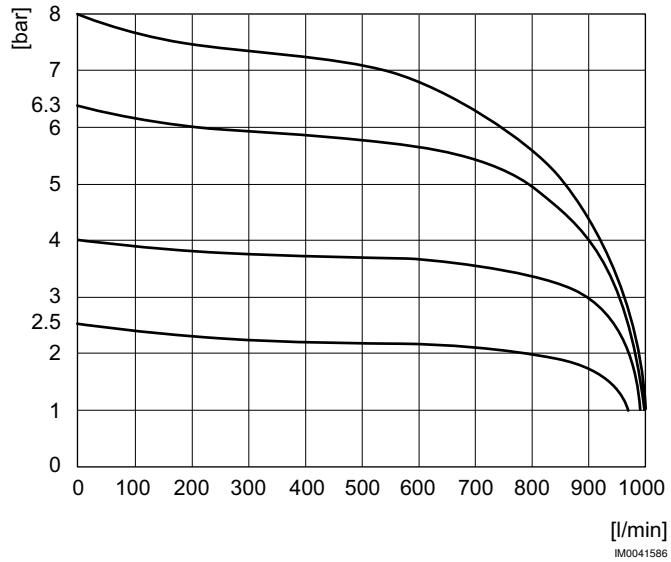


Pv = 9 bar

Series AV03

Accessories

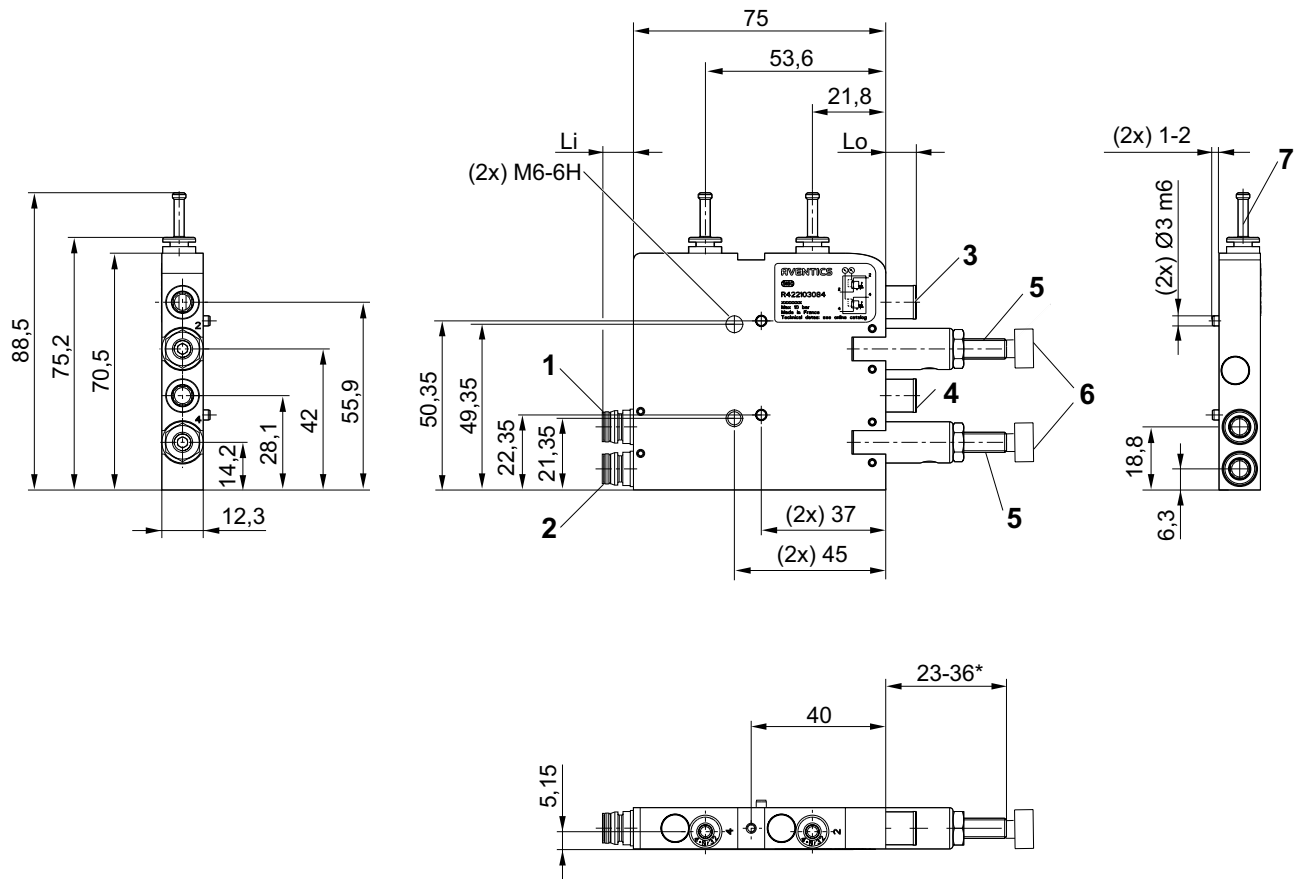
Flow diagram, Port 4



Pv = 9 bar

Series AV03 Accessories

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

24657

Series AV03
 Accessories

Pressure regulator, Series AV
 ▶ Controlled port: 2, 4

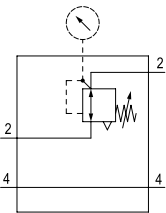
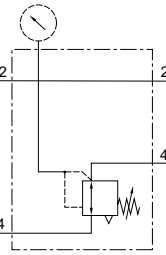

IM0043936

Working pressure min./max. -- / 10 bar
 Ambient temperature min./max. -10°C / +60°C
 Medium temperature min./max. -10°C / +60°C
 Medium Compressed air

Materials:
 Housing Aluminum
 Seals Acrylonitrile butadiene rubber

Technical Remarks

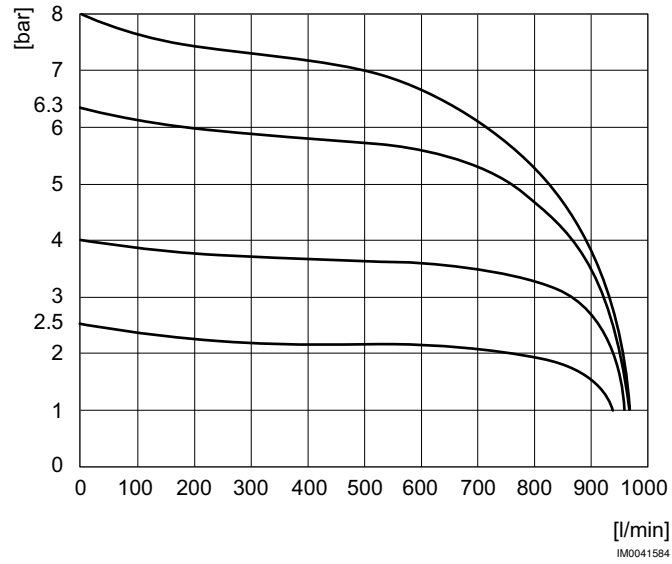
- Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- Mounting bracket (2x) for mounting to the mounting plate: R422103091

	Compressed air connection		Adjustment range min./max.	Repetitive precision	Controlled port	Weight	Part No.
	Input	Output					
			[bar]			[kg]	
	push-in fitting	Ø 8	0.5 / 10	± 10 %	2	0.2	R422003560
		Ø 6					R422003561
	push-in fitting	Ø 8	0.5 / 10	± 10 %	4	0.2	R422003568
		Ø 6					R422003569

Order pressure gauge separately

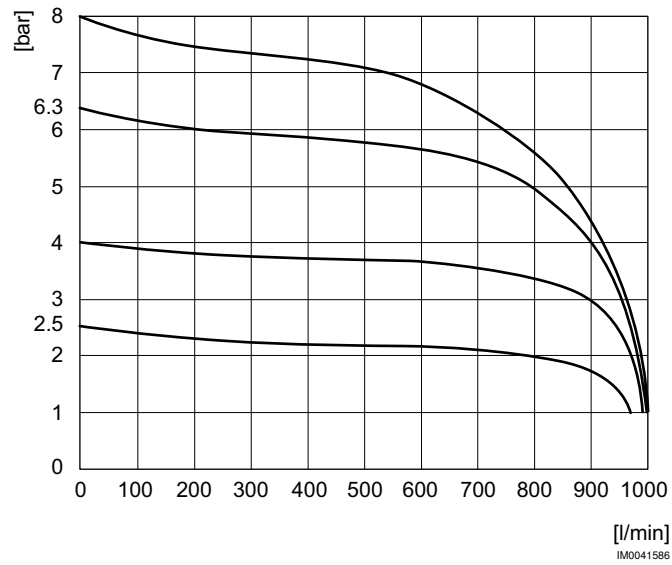
Series AV03
Accessories

Flow diagram, Port 2

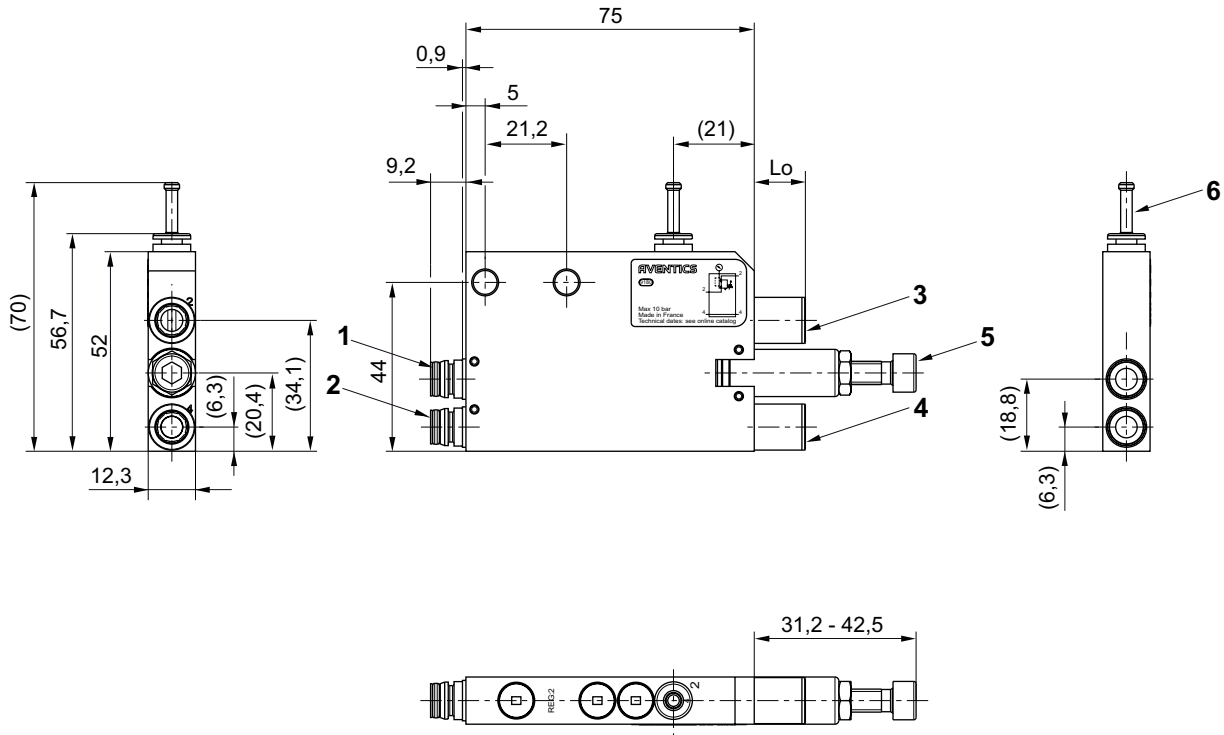


Pv = 9 bar

Flow diagram, Port 4



Pv = 9 bar

Series AV03
Accessories
Dimensions


IM0043951_a

- 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) plugs

Pressure regulator, Series AV
▶ Inch version ▶ Controlled port: 2, 4


IM0043936

Working pressure min./max.	-- / 10 bar
Ambient temperature min./max.	-10°C / +60°C
Medium temperature min./max.	-10°C / +60°C
Medium	Compressed air

Materials:	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber

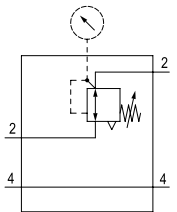
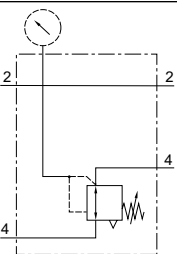
Technical Remarks

- Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- Mounting bracket (2x) for mounting to the mounting plate: R422103091

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

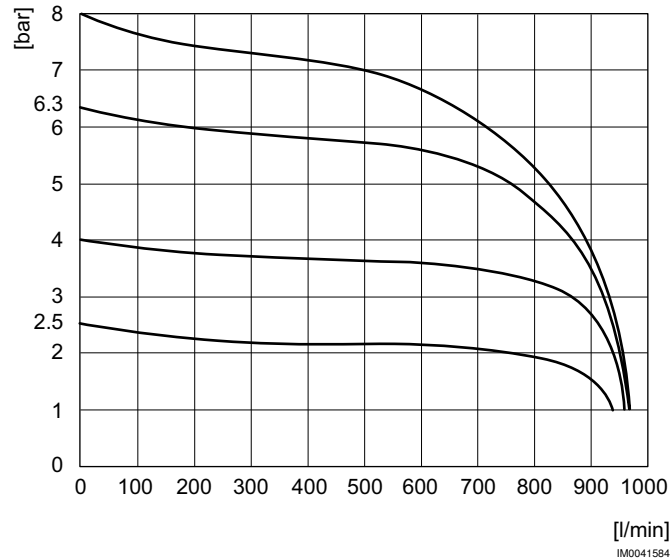
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Series AV03
Accessories

