







AV03 series valve system

- Configurable valve systems, Multipole, Field bus, IO-Link, AV03/AV05, ATEX optional



Mounting orientation	Any
Working pressure min./max.	-13 ... 145 psi
Control pressure min./max.	44 ... 116 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Qn	0.3 Cv
Number of valve positions,max.	64
Protection class,with connection	IP65
DC operating voltage	24 V
Voltage tolerance DC	-10% / +10%

Overview of variants

	Version	You have the following options:	Max.
	Multipole	D-Sub plug, 25-pin, top D-Sub plug, 44-pin, top	24 valves (24 coils) 36 valves (40 coils)
	Multipole	D-Sub plug, 25-pin, on the side D-Sub plug, 44-pin, on the side	24 valves (24 coils) 36 valves (40 coils)
	IO-Link		24 valves (24 coils)
	Field bus connection with I/O functionality (AES)	PROFINET IO EtherCAT DeviceNet POWERLINK PROFIBUS DP CANopen EtherNET/IP POWERLINK	64 valves (128 coils)
	AV03/AV05 in combination	D-Sub plug, 25-pin, on the side D-Sub plug, 44-pin, on the side IO-Link PROFINET IO EtherCAT DeviceNet POWERLINK PROFIBUS DP CANopen EtherNET/IP POWERLINK	24 valves (24 coils) 36 valves (40 coils) 24 valves (24 coils) 64 valves (128 coils)
	ATEX	D-Sub plug, 25-pin, top D-Sub plug, 44-pin, top D-Sub plug, 25-pin, on the side D-Sub plug, 44-pin, on the side PROFINET IO EtherCAT DeviceNet POWERLINK PROFIBUS DP CANopen EtherNET/IP POWERLINK	24 valves (24 coils) 36 valves (36 coils) 24 valves (24 coils) 36 valves (36 coils) 22 valves (22 coils)

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
 The oil content of compressed air must remain constant during the life cycle.
 Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

When using polyurethane tubing, we recommend using additional stiffener sleeves.
 For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.
 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.
 AV03-BP: Only 2x base plates
 For assembly in a control cabinet with direct sealing or when using transition plates, a supply plate must be configured after 8 valves
 ATEX:

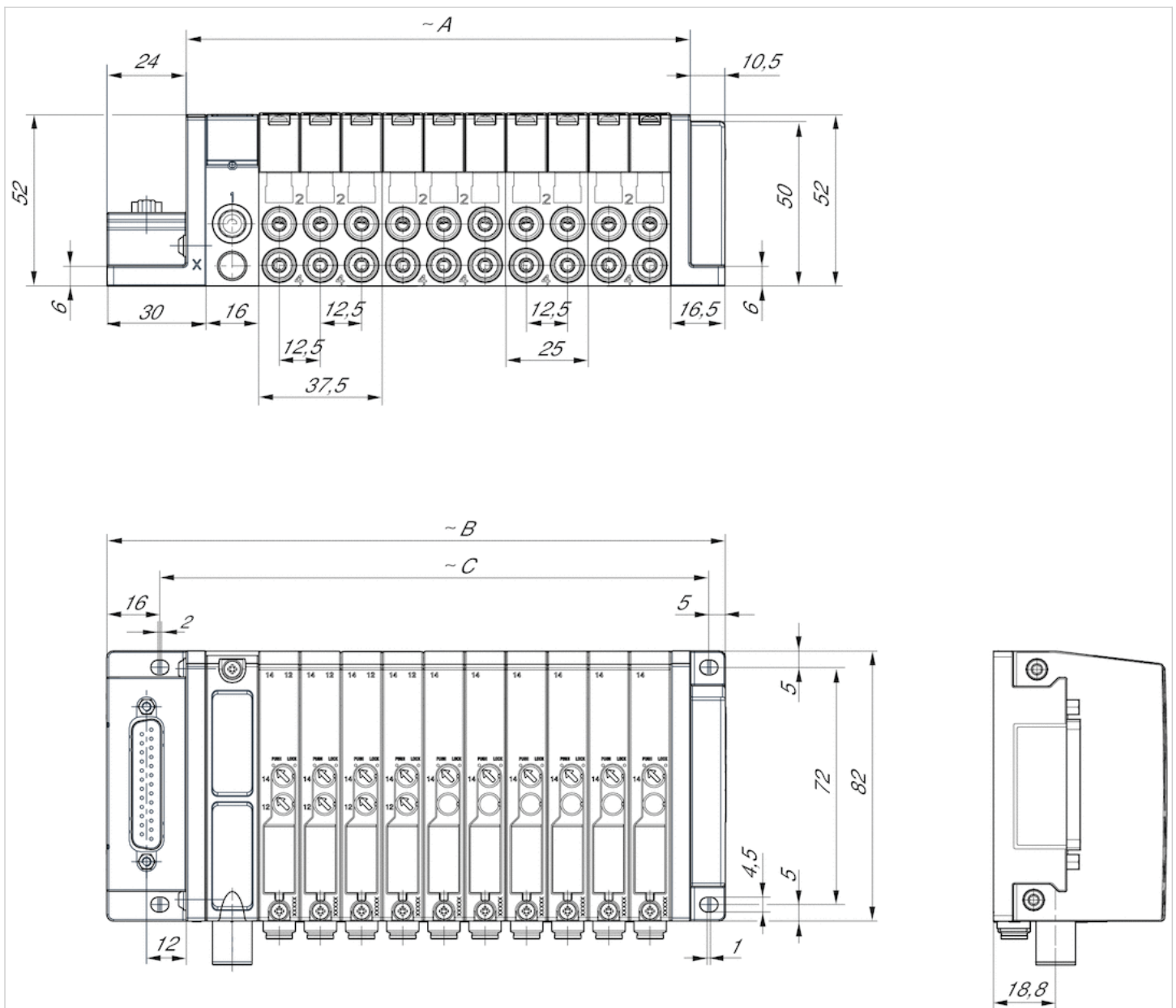
AV valve systems are certified components in accordance with directive 2014/34/EU
 The maximum input power must not exceed 20 W.
 The valve system must be installed in an ATEX-certified control cabinet with at least IP 54.
 The maximum expansion stage is set in the configurator.
 Min./max. ambient temperature -10 ... [45 °C]
 Min./max. medium temperature -10 ... [45 °C]
 ATEX-certified valve systems with identification II 3G Ex nA IIC Gc can be generated in the Internet configurator.

Technical information

Material	
End plate	Aluminum, Polyamide
Base plate	Polyamide
Supply plate	Aluminum

Dimensions

Dimensions D-Sub plug 25-pin top



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)

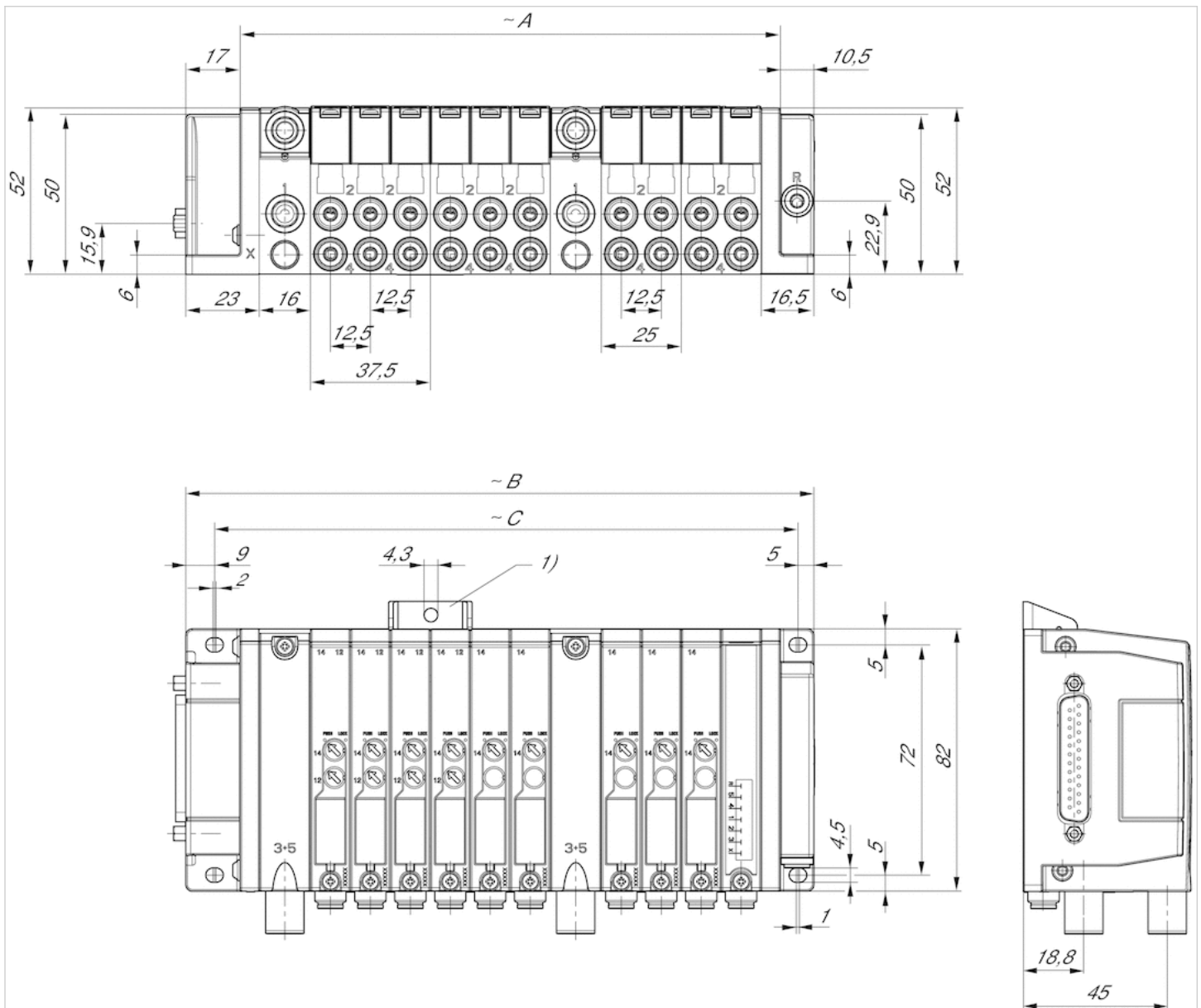
3 and 5 = push-in fitting Ø8 mm. Connection angle: straight

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.

Dimensions D-Sub plug 25-pin on the side



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 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)

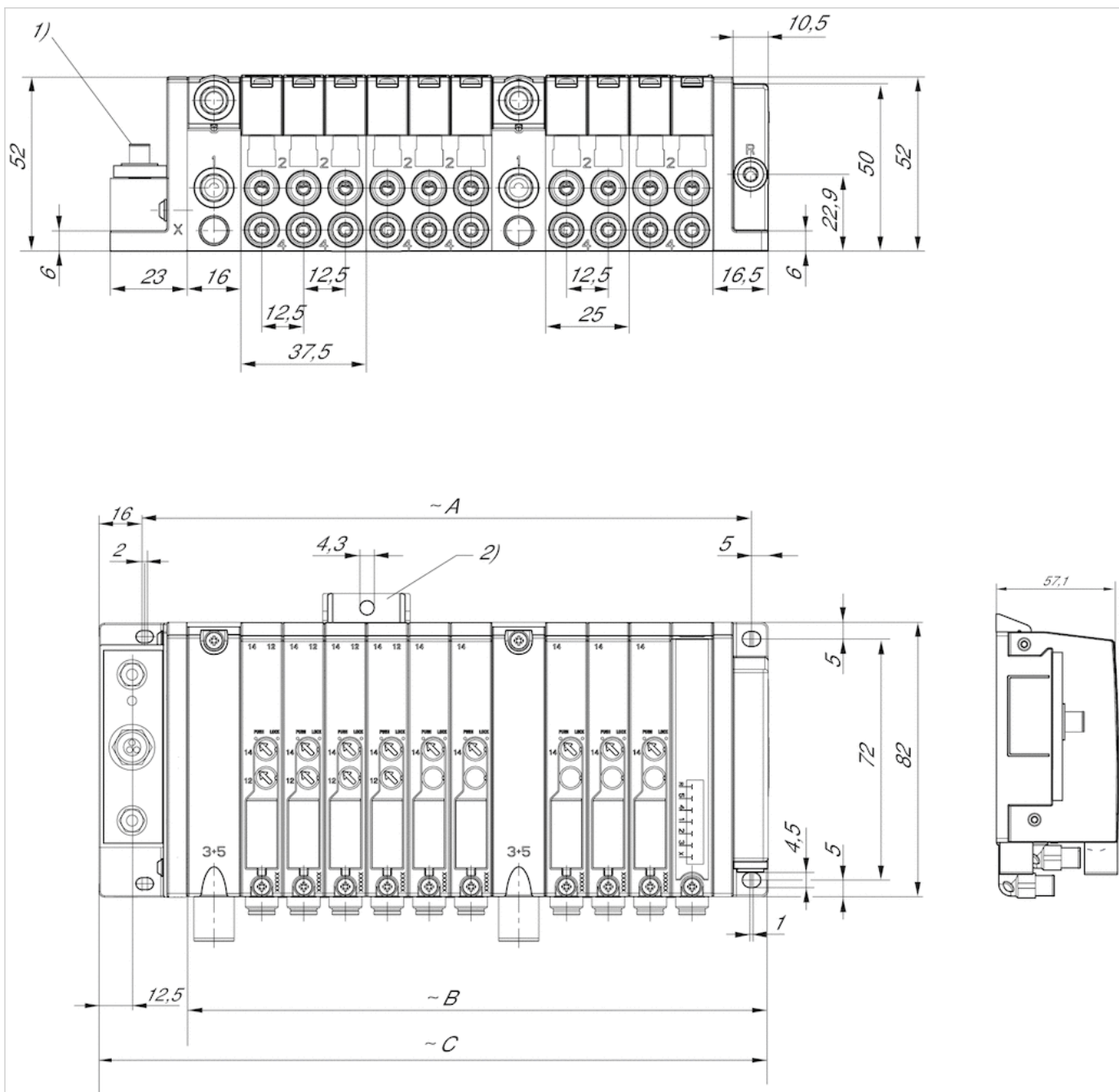
3 and 5 = push-in fitting Ø8 mm. Connection angle: straight

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.

Dimensions IO-Link



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 Ø 3 mm. Connection angle: 90°

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

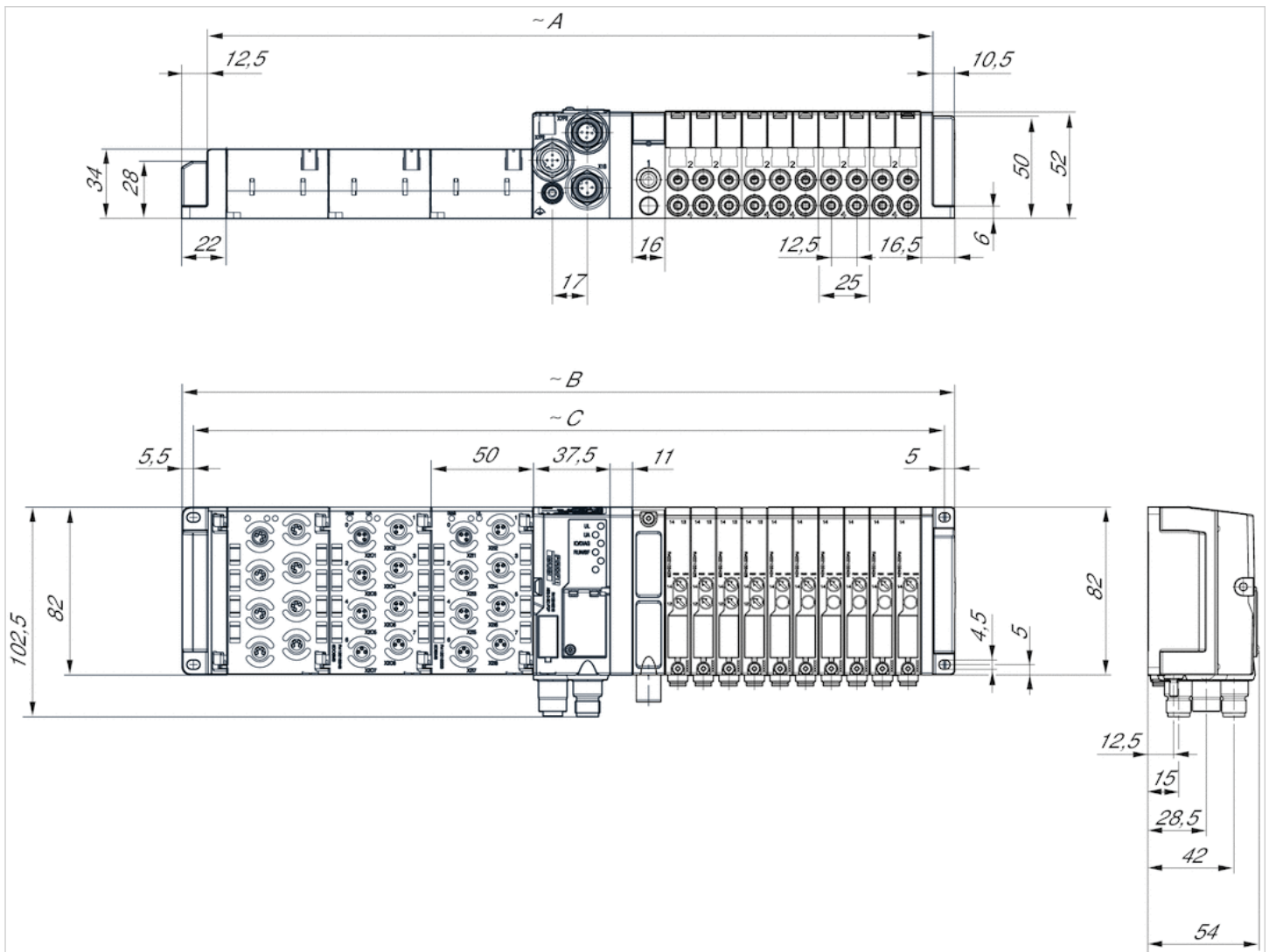
3 and 5 = push-in fitting Ø 8 mm. Connection angle: straight

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.

Dimensions Field bus connection with



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)

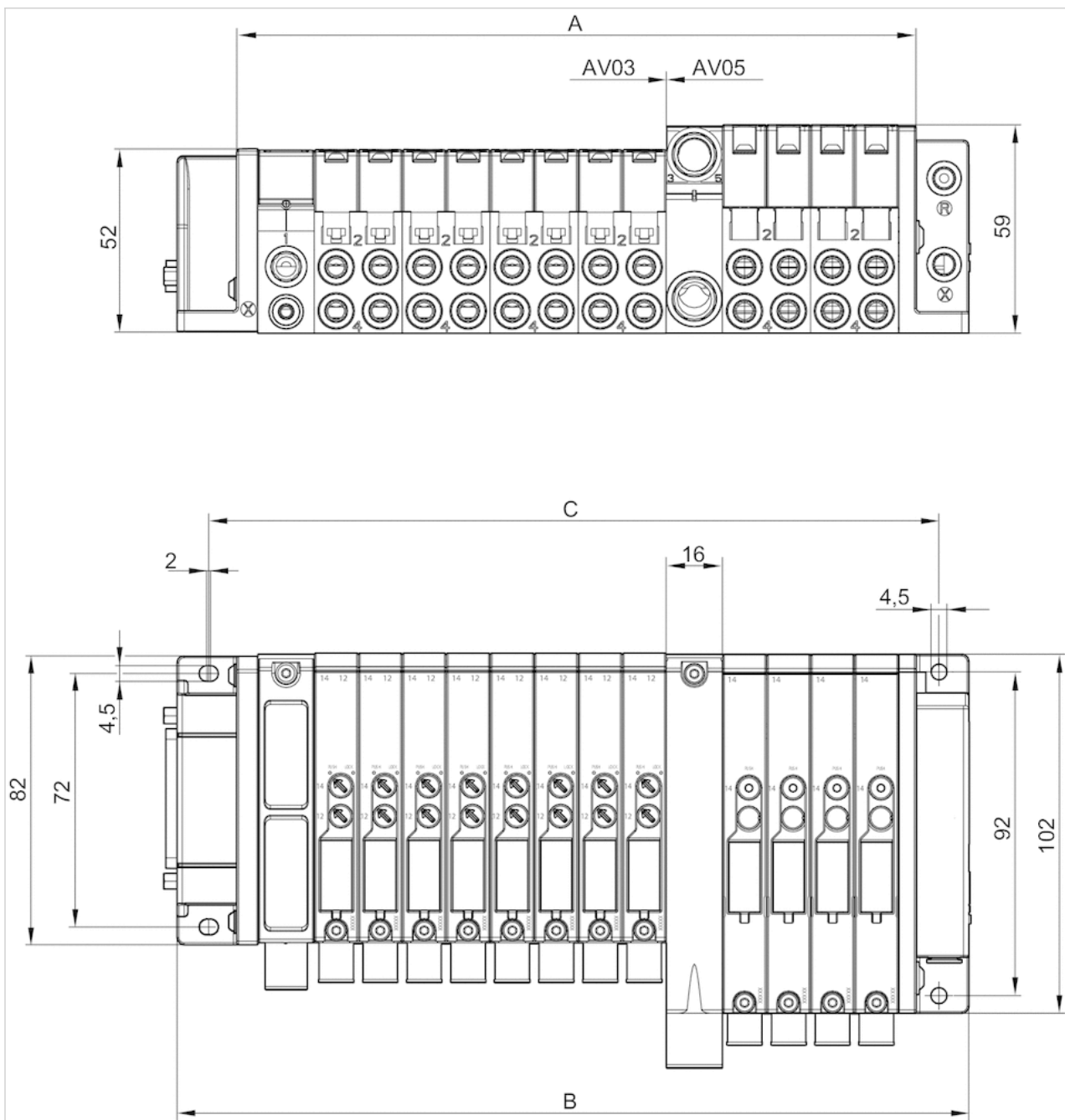
3 and 5 = push-in fitting Ø8 mm. Connection angle: straight

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.

Dimensions AV03/AV05 in combination



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 und 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





2x2/2-directional valve, Series AV03

- 2x2/2
- $Q_n = 0.284 \text{ Cv}$
- NC/NC
- Plate connection
- Manual override : with detent
- Double solenoid
- With spring return
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-13 ... 145 psi
Control pressure min./max.	44 ... 116 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 μm
Oil content of compressed air	0 ... 5 mg/m^3
Nominal flow Q_n	0.284 Cv
Pilot control exhaust	with directional pilot air exhaust
Protection class, with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	16 ms
Typ. switch-off time	20 ms
mounting screws	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.384 ft./lbs.
Weight	0.115 lbs

Technical data

Part No.		MO		Operational voltage	Voltage tolerance
				DC	DC
R422102436			NC/NC	24 V	-10% / +10%
R422102437			NC/NC	24 V	-10% / +10%

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
R422102436	0.55 W	0.4	1.17 l/(s*bar)
R422102437	0.55 W	0.4	1.17 l/(s*bar)

Nominal flow Q_n at 87 psi and $\Delta p = 14.5 \text{ psi}$, MO = Manual override

Technical information

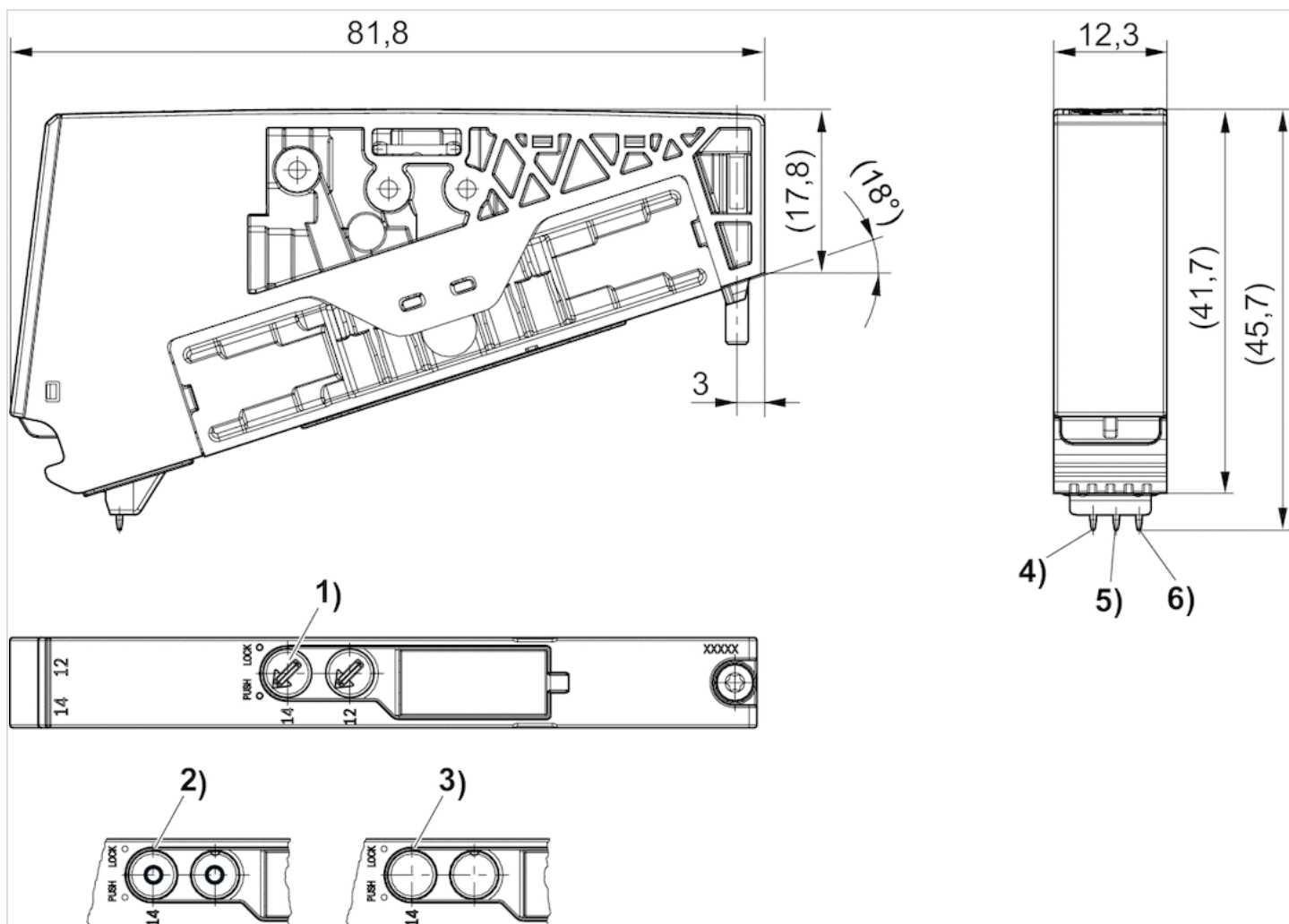
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber, Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Dimensions

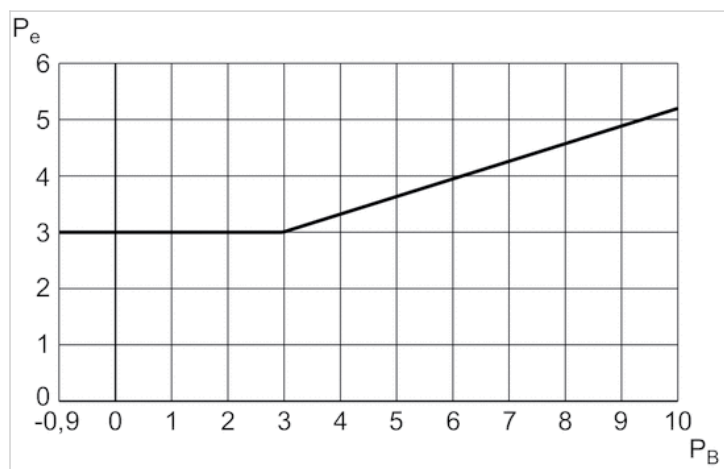
Dimensions



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

Diagrams

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



P= Working pressure

Pe = external control pressure, min.













2x3/2-directional valve, Series AV03

- 2x3/2
- $Q_n = 0.254\text{--}0.305\text{ Cv}$
- Plate connection
- Manual override : with detent, without detent
- Double solenoid
- With spring return
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-13 ... 145 psi
Control pressure min./max.	44 ... 116 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Q_n	See table below
Pilot control exhaust	with directional pilot air exhaust
Protection class, with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	16 ms
Typ. switch-off time	20 ms
mounting screws	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.37 ft./lbs.
Weight	See table below

Technical data

Part No.		MO		Operational voltage	Voltage tolerance
				DC	DC
R422102430			NC/NC	24 V	-10% / +10%
R422102432			NO/NO	24 V	-10% / +10%
R422102434			NC/NO	24 V	-10% / +10%
R422102431			NC/NC	24 V	-10% / +10%
R422102433			NO/NO	24 V	-10% / +10%
R422102435			NC/NO	24 V	-10% / +10%

Part No.	Power consumption	Flow conductance	Flow conductance	Nominal flow Q_n	Weight
	DC	b	C-value		
R422102430	0.55 W	0.29	1.17 l/(s*bar)	0.305 Cv	0.11 lbs
R422102432	0.55 W	0.38	0.92 l/(s*bar)	0.254 Cv	0.108 lbs

Part No.	Power consumption	Flow conductance	Flow conductance	Nominal flow Qn	Weight
	DC	b	C-value		
R422102434	0.55 W	0.38	0.92 l/(s*bar)	0.254 Cv	0.11 lbs
R422102431	0.55 W	0.29	1.17 l/(s*bar)	0.305 Cv	0.11 lbs
R422102433	0.55 W	0.38	0.92 l/(s*bar)	0.254 Cv	0.108 lbs
R422102435	0.55 W	0.38	0.92 l/(s*bar)	0.254 Cv	0.11 lbs

Nominal flow Qn at 87 psi and $\Delta p = 14.5$ psi, MO = Manual override

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

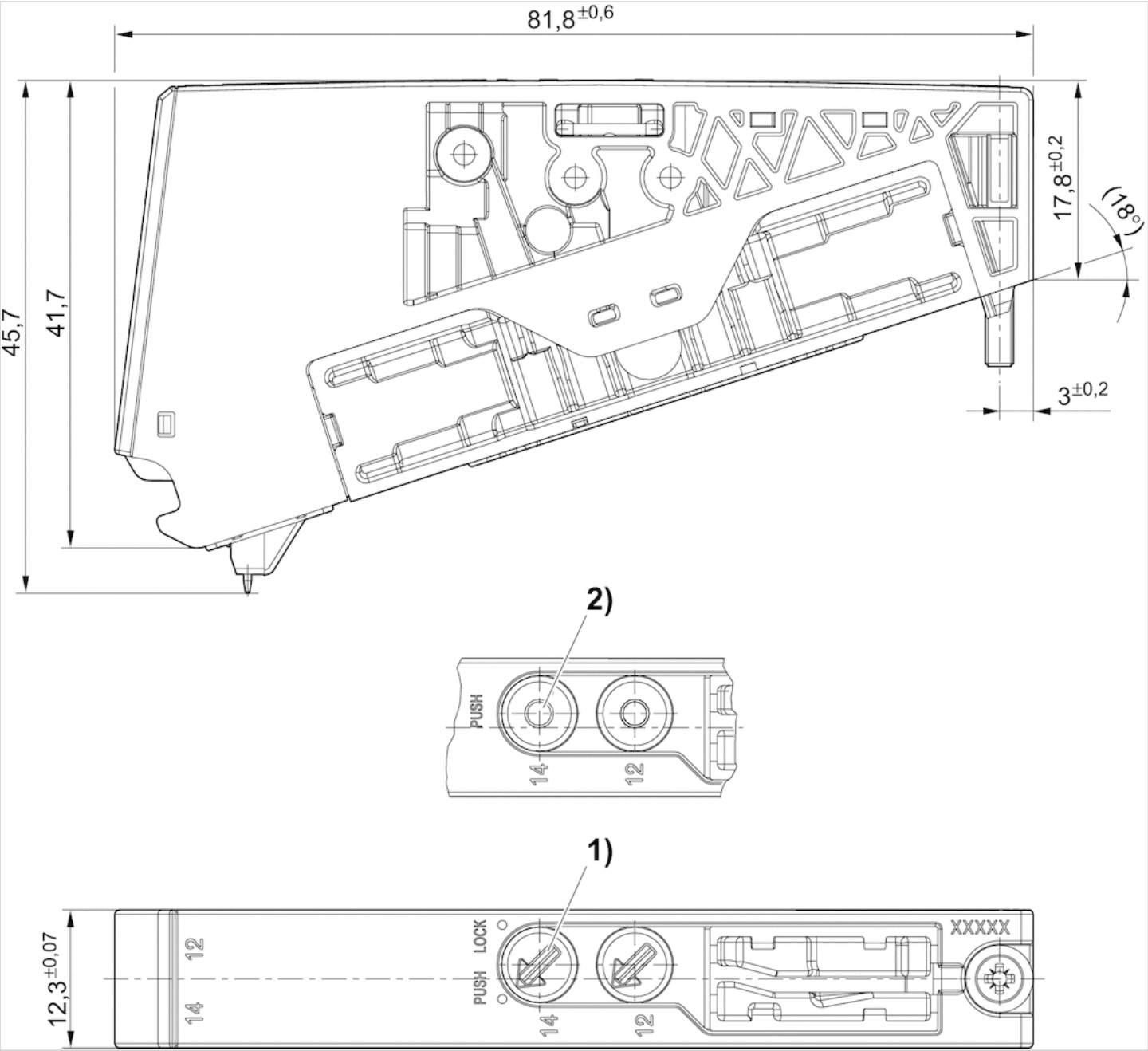
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber, Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Dimensions

Dimensions



- 1) with detent
- 2) without detent

Diagrams

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

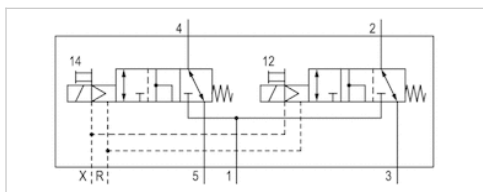


P= Working pressure

Pe = external control pressure, min.

2x3/2-directional valve, Series AV03

- Spool valve, negative overlapping
- 2x3/2
- $Q_n = 0.305 \text{ Cv}$
- Plate connection
- Manual override : without detent
- Double solenoid
- With spring return
- Pilot : External



Version	Spool valve, negative overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-13 ... 145 psi
Control pressure min./max.	44 ... 116 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Q_n	0.305 Cv
Nominal flow 1 ► 2	0.305 Cv
Pilot control exhaust	with directional pilot air exhaust
Protection class, with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	16 ms
Typ. switch-off time	20 ms
mounting screws	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.369 ft./lbs.

Technical data

Part No.	Operational voltage	Voltage tolerance	Power consumption
		DC	DC
R422102856	24 V	-10% / +10%	0.55 W

Nominal flow Q_n at 87 psi and $\Delta p = 14.5 \text{ psi}$, MO = Manual override

Technical information

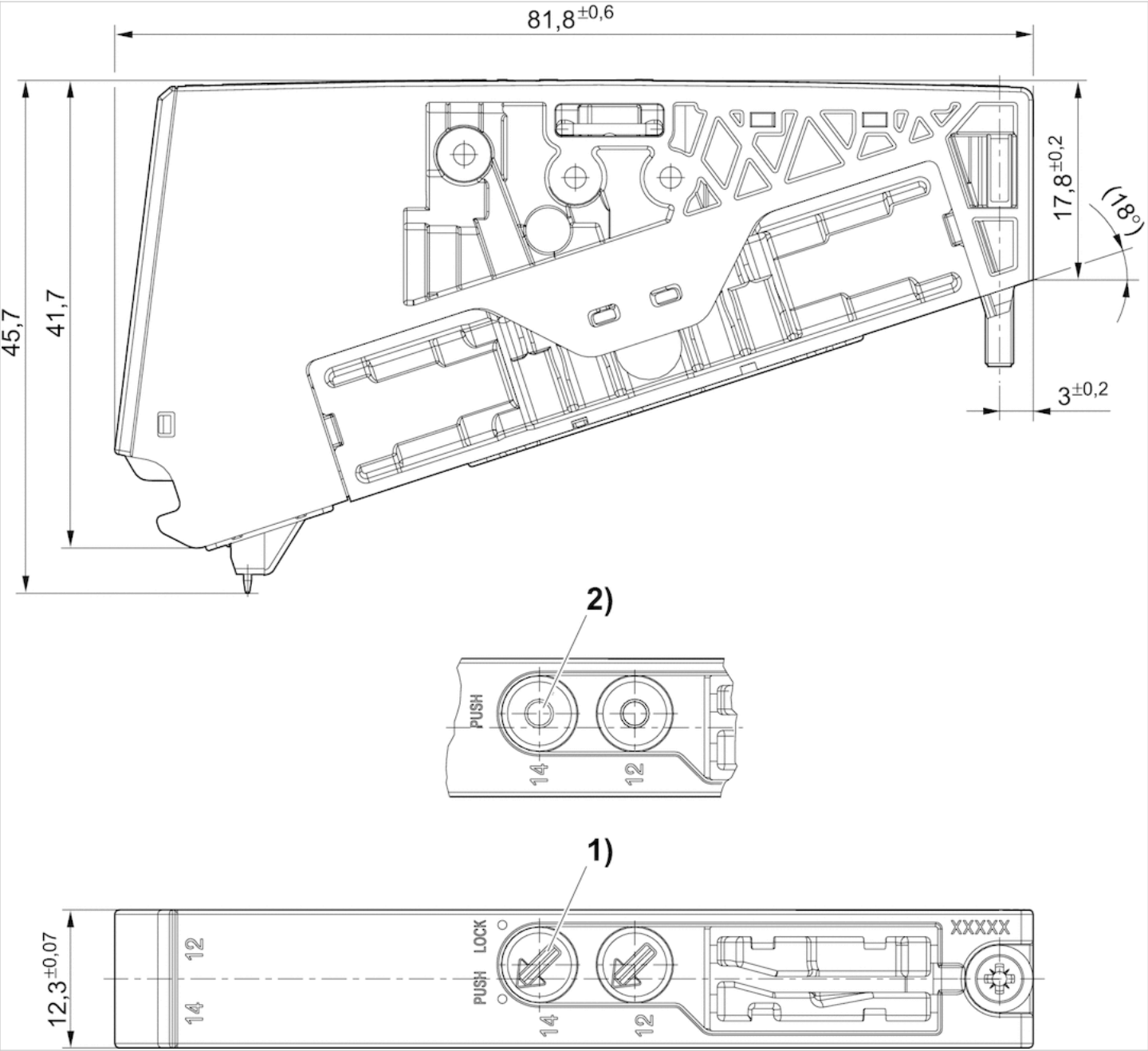
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber, Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Dimensions

Dimensions



- 1) with detent
- 2) without detent

Diagrams

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



P= Working pressure

Pe = external control pressure, min.













5/2-directional valve, Series AV03

- 5/2
- $Q_n = 0.305 \text{ Cv}$
- Plate connection
- Manual override : with detent, without detent
- single solenoid, Double solenoid
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-13 ... 145 psi
Control pressure min./max.	44 ... 116 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 μm
Oil content of compressed air	0 ... 5 mg/m^3
Nominal flow Q_n	0.305 Cv
Pilot control exhaust	with directional pilot air exhaust
Protection class, with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
mounting screws	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.37 ft./lbs.
Weight	See table below

Technical data

Part No.		MO	Operational voltage	Voltage tolerance
			DC	DC
R422102503			24 V	-10% / +10%
R422102504			24 V	-10% / +10%
R422102426			24 V	-10% / +10%
R422102424			24 V	-10% / +10%
R422102427			24 V	-10% / +10%
R422102425			24 V	-10% / +10%

Part No.	Power consumption	Flow conductance	Flow conductance	Typ. switch-on time
	DC	b	C-value	
R422102503	0.55 W	0.29	1.17 l/(s*bar)	10 ms
R422102504	0.55 W	0.29	1.17 l/(s*bar)	10 ms
R422102426	0.55 W	0.29	1.17 l/(s*bar)	8 ms
R422102424	0.55 W	0.29	1.17 l/(s*bar)	12 ms
R422102427	0.55 W	0.29	1.17 l/(s*bar)	8 ms

Part No.	Power consumption	Flow conductance	Flow conductance	Typ. switch-on time
	DC	b	C-value	
R422102425	0.55 W	0.29	1.17 l/(s*bar)	12 ms

Part No.	Typ. switch-off time	Weight
R422102503	17 ms	0.099 lbs
R422102504	17 ms	0.099 lbs
R422102426	8 ms	0.106 lbs
R422102424	17 ms	0.095 lbs
R422102427	8 ms	0.106 lbs
R422102425	17 ms	0.095 lbs

Nominal flow Qn at 87 psi and $\Delta p = 14.5$ psi, MO = Manual override

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

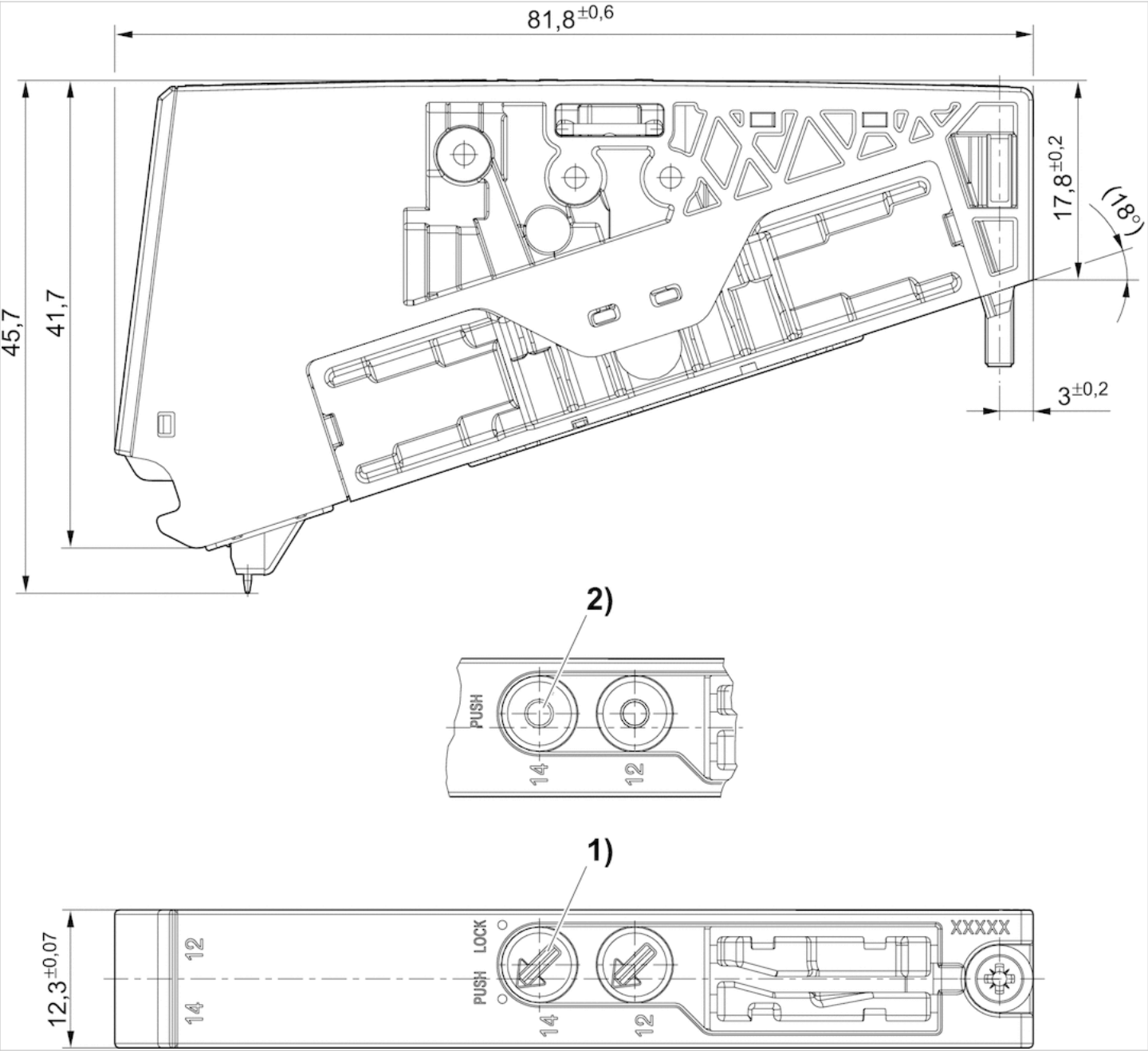
The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve system.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber, Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Dimensions

Dimensions



- 1) with detent
- 2) without detent





5/3-directional valve, Series AV03

- 5/3
- $Q_n = 0.244 \text{ Cv}$
- closed center
- Plate connection
- Manual override : with detent, without detent
- Double solenoid
- With spring return
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Base plate principle, multiple
Working pressure min./max.	-13 ... 145 psi
Control pressure min./max.	44 ... 116 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Q_n	0.244 Cv
Pilot control exhaust	with directional pilot air exhaust
Protection class, with connection	IP65
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	12 ms
Typ. switch-off time	12 ms
mounting screws	Hexalobular socket (TORX) ISO 10664-8
Mounting screw tightening torque	0.37 ft./lbs.
Weight	0.101 lbs

Technical data

Part No.		MO	Operational voltage	Voltage tolerance
			DC	DC
R422102428			24 V	-10% / +10%
R422102429			24 V	-10% / +10%

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
R422102428	0.55 W	0.32	0.92 l/(s*bar)
R422102429	0.55 W	0.32	0.92 l/(s*bar)

Part No.	basic valve with electrical connector
R422102428	Basic valve with pilot valve
R422102429	Basic valve without pilot valve

Nominal flow Qn at 87 psi and $\Delta p = 14.5$ psi, MO = Manual override

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

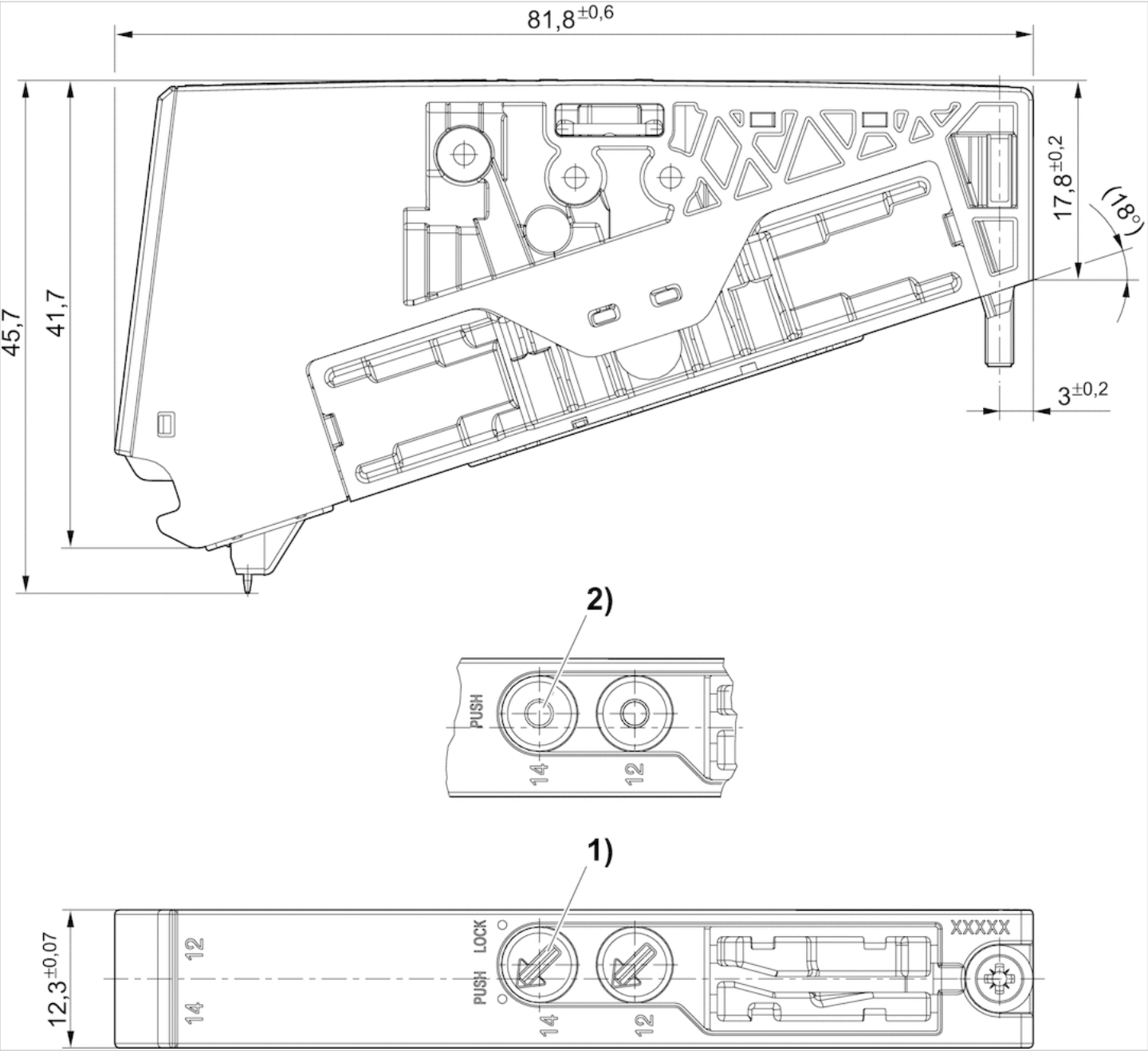
The pilot type (external/internal) is not implemented in the valve, but in the end plate of the valve system.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber, Hydrogenated acrylonitrile butadiene rubber
Front plate	Polyamide, fiber-glass reinforced
End plate	Polyamide

Dimensions

Dimensions



- 1) with detent
- 2) without detent











E/P pressure regulator, Series AV03-EP

- For multipole control, Display: display
- Electr. connection M12, 5-pin, A-coded
- With collective pilot air exhaust



Version	Piloted pressure regulator
Mounting orientation	Any
Working pressure max	159 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m ³
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.485 lbs

Technical data

Part No.		Pressure setting range min./max.	Nominal input value	Actual output value
			Min./max.	Min./max.
R414007364		8 ... 87 psi	0 ... 10 V	0 ... 10 V
R414007369		8 ... 87 psi	4 ... 20 mA	4 ... 20 mA
R414007375		8 ... 145 psi	0 ... 10 V	0 ... 10 V
R414007380		8 ... 145 psi	4 ... 20 mA	4 ... 20 mA
R414007365		8 ... 87 psi	0 ... 10 V	0 ... 10 V
R414007370		8 ... 87 psi	4 ... 20 mA	4 ... 20 mA
R414007376		8 ... 145 psi	0 ... 10 V	0 ... 10 V
R414007381		8 ... 145 psi	4 ... 20 mA	4 ... 20 mA
R414007354		8 ... 145 psi	0 ... 10 V	0 ... 10 V
R414007358		8 ... 145 psi	4 ... 20 mA	4 ... 20 mA

Part No.	Max. power consumption	Repetitive precision	Hysteresis	
	mA			
R414007364	220 mA	0.58 psi	0.725 psi	1)
R414007369	220 mA	0.58 psi	0.725 psi	1)
R414007375	220 mA	0.58 psi	0.725 psi	1)
R414007380	220 mA	0.58 psi	0.725 psi	1)
R414007365	160 mA	0.58 psi	0.725 psi	2)
R414007370	160 mA	0.58 psi	0.725 psi	2)
R414007376	160 mA	0.58 psi	0.725 psi	2)
R414007381	160 mA	0.58 psi	0.725 psi	2)
R414007354	160 mA	2.61 psi	2.9 psi	2)
R414007358	160 mA	2.61 psi	2.9 psi	2)

1) Power outage: operating line exhaust, See diagrams for flow characteristic curve

2) Power outage: maintain pressure, See diagrams for flow characteristic curve

Technical information

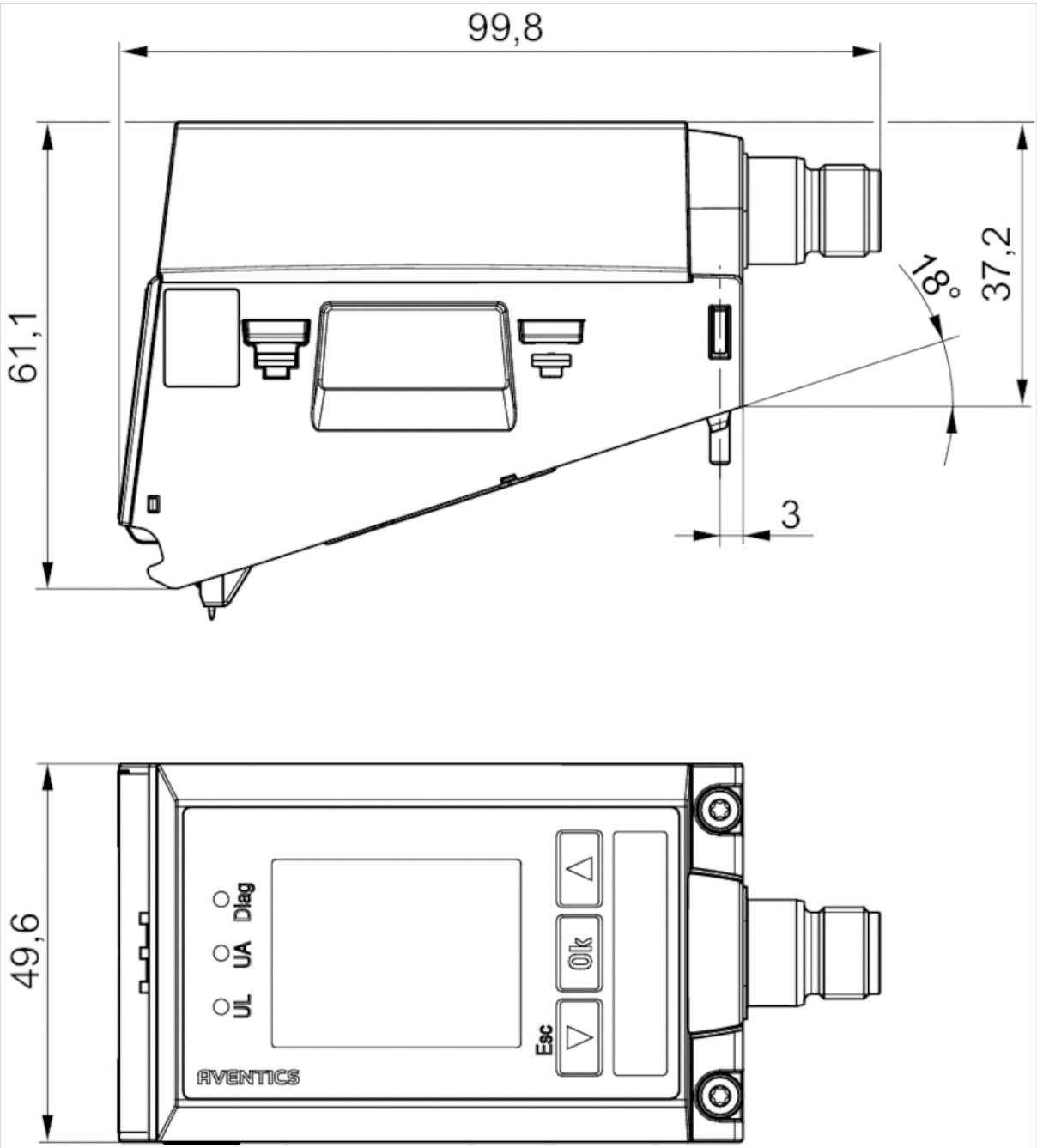
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Housing	Polyarylamide
Seals	Nitrile butadiene rubber

Dimensions

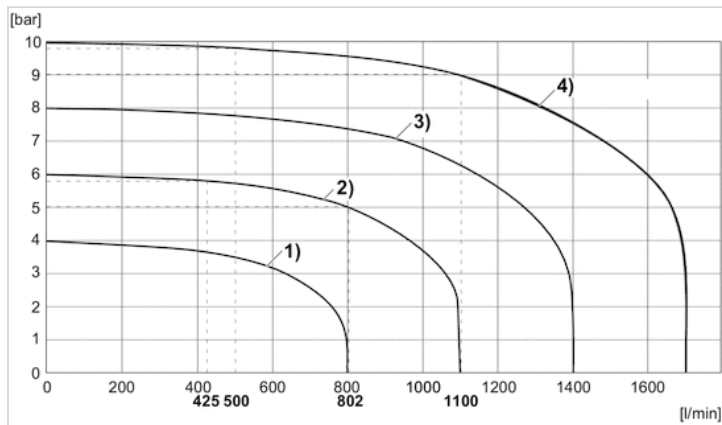
Dimensions



Port for plug M12x1

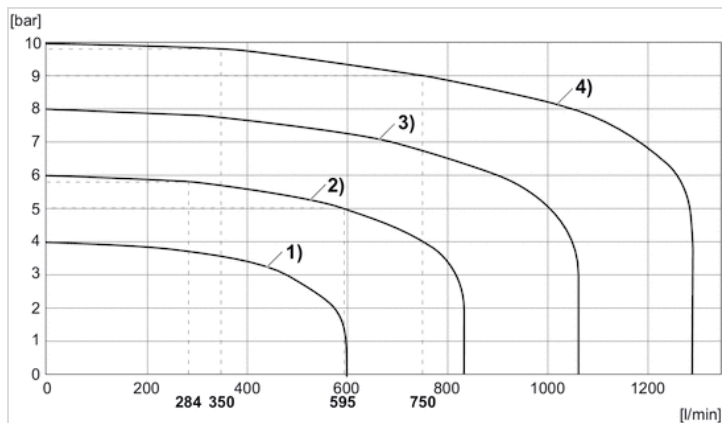
Diagrams

Flow characteristic curve Pressure zone control



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

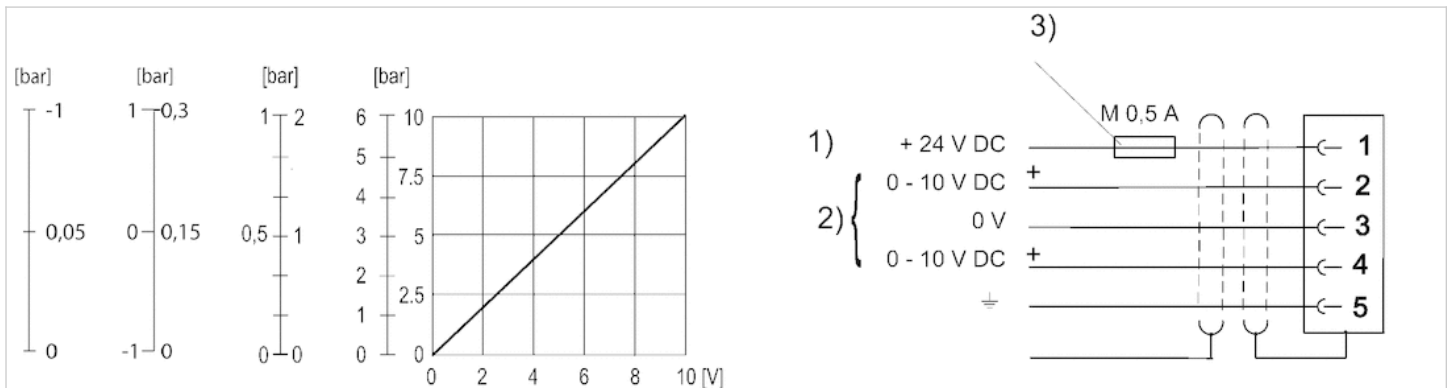
Flow characteristic curve Single pressure control



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

Circuit diagram

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



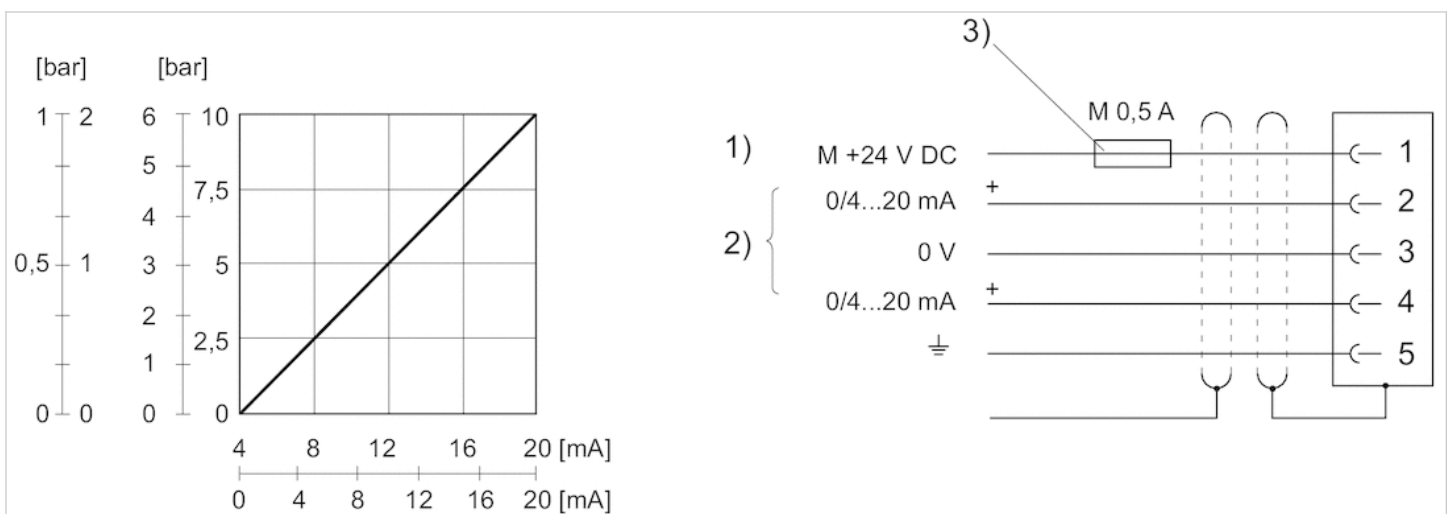
1) Supply voltage 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V.

