

## Series ES05



**AVENTICS™**

**AVENTICS Series ES05  
Directional valves**

  
**EMERSON™**

**AVENTICS Series ES05 Directional valves**

The AVENTICS Series ES05 is ideal for standard pneumatic applications. Its simplicity and modularity make it especially well-suited for applications that require quick changes or extensions. Due to its modular system consisting of a limited number of components and the one-tool concept, the ES05 is also easy to assemble in-house.

- Easy, quick and secure assembly
- Quick delivery
- Excellent flexibility, can be adapted at any time
- Low storage costs thanks to optimization of components
- Modular systems for easy configuration
- High quality with sophisticated material concept
- Also suitable for use in clean rooms due to collected pilot exhaust air



## Product overview

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## Product overview

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**2x3/2-directional valve, Series ES05, UR (Underwriters Laboratories)**

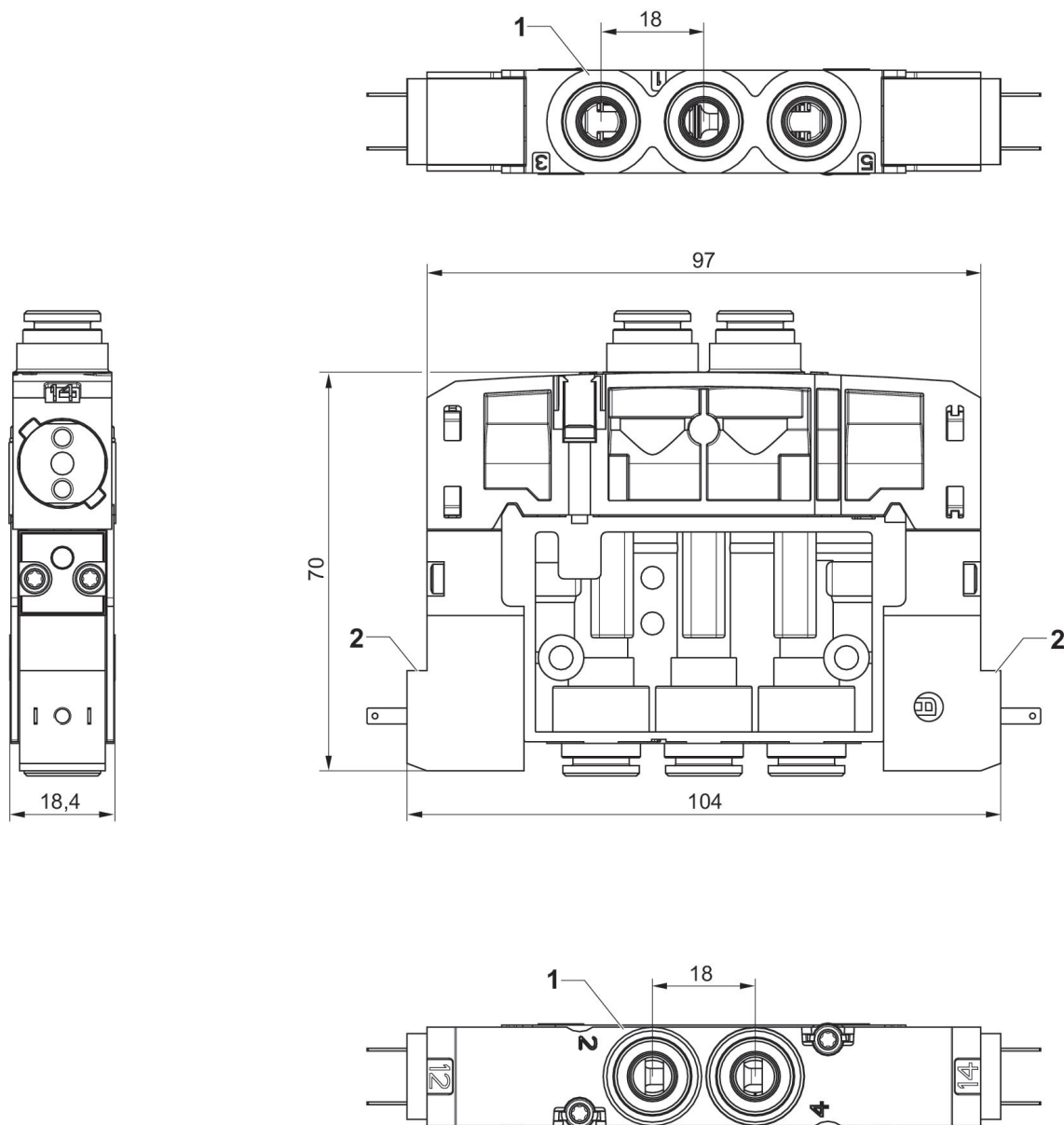
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Compressed air connection input: Ø 8  
 Compressed air connection output: Ø 8  
 Compressed air connection, exhaust: Ø 8  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Part No.
	NC/NC	2x 3/2 NC/NC, with spring return	Ø 8	Ø 8	Ø 8	24 V DC	2	R422103177
	NO/NO	2x 3/2 NO/NO, with spring return	Ø 8	Ø 8	Ø 8	24 V DC	2	R422103178

Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
-15 % / +10 %	without detent	500	<20	R422103177
-15 % / +10 %	without detent	370	<20	R422103178

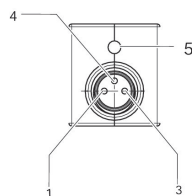
Dimensions



- 1) Connections [1 ,3 ,5, 2, 4] Ø 8
- 2) 2 pilot valves with external electrical connection

**R422103177, R422103178**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

### 2x3/2-directional valve, Series ES05

Activation: Electrically

Electrical connection 2, thread size: M8x1

Compressed air connection input: Ø 8

Compressed air connection output: Ø 8

Compressed air connection, exhaust: Ø 8

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

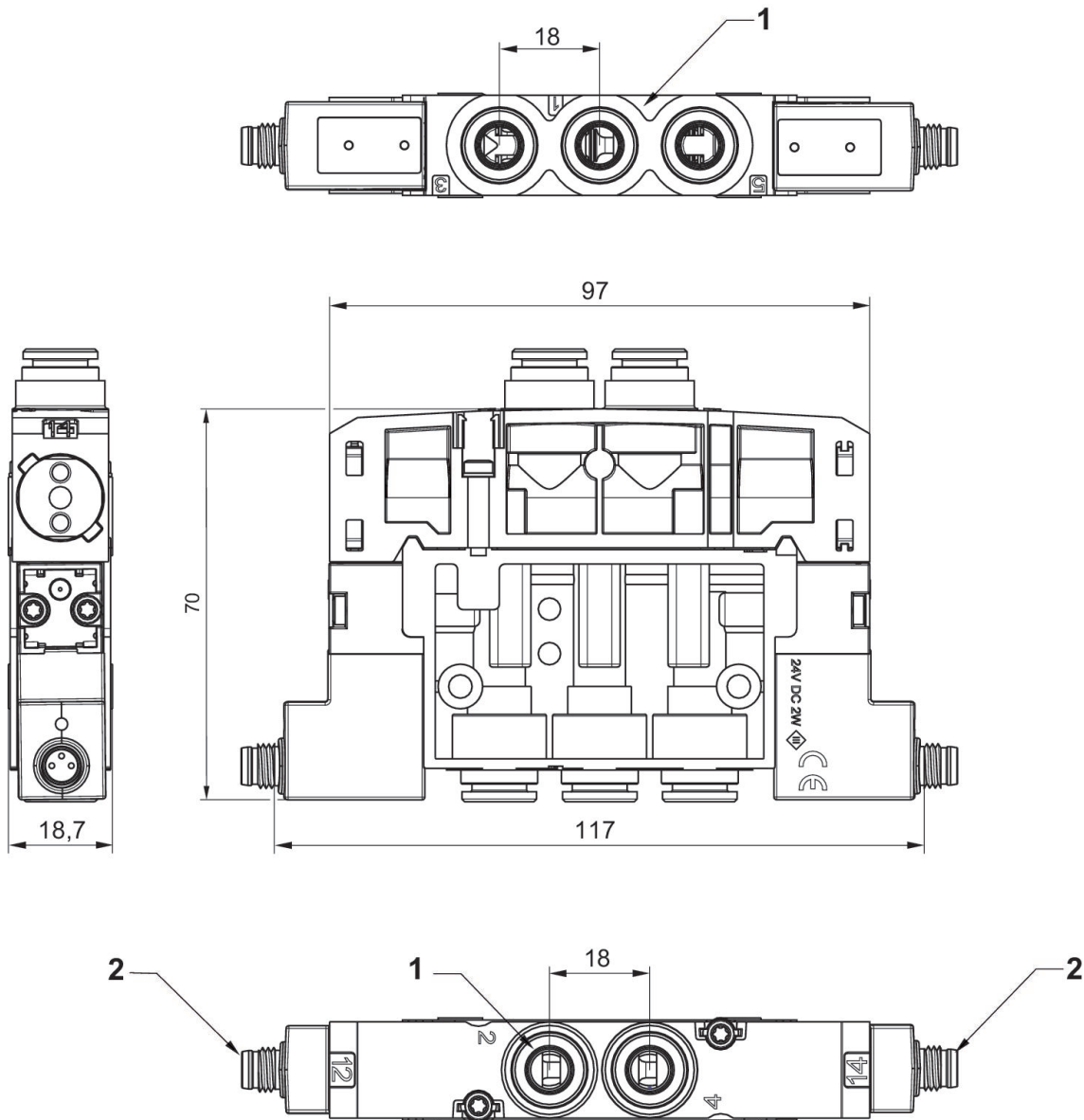
Working pressure min./max.: 3 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Part No.
	NC/NC	2x 3/2 NC/NC, with spring return	Ø 8	Ø 8	Ø 8	24 V DC	2	R422103857
	NO/NO	2x 3/2 NO/NO, with spring return	Ø 8	Ø 8	Ø 8	24 V DC	2	R422103858

Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
-15 % / +10 %	without detent	500	<20	R422103857
-15 % / +10 %	without detent	370	<20	R422103858

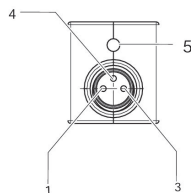
Dimensions



- 1) Connections [1, 3, 5, 2, 4] Ø 8
- 2) 1 pilot valve with electrical connection M8x1

**R422103857, R422103858**

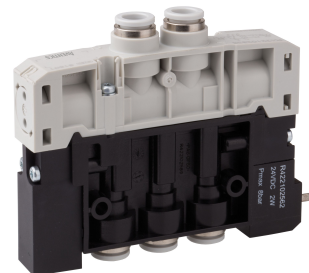
PIN assignment for valve plug connectors

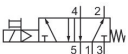


Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**5/2-directional valve, Series ES05, UR (Underwriters Laboratories)**

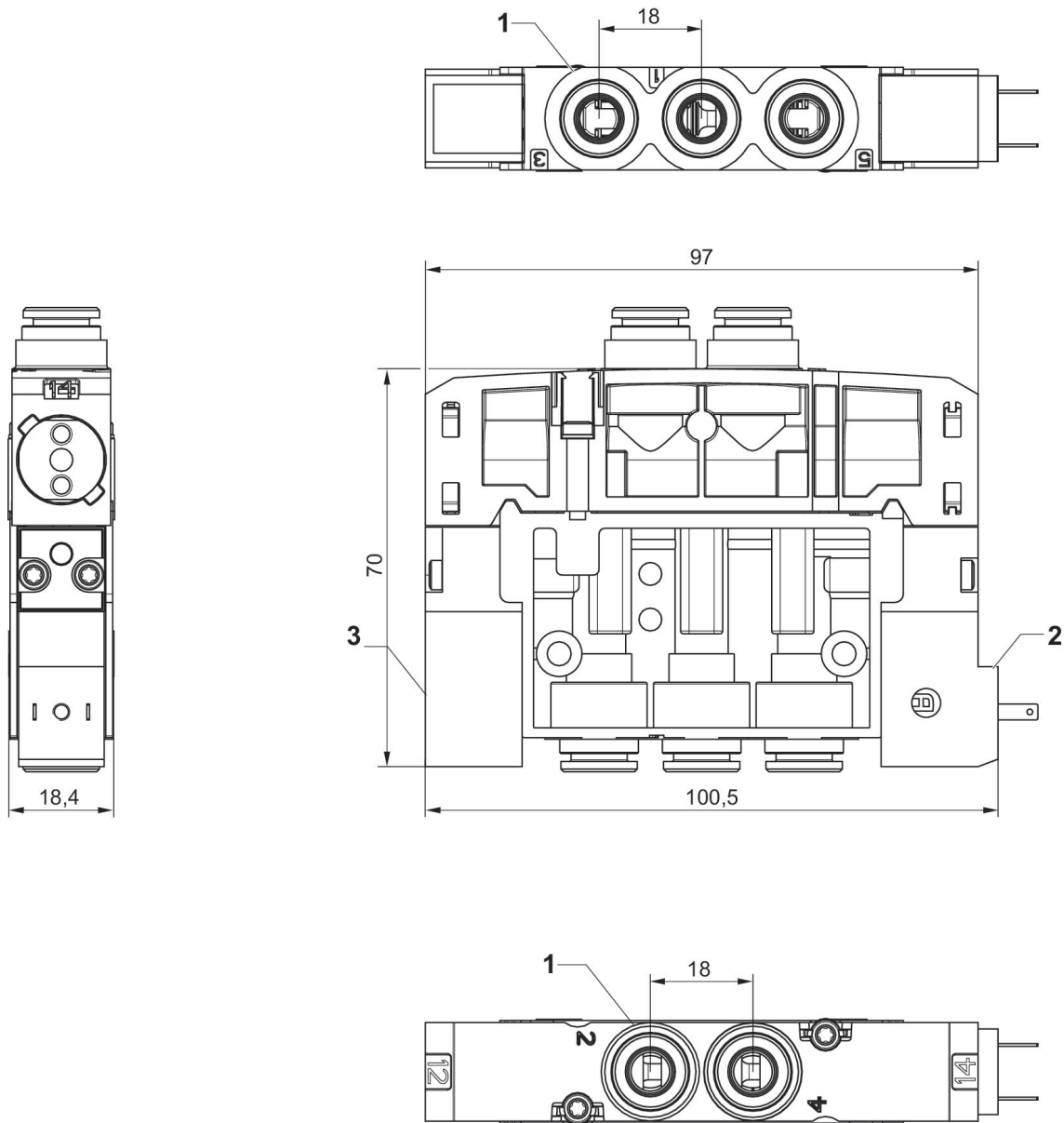
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Compressed air connection input: Ø 8  
 Compressed air connection output: Ø 8  
 Compressed air connection, exhaust: Ø 8  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, with spring return	Ø 8	Ø 8	Ø 8	24 V DC	2	-15 % / +10 %	R422103175

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<35	R422103175

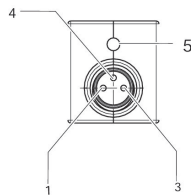
Dimensions  
Double Solenoid



- 1) Connections [1, 3, 5, 2, 4] Ø 8
- 2) 1 pilot valve with electrical connection
- 3) Pilot blanking plate

**R422103175**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**5/2-directional valve, Series ES05, UR (Underwriters Laboratories)**