	Compressed air connection		Adjustment range min./max. [bar]	Repetitive precision	Controlled port	Weight [kg]	Part No.
	Input	Output					
	push-in fitting	1/4"	0.5 / 10	± 10 %	2	0.2	R422003563
	push-in fitting	1/4"	0.5 / 10	± 10 %	4	0.2	R422003571

Order pressure gauge separately

Flow diagram, Port 2

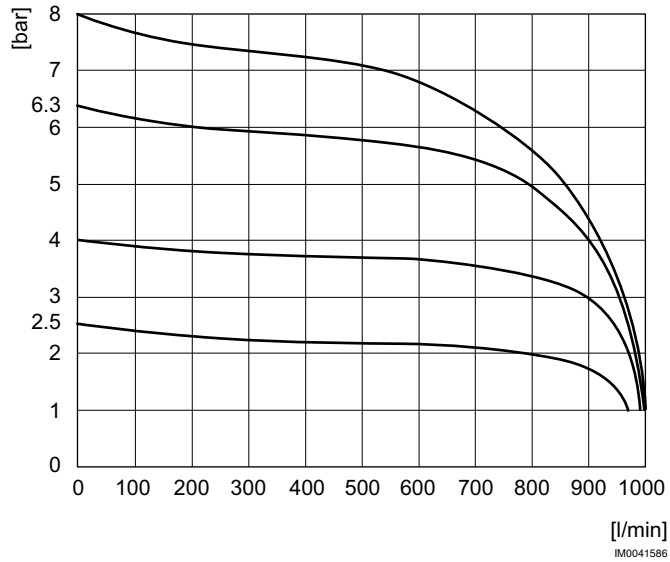


Pv = 9 bar

Series AV03

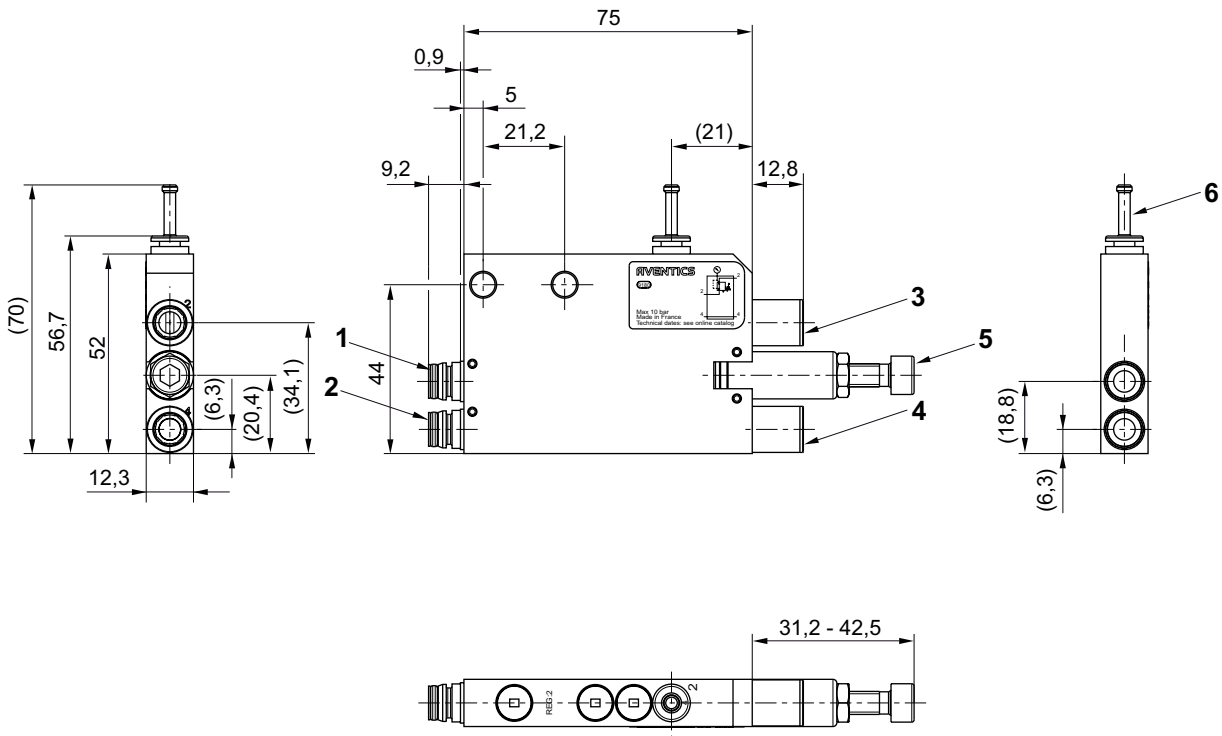
Accessories

Flow diagram, Port 4



Pv = 9 bar

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) plugs

IM0043951_c

Valve systems ▶ Valve systems

Series AV03
Accessories

Plug, M12x1, Series CN2

▶ Plug, M12x1, 4-pin, D-coded, straight ▶ for PROFINET IO, EtherNET/IP, EtherCAT, POWERLINK, sercos III



23447

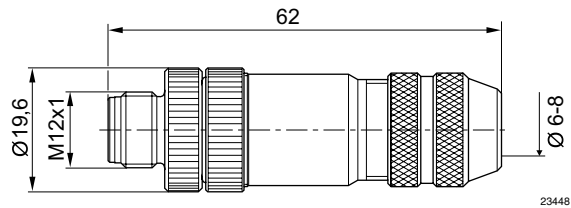
Ambient temperature min./max.	-25°C / +85°C
Protection class	IP67
Materials:	
Housing	Brass

Technical Remarks

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

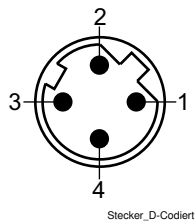
Number of wires	Max. current [A]	suitable cable-Ø min./max [mm]	Weight [kg]	Part No.
4	4	6 / 8	0.41	R419801401

Dimensions



23448

Pin assignment



Stecker_D-Codiert

Series AV03

Accessories

Plug, M12x1, Series CN2

▶ Plug, M12x1, 5-pin, A-coded, straight ▶ screened ▶ for CANopen, DeviceNet



00120241

Ambient temperature min./max.

-40°C / +85°C

Protection class

IP67

Cable fitting

PG 9

Materials:

Housing

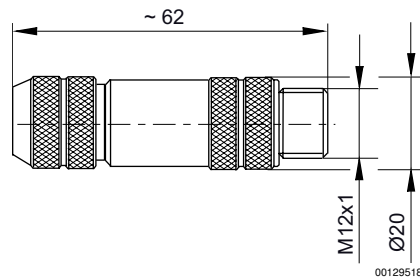
Brass, nickel-plated

Technical Remarks

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

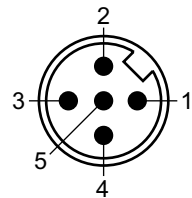
Operational voltage	Max. current	suitable cable-Ø min./max	Housing color	Weight	Part No.
AC					
[V]	[A]	[mm]		[kg]	
48	4	6 / 8	silver	0.048	8942051612

Dimensions



00129518

Pin assignment



Stecker_A-Codiert

Valve systems ▶ Valve systems

Series AV03
Accessories

Plug, M12x1, Series CN2

▶ Plug, M12x1, 5-pin, B-coded, straight ▶ screened ▶ for PROFIBUS DP



00120241

Ambient temperature min./max.
Protection class

-25°C / +90°C
IP67

Materials:
Housing
Seals

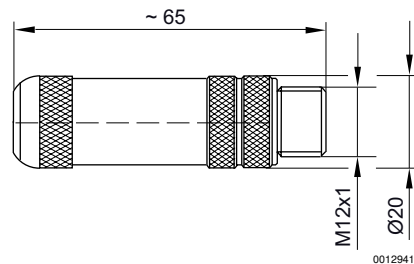
Brass, nickel-plated
Fluorocarbon caoutchouc

Technical Remarks

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

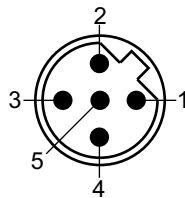
Operational voltage	Max. current	suitable cable-Ø min./max	Housing color	Weight	Part No.
AC					
[V]	[A]	[mm]		[kg]	
48	4	4 / 9	silver	0.06	8941054054

Dimensions



00129415

Pin assignment, B-coded



Stecker_B-Codiert

Series AV03
Accessories
Socket, M12x1, Series CN2

▶ Socket, M12x1, 4-pin, A-coded, straight



00129412

Ambient temperature min./max.

-25°C / +90°C

Protection class

IP67

Materials:

Housing

Polybutyleneterephthalate

Seals

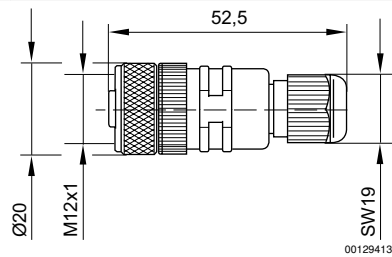
Fluorocarbon caoutchouc

The delivered product may vary from that in the illustration.

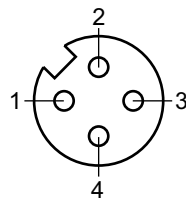
Technical Remarks

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

Operational voltage	Max. current	suitable cable-Ø min./max	Housing color	Weight	Part No.
AC					
[V]	[A]	[mm]		[kg]	
48	4	4 / 8	Black	0.028	8941054324

Dimensions


00129413

Pin assignment


Buchse_A-Cod_4-p

Valve systems ▶ Valve systems

Series AV03
Accessories

Socket, M12x1, Series CN2
▶ Socket, M12x1, 4-pin, A-coded, angled



22869

Ambient temperature min./max.
Protection class

-25°C / +90°C
IP67

Materials:
Housing
Seals

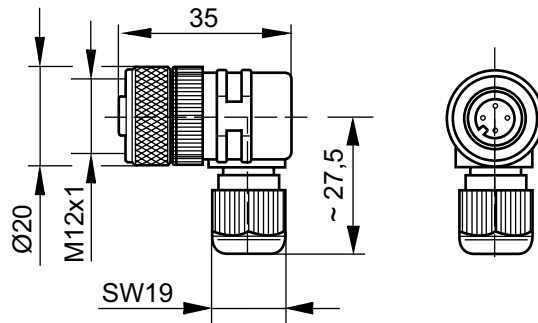
Polybutyleneterephthalate
Fluorocarbon caoutchouc

Technical Remarks

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

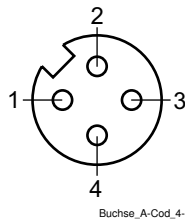
Operational voltage	Max. current	suitable cable-Ø min./max	Housing color	Weight	Part No.
AC					
[V]	[A]	[mm]		[kg]	
48	4	4 / 8	Black	0.027	8941054424

Dimensions



00129355

Pin assignment



Series AV03

Accessories

Socket, M12x1, Series CN2

▶ Socket, M12x1, 5-pin, A-coded, straight ▶ screened ▶ for CANopen, DeviceNet



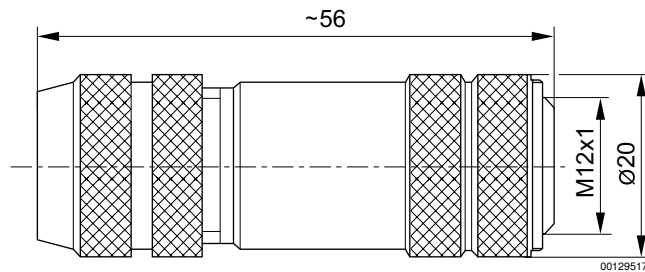
00129776

Ambient temperature min./max.	-40°C / +85°C
Protection class	IP67
Cable fitting	PG 9
Materials:	
Housing	Brass, nickel-plated

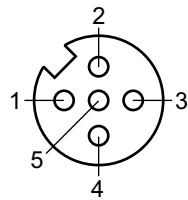
Technical Remarks

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

Operational voltage	Max. current	suitable cable-Ø min./max	Housing color	Weight	Part No.
AC					
[V]	[A]	[mm]		[kg]	
48	4	6 / 8	silver	0.051	8942051602

Dimensions


00129517

Pin assignment


Valve systems ▶ Valve systems

Series AV03
Accessories

Socket, M12x1, Series CN2

▶ Socket, M12x1, 5-pin, B-coded, straight ▶ screened ▶ for PROFIBUS DP



00120227

Ambient temperature min./max.
Protection class

-25°C / +90°C
IP67

Materials:
Housing
Seals

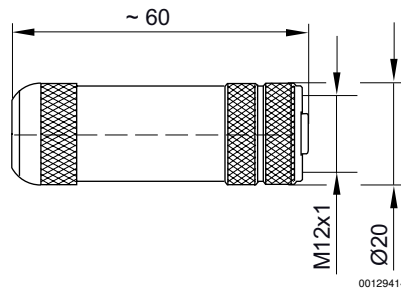
Brass, nickel-plated
Fluorocarbon caoutchouc

Technical Remarks

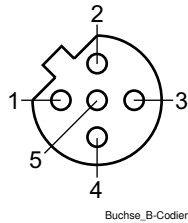
- The specified protection class is only valid in assembled and tested state.

Operational voltage	Max. current	suitable cable-Ø min./max	Housing color	Weight	Part No.
AC					
[V]	[A]	[mm]		[kg]	
48	4	4 / 9	silver	0.06	8941054044

Dimensions



Pin assignment



Series AV03
Accessories
Data final plug (male), Series CN2

▶ Plug, M12x1, 4-pin, B-coded ▶ for PROFIBUS DP



00120228

Ambient temperature min./max.