Min. load resistance of nominal value output = 1 k Ω .

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

Connect the plug via a shielded cable to ensure EMC.

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.











E/P pressure regulator, Series AV03-EP

- For multipole control, Display: LED
- Electr. connection M12, 5-pin, A-coded
- With collective pilot air exhaust



Version	Piloted pressure regulator
Mounting orientation	Any
Working pressure max	159 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.463 lbs

Technical data

Part No.		Pressure setting range min./max.	Nominal input value	Actual output value
			Min./max.	Min./max.
R414007361		8 ... 87 psi	0 ... 10 V	0 ... 10 V
R414007366		8 ... 87 psi	4 ... 20 mA	4 ... 20 mA
R414007372		8 ... 145 psi	0 ... 10 V	0 ... 10 V
R414007377		8 ... 145 psi	4 ... 20 mA	4 ... 20 mA
R414007362		8 ... 87 psi	0 ... 10 V	0 ... 10 V
R414007367		8 ... 87 psi	4 ... 20 mA	4 ... 20 mA
R414007373		8 ... 145 psi	0 ... 10 V	0 ... 10 V
R414007378		8 ... 145 psi	4 ... 20 mA	4 ... 20 mA
R414007352		8 ... 145 psi	0 ... 10 V	0 ... 10 V
R414007356		8 ... 145 psi	4 ... 20 mA	4 ... 20 mA

Part No.	Max. power consumption	Repetitive precision	Hysteresis	
	mA			
R414007361	180 mA	0.58 psi	0.725 psi	1)
R414007366	180 mA	0.58 psi	0.725 psi	1)
R414007372	180 mA	0.58 psi	0.725 psi	1)
R414007377	180 mA	0.58 psi	0.725 psi	1)
R414007362	120 mA	0.58 psi	0.725 psi	2)
R414007367	120 mA	0.58 psi	0.725 psi	2)
R414007373	120 mA	0.58 psi	0.725 psi	2)
R414007378	120 mA	0.58 psi	0.725 psi	2)
R414007352	120 mA	2.61 psi	2.9 psi	2)
R414007356	120 mA	2.61 psi	2.9 psi	2)

1) Power outage: operating line exhaust, See diagrams for flow characteristic curve

2) Power outage: maintain pressure, See diagrams for flow characteristic curve

Technical information

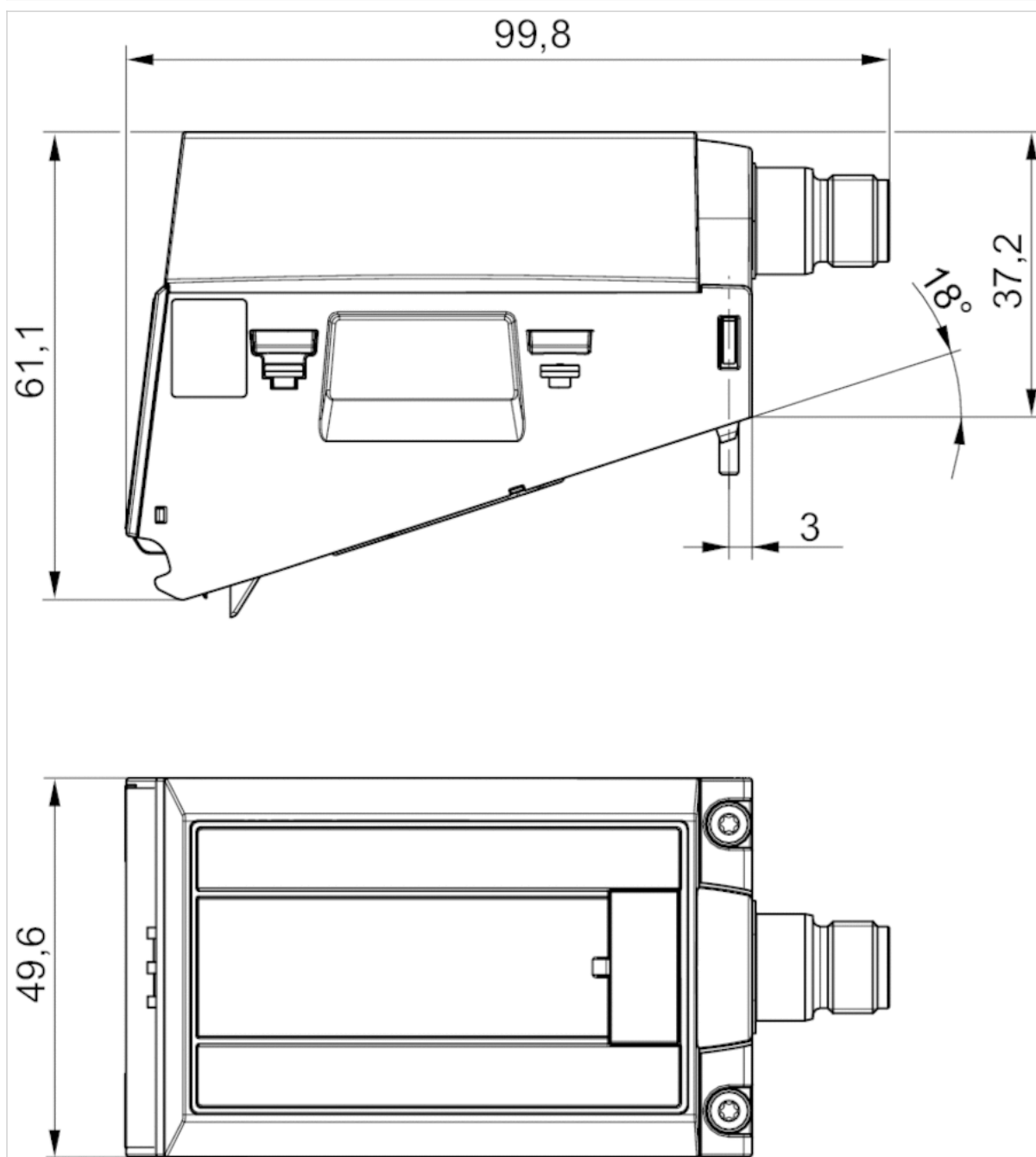
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Housing	Polyarylamide
Seals	Nitrile butadiene rubber

Dimensions

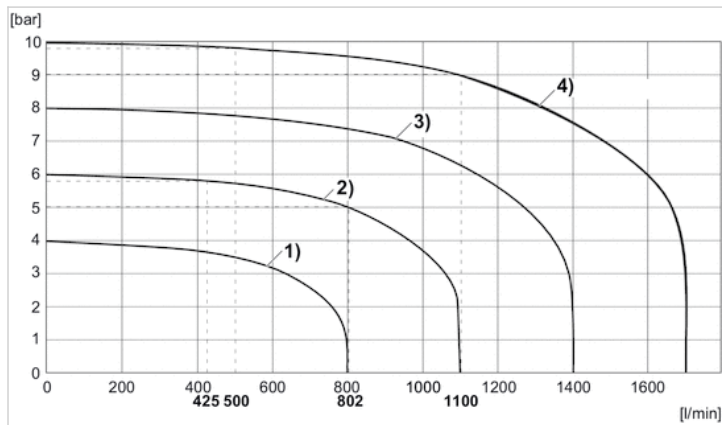
Dimensions



Port for plug M12x1

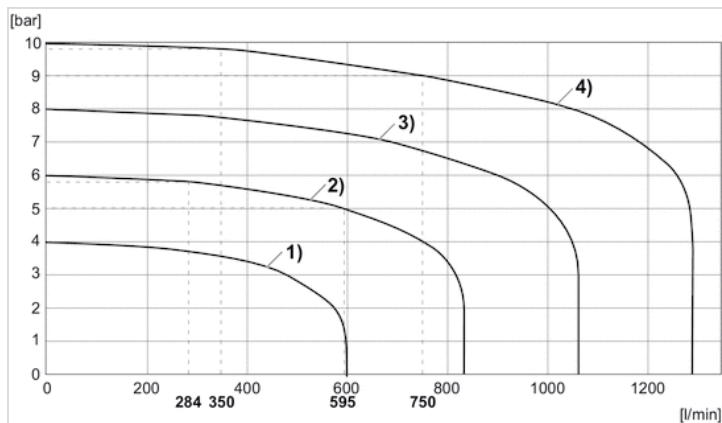
Diagrams

Flow characteristic curve Pressure zone control



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

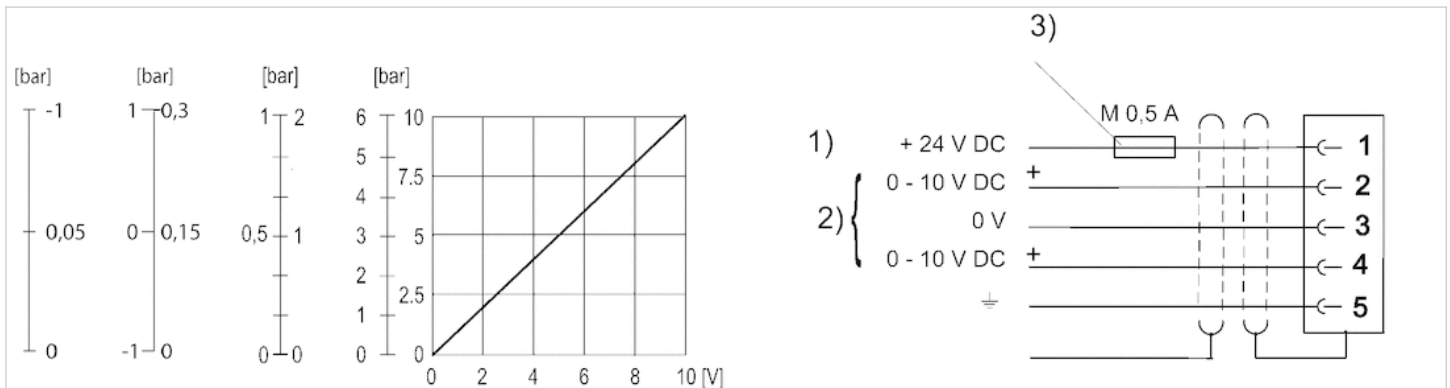
Flow characteristic curve Single pressure control



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

Circuit diagram

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



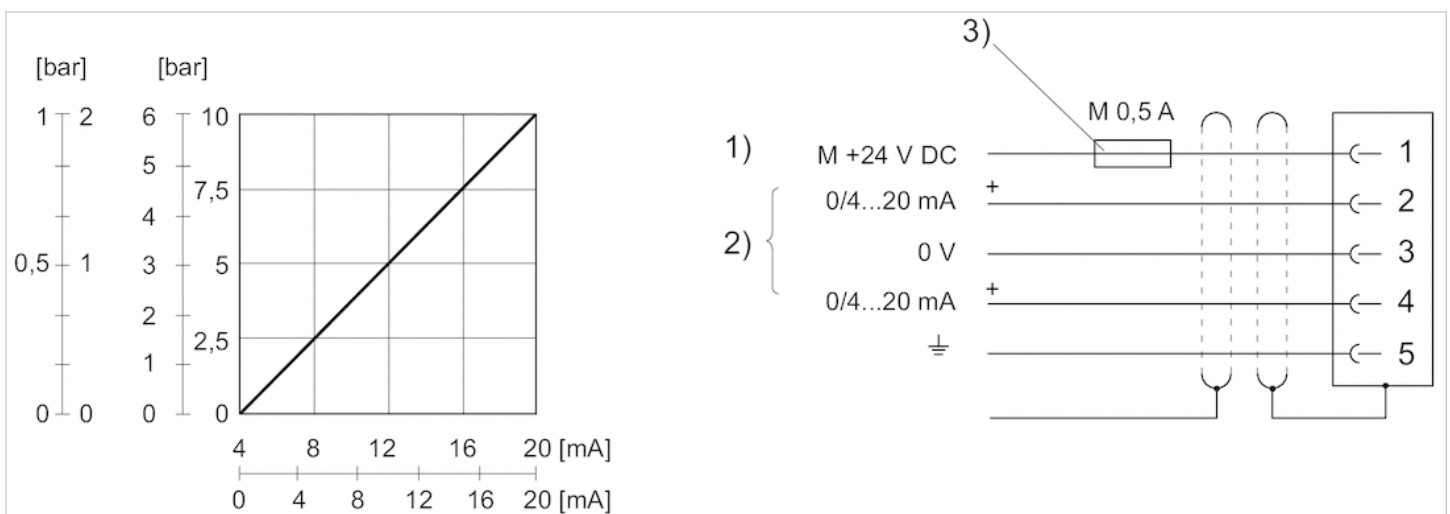
1) Supply voltage 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V.

Min. load resistance of nominal value output = 1 k Ω .

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

Connect the plug via a shielded cable to ensure EMC.

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.




E/P pressure regulator, Series AV03-EP

- For fieldbus connection, Display: display
- with directional pilot air exhaust



Version	Piloted pressure regulator
Mounting orientation	Any
Working pressure max	159 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m ³
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.463 lbs

Technical data

Part No.		Pressure setting range min./max.	Max. power consumption	Repetitive precision
			mA	
R414007915		8 ... 145 psi	220 mA	0.58 psi
R414007916		8 ... 145 psi	160 mA	0.58 psi
R414007360		8 ... 145 psi	160 mA	2.61 psi

Part No.	Hysteresis	
R414007915	0.725 psi	1)
R414007916	0.725 psi	2)
R414007360	2.9 psi	2)

1) Power outage: operating line exhaust, See diagrams for flow characteristic curve

2) Power outage: maintain pressure, See diagrams for flow characteristic curve

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

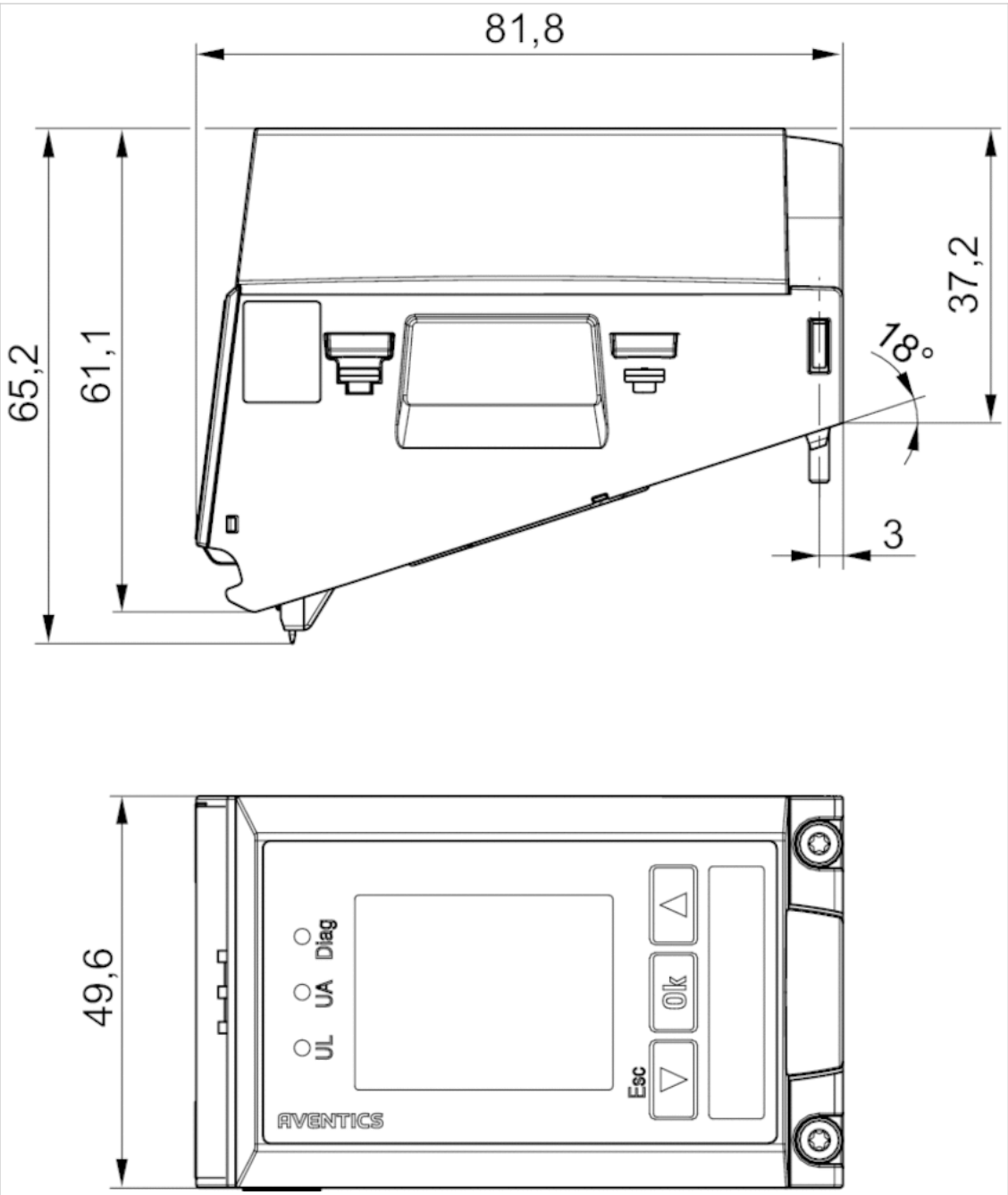
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Housing	Polyarylamide
Seals	Nitrile butadiene rubber

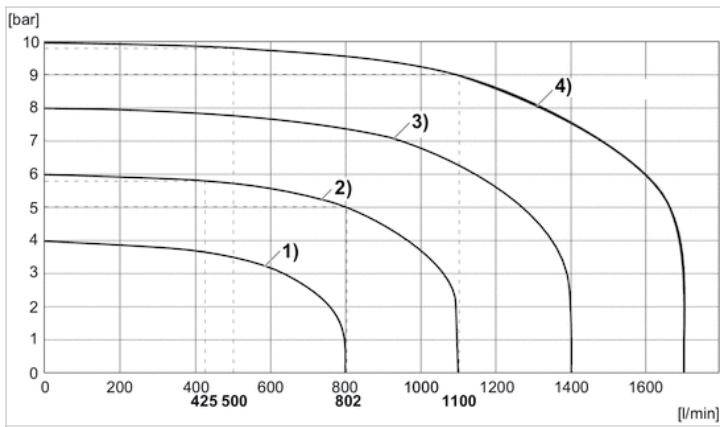
Dimensions

Dimensions



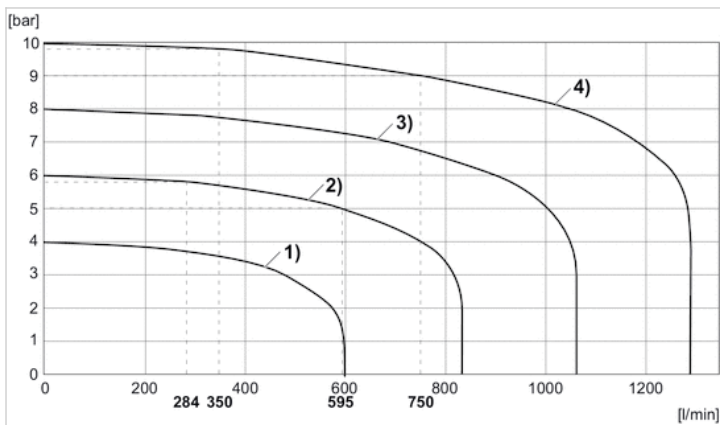
Diagrams

Flow characteristic curve Pressure zone control



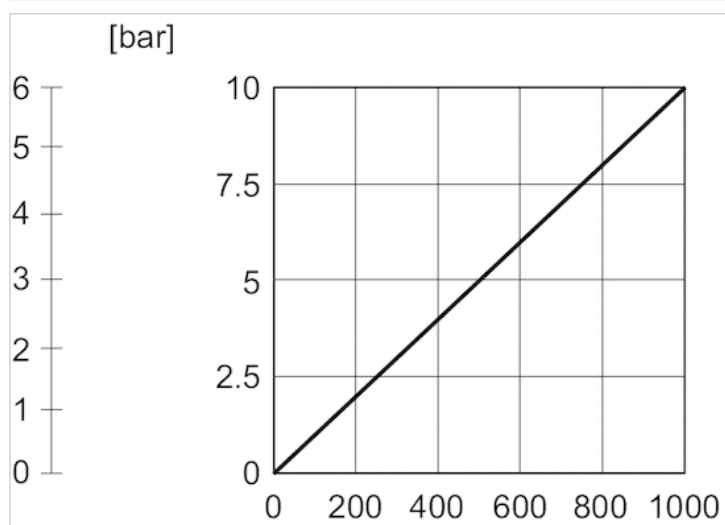
- 1) $P_v = 5 \text{ bar}$, controlled: 4 bar
- 2) $P_v = 7 \text{ bar}$, controlled: 6 bar
- 3) $P_v = 9 \text{ bar}$, controlled: 8 bar
- 4) $P_v = 11 \text{ bar}$, controlled: 10 bar

Flow characteristic curve Single pressure control



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

E/P pressure regulator, Series AV03-EP




- For fieldbus connection, Display: LED

- with directional pilot air exhaust



Version	Piloted pressure regulator
Mounting orientation	Any
Working pressure max	159 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m ³
DC operating voltage	24 V
Voltage tolerance DC	-20% / +30%
Protection class	IP65
Weight	0.353 lbs

Technical data

Part No.		Pressure setting range min./max.	Max. power consumption	Repetitive precision
			mA	
R414007914		8 ... 145 psi	180 mA	0.58 psi
R414007383		8 ... 145 psi	120 mA	0.58 psi
R414007359		8 ... 145 psi	120 mA	2.61 psi

Part No.	Hysteresis	
R414007914	0.725 psi	1)
R414007383	0.725 psi	2)
R414007359	2.9 psi	2)

1) Power outage: operating line exhaust, See diagrams for flow characteristic curve

2) Power outage: maintain pressure, See diagrams for flow characteristic curve

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

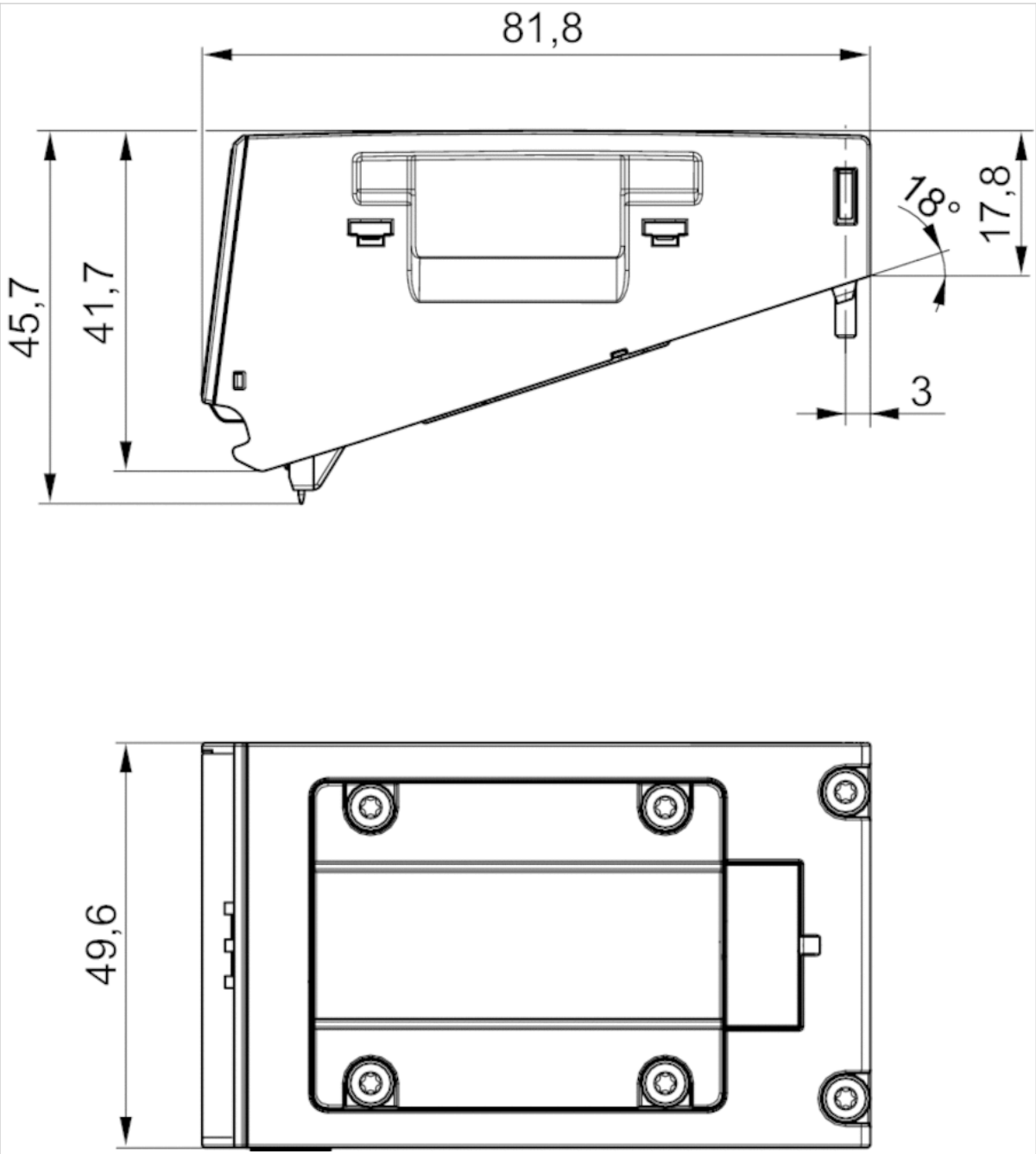
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Housing	Polyarylamide
Seals	Nitrile butadiene rubber

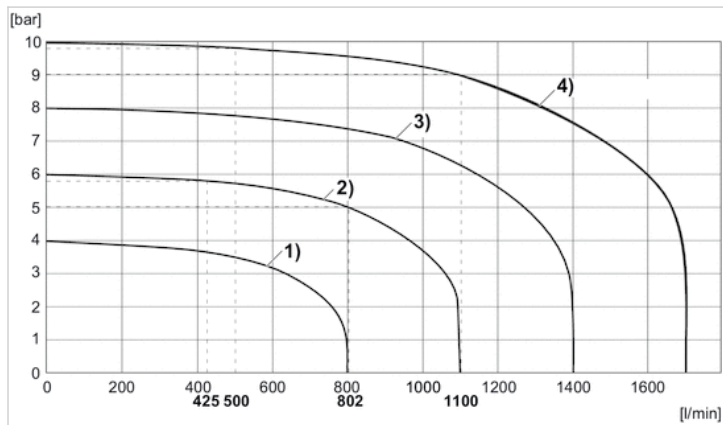
Dimensions

Dimensions



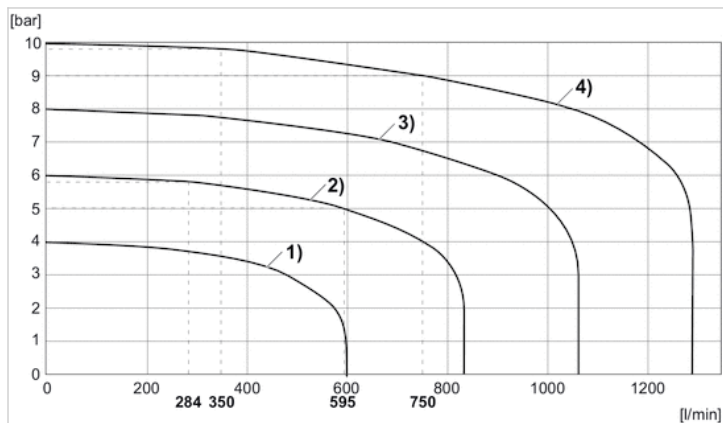
Diagrams

Flow characteristic curve Pressure zone control



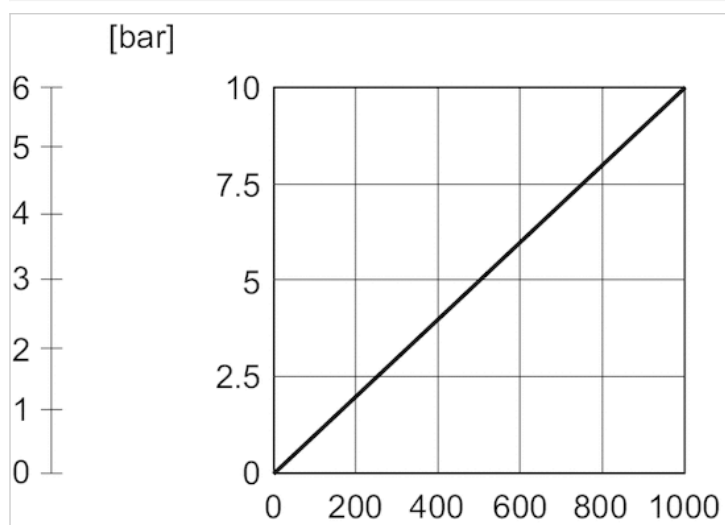
- 1) $P_v = 5 \text{ bar}$, controlled: 4 bar
- 2) $P_v = 7 \text{ bar}$, controlled: 6 bar
- 3) $P_v = 9 \text{ bar}$, controlled: 8 bar
- 4) $P_v = 11 \text{ bar}$, controlled: 10 bar

Flow characteristic curve Single pressure control



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

- Field bus connection with I/O functionality
- D-design
- Bus coupler
- Field bus protocol PROFIBUS DP, CANopen, DeviceNet, EtherNET/IP, PROFINET IO, EtherCAT, POWERLINK



Version	Bus coupler
Ambient temperature min./max.	14 ... 140 °F
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
Protection class	IP65
Cycle time at 256 bits	1 ms
Number of solenoid coils,max.	128
Number of valve positions,max.	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
Weight	See table below

Technical data

Part No.	Field bus protocol	Port
		1
R412018218	PROFIBUS DP	Plug (male), M12, 5-pin, B-coded
R412018220	CANopen	Plug (male), M12, 5-pin, A-coded
R412018221	DeviceNet	Plug (male), M12, 5-pin, A-coded
R412018222	EtherNET/IP	Socket (female), M12, 4-pin, D-coded
R412018223	PROFINET IO	Socket (female), M12, 4-pin, D-coded
R412018225	EtherCAT	Socket (female), M12, 4-pin, D-coded
R412018226	POWERLINK	Socket (female), M12, 4-pin, D-coded

Part No.	Port	power supply
	2	
R412018218	Socket (female), M12, 5-pin, B-coded	Plug (male), M12, 4-pin, A-coded
R412018220	Socket (female), M12, 5-pin, A-coded	Plug (male), M12, 4-pin, A-coded
R412018221	Socket (female), M12, 5-pin, A-coded	Plug (male), M12, 4-pin, A-coded
R412018222	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded
R412018223	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded
R412018225	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded
R412018226	Socket (female), M12, 4-pin, D-coded	Plug (male), M12, 4-pin, A-coded

Part No.	Weight
R412018218	0.353 lbs
R412018220	0.353 lbs
R412018221	0.353 lbs
R412018222	0.386 lbs
R412018223	0.386 lbs
R412018225	0.386 lbs
R412018226	0.386 lbs

Scope of delivery: Incl. mounting screws 3x

Technical information

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.

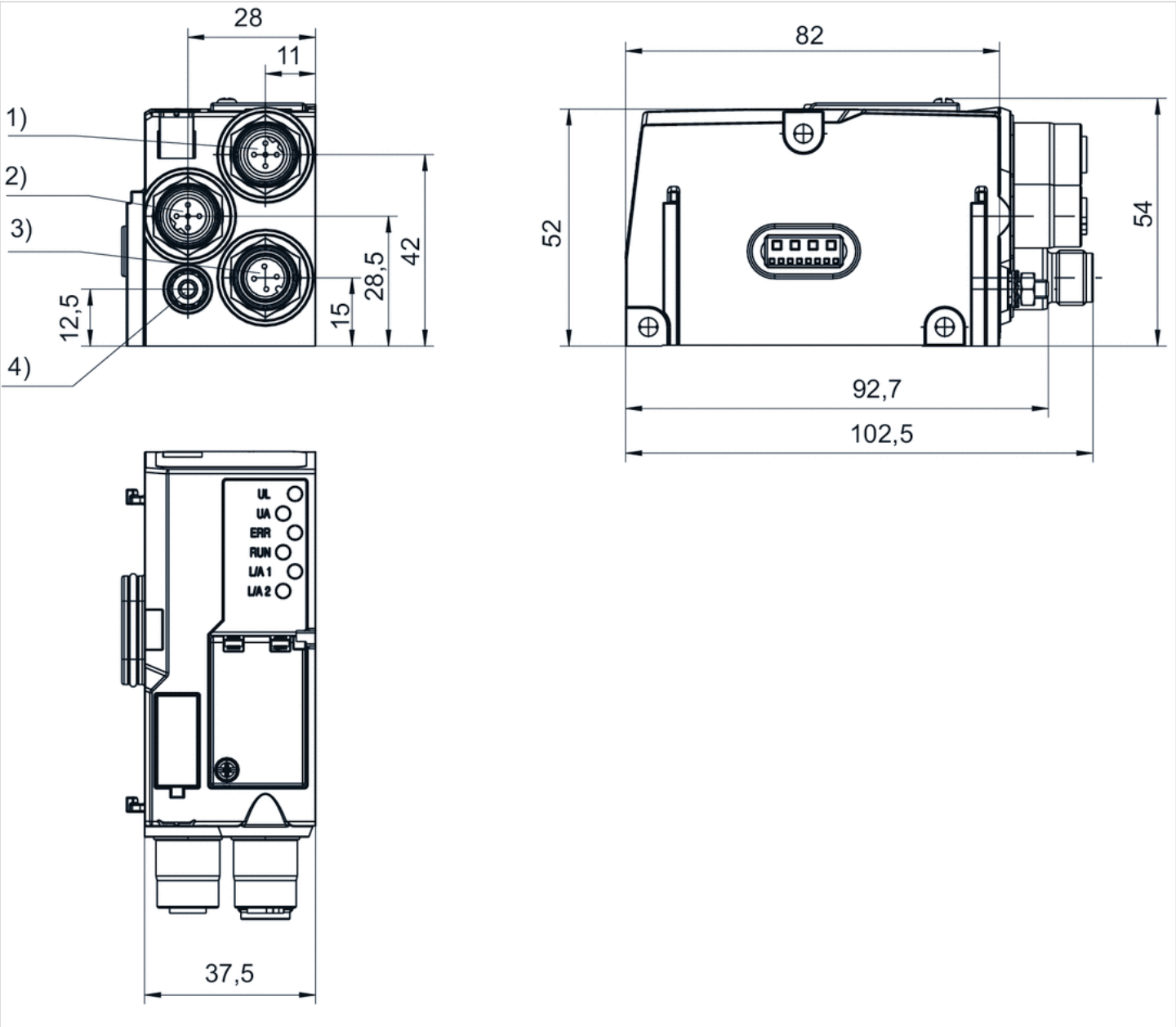
During cyclical data transfer, the bus coupler can send 512 bits of input data to the controller and receive 512 bits of output data from the controller.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

Dimensions



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

Series AES

- digital inputs/outputs, Socket (female), M8x1



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Total current for actuators	4 A
Protection class	IP65
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
Weight	0.242 lbs

Technical data

Part No.	Type	Port	power supply	Number of inputs	Number of outputs
		1			
R412018269	8DIDO8M8	Socket (female), 3-pin	Internal	8	8
R412018233	8DI8M8	Socket (female), 3-pin	Internal	8	-
R412018248	8DO8M8	Socket (female), 3-pin	Internal	-	8
R412018234	16DI8M8	Socket (female), 4-pin	Internal	16	-

Part No.	I/O module version	Fig.	
R412018269	Digital inputs, Digital outputs, Combination module	Fig. 1	1)
R412018233	Digital inputs	Fig. 1	-
R412018248	Digital outputs	Fig. 1	-
R412018234	Digital inputs	Fig. 2	-

Delivery contents: incl. 2 spring clamp elements and seal

1) Function specification for fieldbus configuration.

Technical information

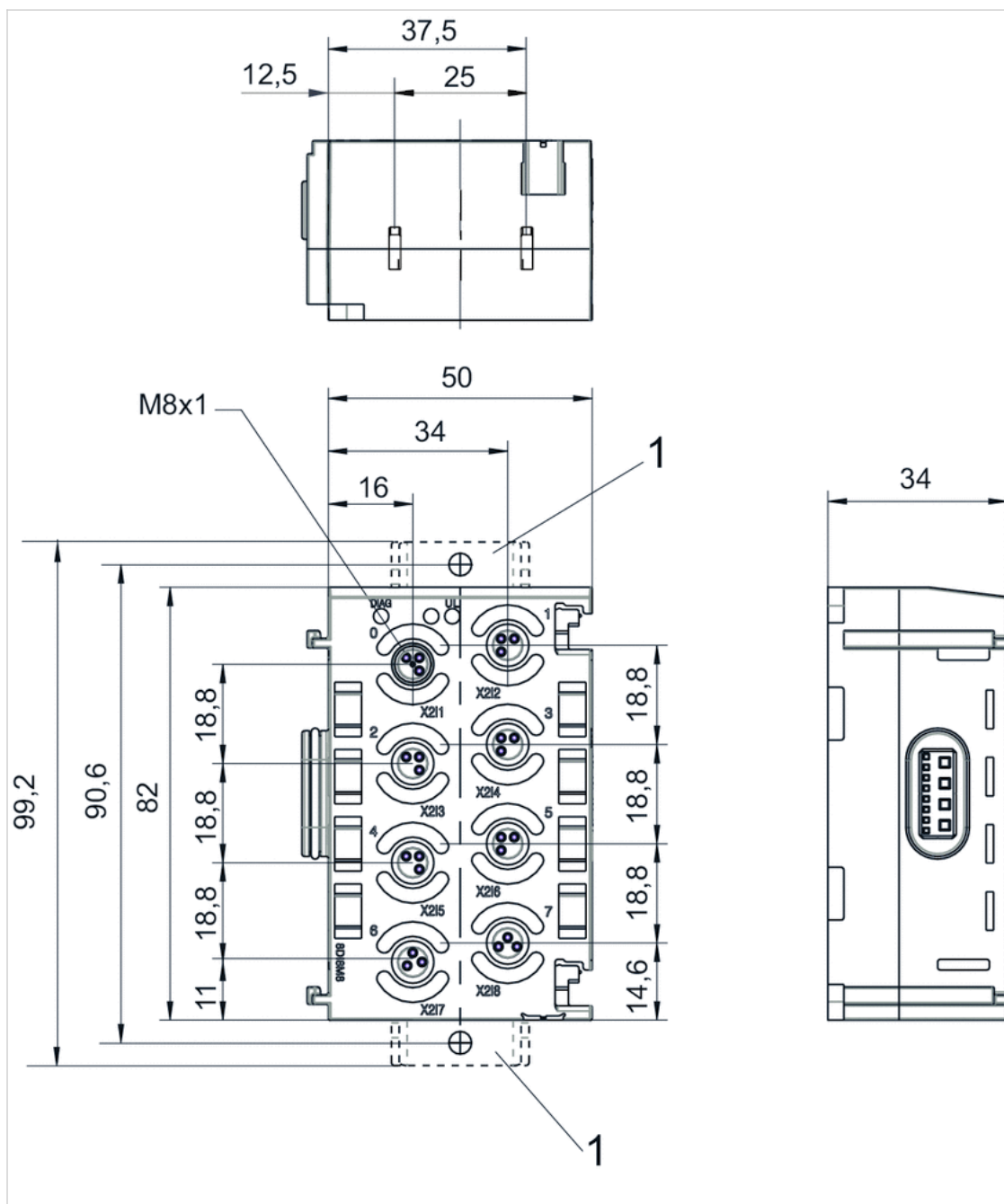
You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
The total current of all outputs (including valves) must not exceed 4 A in the overall system.
Voltage and short-circuit monitoring per LED.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

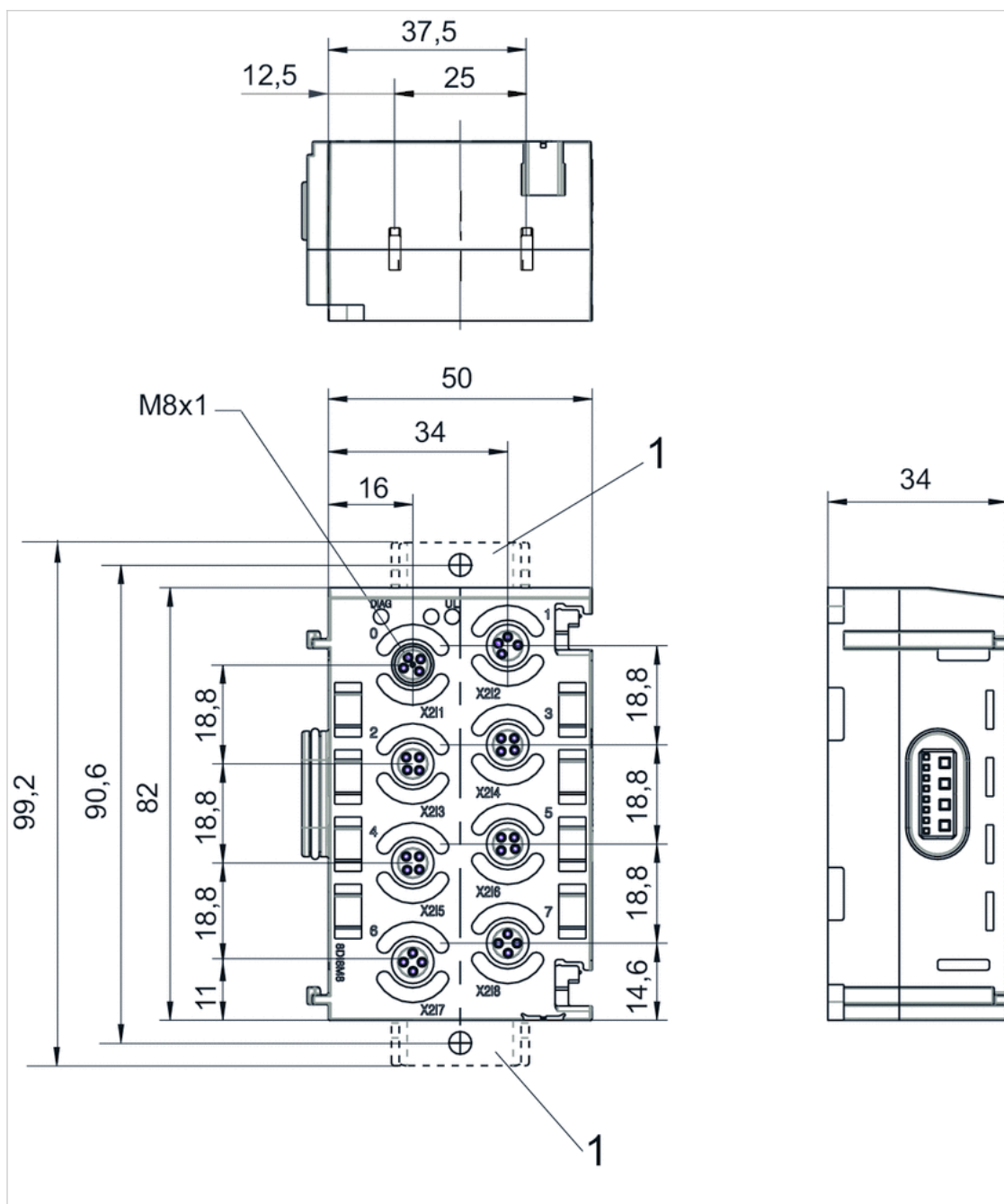
Dimensions

Dimensions Fig. 1



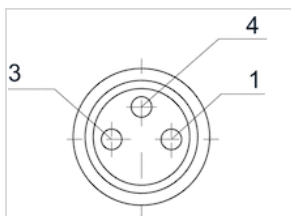
1) Retaining bracket (optional)
Pin assignment M8x1 (3-pin)

Dimensions Fig. 2



Pin assignments

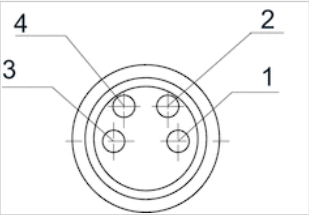
Pin assignments PNP 3-pin



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

Pin assignments

Pin assignments PNP 4-pin



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

Series AES

- digital inputs/outputs
- Socket (female), M12x1, 5-pin



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Power supply for actuators	8x0,5 A
Total current for actuators	4 A
Protection class	IP65
Total current of sensors,max.	1 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
Weight	0.242 lbs

Technical data

Part No.	Type	Port	power supply	Number of inputs	Number of outputs
		1			
R412018235	8DI4M12	Socket (female), M12x1, 5-pin	Internal	8	-
R412018250	8DO4M12	Socket (female), M12x1, 5-pin	Internal	-	8
R412018270	8DIDO4M12	Socket (female), M12x1, 5-pin	Internal	8	8

Part No.	I/O module version	
R412018235	Digital inputs	-
R412018250	Digital outputs	-
R412018270	Digital inputs, Digital outputs, Combination module	1)

Delivery contents: incl. 2 spring clamp elements and seal

1) Function specification for fieldbus configuration.