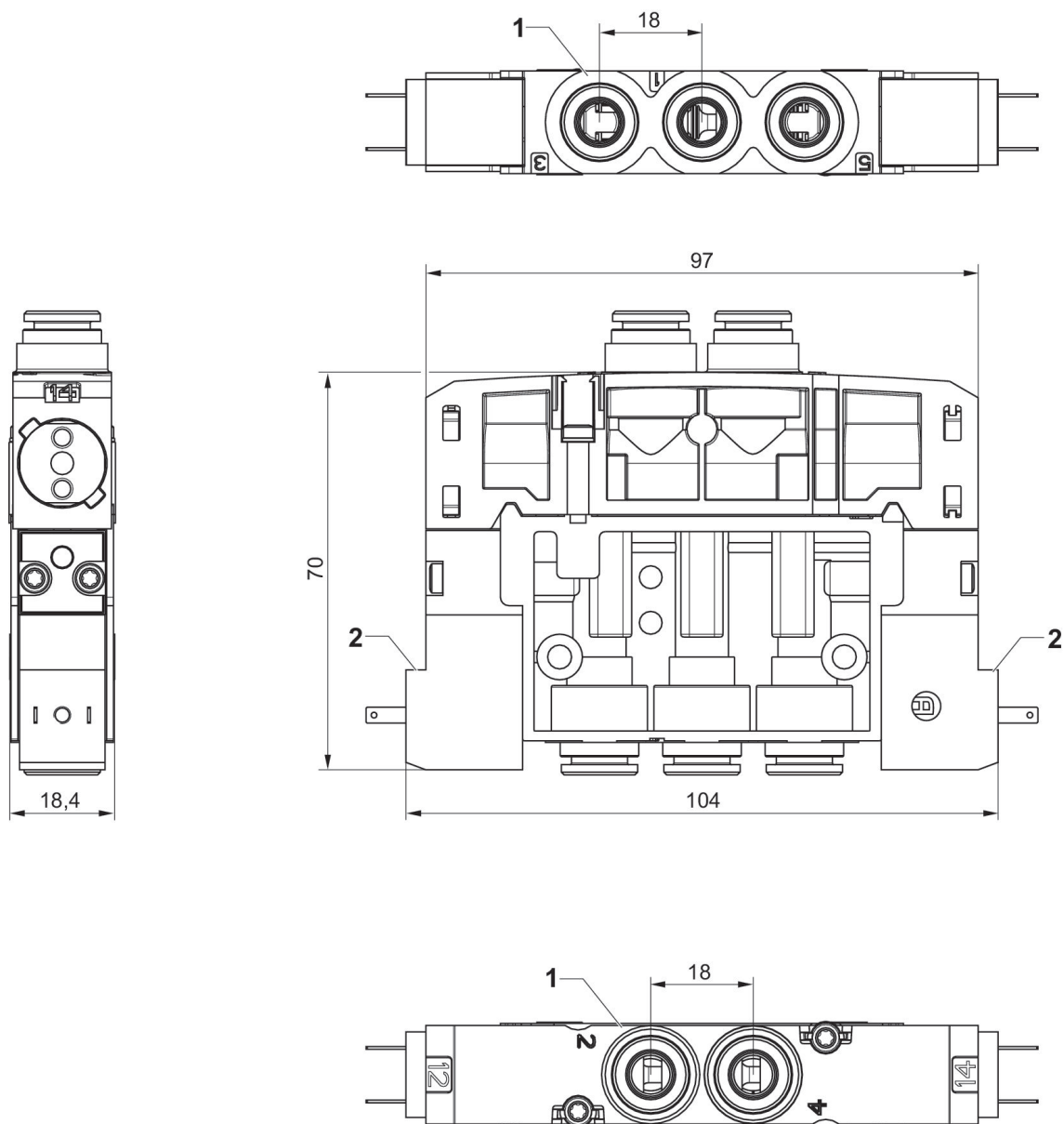
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Compressed air connection input: Ø 8  
 Compressed air connection output: Ø 8  
 Compressed air connection, exhaust: Ø 8  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, double solenoid	Ø 8	Ø 8	Ø 8	24 V DC	2	-15 % / +10 %	R422103176

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<20	R422103176

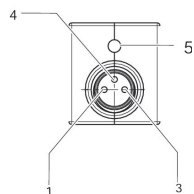
Dimensions  
Double Solenoid



- 1) Connections [1, 3, 5, 2, 4] Ø 8
- 2) 2 pilot valves with external electrical connection

**R422103176**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

### 5/2-directional valve, Series ES05

Activation: Electrically

Electrical connection 2, thread size: M8x1

Compressed air connection input: Ø 8

Compressed air connection output: Ø 8


Compressed air connection, exhaust: Ø 8

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

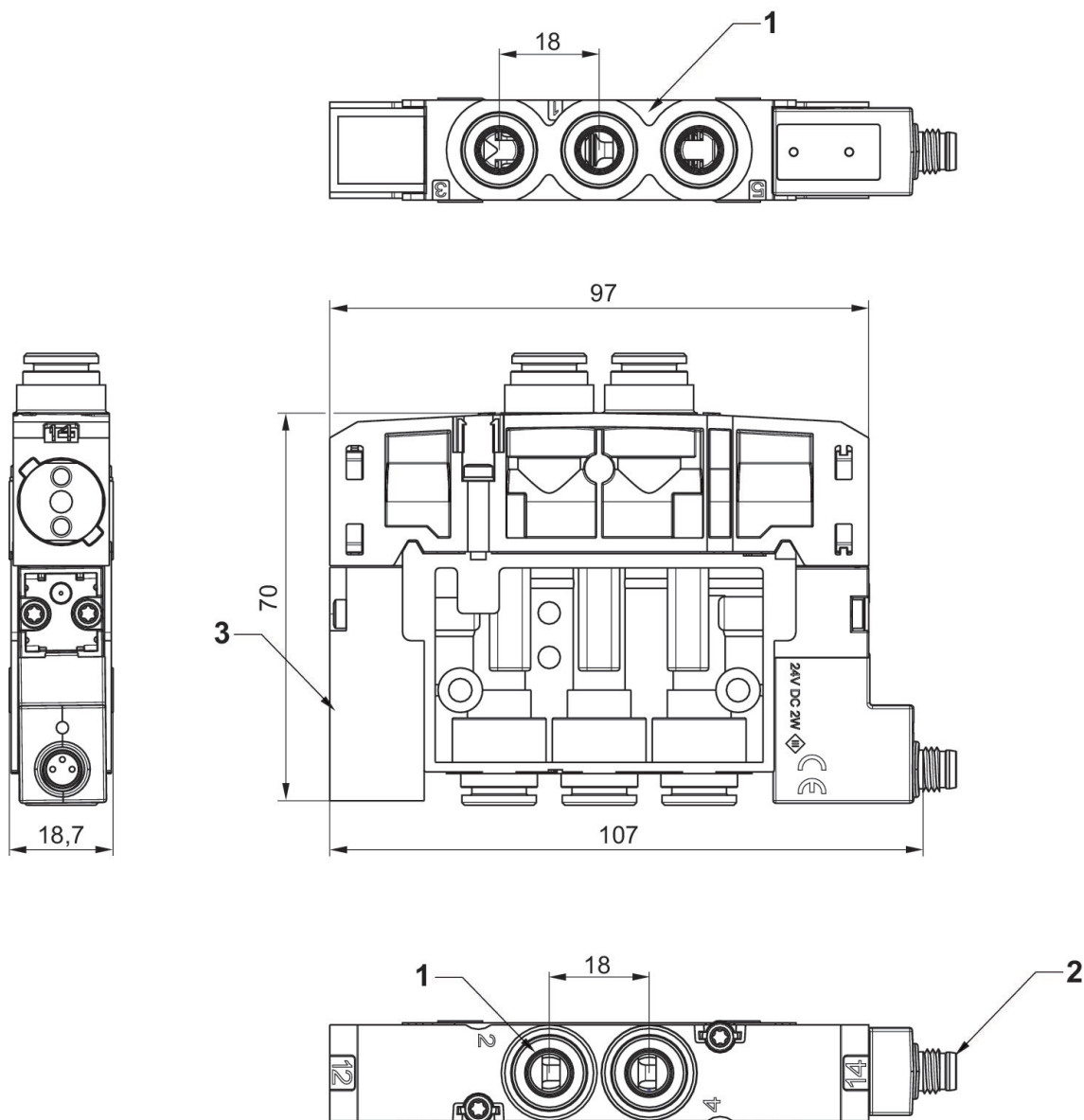
Medium temperature min./max.: 5 °C ... 50 °C

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

	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, with spring return	Ø 8	Ø 8	Ø 8	24 V DC	2	-15 % / +10 %	R422103855

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<35	R422103855

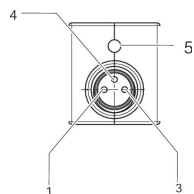
Dimensions



- 1) Connections [1, 3, 5, 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection M8x1
- 3) Pilot blanking plate

**R422103855**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

### 5/2-directional valve, Series ES05

Activation: Electrically

Electrical connection 2, thread size: M8x1

Compressed air connection input: Ø 8

Compressed air connection output: Ø 8


Compressed air connection, exhaust: Ø 8

Duty cycle: 100 %

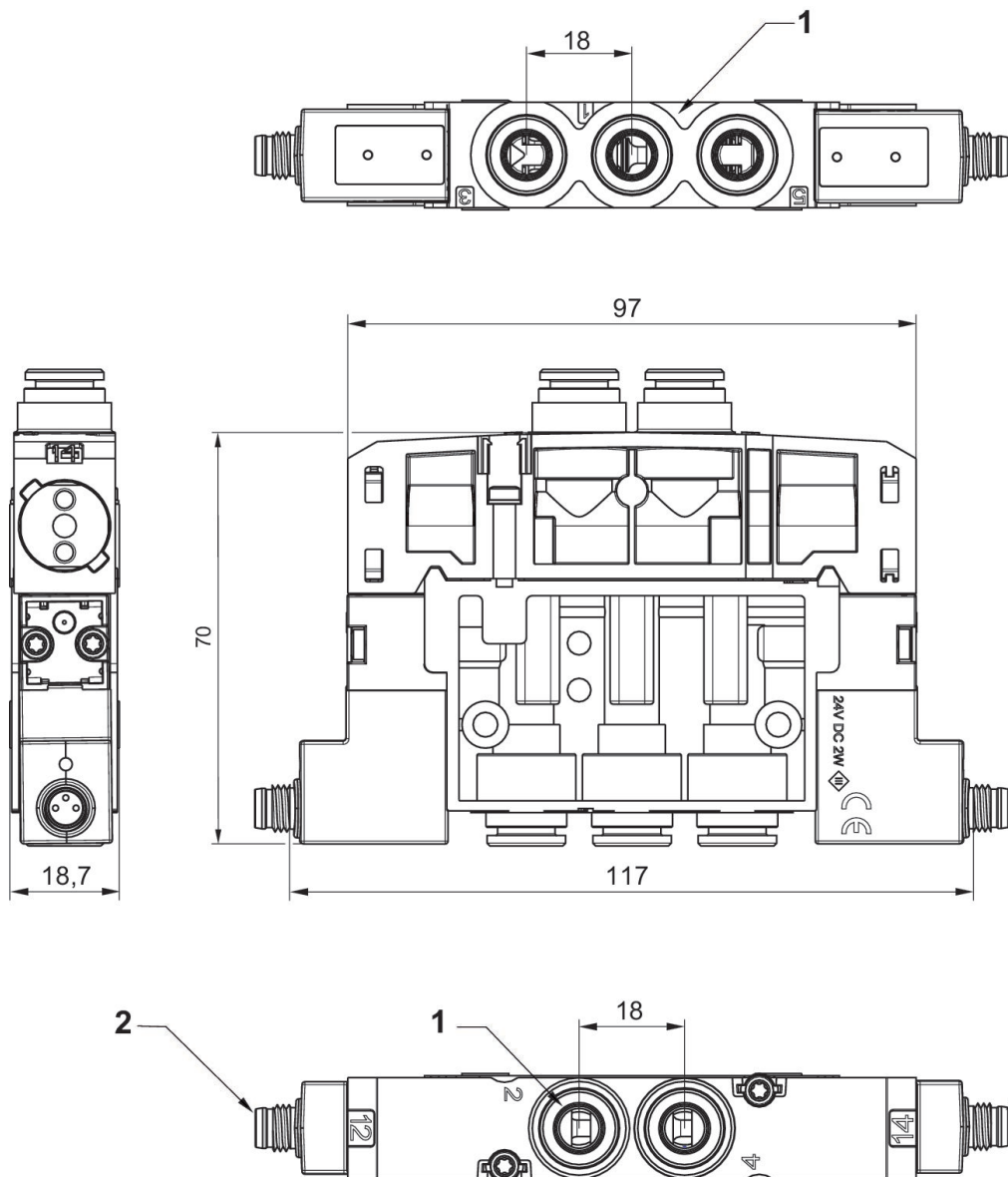
Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

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

	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, double solenoid	Ø 8	Ø 8	Ø 8	24 V DC	2	-15 % / +10 %	R422103856

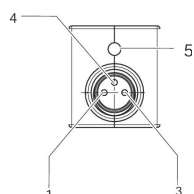
Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<20	R422103856



- 1) Connections [1 ,3 ,5, 2, 4] Ø 8
- 2) 1 pilot valve with electrical connection M8x1
- 3) Pilot blanking plate

**R422103856**

PIN assignment for valve plug connectors

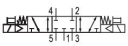


Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**5/3-directional valve, Series ES05, UR (Underwriters Laboratories)**

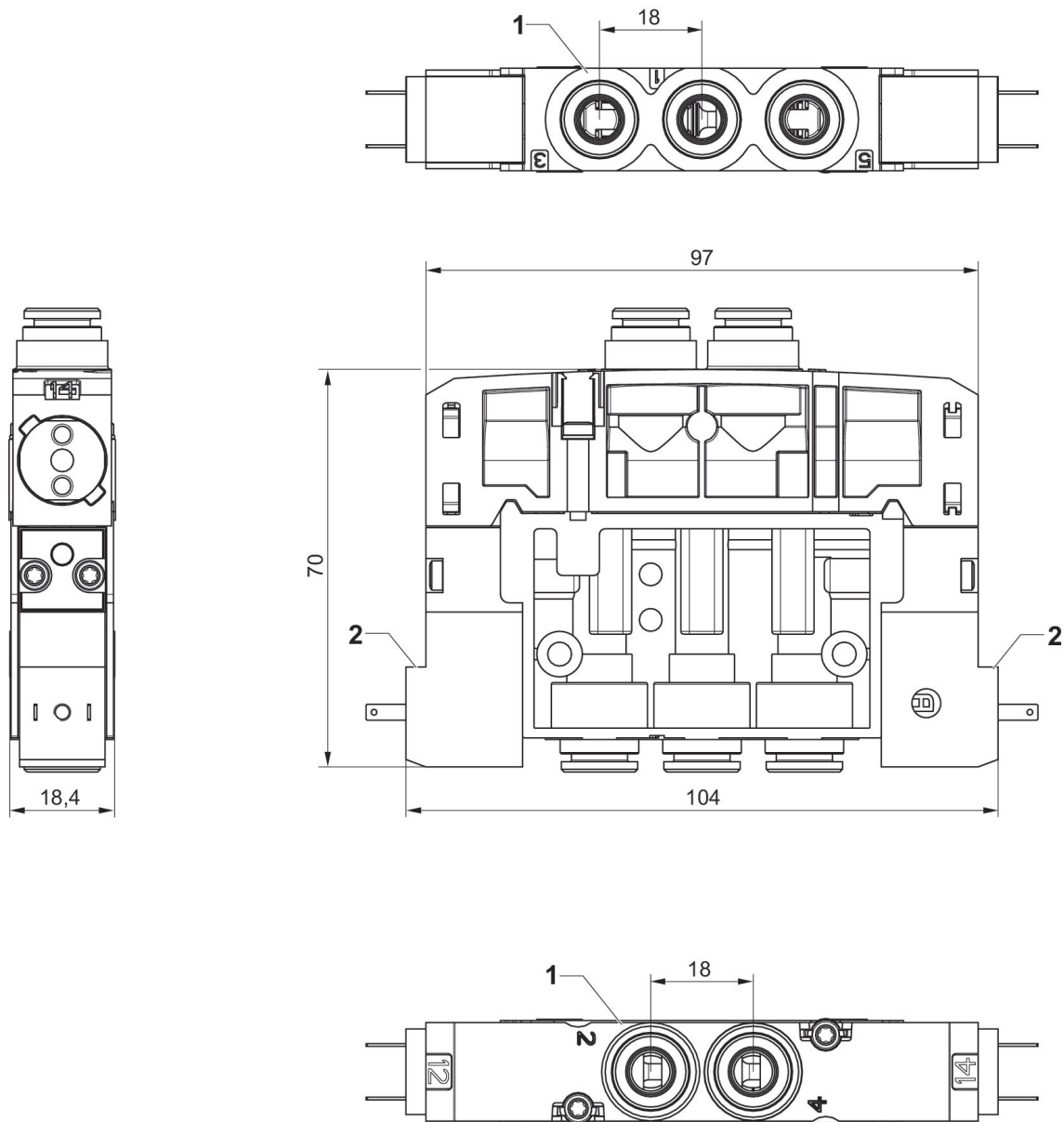
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Part No.
	Closed Center	5/3, closed center	Ø 8	Ø 8	Ø 8	24 V DC	2	R422103183

Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
-15 % / +10 %	without detent	500	<20	R422103183

Dimensions



- 1) Connections [1 ,3 ,5, 2, 4] Ø 8
- 2) 2 pilot valves with external electrical connection

