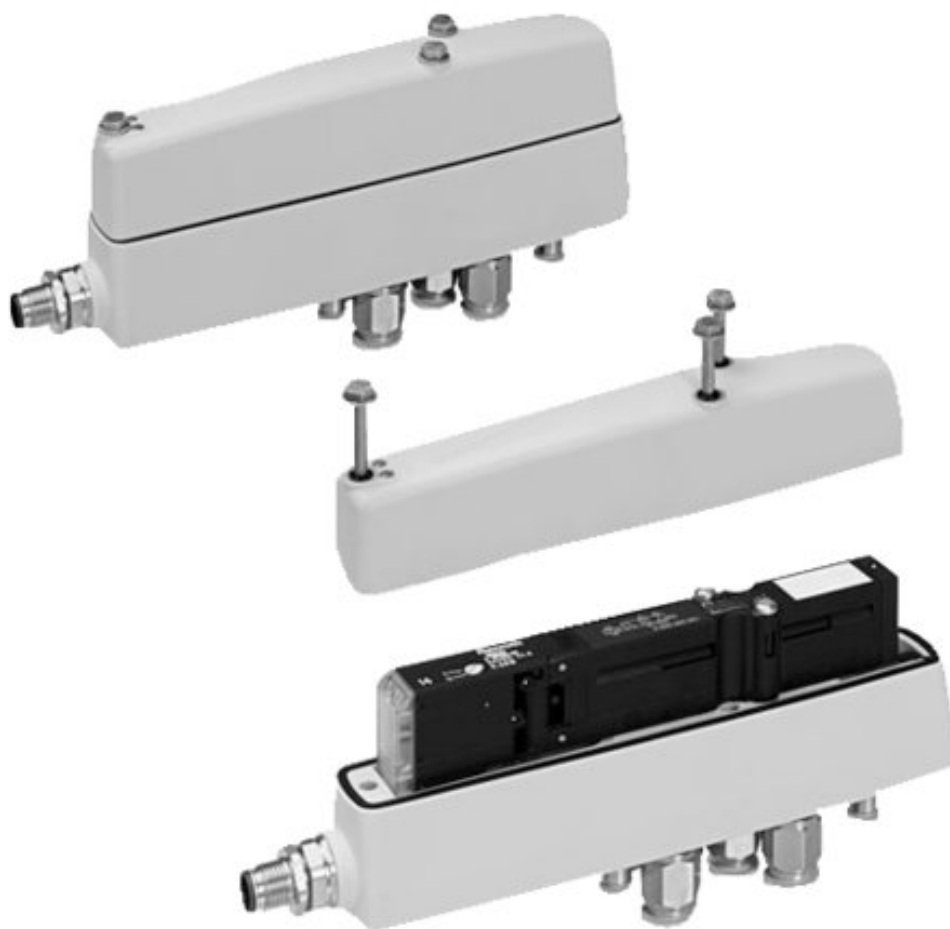


Series CL03 -EV



AVENTICS™ Series CL03 -EV



Directional valves, Series CL03-EV

- Housing
- For series : HF03-LG
- 2x3/2, 5/2, 5/3
- Qn = 700 l/min
- Plate connection
- Compressed air connection output : Ø 8 G 1/8
- suitable for use in food processing



Activation	Electrically
Sealing principle	Soft sealing
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Qn	700 l/min
Protection class with connection	IP65 IP67 IP69K
LED status display	Yellow
Duty cycle	100 %
mounting screws	M5
Mounting screw tightening torque	2 Nm
Weight	See table below

Technical data

Part No.	Compressed air connection	
	Input	Output
R412026369	Ø 8	Ø 8
R412026370	G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412026369	Ø 8	M5
R412026370	G 1/8	M5

Part No.	Compressed air connection		Weight	Fig.
	Pilot Exhaust			
R412026369	M5		0.233 kg	Fig. 2
R412026370	M5		0.247 kg	Fig. 1

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, MO = Manual override

Technical information

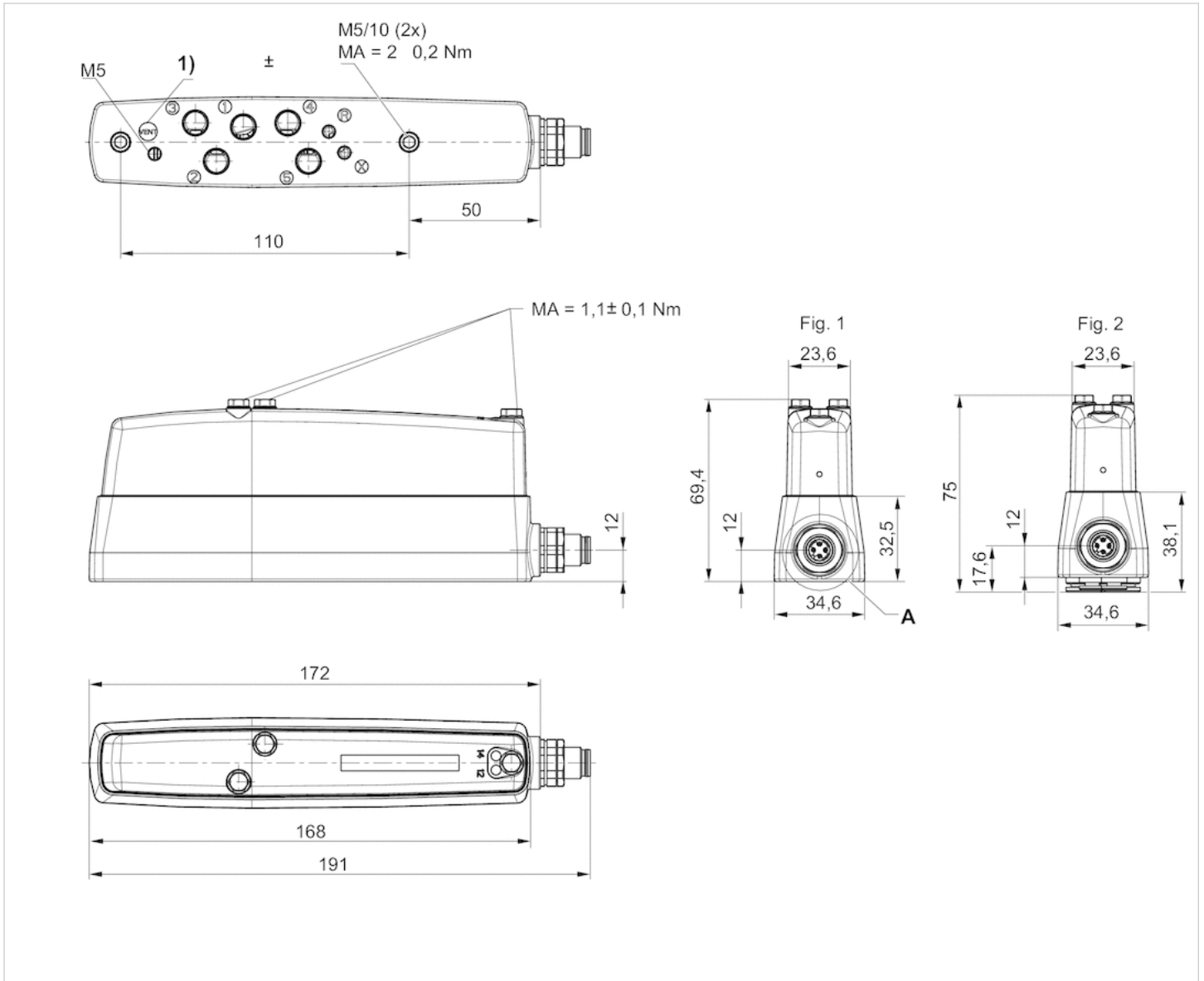
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.
 Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).
 The pilot valve is UL certified (Underwriters Laboratories recognized).
 For series QR2 fittings, see “Pneumatic connection technologies”.
 The valve housing is supplied without a valve and has to be ordered separately. See accessories “Base plate valves, electrically operated”
 Closed exhaust outlets will lead to air congestion and valve damage. The “VENT” connection in the base plate must also not be closed.
 Connect the “VENT” connection to a tube that exhausts the air outside the wet zone. If the valve is mounted in a protected area, for example in a control cabinet, you can also connect a silencer to the “VENT” connection.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber

Dimensions

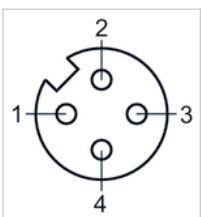
Dimensions



1) Ventilation connection (VENT)

Pin assignments

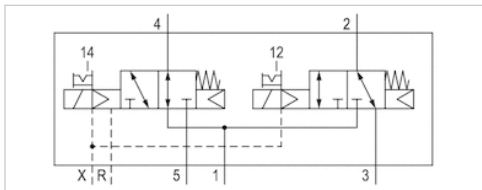
Electrical connection; round plug, A-coded



- 1) not assigned
- 2) Coil 12
- 3) Ground
- 4) Coil 14




2x3/2-directional valve, Series CL03-EV

- 2x3/2
- $Q_n = 700$ l/min
- Pilot valve width : 16 mm
- NO/NC
- Plate connection
- Compressed air connection output : $\varnothing 8$ G 1/8
- Manual override : with detent
- Pilot : External
- suitable for use in food processing



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	3 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Q_n	700 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65 IP67 IP69K
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	25 ms
mounting screws	M5
Mounting screw tightening torque	2 Nm
Tightening torque tolerance	$\pm 0,2$ mT
Weight	0.165 kg

Technical data

Part No.	MO		Compressed air connection	
			Input	Output
R412017959		NO/NC	Ø 8	Ø 8
R412017960		NO/NC	Ø 8	Ø 8
R412017961		NO/NC	G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412017959	Ø 8	Ø 4
R412017960	Ø 8	Ø 4
R412017961	G 1/8	M5

Part No.	Compressed air connection		Operational voltage	Voltage tolerance
		Pilot Exhaust		
R412017959	Ø 4	Ø 4	DC	-15% / +20%
R412017960	Ø 4	Ø 4	DC	-15% / +20%
R412017961	M5	M5	DC	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	push-in fitting
	DC	b	C-value	
R412017959	0.35 W	0.22	2.9 l/(s*bar)	Brass nickel-plated
R412017960	0.35 W	0.22	2.9 l/(s*bar)	Stainless steel
R412017961	0.35 W	0.22	2.9 l/(s*bar)	-

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

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

For series QR2 fittings, see "Pneumatic connection technologies".

The inner valve can be replaced by all series CL03 valves described under "Valve systems".