Technical information

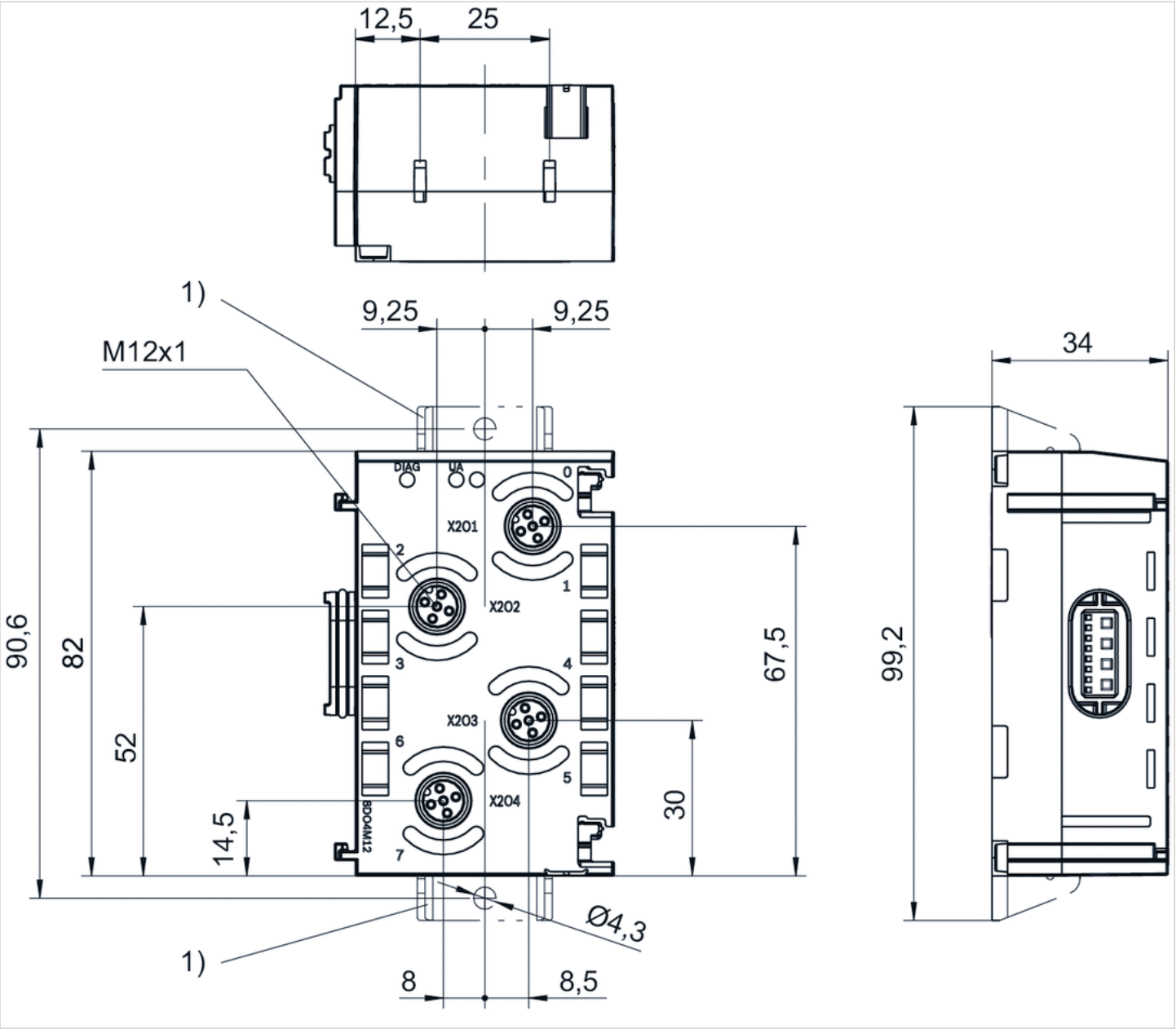
You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
The total current of all outputs (including valves) must not exceed 4 A in the overall system.
Voltage and short-circuit monitoring per LED.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

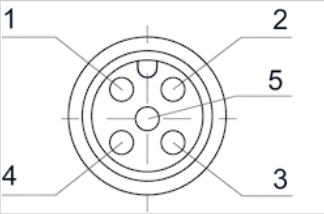
Dimensions



1) Retaining bracket (optional)

Pin assignments

Pin assignments PNP



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

X = bit value

Series AES

- digital inputs/outputs
- Socket (female), M12, 8-pin



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-10% / +10%
Max. current per channel	0.5 A
Total current for actuators	4 A
Protection class	IP65
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
Weight	0.242 lbs

Technical data

Part No.	Type	Port	power supply	Number of inputs	Number of outputs
		1			
R412018243	16DI4M12	Socket (female), M12, 8-pin	Internal	16	-
R412018263	16DO4M12	Socket (female), M12, 8-pin	Internal	-	16

Part No.	I/O module version
R412018243	Digital inputs
R412018263	Digital outputs

Delivery contents: incl. 2 spring clamp elements and seal

Technical information

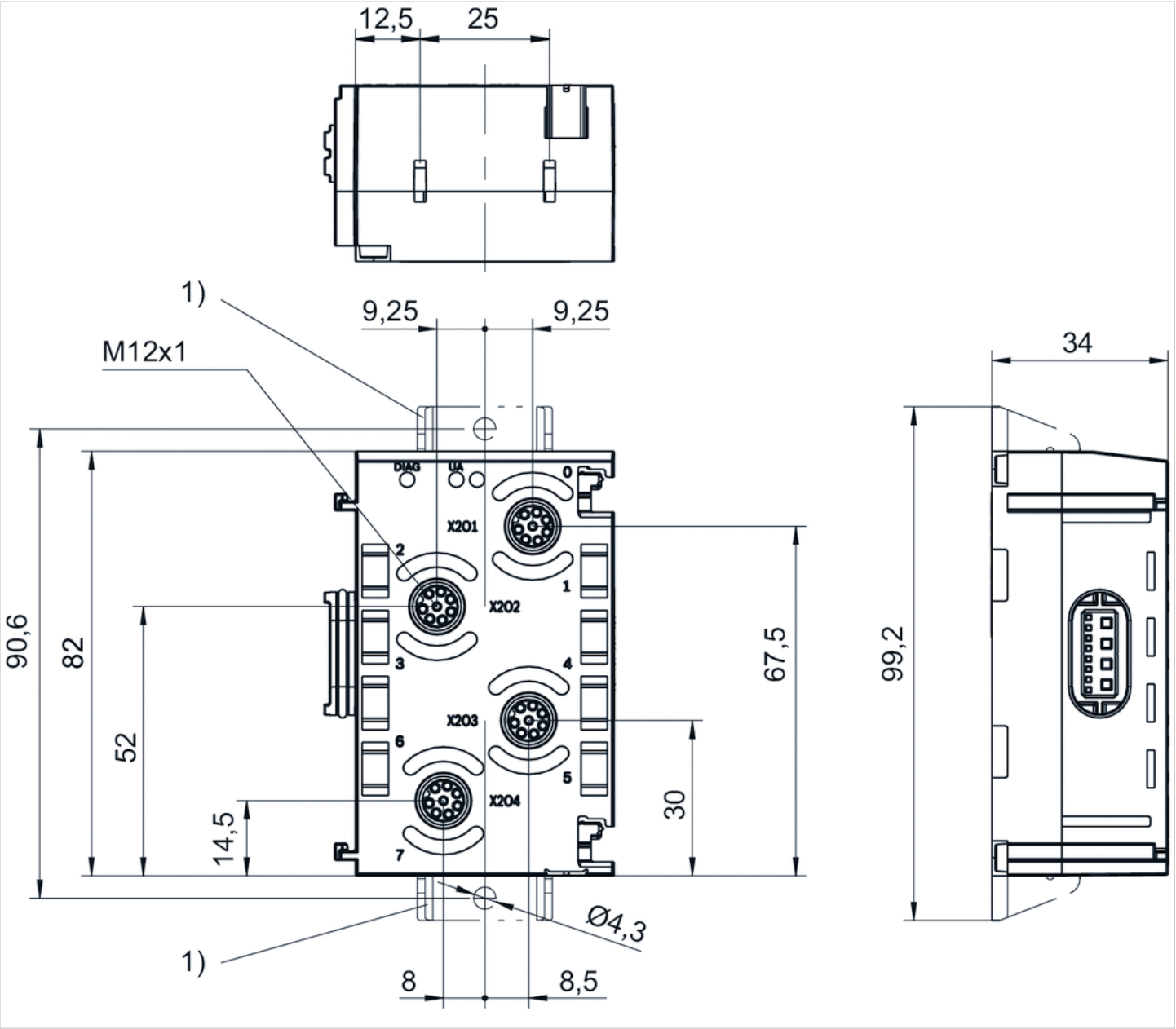
You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
The total current of all outputs (including valves) must not exceed 4 A in the overall system.
Voltage and short-circuit monitoring per LED.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

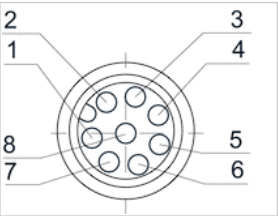
Dimensions



1) Retaining bracket (optional)

Pin assignments

Pin assignments PNP



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

X = bit value

Series AES

- digital outputs
- Socket, D-Sub, 25-pin



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Max. current per channel	0.5 A
Total current for actuators	4 A
Protection class	IP65
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
Weight	0.254 lbs

Technical data

Part No.	Type	Port	power supply	Number of inputs	Number of outputs
		1			
R412018254	24DO1DSUB25	Socket, D-Sub, 25-pin	Internal	24	24

Delivery contents: incl. 2 spring clamp elements and seal

Technical information

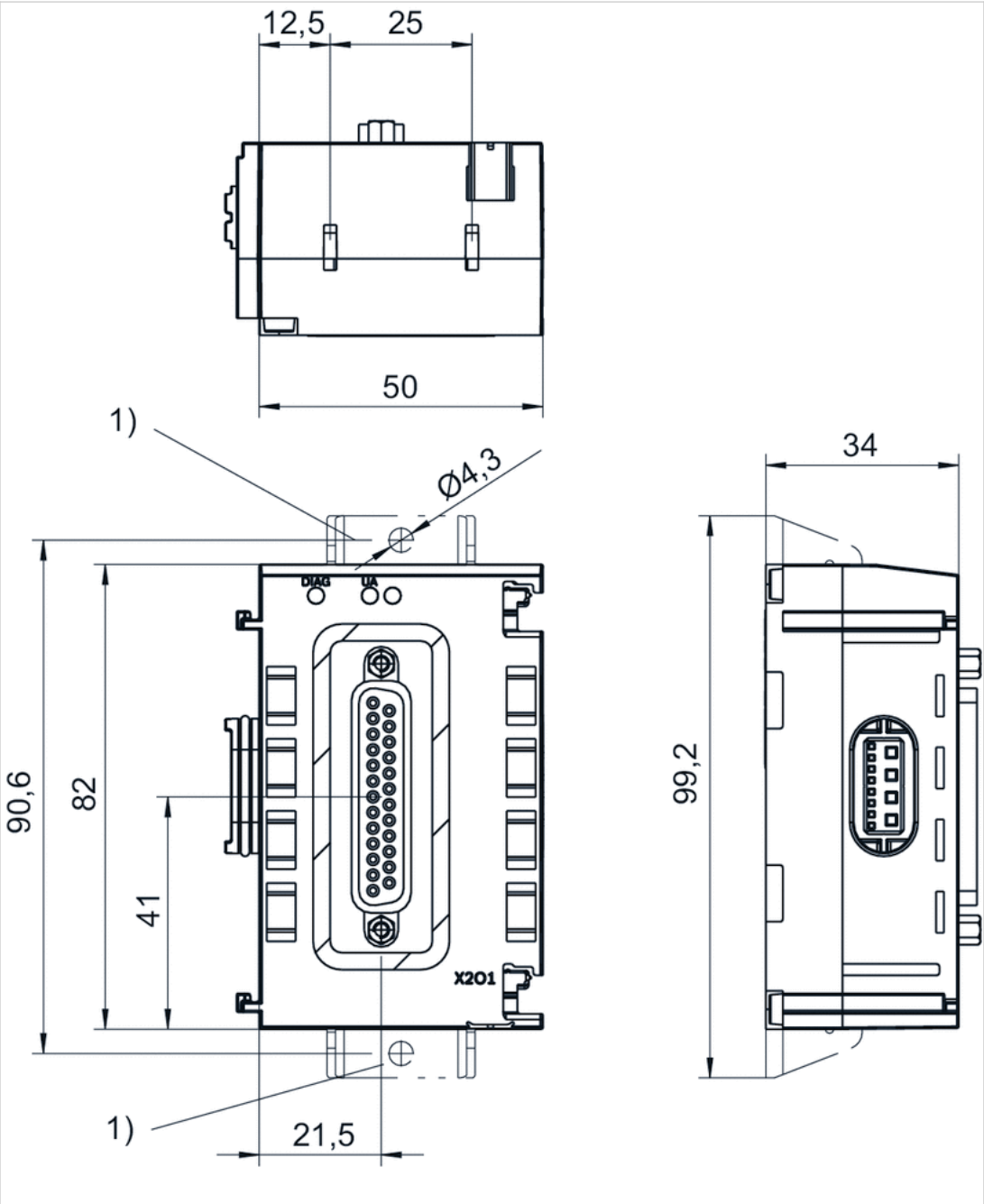
You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
 Voltage and short-circuit monitoring per LED.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

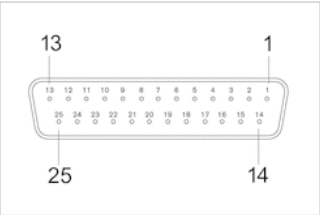
Dimensions



1) Retaining bracket (optional)

Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Socket

Pin			1	2	3	4	5	6	7	8	9	10	11
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]
12	13	14	15	16	17	18	19	20	21	22	23	24	
[X+1.3]	[X+1.4]	[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]	
25													
0 V DC													

X = bit value

Series AES

- digital inputs
- Spring clamp connections



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Protection class	IP20
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
Weight	0.254 lbs

Technical data

Part No.	Type	Port	power supply	Number of inputs
		1		
R412018242	16DI48SC	Spring clamp connections	Internal	16

Delivery contents: incl. 2 spring clamp elements and seal

Technical information

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.

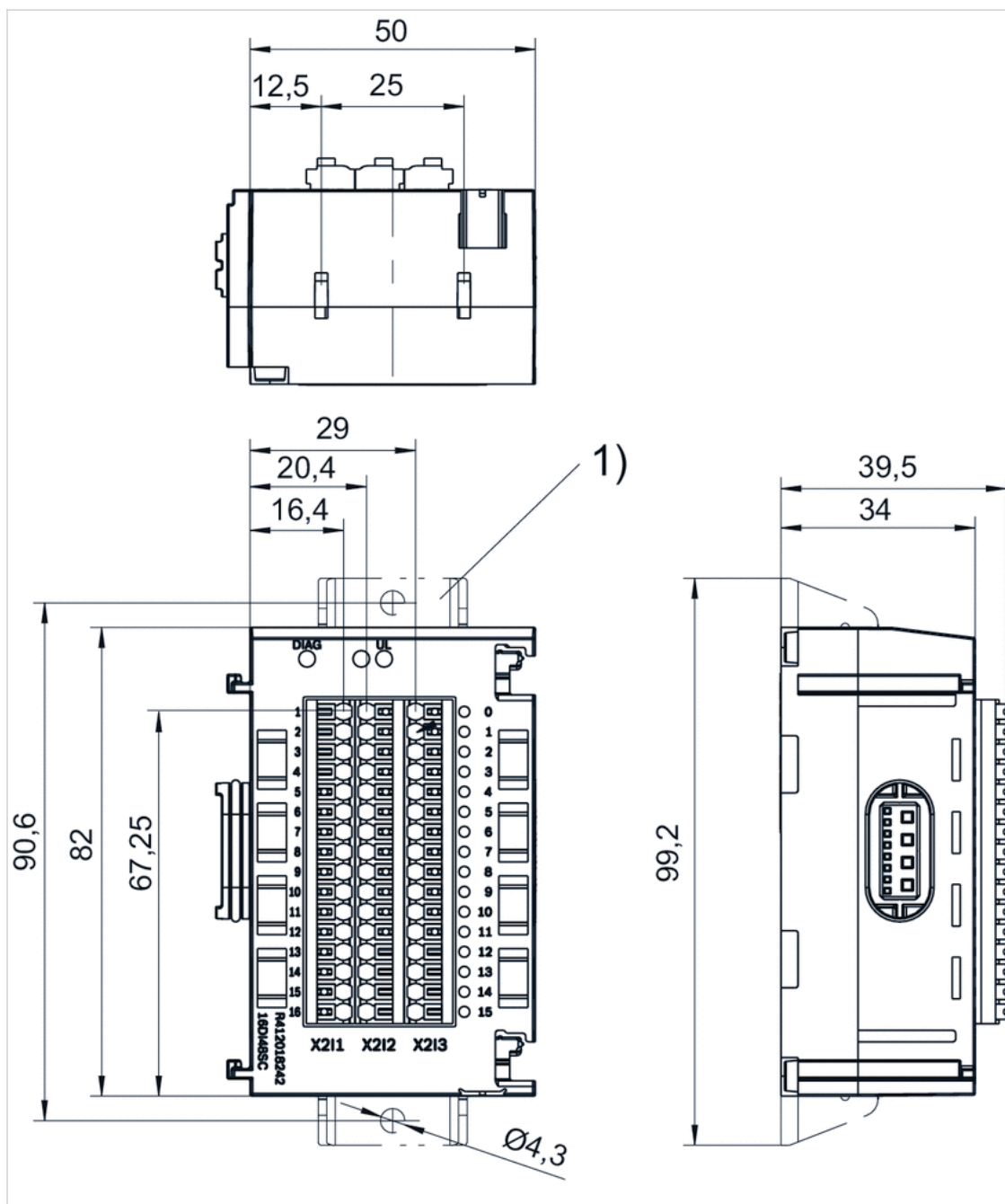
The clamp area for stranded wires is between 0.2 and 1.5 mm2.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

Dimensions



1) Retaining bracket (optional)

Series AES

- digital outputs
- Spring clamp connections



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Electronics voltage tolerance	-25% / +25%
Max. current per channel	0.5 A
Total current for actuators	4 A
Protection class	IP20
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
Weight	0.254 lbs

Technical data

Part No.	Type	Port	power supply	Number of outputs	I/O module version
		1			
R412018252	16DO32SC	Spring clamp connections	Internal	16	Digital outputs

Delivery contents: incl. 2 spring clamp elements and seal

Technical information

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.

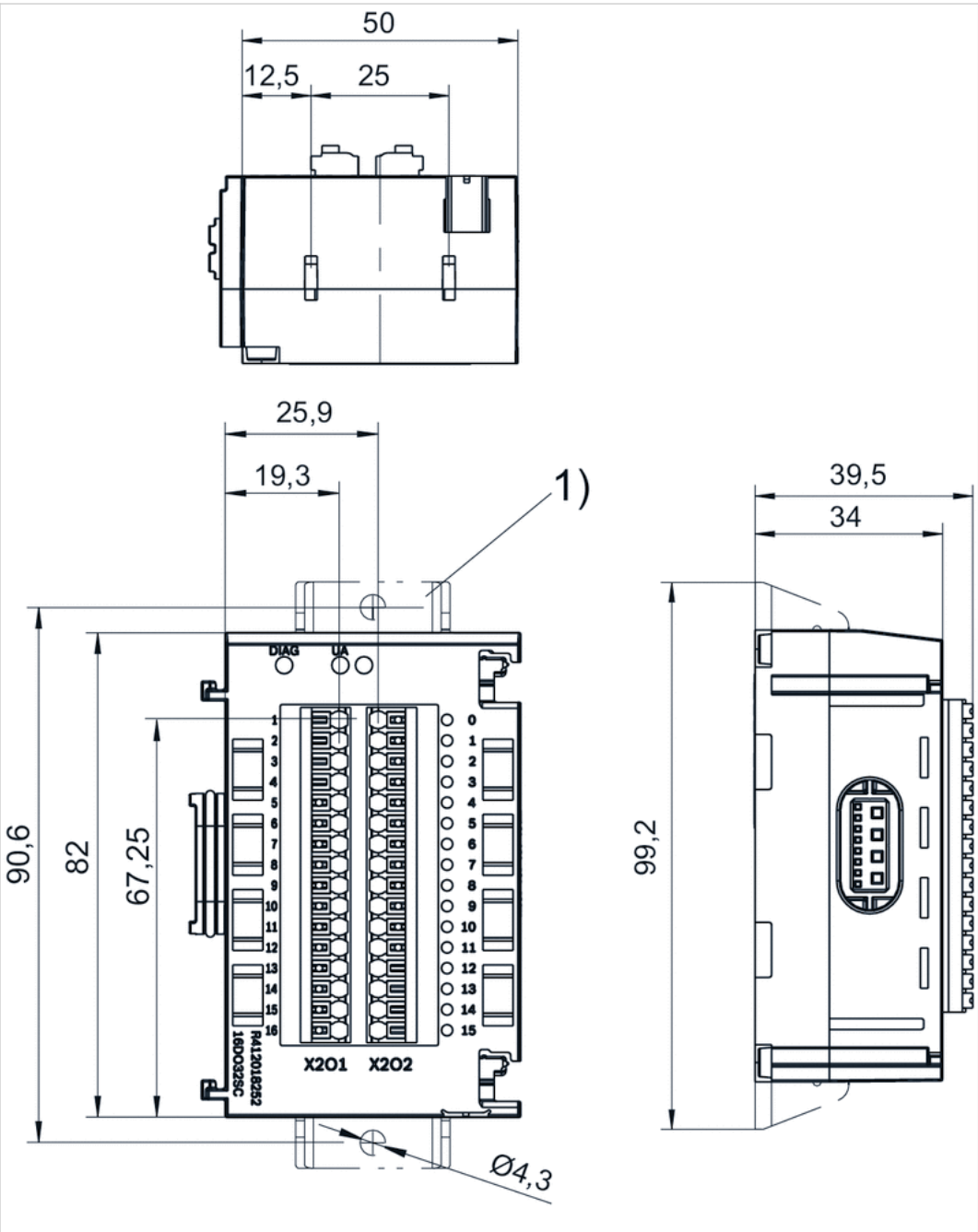
The clamp area for stranded wires is between 0.2 and 1.5 mm2.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

Dimensions



1) Retaining bracket (optional)

Dimensions

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

Series AES

- analog inputs/outputs M12x1, 5-pin ► with external power supply ► control of E/P pressure regulators
- Socket (female), M12x1, 5-pin



Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Max. current per channel	1.2 A
Protection class	IP65
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
Weight	0.242 lbs

Technical data

Part No.	Type	Port
		1
R412018287	2AI2AO2M12-AE	Socket (female), M12x1, 5-pin

Part No.	power supply	Number of inputs	Number of outputs
R412018287	Plug (male), M12, 4-pin, A-coded	2	2

Part No.	Analog inputs
R412018287	0 - 10 V / ± 10 V, 2 - 10 V / ± 10 V, 0 - 20 mA / ± 20 mA, 4 - 20 mA / ± 20 mA

Part No.	Analog outputs
R412018287	0 - 10 V / ± 10 V, 0 ... 20 mA, 4 ... 20 mA

Part No.	I/O module version
R412018287	Analog inputs, Analog outputs

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

Technical information

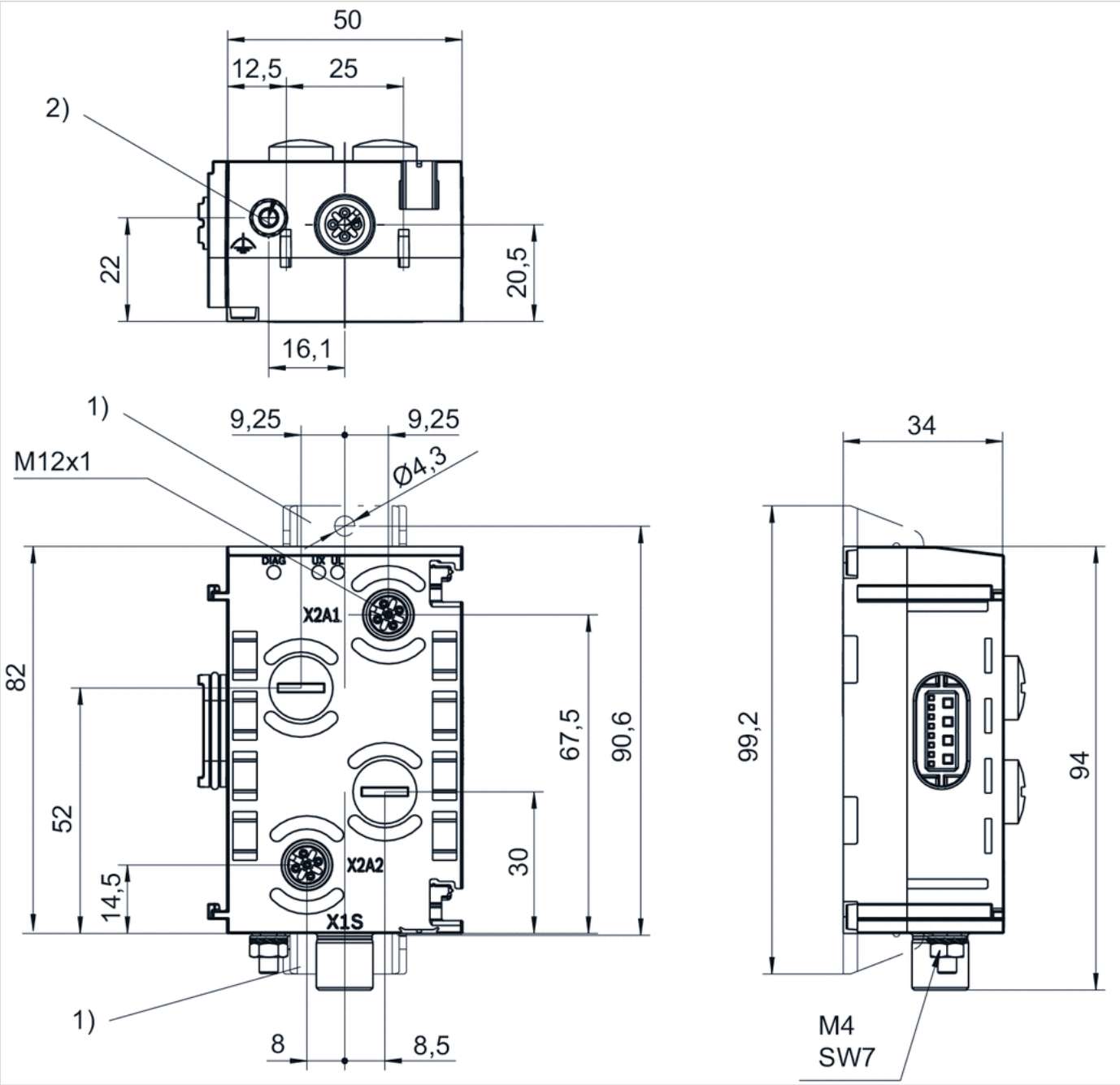
You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.
The total current of all outputs (including valves) must not exceed 4 A in the overall system.
Suitable for direct connection of an electropneumatic pressure regulator from the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

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

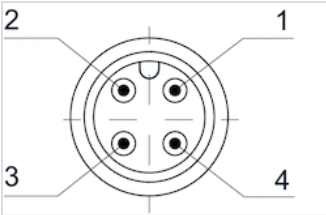
Dimensions



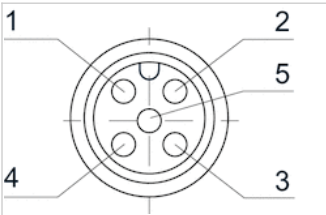
- 1) Retaining bracket (optional)
- 2) Ground

Pin assignments

Plug (male)



Pin assignments Socket (female)



Pin	1	2	3	4
Socket (female) X2A1 - X2A2	24 V DC	Output signal	0 V DC	Input signal
Plug (male) X1S	-	24 V DC	-	0 V DC
5				
Ground				
-				

Series AES

- analog inputs/outputs, M12x1, 5-pin
- I/O module version
- Socket (female), M12, 5-pin



Version	I/O module version
Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Max. current per channel	0.5 A
Protection class	IP65
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
Weight	0.242 lbs

Technical data

Part No.	Type	Port	power supply	Number of inputs	Number of outputs
		1			
R412018277	2AI2M12-E	Socket (female), M12, 5-pin	Internal	2	-
R412018278	4AI4M12-E	Socket (female), M12, 5-pin	Internal	4	-
R412018281	2AO2M12-E	Socket (female), M12, 5-pin	Internal	-	2

Part No.	Analog inputs
R412018277	0 - 10 V / \pm 10 V, 2 - 10 V / \pm 10 V, 0 - 20 mA / \pm 20 mA, 4 - 20 mA / \pm 20 mA
R412018278	0 ... 10 V, 2 - 10 V, 0 ... 20 mA, 4 ... 20 mA
R412018281	-

Part No.	Analog outputs	
R412018277	-	1)
R412018278	-	-
R412018281	0 - 10 V / \pm 10 V, 0 ... 20 mA, 4 ... 20 mA	1)

Delivery contents: incl. 2 spring clamp elements and seal

1) freely selectable signals, configurable

Technical information

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.

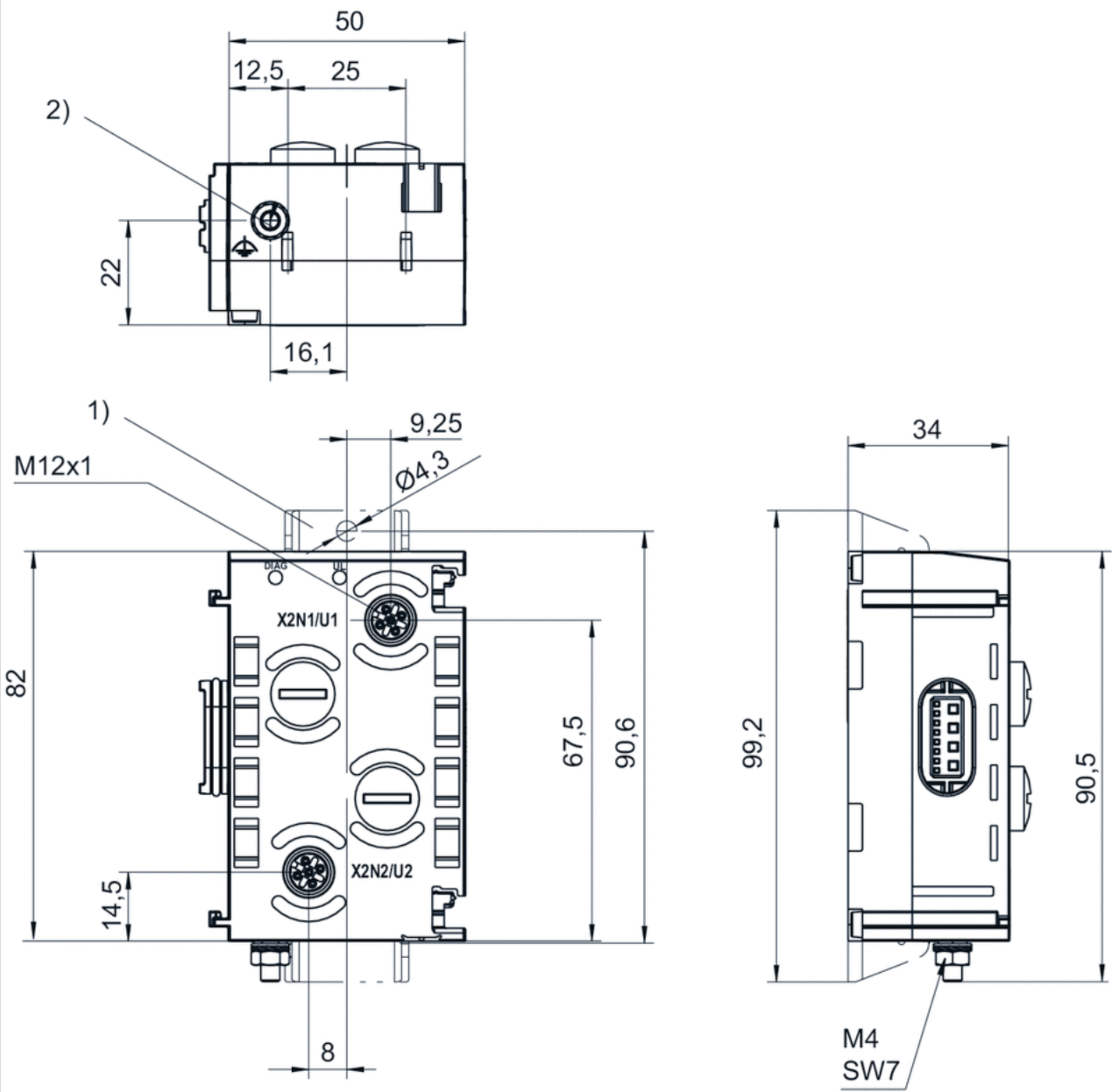
The output channels can drive a maximum ohmic load of 450 ohms in the current range. The minimum resistance in the voltage range is 1 kilohm.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

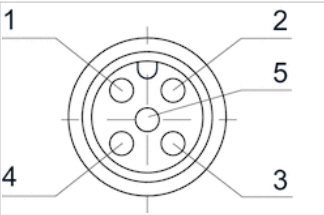
Dimensions



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

Pin assignments

Pin assignments Socket (female)



Pin	1
Socket (female) X2N1 - X2N22AI2M12-E	24 V DC
Socket (female) X2U1 - X2U44AI4M12-E	24 V DC
Socket (female) X2U1 - X2U22AO2M12-E	not assigned
2	3
Input signal (differential input, positive signal)	0 V DC
Input signal (differential input, positive signal)	0 V DC
Output signal	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 AES

- Pressure measurement module with 4 compressed air connection



Ambient temperature min./max.	14 ... 140 °F
Protection class	IP65
Generic emission standard in accordance with norm	EN 61000-6-4
Generic immunity standard in accordance with norm	EN 61000-6-2
Weight	0.254 lbs

Technical data

Part No.	Type	Port size	Number of inputs	Measurement range	Measurement range
				min.	max.
R412018291	4P4D4	D4	4	0 bar	10 bar
R412018292	4VP4D4	D4	4	-1 bar	1 bar

Technical information

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

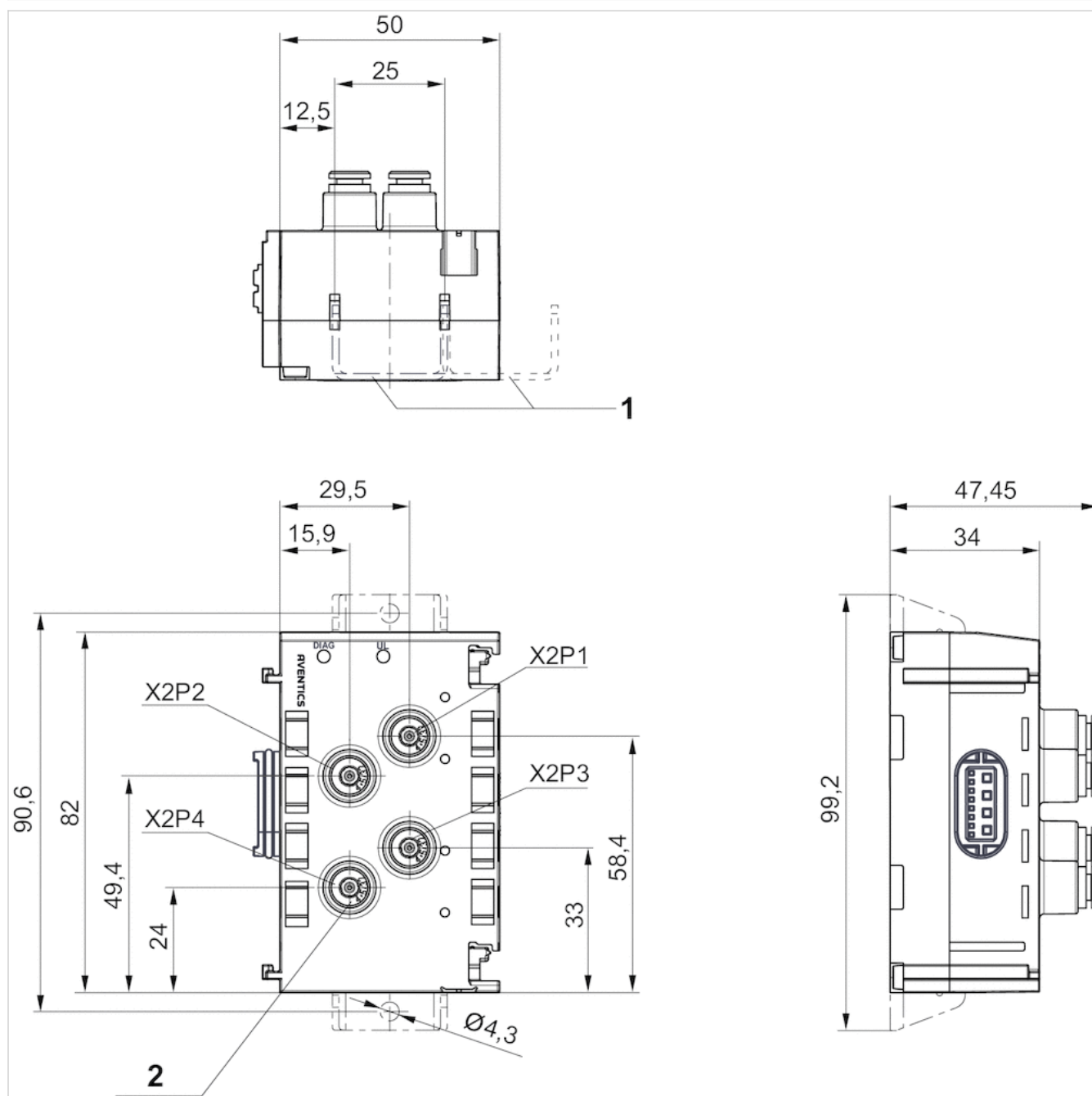
The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

Dimensions



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

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
- Socket (female), M12x1, 5-pin



Version	I/O module version
Ambient temperature min./max.	14 ... 140 °F
Operational voltage electronics	24 V DC
Protection class	IP65
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
Weight	0.242 lbs

Technical data

Part No.	Type	Port	power supply
		1	
R412018293	2AI2AO2M12-C	Socket (female), M12x1, 5-pin	Plug (male), M12, 4-pin, A-coded

Part No.	Number of inputs	Number of outputs
R412018293	2	2

Part No.	Analog inputs
R412018293	0 - 10 V / \pm 10 V, 2 - 10 V / \pm 10 V, 0 - 20 mA / \pm 20 mA, 4 - 20 mA / \pm 20 mA

Part No.	Analog outputs
R412018293	0 - 10 V / \pm 10 V, 0 ... 20 mA, 4 ... 20 mA

Part No.	I/O module version
R412018293	Analog inputs, Analog outputs

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

Technical information

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.

Technical information

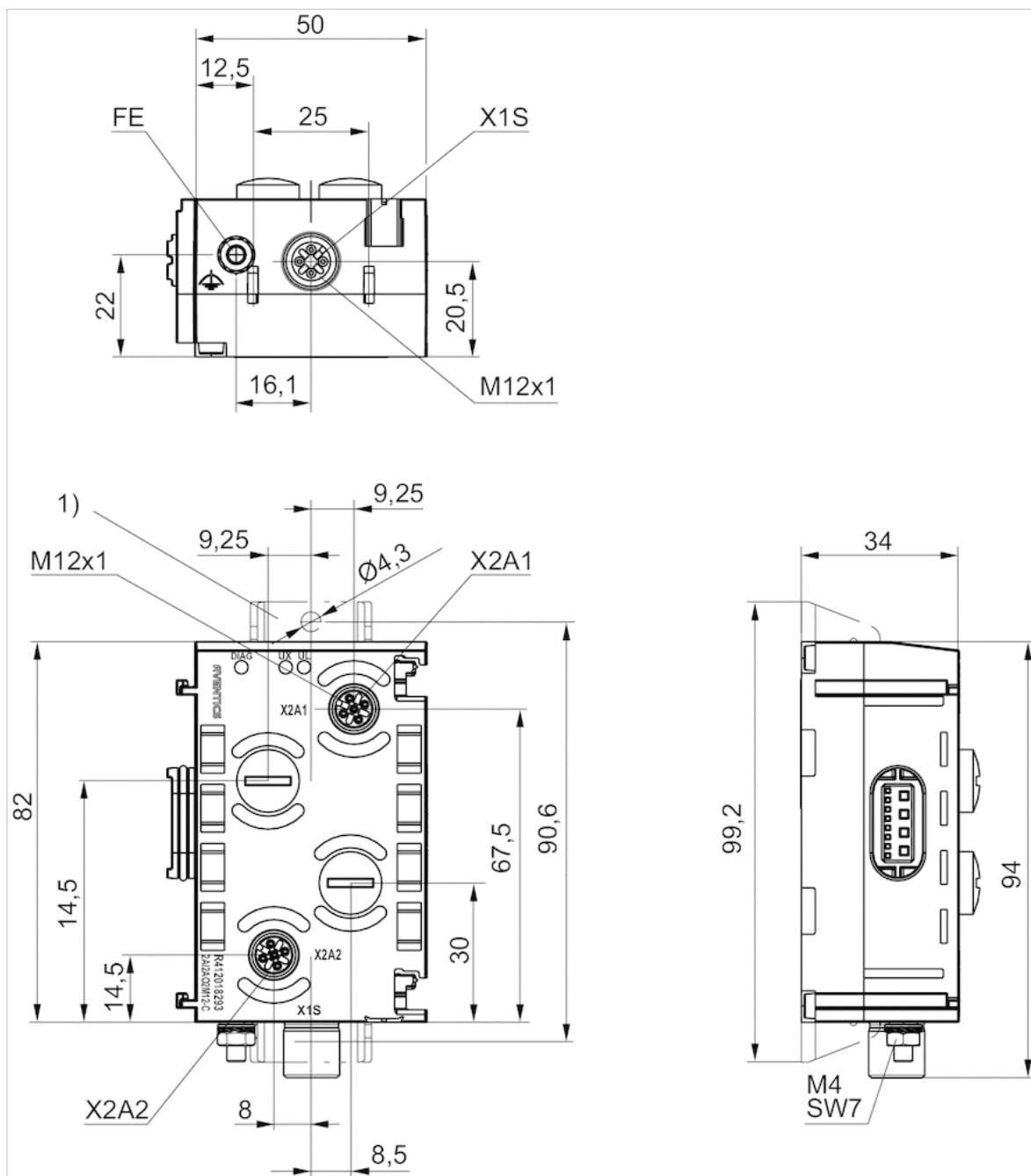
Material

Housing

Polyamide, fiber-glass reinforced

Dimensions

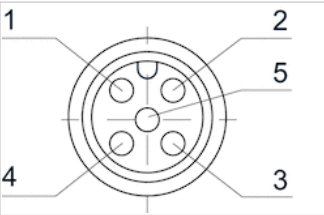
Dimensions



1) Retaining bracket (optional)

Pin assignments

Pin assignments Socket (female)



Pin	1	2	3	4
Socket (female) X2A1 - X2A2	24 V DC	Output signal	0 V DC	Input signal
Plug (male) X1S	-	24 V DC	-	0 V DC
5				
Ground				
-				

Series AES

- power supply 7/8", 5-pin
- Power module
- Plug, 7/8"-16UNF, 5-pin



Version	Power module
Ambient temperature min./max.	14 ... 140 °F
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
Protection class	IP65
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
Weight	0.331 lbs

Technical data

Part No.	Port	Port	Power supply direction
	1	2	UL
R412018272	Plug, 7/8"-16UNF, 5-pin	Socket, 7/8"-16UNF, 5-pin	left, right
R412018273	Plug, 7/8"-16UNF, 5-pin	Socket, 7/8"-16UNF, 5-pin	-
R412018274	Plug, 7/8"-16UNF, 5-pin	Socket, 7/8"-16UNF, 5-pin	left

Part No.	Power supply direction	
	UA	
R412018272	left, right	1)
R412018273	left	2)
R412018274	-	2)

UL: Logic voltage (power supply for electronic components and sensors), UA: Actuator voltage (power supply for valves and outputs), If connection 2 is not used for forwarding, it must be closed with sealing cap R412024838.

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.

Technical information

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)

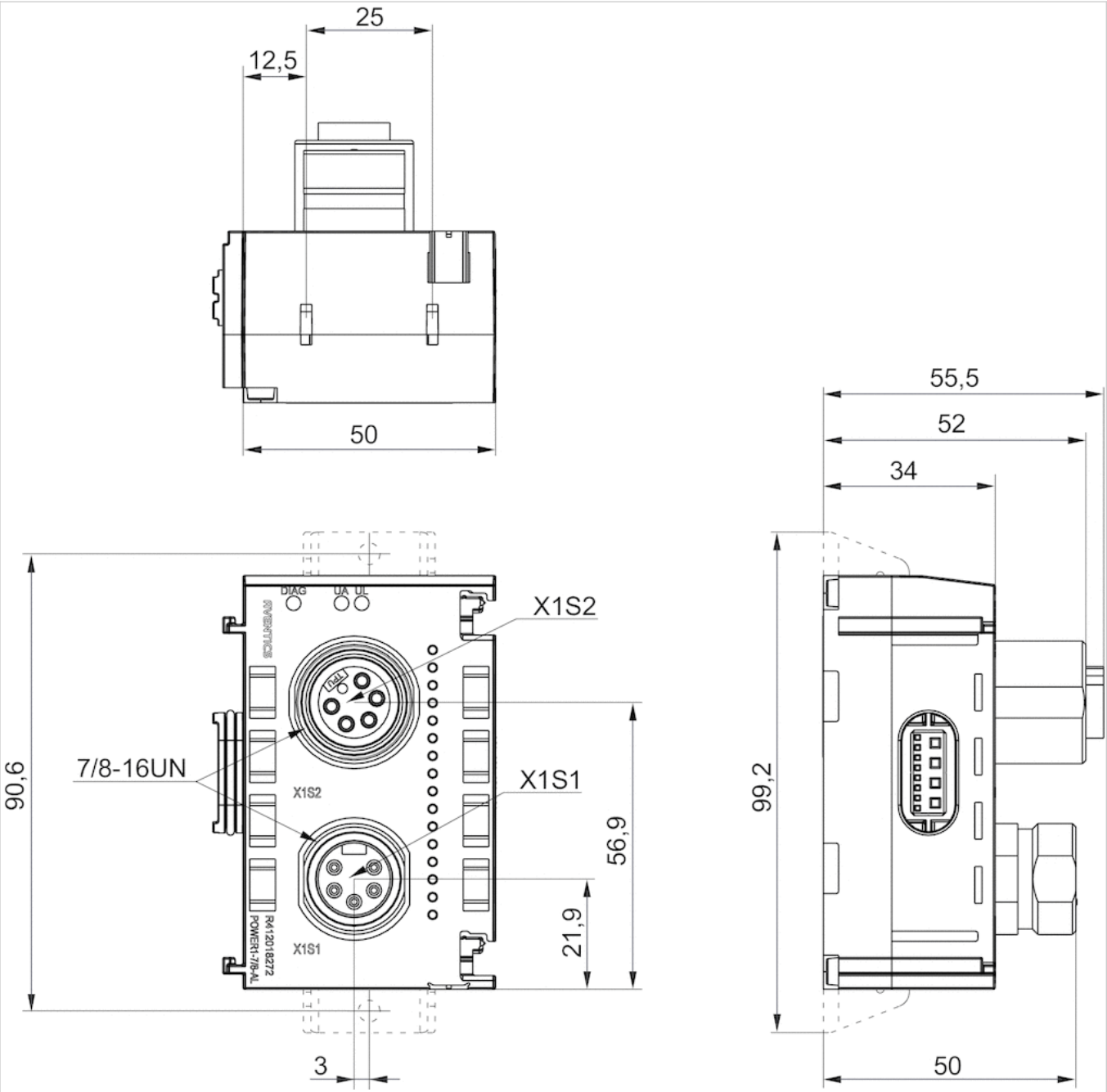
The total internal current (UA or UL) and consumption at X1S2 must not exceed 8A at X1S1.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

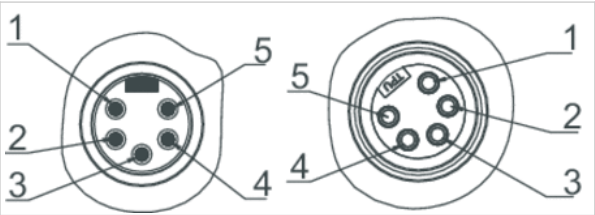
Dimensions



Port 1, X1S1
Port 2, X1S2

Pin assignments

Pin assignments PNP



Pin	1	2	3
Plug X1S1	0 V DC (UA)	0 V DC (UL)	FE
Socket X1S2	0 V DC (UA)	0 V DC (UL)	FE

4	5
24 V DC power supply (UL) input	24 V DC power supply (UA) input
24 V DC power supply (UL) output	24 V DC power supply (UA) output

Series AES

- power supply, M12 plug, 4-pin
- Power module
- Plug, M12x1, 4-pin



Version	Power module
Ambient temperature min./max.	14 ... 140 °F
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
Protection class	IP65
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
Weight	0.331 lbs

Technical data

Part No.	Port	Power supply direction	Power supply direction
	1	UL	UA
R412018267	Plug, M12x1, 4-pin	-	left
R412018268	Plug, M12x1, 4-pin	left	-

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.