### 5/3-directional valve, Series ES05

Activation: Electrically

Electrical connection 2, thread size: M8x1

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

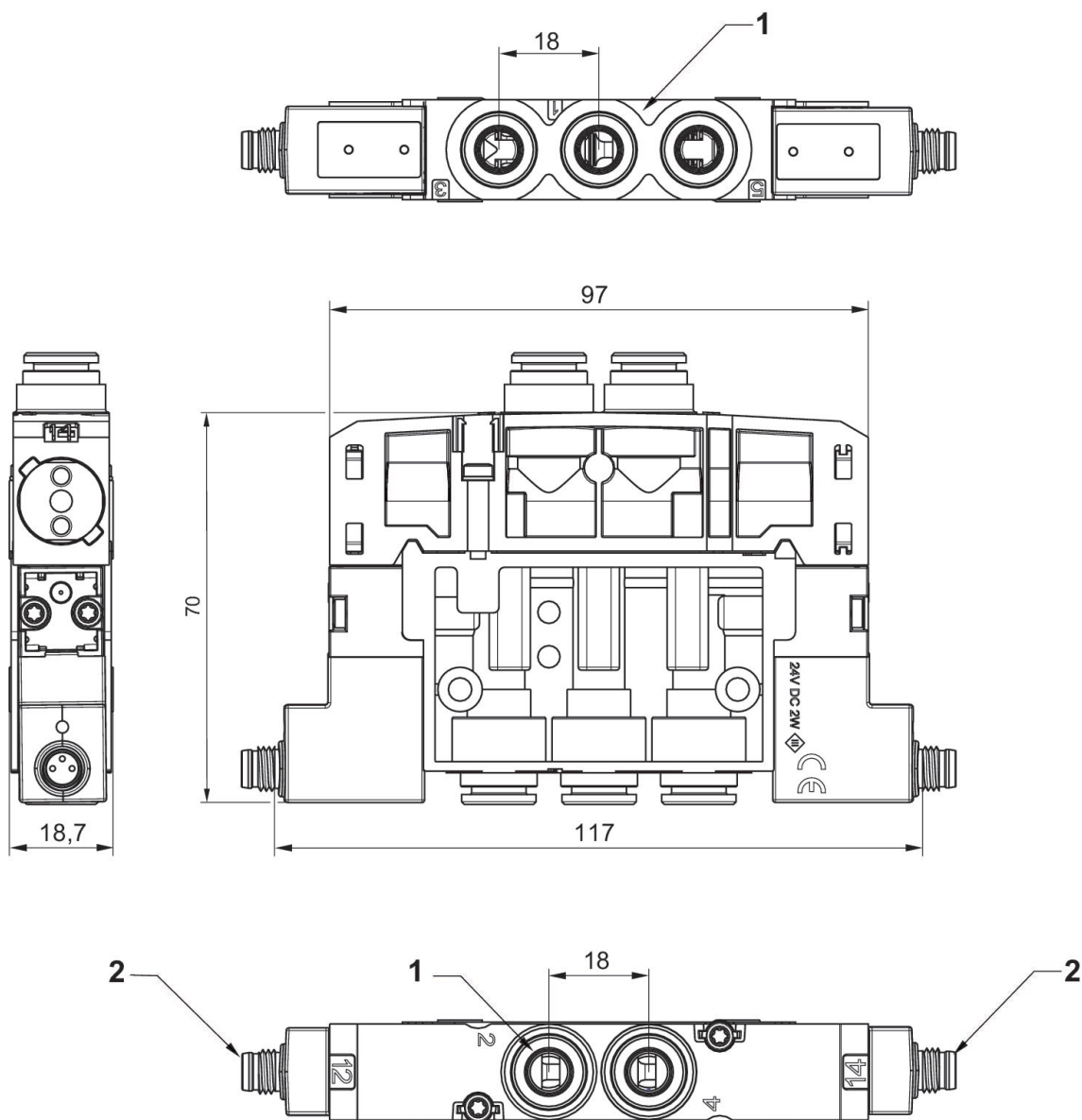
Working pressure min./max.: 3 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Part No.
	Closed Center	5/3, closed center	Ø 8	Ø 8	Ø 8	24 V DC	2	R422103863

Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
-15 % / +10 %	without detent	500	<20	R422103863

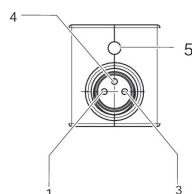
Dimensions



- 1) Connections [1, 3, 5, 2, 4] Ø 8
- 2) 2 pilot valves with external electrical connection M8x1

**R422103863**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**2x3/2-directional valve, Series ES05 -inch, UR (Underwriters Laboratories)**

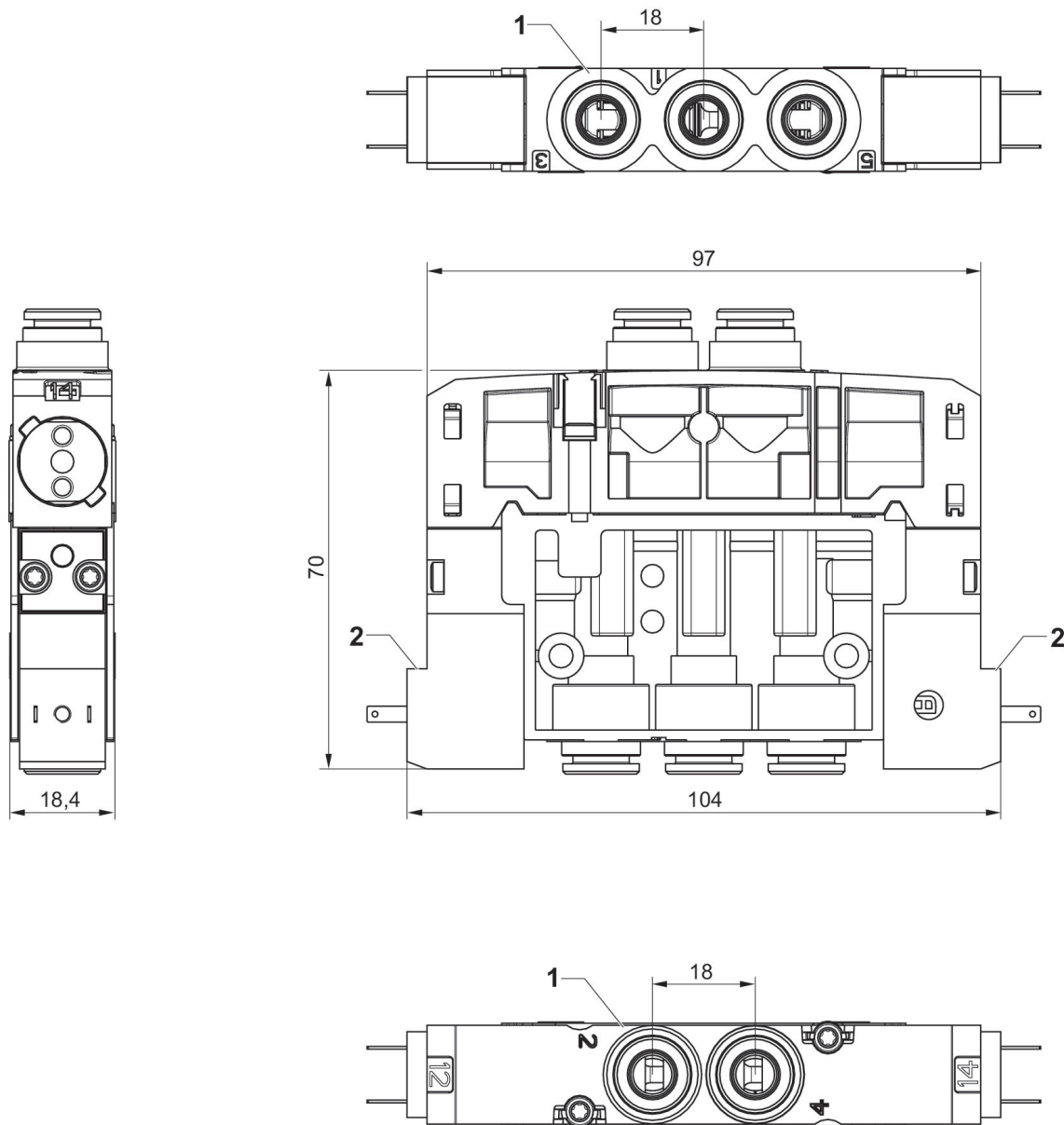
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Compressed air connection input: 3/8"  
 Compressed air connection output: 3/8"  
 Compressed air connection, exhaust: 3/8"  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Part No.
	NC/NC	2x 3/2 NC/NC, with spring return	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	R422103181
	NO/NO	2x 3/2 NO/NO, with spring return	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	R422103182

Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
-15 % / +10 %	without detent	500	<20	R422103181
-15 % / +10 %	without detent	370	<20	R422103182

Dimensions



- 1) Connections [1 ,3 ,5, 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection

**2x3/2-directional valve, Series ES05 -inch**

Activation: Electrically

Electrical connection 2, thread size: M8x1

Compressed air connection input: 3/8"

Compressed air connection output: 3/8"

Compressed air connection, exhaust: 3/8"

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

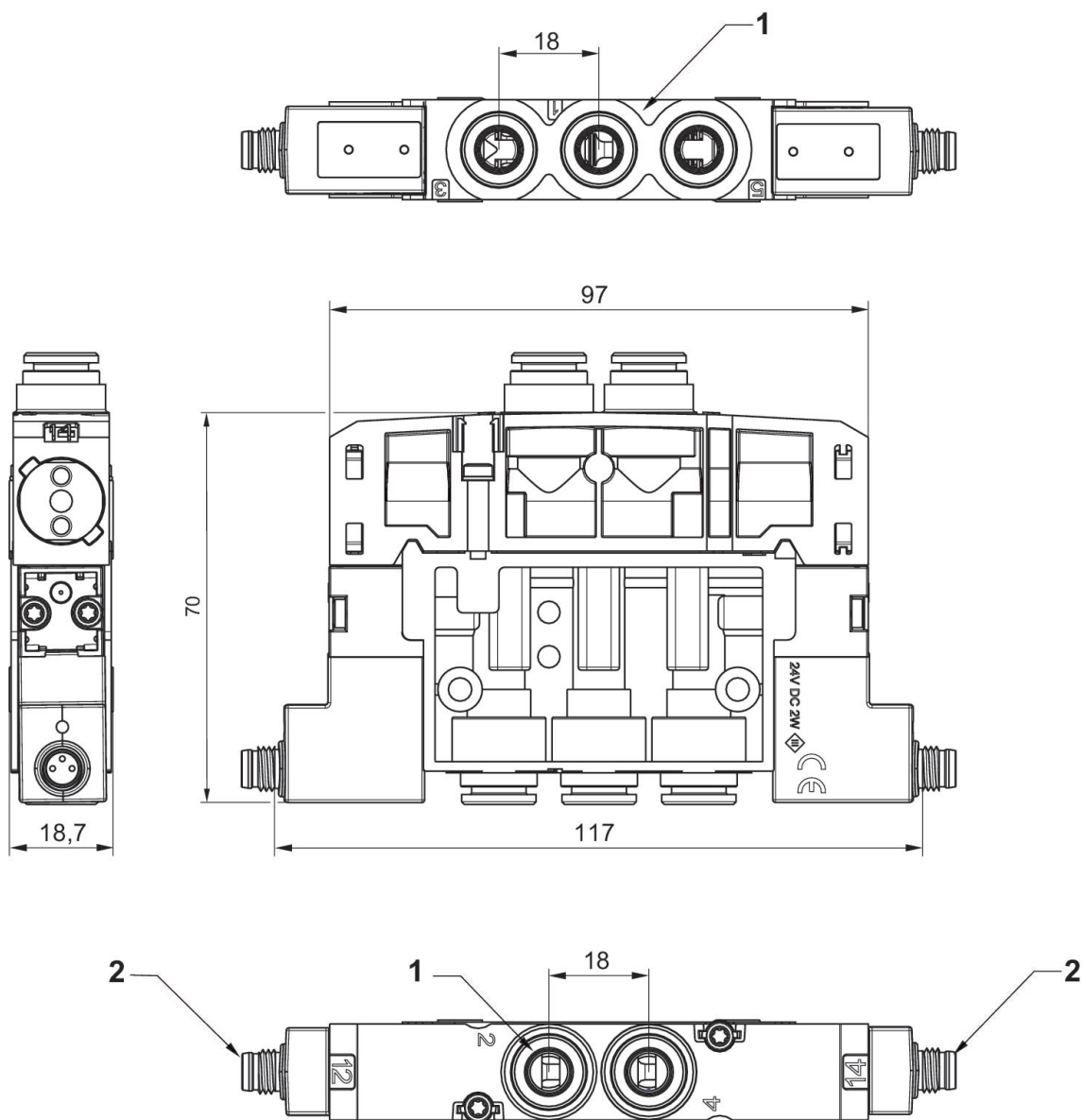
Working pressure min./max.: 3 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Part No.
	NC/NC	2x 3/2 NC/NC, with spring return	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	R422103861
	NO/NO	2x 3/2 NO/NO, with spring return	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	R422103862

Voltage tolerance DC	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
-15 % / +10 %	without detent	500	<20	R422103861
-15 % / +10 %	without detent	370	<20	R422103862

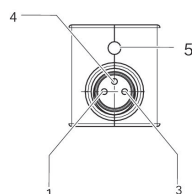
Dimensions



- 1) Connections [1, 3, 5, 2, 4] Ø 8
- 2) 1 pilot valve with electrical connection M8x1

**R422103861, R422103862**

PIN assignment for valve plug connectors

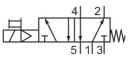


Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**5/2-directional valve, Series ES05 -inch, UR (Underwriters Laboratories)**

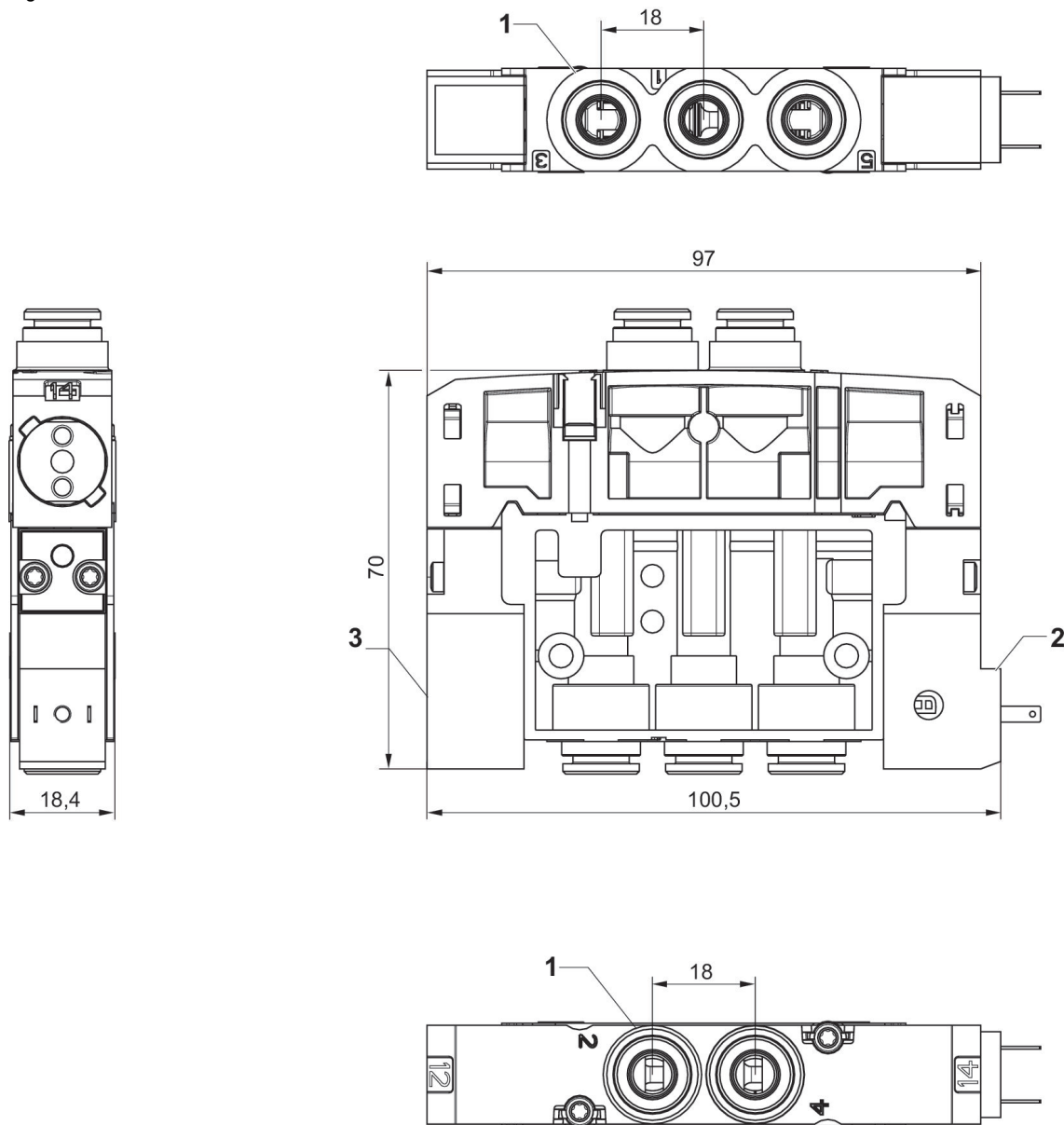
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, with spring return	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	-15 % / +10 %	R422103179