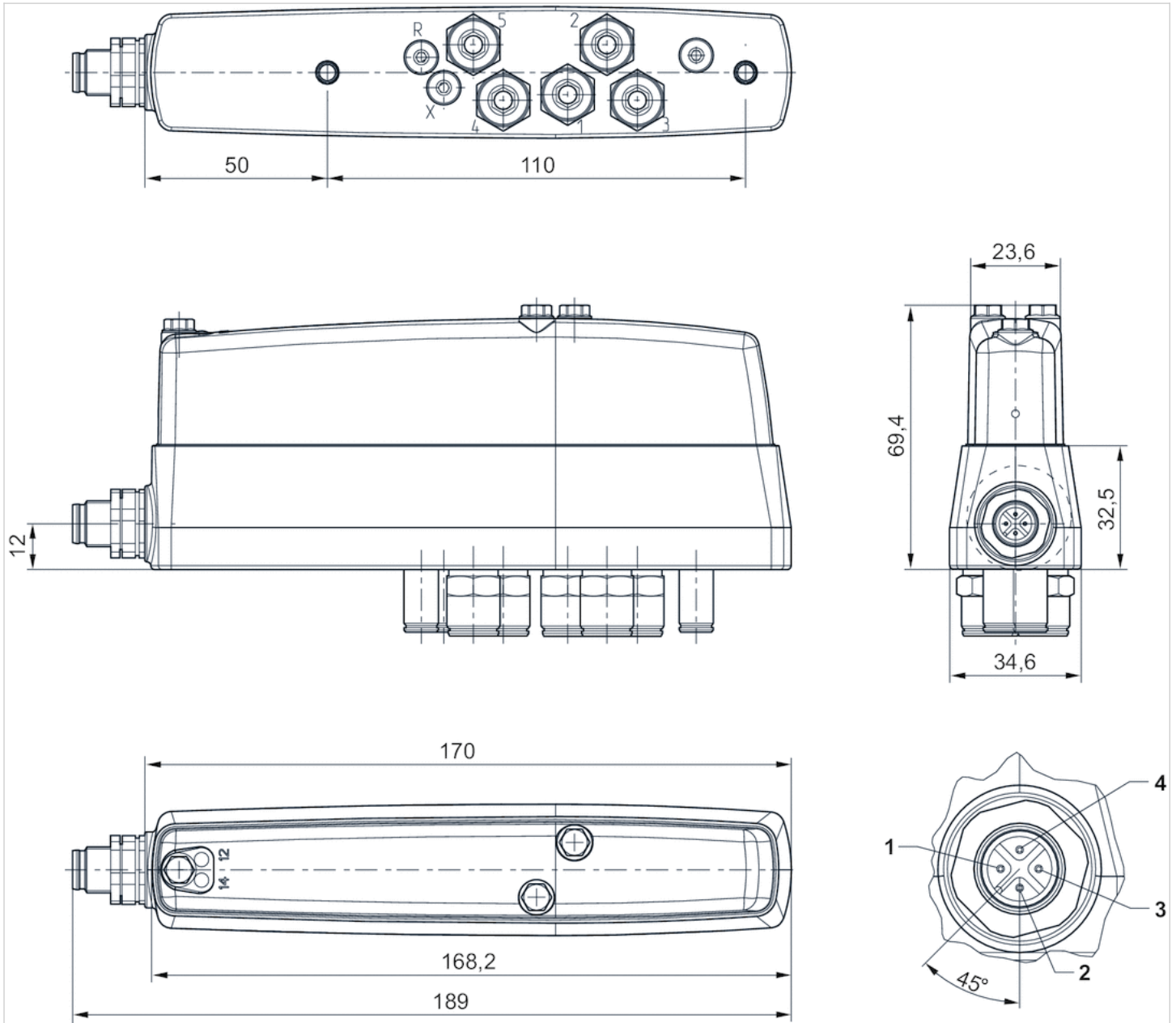
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber
Threaded bushing	Brass, nickel-plated Stainless steel

Dimensions

Dimensions

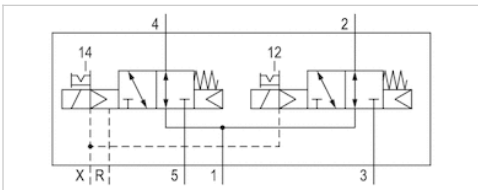


Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) 0 V
- 4) Solenoid 14




2x3/2-directional valve, Series CL03-EV

- 2x3/2
- $Q_n = 700$ l/min
- Pilot valve width : 16 mm
- NO/NO
- Plate connection
- Compressed air connection output : $\varnothing 8$ G 1/8
- Manual override : with detent
- Pilot : External
- suitable for use in food processing



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Q_n	700 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65 IP67 IP69K
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	25 ms
mounting screws	M5
Mounting screw tightening torque	2 Nm
Tightening torque tolerance	$\pm 0,2$ mT
Weight	0.165 kg

Technical data

Part No.	MO		Compressed air connection	
			Input	Output
R412017956		NO/NO	Ø 8	Ø 8
R412017957		NO/NO	Ø 8	Ø 8
R412017958		NO/NO	G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412017956	Ø 8	Ø 4
R412017957	Ø 8	Ø 4
R412017958	G 1/8	M5

Part No.	Compressed air connection		Operational voltage	Voltage tolerance
		Pilot Exhaust		
R412017956	Ø 4	Ø 4	24 V	-15% / +20%
R412017957	Ø 4	Ø 4	24 V	-15% / +20%
R412017958	M5	M5	24 V	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	push-in fitting
	DC	b	C-value	
R412017956	0.35 W	0.22	2.9 l/(s*bar)	Brass nickel-plated
R412017957	0.35 W	0.22	2.9 l/(s*bar)	Stainless steel
R412017958	0.35 W	0.22	2.9 l/(s*bar)	-

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

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

For series QR2 fittings, see "Pneumatic connection technologies".

The inner valve can be replaced by all series CL03 valves described under "Valve systems".

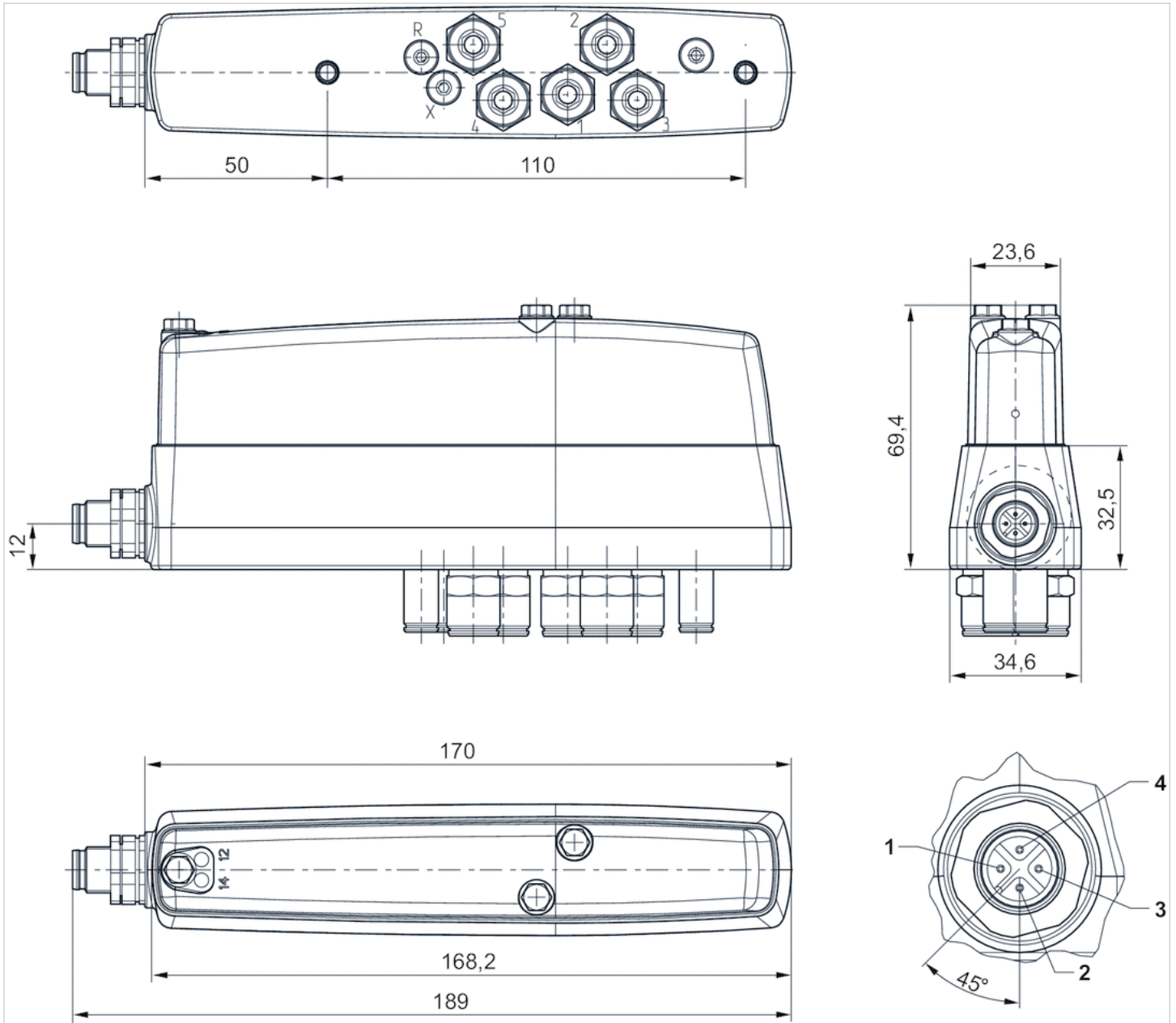
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber
Threaded bushing	Brass, nickel-plated Stainless steel

Dimensions

Dimensions

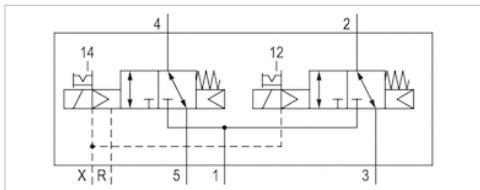


Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) 0 V
- 4) Solenoid 14




2x3/2-directional valve, Series CL03-EV

- 2x3/2
- $Q_n = 700$ l/min
- Pilot valve width : 16 mm
- NC/NC
- Plate connection
- Compressed air connection output : $\varnothing 8$ G 1/8
- Manual override : with detent
- Pilot : External
- suitable for use in food processing



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Q_n	700 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65 IP67 IP69K
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	25 ms
mounting screws	M5
Mounting screw tightening torque	2 Nm
Tightening torque tolerance	$\pm 0,2$ mT
Weight	0.165 kg

Technical data

Part No.	MO		Compressed air connection	
			Input	Output
R412021814		NC/NC	Ø 8	Ø 8
R412021815		NC/NC	Ø 8	Ø 8
R412021816		NC/NC	G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412021814	Ø 8	Ø 4
R412021815	Ø 8	Ø 4
R412021816	G 1/8	M5

Part No.	Compressed air connection		Operational voltage	Voltage tolerance
		Pilot Exhaust		
R412021814	Ø 4	Ø 4	DC	-15% / +20%
R412021815	Ø 4	Ø 4	DC	-15% / +20%
R412021816	M5	M5	DC	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	push-in fitting
	DC	b	C-value	
R412021814	0.35 W	0.22	2.9 l/(s*bar)	Brass nickel-plated
R412021815	0.35 W	0.22	2.9 l/(s*bar)	Stainless steel
R412021816	0.35 W	0.22	2.9 l/(s*bar)	-

Nominal flow Q_n at 6 bar and Δp = 1 bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

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

For series QR2 fittings, see "Pneumatic connection technologies".

The inner valve can be replaced by all series CL03 valves described under "Valve systems".