-25°C / +80°C

Protection class

IP67

Materials:

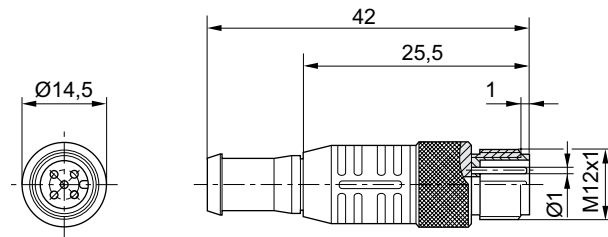
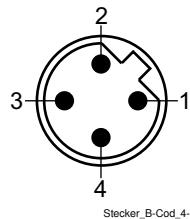
Housing

Thermoplastic elastomer

Technical Remarks

- The specified protection class is only valid in assembled and tested state.
- PROFIBUS DP bus termination plug

Cable exit	Housing color	Weight [kg]	Part No.
straight 180°	Black	0.013	8941054064

Dimensions

Pin assignment


Valve systems ▶ Valve systems

Series AV03
Accessories

Data final plug, Series CN2

▶ Plug, M12x1, 5-pin, A-coded ▶ for CANopen, DeviceNet



00129791

Ambient temperature min./max.
Protection class

+0 °C / +60 °C
IP67

Materials:
Housing

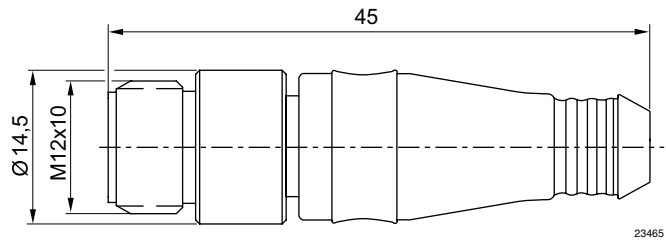
Thermoplastic elastomer

Technical Remarks

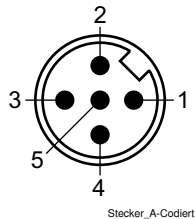
- The specified protection class is only valid in assembled and tested state.

Cable exit	Housing color	Weight [kg]	Part No.
straight 180°	Black	0.011	8941054264

Dimensions



Pin assignment



Series AV03

Accessories

Plug M8x1, Series CN2

▶ Plug, M8x1, 3-pin, straight



Ambient temperature min./max.

-25 °C / +85 °C

Protection class

IP65

Materials:

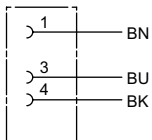
Housing

Polyamide

23467

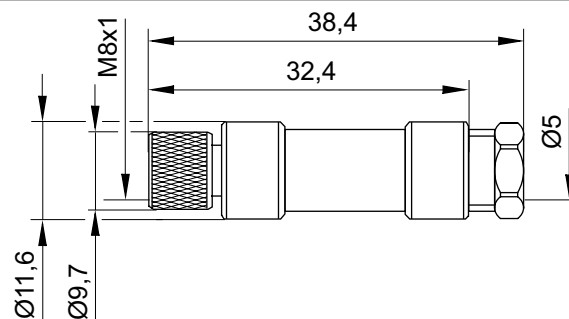
Technical Remarks

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

	Operational voltage	Max. current	Contact assignment	Cable exit	suitable cable-Ø min./max	number of plug options ¹	Part No.
	AC						
	[V]	[A]			[mm]		
	48	4	3	straight 180°	3.5 / 5	1 position	R412021676

Part No.	Housing color	Weight
		[kg]
R412021676	Black	0.008

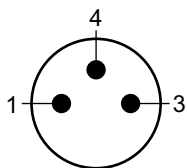
Dimensions



16405

Series AV03
Accessories

Pin assignment



Stecker_3-polig

Plug M8x1, Series CN2
▶ Plug, M8x1, 3-pin, angled



23968

Ambient temperature min./max. -25°C / +80°C
Protection class IP67

Materials:
Housing Polyamide

The delivered product may vary from that in the illustration.

Technical Remarks

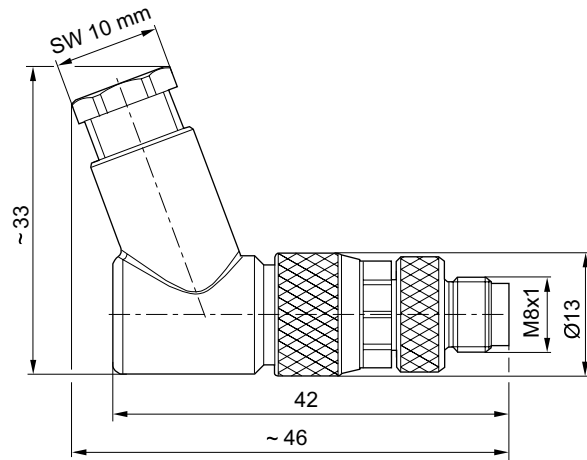
- The specified protection class is only valid in assembled and tested state.

	Operational voltage	Max. current	Contact assignment	Cable exit	suitable cable-Ø min./max	number of plug options ¹	Part No.
	AC						
	[V]	[A]			[mm]		
	48	4	3	angled 90°	3.5 / 5	1 position	R412021677

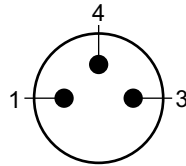
Part No.	Housing color	Weight
		[kg]
R412021677	Black	0.008

Series AV03

Accessories

Dimensions


23267

Pin assignment


Stecker_3-polig

Connecting cable, Series CN2

▶ Plug, M8x1, 3-pin, angled ▶ open cable ends, 3-pin



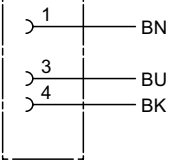
23461

Ambient temperature min./max.	-25 °C / +85 °C
Protection class	IP67
Wire cross-section	0.25 mm ²
Materials:	
Cable color	Black

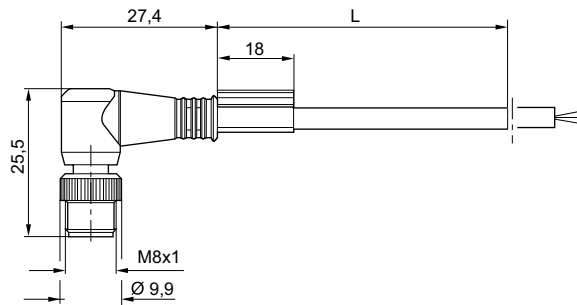
Technical Remarks

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

Series AV03 Accessories

	Operational voltage max.	Max. current	Number of wires	Cable length L	Part No.
	[V AC]	[A]		[m]	
	48	4	3	2	R412021678
				5	R412021679
				10	R412021680

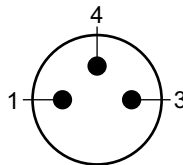
Dimensions



23462

L = length

Pin assignment



Stecker_3-polig

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

Series AV03

Accessories

Connecting cable, Series CN2

▶ Plug, M8x1, 3-pin, angled ▶ Socket, M8x1, 3-pin, straight



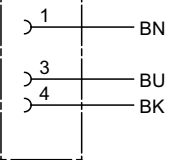
23463

Ambient temperature min./max.
Protection class
Wire cross-section

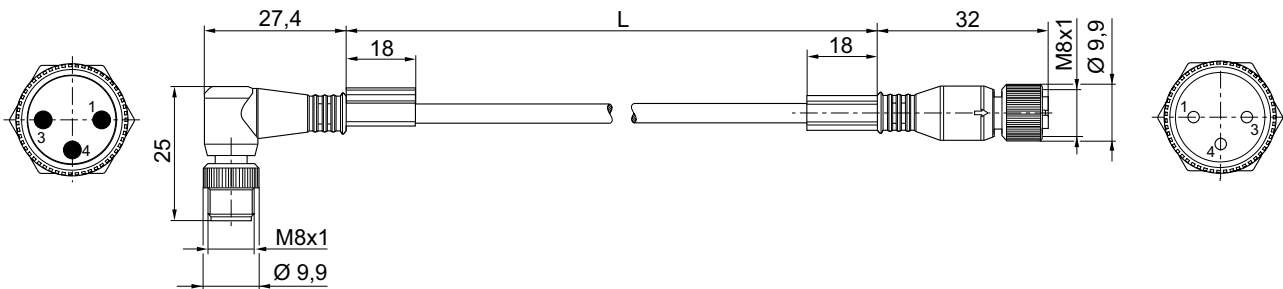
-25 °C / +85 °C
IP67
0.25 mm²

Technical Remarks

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

	Max. current [A]	Number of wires	Cable length L [m]	Part No.
	4	3	1	R412021681
			2	R412021682
			5	R412021683

Dimensions



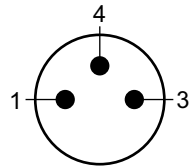
L = length

23464

Valve systems ▶ Valve systems

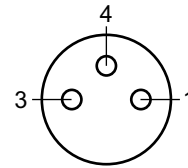
Series AV03 Accessories

Plug pin assignment



Stecker_3-polig

Pin assignment, socket



Buchse_3-polig

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

Connecting cable, Series CN2

▶ Plug, M8x1, 3-pin, straight ▶ open cable ends, 3-pin ▶ with self-clinching screw



00118468

Protection class

IP68

Materials:

Housing color

Black

Cable sheath

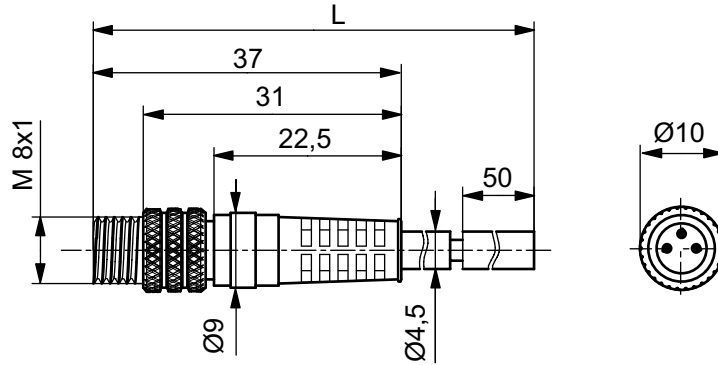
Polyvinyl chloride

Technical Remarks

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

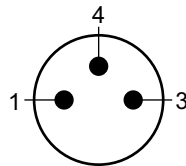
Number of wires	Cable-Ø	Cable length L	Weight	Part No.
	[mm]	[m]	[kg]	
3	4.5	2	0.055	8946203602
		5	0.128	8946203612
		10	0.25	8946203622

Series AV03
 Accessories

Dimensions


00128427

L = length

Pin assignment


Stecker_3-polig

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

Connecting cable, Series CN2

▶ Plug, M8x1, 3-pin, straight ▶ Socket, M8x1, 3-pin, straight



00118679

Protection class

IP68

Materials:

Housing color

Black

Cable sheath

Polyvinyl chloride

Cable color

Black

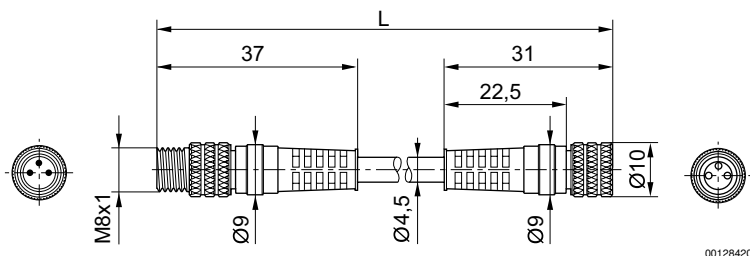
Technical Remarks

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

Series AV03
Accessories

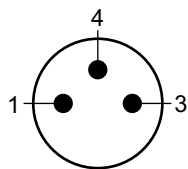
Number of wires	Cable-Ø [mm]	Cable length L [m]	Weight [kg]	Part No.
3	4.5	1	0.035	8946203702
		2	0.06	8946203712
		5	0.136	8946203722

Dimensions



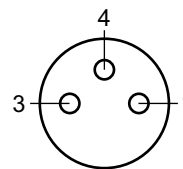
L = length

Plug pin assignment



Stecker_3-polig

Pin assignment, socket



Buchse_3-polig

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

Adapter, Series CN2

▶ Plug, M8x1, 3-pin ▶ Socket, M12x1, 3-pin



23277

Ambient temperature min./max.

-25°C / +85°C

Protection class

IP67

Materials:

Housing

Polyurethane

Technical Remarks

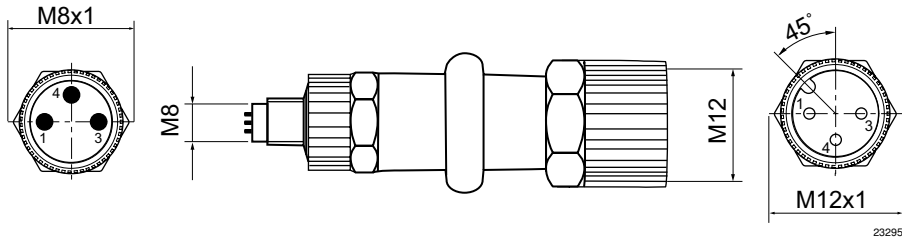
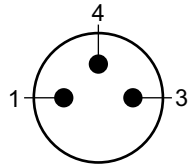
- The specified protection class is only valid in assembled and tested state.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

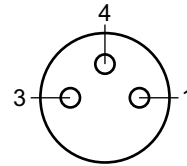
Pneumatics catalog, online PDF, as of 2017-04-05, ©AVENTICS S.à r.l., subject to change

Series AV03
Accessories

Number of wires	Operational voltage	Max. current	Contact assignment	Housing color	Part No.
	AC				
	[V]	[A]			
3	48	4	3	Black	R412021684

Dimensions

Plug pin assignment


Stecker_3-polig

Pin assignment, socket


Buchse_3-polig

Series AV03
Accessories

Plug, M12x1, Series CN2
▶ Plug, M12x1, 4-pin, A-coded



00120230

Ambient temperature min./max. -40°C / +85°C
Protection class IP67

Materials:
Housing Polyamide

The delivered product may vary from that in the illustration.