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<35	R422103179

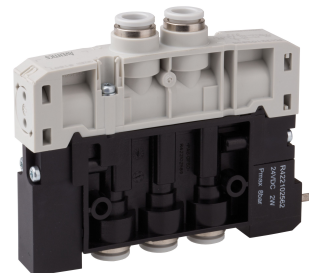
Fig. 1




- 1) Connections [1 ,3 ,5, 2, 4] Ø 3/8
- 2) 1 pilot valve with electrical connection
- 3) Pilot blanking plate

**5/2-directional valve, Series ES05 -inch, UR (Underwriters Laboratories)**

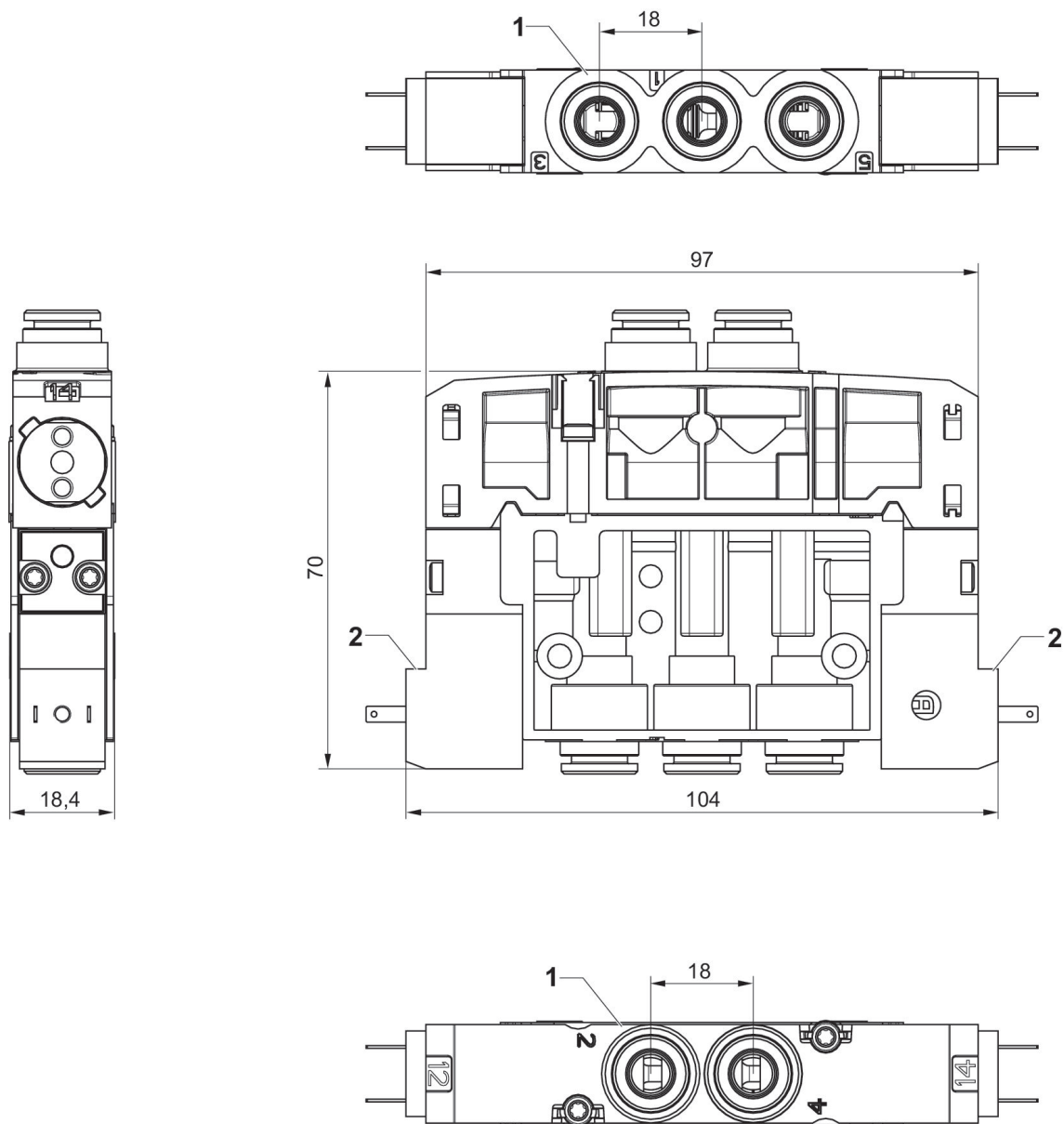
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, double solenoid	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	-15 % / +10 %	R422103180

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<20	R422103180

Dimensions



- 1) Connections [1 ,3 ,5, 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection

**5/2 directional valve function, Series ES05**

Activation: Electrically

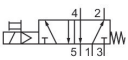
Electrical connection 2, thread size: M8x1

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

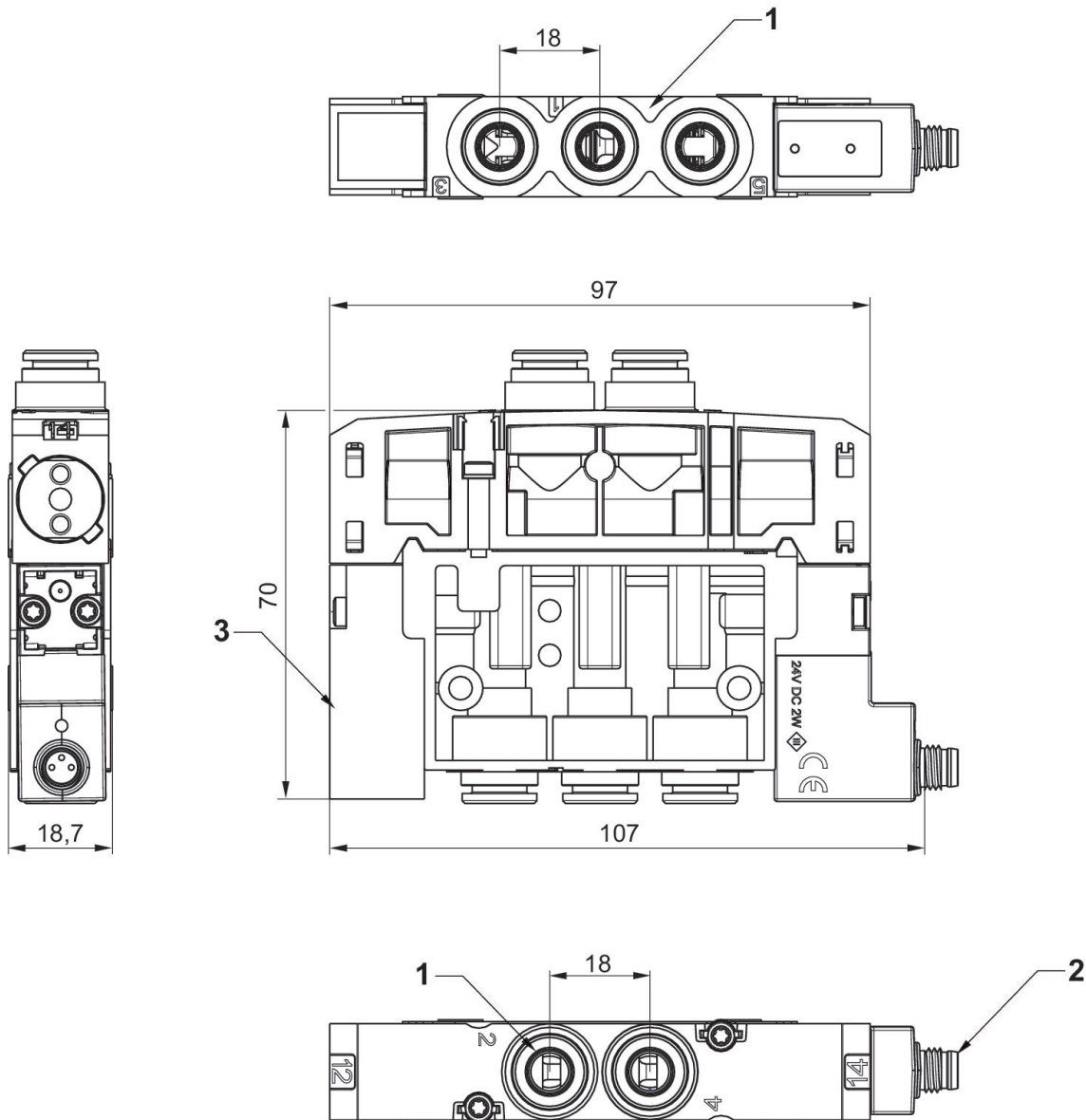
Medium temperature min./max.: 5 °C ... 50 °C

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

	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, with spring return	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	-15 % / +10 %	R422103859

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<35	R422103859

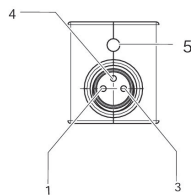
Dimensions  
Fig. 1



- 1) Connections [1 ,3 ,5, 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection M8x1
- 3) Pilot blanking plate

**R422103859**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**5/2 directional valve function, Series ES05**

Activation: Electrically

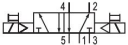
Electrical connection 2, thread size: M8x1

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

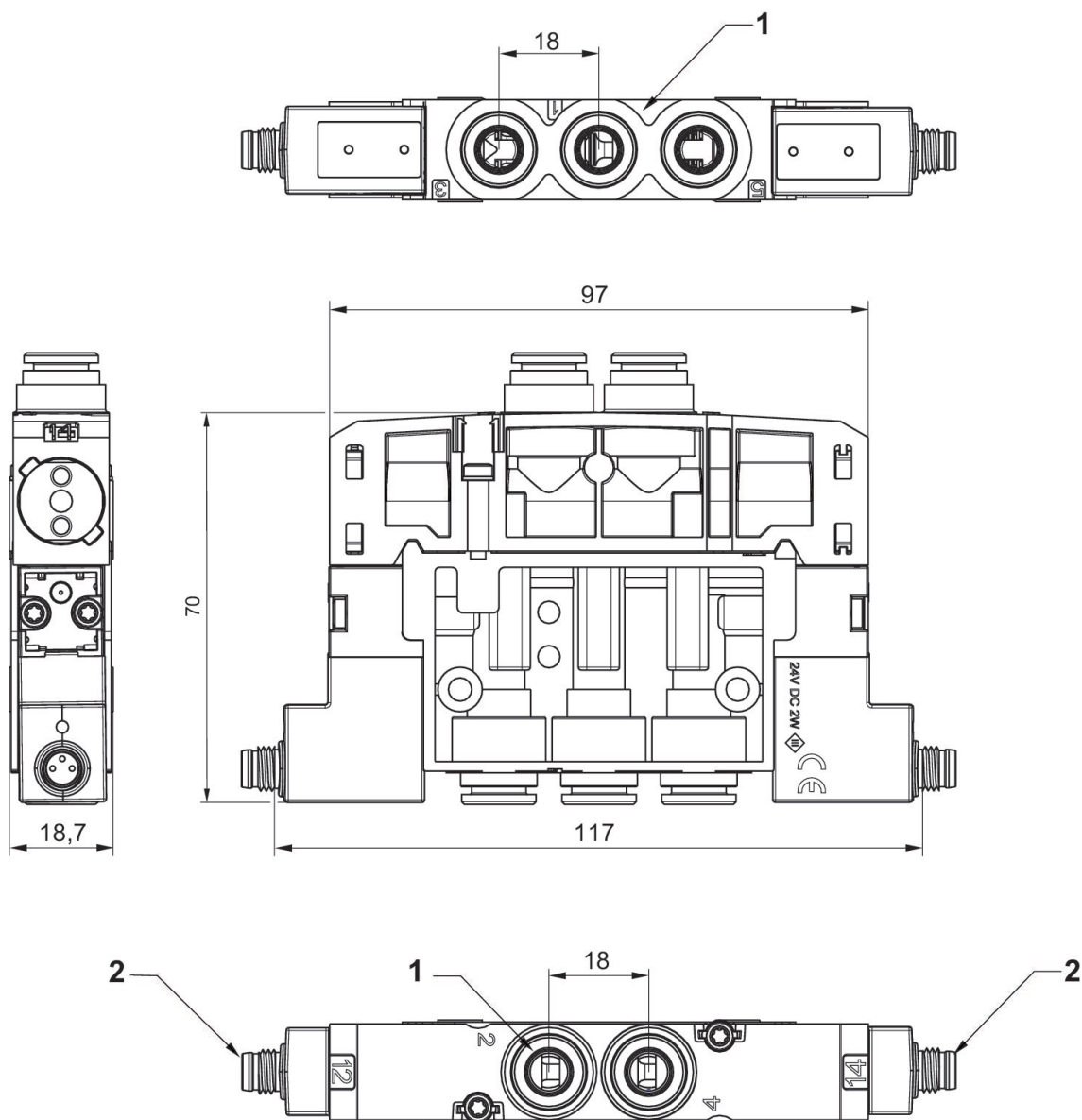
Medium temperature min./max.: 5 °C ... 50 °C

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

	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/2, double solenoid	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	-15 % / +10 %	R422103860

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	610	<20	R422103860

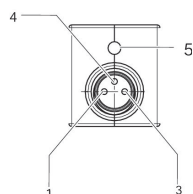
Dimensions



- 1) Connections [1, 3, 5, 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection M8x1

**R422103860**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**5/3-directional valve, Series ES05 -inch, UR (Underwriters Laboratories)**

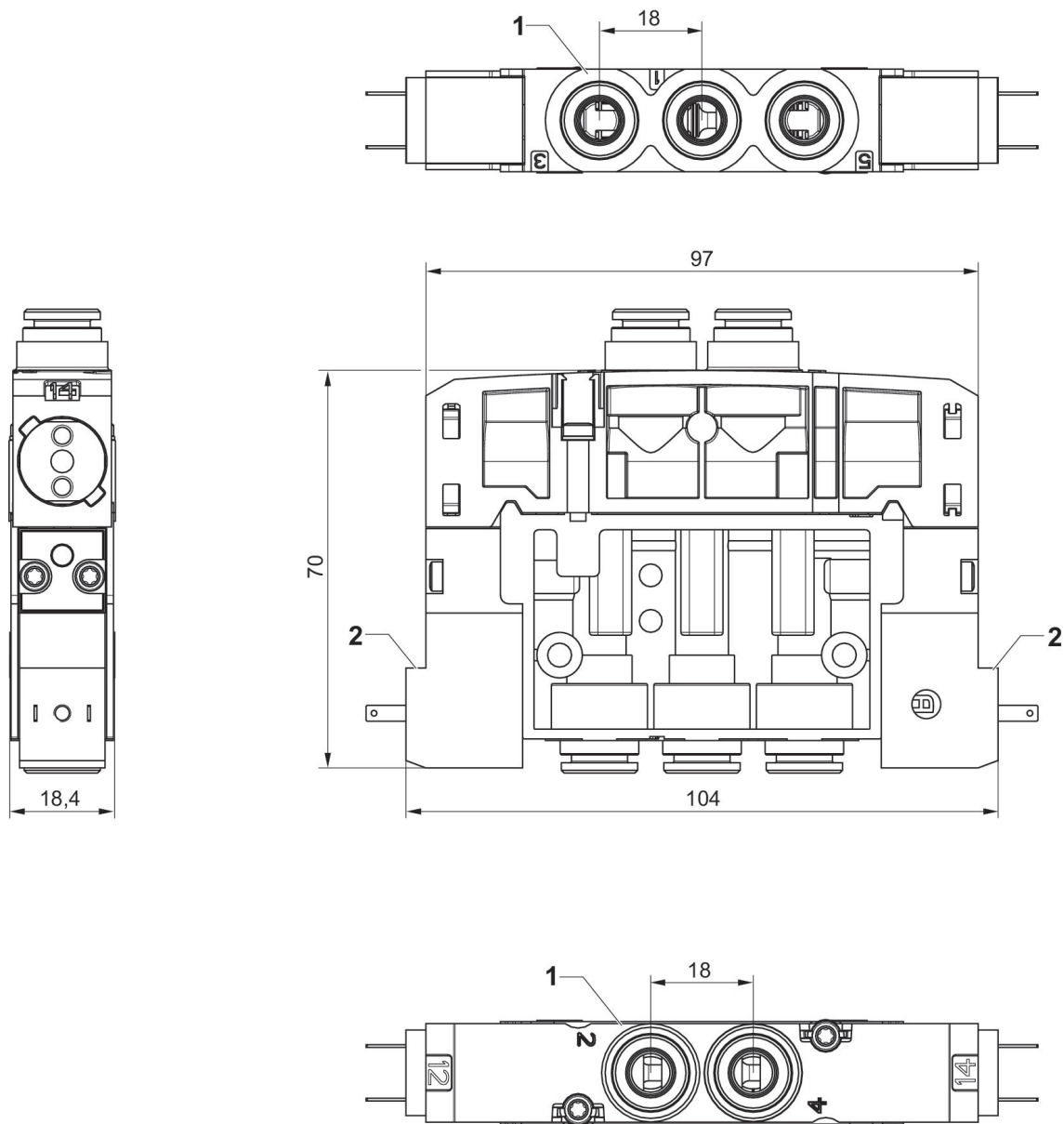
Activation: Electrically  
 Electrical connection 2, thread size: form C, industry  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/3, closed center	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	-15 % / +10 %	R422103184