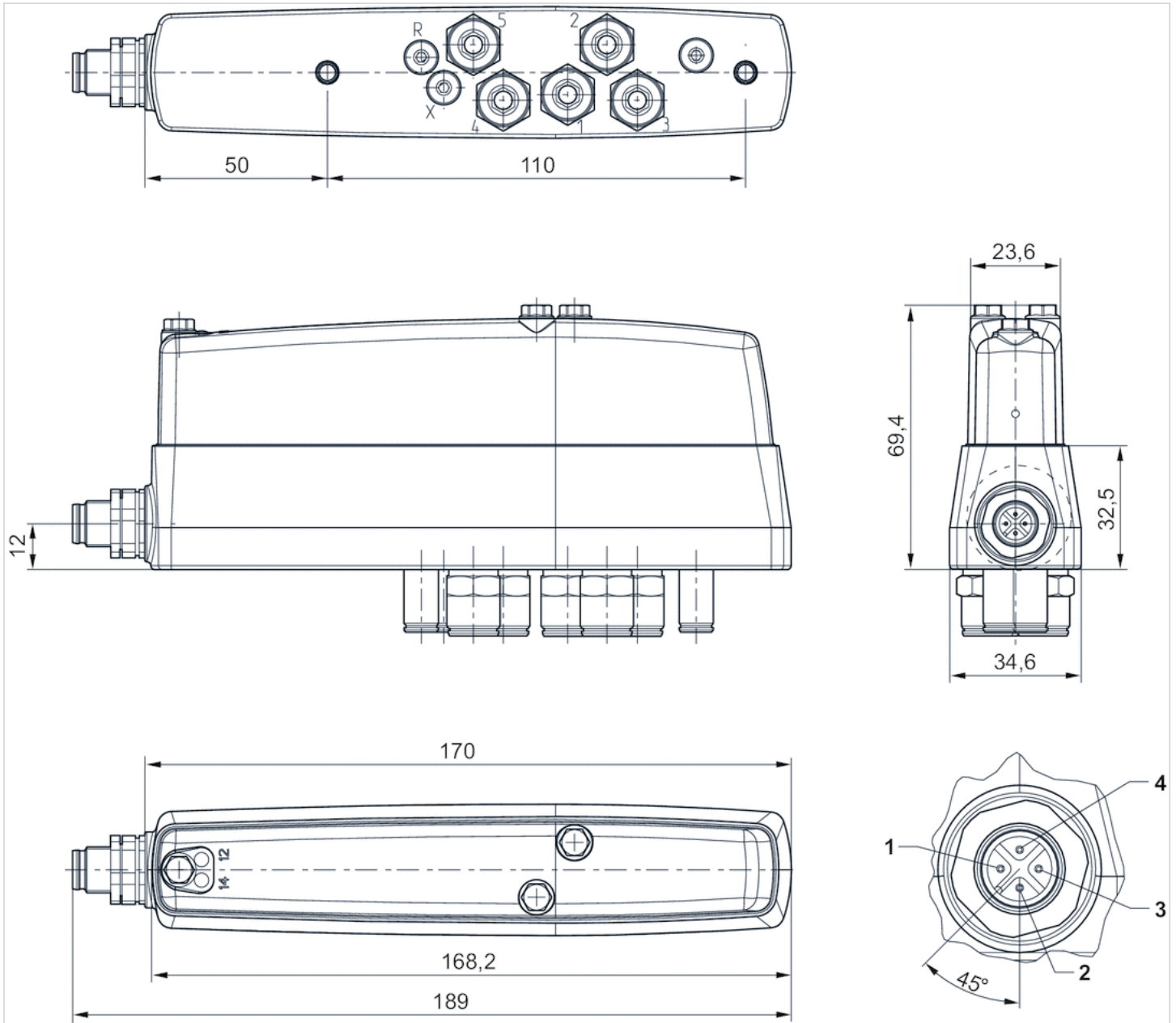
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber
Threaded bushing	Brass, nickel-plated Stainless steel

Dimensions

Dimensions

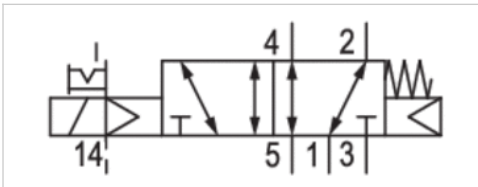


Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) 0 V
- 4) Solenoid 14




5/2-directional valve, Series CL03-EV

- 5/2
- $Q_n = 700$ l/min
- Pilot valve width : 16 mm
- Plate connection
- Compressed air connection output : $\varnothing 8$ G 1/8
- Manual override : with detent
- single solenoid
- With spring/air spring return
- Pilot : External
- suitable for use in food processing



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	3 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 μ m
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Q_n	700 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65 IP67 IP69K
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	23 ms
mounting screws	M5
Mounting screw tightening torque	2 Nm
Tightening torque tolerance	$\pm 0,2$ mT
Weight	0.165 kg

Technical data

Part No.	MO	Compressed air connection	
		Input	Output
R412017962		Ø 8	Ø 8
R412017963		Ø 8	Ø 8
R412017964		G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412017962	Ø 8	Ø 4
R412017963	Ø 8	Ø 4
R412017964	G 1/8	M5

Part No.	Compressed air connection		Operational voltage	Voltage tolerance
		Pilot Exhaust		
R412017962	Ø 4	Ø 4	DC	-15% / +20%
R412017963	Ø 4	Ø 4	DC	-15% / +20%
R412017964	M5	M5	DC	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	push-in fitting
	DC	b	C-value	
R412017962	0.35 W	0.22	2.9 l/(s*bar)	Brass nickel-plated
R412017963	0.35 W	0.22	2.9 l/(s*bar)	Stainless steel
R412017964	0.35 W	0.22	2.9 l/(s*bar)	-

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

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

For series QR2 fittings, see "Pneumatic connection technologies".

The inner valve can be replaced by all series CL03 valves described under "Valve systems".

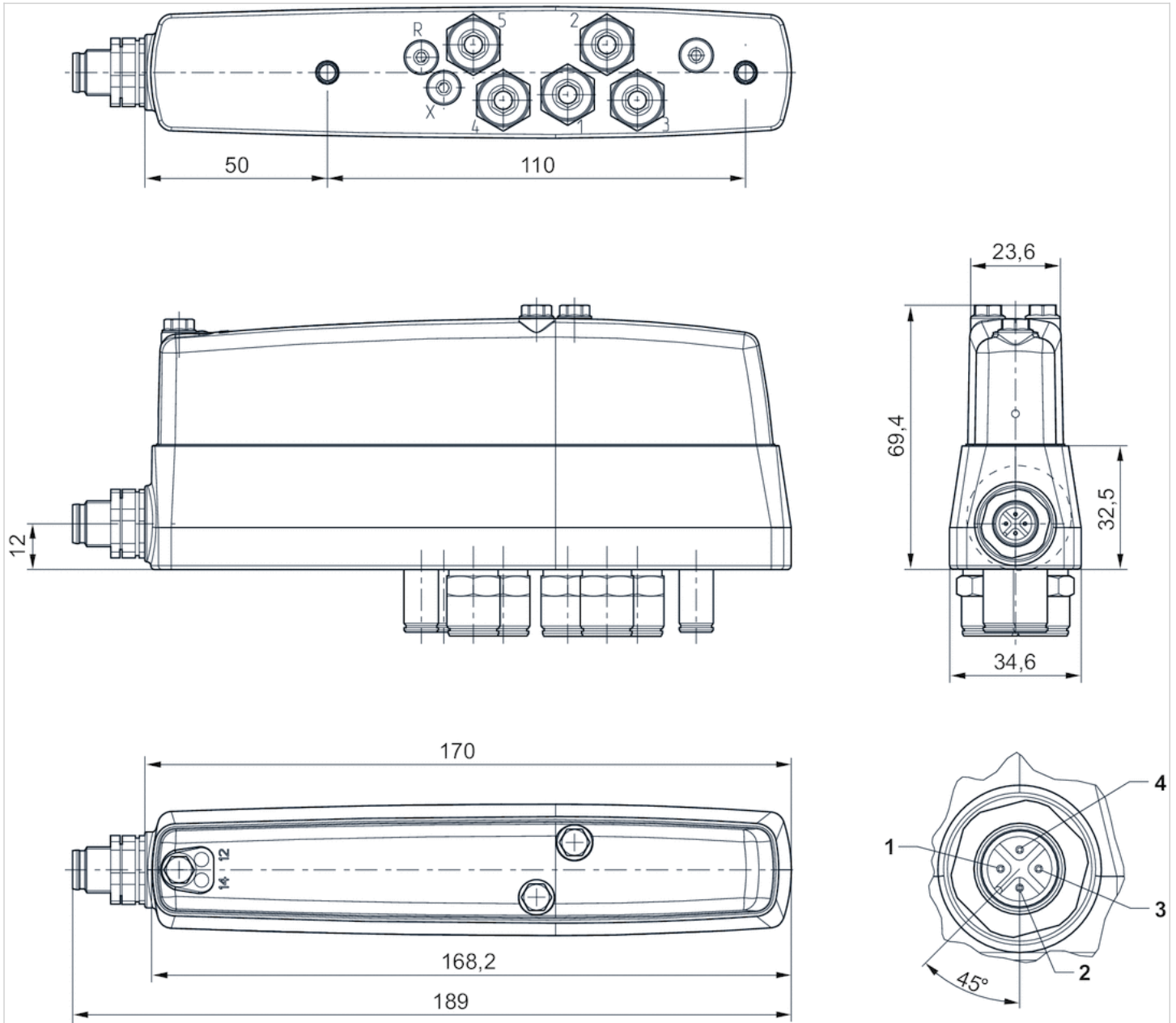
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber
Threaded bushing	Brass, nickel-plated Stainless steel

Dimensions

Dimensions

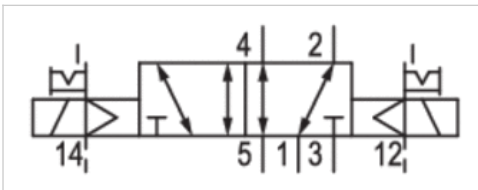


Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) 0 V
- 4) Solenoid 14




5/2-directional valve, Series CL03-EV

- 5/2
- $Q_n = 700$ l/min
- Pilot valve width : 16 mm
- Plate connection
- Compressed air connection output : $\varnothing 8$ G 1/8
- Manual override : with detent
- double solenoid
- Pilot : External
- suitable for use in food processing



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	3 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Q_n	700 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65 IP67 IP69K
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	13 ms
Typ. switch-off time	15 ms
mounting screws	M5
Mounting screw tightening torque	2 Nm
Tightening torque tolerance	$\pm 0,2$ mT
Weight	0.165 kg

Technical data

Part No.	MO	Compressed air connection	
		Input	Output
R412017950		Ø 8	Ø 8
R412017951		Ø 8	Ø 8
R412017952		G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412017950	Ø 8	Ø 4
R412017951	Ø 8	Ø 4
R412017952	G 1/8	M5

Part No.	Compressed air connection		Operational voltage	Voltage tolerance
	Pilot Exhaust			
R412017950	Ø 4		DC	DC
R412017951	Ø 4		24 V	-15% / +20%
R412017952	M5		24 V	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	push-in fitting
	DC	b	C-value	
R412017950	0.35 W	0.22	2.9 l/(s*bar)	Brass nickel-plated
R412017951	0.35 W	0.22	2.9 l/(s*bar)	Stainless steel
R412017952	0.35 W	0.22	2.9 l/(s*bar)	-

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

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

For series QR2 fittings, see "Pneumatic connection technologies".