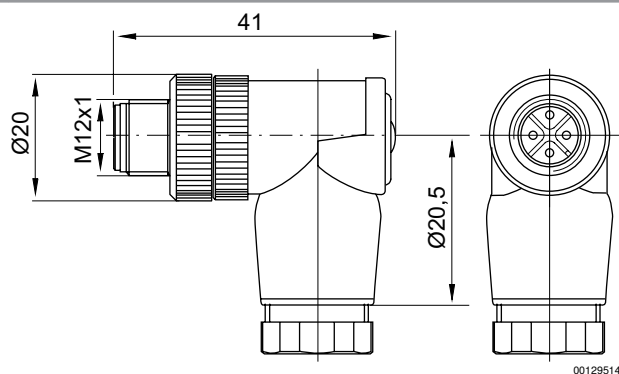
Technical Remarks

- The specified protection class is only valid in assembled and tested state.
- Included: 2 seals for 2 cables each with Ø 2.1 – 3.0 mm and Ø 4.0 – 5.0 mm.

Operational voltage	Max. current	Cable exit	suitable cable-Ø min./max	Weight	Fig.	Part No.
AC						
[V]	[A]		[mm]	[kg]		
48	4	angled 90° straight 180°	4 / 6 2.1 / 5	0.02 0.023	Fig. 1 Fig. 2	1834484223 1834484246

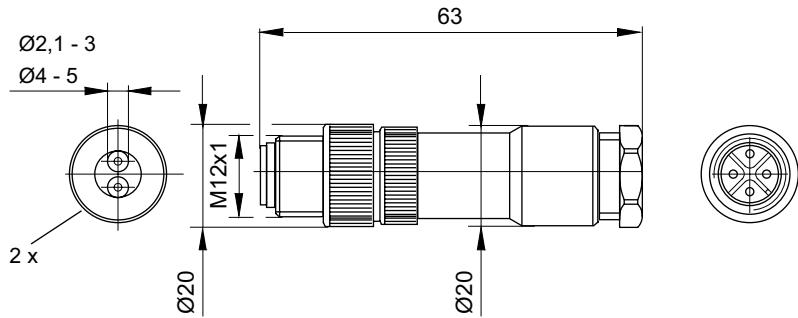
For the duo plug, the cable diameter to be used varies between 2.1 – 3.0 mm and 4.0 – 5.0 mm depending on the seal used.

Fig. 1



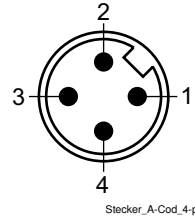
Series AV03
Accessories

Fig. 2



duo plug

Pin assignment, A-coded


Plug, M12x1, Series CN2
▶ Plug, M12x1, 4-pin, A-coded, straight

 Ambient temperature min./max.
 Protection class

 -40 °C / +85 °C
 IP67


00120234

Technical Remarks

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

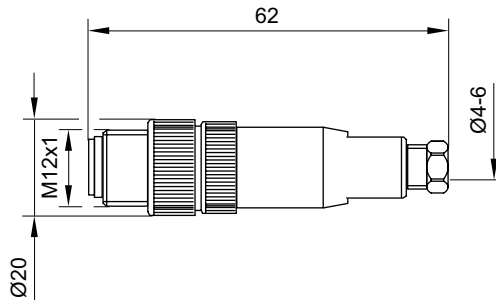
Operational voltage	Max. current	suitable cable-Ø min./max	Weight	Part No.
AC				
[V]	[A]	[mm]	[kg]	
48	4	4 / 6	0.016	1834484222

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2017-04-05, ©AVENTICS S.à r.l., subject to change

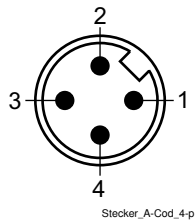
Series AV03
Accessories

Dimensions



00129512

Pin assignment



Connecting cable, Series CN2

▶ Plug, M12x1, 3-pin, straight ▶ Socket, M8x1, 3-pin, straight



Protection class	IP68
Materials:	
Housing color	Black
Cable sheath	Polyvinyl chloride
Cable color	Black

The delivered product may vary from that in the illustration.

00118679

Technical Remarks

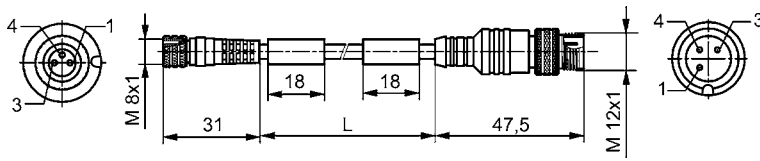
- The specified protection class is only valid in assembled and tested state.

Series AV03

Accessories

	Number of wires	Cable length L [m]	Weight [kg]	Part No.
	3	2	0.065	8946203462

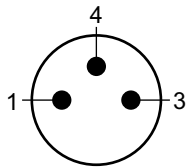
Dimensions



00128424

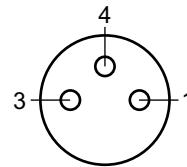
L = length

Plug pin assignment



Stecker_3-polig

Pin assignment, socket



Buchse_3-polig

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

Connecting cable, Series CN2

▶ Plug, M12x1, 3-pin, angled ▶ Socket, M8x1, 3-pin, straight



23466

Ambient temperature min./max.	-25 °C / +80 °C
Protection class	IP67
Wire cross-section	0.25 mm ²
Tightening torque for mounting screws	0.5 Nm

Materials:

Housing	Polyurethane
Housing color	Black
Cable sheath	Polyurethane
Cable color	Black

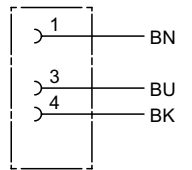
The delivered product may vary from that in the illustration.

Technical Remarks

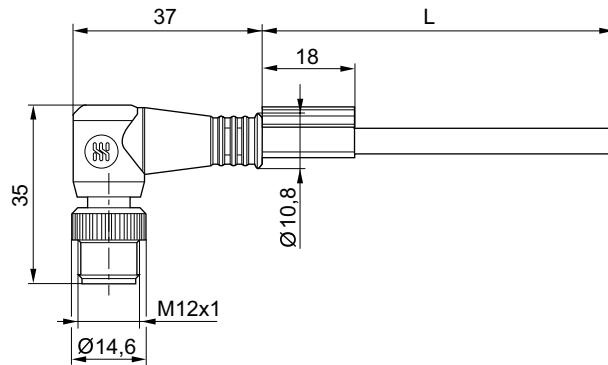
- The specified protection class is only valid in assembled and tested state.

Valve systems ▶ Valve systems

Series AV03 Accessories

	Operational voltage max.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length L	Part No.
	[V AC]	[A]		[mm]	[mm]	[m]	
	48	4	3	20.5	4.1	2	R412021696
						5	R412021697

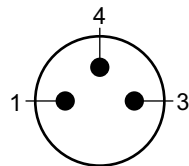
Dimensions



23275_a

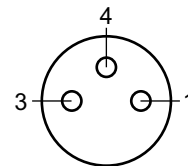
L = length

Plug pin assignment



Stecker_3-polig

Pin assignment, socket



Buchse_3-polig

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

Series AV03

Accessories

Connecting cable, Series CN2

▶ Plug, M12x1, 4-pin, straight ▶ 2x open cable ends, 4-pin



23289

Ambient temperature min./max.	-25°C / +80°C
Protection class	IP67
Wire cross-section	0.34 mm ²
Tightening torque for mounting screws	0.8 Nm

Materials:	
Housing	Polyvinyl chloride
Cable sheath	Polyurethane
Cable color	Black

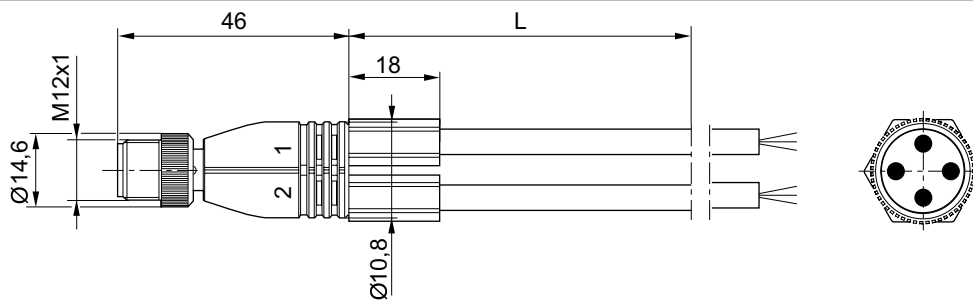
Technical Remarks

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

	Operational voltage max.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length L	Note	Part No.
	[V AC]	[A]		[mm]	[mm]	[m]		
1) — BN	48	4	4	21.5	4.3	2	1)	R412021688
2) — WH						5		R412021689
3) — BU						10		R412021690
4) — BK								

1) with self-clinching screw

Dimensions

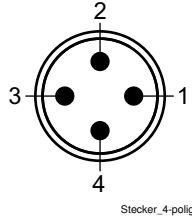


L = length

23272

Series AV03
Accessories

Pin assignment



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

Connecting cable, Series CN2

▶ Plug, M12x1, 4-pin, straight ▶ 2x Socket, M8x1, 3-pin, straight



23288

Ambient temperature min./max.	-25°C / +80°C
Protection class	IP67
Wire cross-section	0.25 mm²
Tightening torque for mounting screws	0.8 Nm
Materials:	
Housing	Polyurethane
Cable sheath	Polyurethane
Cable color	Black

Technical Remarks

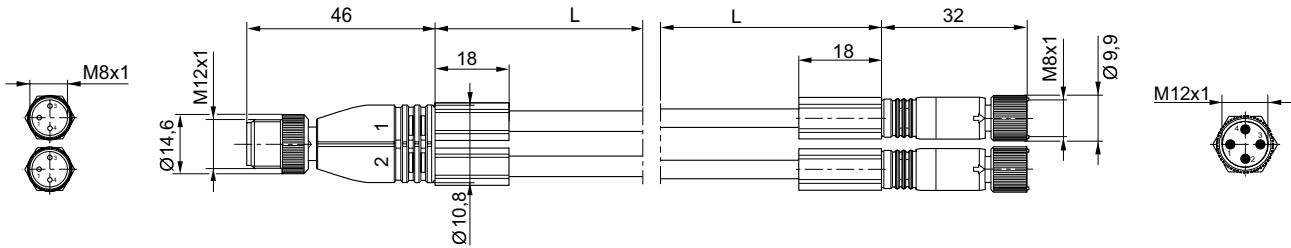
- The specified protection class is only valid in assembled and tested state.

	Operational voltage max.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length L	Part No.												
	[V AC]	[A]		[mm]	[mm]	[m]													
<table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>1</td><td>—</td><td>BN</td></tr> <tr><td>2</td><td>—</td><td>BK</td></tr> <tr><td>3</td><td>—</td><td>BU</td></tr> <tr><td>4</td><td>—</td><td>BK</td></tr> </table>	1	—	BN	2	—	BK	3	—	BU	4	—	BK	48	4	3	1.25	4.1	0.6	R412021685
	1	—	BN																
	2	—	BK																
3	—	BU																	
4	—	BK																	
10.5	R412021686																		
3	R412021687																		

Series AV03

Accessories

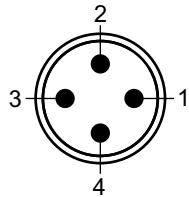
Dimensions



23271

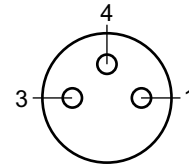
L = length

Plug pin assignment



Stecker_4-polig

Pin assignment, socket



Buchse_3-polig

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

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

M12	M8 (1)	M8 (2)
1	1	1
2	-	4
3	3	3
4	4	-

Connecting cable, Series CN2

▶ Plug, M12x1, 5-pin, straight ▶ open cable ends, 5-pin



00118468

Protection class

IP68

Materials:

Housing color

Black

Cable sheath

Polyvinyl chloride

The delivered product may vary from that in the illustration.

Technical Remarks

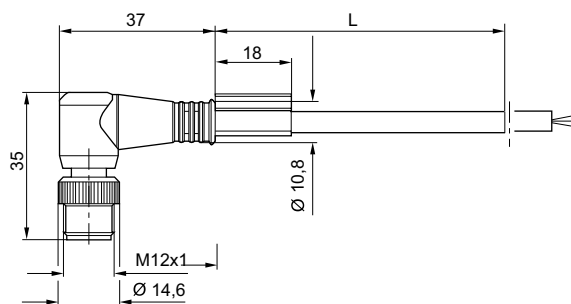
- The specified protection class is only valid in assembled and tested state.