Nominal flow Q <sub>n</sub> 1 to 2 [l/min]	Part No.
500	R422103184

Dimensions  
Double Solenoid



- 1) Connections [1, 3, 5, 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection

### 5/3-directional valve, Series ES05 -inch

Activation: Electrically

Electrical connection 2, thread size: M8x1

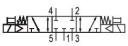
Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

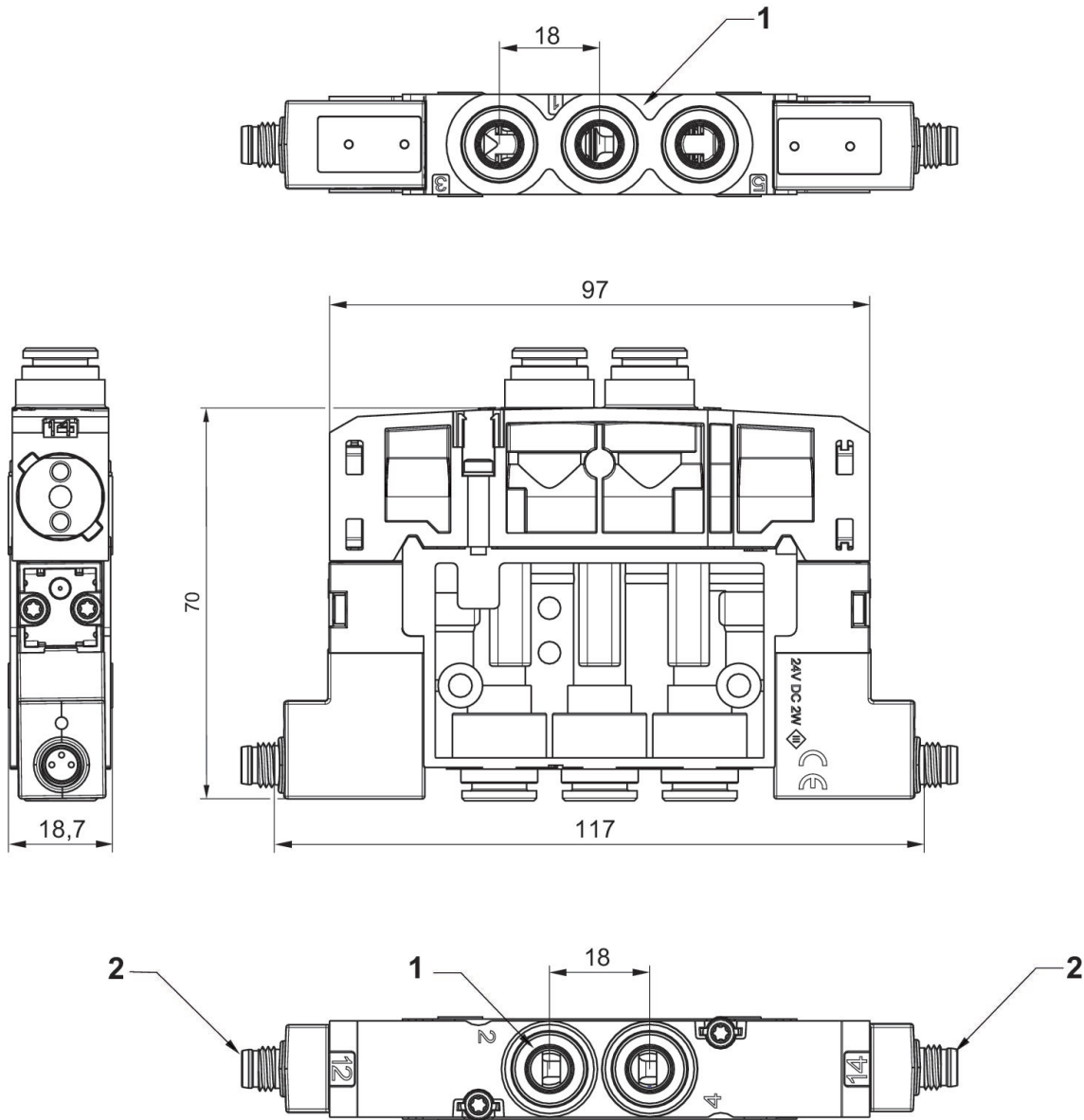
Working pressure min./max.: 3 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
	5/3, closed center	Ø 3/8	Ø 3/8	Ø 3/8	24 V DC	2	-10 % / +15 %	R422103864

Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
without detent	500	<20	R422103864

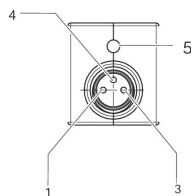
Dimensions  
Double Solenoid



- 1) Connections [1 ,3 ,5 , 2, 4] Ø 3/8
- 2) 2 pilot valves with external electrical connection M8x1

**R422103864**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

### Single subbase, Series ES05

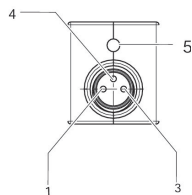
Activation: Electrically  
 Electrical connection 2, thread size: M8  
 Compressed air connection input: Ø 8  
 Compressed air connection output: Special base plate  
 Compressed air connection, exhaust: Ø 8  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
3/2, with air spring return	Ø 8	Base plate	Ø 8	24 V DC	2	-15 % / +10 %	without detent	R422103850
3/2, double solenoid	Ø 8	Base plate	Ø 8	24 V DC	2	-15 % / +10 %	without detent	R422103851

### R422103850, R422103851

PIN assignment for valve plug connectors

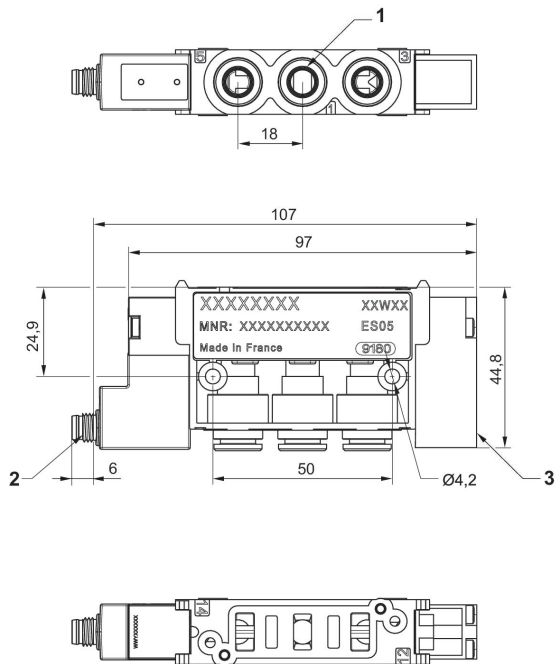


Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**R422103850**

Dimensions

Double Solenoid

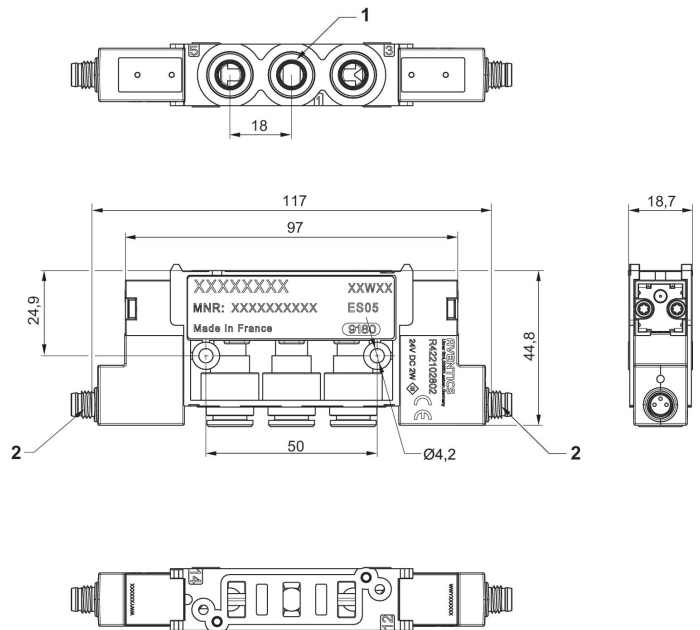


- 1) Connections [1 ,3 ,5] Ø 8
- 2) Pilot valve with external electrical control: M8x1
- 3) Pilot blanking plate

**R422103851**

Dimensions

Double Solenoid



- 1) Connections [1 ,3 ,5] Ø 8
- 2) Pilot valve with external electrical control: M8x1

### Single subbase, Series ES05

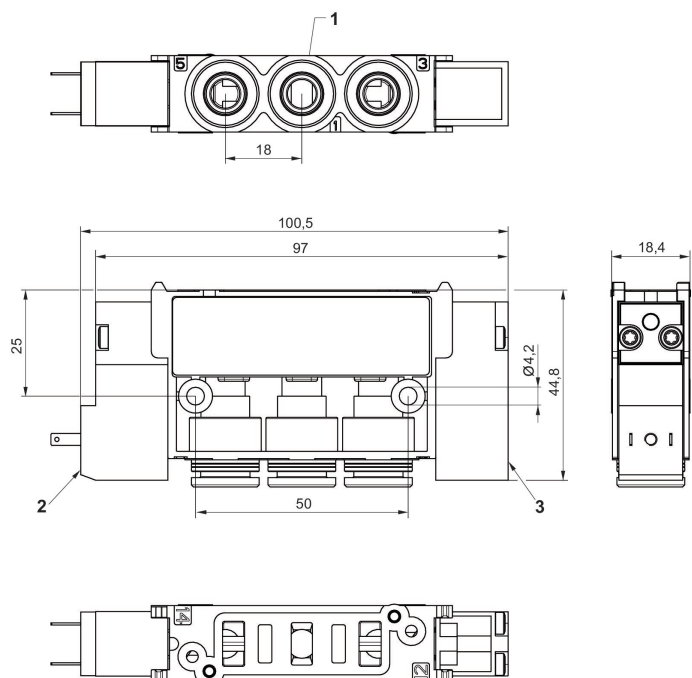
Activation: Electrically  
 Compressed air connection input: Ø 8  
 Compressed air connection output: Special base plate  
 Compressed air connection, exhaust: Ø 8  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
3/2, with air spring return	Ø 8	Base plate	Ø 8	24 V DC	2	-15 % / +10 %	without detent	R422102746
3/2, double solenoid	Ø 8	Base plate	Ø 8	24 V DC	2	-15 % / +10 %	without detent	R422102747

#### R422102746

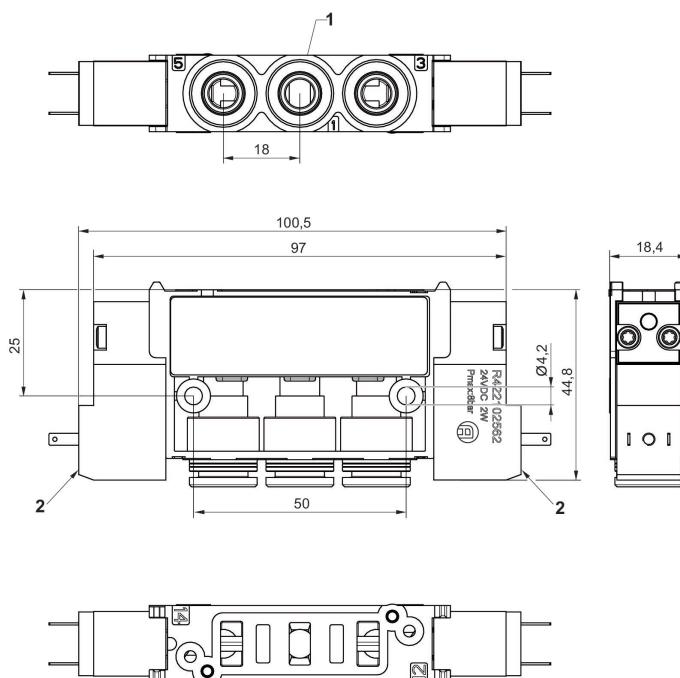
Dimensions  
Double Solenoid



- 1) Connections [1 ,3 ,5] Ø 8
- 2) Pilot valve with external electrical control
- 3) Pilot blanking plate

#### R422102747

Dimensions  
Double Solenoid



- 1) Connections [1 ,3 ,5] Ø 8
- 2) Pilot valve with external electrical control

### Single subbase, Series ES05 -inch

Activation: Electrically

Electrical connection 2, thread size: M8

Compressed air connection input: Ø 3/8

Compressed air connection output: Base plate

Compressed air connection, exhaust: Ø 3/8

Duty cycle: 100 %

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

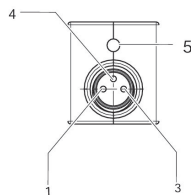
Working pressure min./max.: 3 bar ... 8 bar



Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
3/2	Ø 3/8	Base plate	Ø 3/8	24 V DC	2	-15 % / +10 %	without detent	R422103852
3/2	Ø 3/8	Base plate	Ø 3/8	24 V DC	2	-15 % / +10 %	without detent	R422103853

### R422103852, R422103853

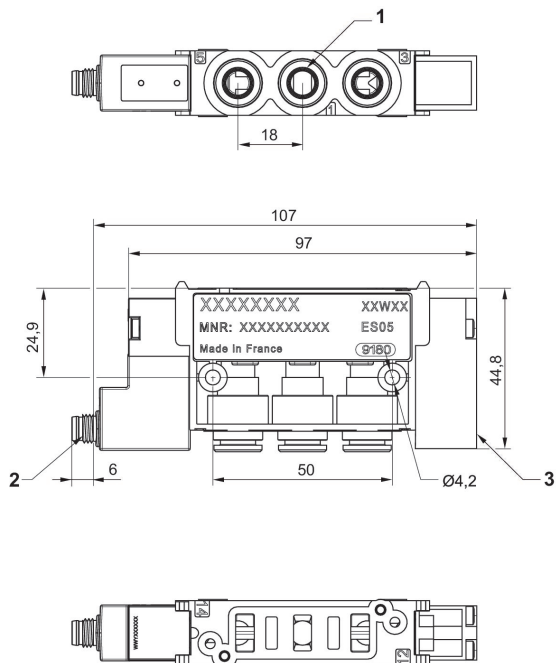
PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**R422103852**

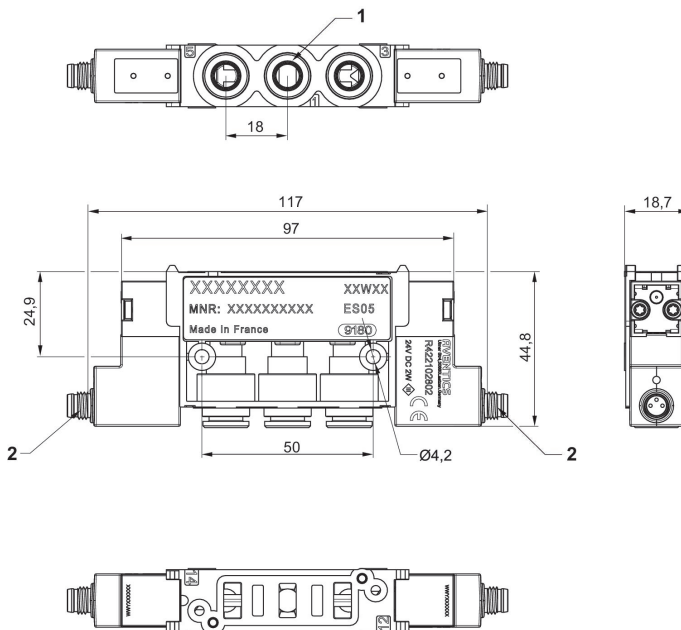
Dimensions



- 1) Connections [1 ,3 ,5, 2, 4] Ø 3/8
- 2) Pilot valve with external electrical control: M8x1
- 3) Pilot blanking plate

**R422103853**

Dimensions



- 1) Connections [1 ,3 ,5, 2, 4] Ø 3/8
- 2) Pilot valve with external electrical control: M8x1