Technical information

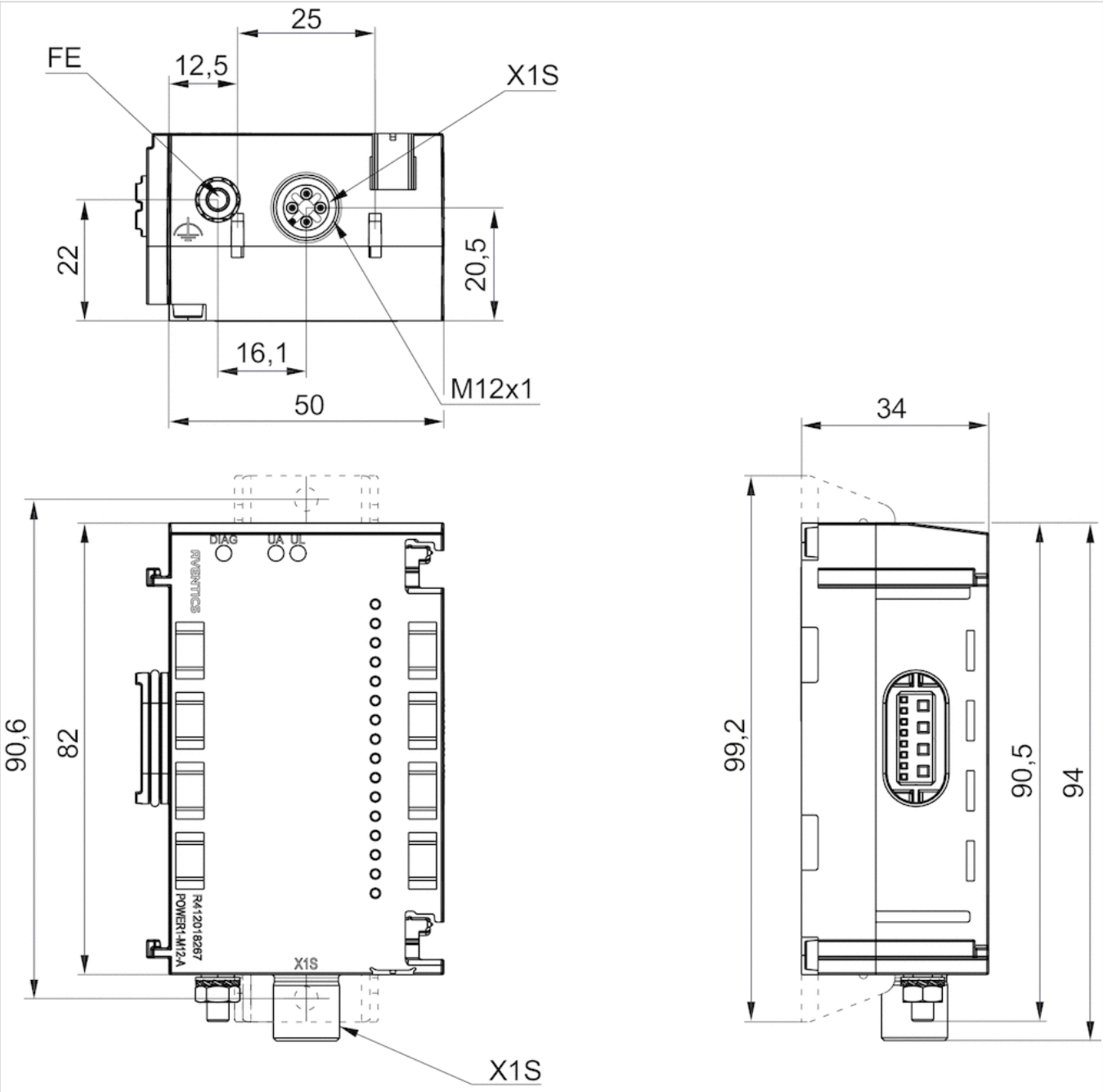
You will find assignment schemes for the product in the operating instructions, or contact the nearest AVENTICS sales office.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced

Dimensions

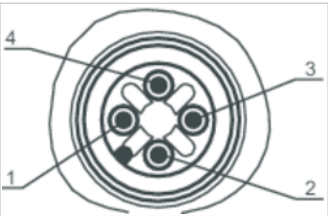
Dimensions



Port 1, X1S

Pin assignments

Pin assignments PNP



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

Blanking plate

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



Working pressure min./max.	-13 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³
Protection class	IP65
Mounting screw	Hexalobular socket (TORX) ISO 10664-8
Tightening torque for mounting screws	0.52 ft./lbs.
Weight	0.062 lbs

Technical data

Part No.	Type	Delivery unit
R422102462	Blanking plate	1 piece

Delivery includes sealing kit and 1x mounting screw

Technical information

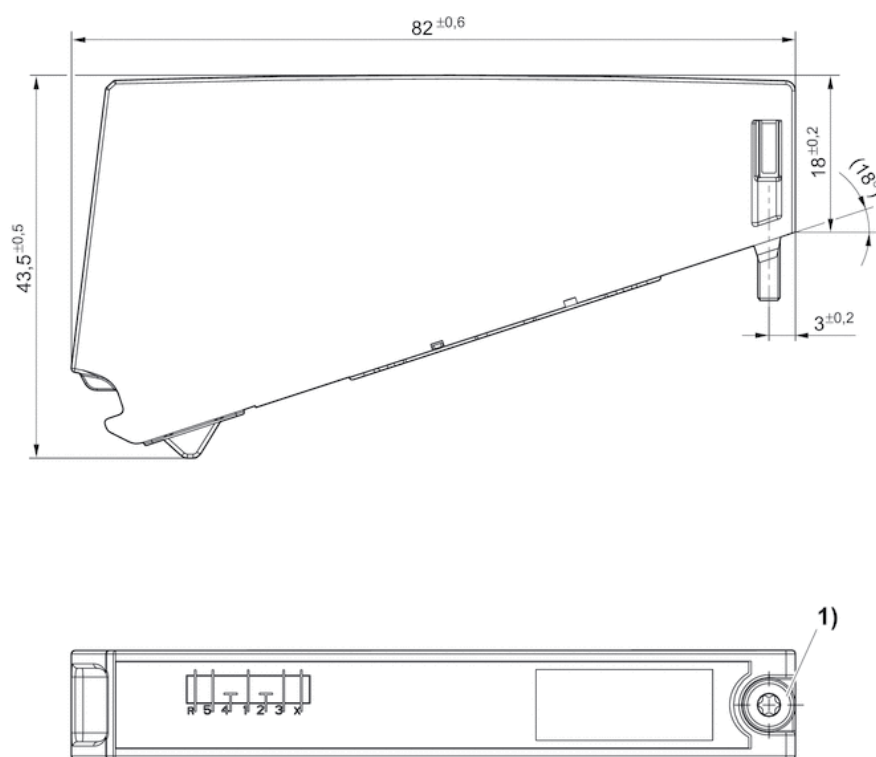
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
 The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
 The oil content of compressed air must remain constant during the life cycle.
 Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Housing	Polyarylamide, fiber-glass reinforced
Screws	Steel, galvanized

Dimensions

Dimensions



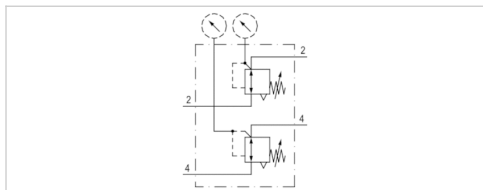
1) Mounting screw

Pressure regulator, Series AV

- push-in fitting
- Controlled port 2, 4



Adjustment range min./max.	8 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Weight	0.044 lbs



Technical data

Part No.	Compressed air connection type	Compressed air connection	Repetitive precision
	Input	Output	
R422103084	push-in fitting	Ø 6	± 10 %
R422103085	push-in fitting	Ø 8	± 10 %
R422103086	push-in fitting	1/4"	± 10 %

Part No.	Controlled port
R422103084	2, 4
R422103085	2, 4
R422103086	2, 4

Order pressure gauge separately

Technical information

Kit for stacking assembly of up to 6 regulators: R422103090

Mounting bracket (2x) for mounting to the mounting plate: R422103091

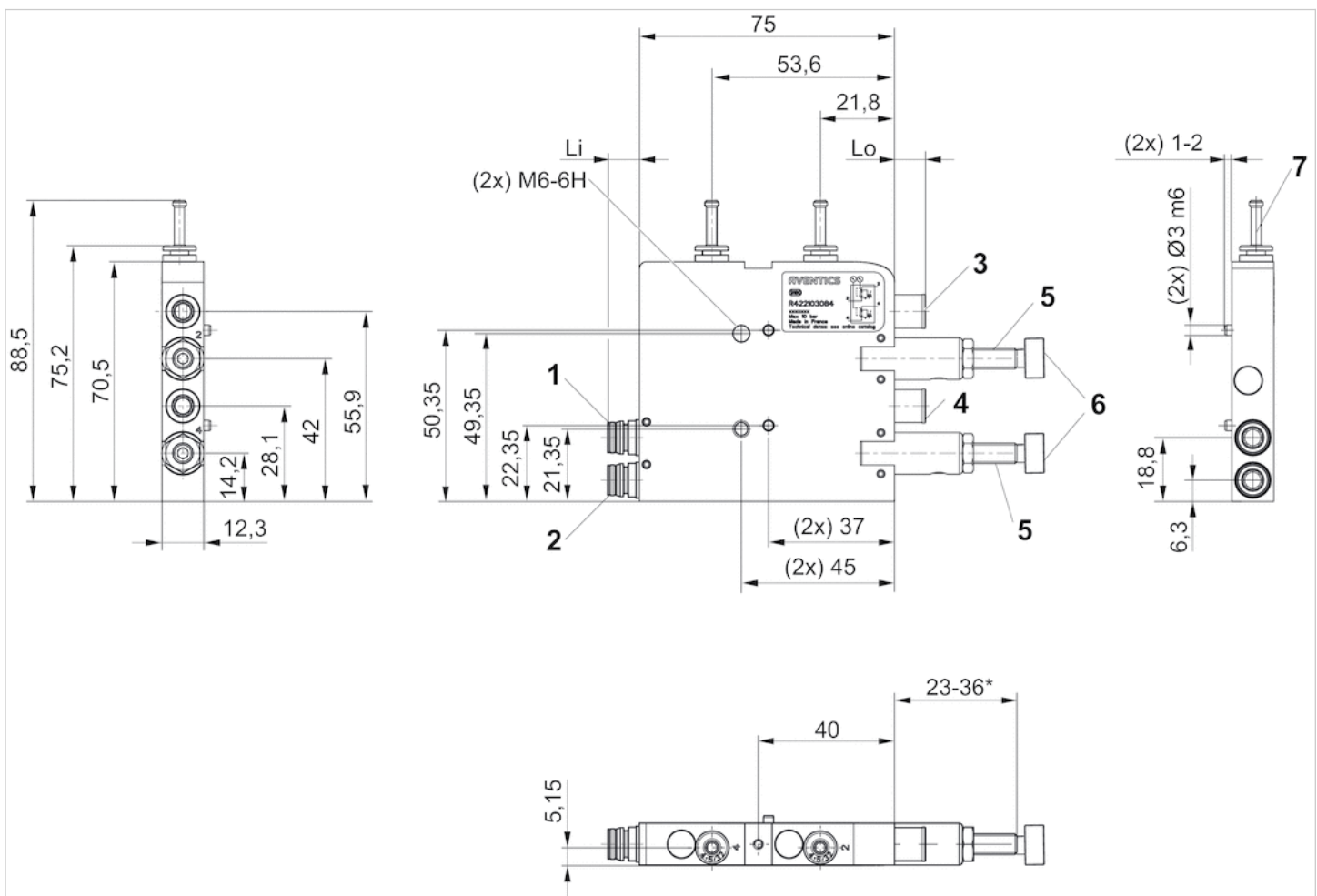
For 2 or more AV pressure regulators assembled into blocks with pressure gauges, use of push-in fitting R412005046 is recommended for every second pressure gauge

Technical information

Material	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber

Dimensions

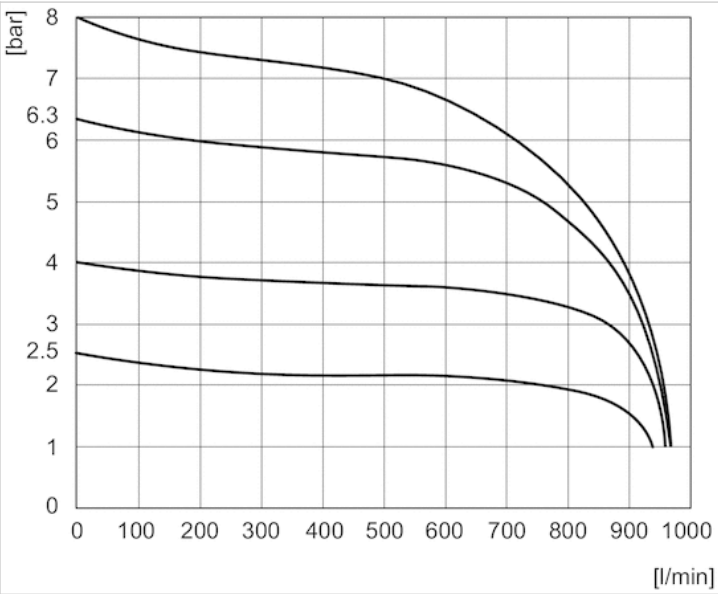
Dimensions



- 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

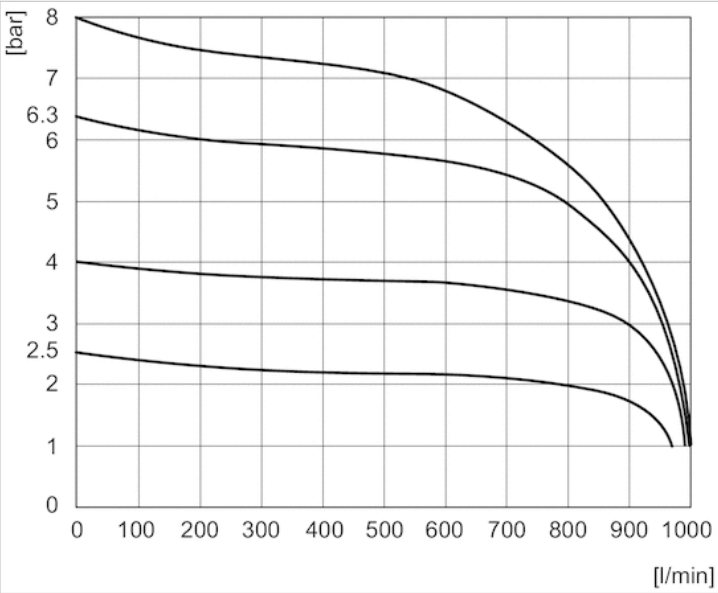
Diagrams

Flow diagram Port 2



Pv = 9 bar

Flow diagram Port 4



Pv = 9 bar

Pressure regulator, Series AV

- Controlled port 2, 4



Adjustment range min./max.

8 ... 145 psi

Ambient temperature min./max.

14 ... 140 °F

Medium temperature min./max.

14 ... 140 °F





Medium

Compressed air

Weight

0.441 lbs

Technical data

Part No.		Compressed air connection type	Compressed air connection
		Input	Output
R422003560		push-in fitting	Ø 8
R422003561		push-in fitting	Ø 6
R422003568		push-in fitting	Ø 8
R422003569		push-in fitting	Ø 6

Part No.	Compressed air connection type	Repetitive precision	Controlled port
	Output		
R422003560	push-in fitting	± 10 %	2
R422003561	-	± 10 %	2
R422003568	-	± 10 %	4
R422003569	-	± 10 %	4

Order pressure gauge separately

Technical information

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

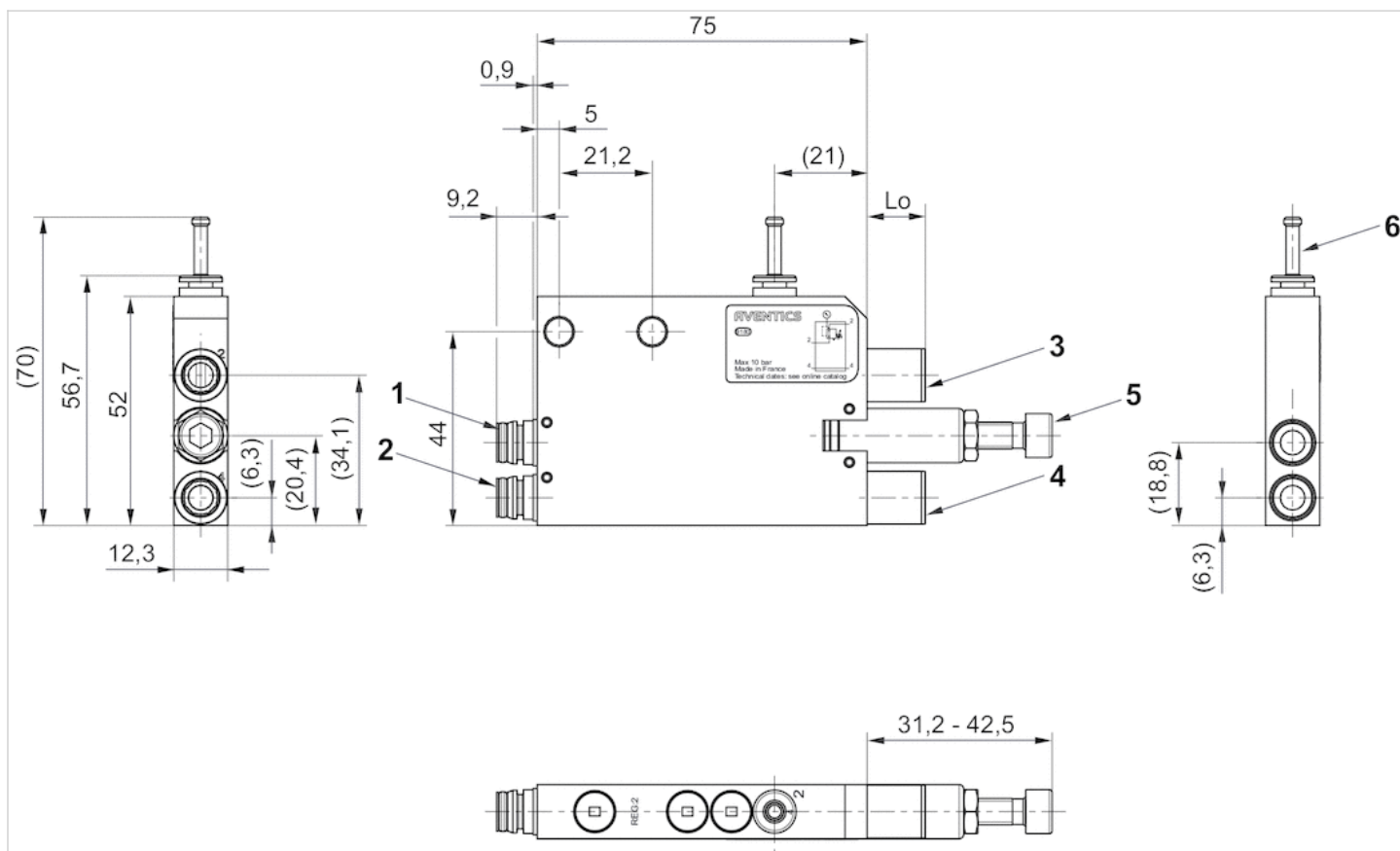
For 2 or more AV pressure regulators assembled into blocks with pressure gauges, use of push-in fitting R412005046 is recommended for every second pressure gauge

Technical information

Material	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber

Dimensions

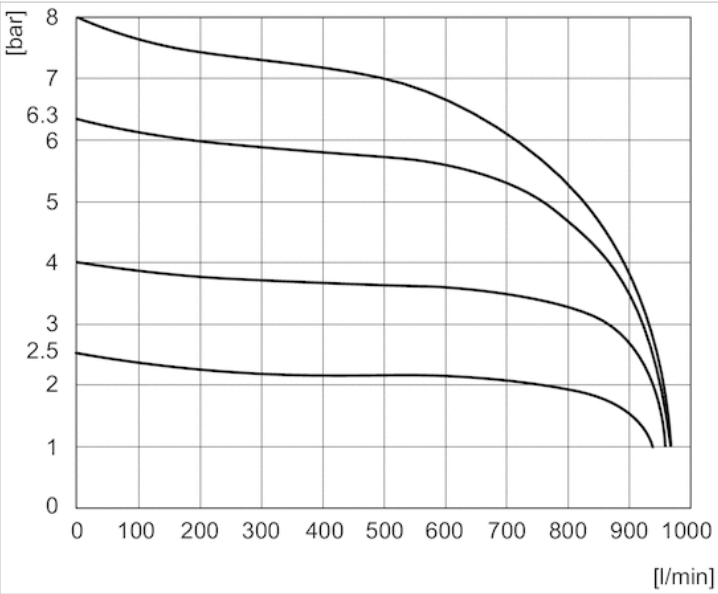
Dimensions



- 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

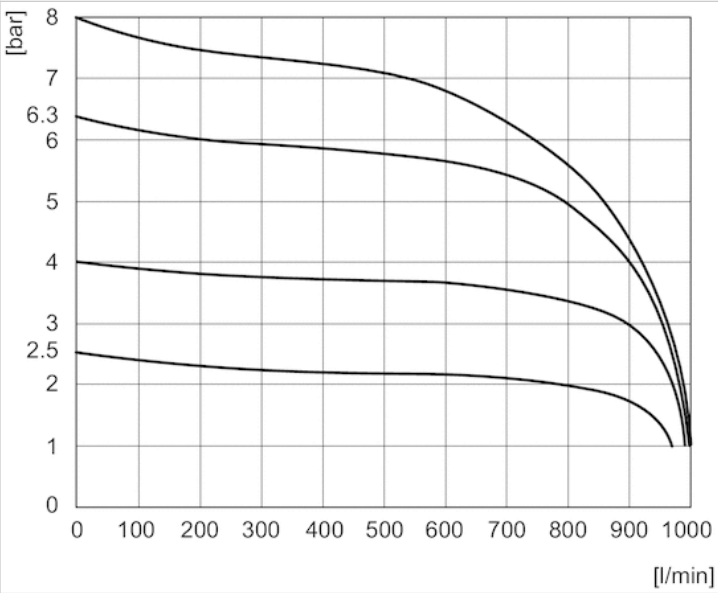
Diagrams

Flow diagram Port 2



Pv = 9 bar

Flow diagram Port 4



Pv = 9 bar



Pressure regulator, Series AV

- Inch version
- Controlled port 2, 4



Adjustment range min./max.	8 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Weight	0.441 lbs

Technical data

Part No.		Compressed air connection type	
		Input	Output
R422003563		push-in fitting	1/4"
R422003571		push-in fitting	1/4"

Part No.	Compressed air connection type	Repetitive precision	Controlled port
	Output		
R422003563	push-in fitting	± 10 %	2
R422003571	-	± 10 %	4

Order pressure gauge separately

Technical information

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

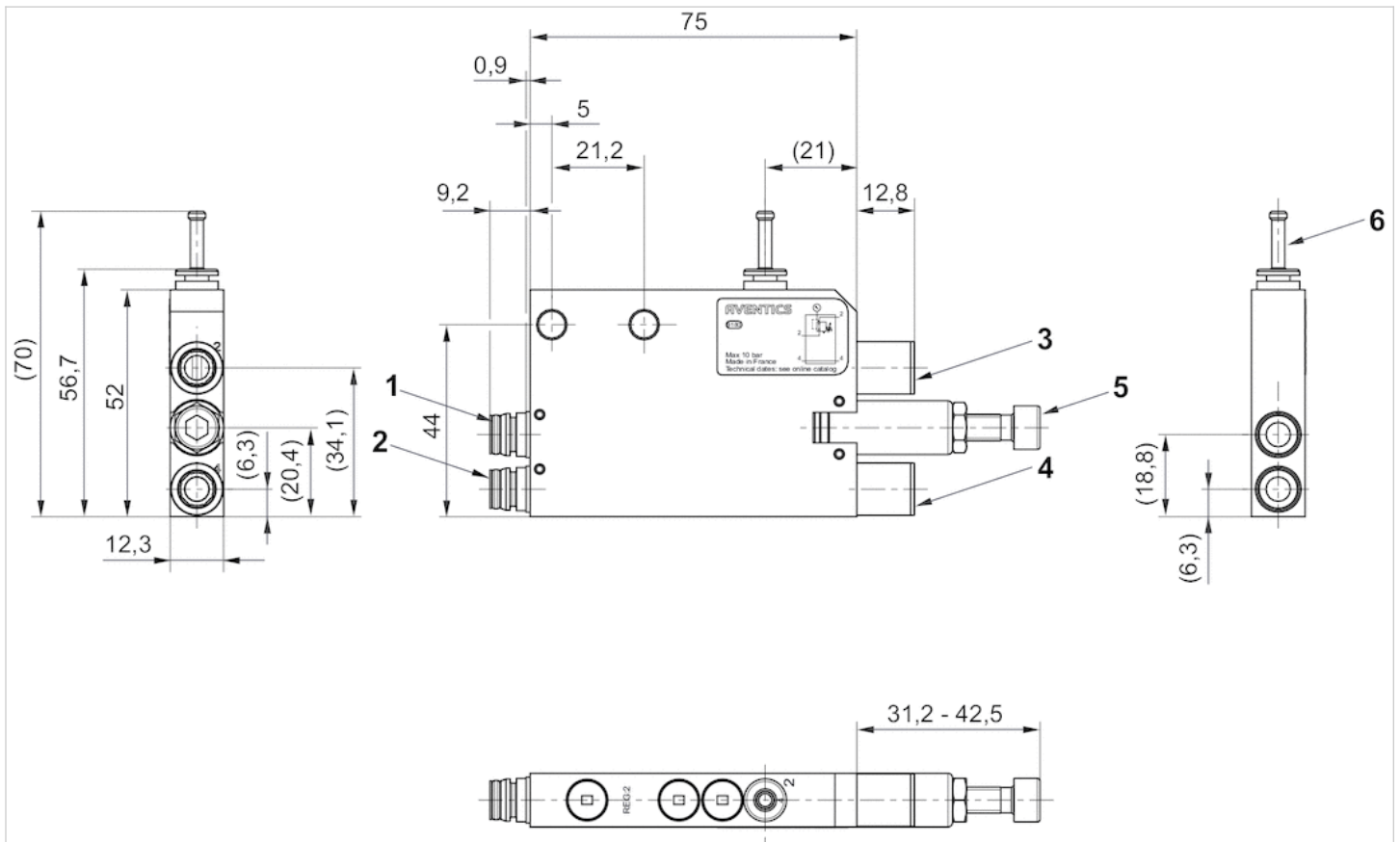
For 2 or more AV pressure regulators assembled into blocks with pressure gauges, use of push-in fitting R412005046 is recommended for every second pressure gauge

Technical information

Material	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber

Dimensions

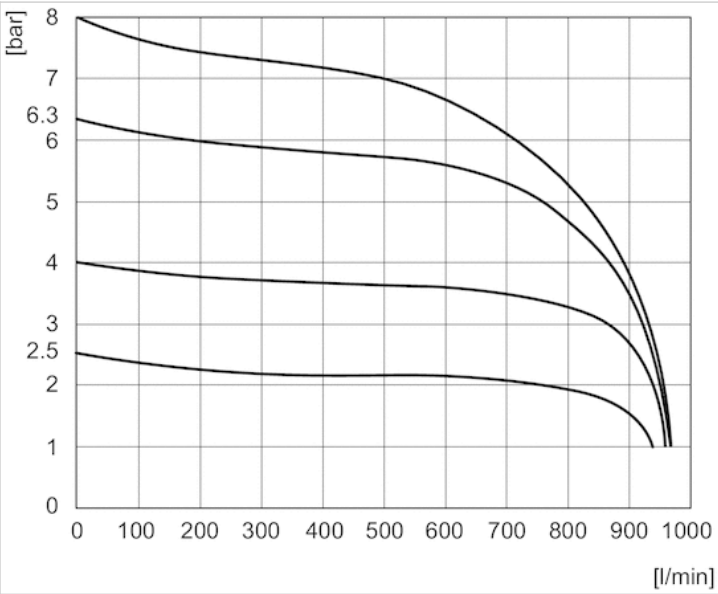
Dimensions



- 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
- 7) Logic valves

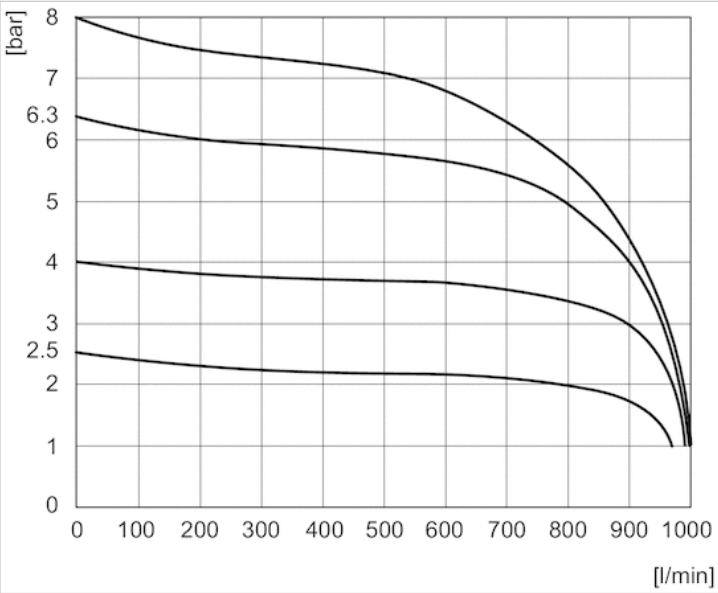
Diagrams

Flow diagram Port 2



Pv = 9 bar

Flow diagram Port 4



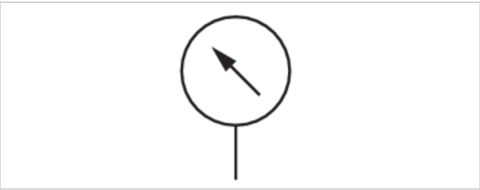
Pv = 9 bar

Pressure gauge, Series PG1-ROB

- Back port
- Background color Black
- Scale color White
- Viewing window Polystyrene
- Units MPa



Version	Bourdon tube pressure gauge
Medium	Compressed air, Compressed air
Main scale unit (outside)	MPa
Main scale color (outside)	White
Background color	Black
Pointer color	Red
Weight	0.022 lbs



Technical data

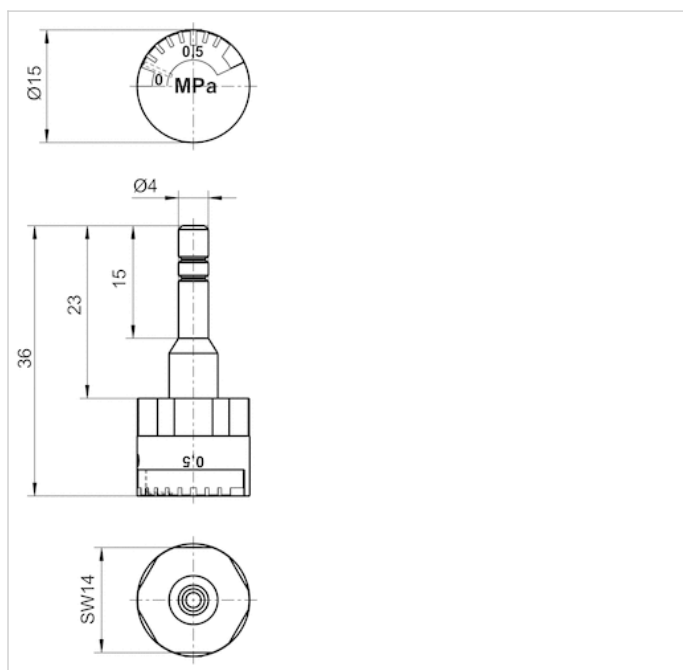
Part No.	Compressed air connection	Nominal diameter	Range of application	Display range
R412009413	Ø 4	0.59 inch	0 ... 10 bar	0 ... 10 bar

Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass
Viewing window	Polystyrene
Seal	Polytetrafluorethylene

Dimensions

Dimensions in mm



Series QR1-S Mini

- Angled plug-in connector
- pin bushing
- Ø 4
- push-in fitting
- Ø 4
- QR1-S-RVW



Working pressure min./max.	-13 ... 145 psi
Ambient temperature min./max.	32 ... 140 °F
Weight	0.004 lbs

Technical data

Part No.	Port G	Port D	Delivery unit
R412005046	Ø 4	Ø 4	10 piece

Weight per piece

Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined

For use with 2 or more AV pressure regulators assembled into blocks with pressure gauges.

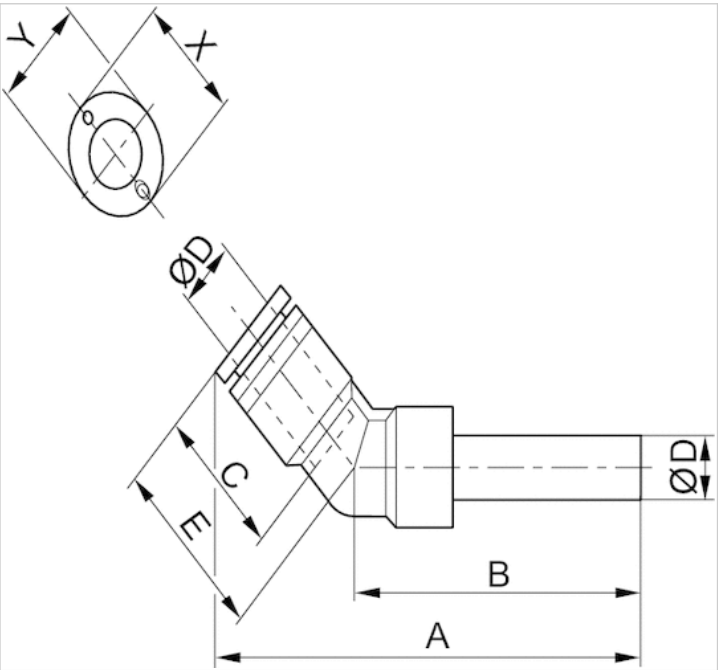
For 2 or more AV pressure regulators assembled into blocks with pressure gauges, use of push-in fitting R412005046 is recommended for every second pressure gauge

For further information about assembling and tolerances of adaptable tubing can be found in the “Technical information” document (available in the MediaCentre).

Technical information

Material	
Material	nickel-plated
Housing	Polybutyleneterephthalate
Seal	Acrylonitrile butadiene rubber
Tooth lock washer	Stainless steel
Release ring	Polyoxymethylene
Release ring holder	Die cast zinc, Brass, nickel-plated

Dimensions



Dimensions

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







Throttle module

- push-in fitting
- Controlled flow, Uncontrolled flow



Ambient temperature min./max. 14 ... 140 °F
 Medium temperature min./max. 14 ... 140 °F
 Medium Compressed air

Technical data

Part No.		Version	Compressed air connection type
			Input
R422003311		Controlled flow	push-in fitting
R422003267		Controlled flow	push-in fitting
R422003666		Controlled flow	push-in fitting
R422003577		Uncontrolled flow	push-in fitting
R422003578		Uncontrolled flow	push-in fitting
R422003667		Uncontrolled flow	push-in fitting

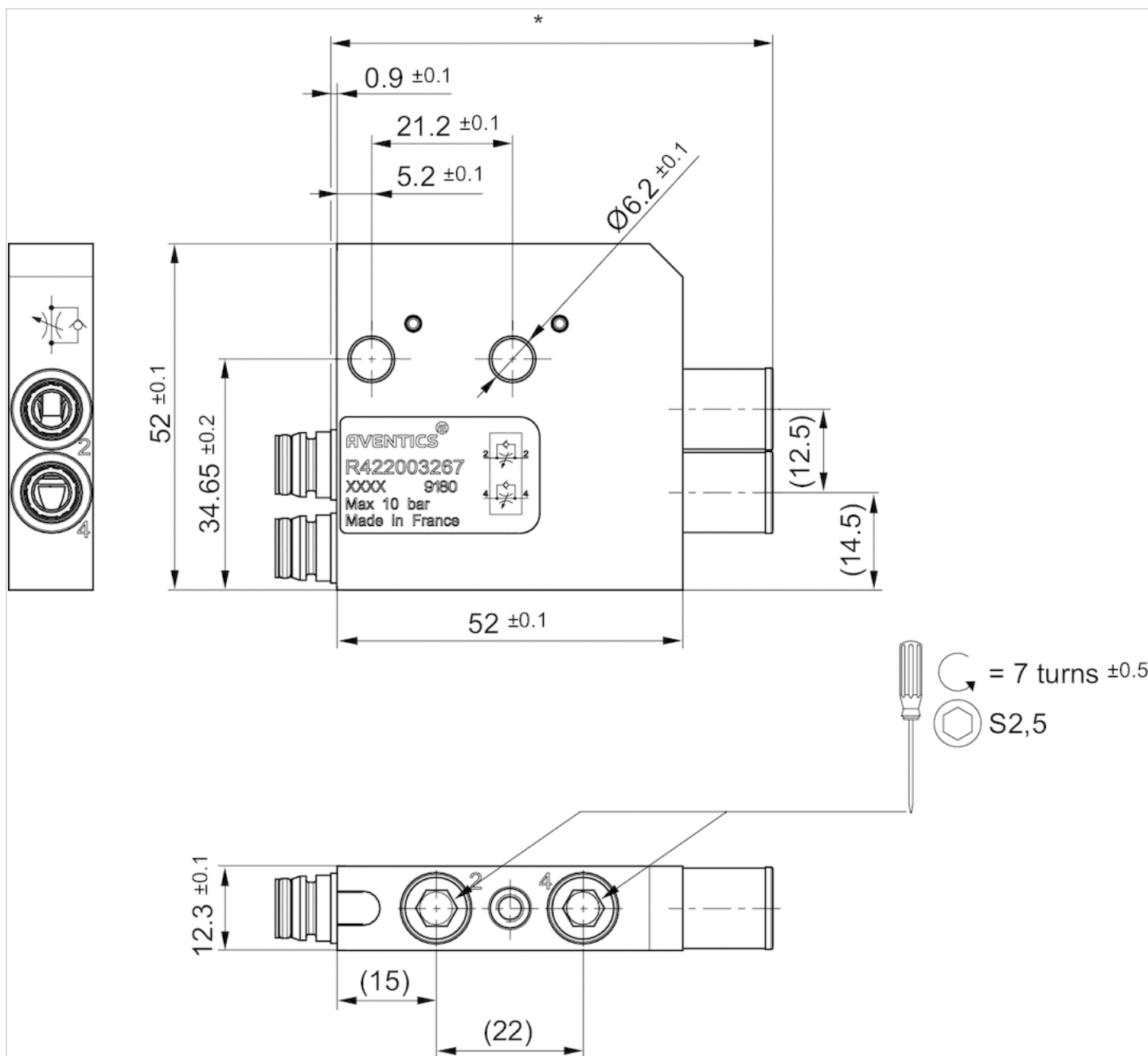
Part No.	Compressed air connection	Fig.
	Output	
R422003311	Ø 6	Fig. 1
R422003267	Ø 8	Fig. 1
R422003666	1/4"	Fig. 1
R422003577	Ø 6	Fig. 2
R422003578	Ø 8	Fig. 2
R422003667	1/4"	Fig. 2

Technical information

Material	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber

Dimensions

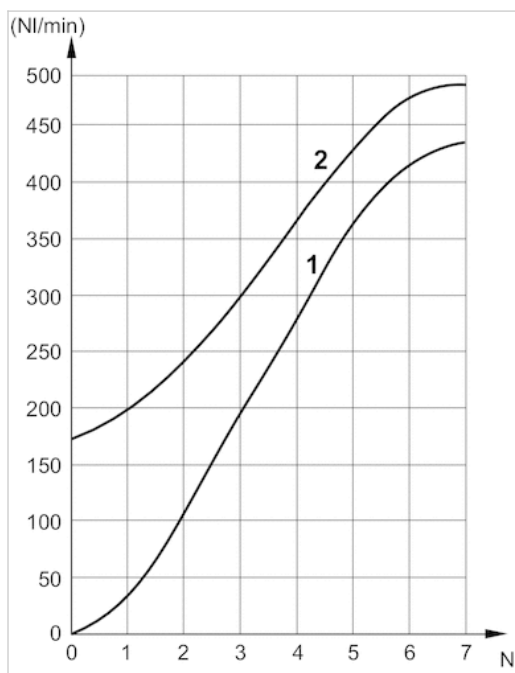
Dimensions



* Installation length

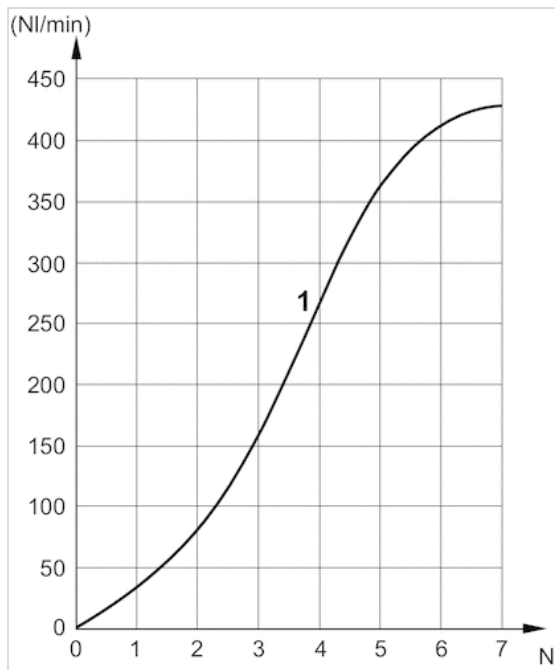
Diagrams

Fig. 1 single solenoid



- 1) Controlled flow
- 2) Uncontrolled flow

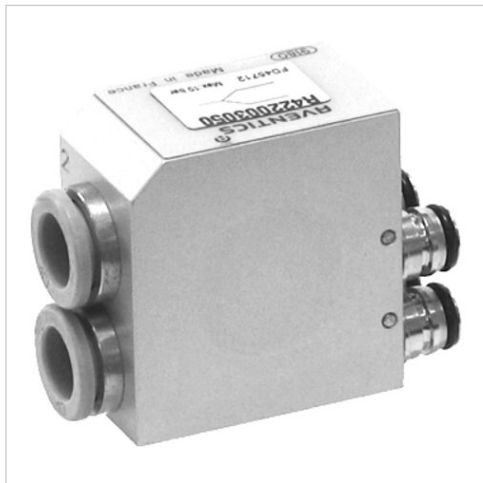
Fig. 2 Double solenoid



- 1) Controlled flow

Flow rate coupler Series AV03, AV05

- For port channels 2, 4



Working pressure min./max.

-13 ... 145 psi

Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Weight

0.254 lbs

Technical data

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

Technical information

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

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.

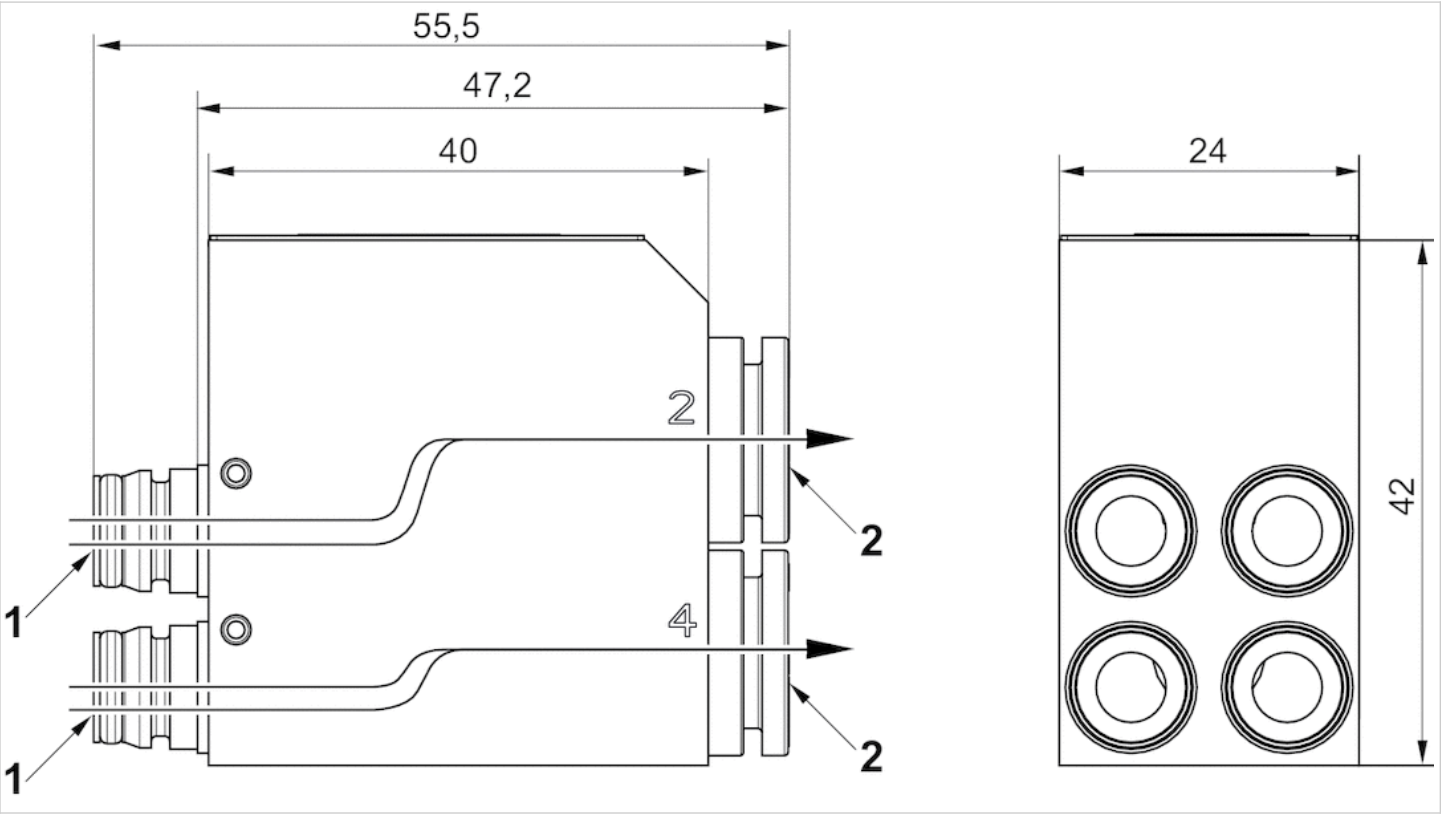
Both valves must be identical models and controlled electrically at the same time.

Technical information

Material	
Housing	Aluminum
Seals	Nitrile rubber

Dimensions

Fig. 1



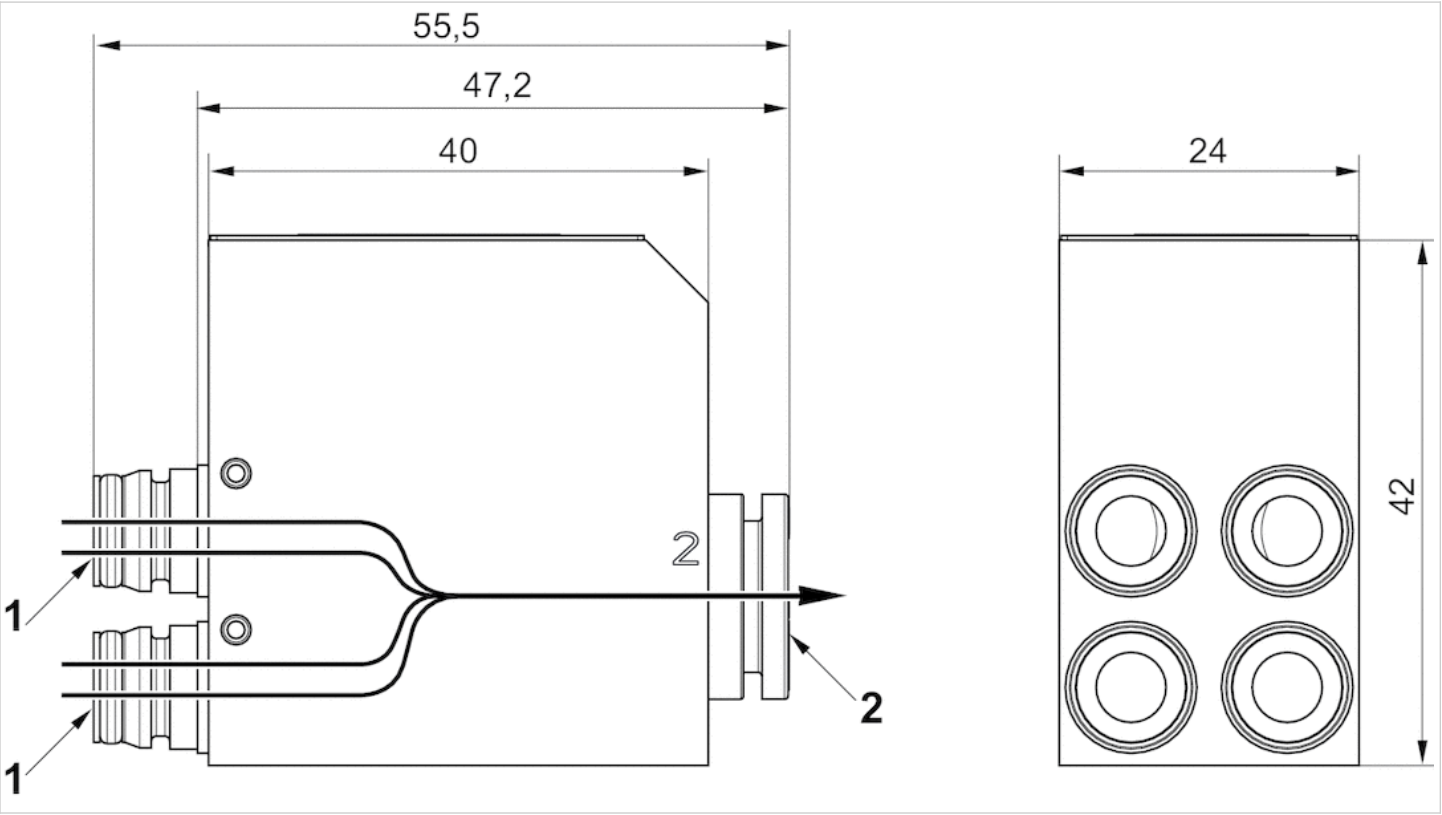
- 1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- 2) 2 x Ø 10

Dimensions

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

Dimensions

Fig. 2



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

Dimensions

Number of valves	2	2
Valve function	2x3/2	2x3/2
Series	AV03	AV05
Flow [l/min]	830	1400

Extension kit for base plate 2x



Working pressure min./max.

-13 ... 145 psi

Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.	Type
R412015422	Base plate 2x for single solenoid valves for multipole plug
R412015423	Base plate 2x for double solenoid valves for multipole plug
R412018088	Base plate 2x for bus coupler

Part No.	Scope of delivery
R412015422	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)
R412015423	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)
R412018088	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)

Technical information

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

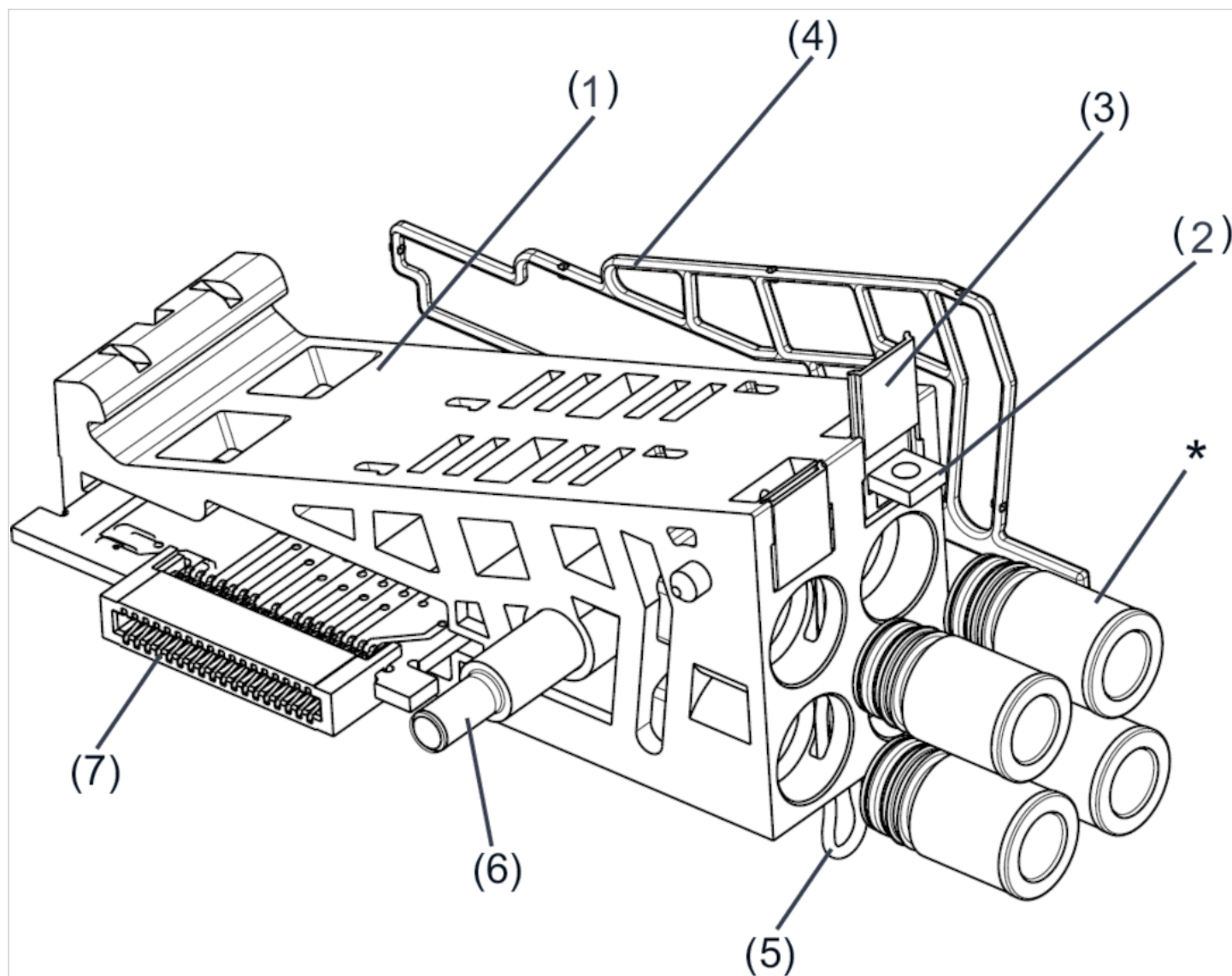
After two AV-EP or one AV-EP and 4 vales, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Technical information

Material	
Housing	Polyamide
Seals	Nitrile rubber

Dimensions

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



Working pressure min./max.

-13 ... 145 psi

Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.	Type
R412018378	Base plate 3x for single solenoid valves for multipole plug
R412018379	Base plate 3x for double solenoid valves for multipole plug
R412018380	Base plate 3x for bus coupler

Part No.	Scope of delivery
R412018378	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)
R412018379	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)
R412018380	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)

Technical information

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

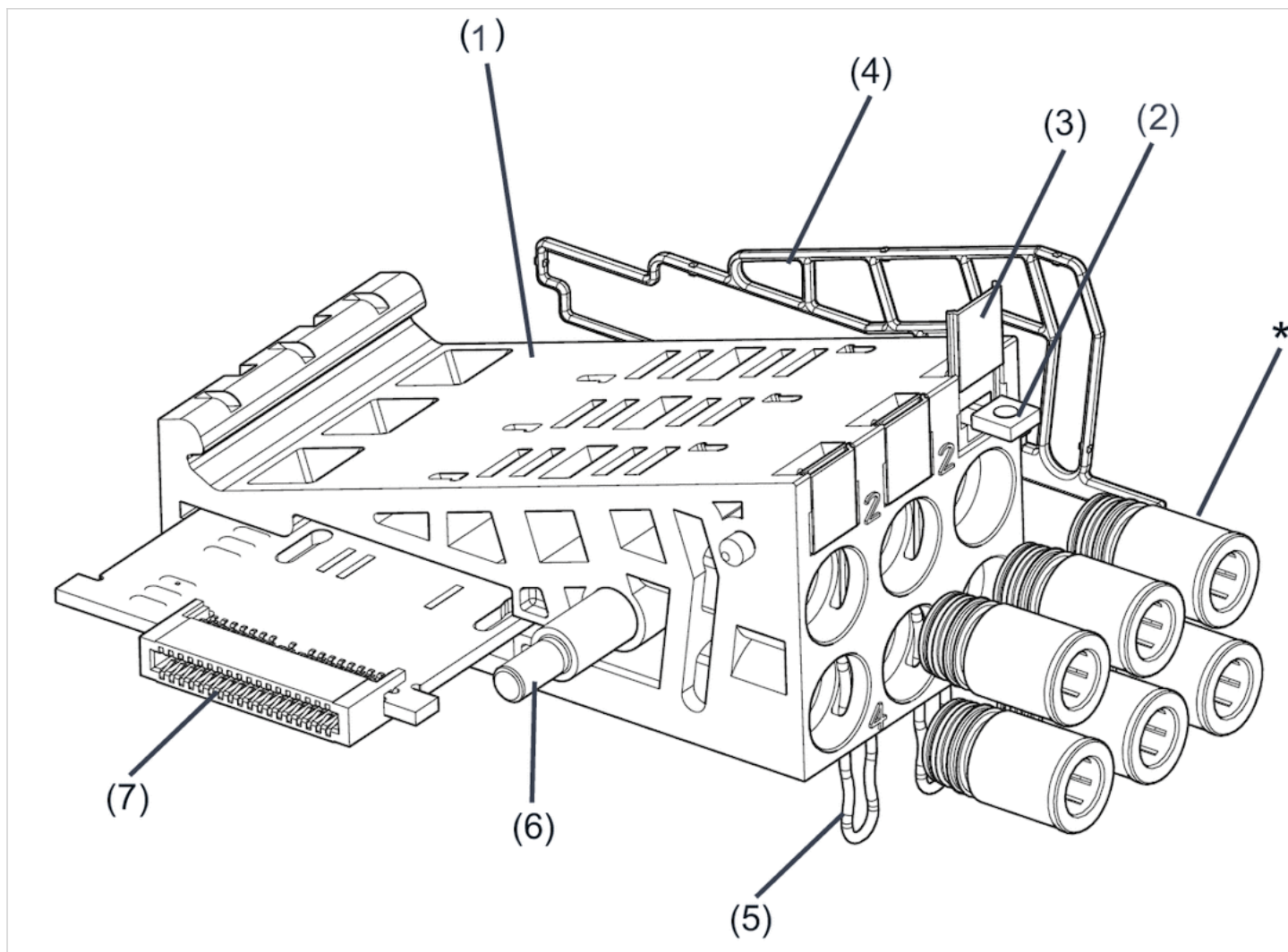
After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Technical information

Material	
Housing	Polyamide
Seals	Nitrile rubber

Dimensions

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 4x

- for series AV03



Working pressure min./max.