The inner valve can be replaced by all series CL03 valves described under "Valve systems".

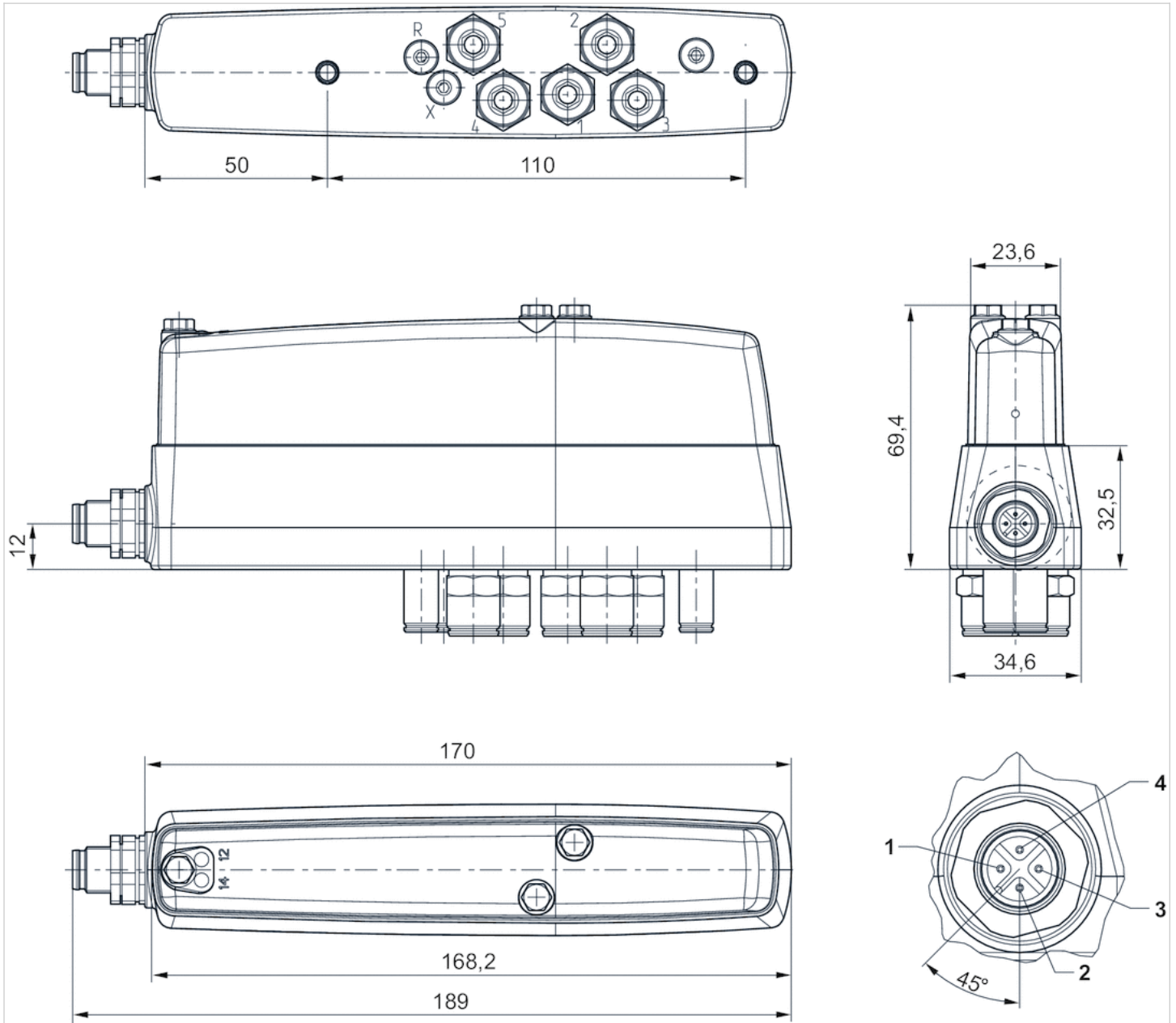
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber
Threaded bushing	Brass, nickel-plated Stainless steel

Dimensions

Dimensions

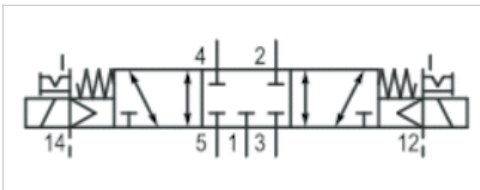


Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) 0 V
- 4) Solenoid 14




5/3-directional valve, Series CL03-EV

- 5/3
- Qn = 700 l/min
- Pilot valve width : 16 mm
- closed center
- Plate connection
- Compressed air connection output : Ø 8 G 1/8
- Manual override : with detent
- Pilot : External
- suitable for use in food processing



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	3 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Qn	700 l/min
Pilot control exhaust	With collective pilot air exhaust
Protection class with connection	IP65 IP67 IP69K
Protective circuit	Z-diode
Reverse polarity protection	Protected against polarity reversal
LED status display	Yellow
Duty cycle	100 %
Typ. switch-on time	14 ms
Typ. switch-off time	15 ms
mounting screws	M5
Mounting screw tightening torque	2 Nm
Tightening torque tolerance	±0,2 mT
Weight	0.165 kg

Technical data

Part No.	MO		Compressed air connection	
			Input	
R412017953		closed center	Ø 8	
R412017954		closed center	Ø 8	
R412017955		closed center	G 1/8	

Part No.	Compressed air connection		Compressed air connection	
	Output		Exhaust	
R412017953	Ø 8		Ø 8	
R412017954	Ø 8		Ø 8	
R412017955	G 1/8		G 1/8	

Part No.	Compressed air connection		Compressed air connection	
	Pilot Input		Pilot Exhaust	
R412017953	Ø 4		Ø 4	
R412017954	Ø 4		Ø 4	
R412017955	M5		M5	

Part No.	Operational voltage	Voltage tolerance	Power consumption
		DC	DC
R412017953	24 V	-15% / +20%	0.35 W
R412017954	24 V	-15% / +20%	0.35 W
R412017955	24 V	-15% / +20%	0.35 W

Part No.	Flow conductance	Flow conductance	push-in fitting
	b	C-value	
R412017953	0.39	2.5 l/(s*bar)	Brass nickel-plated
R412017954	0.39	2.5 l/(s*bar)	Stainless steel
R412017955	0.39	2.5 l/(s*bar)	-

Nominal flow Q_n at 6 bar and Δp = 1 bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

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

For series QR2 fittings, see "Pneumatic connection technologies".

The inner valve can be replaced by all series CL03 valves described under "Valve systems".

The pilot valve is UL (Underwriters Laboratories) certified.

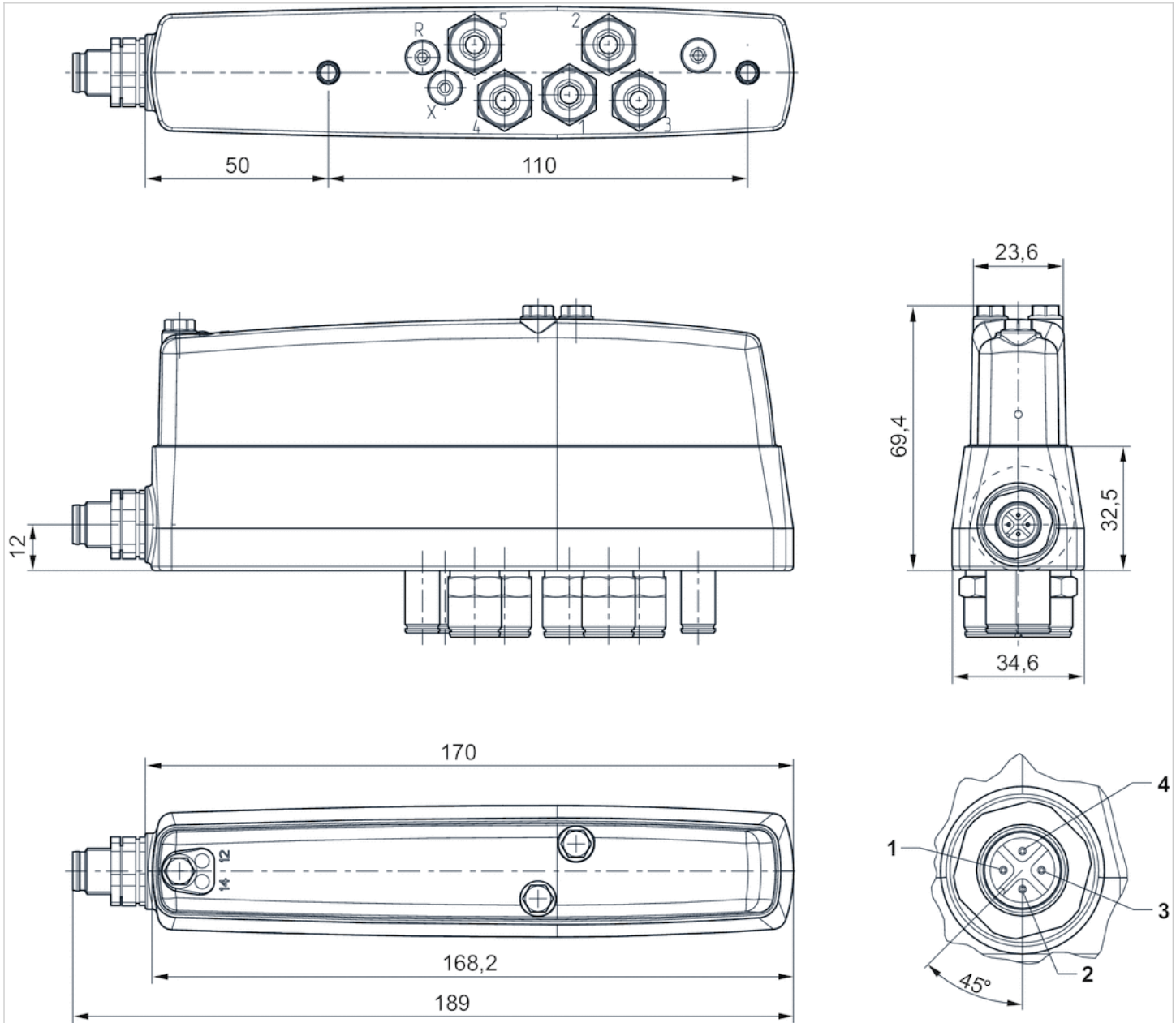
Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Material	
Threaded bushing	Brass, nickel-plated Stainless steel

Dimensions

Dimensions



Electrical connection:

- 1) Not connected
- 2) Solenoid 12
- 3) 0 V
- 4) Solenoid 14

Directional valves, Series CL03-EV

- Housing
- For series : HF03-LG
- 2x3/2, 5/2, 5/3
- Qn = 700 l/min
- Plate connection
- Compressed air connection output : Ø 8 G 1/8
- suitable for use in food processing