### Single subbase, Series ES05 -inch

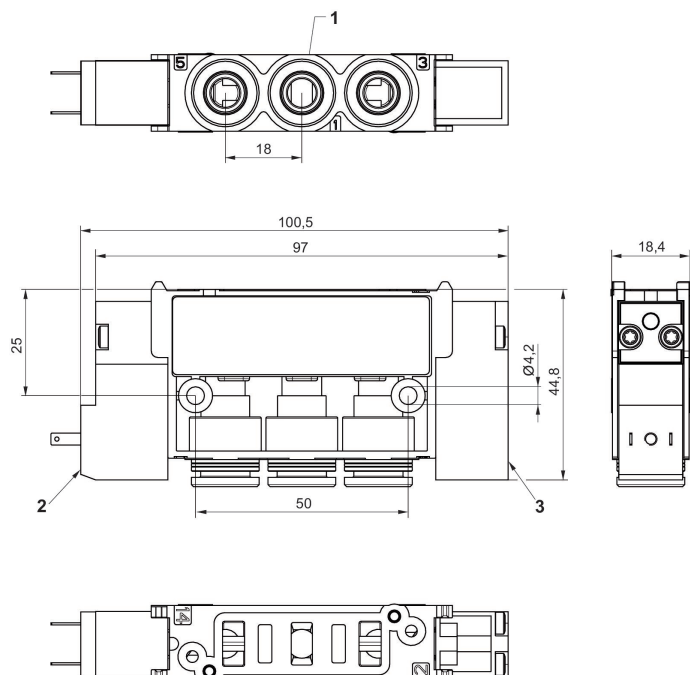
Activation: Electrically  
 Compressed air connection input: Ø 3/8  
 Compressed air connection output: Base plate  
 Compressed air connection, exhaust: Ø 3/8  
 Duty cycle: 100 %  
 Ambient temperature min./max.: 5 °C ... 50 °C  
 Medium temperature min./max.: 5 °C ... 50 °C  
 Working pressure min./max.: 3 bar ... 8 bar



Switching principle	port pneumatic input 1	Compressed air connection output	Compressed air connection, exhaust	Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
3/2	Ø 3/8	Base plate	Ø 3/8	24 V DC	2	-15 % / +10 %	without detent	R422102748
3/2	Ø 3/8	Base plate	Ø 3/8	24 V DC	2	-15 % / +10 %	without detent	R422102749

#### R422102748

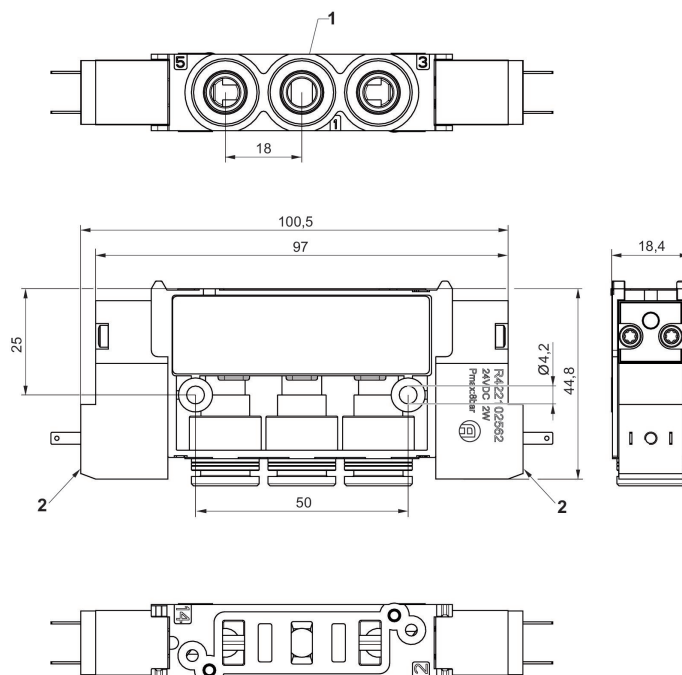
Dimensions



- 1) Connections [1 ,3 ,5 ,2 , 4] Ø 3/8
- 2) Pilot valve with external electrical control
- 3) Pilot blanking plate

#### R422102749

Dimensions



- 1) Connections [1 ,3 ,5 ,2 , 4] Ø 3/8
- 2) Pilot valve with external electrical control

**2x 3/2 directional valve function, Series ES05**

Activation: Electrically

Compressed air connection input: Ø 8

Compressed air connection output: Ø 8

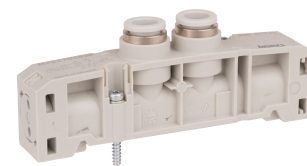
Compressed air connection, exhaust: Ø 8

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

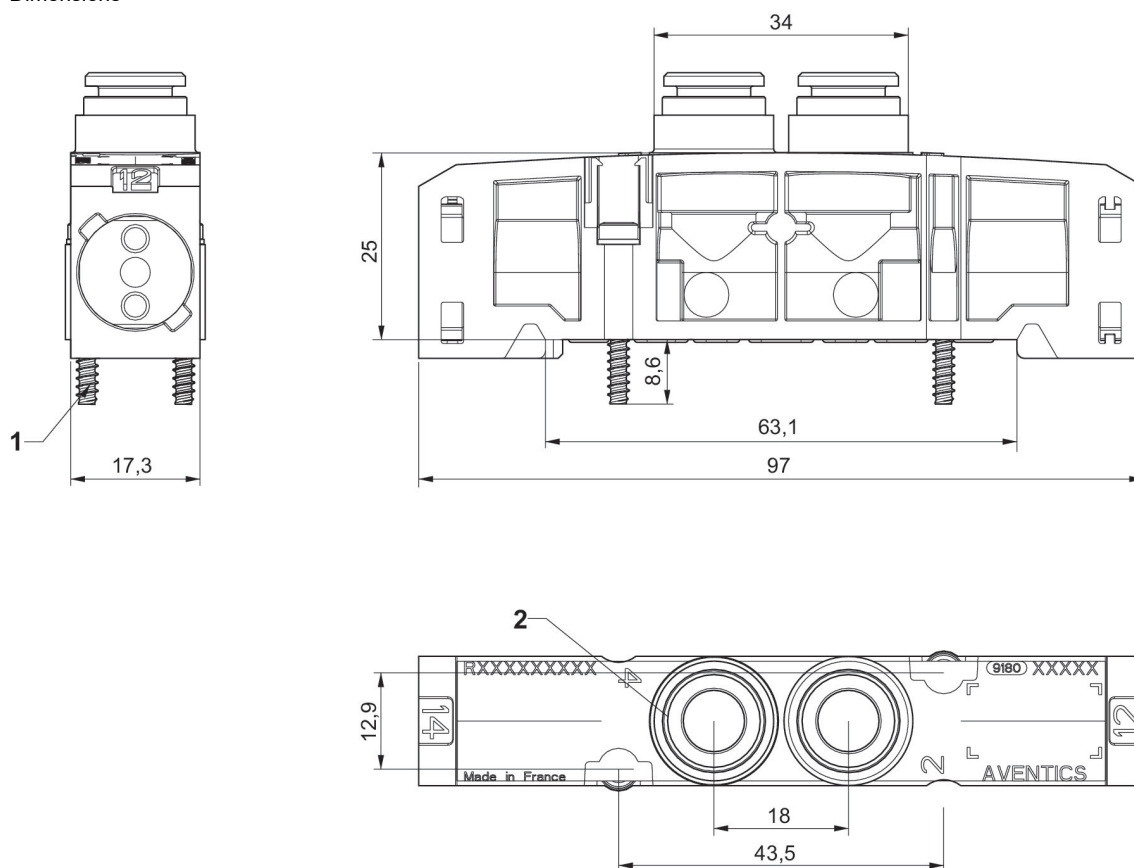
Control pressure min./max.: 3 bar ... 8 bar

Working pressure min./max.: -0.8 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
	NO/NO	2x 3/2 NO/NO, with spring return	Base plate	Ø 8	without detent	370	<20	R422102638
	NO/NO	2x 3/2 NO/NO, with spring return	Base plate	Ø 8	without detent	370	<20	R422P02638
	NC/NC	2x 3/2 NC/NC, with spring return	Base plate	Ø 8	without detent	500	<20	R422102637
	NC/NC	2x 3/2 NC/NC, with spring return	Base plate	Ø 8	without detent	500	<20	R422P02637

Dimensions



- 1) Screws for plastic Ø3
- 2) Ø 8

**2x 3/2 directional valve function, Series ES05 -inch**

Activation: Electrically

Compressed air connection output: 3/8"

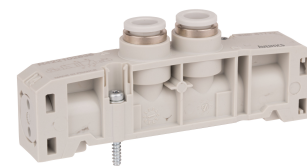
Compressed air connection, exhaust: 3/8"

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

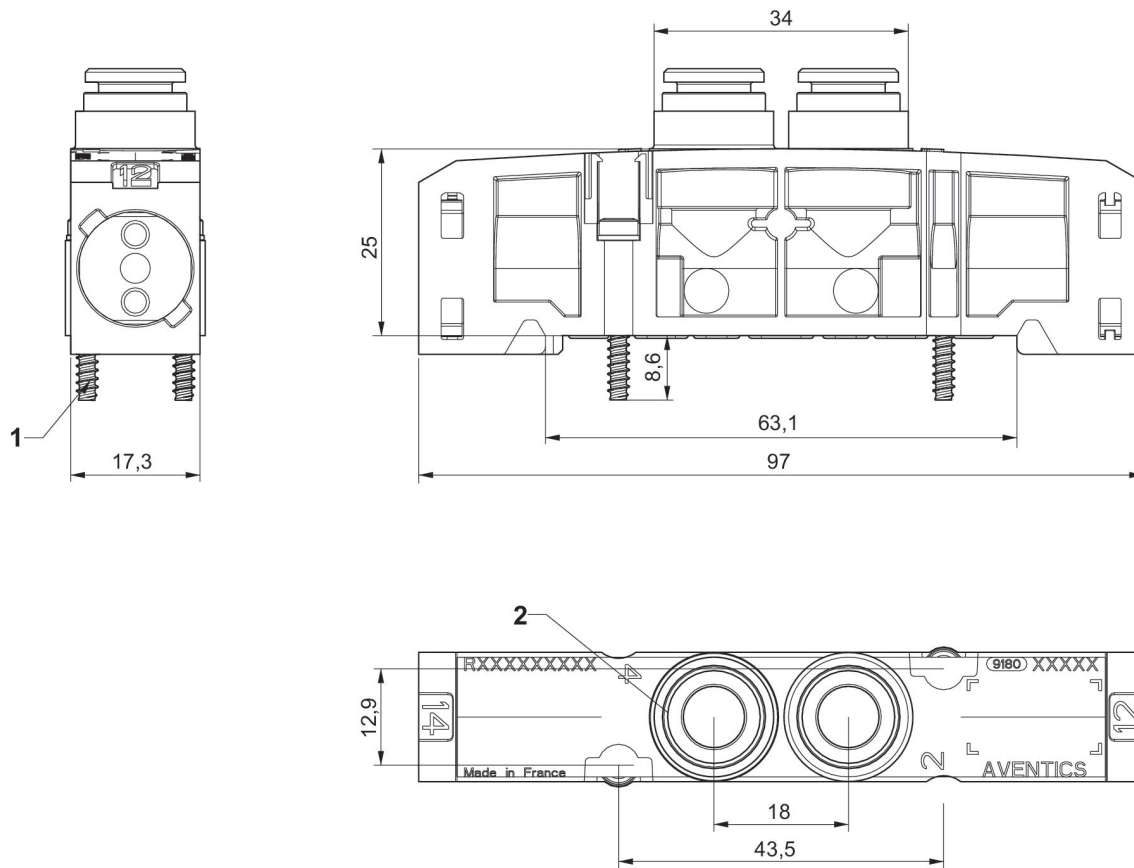
Control pressure min./max.: 3 bar ... 8 bar

Working pressure min./max.: -0.8 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
	NC/NC	2x 3/2 NC/NC, with spring return	Base plate	Ø 3/8	370	<20	R422103171
	NC/NC	2x 3/2 NC/NC, with spring return	Base plate	Ø 3/8	370	<20	R422P03171
	NO/NO	2x 3/2 NO/NO, with spring return	Base plate	Ø 3/8	500	<20	R422103172
	NO/NO	2x 3/2 NO/NO, with spring return	Base plate	Ø 3/8	500	<20	R422P03172

Dimensions



- 1) Screws for plastic Ø3
- 2) 3/8"

### 5/2 directional valve function, Series ES05

Activation: Electrically

Compressed air connection input: Special base plate

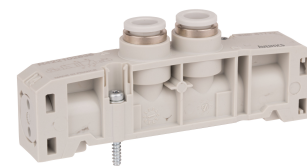
Compressed air connection output: Ø 8

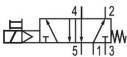


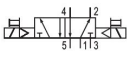
Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

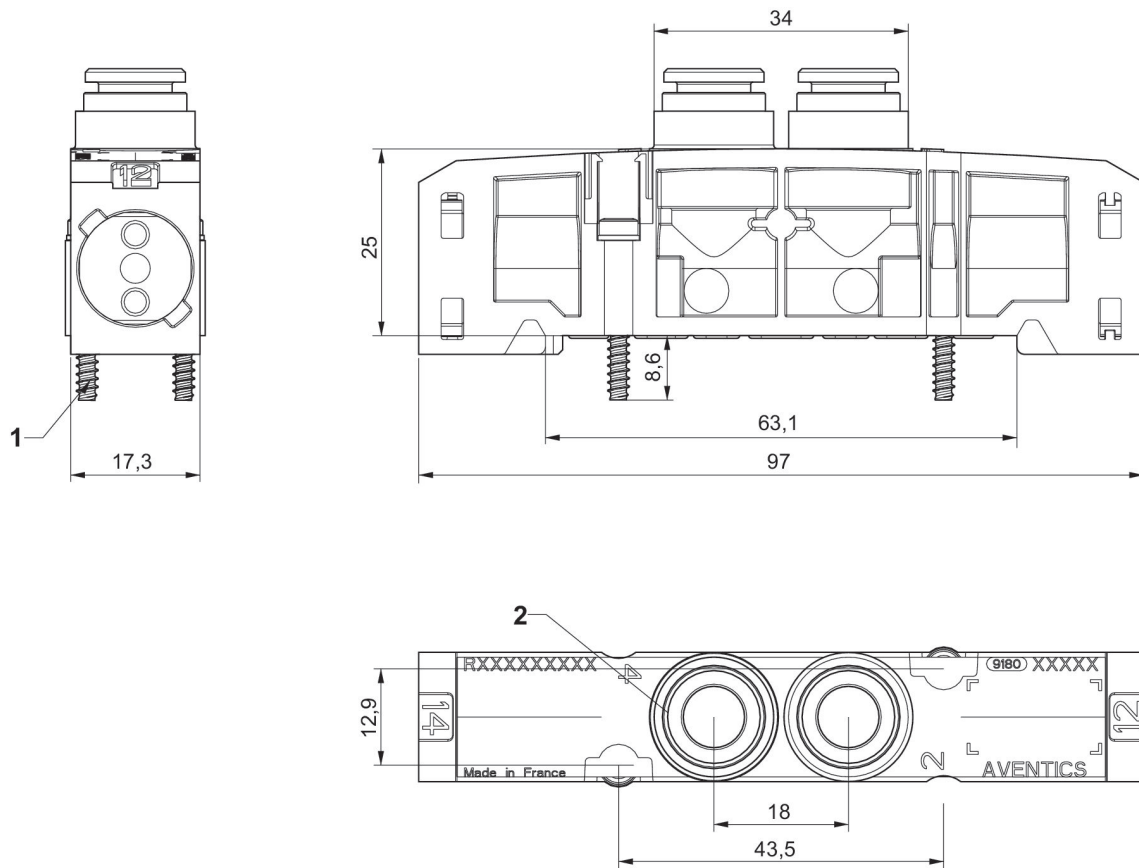
Control pressure min./max.: 3 bar ... 8 bar

Working pressure min./max.: -0.8 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
	5/2, with spring return	Base plate	Ø 8	610	<35	R422102601
	5/2, with spring return	Base plate	Ø 8	610	<35	R422P02601
	5/2, double solenoid	Base plate	Ø 8	610	<20	R422102636
	5/2, double solenoid	Base plate	Ø 8	610	<20	R422P02636

Dimensions



- 1) Screws for plastic Ø3
- 2) Ø 8

**5/2 directional valve function, Series ES05 -inch**

Activation: Electrically

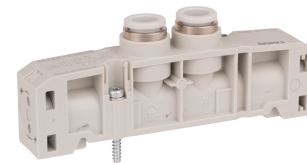
Compressed air connection output: 3/8"