Series AV03
Accessories

Number of wires	Cable length L [m]	Weight [kg]	Note	Part No.
5	2	0.097	1)	8946203432
	5	0.228		8946203442
	10	0.449		8946203452

1) with self-clinching screw

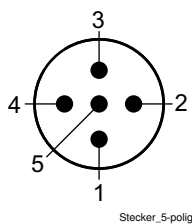
Dimensions



00128423

L = length

Pin assignment



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

Series AV03
Accessories
Connecting cable, Series CN2

▶ Plug, M12x1, 5-pin, angled ▶ open cable ends, 5-pin



23278

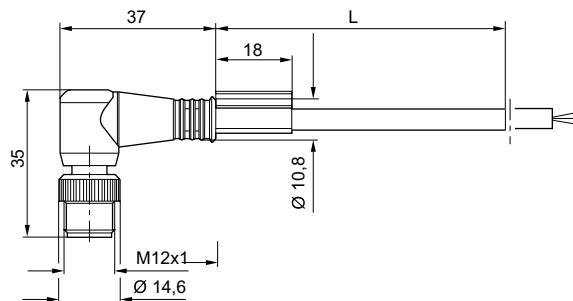
Ambient temperature min./max.	-25°C / +80°C
Protection class	IP67
Wire cross-section	0.34 mm ²
Tightening torque for mounting screws	0.8 Nm

Materials:	
Housing	Polyurethane
Housing color	Black
Cable sheath	Polyurethane
Cable color	Black

Technical Remarks

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

Operational voltage max. [V AC]	Max. current [A]	Number of wires	Bending radius min. [mm]	Cable-Ø [mm]	Cable length L [m]	Part No.
48	4	5	25	5	2	R412021691
					5	R412021692
					10	R412021693

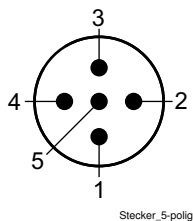
Dimensions


00128423

L = length

Series AV03
Accessories

Pin assignment



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

Connecting cable, Series CN2

▶ **Plug, M12x1, 5-pin, A-coded, angled** ▶ **Socket, M12x1, 5-pin, A-coded, straight**



23279

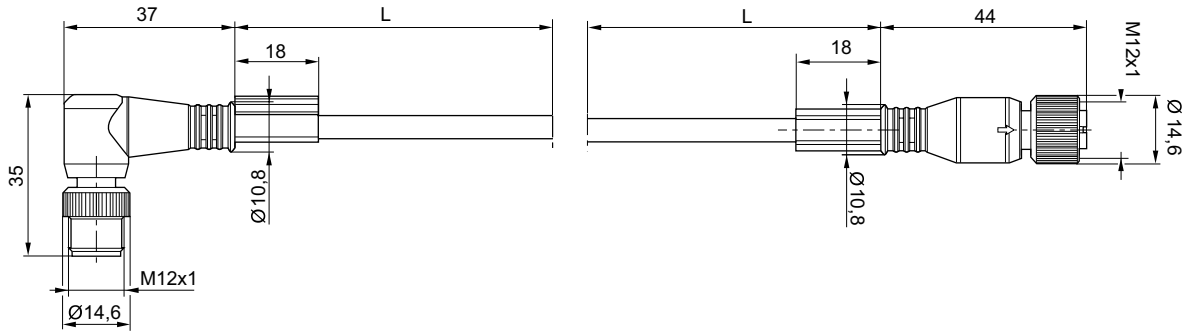
Ambient temperature min./max.	-25°C / +80°C
Protection class	IP67
Operational voltage AC, max.	48 V AC
Wire cross-section	0.34 mm ²
Tightening torque for mounting screws	0.8 Nm

Materials:	
Housing	Polyurethane
Housing color	Black
Cable sheath	Polyurethane
Cable color	Black

Technical Remarks

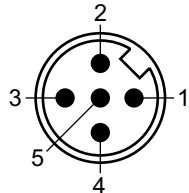
- The specified protection class is only valid in assembled and tested state.

Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length L	Part No.
[A]		[mm]	[mm]	[m]	
4	5	25	5	2	R412021694
				5	R412021695

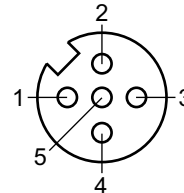
Series AV03
Accessories
Dimensions


23274

L = length

Plug pin assignment


Stecker_A-Codiert

Pin assignment, socket


Buchse_A-Codiert

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

Connecting cable, Series CN2

- ▶ **Plug, M12x1, 5-pin, A-coded, angled** ▶ **Socket, M12x1, 5-pin, A-coded, straight** ▶ suitable for dynamic laying
- ▶ screened



Ambient temperature min./max.	-25°C / +80°C
Protection class	IP65
Wire cross-section	0.34 mm ²
Tightening torque for mounting screws	0.8 Nm

Materials:

Housing	Polyurethane
Cable sheath	Polyurethane
Cable color	Black

23279

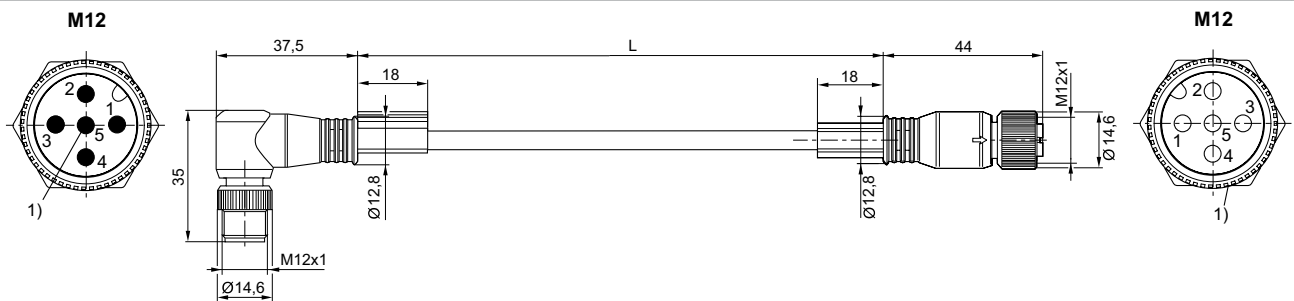
Technical Remarks

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

Series AV03 Accessories

	Operational voltage max.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length L	Part No.
	[V AC]	[A]		[mm]	[mm]	[m]	
	48	4	4	54	5.4	2	R412022193
						5	R412022194
						10	R412022195

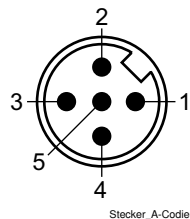
Dimensions



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

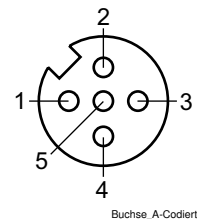
23286

Plug pin assignment



(1) BN=brown
 (2) WH=white
 (3) BU=blue
 (4) BK=black
 Shield is connected to pin 5.

Pin assignment, socket



(1) BN=brown
 (2) WH=white
 (3) BU=blue
 (4) BK=black
 (5) not assigned

Series AV03

Accessories

Connecting cable, Series CN2

- ▶ Plug, M12x1, 8-pin, A-coded, straight ▶ Socket, M12x1, 8-pin, A-coded, straight ▶ suitable for dynamic laying
▶ screened



00120164

Ambient temperature min./max.

-25°C / +80°C

Protection class

IP67

Materials:

Housing

Polyurethane

Housing color

Orange

Seals

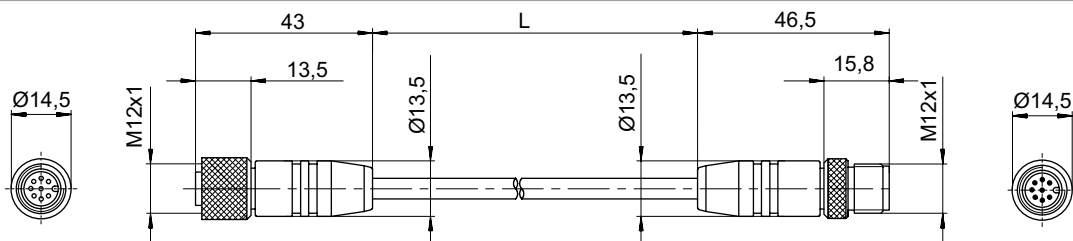
Fluorocautchouc

Technical Remarks

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

	Operational voltage max.	Max. current	Cable length L	Part No.
	[V AC]	[A]	[m]	
	30	1.5	0.5	8946202802
			1	8946202812
			2	8946202822
			5	8946202832
			10	8946202842
			0.3	8946202852

Dimensions

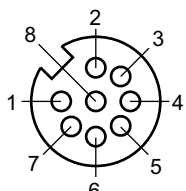


00132297

L = length

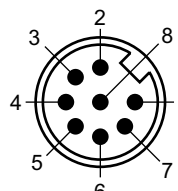
Series AV03 Accessories

Pin assignment, socket



Buchse_A-Cod_8-pol

Plug pin assignment



Stecker_A-Cod_8-pol

- (1) white
- (2) brown
- (3) green
- (4) yellow
- (5) gray
- (6) pink
- (7) blue
- (8) red

Distributor, Series AES

▶ 4x passive distributor, M12x1, 8-pin / 4x M8x1, 3-pin

Ambient temperature min./max.
Protection class
Operational voltage electronics
Power consumption electronics

-30°C / +80°C
IP67
24 V DC
2 A

Materials:

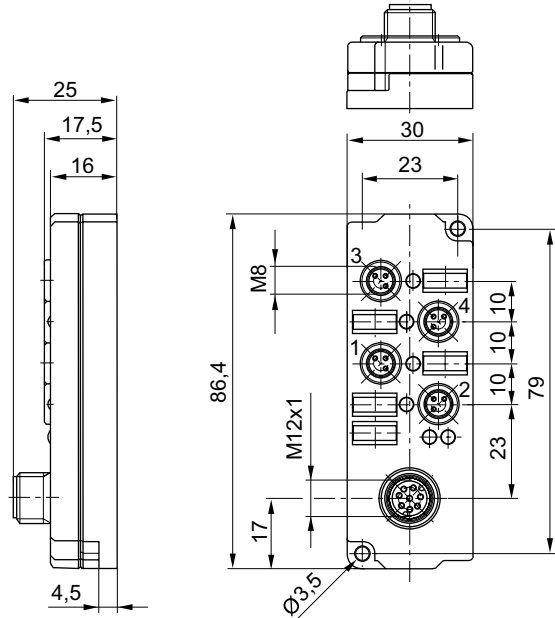
Housing

Polyamide



22702

for Type	Port 1 Bus IN	Port 2 Bus OUT	Weight	Part No.
			[kg]	
16DI4M12 16DI8M8	Plug (male), M12x1, 8-pin	Socket (female), M8x1, 3-pin, 4x	0.07	R402001810

Series AV03
Accessories
Dimensions

Pin assignments

PinM12	1. M8	2. M8	3. M8	4. M8
1	4	-	-	-
2	-	4	-	-
3	-	-	4	-
4	-	-	-	4
5	1	1	1	1
6	-	-	-	-
7	3	3	3	3
8	-	-	-	-

Y-connector, Series CN2

▶ 2x Socket, M12x1, 5-pin ▶ Plug, M12x1, 5-pin



Ambient temperature min./max.

-25°C / +90°C

Protection class

IP68

Materials:

Housing

Polyurethane

Seals

Fluorocautchouc

The delivered product may vary from that in the illustration.

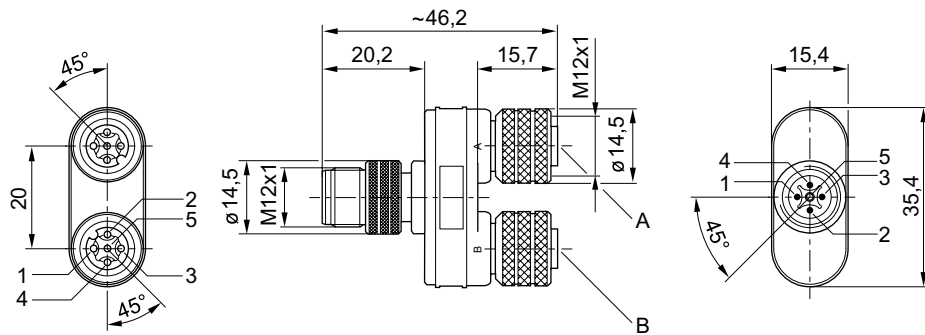
00118470

Series AV03
Accessories

Technical Remarks
 ■ The specified protection class is only valid in assembled and tested state.

Operational voltage	Max. current	Cable exit	Housing color	Weight	Part No.
AC					
[V]	[A]			[kg]	
30	4	straight 180°	Black	0.029	8941002392

Dimensions

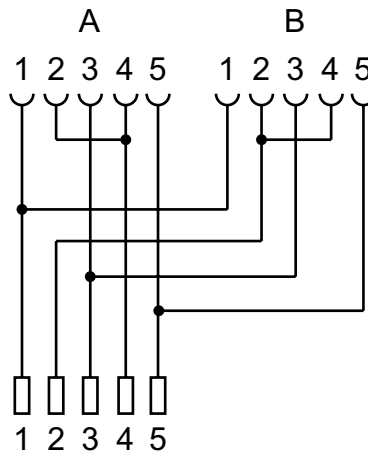


23425

Sockets: Pin 2 and 4 bridged.