Activation	Electrically
Sealing principle	Soft sealing
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Qn	700 l/min
Protection class with connection	IP65 IP67 IP69K
LED status display	Yellow
Duty cycle	100 %
mounting screws	M5
Mounting screw tightening torque	2 Nm
Weight	See table below

Technical data

Part No.	Compressed air connection	
	Input	Output
R412026369	Ø 8	Ø 8
R412026370	G 1/8	G 1/8

Part No.	Compressed air connection	
	Exhaust	Pilot Input
R412026369	Ø 8	M5
R412026370	G 1/8	M5

Part No.	Compressed air connection		Weight	Fig.
	Pilot Exhaust			
R412026369	M5		0.233 kg	Fig. 2
R412026370	M5		0.247 kg	Fig. 1

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, MO = Manual override

Technical information

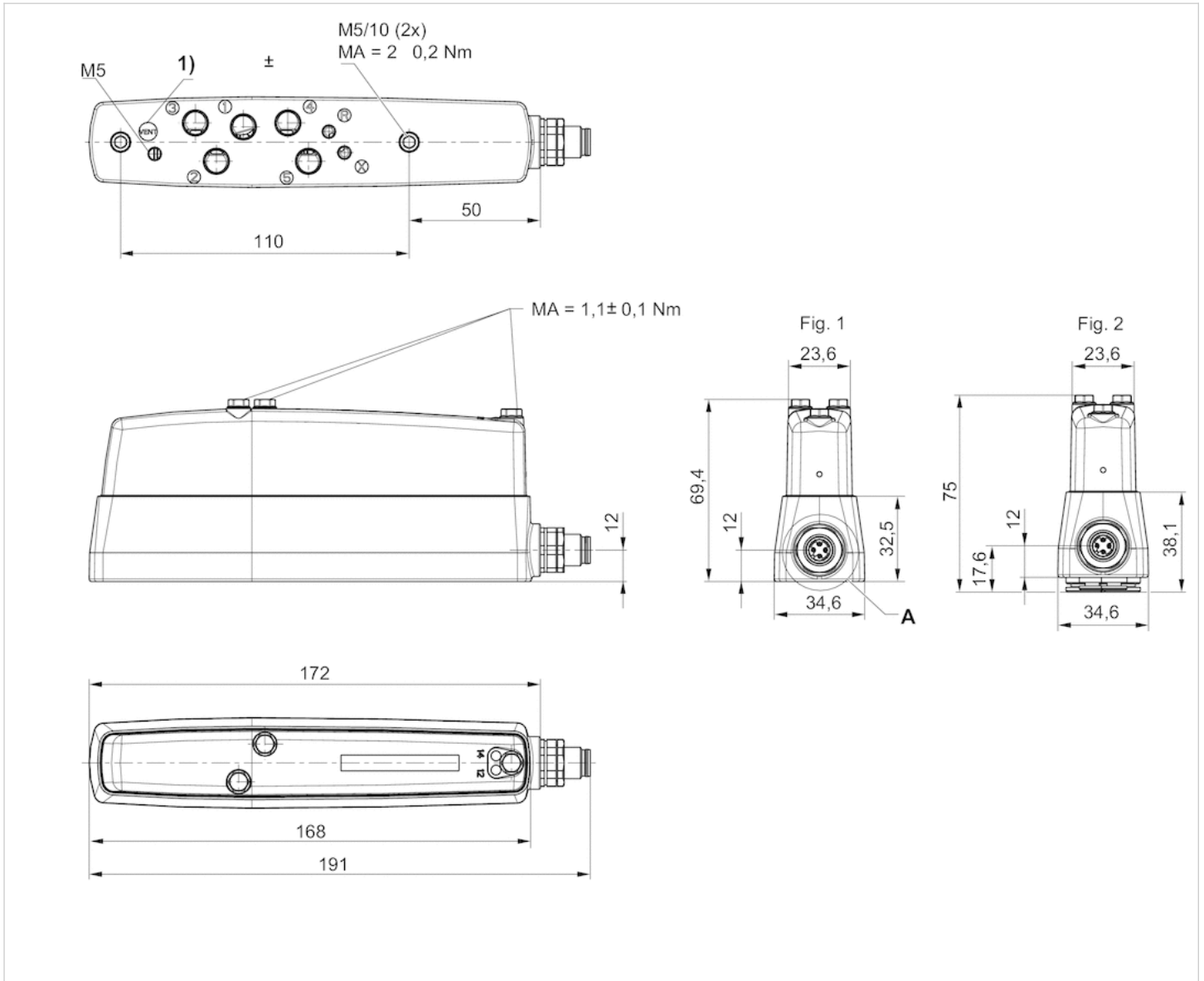
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
 The oil content of compressed air must remain constant during the life cycle.
 Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).
 The pilot valve is UL certified (Underwriters Laboratories recognized).
 For series QR2 fittings, see “Pneumatic connection technologies”.
 The valve housing is supplied without a valve and has to be ordered separately. See accessories “Base plate valves, electrically operated”
 Closed exhaust outlets will lead to air congestion and valve damage. The “VENT” connection in the base plate must also not be closed.
 Connect the “VENT” connection to a tube that exhausts the air outside the wet zone. If the valve is mounted in a protected area, for example in a control cabinet, you can also connect a silencer to the “VENT” connection.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Hydrogenated acrylonitrile butadiene rubber

Dimensions

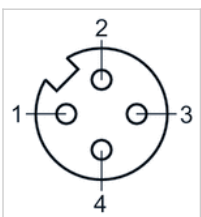
Dimensions



1) Ventilation connection (VENT)

Pin assignments

Electrical connection; round plug, A-coded



- 1) not assigned
- 2) Coil 12
- 3) Ground
- 4) Coil 14





2x3/2-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 2x3/2
- Qn = 850 l/min
- Pilot valve width : 16 mm
- NC/NC NO/NO NC/NO NO/NC
- Plate connection
- Manual override : with detent
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective 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	25 ms
mounting screws	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.	MO	Operational voltage	Voltage tolerance	
			DC	DC
0820055101		24 V	-15% / +20%	
0820055201		24 V	-15% / +20%	
0820055301		24 V	-15% / +20%	
0820055311		24 V	-15% / +20%	

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055101	0.35 W	0.22	2.97 l/(s*bar)
0820055201	0.35 W	0.22	2.97 l/(s*bar)
0820055301	0.35 W	0.22	2.97 l/(s*bar)

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055311	0.35 W	0.22	2.97 l/(s*bar)

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

Use only the approved oils from AVENTICS. 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.

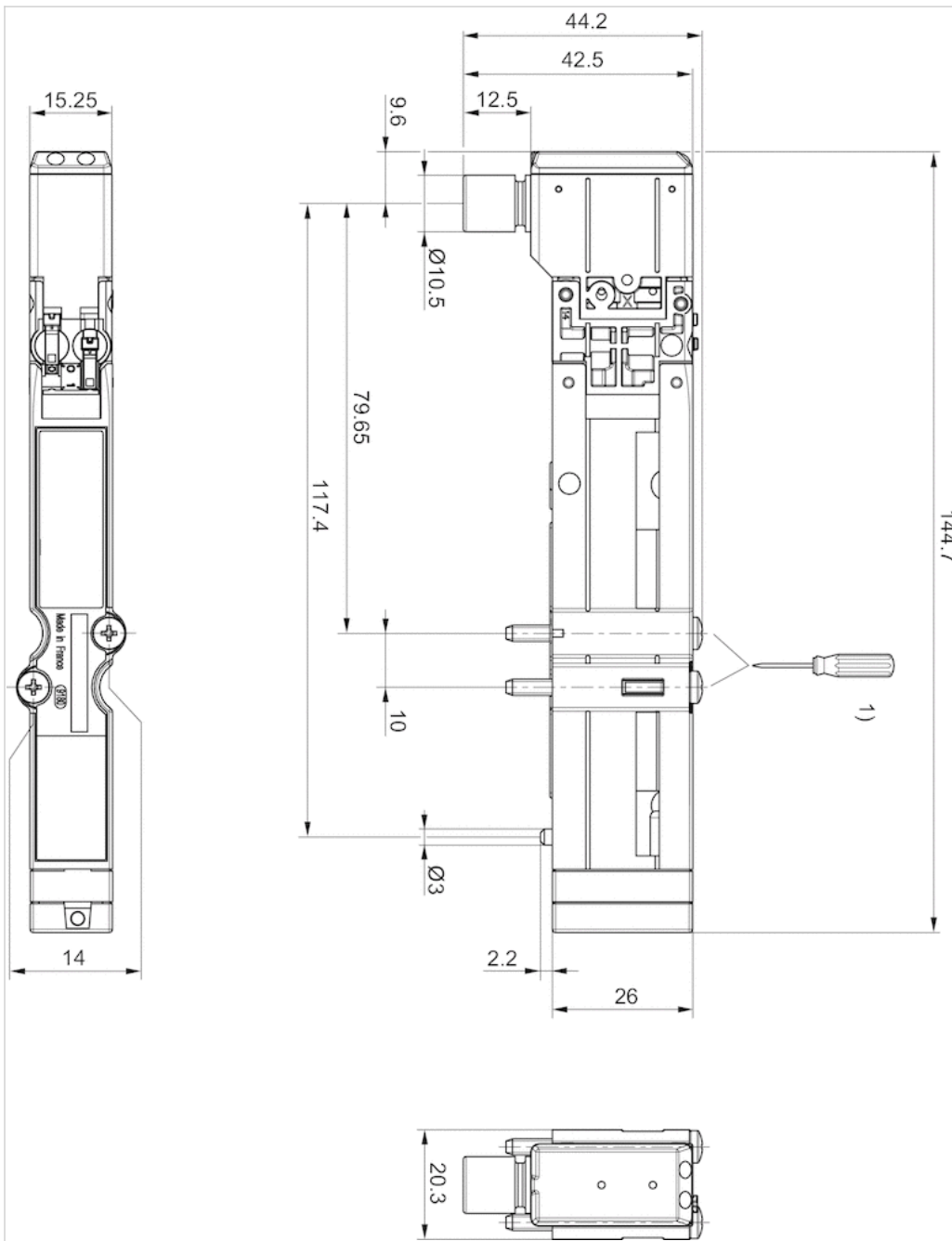
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

Dimensions



1) = 1.1Nm 800tr/min. max.









2x3/2-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 2x3/2
- Qn = 850 l/min
- Pilot valve width : 16 mm
- NC/NC NO/NO NC/NO NO/NC
- Plate connection
- Manual override : without detent
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective 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	25 ms
mounting screws	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.		MO		Operational voltage		Voltage tolerance	
				DC	DC	DC	DC
0820055102			NC/NC	24 V		-15% / +20%	
0820055202			NO/NO	24 V		-15% / +20%	
0820055302			NC/NO	24 V		-15% / +20%	
0820055312			NO/NC	24 V		-15% / +20%	

Part No.	Power consumption		Flow conductance	
	DC		b	C-value
0820055102	0.35 W		0.22	2.97 l/(s*bar)
0820055202	0.35 W		0.22	2.97 l/(s*bar)

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055302	0.35 W	0.22	2.97 l/(s*bar)
0820055312	0.35 W	0.22	2.97 l/(s*bar)

Nominal flow Qn at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

Use only the approved oils from AVENTICS. 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.