-13 ... 145 psi

Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.	Type
R412018205	Base plate 4x for bus coupler

Part No.	Scope of delivery
R412018205	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)

Technical information

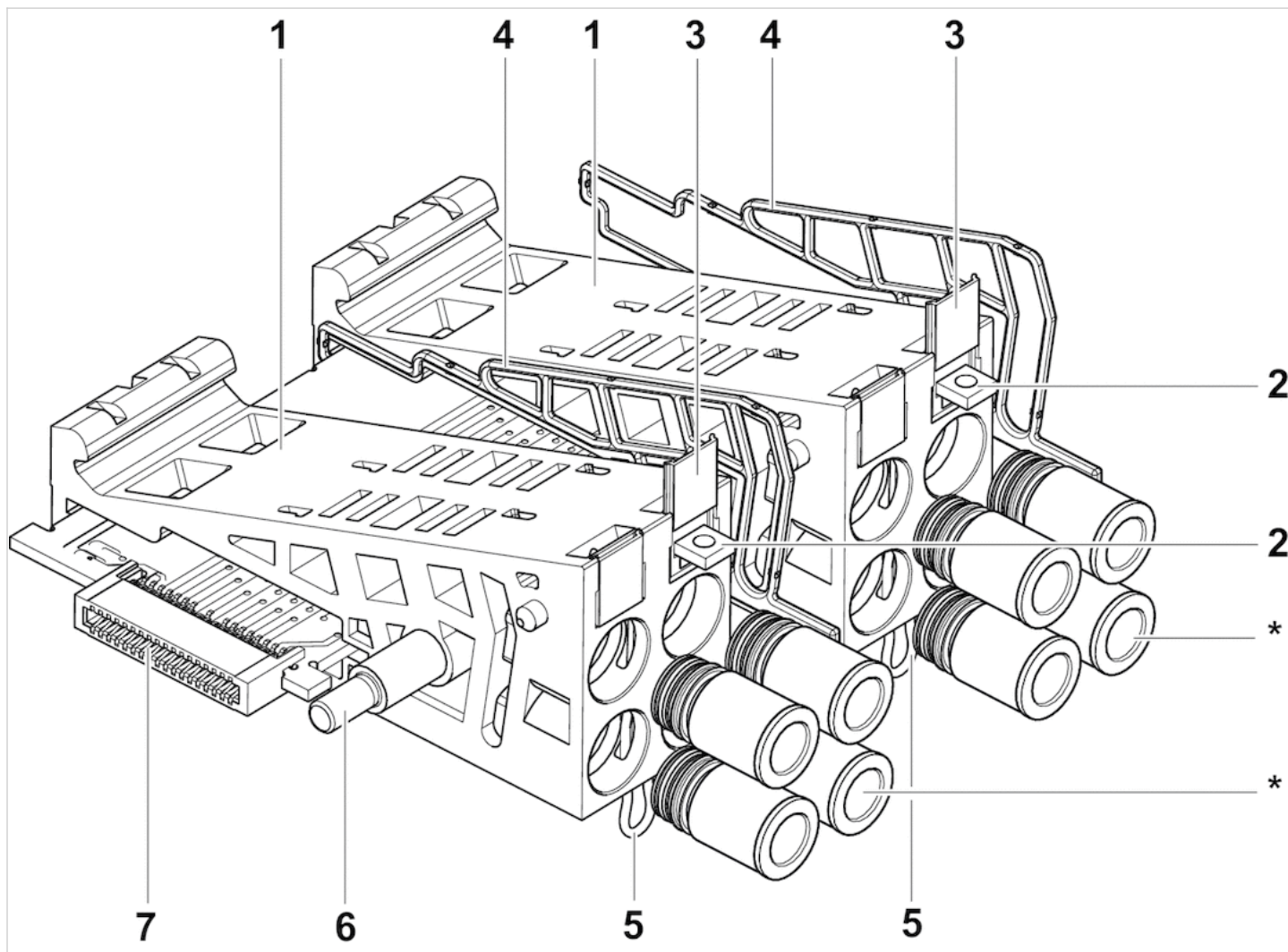
After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Seals	Nitrile rubber

Dimensions

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

- for series AV03-EP



Working pressure min./max.

0 ... 159 psi

Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.	Type
R414007343	Base plate for single pressure control for multipole connection
R414007344	Base plate for pressure zone control for multipole connection
R414007533	Base plate for single pressure control for fieldbus connection
R414007534	Base plate for pressure zone control for fieldbus connection

Part No.	Scope of delivery
R414007343	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)
R414007344	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)
R414007533	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)
R414007534	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)

Technical information

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.

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

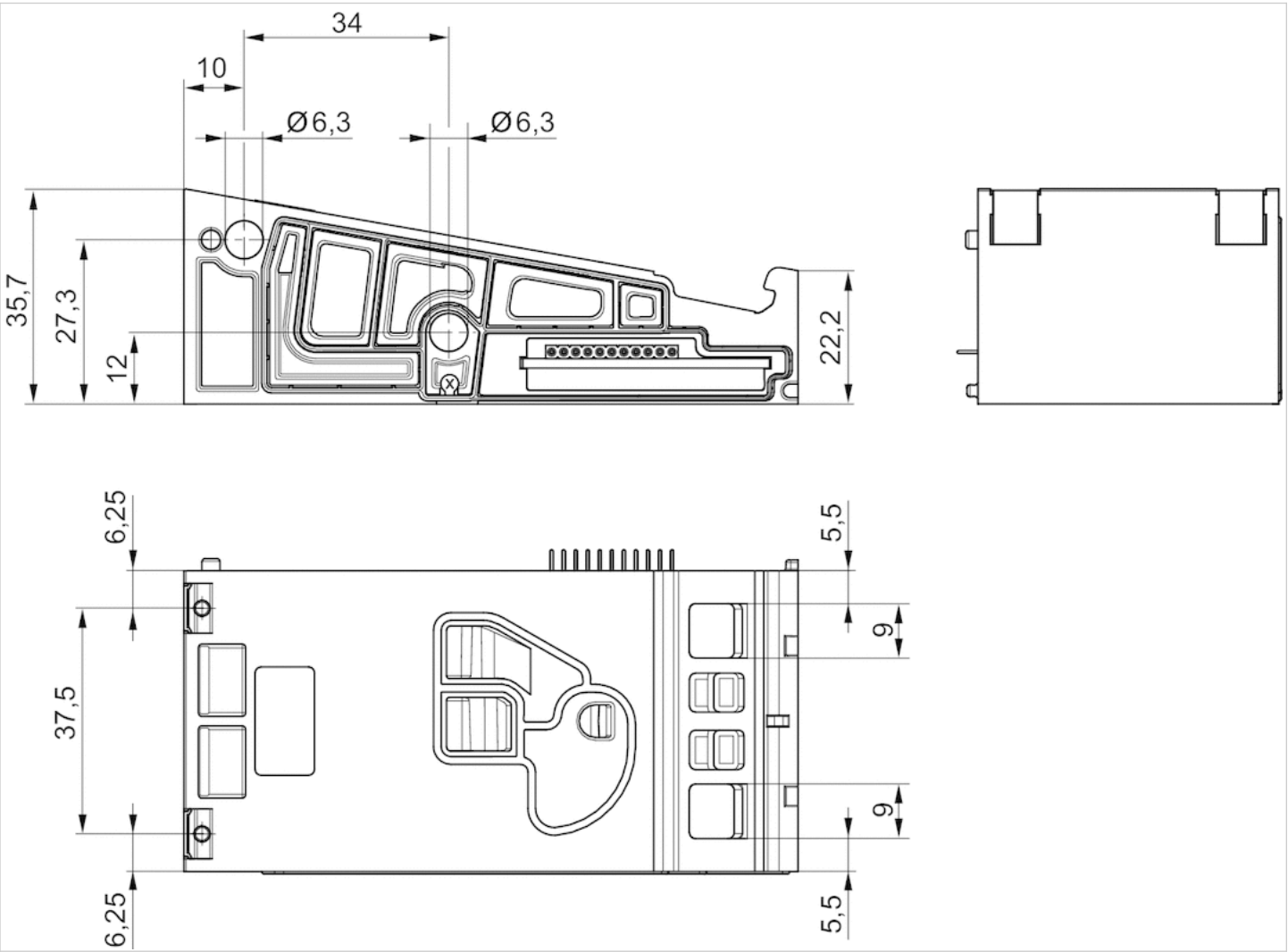
After three I/O modules or 8 valves, mount a retaining bracket (R412018339) to fasten the entire unit to the mounting surface.

Technical information

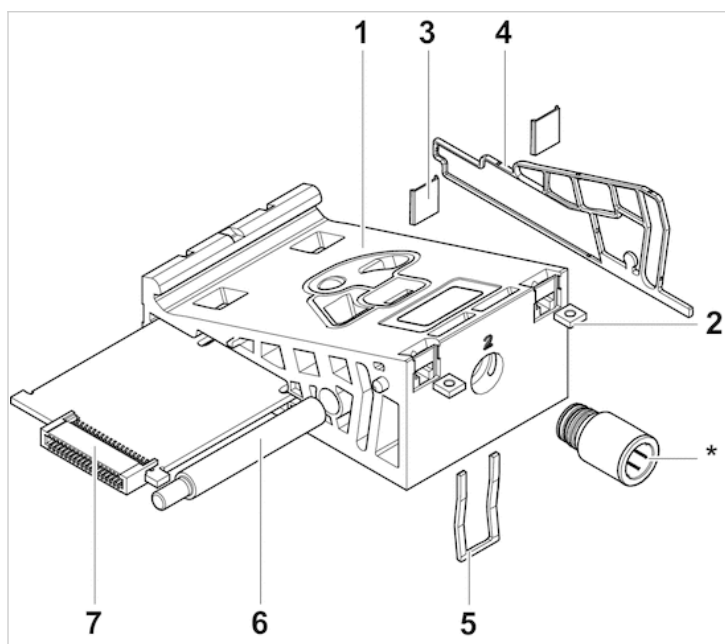
Material	
Housing	Polyamide
Seals	Nitrile butadiene rubber

Dimensions

Dimensions



Overview drawing

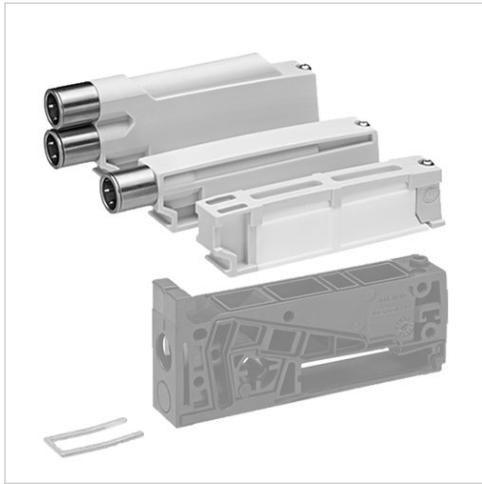


* Push-in fittings not included in the scope of delivery.

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

Extension kit, exhaust module for supply plate

- for series AV03



Working pressure min./max.	-13 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³

Technical data

Part No.	Type
R412018331	Exhaust module 3, 5, and R with flat silencer
R412018332	Exhaust module with combined collected exhaust 3 and 5
R412018333	Exhaust module with separate collected exhaust 3 and 5

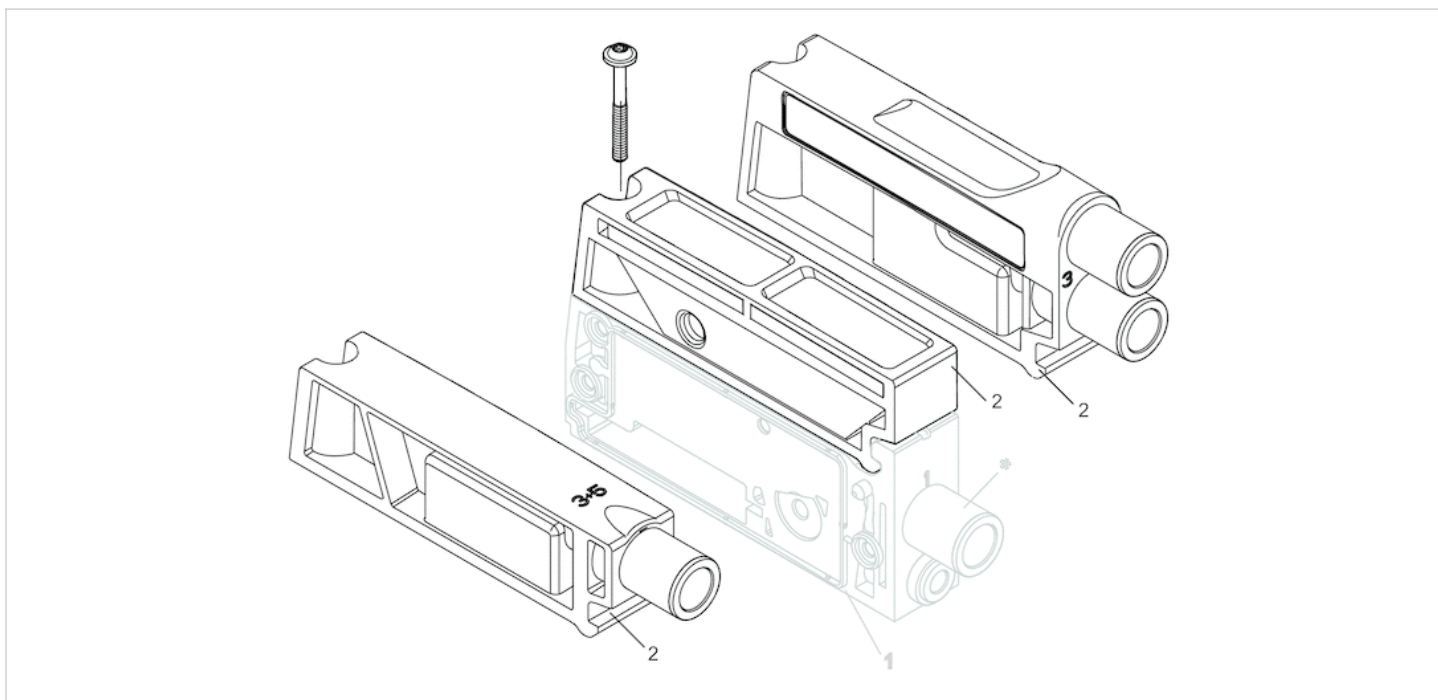
Part No.	Scope of delivery
R412018331	Exhaust module, including 1 seal, 1 mounting screw
R412018332	Exhaust module, incl. 1 mounting screw, push-in fitting Ø 8 mm
R412018333	Exhaust module, incl. 1 mounting screw, push-in fitting Ø 8 mm

Technical information

When using polyurethane tubing, we recommend using additional stiffener sleeves.
For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

Dimensions

Overview drawing



2) Exhaust module

Extension kit, supply plate

- for series AV03



Working pressure min./max.

-13 ... 145 psi













Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.		Valve system version	Position
R412018347		Field bus	1
R412022573		Multipole	1
R412018348		Field bus	1
R412022574		Multipole	1
R412018337		Field bus	1
R412022575		Multipole	1
R412018613		Field bus	1
R412022576		Multipole	1
R412018614		Field bus	1
R412022577		Multipole	1
R412018615		Field bus	1
R412022578		Multipole	1

Part No.	Type
R412018347	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X/R
R412022573	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X/R
R412018348	Supply plate, connection 1, external pilot, separate pressure zones in channels 1/3/5/X/R
R412022574	Supply plate, connection 1, external pilot, separate pressure zones in channels 1/3/5/X/R
R412018337	Supply plate, connection 1, no pressure zones
R412022575	Supply plate, connection 1, no pressure zones
R412018613	Supply plate, connection 1, separate pressure zones in channels 1/3/5
R412022576	Supply plate, connection 1, separate pressure zones in channels 1/3/5
R412018614	Supply plate, connection 1, separate pressure zone in channel 1

Part No.	Type
R412022577	Supply plate, connection 1, separate pressure zone in channel 1
R412018615	Supply plate, connection 1, separate pressure zones in channels 3/5
R412022578	Supply plate, connection 1, separate pressure zones in channels 3/5

Part No.	Scope of delivery	Fig.
R412018347	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2
R412022573	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2
R412018348	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2
R412022574	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2
R412018337	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412022575	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412018613	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412022576	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1

Part No.	Scope of delivery	Fig.
R412018614	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412022577	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412018615	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412022578	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2

Technical information

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

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.

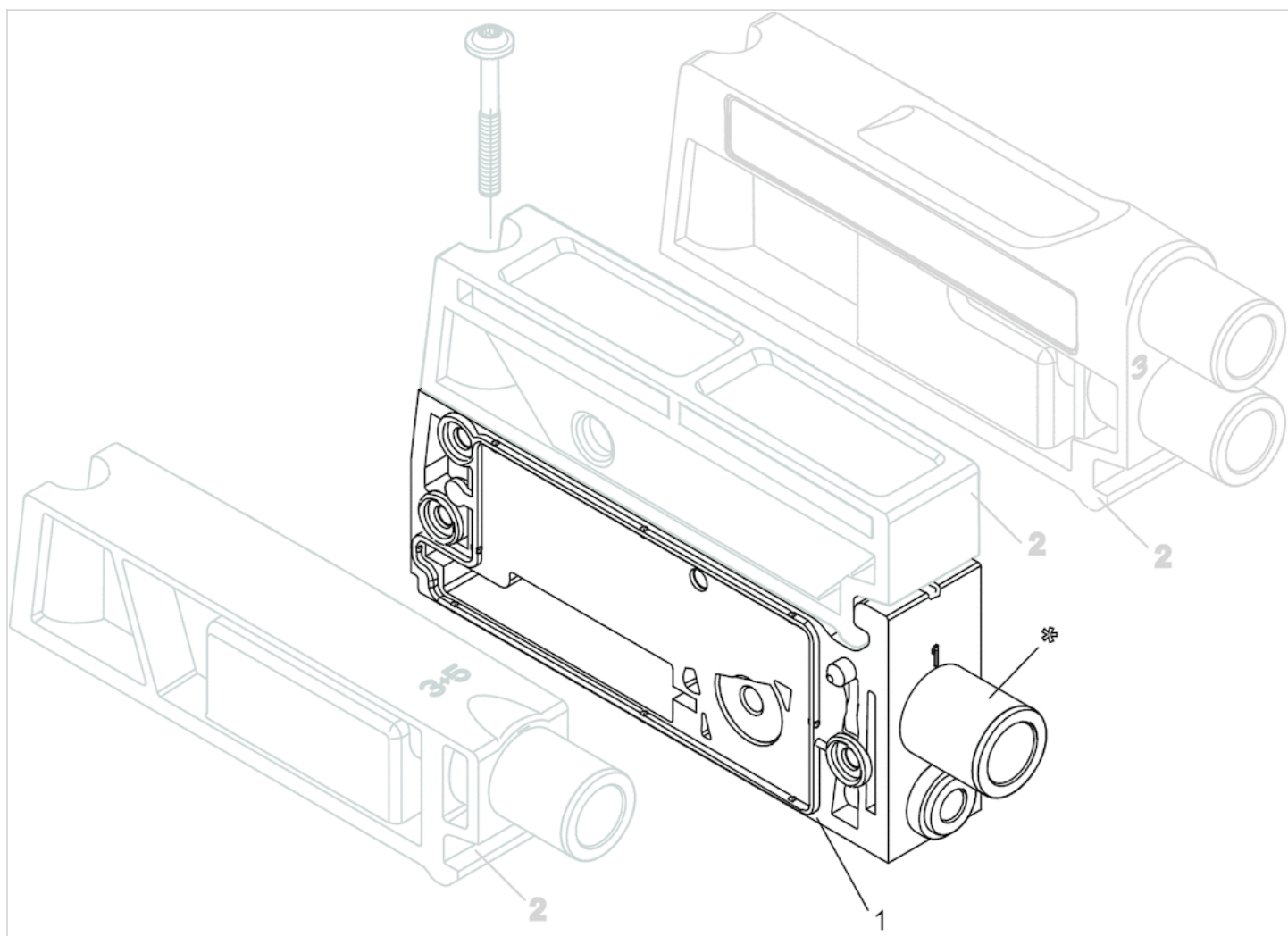
Position 1: Push-in fittings not included in the scope of delivery.

Technical information

Material	
Housing	Polyamide
Seals	Nitrile rubber

Dimensions

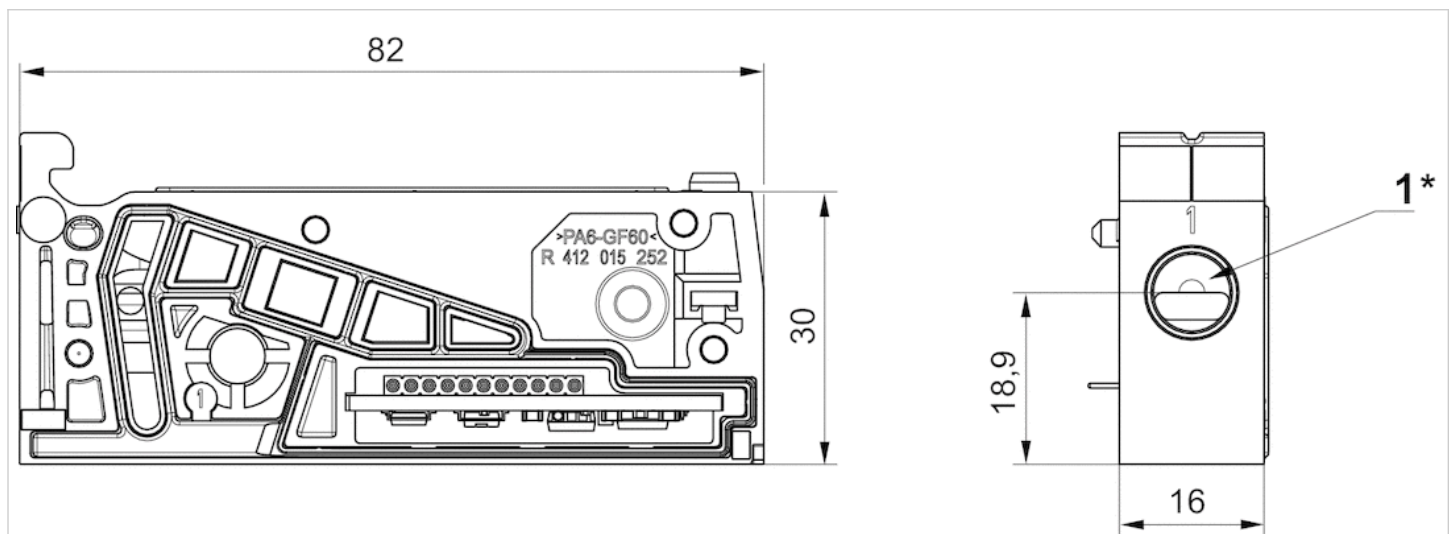
Overview drawing



* 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.

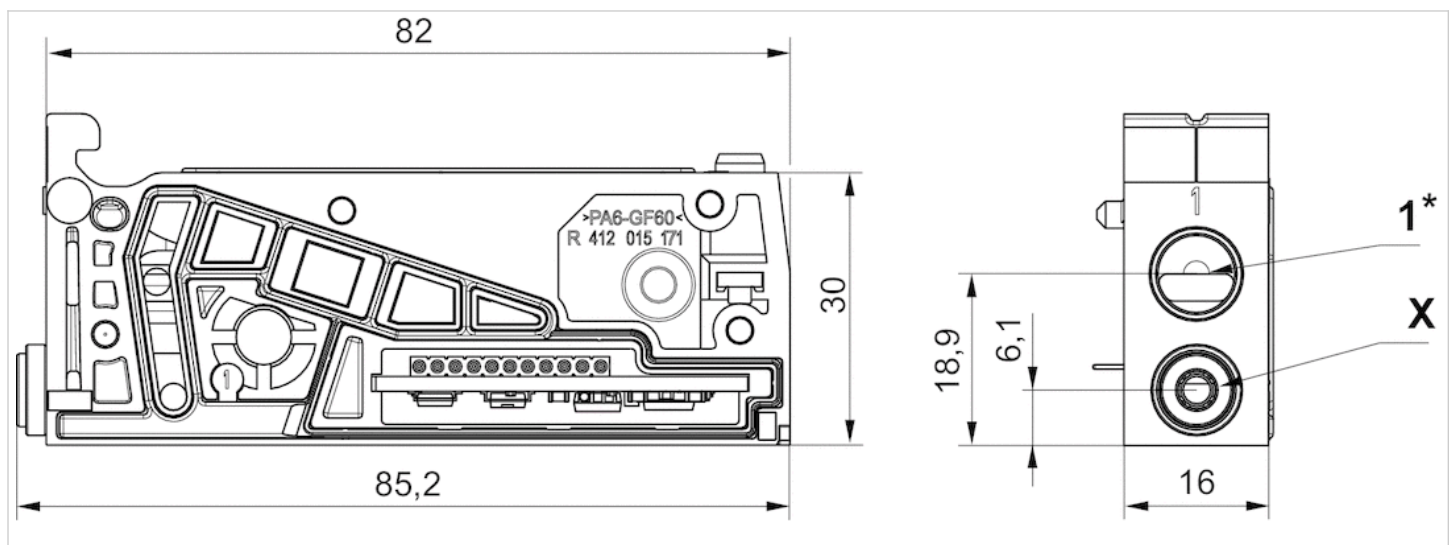
Fig. 1



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.

Fig. 2



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.


Extension kit, supply plate with switch-off voltage monitoring

- for series AV03



Working pressure min./max.	-13 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium	Compressed air
Max. particle size	40 µm
Oil content of compressed air	0 ... 5 mg/m³

Technical data

Part No.		Valve system version	Position
R412025065		Field bus	1
R412025066		Field bus	1
R412025067		Field bus	1
R412025068		Field bus	1
R412025069		Field bus	1
R412025070		Field bus	1

Part No.	Type
R412025065	Supply plate, connection 1, internal pilot, separate pressure zones in channels 1/3/5/X/R
R412025066	Supply plate, connection 1, X, external pilot, separate pressure zones in channels 1/3/5/X/R
R412025067	Supply plate, connection 1, no pressure zones
R412025068	Supply plate, connection 1, separate pressure zones in channels 1/3/5
R412025069	Supply plate, connection 1, separate pressure zone in channel 1
R412025070	Supply plate, connection 1, separate pressure zones in channels 3/5

Part No.	Scope of delivery	Fig.
R412025065	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2

Part No.	Scope of delivery	Fig.
R412025066	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 2
R412025067	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412025068	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412025069	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1
R412025070	Base plate, incl. 1 nut, 2 seals, 1 retaining clip, 1 screw, 1 tie rod extension, and 1 extension circuit board	Fig. 1

You must order the exhaust modules separately.

Technical information

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.

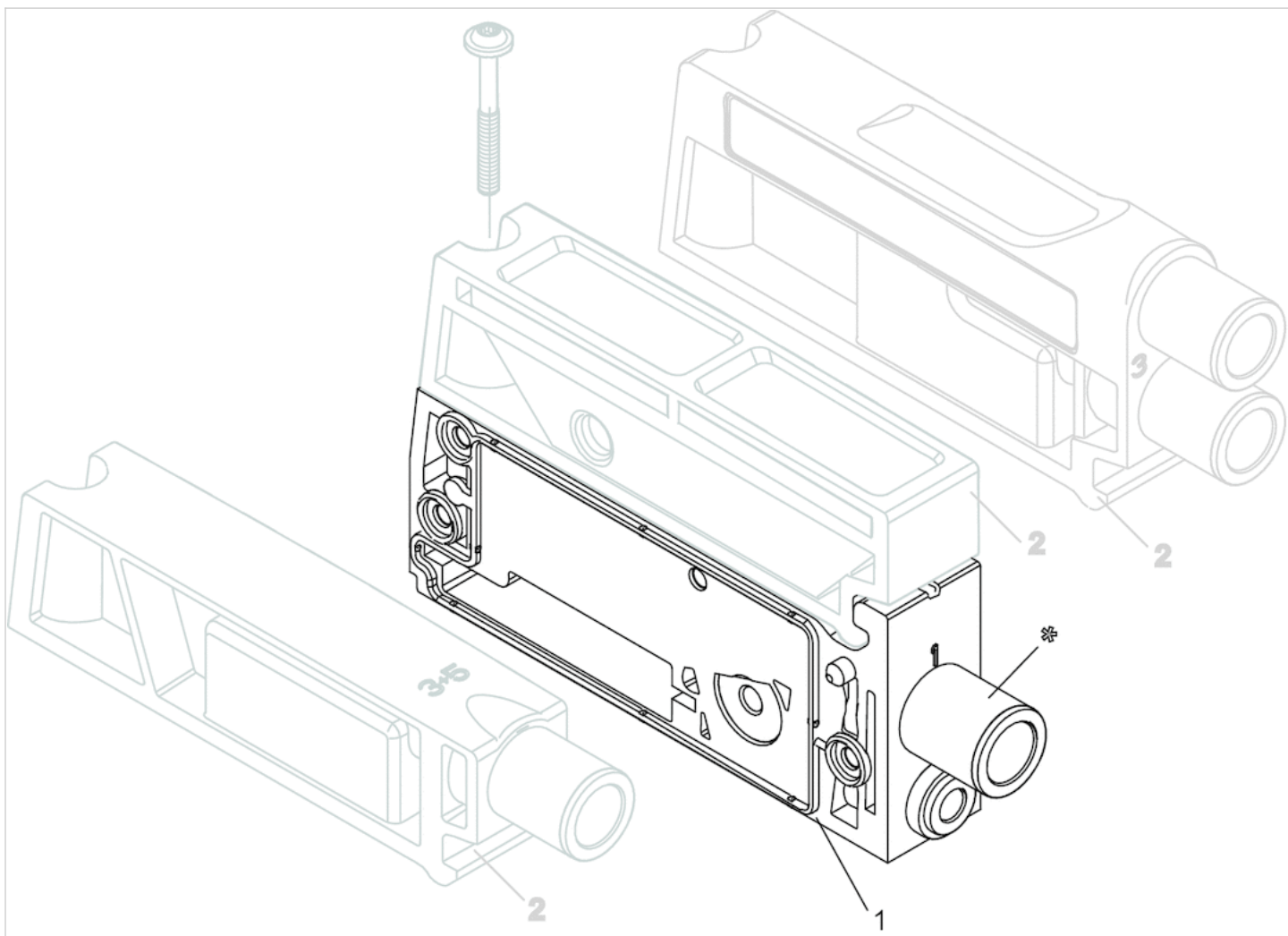
For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

Technical information

Material	
Housing	Polyamide
Seals	Nitrile rubber

Dimensions

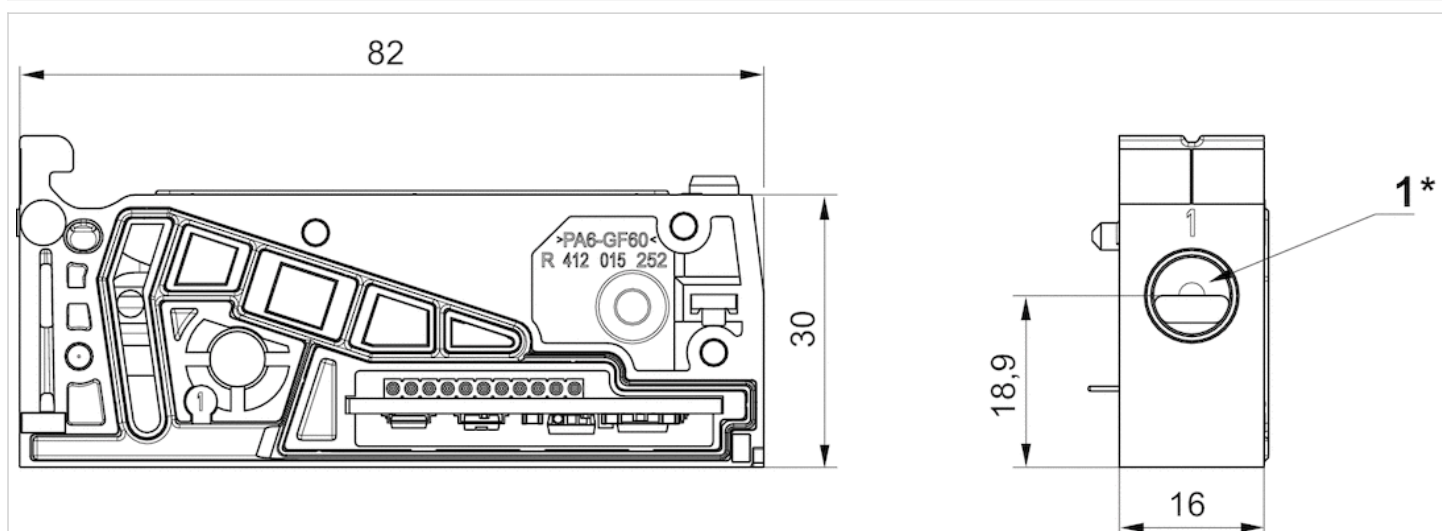
Overview drawing



* 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.

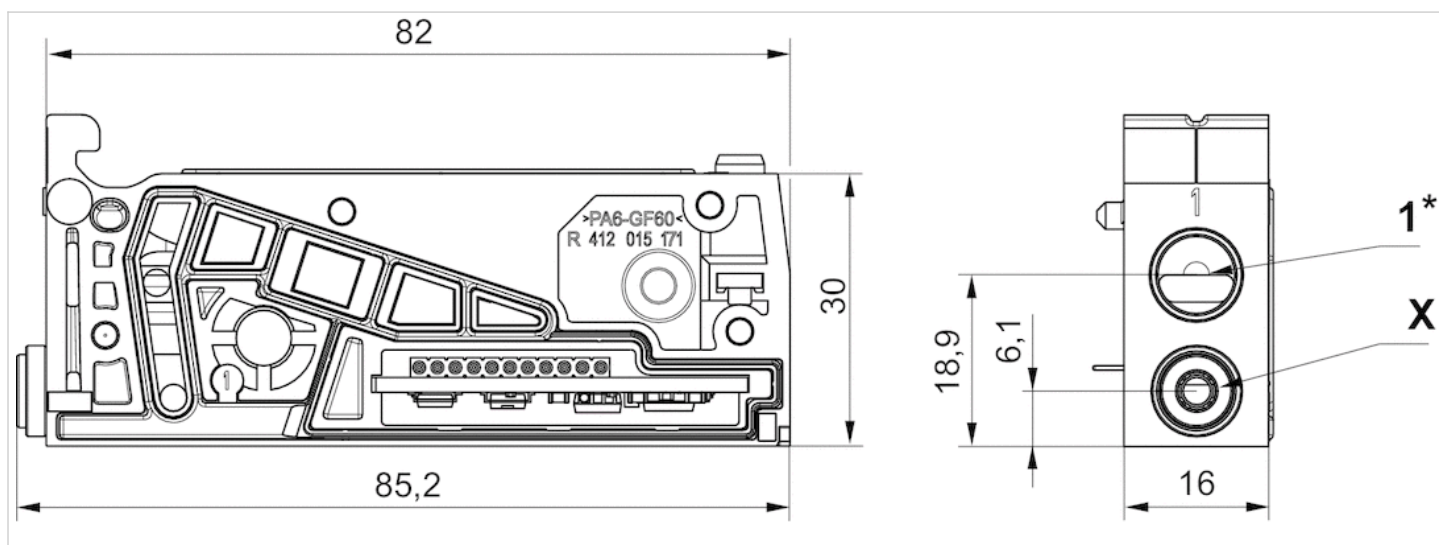
Fig. 1



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.

Fig. 2



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.


Extension kit, electrical supply plate

- for AV03, AES



Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Max. power consumption	2 A
Protection class	IP65
Weight	0.264 lbs

Technical data

Part No.		Scope of delivery
R412021748		Supply plate, incl. 1 seal, 1 tie rod, and 1 screw for extension
R412021752		Supply plate, incl. 1 seal, 1 tie rod, and 1 screw for extension

Part No.	electrical connections	DC operating voltage	Voltage tolerance DC
R412021748	M12, 4-pin, A-coded	24 V	-10% / +10%
R412021752	M12, 4-pin, A-coded	24 V	-10% / +10%

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

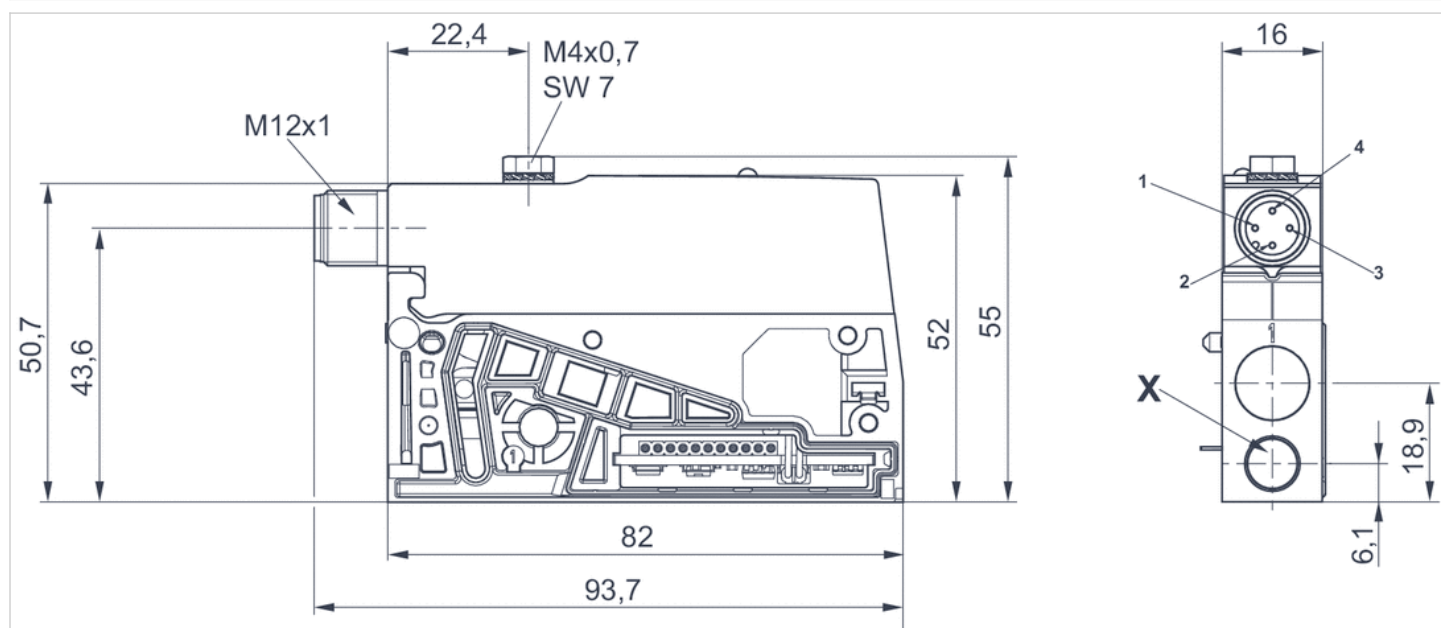
Please note that the supply plate may only be used in conjunction with AES series fieldbus modules.

Technical information

Material	
Housing	Polyamide, Aluminum
Seal	Nitrile rubber

Dimensions

Dimensions



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

Extension kit, Electrical valve control module

- for AV03



Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Max. power consumption	1 A
Protection class	IP65
Weight	0.276 lbs

X
3
1
5
R

Technical data

Part No.	Scope of delivery	Pilot connection
R412022742	M12 control module (incl. base plate for 2 valve positions incl. 2 nuts, 2 labels), 1 tie rod extension 16 mm, 1 tide rod extension 25 mm, 1 screw, 1 retaining clip, and 1 seal	Ø 12

Part No.	DC operating voltage
R412022742	24 V

Push-in fittings are not included in the scope of delivery and must be ordered separately.

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

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

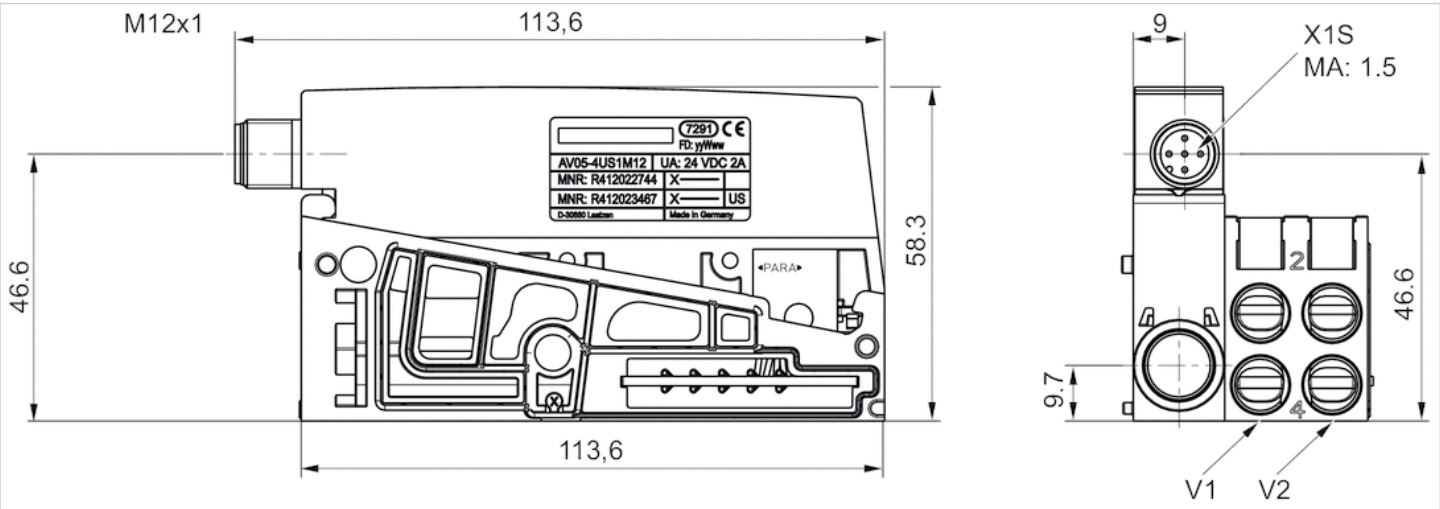
For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

Technical information

Material	
Housing	Polyamide, Aluminum
Seal	Nitrile rubber

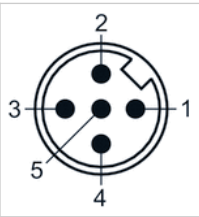
Dimensions

Dimensions



Pin assignments

Plug pin assignment



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

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

Extension kit, combination plate

AV03/AV05

- for AV03 / AV05



Working pressure min./max.

-13 ... 145 psi









Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.		Position	Type
R412021780		1	Supply plate, connection 1, no pressure zones
R412022594		1	Supply plate, connection 1, no pressure zones
R412021777		1	Supply plate, connection 1, no pressure zones
R412022592		1	Supply plate, connection 1, no pressure zones
R412021779		1	Supply plate, connection 1, separate pressure zones in channels 1/3/5
R412022593		1	Supply plate, connection 1, separate pressure zones in channels 1/3/5
R412021776		1	Supply plate, connection 1, separate pressure zones in channels 1/3/5
R412022591		1	Supply plate, connection 1, separate pressure zones in channels 1/3/5

Part No.	Scope of delivery	Pilot connection
R412021780	Combination module, connection 1, no pressure zones	Ø 12
R412022594	Combination module, connection 1, no pressure zones	-
R412021777	Combination module, connection 1, no pressure zones	Ø 12
R412022592	Combination module, connection 1, no pressure zones	-
R412021779	Combination module, connection 1, separate pressure zones in channels 1/3/5	Ø 12
R412022593	Combination module, connection 1, separate pressure zones in channels 1/3/5	-
R412021776	Combination module, connection 1, separate pressure zones in channels 1/3/5	Ø 12
R412022591	Combination module, connection 1, separate pressure zones in channels 1/3/5	-

Part No.	Valve system version	
R412021780	Field bus	-
R412022594	Field bus	1)
R412021777	Multipole	-
R412022592	Multipole	1)
R412021779	Field bus	-
R412022593	Field bus	1)
R412021776	Multipole	-
R412022591	Multipole	1)

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

1) Inch version

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

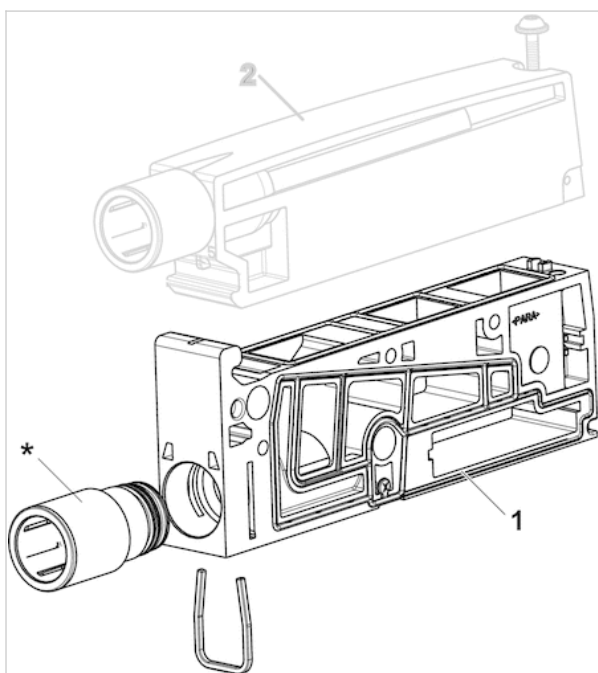
You must order items 1, 2, and 3 respectively in the required quantity.

Technical information

Material	
Housing	Polyamide, fiber-glass reinforced
Base plate	Aluminum
Seal	Nitrile rubber

Dimensions

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.

End plate right

- for AV03



Ambient temperature min./max.	14 ... 122 °F
Medium temperature min./max.	14 ... 122 °F
Weight	0.176 lbs

Technical data

Part No.	Compressed air connection Pilot control exhaust [R]	Delivery unit	Fig.
R412018349	Ø 4	1 piece	Fig. 1
R412018350	-	1 piece	Fig. 2

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .
 The oil content of compressed air must remain constant during the life cycle.
 Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

When using polyurethane tubing, we recommend using additional stiffener sleeves.
 For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

Technical information

Material	
Housing	Aluminum
Screws	Steel

Dimensions

Fig. 1

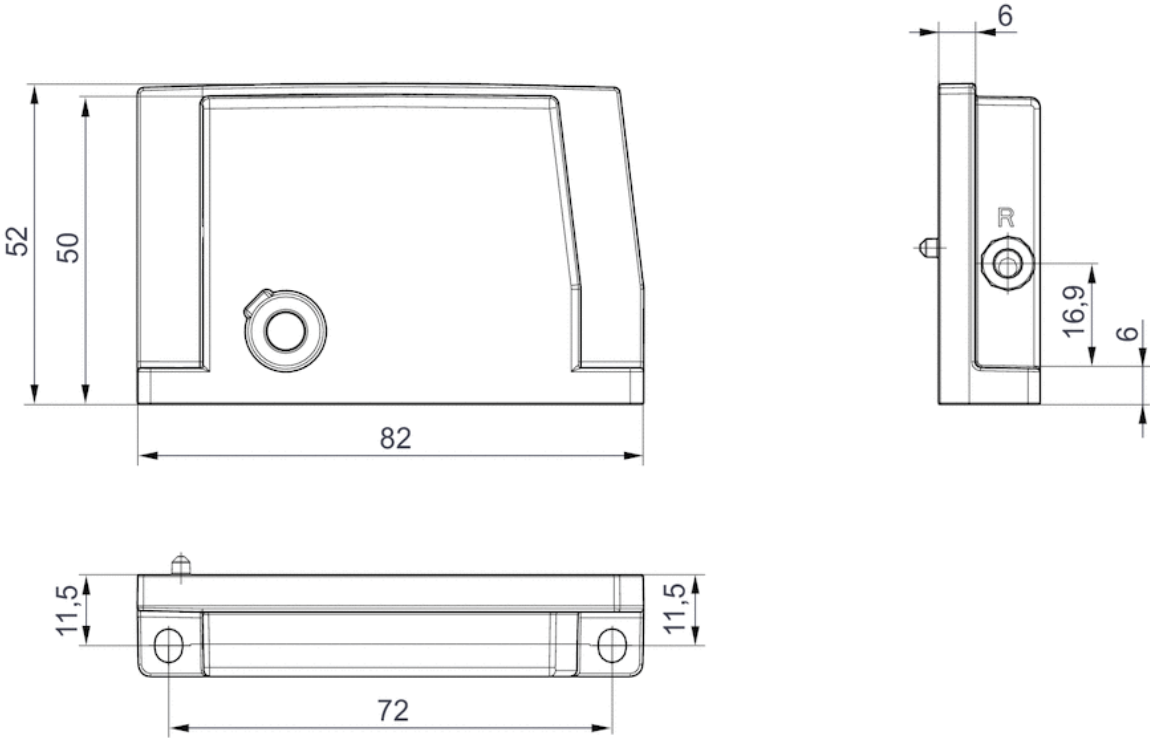
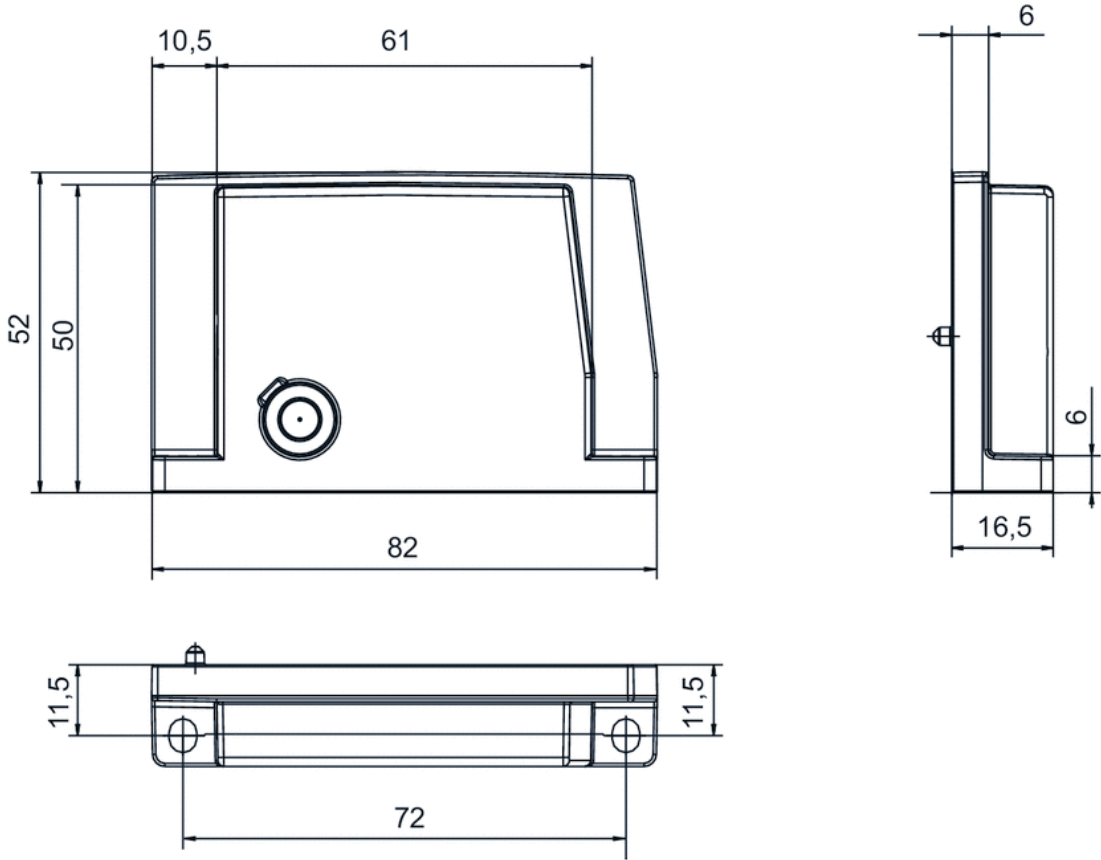
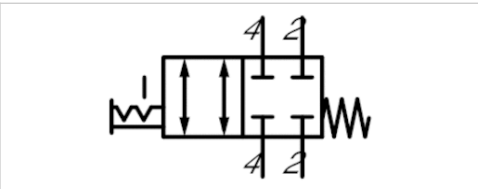


Fig. 2



Shut-off module

- Qn = 0.254-0.762 Cv
- Compressed air connection output 1/4", Ø 8, Ø 6, Ø 4
- For port channels 2, 4



Activation	Mechanical
Working pressure min./max.	0 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium temperature min./max.	14 ... 140 °F
Medium	Compressed air
Weight	0.176 lbs

Technical data

Part No.	Compressed air connection	Flow rate value
	Output	Qn
R422102699	1/4"	0.559 Cv
R422102704	Ø 8	0.762 Cv
R422102705	Ø 6	0.559 Cv
R422102706	Ø 4	0.254 Cv

Technical information

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

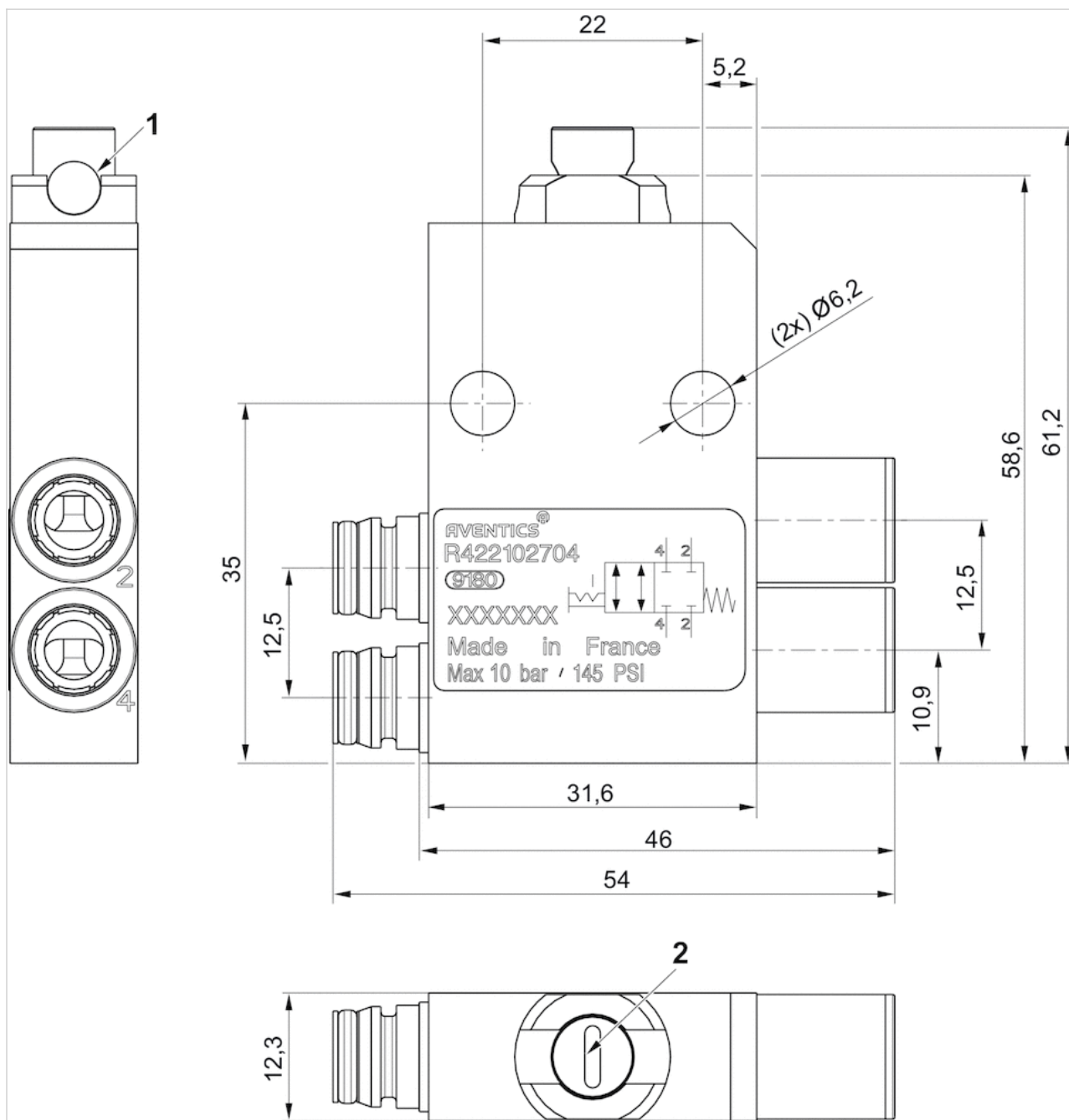
For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

Technical information

Material	
Housing	Aluminum
Seals	Nitrile butadiene rubber

Dimensions

Dimensions

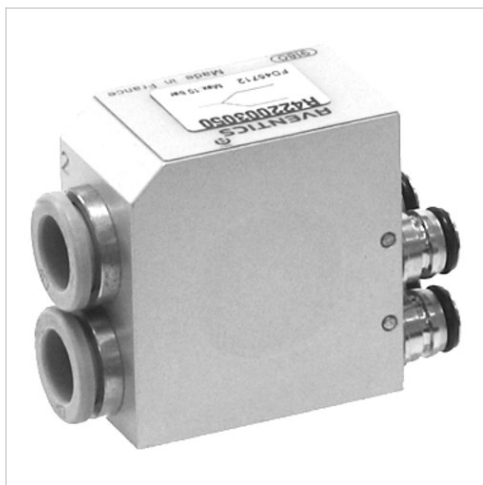


- 1) Through hole for cable lock
Order cable lock 7472D02758 separately
- 2) Manual override lock

Flow rate coupler, Series AV03, AV05

Inch version

- For port channels 2, 4



Working pressure min./max.	-13 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium	Compressed air
Weight	0.264 lbs

Technical data

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

Technical information

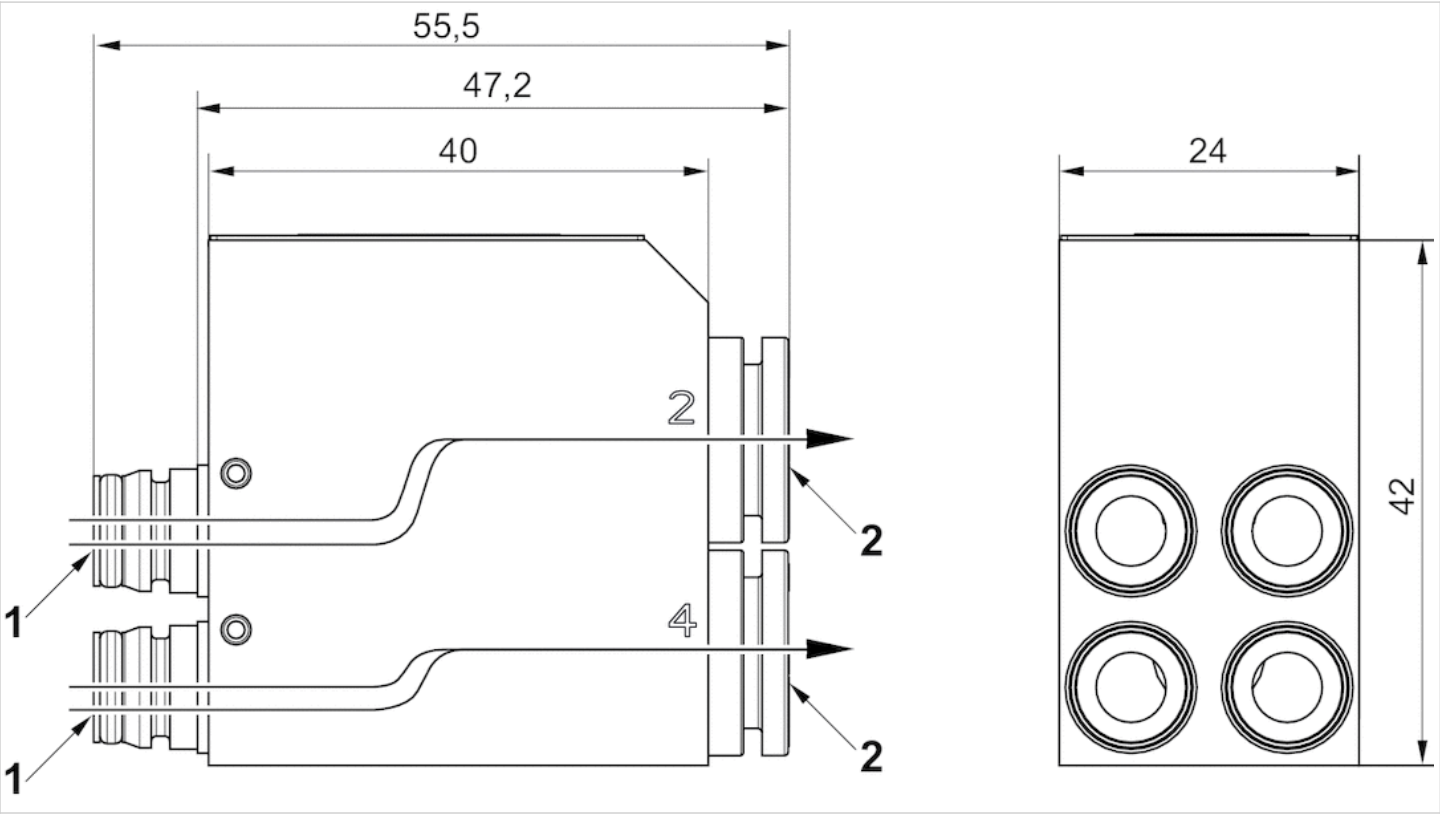
When using polyurethane tubing, we recommend using additional stiffener sleeves.
 For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.
 Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
 Doubling of flow rate performance by connecting the working connections of two valves.
 Both valves must be identical models and controlled electrically at the same time.