Plug (male)M 12Pin	Socket (female)AM12Pin	Socket (female)BM12Pin
1	1	1
2	-	2 / 4
3	3	3
4	2 / 4	-
5	5	5

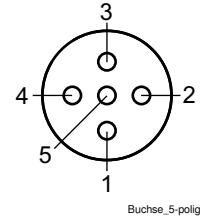
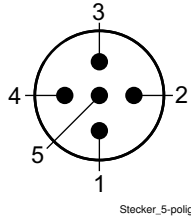
Assignment scheme



23498

Series AV03
Accessories

Plug pin assignment | **Pin assignment, socket**



Y-connector, Series CN2

▶ 2x Socket, M8x1, 3-pin ▶ Plug, M12x1, 4-pin



00118470

Ambient temperature min./max.
Protection class

-25°C / +90°C
IP68

Materials:
Housing
Seals

Polyurethane
Fluorocautchouc

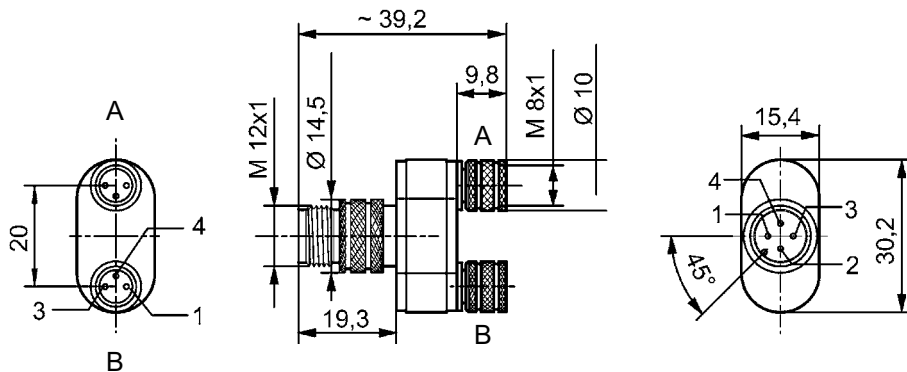
The delivered product may vary from that in the illustration.

Technical Remarks

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

Operational voltage	Max. current	Cable exit	Housing color	Weight	Part No.
AC					
[V]	[A]			[kg]	
48	4	straight 180°	Black	0.02	8941002382

Dimensions



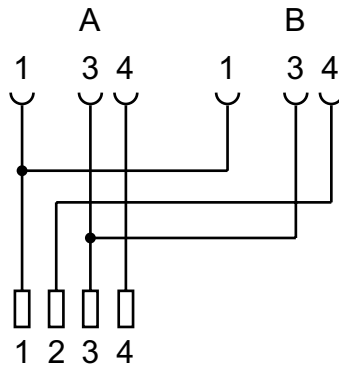
00128421

Series AV03
Accessories

Pin assignments

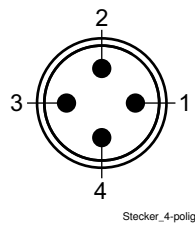
Plug (male)M 12Pin	Socket (female)M8APin	Socket (female)M8BPin
1	1	1
2	-	4
3	3	3
4	4	-

Assignment scheme



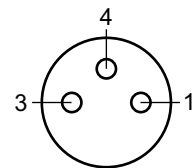
23499

Plug pin assignment



Stecker_4-polig

Pin assignment, socket



Buchse_3-polig

Series AV03

Accessories

Multipole plug D-Sub (25-pin)

▶ Socket, D-Sub, 25-pin



15845

Ambient temperature min./max.	-20 °C / +80 °C
Protection class	IP67
Operating voltage DC, max.	24 V DC
Wire cross-section	0.22 mm ²

Materials:	
Housing	Thermoplastic elastomer
Housing color	Black
Cable color	Black

Technical Remarks

- The specified protection class is only valid in assembled and tested state.
- The increased wire cross-section of pin 25 is 0.82 mm².

Cable exit	Cable sheath	Cable-Ø	Cable length L		Fig.	Part No.
		[mm]	[m]			
straight 180°	Polyvinyl chloride	8.5	3	-	Fig. 1	R419500454
	Polyvinyl chloride	8.5	5	-		R419500455
	Polyvinyl chloride	8.5	10	-		R419500456
	Polyurethane	10.5	3	suitable for dynamic laying		R419500457
	Polyurethane	10.5	5	suitable for dynamic laying		R419500458
	Polyurethane	10.5	10	suitable for dynamic laying		R419500459
angled 90°	Polyvinyl chloride	8.5	3	-	Fig. 2	R419500460
	Polyvinyl chloride	8.5	5	-		R419500461
	Polyvinyl chloride	8.5	10	-		R419500462
	Polyurethane	10.5	3	suitable for dynamic laying		R419500463
	Polyurethane	10.5	5	suitable for dynamic laying		R419500464
	Polyurethane	10.5	10	suitable for dynamic laying		R419500465
straight 180°	Polyvinyl chloride	8.5	15	-	Fig. 1	R412022156
angled 90°	Polyvinyl chloride	8.5	15	-	Fig. 2	R412022352

Series AV03
Accessories

Fig. 1

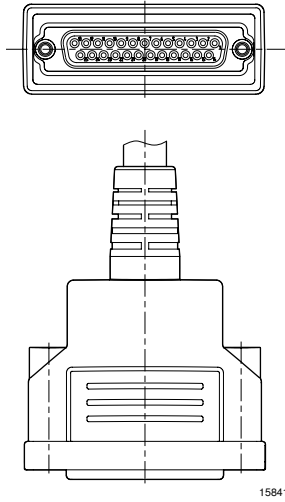
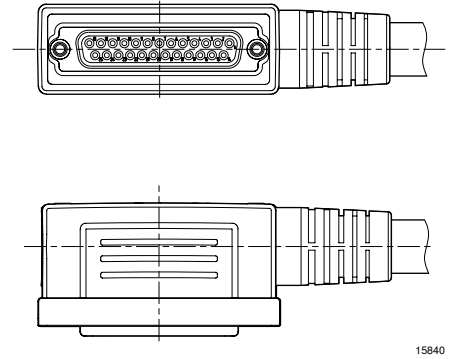
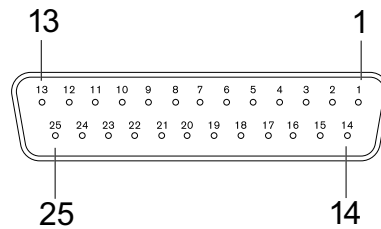


Fig. 2



PIN assignment and cable colors, cable identification as per DIN 47100



00136701

Socket (female)

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green
Pin	14	15	16	17	18	19	20	21	22	23	24	25	
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black	

Series AV03

Accessories

Multipole plug (44-pin)

► Socket, D-Sub, 44-pin



15845

Ambient temperature min./max.	-20 °C / +80 °C
Protection class	IP65
Operating voltage DC, max.	24 V DC
Wire cross-section	0.22 mm ²

Materials:	
Housing	Thermoplastic elastomer
Housing color	Black
Cable color	Black

Technical Remarks

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

Cable exit	Cable sheath	Cable-Ø	Cable length L		Fig.	Part No.
		[mm]	[m]			
straight 180°	Polyvinyl chloride	10.7	3	-	Fig. 1	R419500466
	Polyvinyl chloride	10.7	5	-		R419500467
	Polyvinyl chloride	10.7	10	-		R419500468
	Polyurethane	13	3	suitable for dynamic laying		R419500469
	Polyurethane	13	5	suitable for dynamic laying		R419500470
	Polyurethane	13	10	suitable for dynamic laying		R419500471
angled 90°	Polyvinyl chloride	10.7	3	-	Fig. 2	R419500472
	Polyvinyl chloride	10.7	5	-		R419500473
	Polyvinyl chloride	10.7	10	-		R419500474
	Polyurethane	13	3	suitable for dynamic laying		R419500475
	Polyurethane	13	5	suitable for dynamic laying		R419500476
	Polyurethane	13	10	suitable for dynamic laying		R419500477

Series AV03 Accessories

Fig. 1

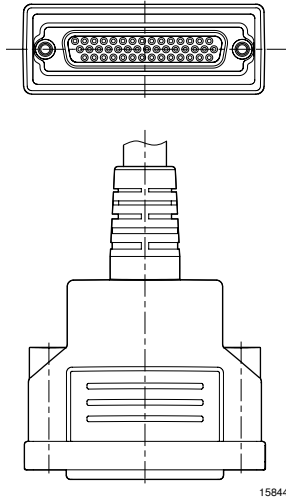
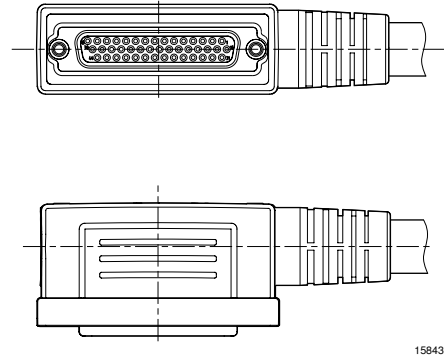
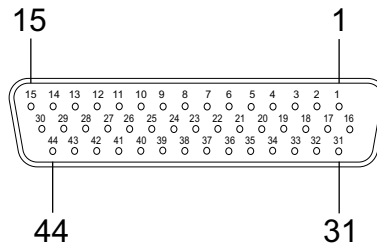


Fig. 2



Multipole plug (44-pin), PIN assignment and cable colors, cable identification as per DIN 47100



00137727

Socket (female)

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green

Pin	14	15	16	17	18	19	20	21	22	23	24	25
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

Pin	26	27	28	29	30	31	32	33	34	35	36	37
Color	brown/black	gray/green	yellow/gray	pink/green	yellow/pink	green/blue	yellow/blue	green/red	yellow/red	green/black	yellow/black	gray/blue

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

Series AV03
Accessories
Connecting cable with plug and socket

▶ Plug, D-Sub, 25-pin, angled 90° ▶ Socket, D-Sub, 25-pin, straight 180°



IM0042647

Ambient temperature min./max.	-5°C / +50°C
Protection class	IP65
Operating voltage DC, max.	24 V DC
Wire cross-section	0.21 mm ²

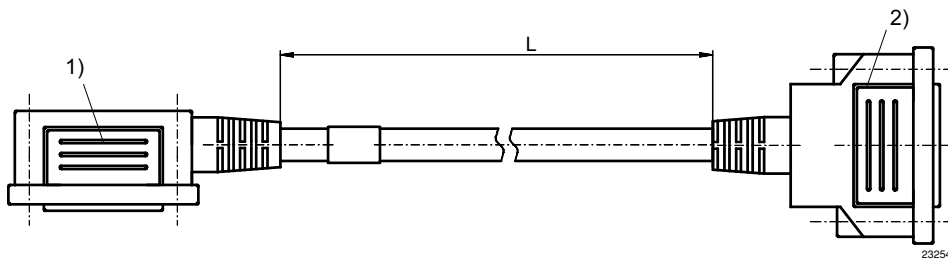
Materials:

Housing	Thermoplastic elastomer
Cable sheath	Polyvinyl chloride

Technical Remarks

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

	Cable length L	Part No.
	[m]	
	0.5	R412020635
	1	R412020636
	2	R412020637
	5	R412020638
	10	R412020639

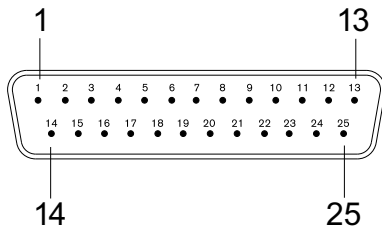
Dimensions


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

Valve systems ▶ Valve systems

Series AV03
Accessories

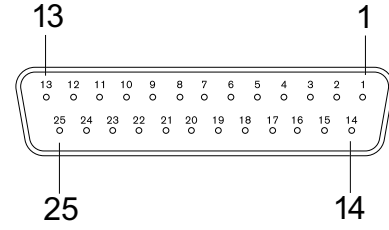
PIN assignment and cable colors, cable identification as per DIN 47100



00137724

Plug

1) The wire cross-section of pin 25 is 0.82 mm².



00136701

Socket

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green

Pin	14	15	16	17	18	19	20	21	22	23	24	25
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

Connecting cable

▶ Plug, D-Sub, 25-pin, angled 90° ▶ Socket, D-Sub, 25-pin, angled 90°



IM0042649

Ambient temperature min./max.

-5°C / +50°C

Protection class

IP65

Operating voltage DC, max.

24 V DC

Wire cross-section

0.21 mm²

Materials:

Housing

Thermoplastic elastomer

Cable sheath

Polyvinyl chloride

The delivered product may vary from that in the illustration.

Technical Remarks

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

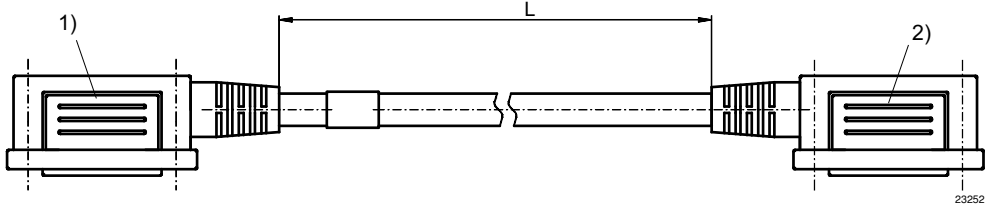
	Cable length L	Part No.
	[m]	
	0.5	R412020630
	1	R412020631
	2	R412020632
	5	R412020633
	10	R412020634

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2017-04-05, ©AVENTICS S.à r.l., subject to change

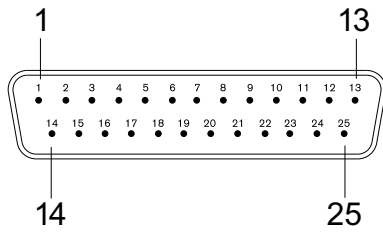
Series AV03
Accessories

Dimensions

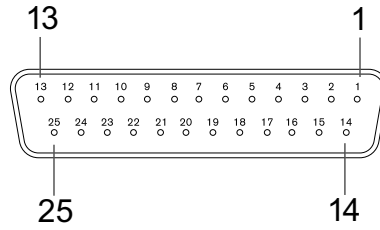


- 1) Port 1 (Plug)
- 2) Port 2 (Socket)

PIN assignment and cable colors, cable identification as per DIN 47100



00137724



00136701

Plug

1) The wire cross-section of pin 25 is 0.82 mm².