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

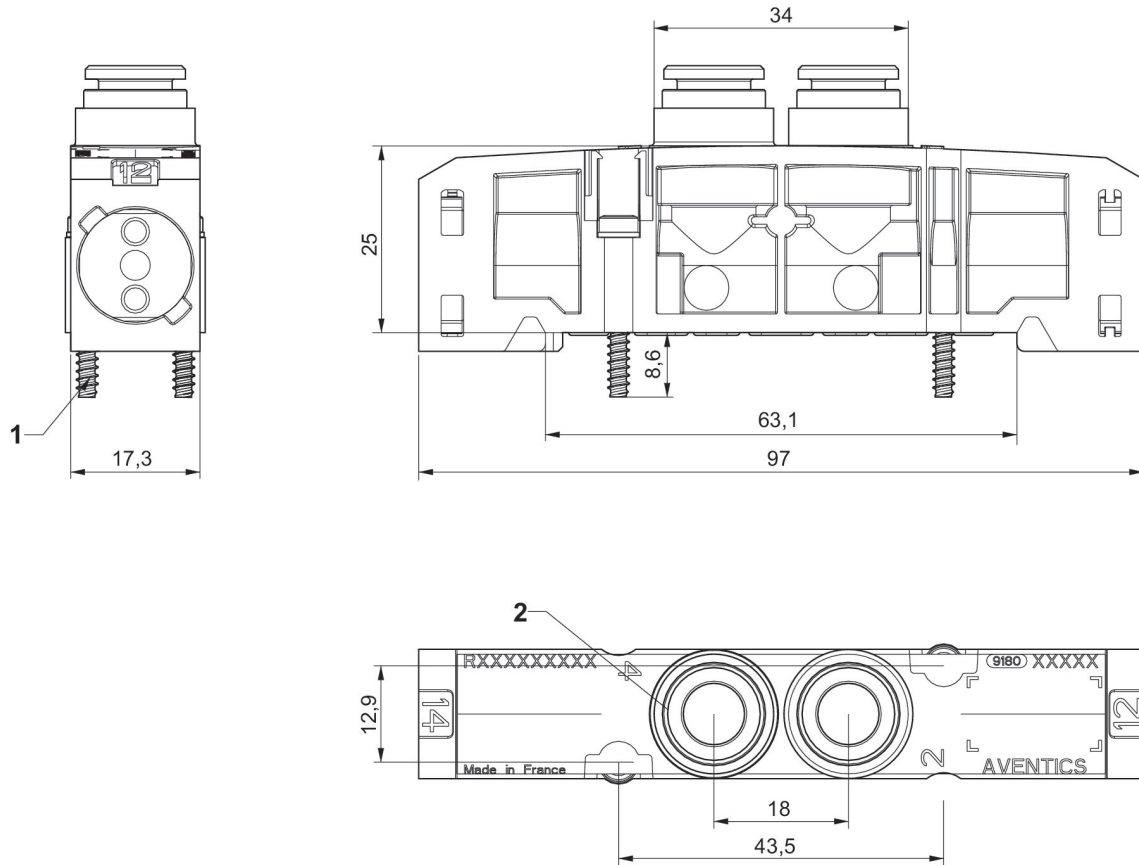
Control pressure min./max.: 3 bar ... 8 bar

Working pressure min./max.: -0.8 bar ... 8 bar



	Switching principle	port pneumatic input 1	Compressed air connection output	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
	5/2, with spring return	Base plate	Ø 3/8	610	<35	R422103169
	5/2, with spring return	Base plate	Ø 3/8	610	<35	R422P03169
	5/2, double solenoid	Base plate	Ø 3/8	610	<20	R422103170
	5/2, double solenoid	Base plate	Ø 3/8	610	<20	R422P03170

Dimensions



- 1) Screws for plastic Ø3
- 2) 3/8"

### 5/3 directional valve function, ES05

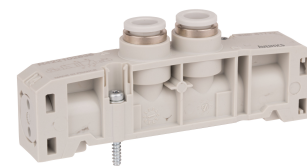
Activation: Electrically

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

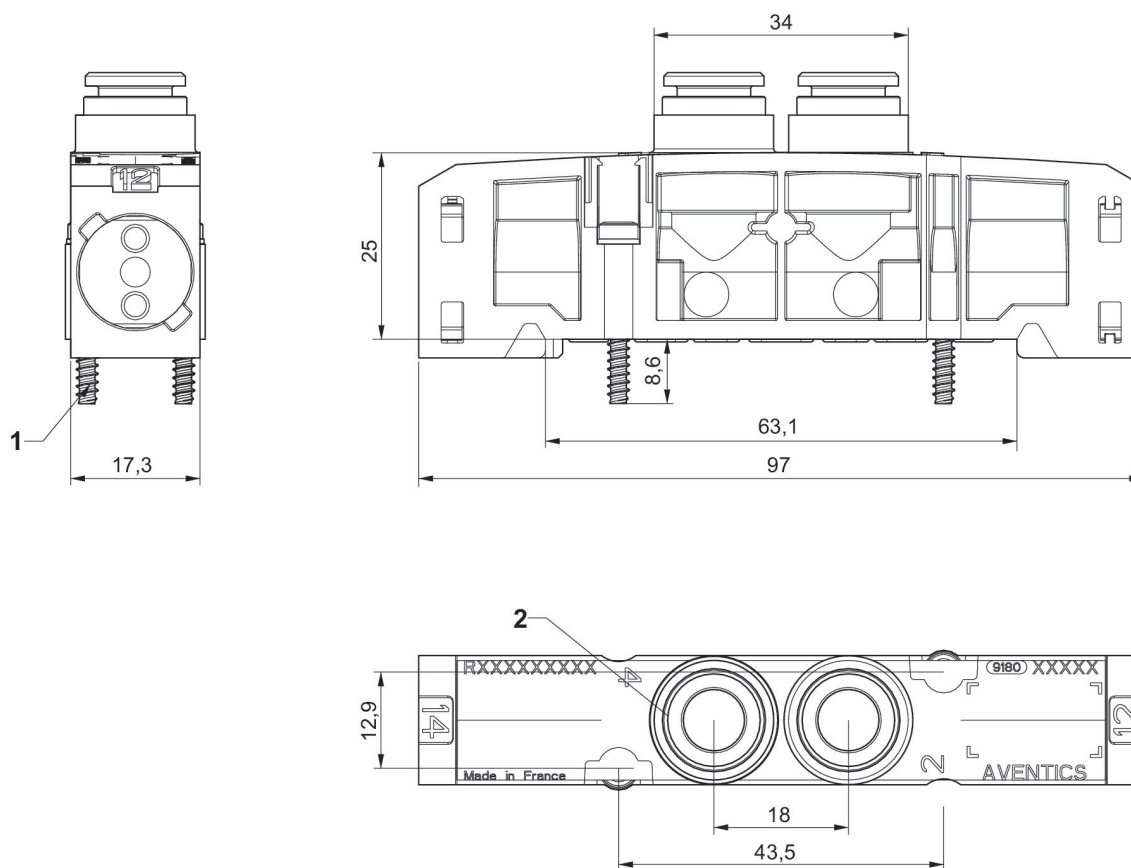
Control pressure min./max.: 3 bar ... 8 bar

Working pressure min./max.: -0.8 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
	Closed Center	5/3, closed center	Ø 8	Base plate	without detent	500	<20	R422003639
	Closed Center	5/3, closed center	Ø 8	Base plate	without detent	500	<20	R422P03639

#### Dimensions



1) Screws for plastic Ø3

2) Ø 8

### 5/3 directional valve function, ES05 -inch

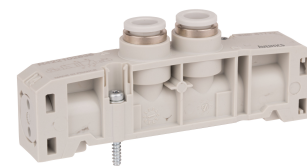
Activation: Electrically

Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C

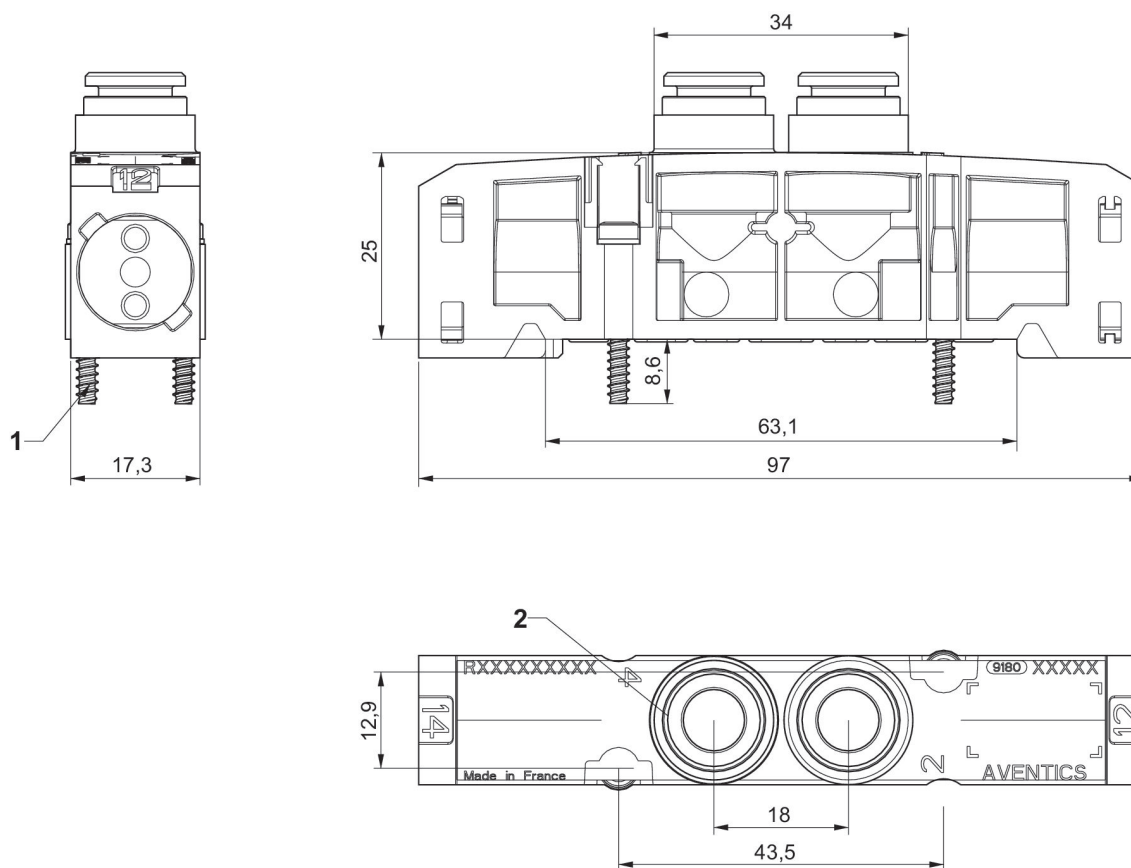
Control pressure min./max.: 3 bar ... 8 bar

Working pressure min./max.: -0.8 bar ... 8 bar



	Valve function	Switching principle	port pneumatic input 1	Compressed air connection output	Manual override	Nominal flow Qn 1 to 2 [l/min]	Switch-off time	Part No.
	Closed Center	5/3, closed center	Ø 3/8	Base plate	without detent	500	<20	R422003640
	Closed Center	5/3, closed center	Ø 3/8	Base plate	without detent	500	<20	R422P03640

#### Dimensions



- 1) Screws for plastic Ø3
- 2) Ø 3/8"

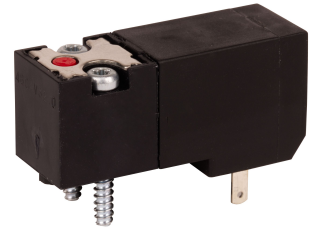
**Pilot valve, Series ES05**

Activation: Electrically

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

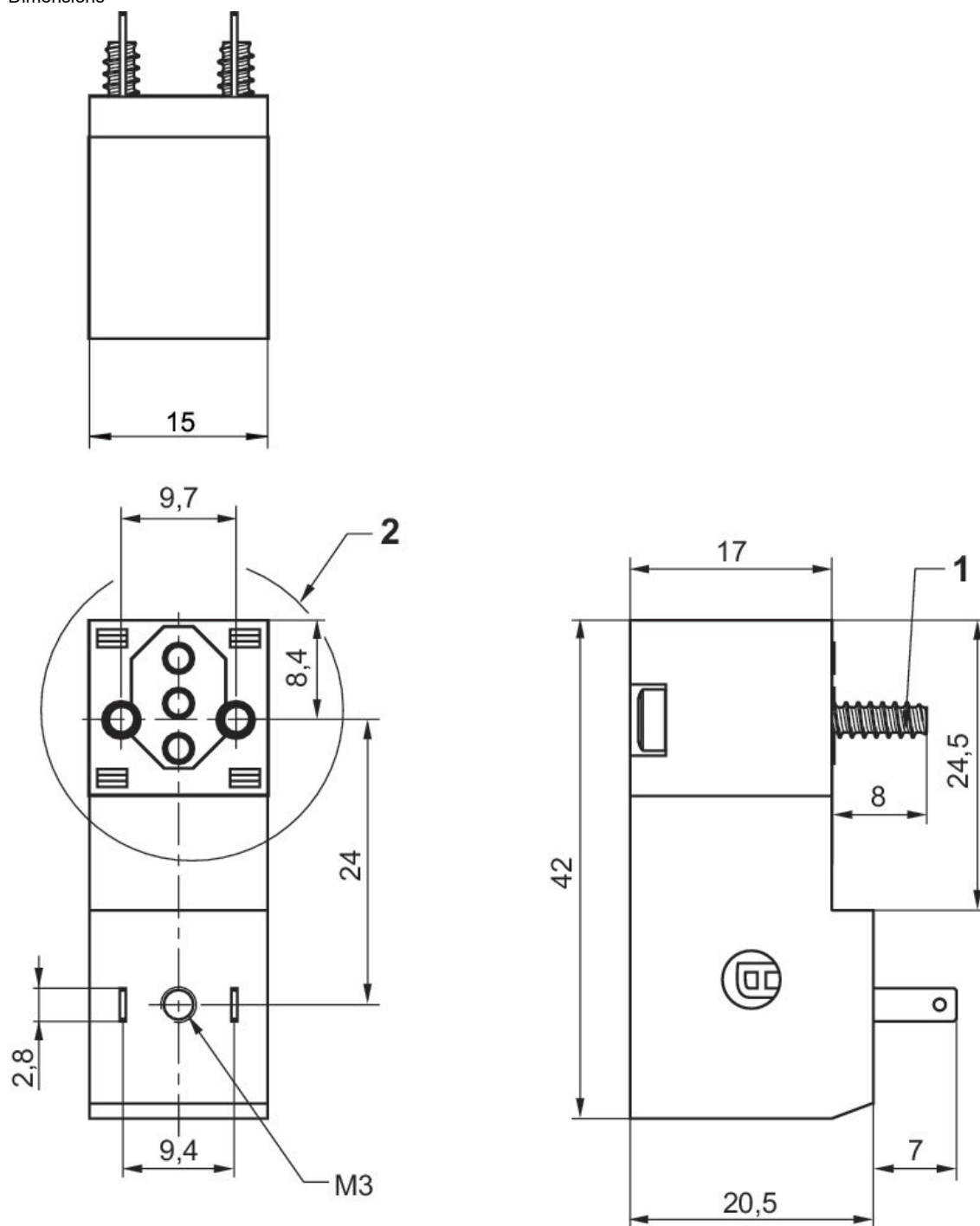
Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C



Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
24 V DC	2	-15 % / +10 %	without detent	R422003356
24 V DC	2	-15 % / +10 %	without detent	R422P03356

Dimensions



- 1) Screws for plastic Ø3
- 2) rotatable 90°

**Pilot valve, Series ES05**

Activation: Electrically

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

Duty cycle: 100 %

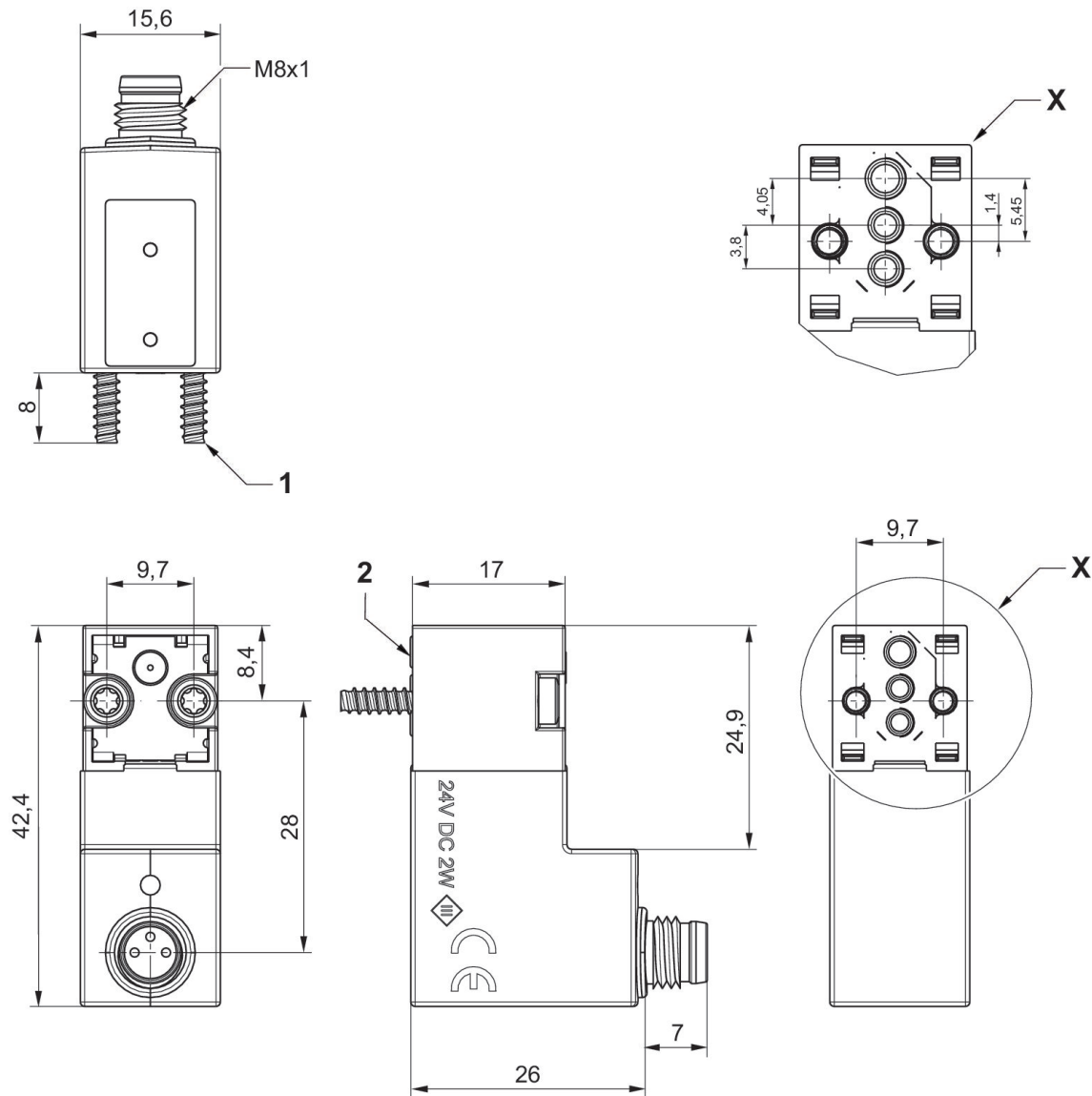
Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C



Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Part No.
24 V DC	2	-15 % / +10 %	R422103854
24 V DC	2	-15 % / +10 %	R422P03854

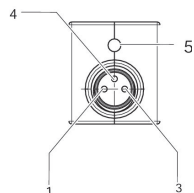
Dimensions



- 1) Screws for plastic Ø3
- 2) rotatable 90°

**R422103854, R422P03854**

PIN assignment for valve plug connectors



Pin assignment (1) Pin not assigned (3) 0 V (4) 24 V (5) LED Note: Bipolar protective circuit to prevent overvoltage

**Pilot valve, Series ES05**

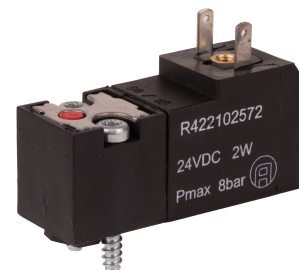
Activation: Electrically

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

Duty cycle: 100 %

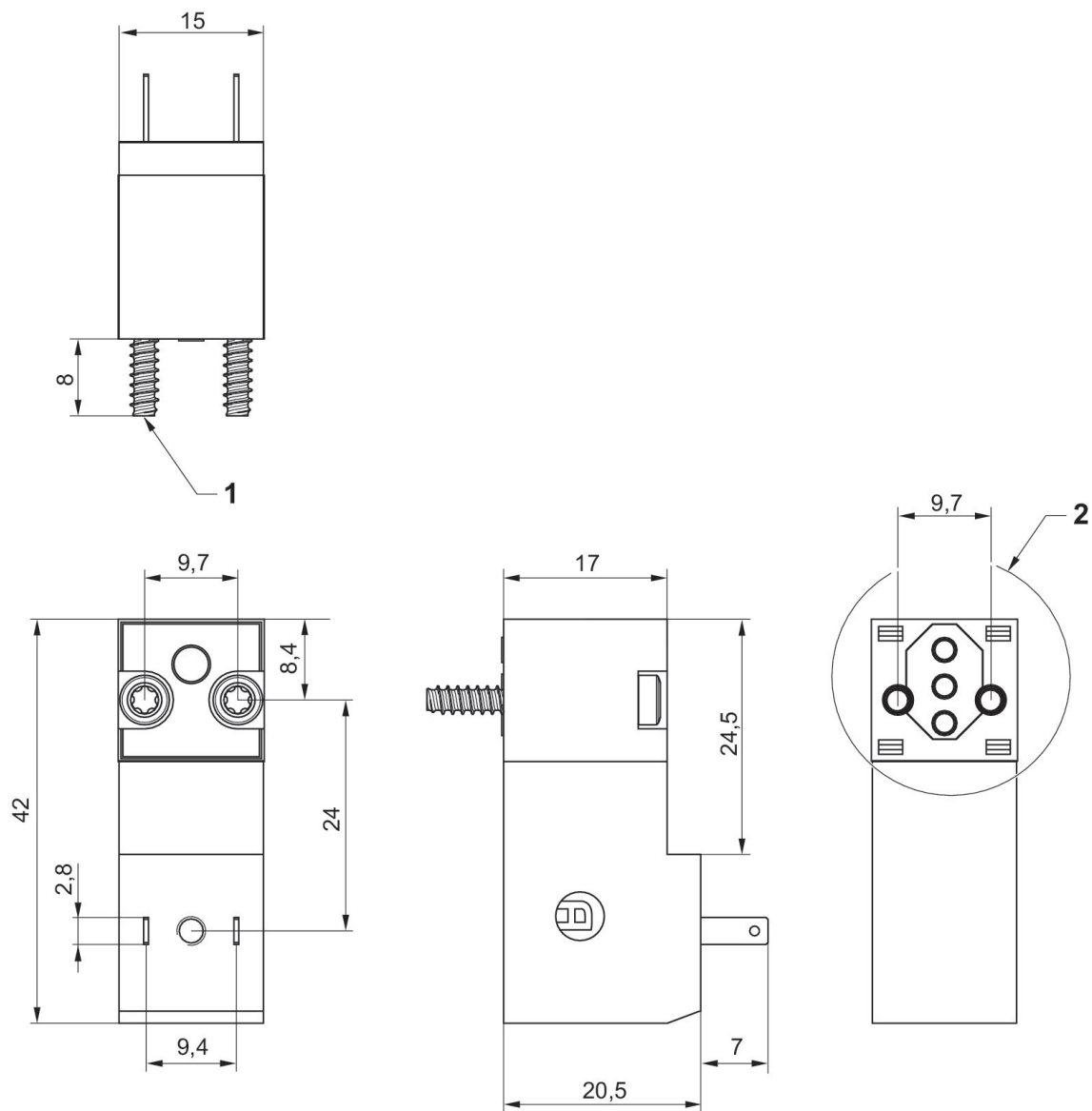
Ambient temperature min./max.: 5 °C ... 50 °C

Medium temperature min./max.: 5 °C ... 50 °C



Operational voltage	Power consumption DC [W]	Voltage tolerance DC	Manual override	Part No.
24 V DC	2	-15 % / +10 %	without detent	R422003357
24 V DC	2	-15 % / +10 %	without detent	R422P03357

Dimensions



- 1) Screws for plastic Ø3
- 2) rotatable 90°

Valve plug connector, series CON-VP

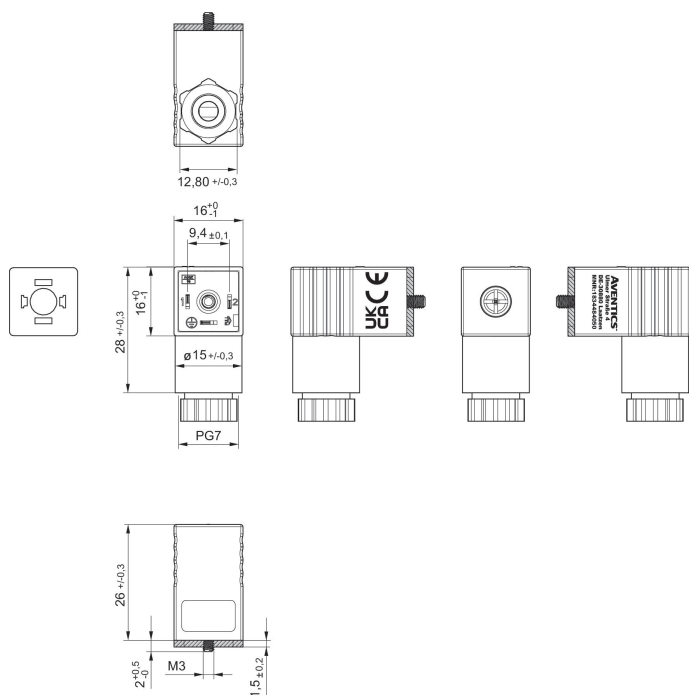
Electrical connection 1: EN 175301-803, form C  
Ambient temperature min./max.: -20 °C ... 80 °C



	Operational voltage	Max. current [A]	Contact assignment	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
	300 V DC / 250 V AC	6	2+E	4	6	1834484050

1834484050

Dimensions



Profile seal

Valve plug connector, series CON-VP

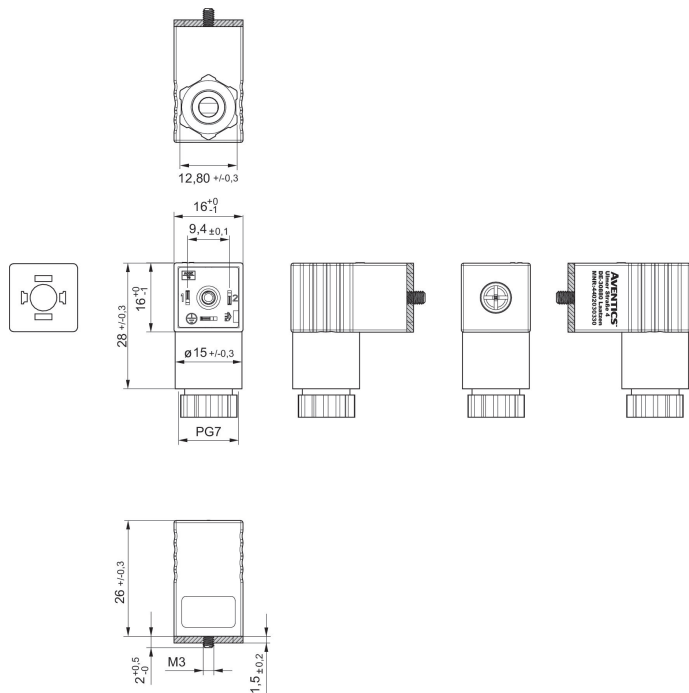
Electrical connection 1: form C, industry  
Ambient temperature min./max.: -20 °C ... 80 °C



	Operational voltage	Protective circuit	Max. current [A]	Contact assignment	LED status display	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
	24 V AC/DC	Varistor	1.5	2+E	Green	4	6	4402030330

4402030330

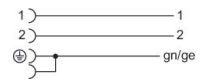
Dimensions



Profile seal

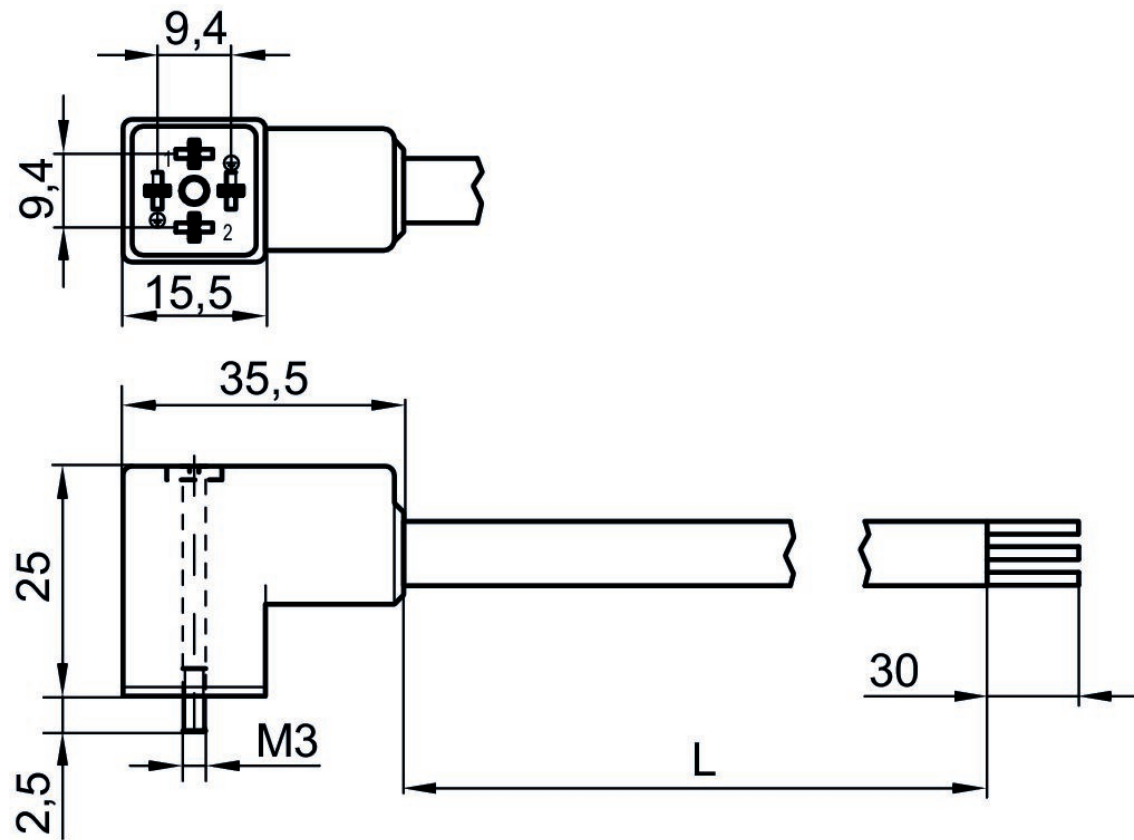
**Valve plug connector, series CON-VP**

Electrical connection 1: Socket ... form C, industry ... 2+E  
 Electrical connection 2: open cable ends ... 3-pin  
 Protective circuit: Varistor  
 Ambient temperature min./max.: -25 °C ... 90 °C

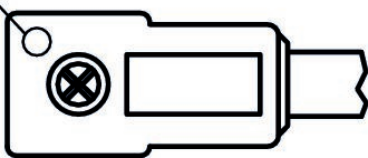


Operational voltage	Protective circuit	Max. current [A]	Contact assignment	LED status display	Cable length [m]	Part No.
24 V AC/DC	Varistor	4	2+E	Yellow	3	R412024833
24 V AC/DC	Varistor	4	2+E	Yellow	5	R412024834
24 V AC/DC	Varistor	4	2+E	Yellow	10	R412024835

Dimensions



**LED**



L = length

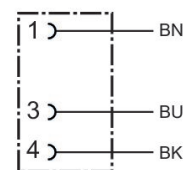
### Round plug connector, Series CON-RD

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

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

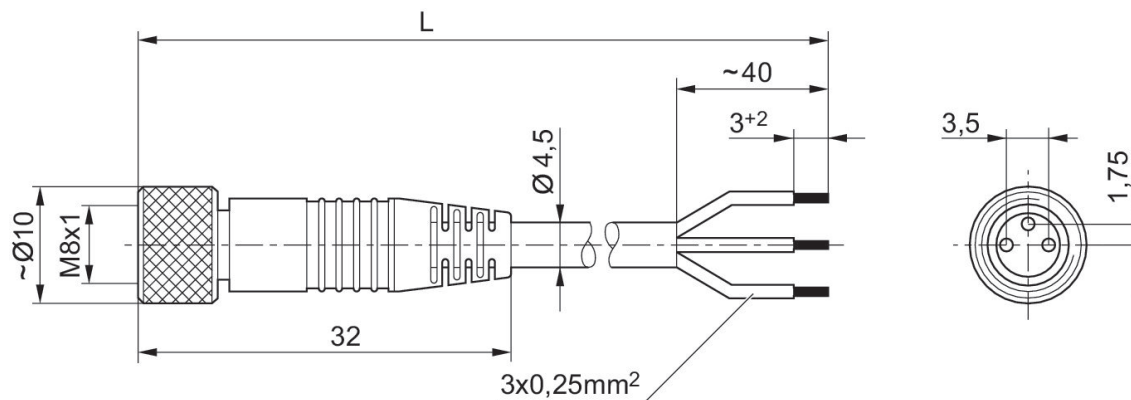
Certification: UL (Underwriters Laboratories)

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



Operational voltage	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, number of poles	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, number of poles	Cable length [m]	Part No.
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	3	1834484166
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	5	1834484168
48 V AC/DC	Socket	M8x1	3-pin	A-coded	open cable ends	3-pin	10	1834484247

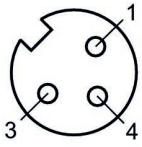
Dimensions



L = length

**1834484166, 1834484168, 1834484247**

Pin assignment, socket







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

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