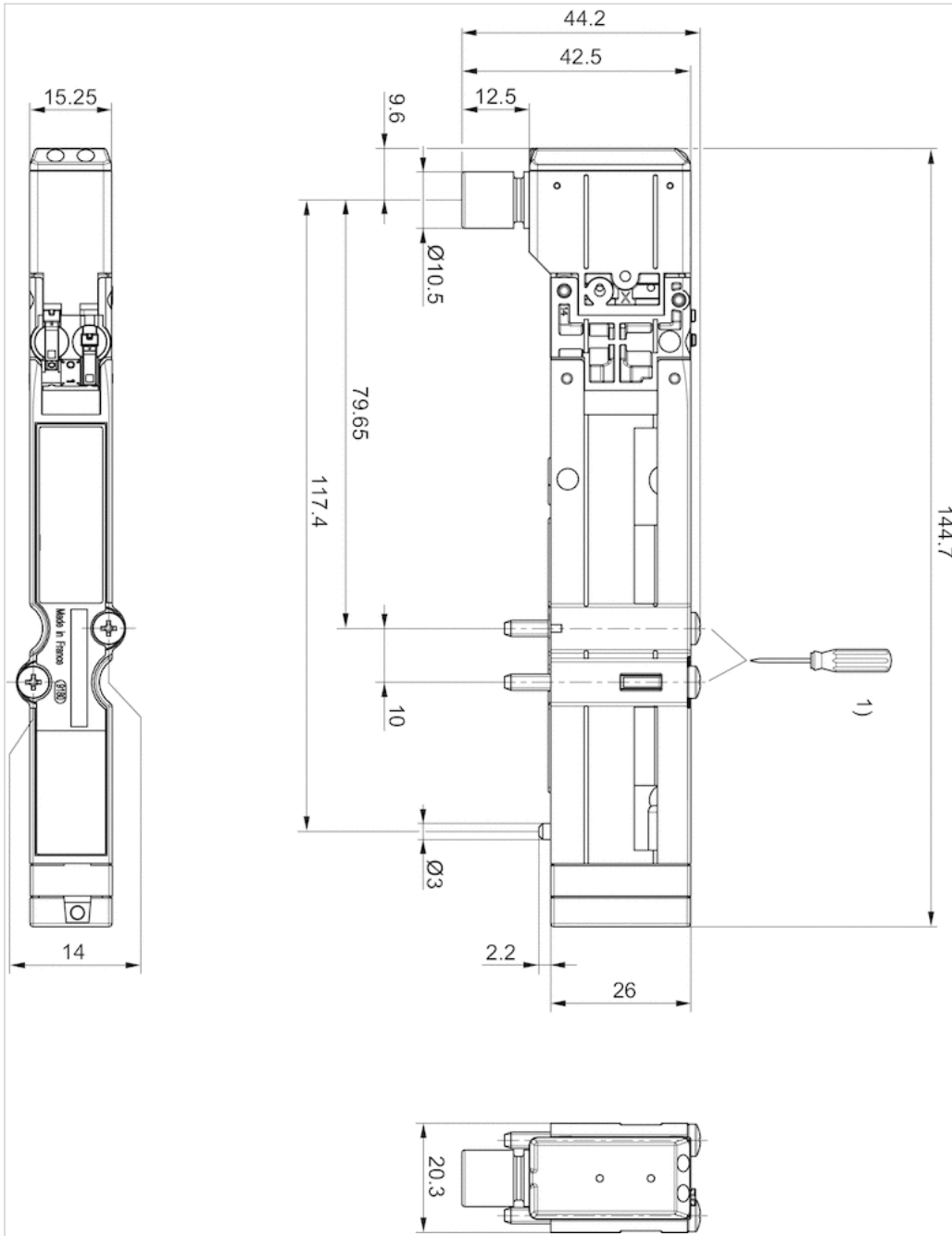
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

Dimensions



1) =1.1Nm 800tr/min. max.







5/2-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 5/2
- Qn = 850 l/min
- Pilot valve width : 16 mm
- Plate connection
- Manual override : with detent
- single solenoid double solenoid
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m ³
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective 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	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.		MO	Operational voltage		Voltage tolerance
			DC	DC	DC
0820055051			24 V		-15% / +20%
0820055501			24 V		-15% / +20%
0820055001			24 V		-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	Typ. switch-on time
	DC	b	C-value	
0820055051	0.35 W	0.22	2.98 l/(s*bar)	16 ms
0820055501	0.35 W	0.22	2.97 l/(s*bar)	13 ms
0820055001	0.35 W	0.22	2.98 l/(s*bar)	15 ms

Part No.	Typ. switch-off time
0820055051	23 ms
0820055501	15 ms
0820055001	23 ms

Nominal flow Q_n at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

Use only the approved oils from AVENTICS. 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.

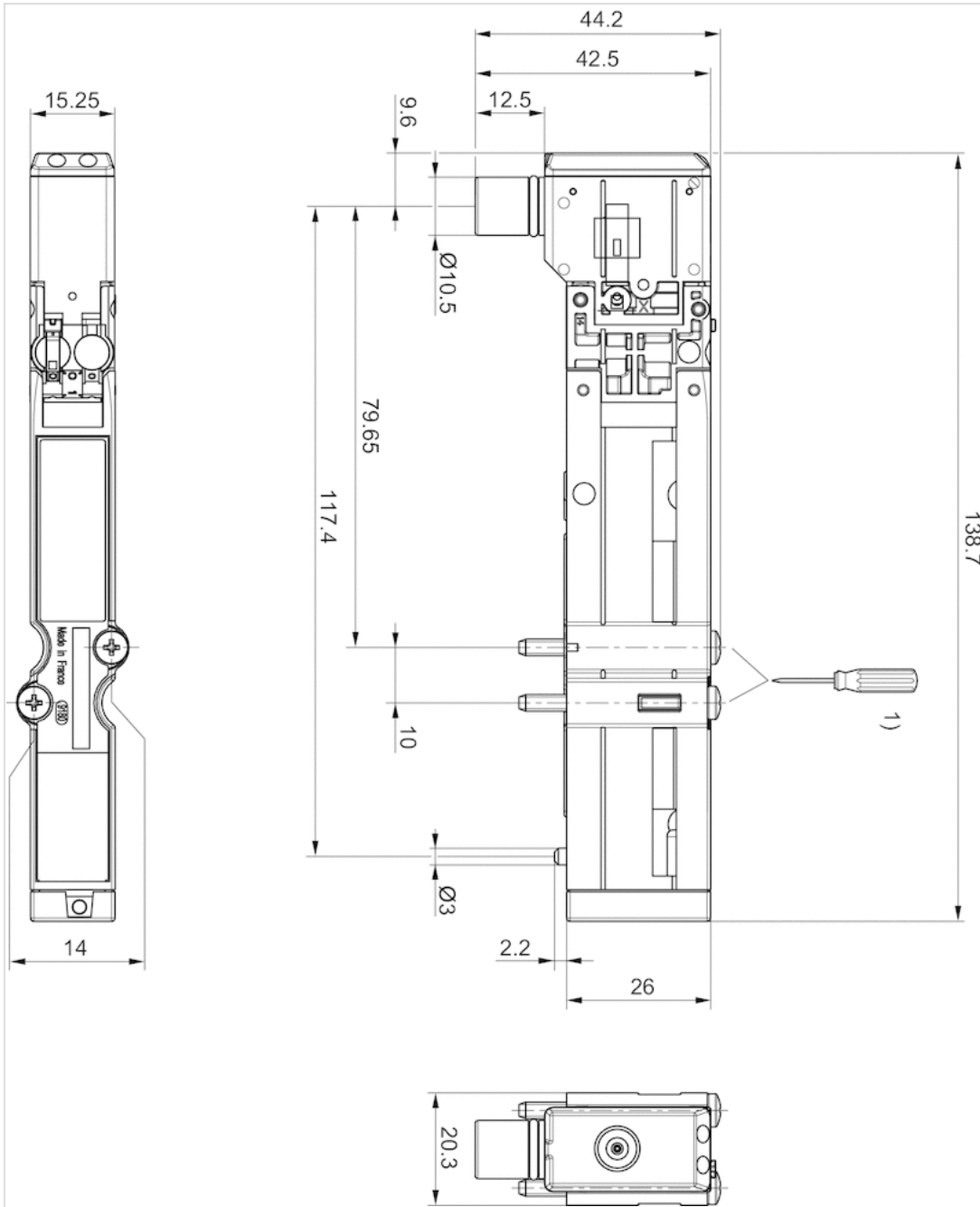
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

Dimensions



1) =1.1Nm 800tr/min. max.

5/2-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 5/2
- Qn = 850 l/min
- Pilot valve width : 16 mm
- Plate connection
- Manual override : without detent
- single solenoid double solenoid
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective 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	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.	MO	Operational voltage		Voltage tolerance
		DC	DC	DC
0820055052		24 V		-15% / +20%
0820055502		24 V		-15% / +20%
0820055002		24 V		-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance	Typ. switch-on time
	DC	b	C-value	
0820055052	0.35 W	0.22	2.98 l/(s*bar)	16 ms
0820055502	0.35 W	0.22	2.97 l/(s*bar)	13 ms
0820055002	0.35 W	0.22	2.98 l/(s*bar)	15 ms

Part No.	Typ. switch-off time
0820055052	23 ms
0820055502	15 ms
0820055002	23 ms

Nominal flow Q_n at 6 bar and $\Delta p = 1$ bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

Use only the approved oils from AVENTICS. 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.