Technical information

Material	
Housing	Aluminum
Seals	Nitrile rubber

Dimensions

Fig. 1



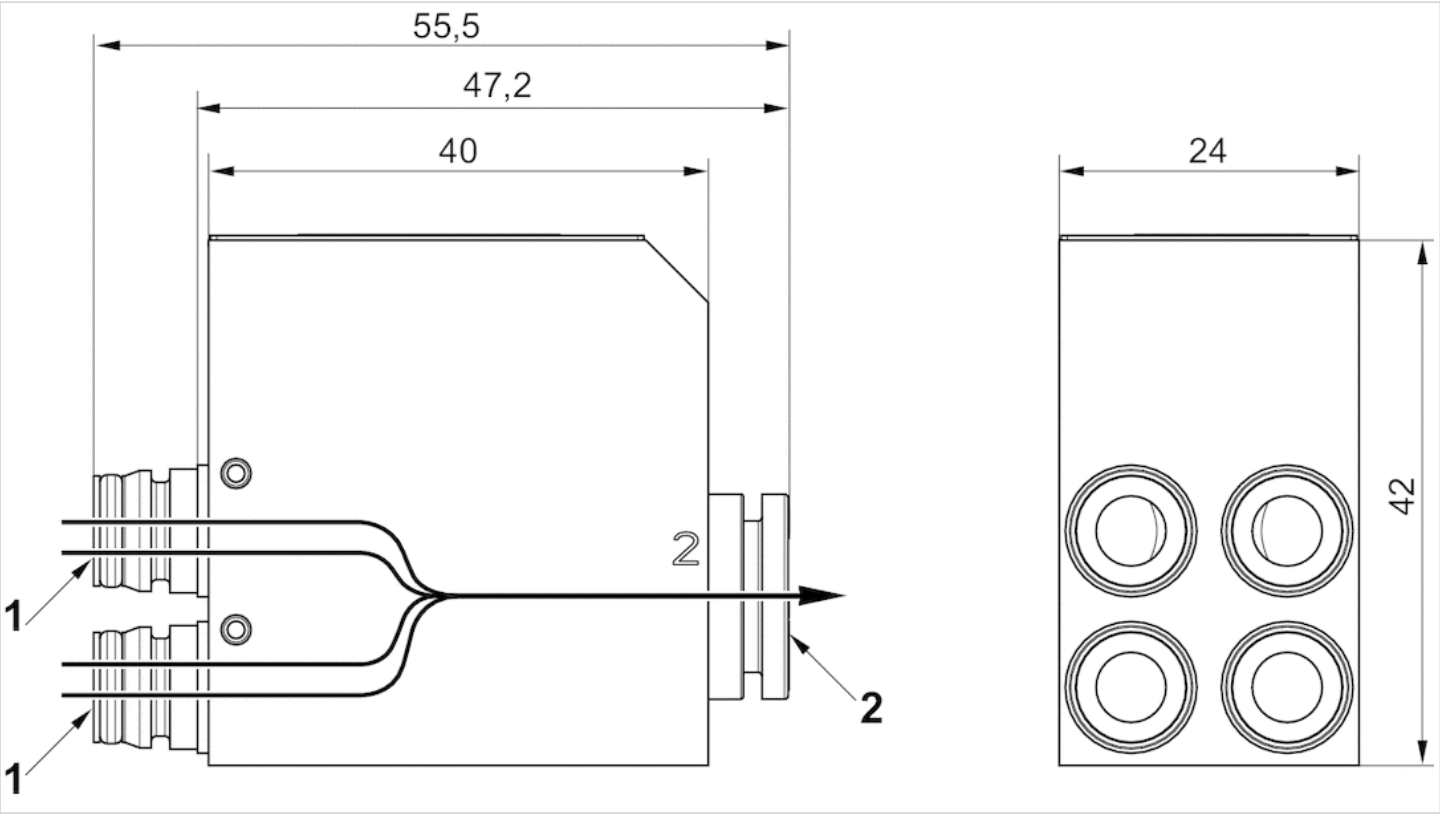
- 1) Pneumatic connection to base plate valves, suitable for all sizes in the AV03 and AV05 series
- 2) 2 x Ø 10

Dimensions

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

Dimensions

Fig. 2



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

Dimensions

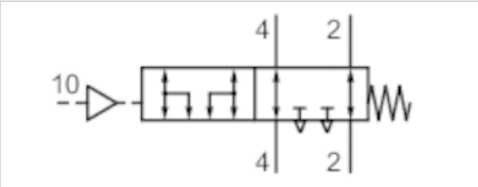
Number of valves	2	2
Valve function	2x3/2	2x3/2
Series	AV03	AV05
Flow [l/min]	830	1400

Exhaust module Series AV03, AV05

- For port channels 2, 4



Working pressure min./max.	0 ... 145 psi
Ambient temperature min./max.	14 ... 140 °F
Medium	Compressed air
Weight	0.154 lbs



Technical data

Part No.	Port 2 / 4	* Port	Flow
			Qn
R422003046	Ø 8	Ø 4	1.1 Cv
R422003185	Ø 6	Ø 4	0.732 Cv
R422003187	Ø 4	Ø 4	0.284 Cv

* Port 10

Technical information

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

For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

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.

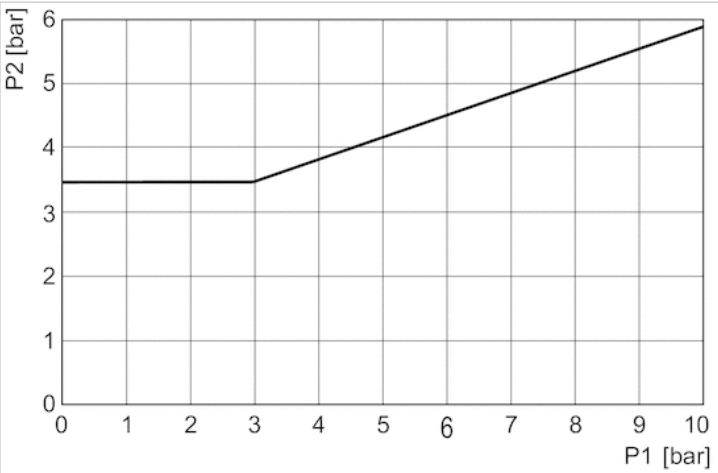
Applications with vertical actuators with exhaust or pressure throttles and a maximum load of 15 kg as well as up to a speed of Vmax 33 mm/s .

Technical information

Material	
Housing	Aluminum
Seals	Nitrile rubber

Diagrams

Minimum control pressure (depending on operating pressure)



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

Diagrams

p1	0	3	10
p2	3.5	3.5	5.8

Push-in fittings

- for AV



Working pressure min./max.

-13 ... 145 psi

Ambient temperature min./max.

14 ... 140 °F

Medium

Compressed air

Technical data

Part No.	Type	Scope of delivery
R412018617	Push-in fitting Ø 4 mm - 5/32", straight	2 piece
R412018618	Push-in fitting Ø 6 mm, straight	2 piece
R412018619	Push-in fitting Ø 8 mm - 5/16", straight	2 piece
R412018621	Push-in fitting Ø 3 mm, angled, short, and push-in fitting Ø 3 mm, angled, long	1 piece
R412018622	Push-in fitting Ø 4 mm - 5/32", angled, short and push-in fitting Ø 4 mm - 5/32", angled, long	1 piece
R412018623	Push-in fitting Ø 6 mm, angled, short Push-in fitting Ø 6 mm, angled, long	1 piece
R422002561	Push-in fitting Ø 3 mm, angled, short	10 piece
R422002569	Plug connector Ø 3 mm, angled, long	10 piece
R422002554	Push-in fitting Ø 4 mm - 5/32", straight	10 piece
R422002562	Push-in fitting Ø 4 mm, 5/32", angled, short	10 piece
R422002570	Push-in fitting Ø 4 mm, 5/32", angled, long	10 piece
R422002555	Push-in fitting Ø 6 mm, straight	10 piece
R422002563	Push-in fitting Ø 6 mm, angled, short	10 piece
R422002571	Push-in fitting Ø 6 mm, angled, long	10 piece
R422002557	Push-in fitting Ø 8 mm, 5/16", straight	10 piece
R422002565	Push-in fitting Ø 8 mm, 5/16", angled, short	10 piece
R422002573	Push-in fitting Ø 8 mm, 5/16", angled, long	10 piece
R422002944	Push-in fitting Ø 8 mm, angled, short Push-in fitting Ø 8 mm, angled, long	1 piece
R412021785	Push-in fitting 1/8", straight	2 piece
R412018620	Push-in fitting 1/4", straight	2 piece
R422002560	Push-in fitting 3/8", straight	10 piece
R422102508	Push-in fitting Ø 12 mm, straight	2 piece
R422002559	Push-in fitting Ø 12 mm, straight	10 piece
R422002556	Push-in fitting 1/4", straight	10 piece
R412021786	Push-in fitting 1/8", straight	10 piece

Part No.	Housing material	
R412018617	Brass, nickel-plated	-
R412018618	Brass, nickel-plated	-
R412018619	Brass, nickel-plated	-
R412018621	Brass, nickel-plated	1)
R412018622	Brass, nickel-plated	-
R412018623	Brass, nickel-plated	-
R422002561	Brass, nickel-plated	-
R422002569	Brass, nickel-plated	-
R422002554	Brass, nickel-plated	-
R422002562	Brass, nickel-plated	-
R422002570	Brass, nickel-plated	-
R422002555	Brass, nickel-plated	-
R422002563	Brass, nickel-plated	-
R422002571	Brass, nickel-plated	-
R422002557	Brass, nickel-plated	-
R422002565	Polyamide, fiber-glass reinforced, black	-
R422002573	Polyarylamide, fiber-glass reinforced	-
R422002944	Polyamide, fiber-glass reinforced, black	-
R412021785	Brass, nickel-plated	-
R412018620	Brass, nickel-plated	-
R422002560	Brass, nickel-plated	-
R422102508	Brass, nickel-plated	1)
R422002559	Brass, nickel-plated	1)
R422002556	Brass, nickel-plated	-
R412021786	Brass, nickel-plated	-

1) Only for AV05 air connection, connection 1

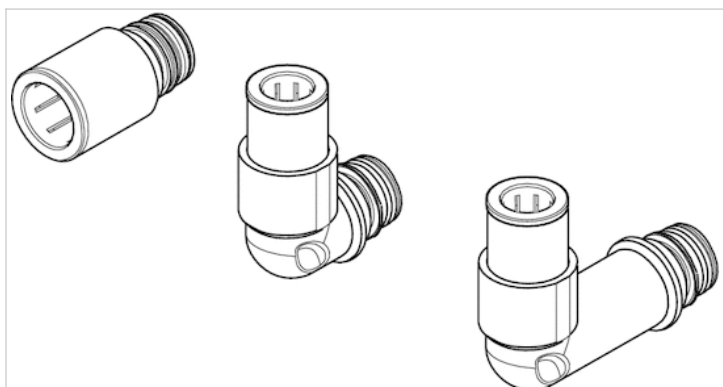
Technical information

When using polyurethane tubing, we recommend using additional stiffener sleeves.
For push-in fittings, only use plug accessories made of plastic (polyamide) from our catalog.

Technical information

Material	
Housing	Brass, nickel-plated, Polyamide, fiber-glass reinforced, black, Polyarylamide, fiber-glass reinforced
Seal	Nitrile rubber

Dimensions



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.

14 ... 122 °F

Medium temperature min./max.

14 ... 122 °F

electr. connection

D-Sub plug, 25-pin, top, D-Sub plug, 44-pin, top

Weight

See table below

Technical data

Part No.	Type	Delivery unit	Weight	Fig.
R412018334	Top connection	1 piece	0.099 lbs	Fig. 1
R412018335	Side connection	1 piece	0.11 lbs	Fig. 2

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

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Housing	Polyamide
Screws	Steel

Dimensions

Fig. 1

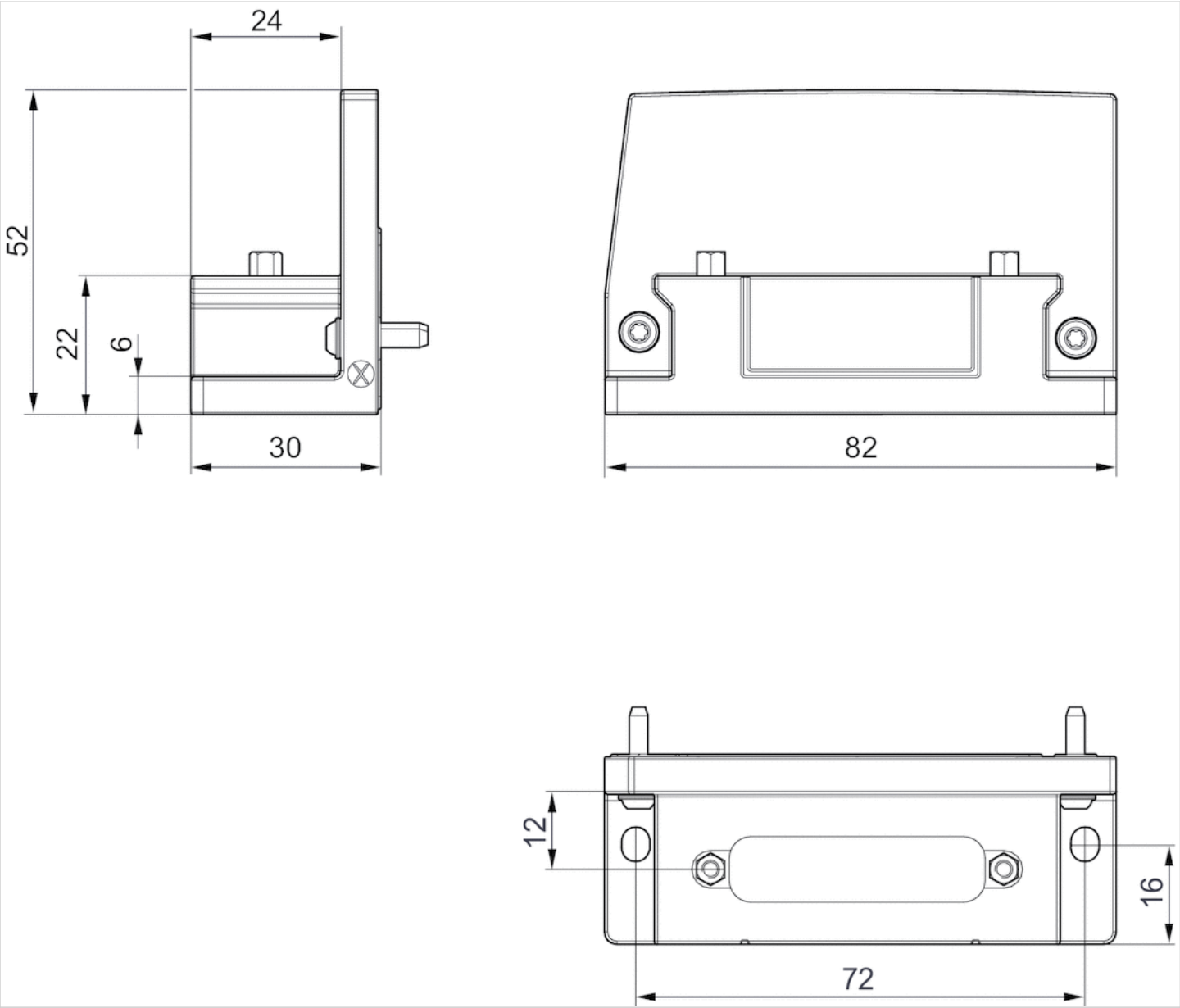
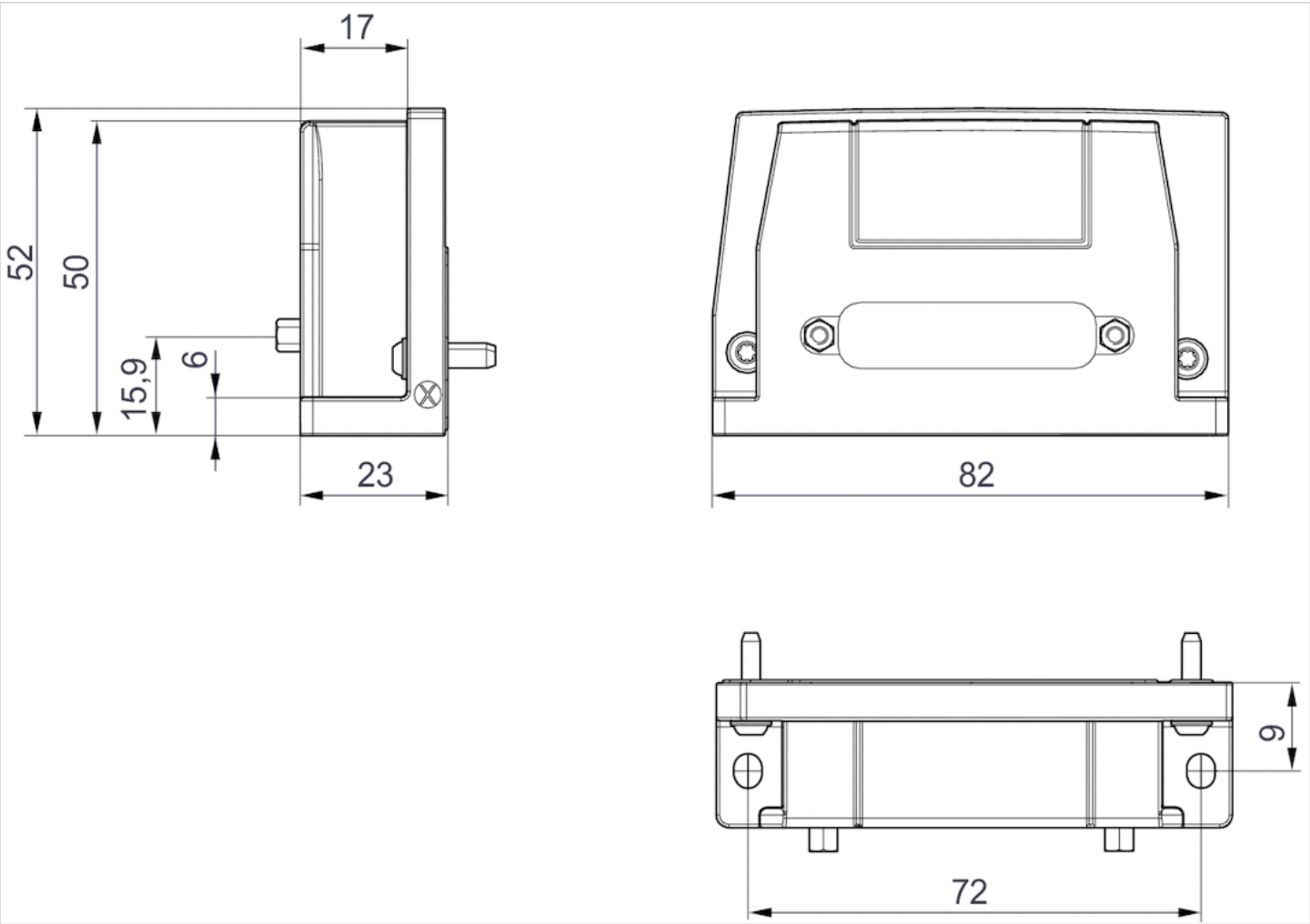


Fig. 2



Mounting kit for DIN rail

- for AV03, AV05, AES, ES05



Technical data

Part No.
R412019468

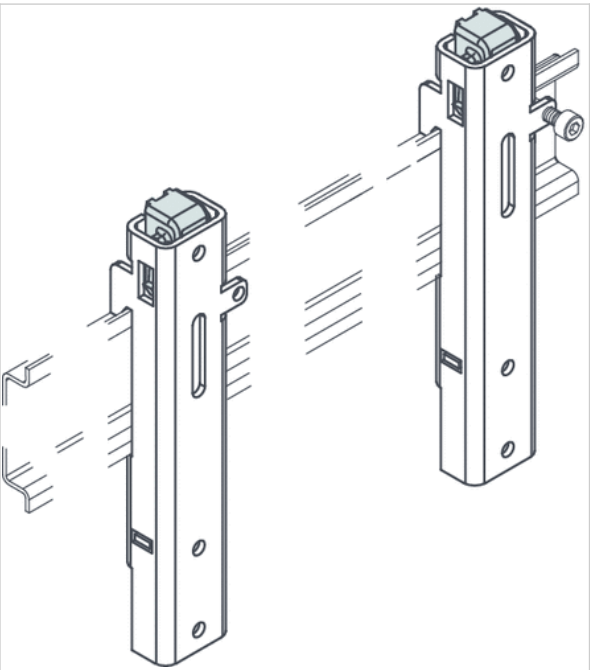
Scope of delivery: 2 clamps, 4 screws M4x8 DIN 912, 1 screw M3x14 DIN 912, Note: The valve system should not be equipped with more than the maximum number of components. After maximum equipment of the valve system, we recommend no longer assembling the valve system on a DIN rail.

Technical information

Material	
Housing	Steel, chrome-plated

Dimensions

Dimensions



Assembly kit

- for AV



Technical data

Part No.	Type	Delivery unit
R422103091	Mounting bracket for mounting to the mounting plate	2 piece

Technical information

Material	
Housing	Stainless steel

PDF creation date: 16.05.2019

Retaining bracket for intermediate mounting

- for AES, AV03, AV05



Technical data

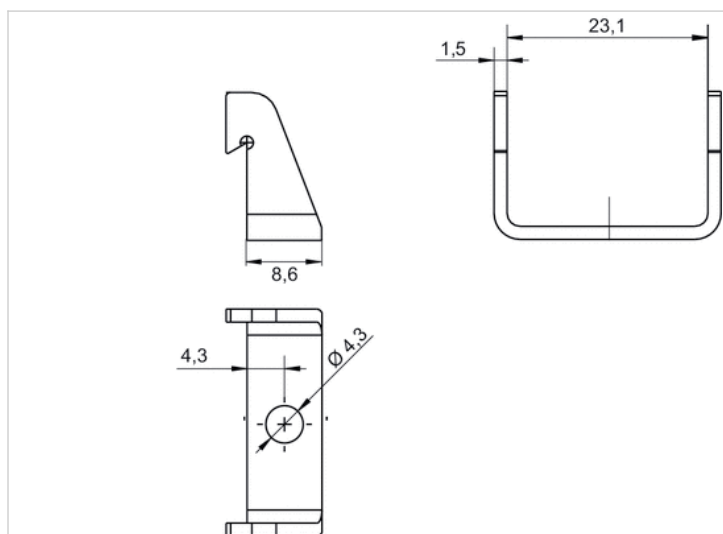
Part No.	Type	Delivery unit
R412018339	Retaining brackets	10 piece

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 5.906 in .

Technical information

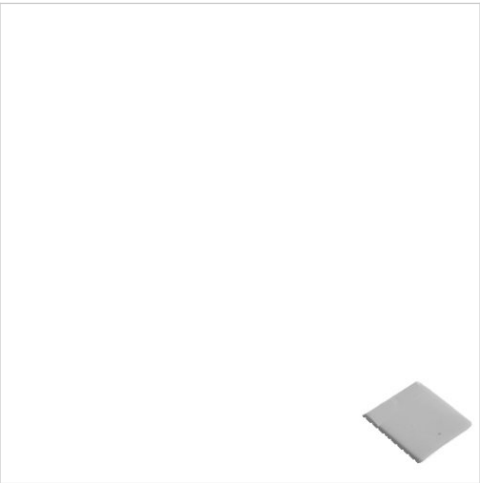
Material	
Housing	Stainless steel

Dimensions



Name plates, front

- for AV03, AV05, AES



Weight

0.031 lbs

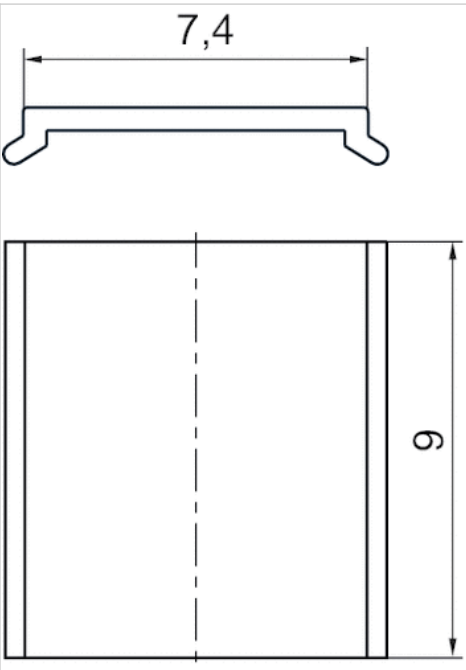
Technical data

Part No.	Type	Delivery unit
R412019552	Name plates	150 piece

Technical information

Material	
Housing	Polyamide

Dimensions



Name plates

- for AV03, AV05, AES



Weight

0.031 lbs

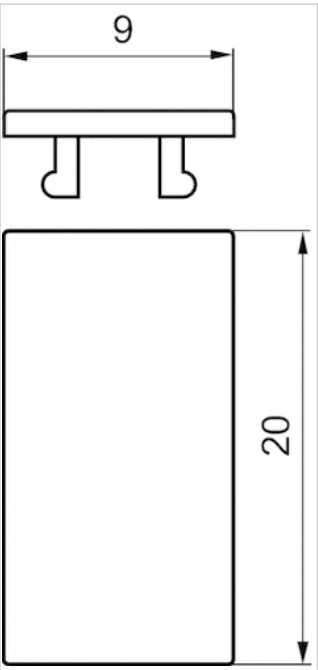
Technical data

Part No.	Type	Delivery unit
R422100889	Name plates	20 piece

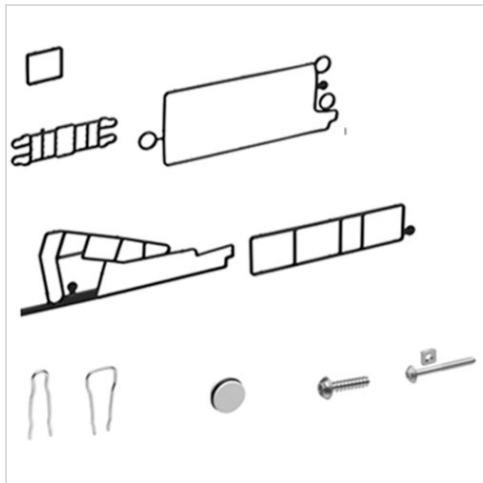
Technical information

Material	
Housing	Polyamide

Dimensions



Accessories



Ambient temperature min./max.
Medium

14 ... 140 °F
Compressed air

Technical data

Part No.	Position	Type	Scope of delivery	
R412018338	1	Valve seals	10 piece	1)
R412020084	1	Valve seals	10 piece	2)
R412018344	2	Seals for left end plate	10 piece	1)
R412020080	2	Seals for left end plate	10 piece	2)
R412018345	3	Seals for base plate	10 piece	1)
R412020082	3	Seals for base plate	10 piece	2)
R412018346	4	Seals for function modules	10 piece	1)
R412020081	4	Seals for function modules	10 piece	2)
R412018746	5	Retaining clips for supply plate	10 piece	1)
R412020075	5	Retaining clips for supply plate	10 piece	2)
R412018747	6	Retaining clips for base plate	10 piece	3)
R412018351	7	Sealing cap for right end plate	5 piece	3)
R412015467	8	Screws for left end plate	10 piece	3)
R412018336	9	Mounting screw for valve	10 piece	3)

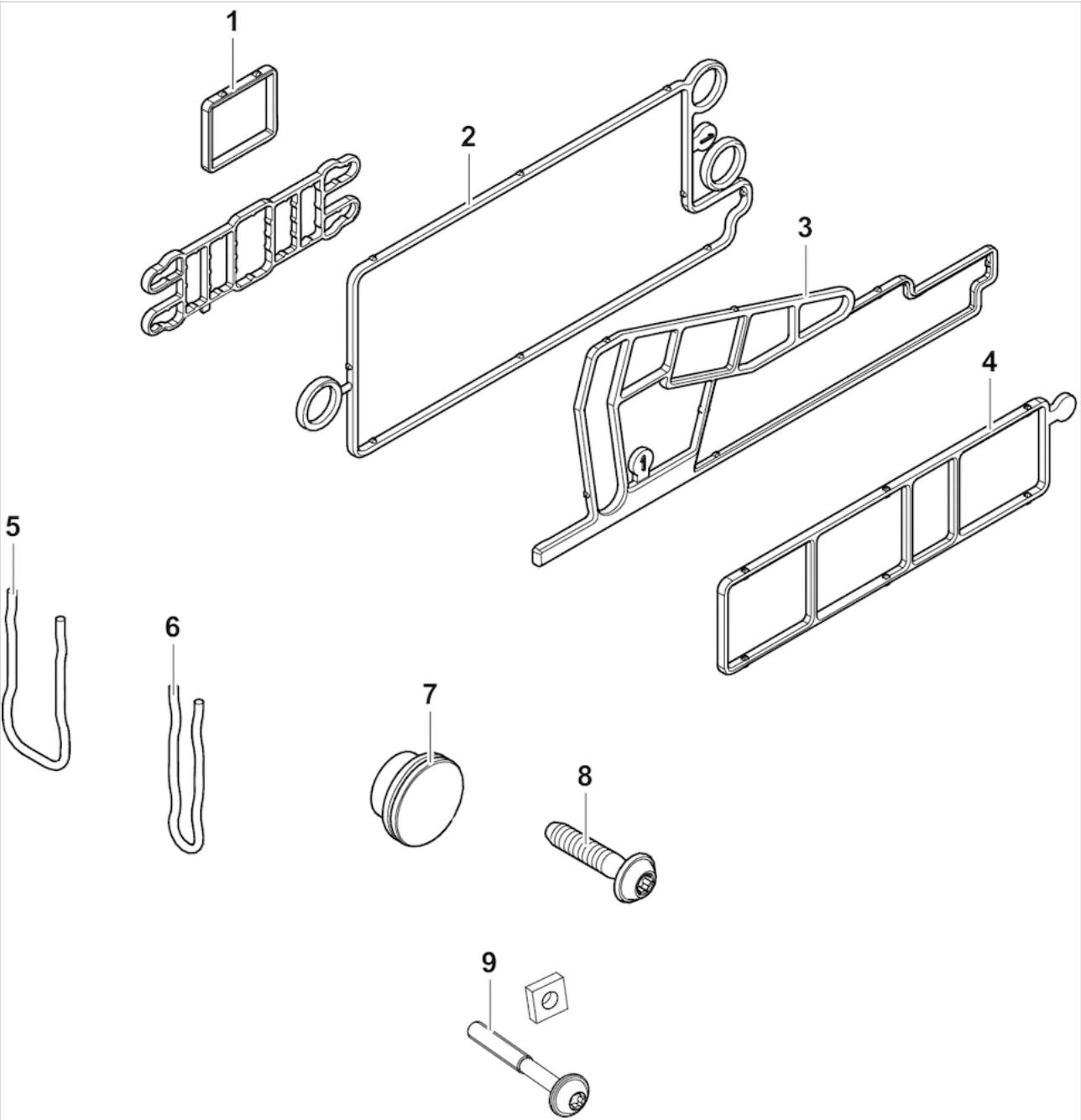
1) AV03

2) AV05

3) AV03 / AV05

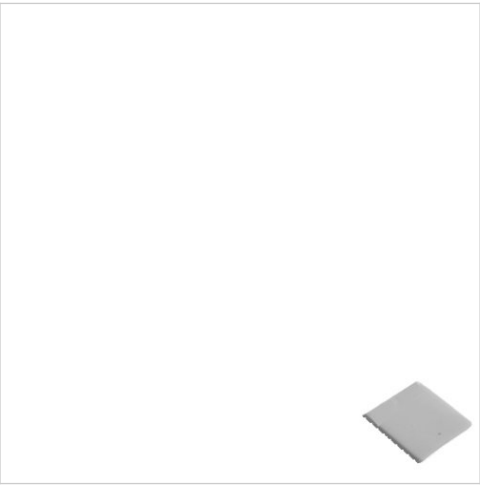
Dimensions

Overview drawing



Name plates

- for AES



Weight

0.031 lbs

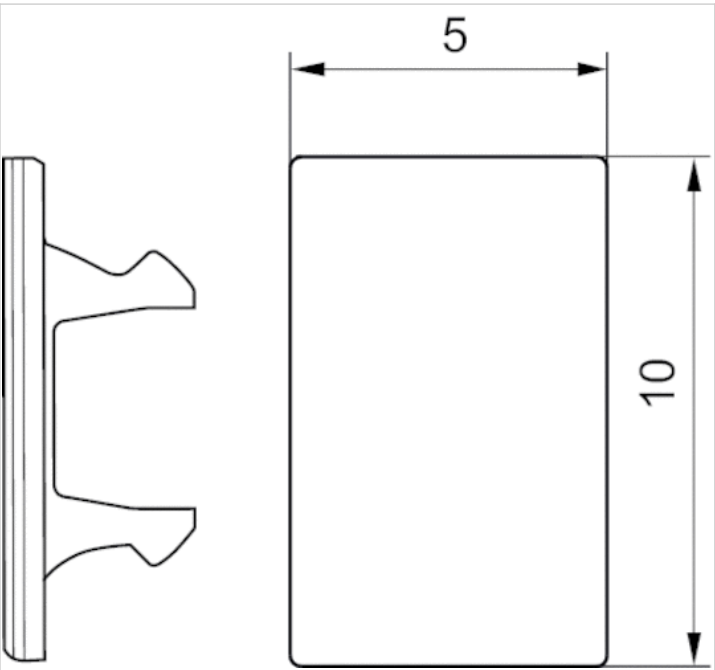
Technical data

Part No.	Type	Delivery unit
R412018192	Name plates	60 piece

Technical information

Material	
Housing	Polyamide

Dimensions



Protective cap, series CON-RD

- M8x1



Protection class
Weight

IP67
0.031 lbs

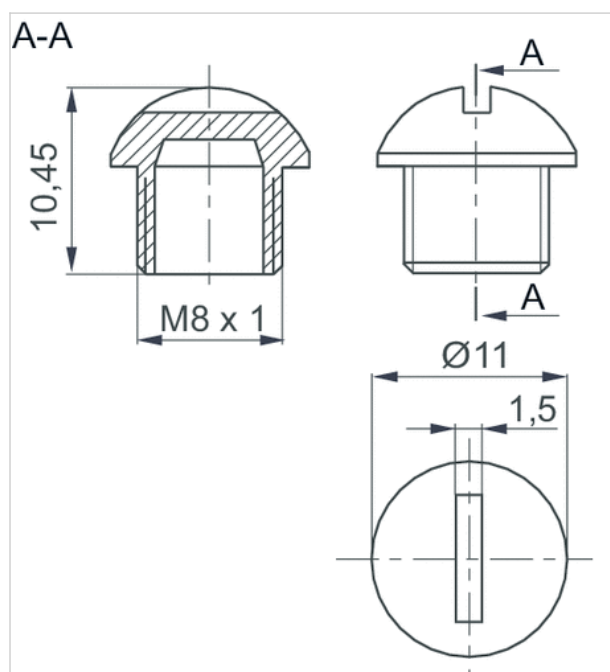
Technical data

Part No.	Type	Scope of delivery
R412003493	M8x1	25

Technical information

Material	
Housing	Polyamide

Dimensions



Protective cap, series CON-RD

- M12x1



Protection class
Weight

IP67
0.002 lbs

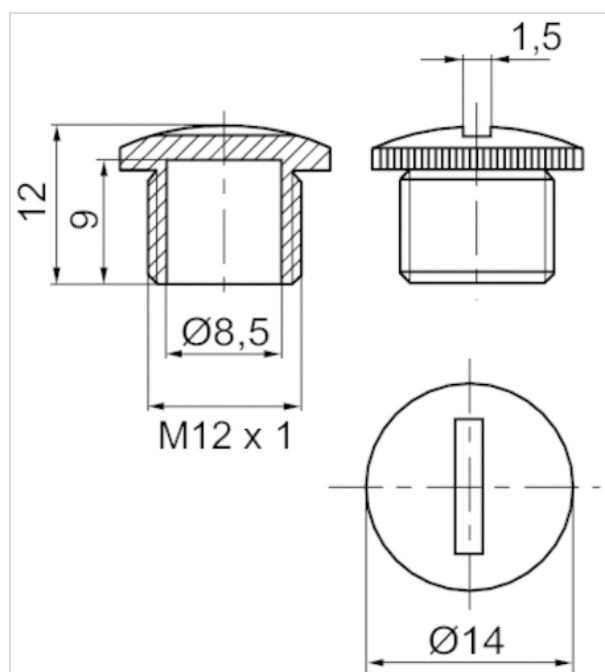
Technical data

Part No.	Type	Delivery unit
1823312001	M12x1	50 piece

Technical information

Material	
Housing	Polyamide

Dimensions



End plate left

- for AES



Ambient temperature min./max.

14 ... 140 °F

Weight

0.073 lbs

Technical data

Part No.	Type
R412015398	End plate left

Delivery contents: incl. 2 spring clamp elements

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

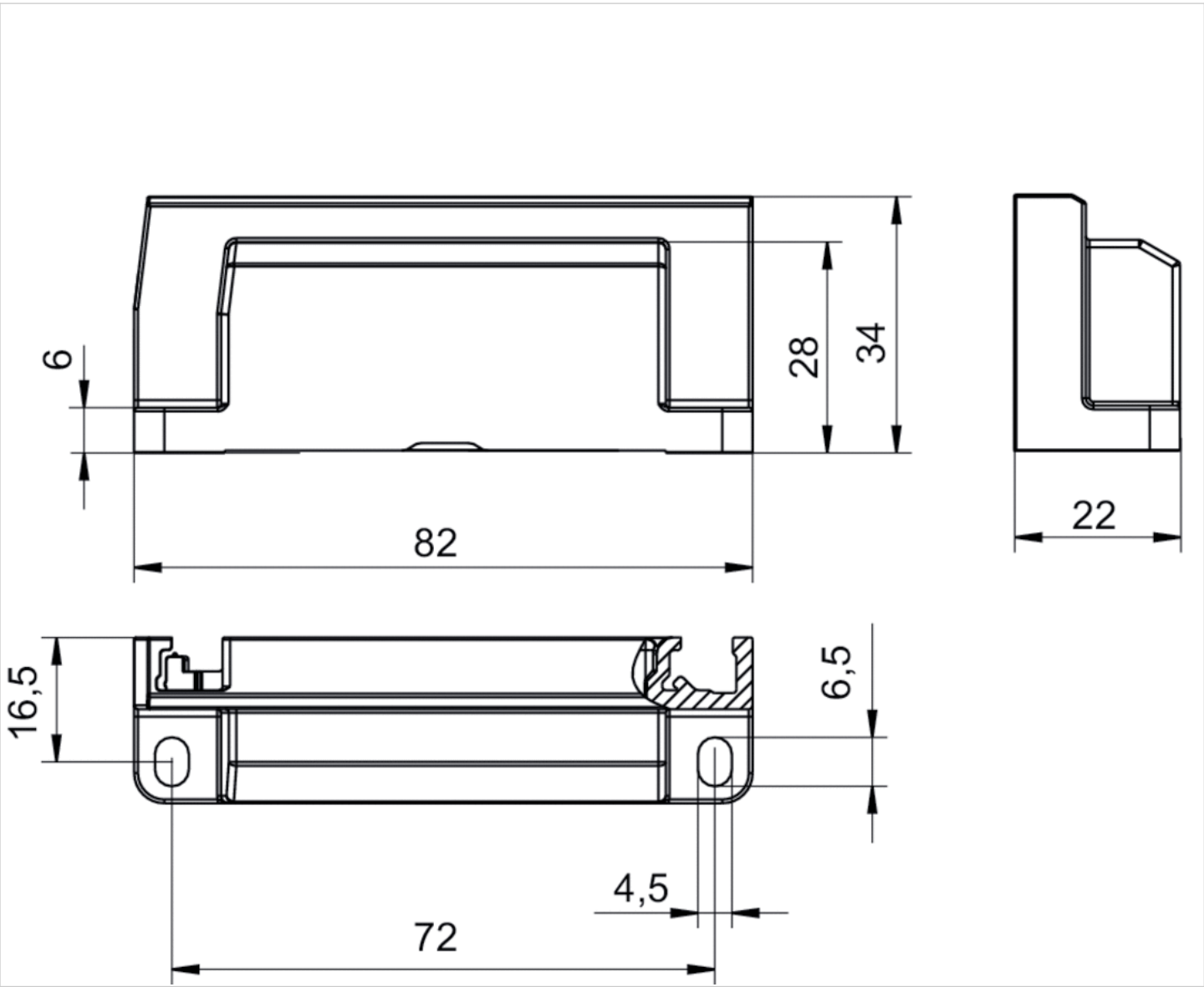
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Base plate	Polyamide, fiber-glass reinforced

Dimensions

Dimensions



End plate right

- for AES



Ambient temperature min./max.

14 ... 140 °F

Weight

0.086 lbs

Technical data

Part No.	Suitable for Series
R412015741	Stand-Alone variant AES

Scope of delivery incl. seal and mounting screws

Technical information

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 27 °F under ambient and medium temperature and may not exceed 5.4 °F .

The oil content of compressed air must remain constant during the life cycle.

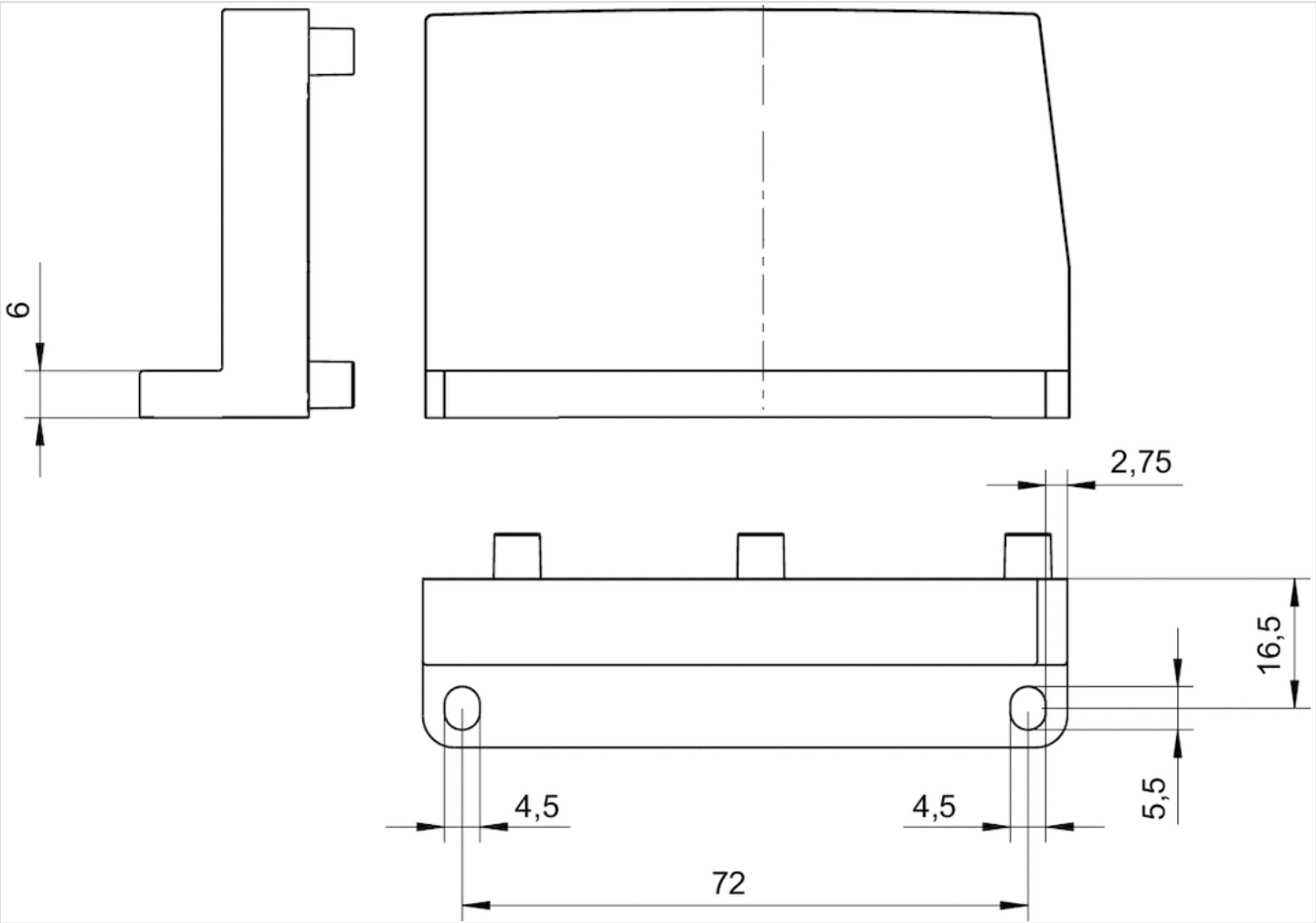
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

Technical information

Material	
Base plate	Polyamide, fiber-glass reinforced

Dimensions

Dimensions



Retaining bracket for intermediate mounting

- for AES, AV03, AV05



Technical data

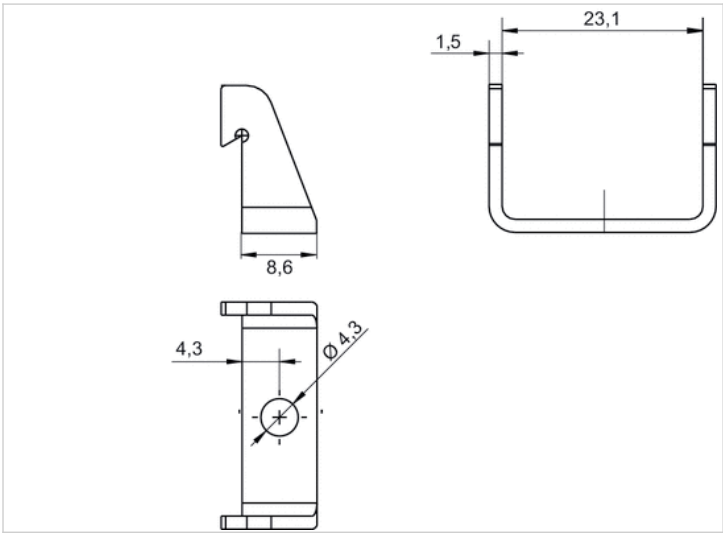
Part No.	Type	Delivery unit
R412018339	Retaining brackets	10 piece

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 5.906 in .