Socket

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13
Color	white	brown	green	yellow	gray	pink	blue	red	black	violet	gray/pink	red/blue	white/green

Pin	14	15	16	17	18	19	20	21	22	23	24	25
Color	brown/green	white/yellow	yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue	brown/blue	white/red	brown/red	white/black

Series AV03
Accessories

End plate left

▶ Connection on top or connection on side ▶ D-Sub plug, 25-pin, top, D-Sub plug, 44-pin, top ▶ for AV03



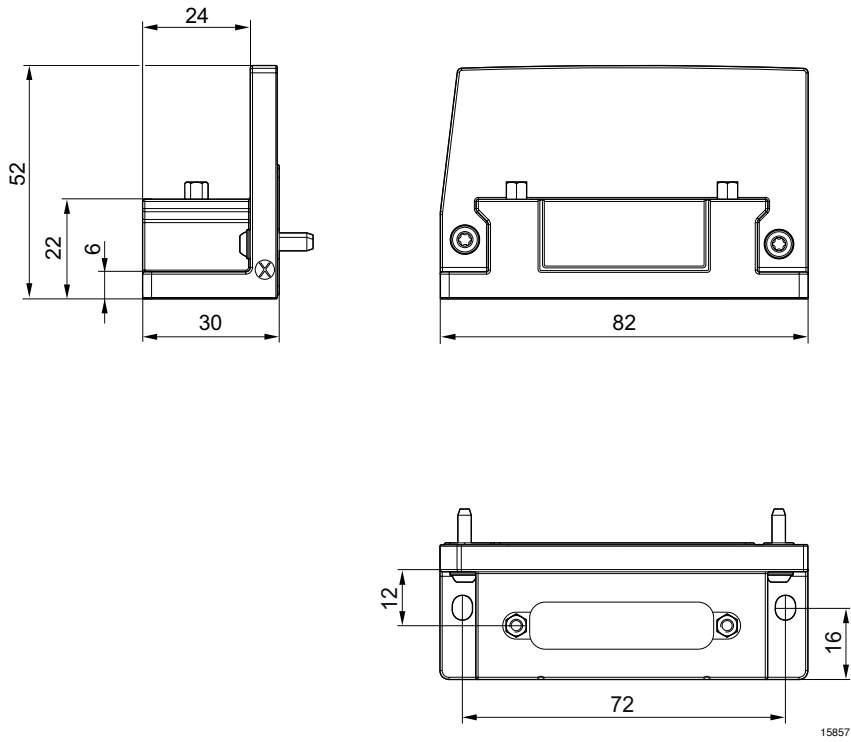
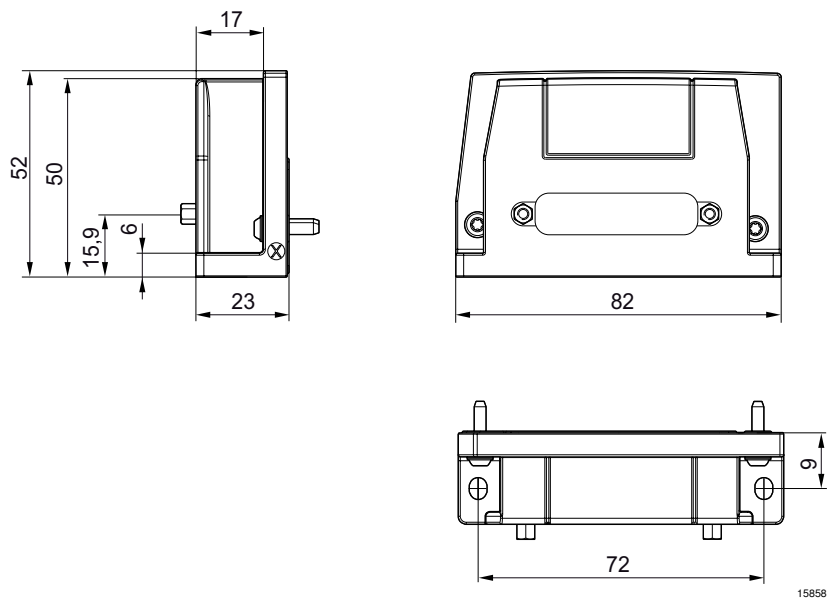
Ambient temperature min./max. -10°C / +50°C
Medium temperature min./max. -10°C / +50°C

Materials:
Housing Polyamide
Screws Steel

Technical Remarks	
■	The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■	The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■	The oil content of compressed air must remain constant during the life cycle.
■	Use only the approved oils from AVENTICS, see chapter „Technical information“.

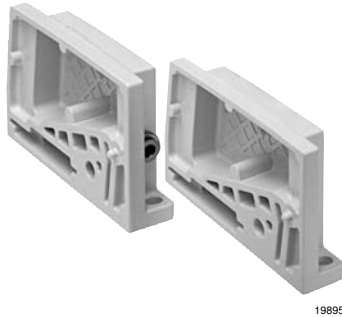
Type	Order quantity	Weight	Fig.	Part No.
	[pcs.]	[kg]		
Top connection	1	0.045	Fig. 1	R412018334
Side connection	1	0.05	Fig. 2	R412018335

Scope of delivery: incl. 1 seal and 2 mounting screws

Series AV03
Accessories
Fig. 1

Fig. 2


Series AV03
Accessories

End plate right
▶ for AV03



19895

Ambient temperature min./max.
Medium temperature min./max.

-10°C / +50°C
-10°C / +50°C

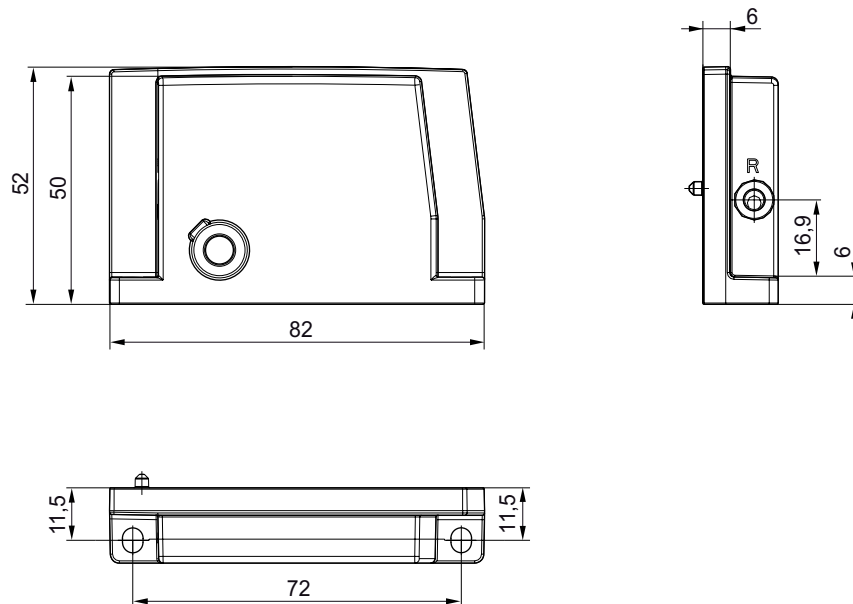
Materials:
Housing
Screws

Aluminum
Steel

Technical Remarks	
■ When using polyurethane tubing, we recommend using additional stiffener sleeves.	

Compressed air connection	Order quantity	Weight	Fig.	Part No.
Pilot control exhaust	[pcs.]			
[12]		[kg]		
Ø 4	1	0.08	Fig. 1	R412018349
-	1	0.08	Fig. 2	R412018350

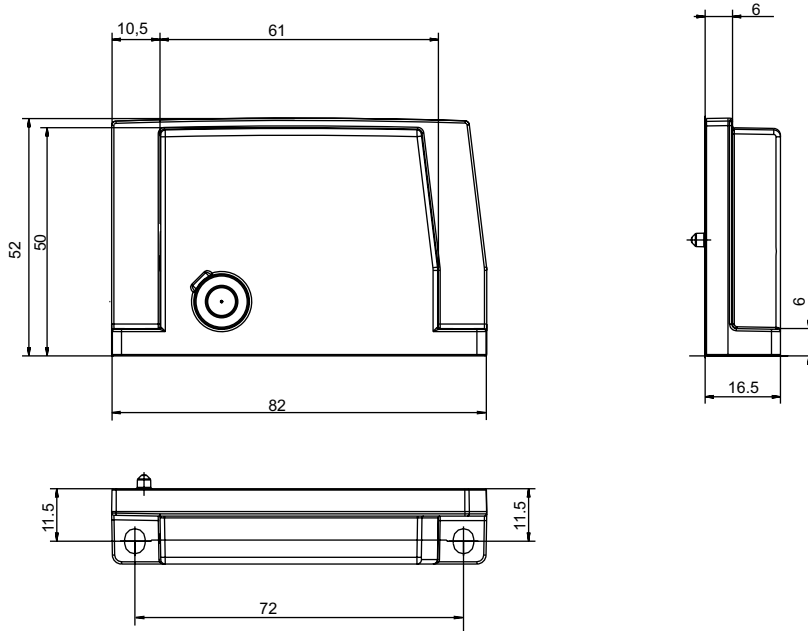
Fig. 1



15859

Series AV03
Accessories

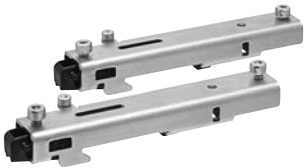
Fig. 2



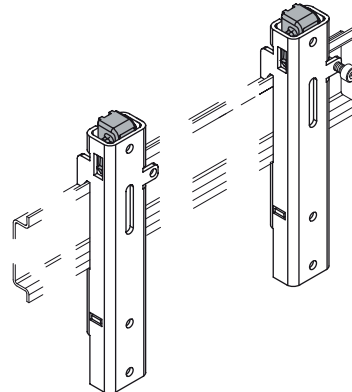
15860

Mounting kit for DIN rail

▶ for AV03, AV05, AES



22692



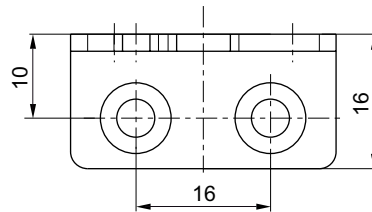
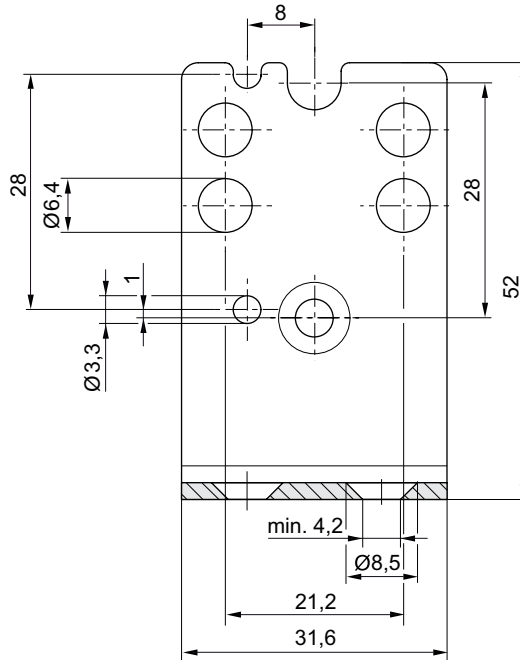
21349

Part No.	Material	Surface							
R412019468	Steel	chrome-plated							

Scope of delivery: 2 clamps, 4 screws M4x8 DIN 912, 1 screw M3x14 DIN 912
 Note: The valve system should not be equipped with more than the maximum number of components. After maximum equipment of the valve system, we recommend no longer assembling the valve system on a DIN rail.

Series AV03
Accessories

Coupling kit
▶ for AV



IM0043935

Part No.	Type	Material	Order quantity [Piece]				
R422103091	Mounting bracket for mounting to the mounting plate	Stainless steel	2				

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.

Series AV03

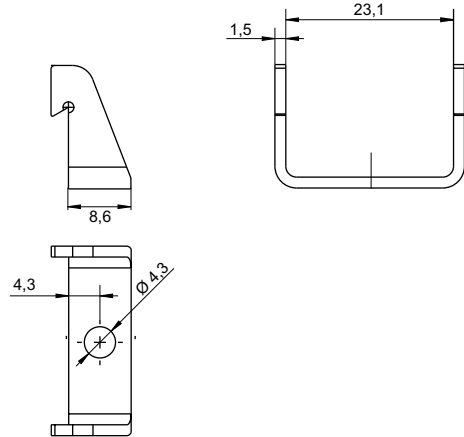
Accessories

Retaining bracket for intermediate mounting

▶ for AES, AV03, AV05



19093



17196

Part No.	Type	Material	Order quantity [Piece]				
R412018339	Retaining brackets	Stainless steel	10				

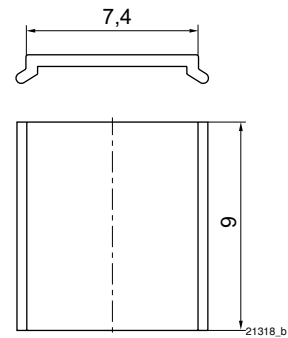
After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.
Screws not included in scope of delivery
The max. permissible space between the retaining brackets is 150 mm.