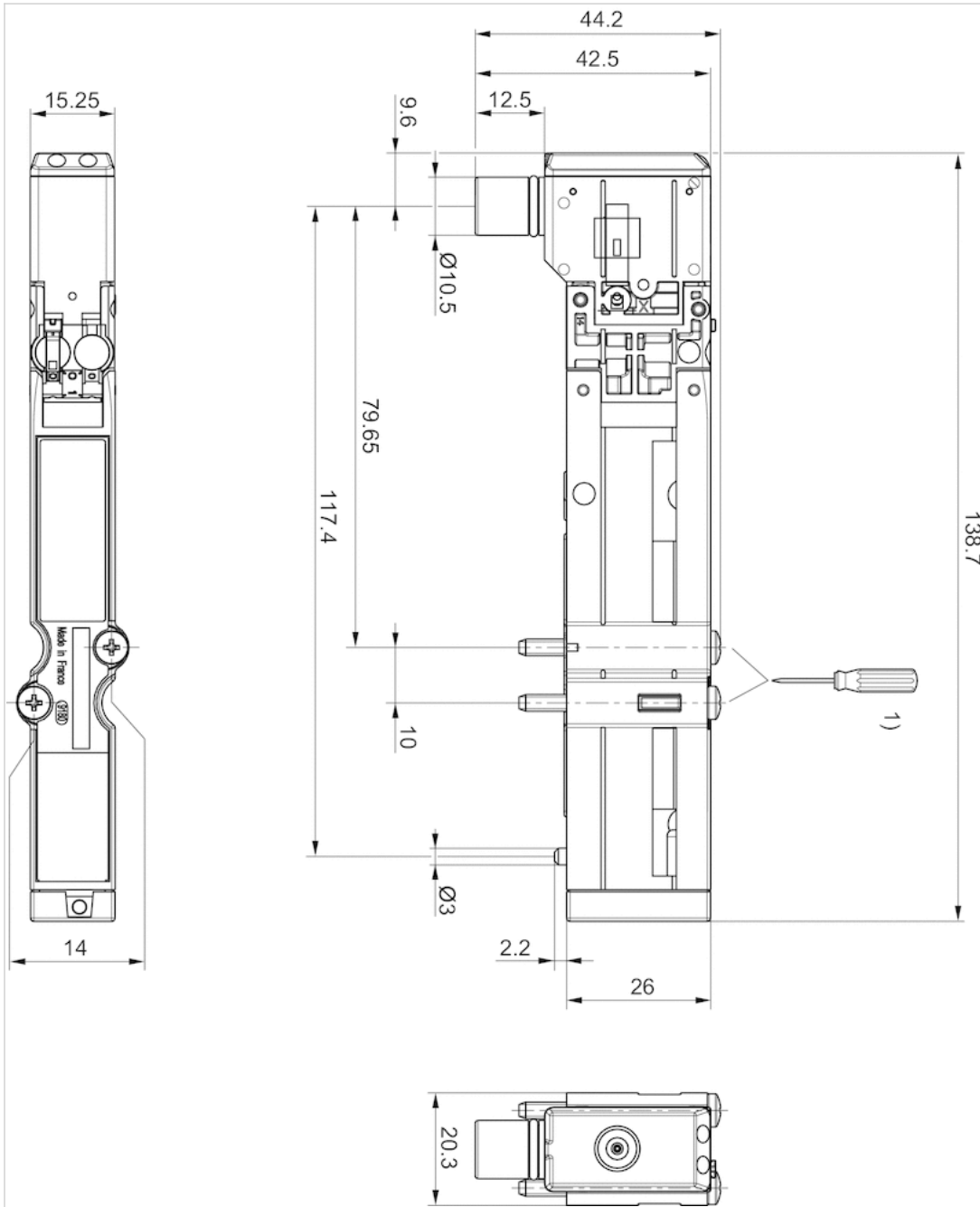
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

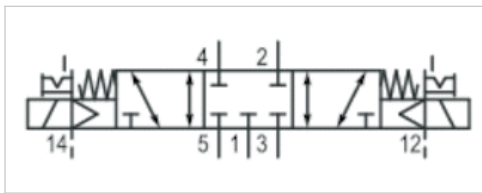
Dimensions



1) =1.1Nm 800tr/min. max.

5/3-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 5/3
- Qn = 850 l/min
- Pilot valve width : 16 mm
- closed center
- Plate connection
- Manual override : with detent
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective 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	14 ms
Typ. switch-off time	15 ms
mounting screws	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.	MO		Operational voltage	Voltage tolerance
			DC	DC
0820055601		closed center	24 V	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055601	0.35 W	0.23	2.79 l/(s*bar)

Nominal flow Qn at 6 bar and Δp = 1 bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

Use only the approved oils from AVENTICS. 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.

The pilot valve is UL (Underwriters Laboratories) certified.

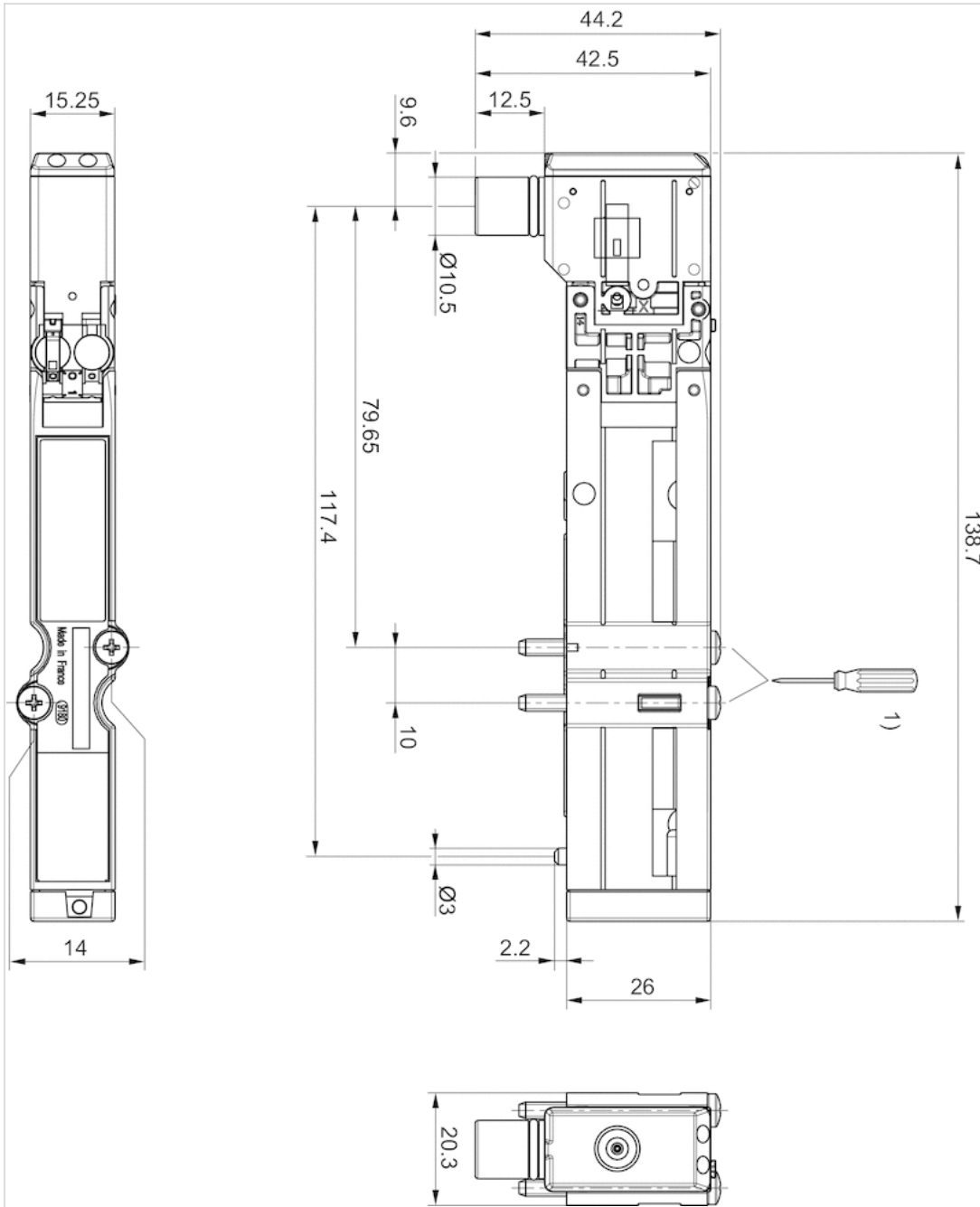
Technical information

Material

Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

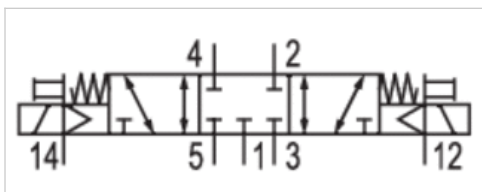
Dimensions



1) =1.1Nm 800tr/min. max.

5/3-directional valve, Series HF03-LG

- For series : HF03-LG, CL03
- 5/3
- Qn = 850 l/min
- Pilot valve width : 16 mm
- closed center
- Plate connection
- Manual override : without detent
- Pilot : External



Version	Spool valve, positive overlapping
Activation	Electrically
Pilot	External
Sealing principle	Soft sealing
Blocking principle	Single base plate principle
Certificates	UR (Underwriters Laboratories)
Working pressure min./max.	-0.9 ... 10 bar
Control pressure min./max.	2.5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 5 mg/m³
Nominal flow Qn	850 l/min
Pilot control exhaust	With collective 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	14 ms
Typ. switch-off time	15 ms
mounting screws	cross recessed DIN EN ISO 4757-Z1
Mounting screw tightening torque	1.3 Nm
Weight	0.082 kg

Technical data

Part No.	MO		Operational voltage	Voltage tolerance
			DC	DC
0820055602		closed center	24 V	-15% / +20%

Part No.	Power consumption	Flow conductance	Flow conductance
	DC	b	C-value
0820055602	0.35 W	0.23	2.79 l/(s*bar)

Nominal flow Qn at 6 bar and Δp = 1 bar, 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 15 °C under ambient and medium temperature and may not exceed 3 °C .

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

Use only the approved oils from AVENTICS. 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.

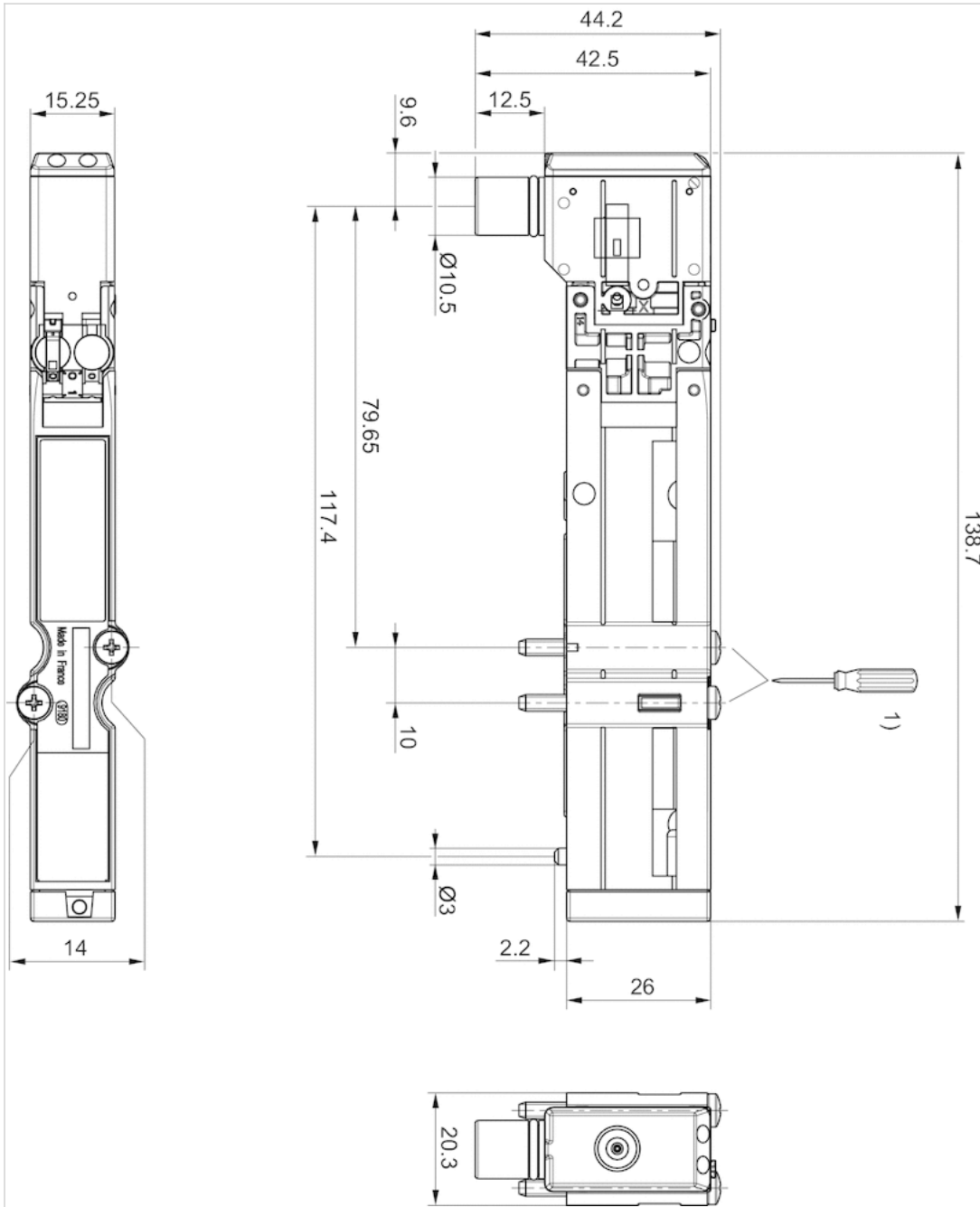
The pilot valve is UL (Underwriters Laboratories) certified.