Technical information

Material	
Housing	Stainless steel

Dimensions



Spring clamp element

- for AES



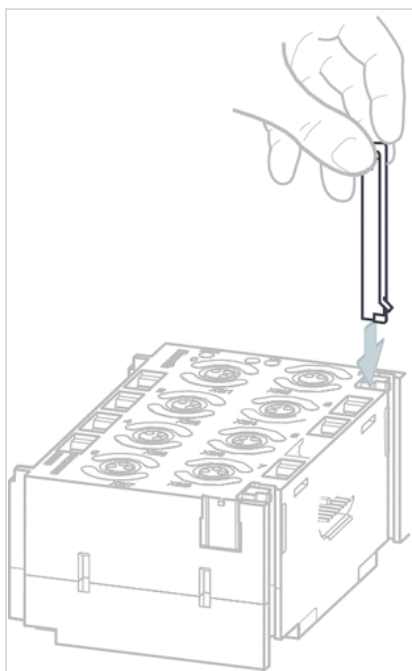
Technical data

Part No.	Type	Suitable for	Delivery unit
R412015400	Spring clamp element	For connecting field bus components	10 piece

Technical information

Material	
Housing	Steel

Dimensions



Round plug connector, Series CON-RD

- Plug, M12x1, 4-pin, D-coded, straight, 180°
- for Ethernet, EtherNET/IP, EtherCAT, POWERLINK, sercos III
- shielded



Connection type	Thread cutting
Ambient temperature min./max.	-13 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.904 lbs

Technical data

Part No.	Max. current
R419801401	4 A

Technical information

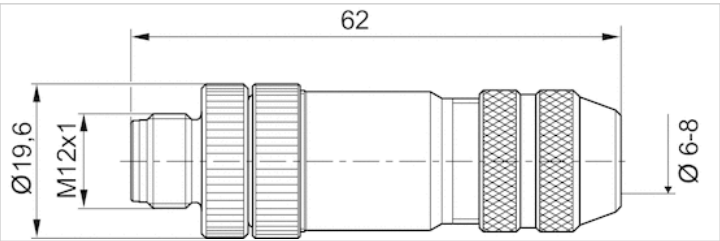
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Brass, nickel-plated

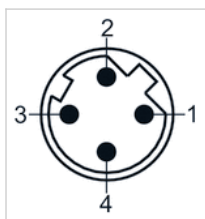
Dimensions

Dimensions



Pin assignments

Plug pin assignment



Round plug connector, Series CON-RD

- Plug, M12x1, 5-pin, A-coded, straight, 180°
- for CANopen, DeviceNet
- UL (Underwriters Laboratories)
- shielded



Connection type	Screws
Ambient temperature min./max.	-40 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.106 lbs

Technical data

Part No.	Max. current	suitable cable-Ø min./max
8942051612	4 A	0.24 inch

Technical information

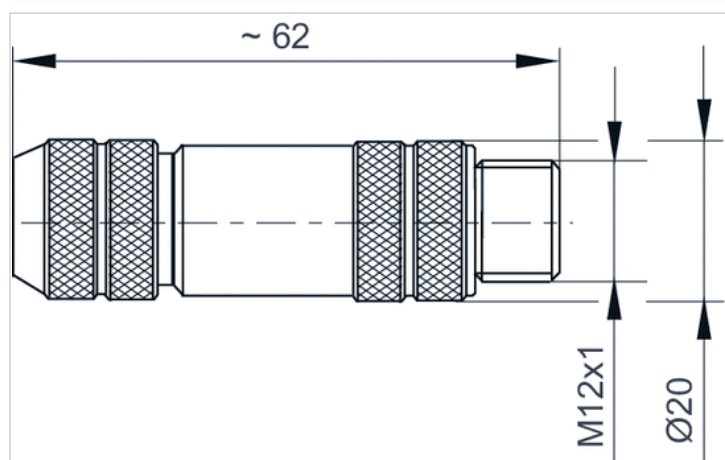
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Brass, nickel-plated

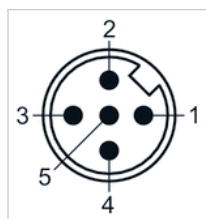
Dimensions

Dimensions



Pin assignments

Plug pin assignment



Round plug connector, Series CON-RD

- Plug, M12x1, 5-pin, B-coded, straight, 180°
- for PROFIBUS DP
- UL (Underwriters Laboratories)
- shielded



Connection type	Screws
Ambient temperature min./max.	-13 ... 194 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.132 lbs

Technical data

Part No.	Max. current	suitable cable-Ø min./max
8941054054	4 A	0.16 inch

Technical information

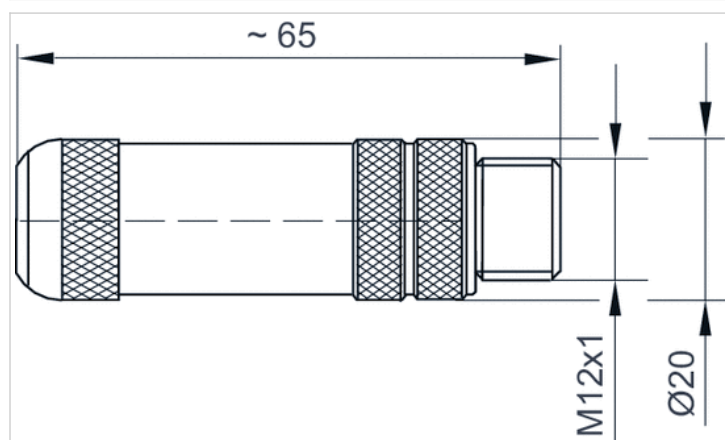
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Brass, nickel-plated
Seals	Fluorocarbon caoutchouc

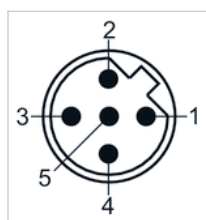
Dimensions

Dimensions



Pin assignments

Plug pin assignment



Round plug connector, Series CON-RD

- Socket, M12x1, 4-pin, A-coded, straight, 180°
- UL (Underwriters Laboratories)
- unshielded



Connection type	Screws
Ambient temperature min./max.	-13 ... 194 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.062 lbs
	The delivered product may vary from that in the illustration.

Technical data

Part No.	Max. current	suitable cable-Ø min./max
8941054324	4 A	0.16 inch

Technical information

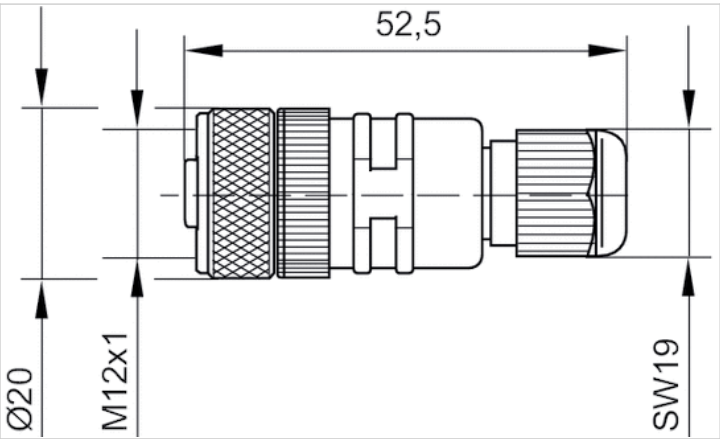
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polybutyleneterephthalate
Seals	Fluorocarbon caoutchouc

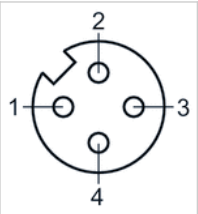
Dimensions

Dimensions



Pin assignments

Pin assignment socket



Round plug connector, Series CON-RD

- Socket, M12x1, 4-pin, A-coded, angled, 90°
- unshielded



Connection type	Screws
Ambient temperature min./max.	-13 ... 194 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.06 lbs

Technical data

Part No.	Max. current	suitable cable-Ø min./max
8941054424	4 A	0.16 inch

Technical information

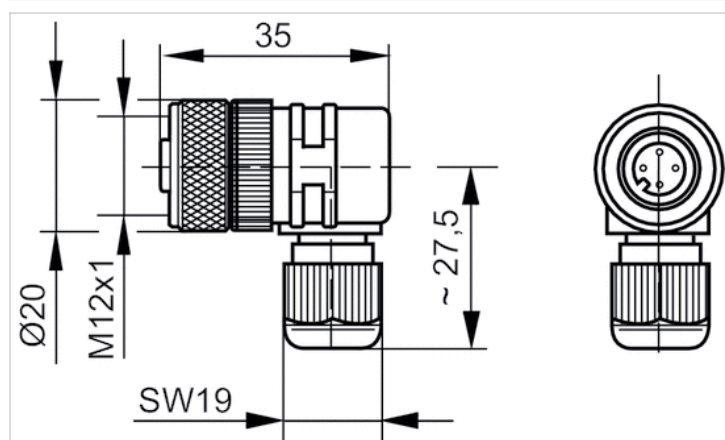
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polybutyleneterephthalate
Seals	Fluorocarbon caoutchouc

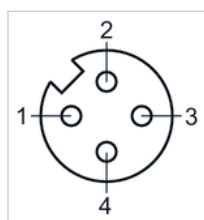
Dimensions

Dimensions



Pin assignments

Pin assignment socket



Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, A-coded, straight, 180°
- for CANopen, DeviceNet
- UL (Underwriters Laboratories)
- shielded



Connection type	Screws
Ambient temperature min./max.	-40 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.112 lbs

Technical data

Part No.	Max. current	suitable cable-Ø min./max
8942051602	4 A	0.24 inch

Technical information

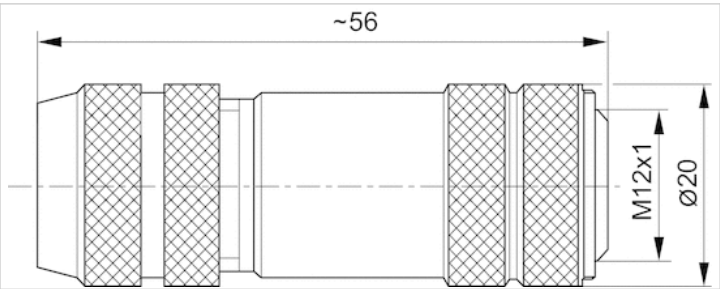
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Brass, nickel-plated

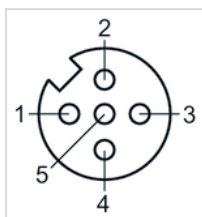
Dimensions

Dimensions



Pin assignments

Pin assignment socket



Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, B-coded, straight, 180°
- for PROFIBUS DP
- UL (Underwriters Laboratories)
- shielded



Connection type	Screws
Ambient temperature min./max.	-13 ... 194 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.132 lbs

Technical data

Part No.	Max. current	suitable cable-Ø min./max
8941054044	4 A	0.16 / 0.35 inch

Technical information

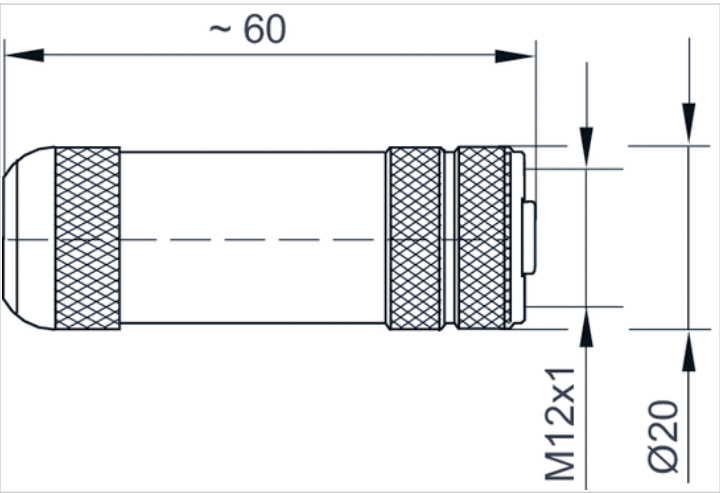
The specified protection class is only valid in assembled and tested state.

Technical information

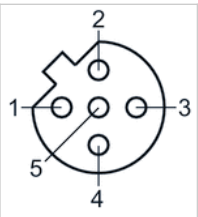
Material	
Housing	Brass, nickel-plated
Seals	Fluorocarbon caoutchouc

Dimensions

Dimensions



Pin assignments



Data final plug, Series CON-RD

- Plug, M12x1, 4-pin, B-coded, straight, 180°
- for PROFIBUS DP



Ambient temperature min./max.	-13 ... 176 °F
Protection class	IP67
Weight	0.029 lbs

Technical data

Part No.
8941054064

Technical information

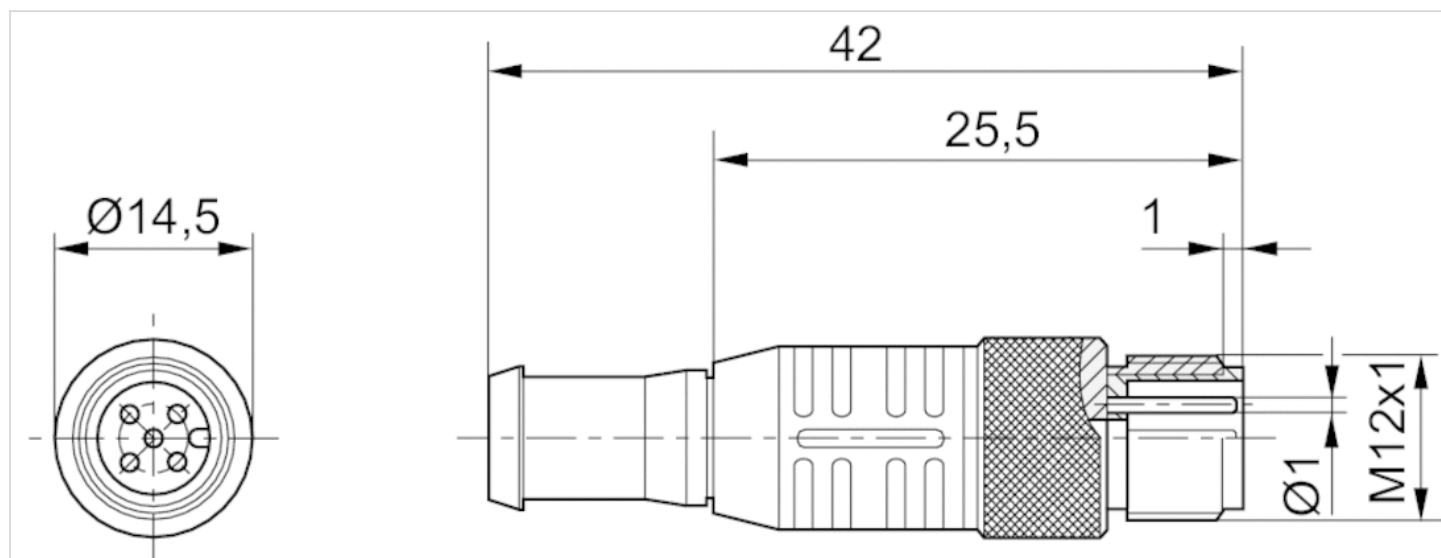
The specified protection class is only valid in assembled and tested state.
 PROFIBUS DP bus termination plug

Technical information

Material	
Housing	Thermoplastic elastomer

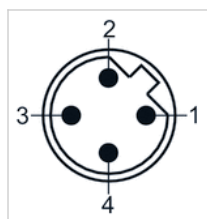
Dimensions

Dimensions



Pin assignments

Plug pin assignment



Data final plug, Series CON-RD

- Plug, M12x1, 5-pin, A-coded, straight, 180°
- for CANopen, DeviceNet



Ambient temperature min./max.	32 ... 140 °F
Protection class	IP67
Weight	0.024 lbs

Technical data

Part No.
8941054264

Technical information

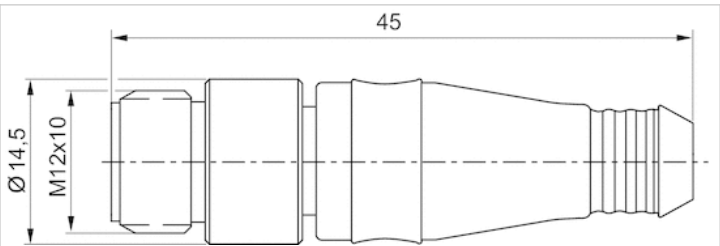
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Thermoplastic elastomer

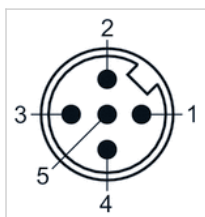
Dimensions

Dimensions



Pin assignments

Plug pin assignment

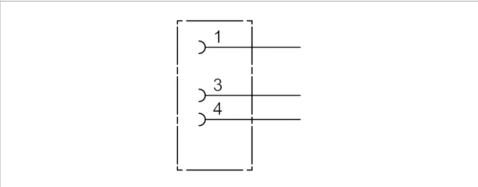


Round plug connector, Series CON-RD

- Plug, M8x1, 3-pin, A-coded, straight, 180°
- unshielded



Connection type	Screws
Ambient temperature min./max.	-40 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.018 lbs



Technical data

Part No.	Max. current	Contact assignment	suitable cable-Ø min./max
R412021676	4 A	3	0.14 / 0.19 inch

Technical information

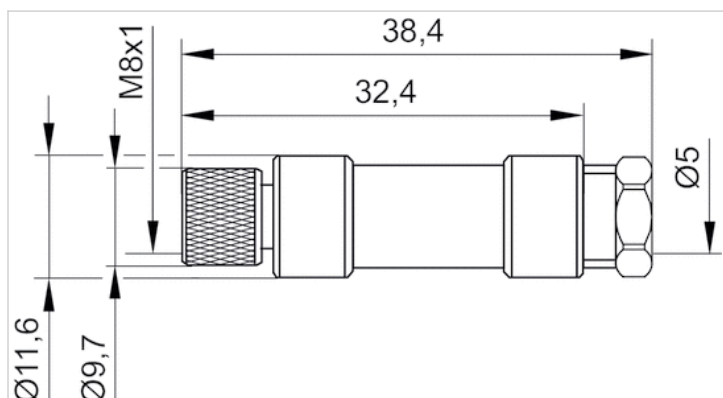
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

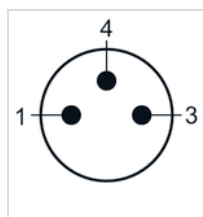
Dimensions

Dimensions



Pin assignments

Plug pin assignment



Round plug connector, Series CON-RD

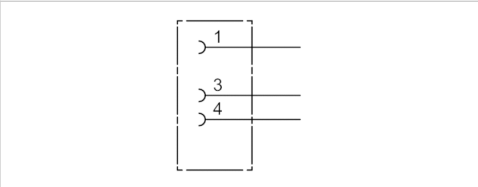
- Plug, M8x1, 3-pin, A-coded, angled, 90°
- unshielded



Connection type
Ambient temperature min./max.
Operational voltage
Protection class
Weight

Screws
-13 ... 185 °F
48 V, AC/DC

IP67
0.018 lbs
The delivered product may vary from that in the illustration.



Technical data

Part No.	Max. current	Contact assignment	suitable cable-Ø min./max
R412021677	4 A	3	0.14 / 0.19 inch

Technical information

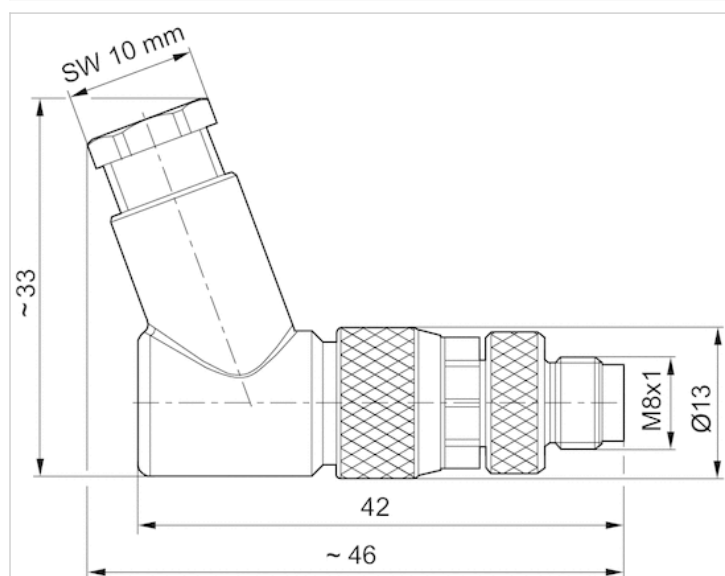
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

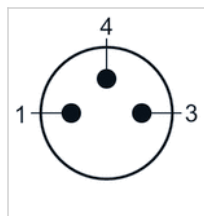
Dimensions

Dimensions



Pin assignments

Plug pin assignment

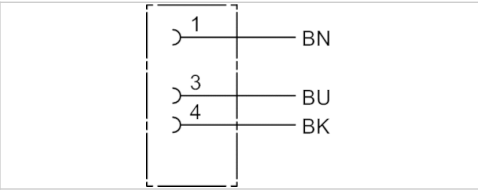


Round plug connector, Series CON-RD

- Plug, M8x1, 3-pin, A-coded, angled, 90°
- open cable ends
- with cable
- suitable for dynamic laying
- unshielded



Ambient temperature min./max.	-13 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP68
Wire cross-section	0 in²



Technical data

Part No.	Max. current	Number of wires	Cable length
R412021678	4 A	3	6.56 ft.
R412021679	4 A	3	16.4 ft.
R412021680	4 A	3	32.81 ft.

suitable for dynamic laying

Technical information

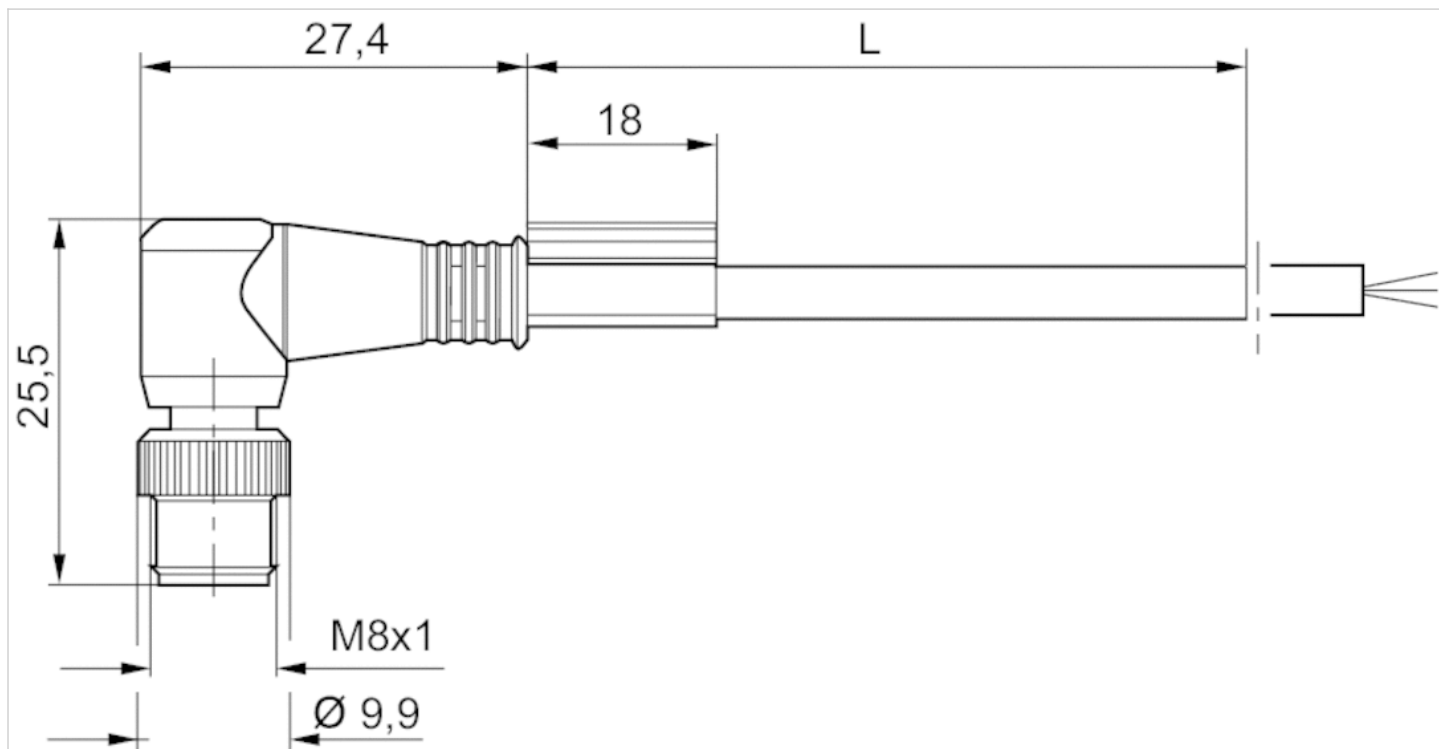
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

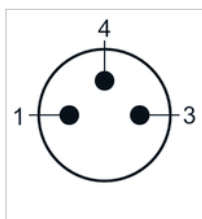
Dimensions



L = length

Pin assignments

Plug pin assignment



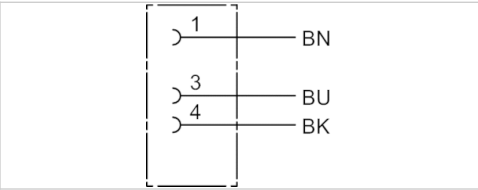
- (1) BN=brown
- (3) BU=blue
- (4) BK=black

Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, straight, 180°
- Plug, A-coded, angled, 90°
- with cable
- suitable for dynamic laying
- unshielded



Ambient temperature min./max.	-13 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP68
Wire cross-section	0 in²



Technical data

Part No.	Max. current	Number of wires	Cable length
R412021681	4 A	3	3.28 ft.
R412021682	4 A	3	6.56 ft.
R412021683	4 A	3	16.4 ft.

suitable for dynamic laying

Technical information

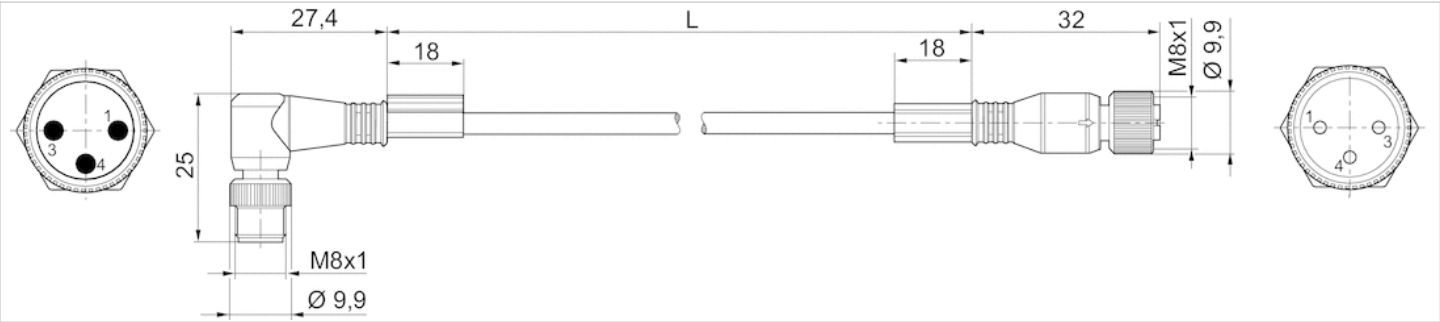
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

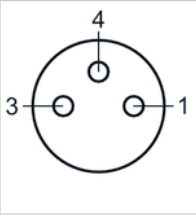
Dimensions



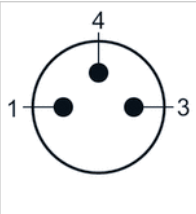
L = length

Pin assignments

Pin assignment socket



Plug pin assignment



Round plug connector, Series CON-RD

- Plug, M8x1, 3-pin, A-coded, straight, 180°
- open cable ends
- with cable
- unshielded



Operational voltage	30 V, AC/DC
Protection class	IP67
Weight	See table below

Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Weight
8946203602	3 A	3	0.18 inch	6.56 ft.	0.121 lbs
8946203612	3 A	3	0.18 inch	16.4 ft.	0.282 lbs
8946203622	3 A	3	0.18 inch	32.81 ft.	0.551 lbs

Technical information

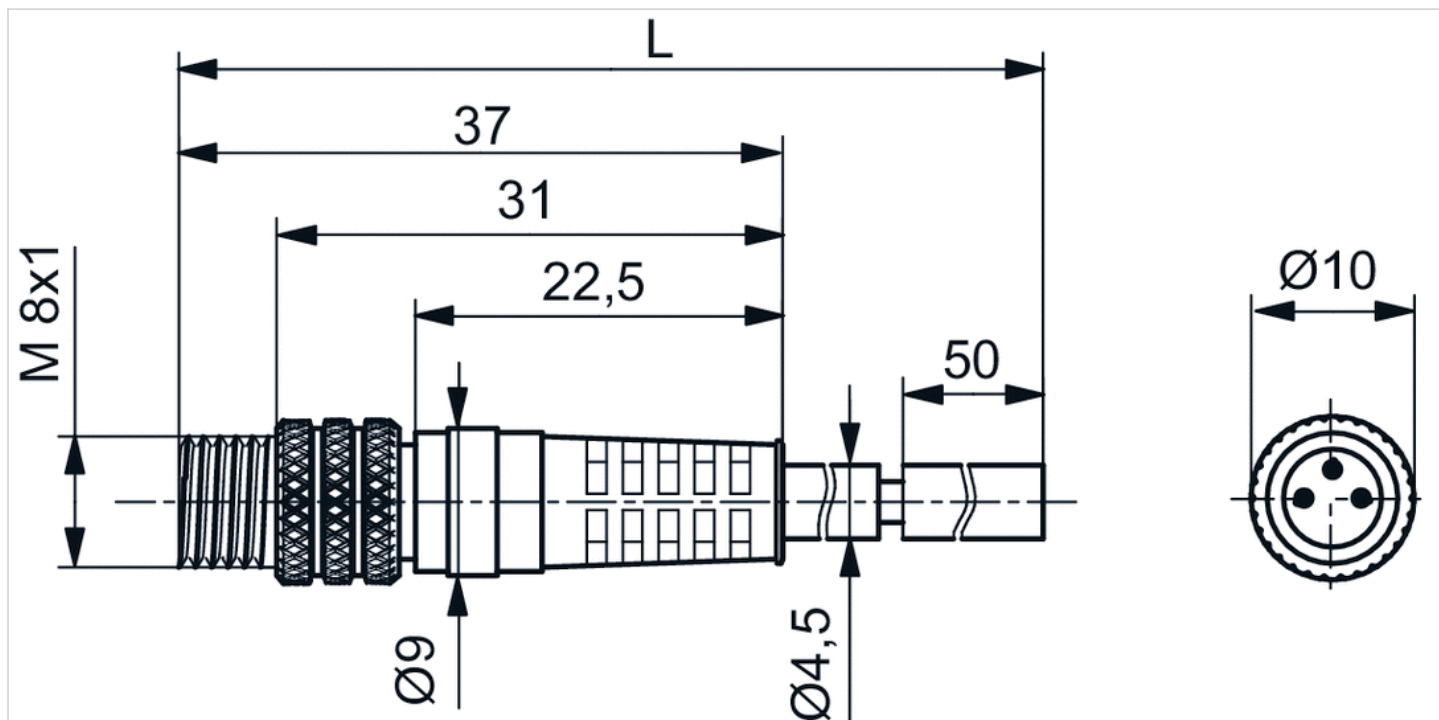
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyvinyl chloride

Dimensions

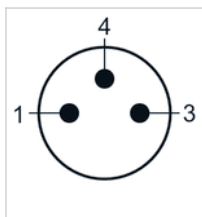
Dimensions



L = length

Pin assignments

Plug pin assignment



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

Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, straight, 180°
- Plug, A-coded, straight, 180°
- with cable
- unshielded



Protection class

Weight

IP68

See table below

Technical data

Part No.	Number of wires	Weight
8946203702	3	0.077 lbs
8946203712	3	0.132 lbs
8946203722	3	0.3 lbs

Technical information

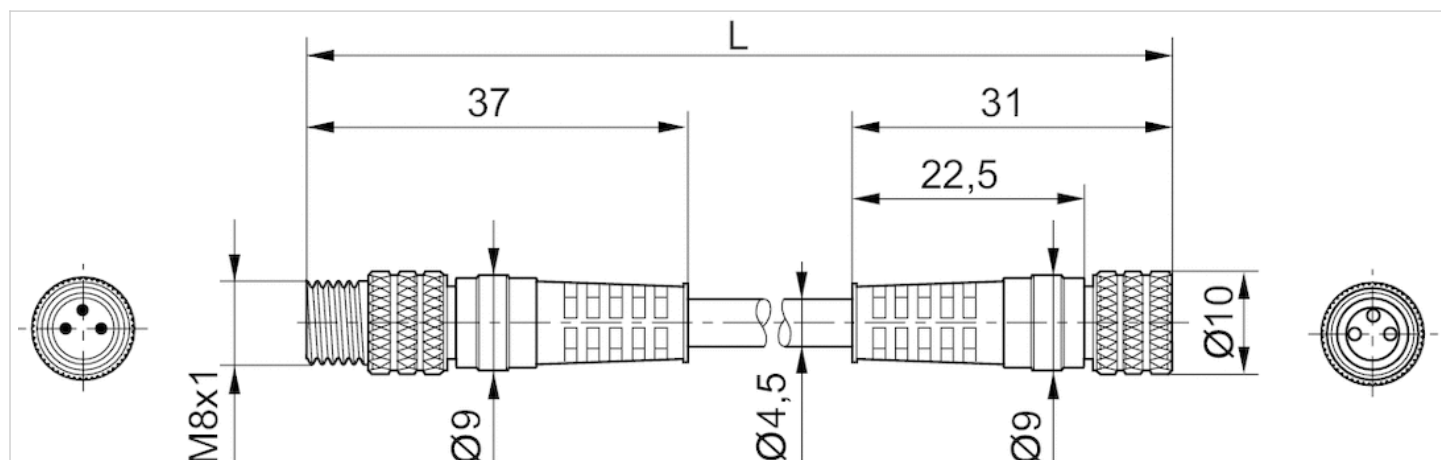
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Cable sheath	Polyvinyl chloride

Dimensions

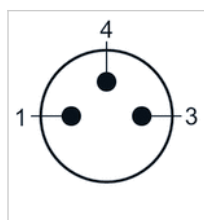
Dimensions



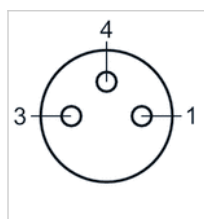
L = length

Pin assignments

Plug pin assignment



Pin assignment socket



Adapter, Series CON-AP

- Socket, M12x1, 3-pin, A-coded, straight, 180°
- Plug, M8x1, A-coded, straight, 180°
- unshielded



Ambient temperature min./max.	-13 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67

Technical data

Part No.	Max. current	Contact assignment
R412021684	4 A	3

Technical information

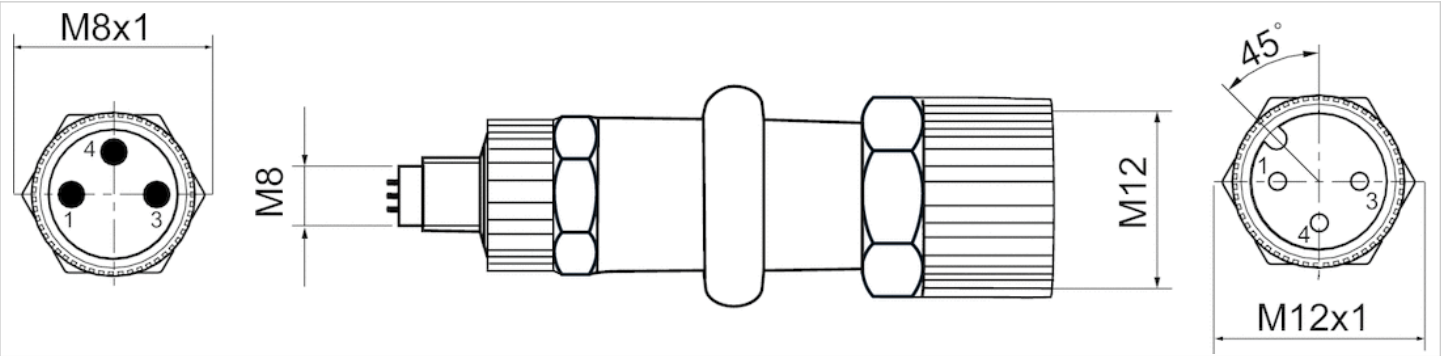
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane

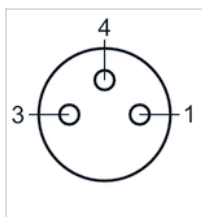
Dimensions

Dimensions

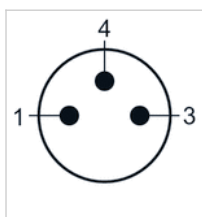


Pin assignments

Pin assignment socket



Plug pin assignment



Round plug connector, Series CON-RD

- Plug, M12x1, 4-pin, A-coded, angled, 90°, Plug, M12x1, 4-pin, A-coded, straight, 180°
- UL (Underwriters Laboratories)
- unshielded



Connection type	Screws
Ambient temperature min./max.	-40 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.044 lbs
	The delivered product may vary from that in the illustration.

Technical data

Part No.	Electrical connection	Max. current	suitable cable-Ø min./max	Fig.
	1			
1834484223	Plug, M12x1, 4-pin, A-coded, angled, 90°	4 A	0.16 inch	Fig. 1
1834484246	Plug, M12x1, 4-pin, A-coded, straight, 180°	4 A	0.16 / 0.23 inch	Fig. 2

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.

Technical information

The specified protection class is only valid in assembled and tested state.
Included: 2 seals for 2 cables each with Ø 0.083 in ... 0.118 in and Ø 0.157 in ... 0.197 in .

Technical information

Material	
Housing	Polyamide

Dimensions

Fig. 1

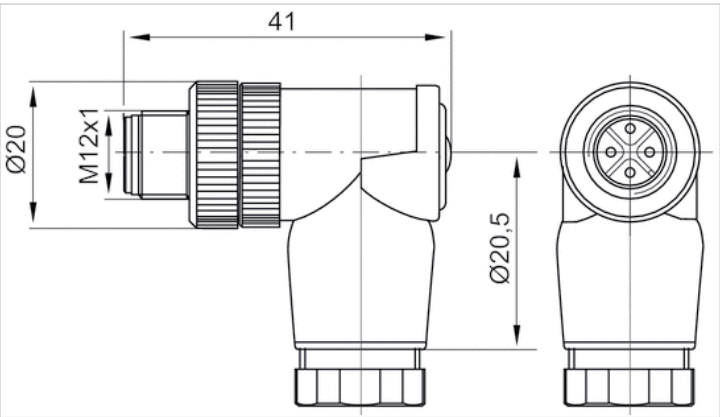
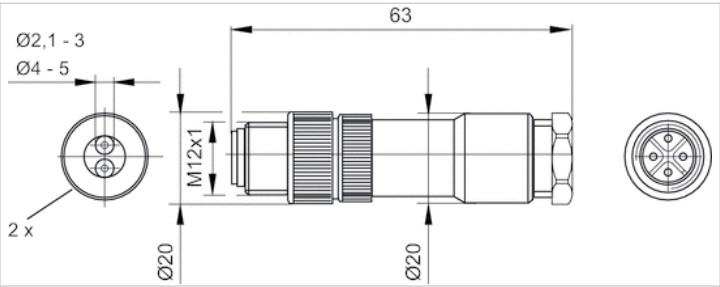


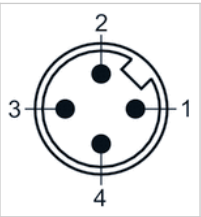
Fig. 2



duo plug

Pin assignments

Plug pin assignment



Round plug connector, Series CON-RD

- Plug, M12x1, 4-pin, A-coded, straight, 180°
- UL (Underwriters Laboratories)
- unshielded



Connection type	Screws
Ambient temperature min./max.	-40 ... 185 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.035 lbs

Technical data

Part No.	Max. current	suitable cable-Ø min./max
1834484222	4 A	0.16 inch

Technical information

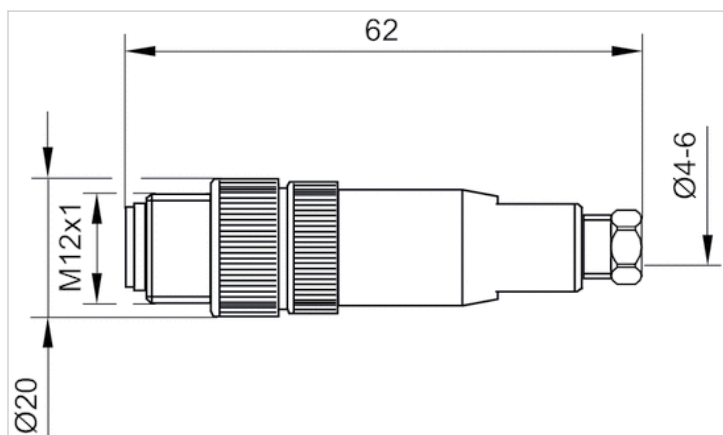
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

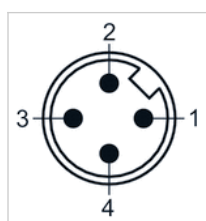
Dimensions

Dimensions



Pin assignments

Plug pin assignment



Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, straight, 180°
- Plug, M12x1, A-coded, straight, 180°
- with cable
- unshielded



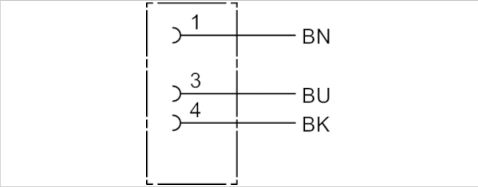
Protection class

Weight

IP68

0.143 lbs

The delivered product may vary from that in the illustration.



Technical data

Part No.	Number of wires
8946203462	3

Technical information

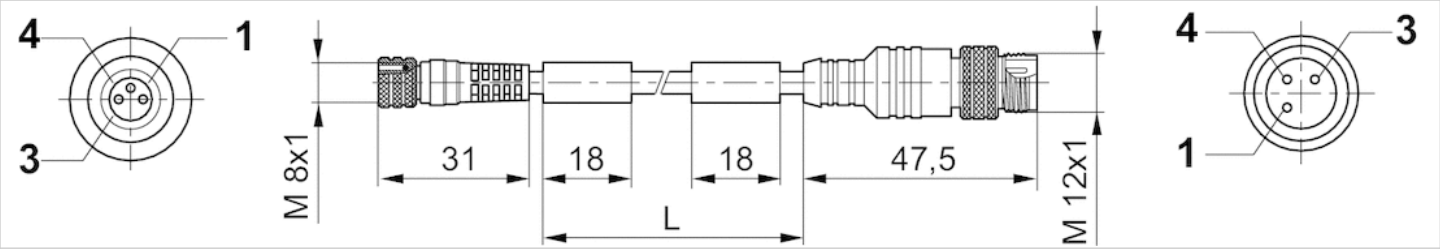
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Cable sheath	Polyvinyl chloride

Dimensions

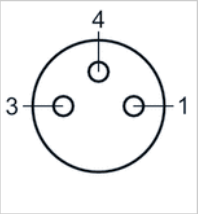
Dimensions



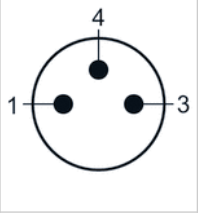
L = length

Pin assignments

Pin assignment socket

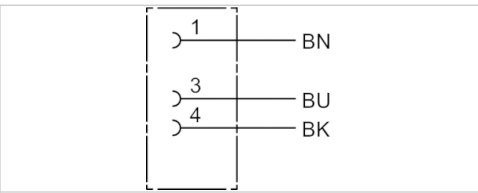


Plug pin assignment



Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, straight, 180°
- Plug, M12x1, A-coded, angled, 90°
- with cable
- suitable for dynamic laying
- unshielded



Ambient temperature min./max.	See table below
Operational voltage	48 V, AC/DC
Protection class	IP67
Wire cross-section	0 in²
Mounting screw tightening torque	0.37 ft./lbs.
	The delivered product may vary from that in the illustration.

Technical data

Part No.	Ambient temperature min./max.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length
R412021696	-13 ... 176 °F	4 A	3	0.81 inch	0.16 inch	6.56 ft.
R412021697	-13 ... 185 °F	4 A	3	0.81 inch	0.16 inch	16.4 ft.

suitable for dynamic laying

Technical information

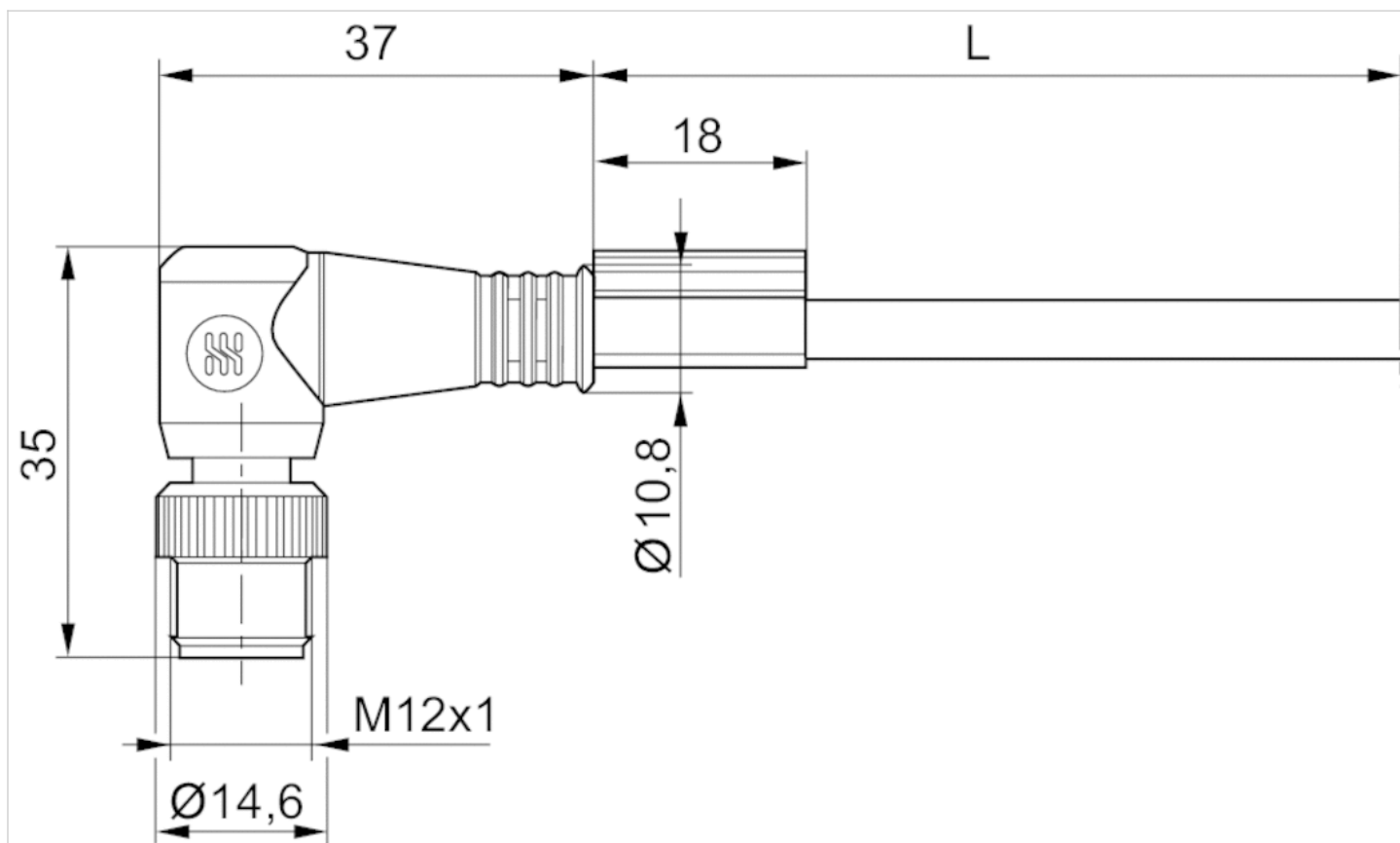
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

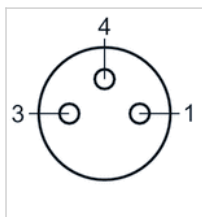
Dimensions



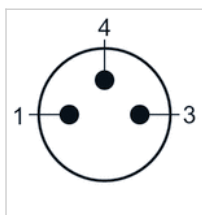
L = length

Pin assignments

Pin assignment socket



Plug pin assignment

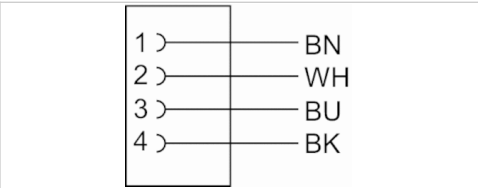


Y-Plug connector, series CON-RD

- Plug, M12x1, 4-pin, A-coded, straight, 180°
- 2, open cable ends, 3-pin
- 3-pin
- with cable
- unshielded



Ambient temperature min./max.	-13 ... 176 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Mounting screw tightening torque	0.59 ft./lbs.



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length
R412021688	4 A	4	0.17 inch	6.56 ft.

with self-clinching screw

Technical information

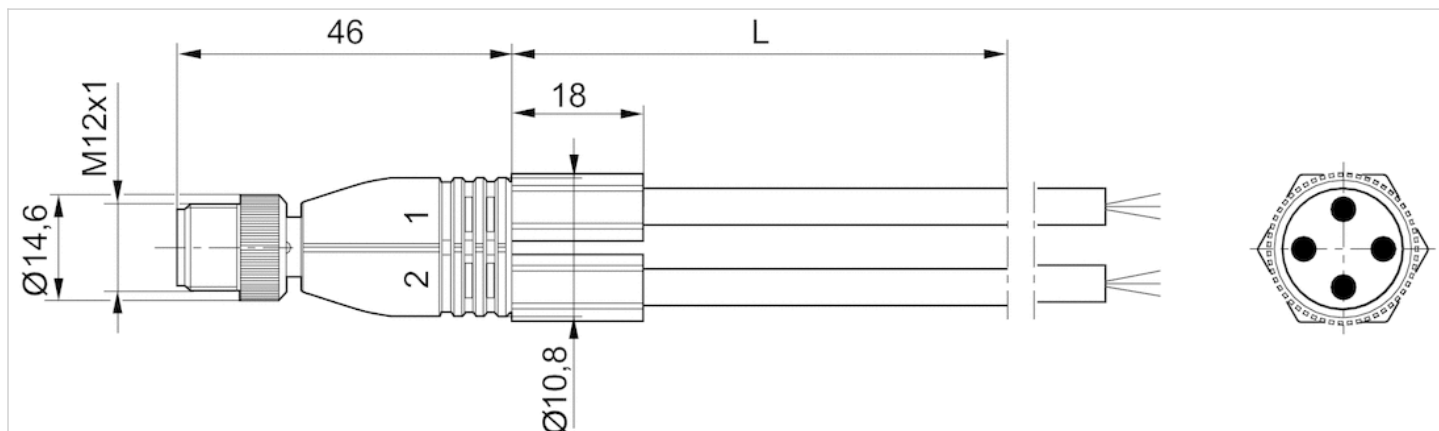
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

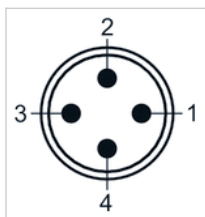
Dimensions



L = length

Pin assignments

Plug pin assignment



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

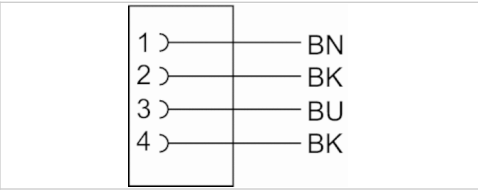
Line 2: (1) BN = brown, (3) BU =blue, (2) BK = black

Y-Plug connector, series CON-RD

- Plug, M12x1, 4-pin, A-coded, straight, 180°
- 2, Socket, A-coded, straight, 180°
- Socket, M8x1, 3-pin, A-coded, straight, 180°
- with cable
- unshielded



Ambient temperature min./max.	-13 ... 176 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Mounting screw tightening torque	0.59 ft./lbs.



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length
R412021685	4 A	3	0.16 inch	1.97 ft.
R412021687	4 A	3	0.16 inch	9.84 ft.

Technical information

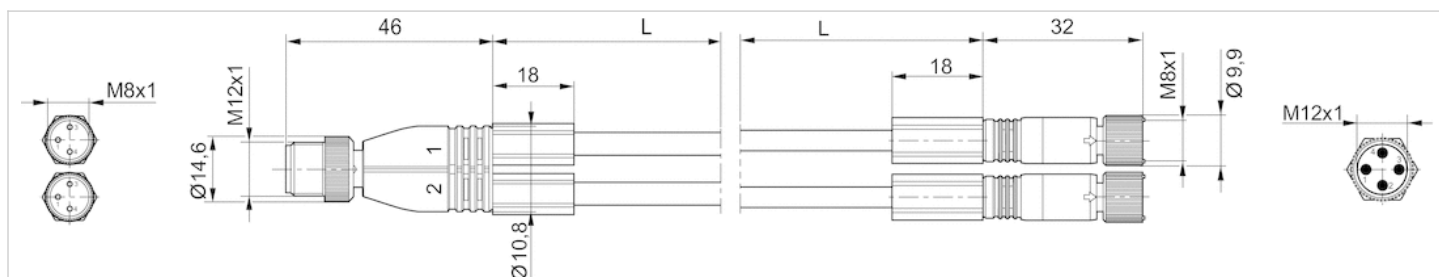
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

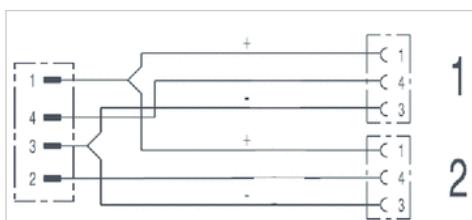
Dimensions



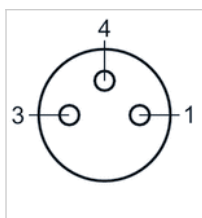
L = length

Pin assignments

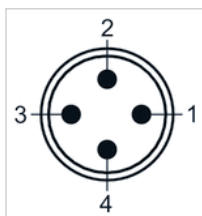
Assignment scheme



Pin assignment socket



Plug pin assignment



Round plug connector, Series CON-RD

- Plug, M12x1, 5-pin, A-coded, straight, 180°
- open cable ends, 5-pin
- with cable
- unshielded



Protection class
Weight

IP68
See table below
The delivered product may vary from that in the illustration.