Name plates, front

▶ for AV03, AV05, I/O modules, series AES, Bus coupler, series AES



21315_a



21318_b

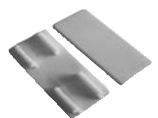
Part No.	Type	Material	Weight [kg]	Order quantity [Piece]			
R412019552	Name plates	Polyamide	0.014	150			

Valve systems ▶ Valve systems

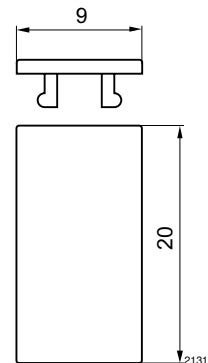
Series AV03
Accessories

Name plates

▶ for AV03, AV05, LS04 / LS04-SW, Bus coupler, series AES



21315



Part No.	Type	Material	Weight [kg]	Order quantity [Piece]			
R422100889	Name plates	Polyamide	0.014	20			

Push-in fittings

▶ for AV



19866_a

Ambient temperature min./max.
Working pressure min./max.
Medium

-10°C / +60°C
0.9 bar / 10 bar
Compressed air

Materials:
Housing
Seal

Polyamide, fiber-glass reinforced
Nitrile rubber

Part No.	Typ / Ausführung	Delivery quantity [Piece]	Note							
R412018621	Push-in fitting Ø 3 mm, angled, short, and push-in fitting Ø 3 mm, angled, long	1	-							

1) Only for AV05 air connection, connection 1
When using polyurethane tubing, we recommend using additional stiffener sleeves.

Series AV03

Accessories

Part No.	Typ / Ausführung	Delivery quantity [Piece]	Note								
R412018622	Push-in fitting Ø 4 mm - 5/32", angled, short and push-in fitting Ø 4 mm - 5/32", angled, long	1	-								
R412018623	Push-in fitting Ø 6 mm, angled, short Push-in fitting Ø 6 mm, angled, long	1	-								
R422002944	Push-in fitting Ø 8 mm, angled, short Push-in fitting Ø 8 mm, angled, long	1	-								
R412018617	Push-in fitting Ø 4 mm - 5/32", straight	2	-								
R412018618	Push-in fitting Ø 6 mm, straight	2	-								
R412018619	Push-in fitting Ø 8 mm - 5/16", straight	2	-								
R412018620	Push-in fitting 1/4", straight	2	-								
R412021785	Push-in fitting 1/8", straight	2	-								
R412021786	Push-in fitting 1/8", straight	10	-								
R422102508	Push-in fitting Ø 12 mm, straight	2	1)								
R422002561	Push-in fitting Ø 3 mm, angled, short	10	-								
R422002569	Plug connec- tor Ø 3 mm, angled, long	10	-								
R422002559	Push-in fitting Ø 12 mm, straight	10	1)								
R422002560	Push-in fitting 3/8", straight	10	-								
R422002554	Push-in fitting Ø 4 mm - 5/32", straight	10	-								
R422002562	Push-in fitting Ø 4 mm, 5/32", angled, short	10	-								
R422002570	Push-in fitting Ø 4 mm, 5/32", angled, long	10	-								
R422002555	Push-in fitting Ø 6 mm, straight	10	-								
R422002563	Push-in fitting Ø 6 mm, angled, short	10	-								

1) Only for AV05 air connection, connection 1

When using polyurethane tubing, we recommend using additional stiffener sleeves.

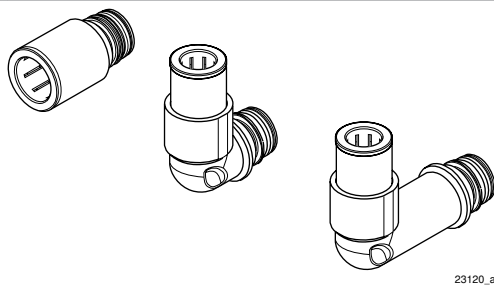
Valve systems ▶ Valve systems

Series AV03
Accessories

Part No.	Typ / Ausführung	Delivery quantity [Piece]	Note								
R422002571	Push-in fitting Ø 6 mm, angled, long	10	-								
R422002556	Push-in fitting 1/4", straight	10	-								
R412021786	Push-in fitting 1/8", straight	10	-								
R422002557	Push-in fitting Ø 8 mm, 5/16", straight	10	-								
R422002565	Push-in fitting Ø 8 mm, 5/16", angled, short	10	-								
R422002573	Push-in fitting Ø 8 mm, 5/16", angled, long	10	-								

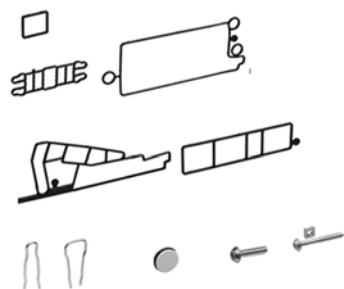
1) Only for AV05 air connection, connection 1
When using polyurethane tubing, we recommend using additional stiffener sleeves.

Overview drawing



23120_a

Accessories
▶ for Series AV03



19866

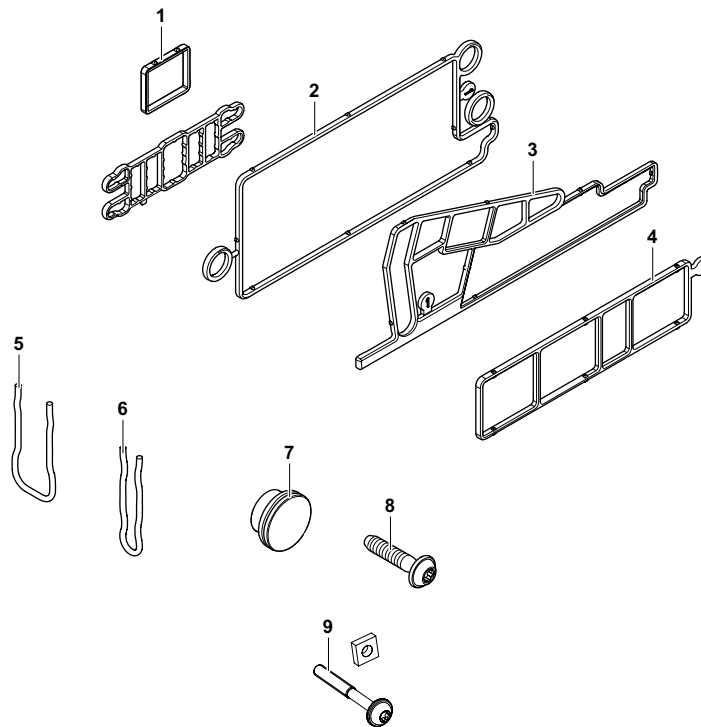
Ambient temperature min./max.
Medium

-10°C / +50°C
Compressed air

Position	Type	Delivery quantity	Part No.
1	Valve seals	10	R412018338
2	Seals for left end plate	10	R412018344

Series AV03
Accessories

Position	Type	Delivery quantity	Part No.
3	Seals for base plate	10	R412018345
4	Seals for function modules	10	R412018346
5	Retaining clips for supply plate	10	R412018746
6	Retaining clips for base plate	10	R412018747
7	Sealing cap for right end plate	5	R412018351
8	Screws for left end plate	10	R412015467
9	Mounting screw for valve	10	R412018336

Overview drawing


15861

Valve systems ▶ Valve systems

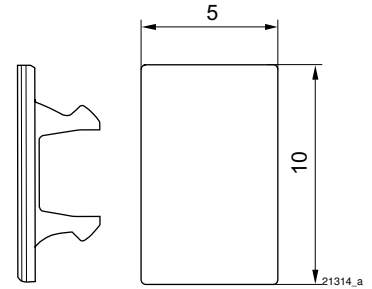
Series AV03
Accessories

Name plates

▶ for I/O modules, series AES



21315_a



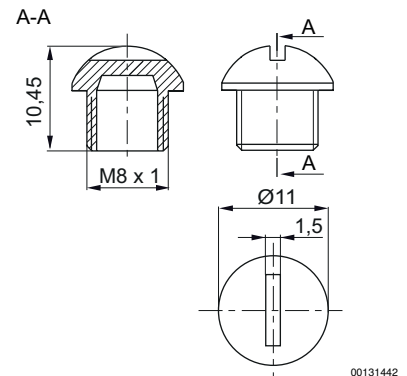
Part No.	Type	Material	Weight [kg]	Order quantity [Piece]			
R412018192	Name plates	Polyamide	0.014	60			

Protective cap

▶ M8x1



00120243



00131442

Part No.	Type	Material	Weight [kg]	Order quantity [Piece]			
R412003493	M8x1	Polyamide	0.014	25			

Series AV03

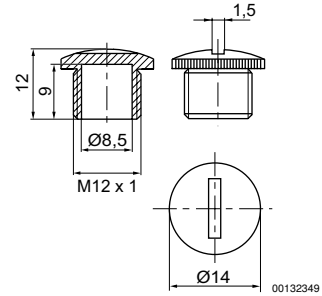
Accessories

Protective cap

▶ M12x1



00120243



00132349

Part No.	Type	Material	Weight [kg]	Order quantity [Piece]			
1823312001	M12x1	Polyamide	0.001	50			

End plate left

▶ for AES



21465

Ambient temperature min./max.

-10 °C / +60 °C

Materials:

Base plate

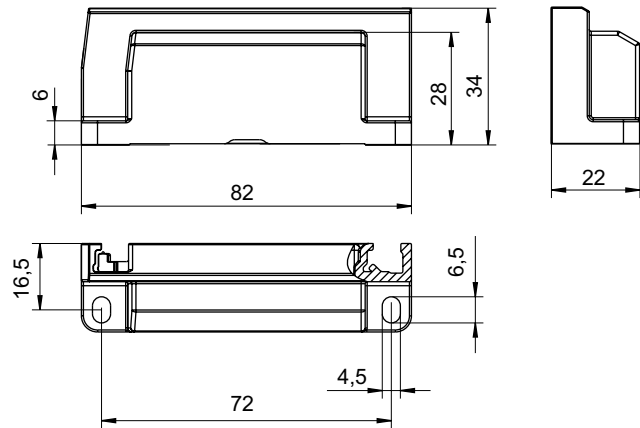
Polyamide, fiber-glass reinforced

Type	Weight [kg]	Part No.
End plate left	0.033	R412015398

Delivery contents: incl. 2 spring clamp elements

Series AV03
Accessories

Dimensions



End plate right
▶ for AES



21398

Ambient temperature min./max.

-10°C / +60°C

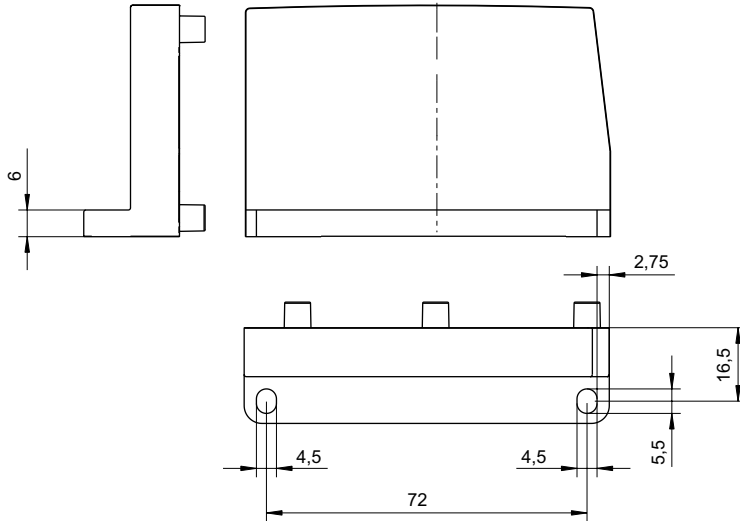
Materials:
Base plate

Polyamide, fiber-glass reinforced

Suitable for Series	Weight	Part No.
	[kg]	
Stand-Alone variant AES	0.039	R412015741
Scope of delivery incl. seal and mounting screws		

Series AV03
 Accessories

Dimensions



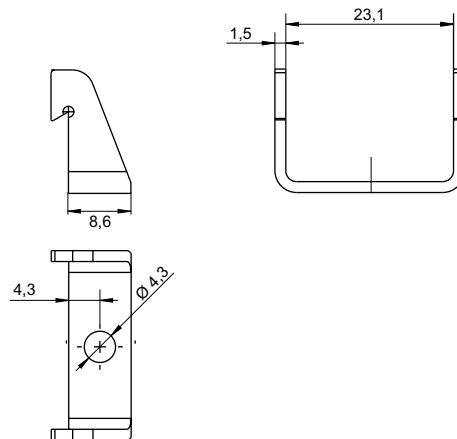
17213

Retaining bracket for intermediate mounting

▶ for AES, AV03, AV05



19093



17196

Part No.	Type	Material	Order quantity [Piece]				
R412018339	Retaining brackets	Stainless steel	10				

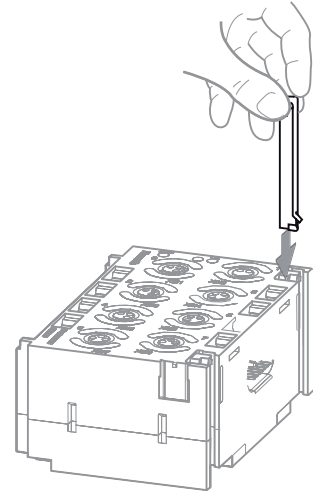
After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.
 Screws not included in scope of delivery
 The max. permissible space between the retaining brackets is 150 mm.

Series AV03
Accessories

Spring clamp element
▶ for AES



19094



20432

Part No.	Type	Material	Order quantity [Piece]				
R412015400	Spring clamp element	Steel	10				

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05-04-2017

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