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Seals	Acrylonitrile butadiene rubber

Dimensions

Dimensions



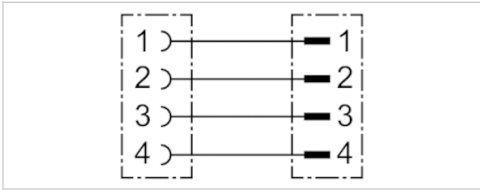
1) =1.1Nm 800tr/min. max.

Round plug connector, Series CON-RD

- Socket M12x1 4-pin A-coded straight 180°
- Plug M12x1 4-pin A-coded straight 180°
- EN 61076-2-101
- with cable
- unshielded



Ambient temperature min./max.	-40 ... 105 °C
Protection class	IP65 IP67 IP68 IP69
Wire cross-section	0.34 mm ²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Bending radius min.	Cable-Ø	Cable length	Delivery unit	Weight
R402003760	4 A	4	45 mm	4.5 mm	5 m	1 piece	0.258 kg
R402003761	4 A	4	45 mm	4.5 mm	10 m	1 piece	0.484 kg
R402003762	4 A	4	45 mm	4.5 mm	15 m	1 piece	0.721 kg

Technical information

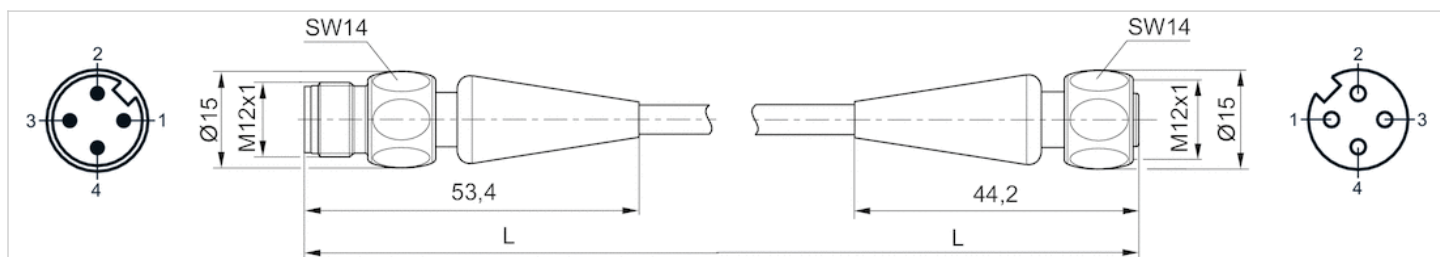
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polypropylene
Seals	Ethylene propylene diene monomer rubber
Cable sheath	Polyvinyl chloride

Dimensions

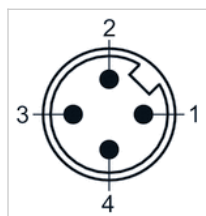
Dimensions



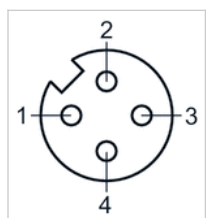
L = cable length

Pin assignments

Plug pin assignment



Pin assignment, socket

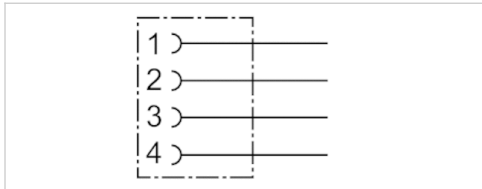


Round plug connector, Series CON-RD

- Socket, M12x1, 4-pin, A-coded, straight, 180°
- unshielded



Connection type	Screws
Ambient temperature min./max.	0 ... 50 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Weight	0.028 kg



Technical data

Part No.	Max. current	suitable cable-Ø min./max
R402003755	4 A	3 / 6.5 mm

Technical information

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

Technical information

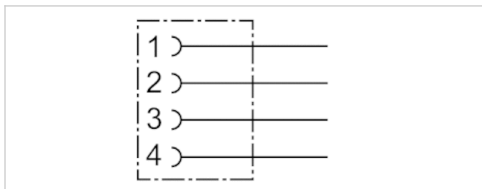
Material	
Housing	Stainless steel Polybutyleneterephthalate
Seals	Fluorocaoutchouc

Round plug connector DUO, Series CON-RD

- Socket, M12x1, 4-pin, A-coded, straight, 180°
- unshielded



Connection type	Screws
Ambient temperature min./max.	0 ... 50 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Weight	0.034 kg



Technical data

Part No.	Version	Max. current	suitable cable-Ø min./max
R402003790	duo plug	4 A	3.5 / 5 mm

Technical information

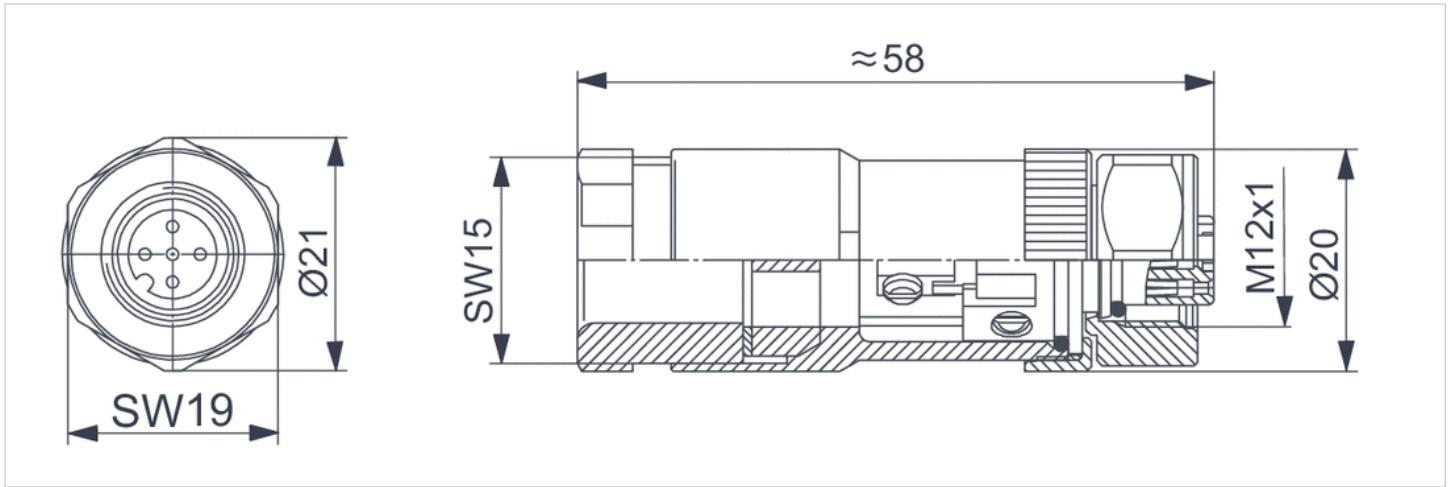
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Stainless steel Polybutyleneterephthalate
Seals	Fluorocaoutchouc

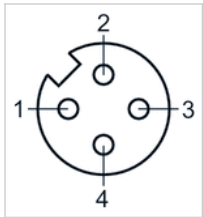
Dimensions

Dimensions



Pin assignments

Pin assignment, socket

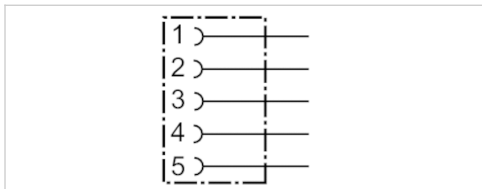


Round plug connector, Series CON-RD

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



Connection type	Screws
Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP69K
Weight	0.057 kg



Technical data

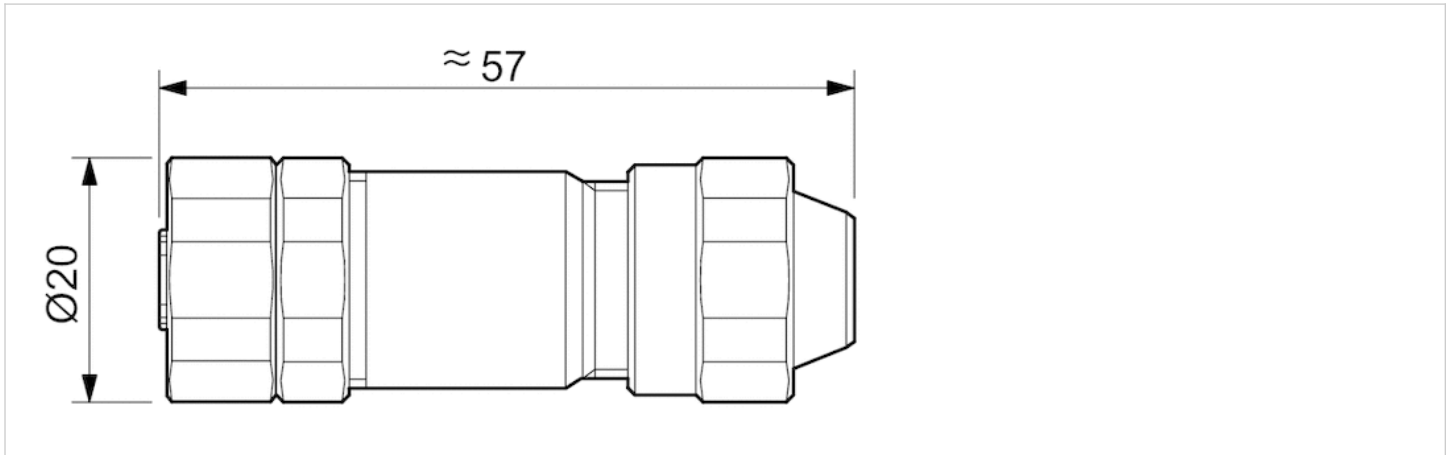
Part No.	Version	Max. current	suitable cable-Ø min./max
R402003757	Data plug input	4 A	6 / 8 mm

Technical information

Material	
Housing	Stainless steel

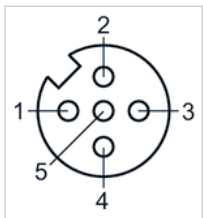
Dimensions

Dimensions



Pin assignments

Pin assignment, socket



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



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2019-03



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