Technical data

Part No.	Number of wires	Cable length	Weight
8946203432	5	6.56 ft.	0.214 lbs
8946203442	5	16.4 ft.	0.503 lbs

with self-clinching screw

Technical information

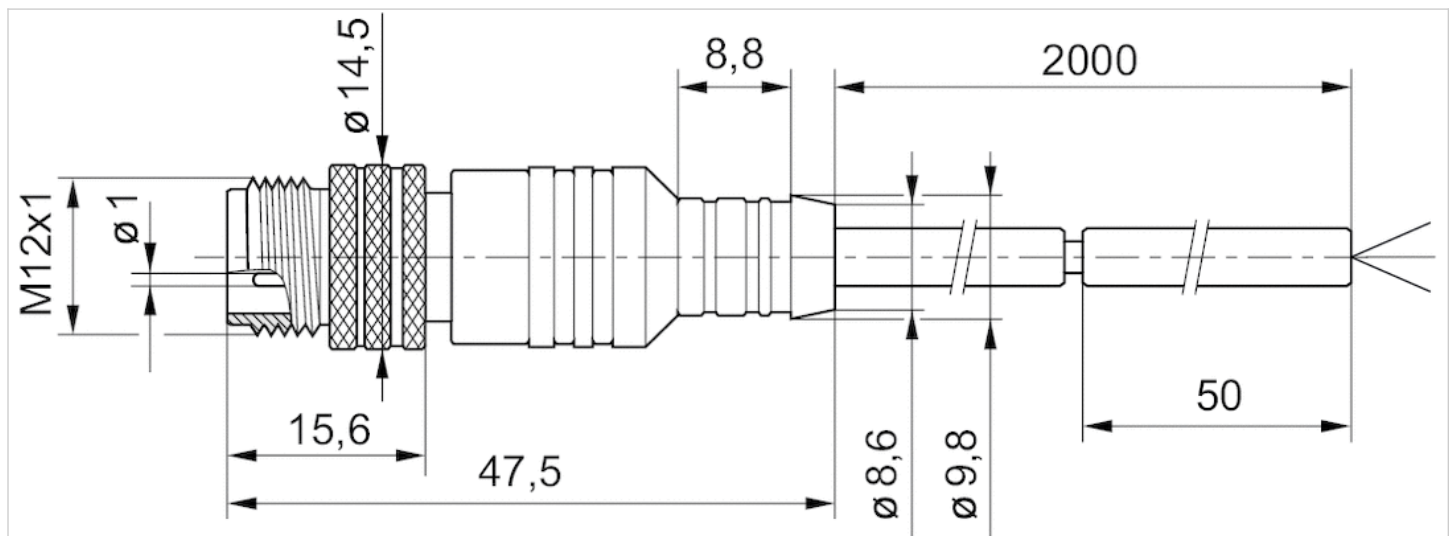
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Cable sheath	Polyvinyl chloride

Dimensions

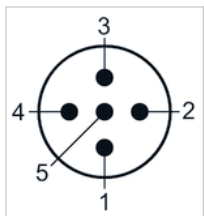
Dimensions



L = length

Pin assignments

Plug pin assignment



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

Round plug connector, Series CON-RD

- Plug, M12x1, 5-pin, A-coded, angled, 90°
- open cable ends, 5-pin
- with cable
- suitable for dynamic laying
- unshielded



Ambient temperature min./max.	-13 ... 176 °F
Operational voltage	48 V, AC/DC
Protection class	IP68
Wire cross-section	0 in ²
Mounting screw tightening torque	0.59 ft./lbs.

Technical data

Part No.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length
R412021691	4 A	5	0.98 inch	0.2 inch	6.56 ft.
R412021692	4 A	5	0.98 inch	0.2 inch	16.4 ft.
R412021693	4 A	5	0.98 inch	0.2 inch	32.81 ft.

suitable for dynamic laying

Technical information

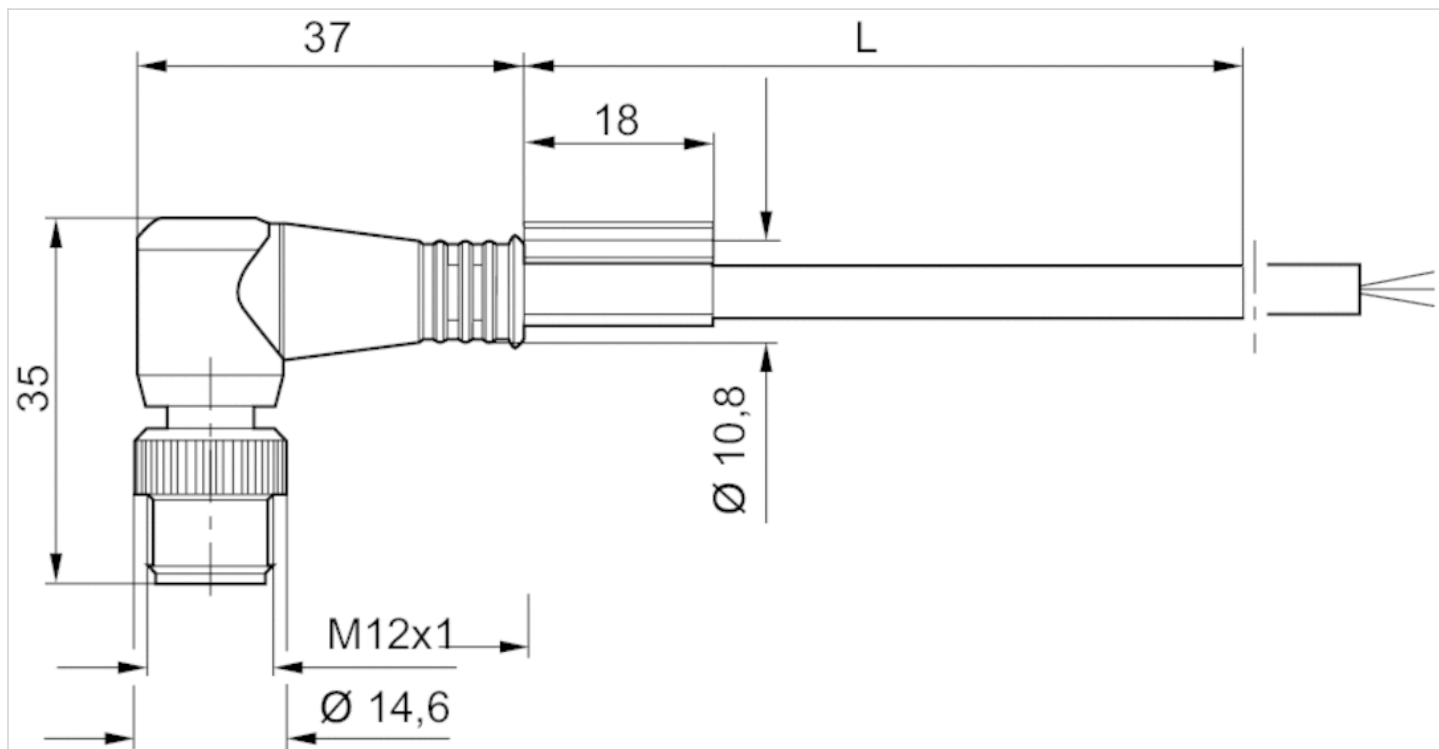
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

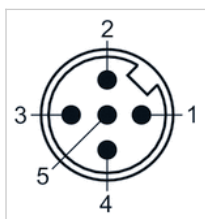
Dimensions



L = length

Pin assignments

Plug pin assignment



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

Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, A-coded, straight, 180°
- Plug, angled, 90°
- with cable
- suitable for dynamic laying
- unshielded



Ambient temperature min./max.	-13 ... 176 °F
Operational voltage	48 V, AC/DC
Protection class	IP68
Wire cross-section	0 in²
Mounting screw tightening torque	0.59 ft./lbs.

Technical data

Part No.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length
R412021694	4 A	5	0.98 inch	0.2 inch	6.56 ft.
R412021695	4 A	5	0.98 inch	0.2 inch	16.4 ft.

suitable for dynamic laying

Technical information

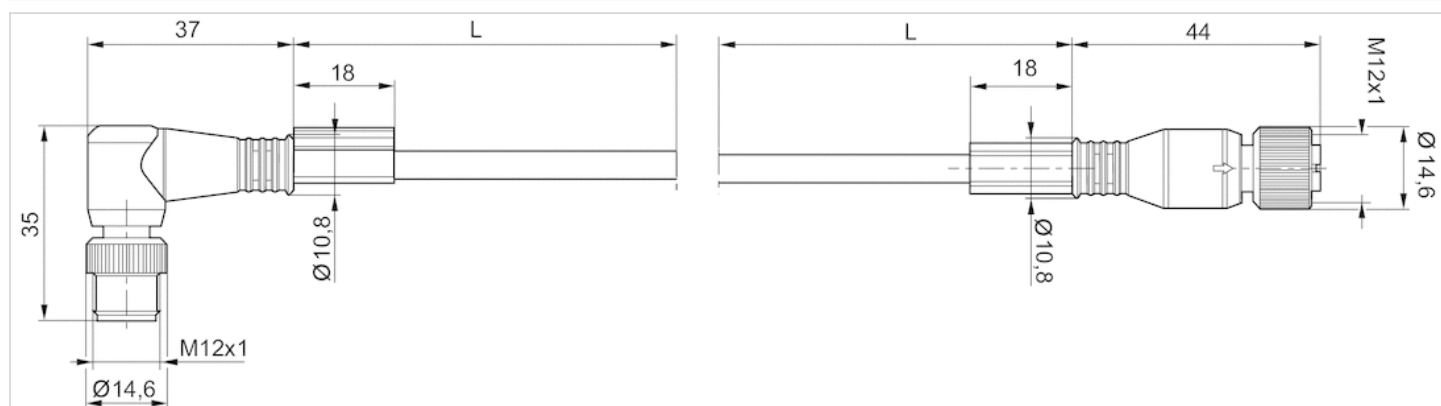
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

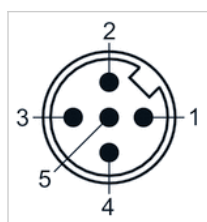
Dimensions



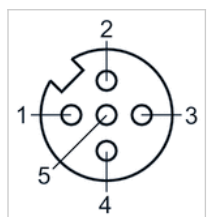
L = length

Pin assignments

Plug pin assignment



Pin assignment socket



Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, A-coded, straight, 180°
- Plug, angled, 90°
- with cable
- suitable for dynamic laying
- shielded



Ambient temperature min./max.	-13 ... 176 °F
Operational voltage	48 V, AC/DC
Protection class	IP68
Wire cross-section	0 in²
Mounting screw tightening torque	0.59 ft./lbs.

1	BN
2	WH
3	BU
4	BK
5	

Technical data

Part No.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length
R412022193	4 A	4	2.13 inch	0.21 inch	6.56 ft.

suitable for dynamic laying

Technical information

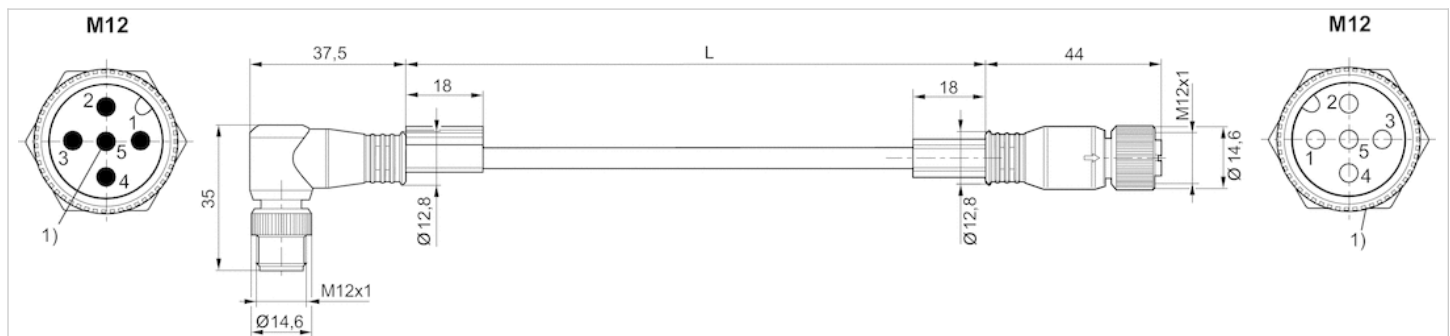
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

Dimensions



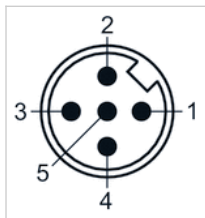
L = length

PIN assignment 1:1

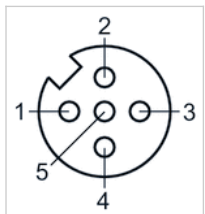
1) Shield is connected to pin 5 of the plug and the knurled screw of the socket.

Pin assignments

Plug pin assignment



Pin assignment socket

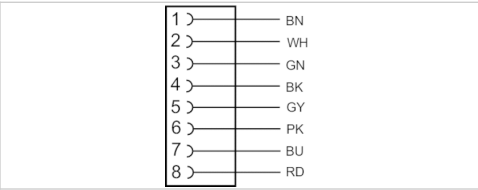


Round plug connector, Series CON-RD

- Socket, M12x1, 8-pin, A-coded, straight, 180°
- Plug, straight, 180°
- with cable
- suitable for dynamic laying
- shielded



Ambient temperature min./max.	-13 ... 176 °F
Operational voltage	30 / 36 V, AC/DC
Protection class	IP67



Technical data

Part No.	Max. current	Number of wires	Cable length
8946202802	1.5 A	8	1.64 ft.
8946202812	1.5 A	8	3.28 ft.
8946202822	1.5 A	8	6.56 ft.
8946202832	1.5 A	8	16.4 ft.
8946202842	1.5 A	8	32.81 ft.

suitable for dynamic laying

Technical information

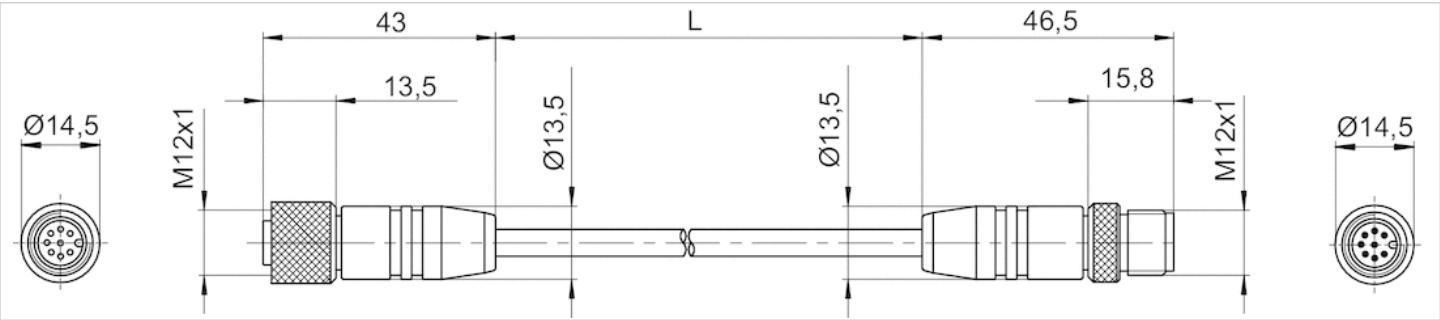
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Seals	Fluorocaoutchouc
Cable sheath	Polyurethane

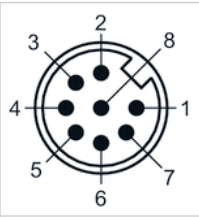
Dimensions

Dimensions

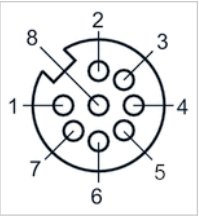


L = length

Pin assignments



Pin assignment socket



Distributor, Series AES

- 4x passive distributor, M12x1, 8-pin / 4x M8x1, 3-pin
- Plug (male), M12x1, 8-pin



Ambient temperature min./max.	-22 ... 176 °F
Operational voltage electronics	24 V DC
Power consumption electronics	2 A
Protection class	IP67
Weight	0.154 lbs

Technical data

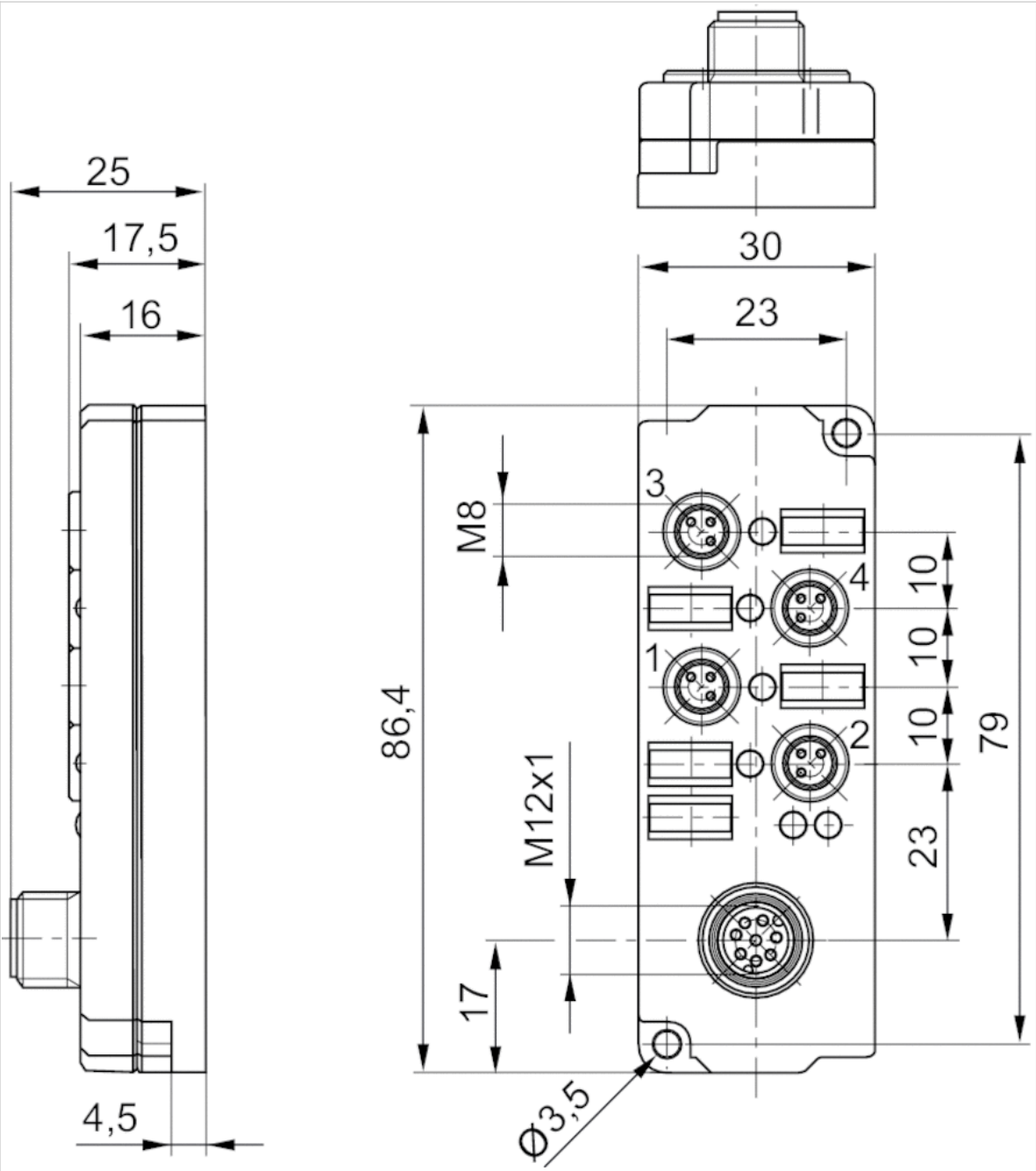
Part No.	Type	Port	Port
		1	2
R402001810	16DI4M12, 16DI8M8	Plug (male), M12x1, 8-pin	Socket (female), M8x1, 3-pin

Technical information

Material	
Housing	Polyamide

Dimensions

Dimensions



Y-Plug connector, series CON-AP

- 2, Plug, M12x1, 5-pin, A-coded, straight, 180°
- Socket, A-coded, straight, 180°
- Socket, M12x1, 5-pin, A-coded, straight, 180°
- unshielded



Ambient temperature min./max.	-13 ... 194 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.064 lbs
	The delivered product may vary from that in the illustration.

Technical data

Part No.	Max. current
8941002392	4 A

Technical information

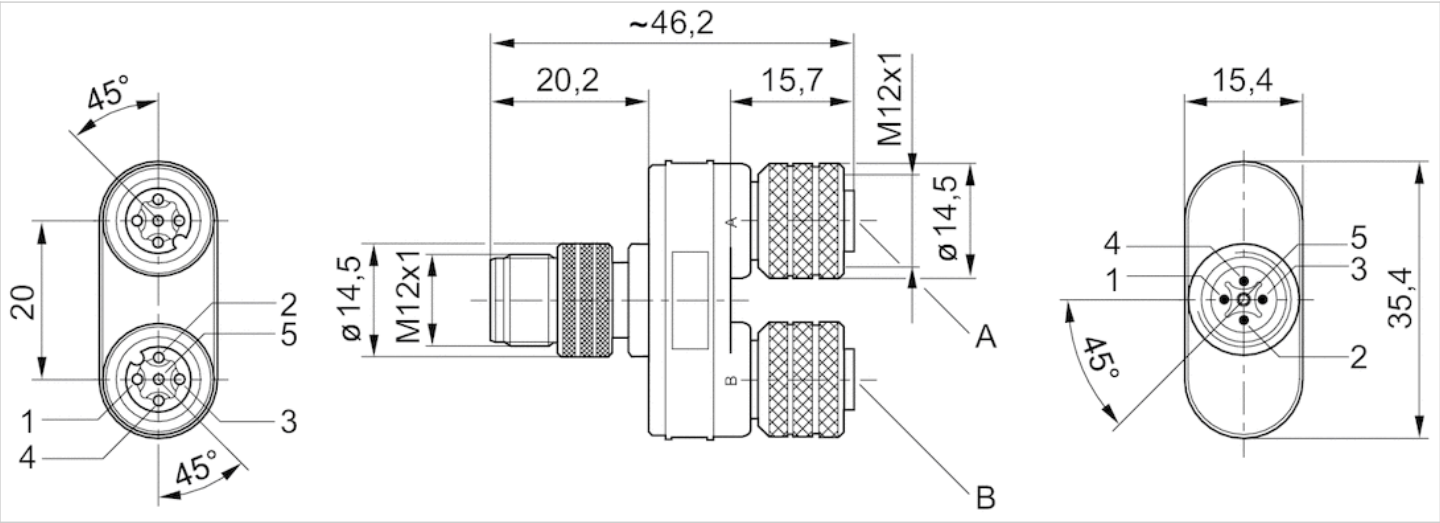
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Seals	Fluorocaoutchouc

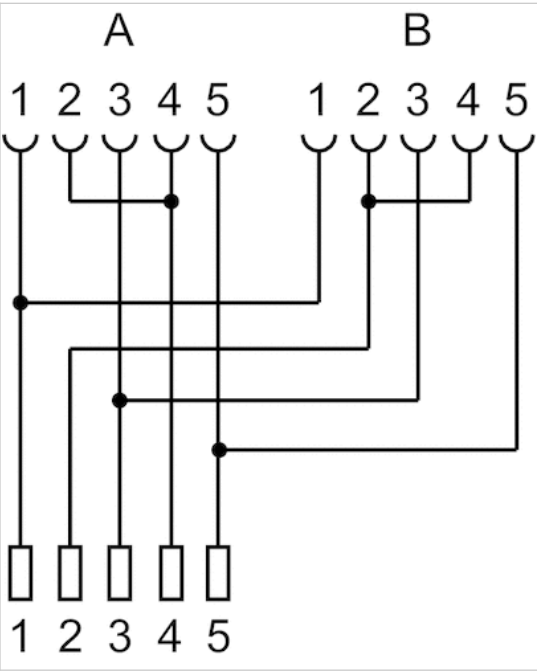
Dimensions

Dimensions



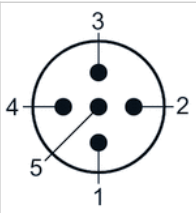
Sockets: Pin 2 and 4 bridged.

Assignment scheme

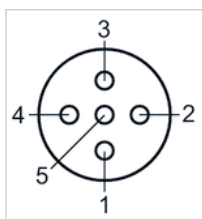


Pin assignments

Plug pin assignment



Pin assignment socket



Y-Plug connector, series CON-AP

- 2, Plug, M12x1, 4-pin, A-coded, straight, 180°
- Socket, M8x1, 3-pin, A-coded, straight, 180°
- Socket, M8x1, 3-pin, A-coded, straight, 180°
- unshielded



Ambient temperature min./max.	-13 ... 194 °F
Operational voltage	48 V, AC/DC
Protection class	IP67
Weight	0.044 lbs
	The delivered product may vary from that in the illustration.

Technical data

Part No.	Max. current
8941002382	4 A

Technical information

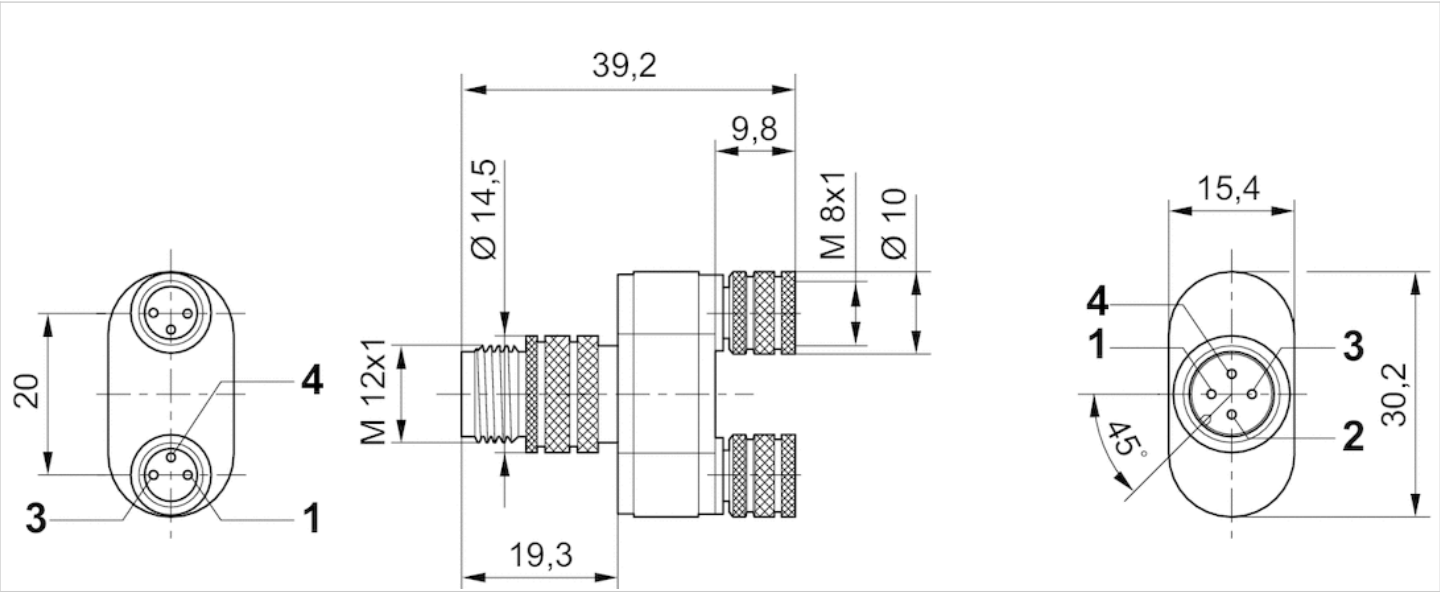
The specified protection class is only valid in assembled and tested state.

Technical information

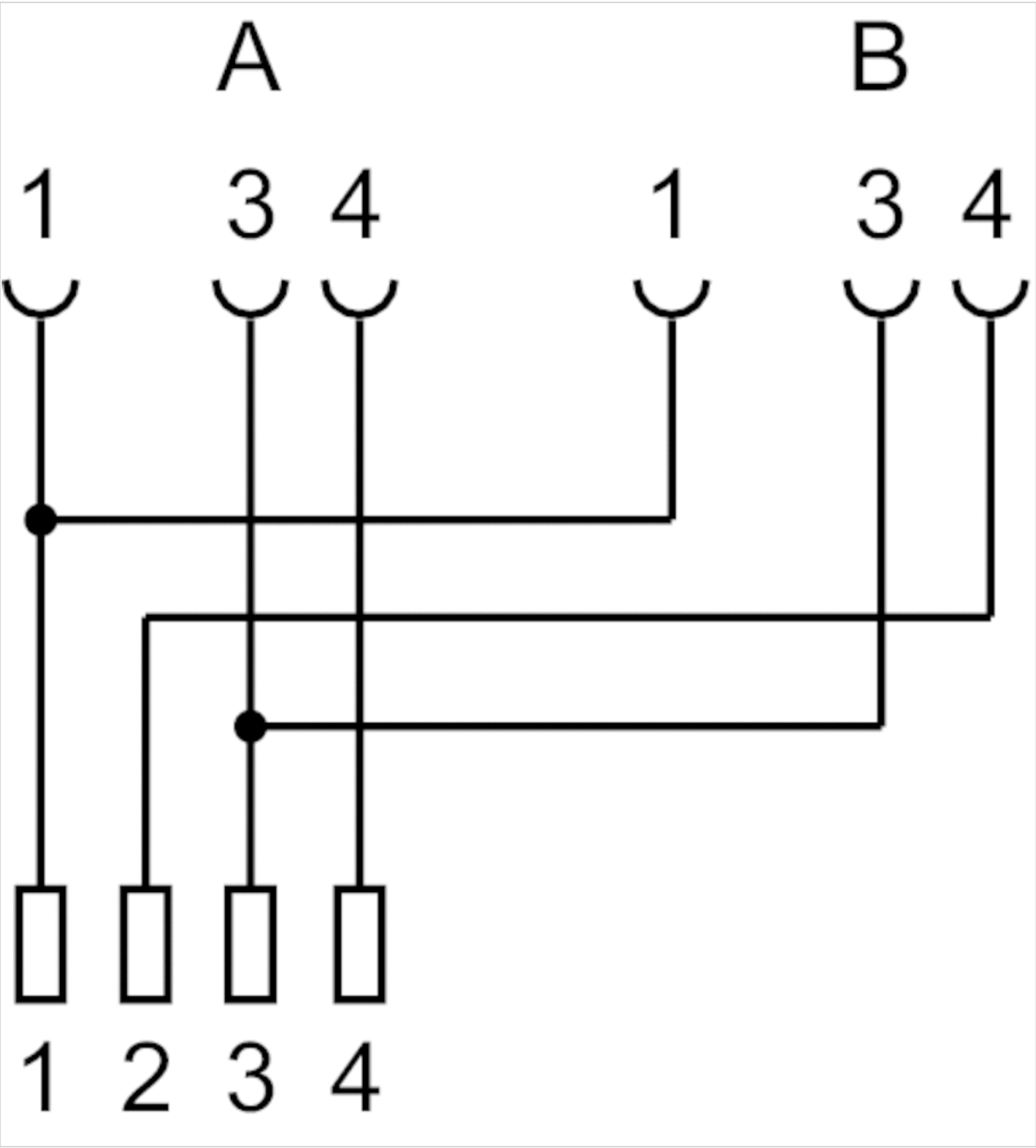
Material	
Housing	Polyurethane
Seals	Fluorocaoutchouc

Dimensions

Dimensions

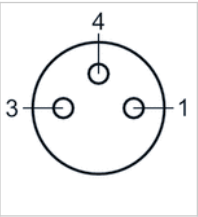


Assignment scheme

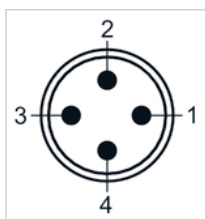


Pin assignments

Pin assignment socket



Plug pin assignment



Multipole plug, series CON-MP

- Plug, D-Sub, 25-pin, angled, 90°
- Socket, D-Sub, 25-pin, straight, 180°
- with cable
- UL (Underwriters Laboratories)
- unshielded



Ambient temperature min./max.	23 ... 122 °F
Operational voltage	24 V, DC
Protection class	IP67
Wire cross-section	0 in²

Technical data

Part No.	Max. current	Number of wires	Cable length	Certification
R412020635	3 A	25	1.64 ft.	UL (Underwriters Laboratories)
R412020636	3 A	25	3.28 ft.	UL (Underwriters Laboratories)
R412020637	3 A	25	6.56 ft.	UL (Underwriters Laboratories)
R412020638	3 A	25	16.4 ft.	UL (Underwriters Laboratories)
R412020639	3 A	25	32.81 ft.	UL (Underwriters Laboratories)

Technical information

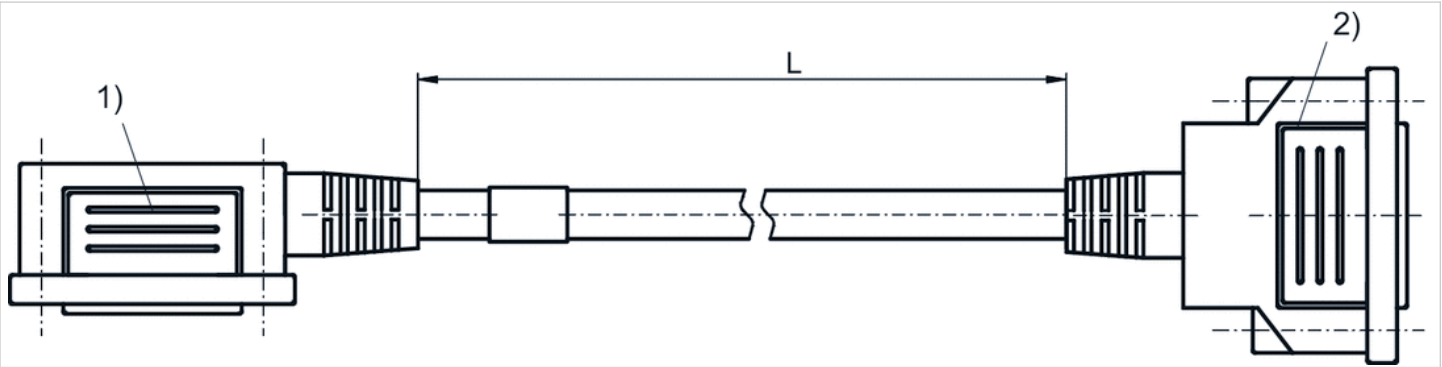
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Thermoplastic elastomer
Cable sheath	Polyvinyl chloride

Dimensions

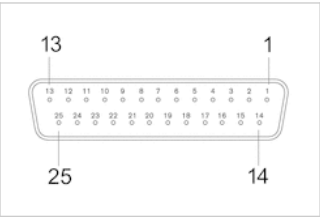
Dimensions



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

Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Socket

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

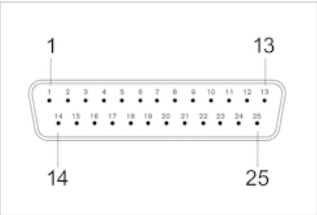
10	11	12	13	14	15
violet	gray/pink	red/blue	white/green	brown/green	white/yellow

16	17	18	19	20	21
yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue

22	23	24	25
brown/blue	white/red	brown/red	white/black

Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Plug

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

10	11	12	13	14	15
violet	gray/pink	red/blue	white/green	brown/green	white/yellow

16	17	18	19	20	21
yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue

22	23	24	25
brown/blue	white/red	brown/red	white/black

Multipole plug, series CON-MP

- Plug, D-Sub, 25-pin, angled, 90°
- Socket, D-Sub, 25-pin, angled, 90°
- with cable
- UL (Underwriters Laboratories)
- unshielded



Ambient temperature min./max.	23 ... 122 °F
Operational voltage	24 V, DC
Protection class	IP67
Wire cross-section	0 in²
The delivered product may vary from that in the illustration.	

Technical data

Part No.	Max. current	Number of wires	Cable length	Certification
R412020630	3 A	25	1.64 ft.	UL (Underwriters Laboratories)
R412020631	3 A	25	3.28 ft.	UL (Underwriters Laboratories)
R412020632	3 A	25	6.56 ft.	UL (Underwriters Laboratories)
R412020633	3 A	25	16.4 ft.	UL (Underwriters Laboratories)
R412020634	3 A	25	32.8 ft.	UL (Underwriters Laboratories)

Technical information

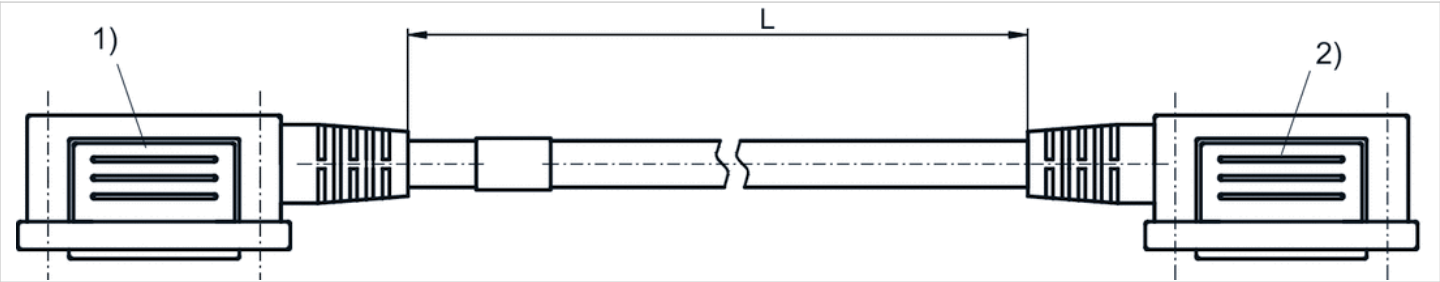
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Thermoplastic elastomer
Cable sheath	Polyvinyl chloride

Dimensions

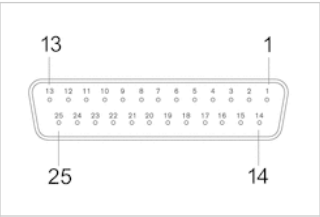
Dimensions



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

Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Socket

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

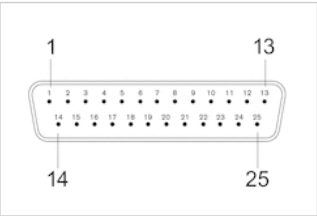
10	11	12	13	14	15
violet	gray/pink	red/blue	white/green	brown/green	white/yellow

16	17	18	19	20	21
yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue

22	23	24	25
brown/blue	white/red	brown/red	white/black

Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Plug

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

Multipole plug, series CON-MP

- open cable ends, 44-pin
- with cable
- unshielded



Ambient temperature min./max.	-4 ... 176 °F
Operational voltage	24 V, DC
Protection class	IP65
Wire cross-section	0 in ²

Technical data

Part No.	Electrical connection	Max. current	Number of wires	Cable sheath
	1			
R419500466	Socket, D-Sub, 44-pin, straight, 180°	3 A	44	Polyvinyl chloride
R419500467	Socket, D-Sub, 44-pin, straight, 180°	3 A	44	Polyvinyl chloride
R419500468	Socket, D-Sub, 44-pin, straight, 180°	3 A	44	Polyvinyl chloride
R419500469	Socket, D-Sub, 44-pin, straight, 180°	3 A	44	Polyurethane
R419500470	Socket, D-Sub, 44-pin, straight, 180°	3 A	44	Polyurethane
R419500471	Socket, D-Sub, 44-pin, straight, 180°	3 A	44	Polyurethane
R419500472	Socket, D-Sub, 44-pin, angled, 90°	3 A	44	Polyvinyl chloride
R419500473	Socket, D-Sub, 44-pin, angled, 90°	3 A	44	Polyvinyl chloride
R419500474	Socket, D-Sub, 44-pin, angled, 90°	3 A	44	Polyvinyl chloride
R419500475	Socket, D-Sub, 44-pin, angled, 90°	3 A	44	Polyurethane
R419500476	Socket, D-Sub, 44-pin, angled, 90°	3 A	44	Polyurethane
R419500477	Socket, D-Sub, 44-pin, angled, 90°	3 A	44	Polyurethane

Part No.	Cable-Ø	Cable length		Fig.
R419500466	0.42 inch	9.84 ft.	-	Fig. 1
R419500467	0.42 inch	16.4 ft.	-	Fig. 1
R419500468	0.42 inch	32.81 ft.	-	Fig. 1
R419500469	0.51 inch	9.84 ft.	1)	Fig. 1
R419500470	0.51 inch	16.4 ft.	1)	Fig. 1
R419500471	0.51 inch	32.81 ft.	1)	Fig. 1
R419500472	0.42 inch	9.84 ft.	-	Fig. 2
R419500473	0.42 inch	16.4 ft.	-	Fig. 2
R419500474	0.42 inch	32.81 ft.	-	Fig. 2
R419500475	0.51 inch	9.84 ft.	1)	Fig. 2
R419500476	0.51 inch	16.4 ft.	1)	Fig. 2
R419500477	0.51 inch	32.81 ft.	1)	Fig. 2

1) suitable for dynamic laying

Technical information

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

Technical information

Material	
Housing	Thermoplastic elastomer
Cable sheath	Polyvinyl chloride, Polyurethane

Dimensions

Fig. 1

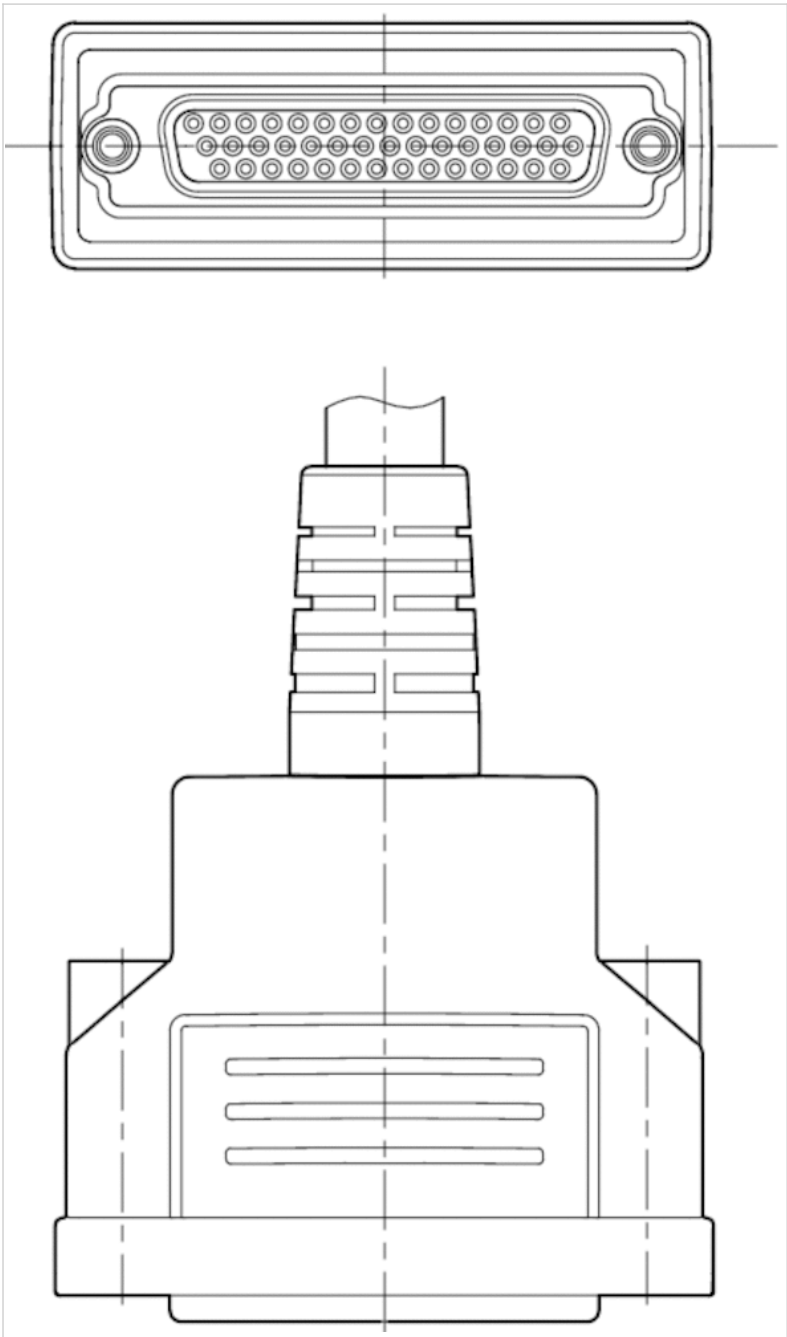
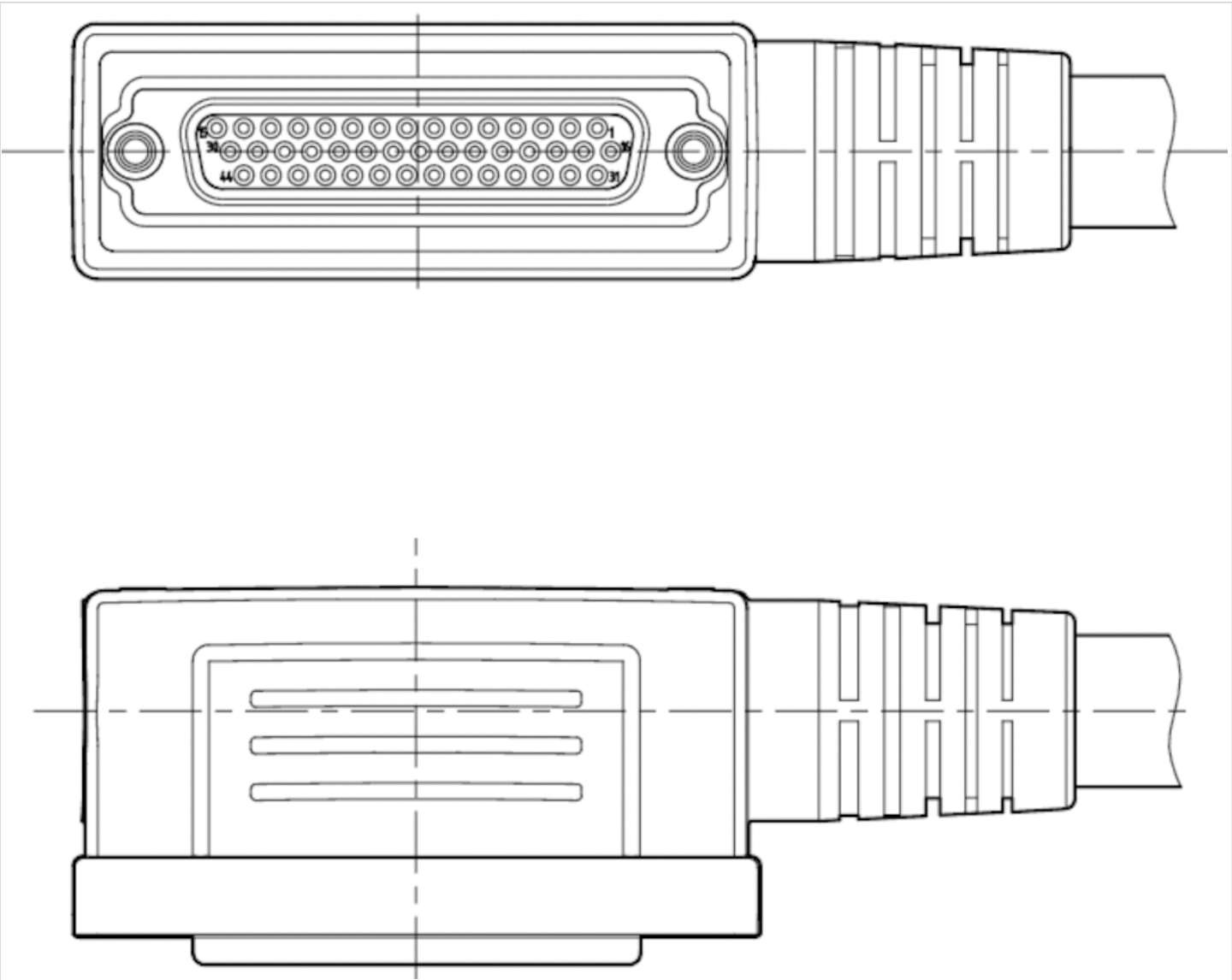
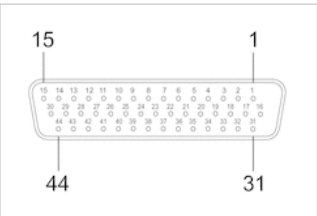


Fig. 2



Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Socket

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

Multipole plug, series CON-MP

- open cable ends, 25-pin
- with cable
- unshielded



Ambient temperature min./max.	-4 ... 176 °F
Operational voltage	24 V, DC
Protection class	IP67
Wire cross-section	0 in ²

Technical data

Part No.	Electrical connection	Max. current	Number of wires	Cable sheath
	1			
R419500454	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyvinyl chloride
R419500455	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyvinyl chloride
R419500456	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyvinyl chloride
R412022156	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyvinyl chloride
R419500457	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyurethane
R419500458	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyurethane
R419500459	Socket, D-Sub, 25-pin, straight, 180°	3 A	25	Polyurethane
R419500460	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyvinyl chloride
R419500461	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyvinyl chloride
R419500462	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyvinyl chloride
R412022352	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyvinyl chloride
R419500463	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyurethane
R419500464	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyurethane
R419500465	Socket, D-Sub, 25-pin, angled, 90°	3 A	25	Polyurethane

Part No.	Cable-Ø	Cable length		Fig.
R419500454	0.33 inch	9.84 ft.	-	Fig. 1
R419500455	0.33 inch	16.4 ft.	-	Fig. 1
R419500456	0.33 inch	32.81 ft.	-	Fig. 1
R412022156	-	-	-	Fig. 1
R419500457	0.41 inch	9.84 ft.	1)	Fig. 1
R419500458	0.41 inch	16.4 ft.	1)	Fig. 1
R419500459	0.41 inch	32.81 ft.	1)	Fig. 1
R419500460	0.33 inch	9.84 ft.	-	Fig. 2
R419500461	0.33 inch	16.4 ft.	-	Fig. 2
R419500462	0.33 inch	32.81 ft.	-	Fig. 2
R412022352	-	-	-	Fig. 2

Part No.	Cable-Ø	Cable length		Fig.
R419500463	0.41 inch	9.84 ft.	1)	Fig. 2
R419500464	0.41 inch	16.4 ft.	1)	Fig. 2
R419500465	0.41 inch	32.81 ft.	1)	Fig. 2

1) suitable for dynamic laying

Technical information

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

Technical information

Material	
Housing	Thermoplastic elastomer
Cable sheath	Polyvinyl chloride, Polyurethane

Dimensions

Fig. 1

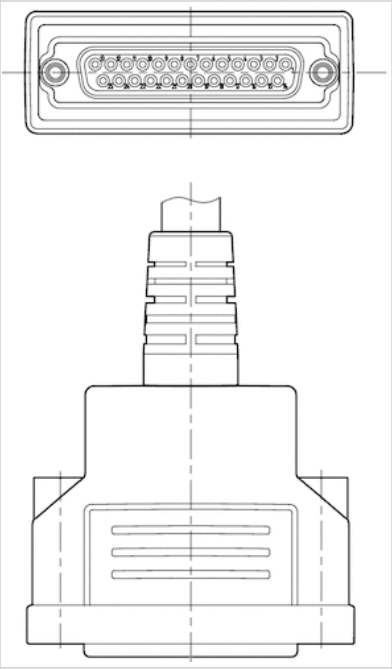
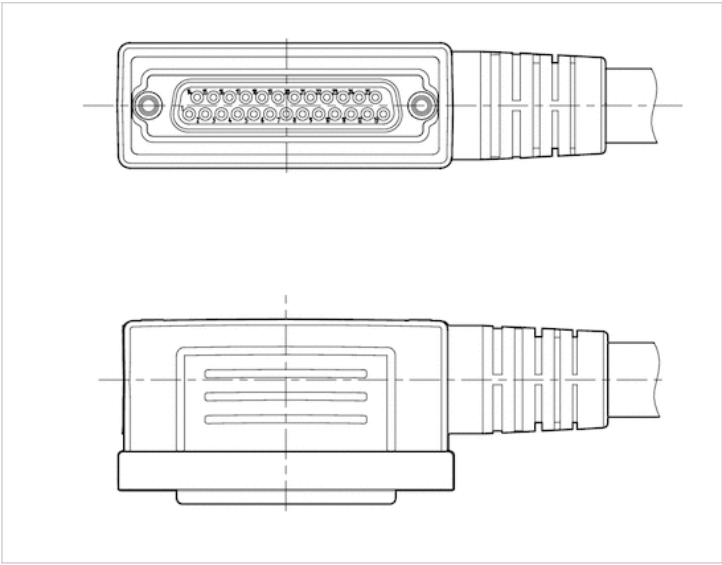
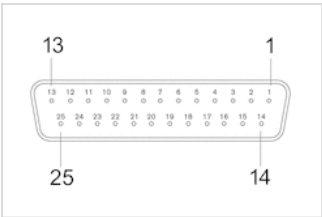


Fig. 2



Pin assignments

PIN assignment and cable colors cable identification as per DIN 47100



Socket

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

10	11	12	13	14	15
violet	gray/pink	red/blue	white/green	brown/green	white/yellow

16	17	18	19	20	21
yellow/brown	white/gray	gray/brown	white/pink	pink/brown	white/blue

22	23	24	25
brown/blue	white/red	brown/red	white/black