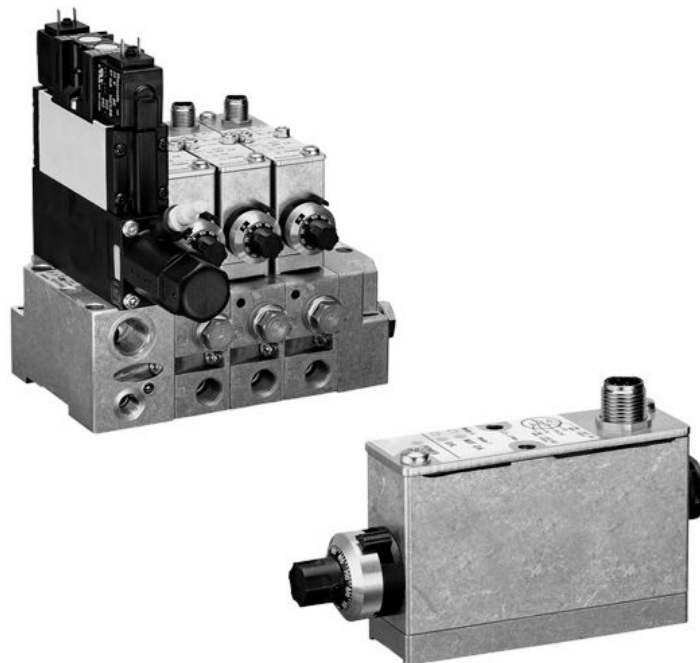


## Series MS01



**AVENTICS™**

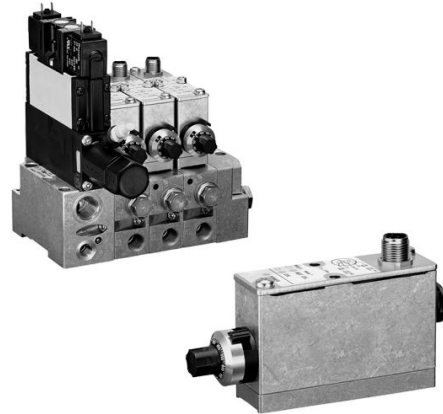
**AVENTICS Series MS01**  
**Pneumatic position monitoring**

  
**EMERSON™**

## Series MS01

The AVENTICS Series MS01 is a pneumatic position monitoring that can be integrated into every machine controller as a block solution with the CD01 valve system, which means minimal assembly and installation effort for the user. The measuring system can be mounted on a plastic base plate with a push-in fitting or an aluminium base plate with thread connection. This ensures a solid construction according to ISO standard 15407-1.

- Test block MS01
- Operating pressure 4 bar ... 10 bar

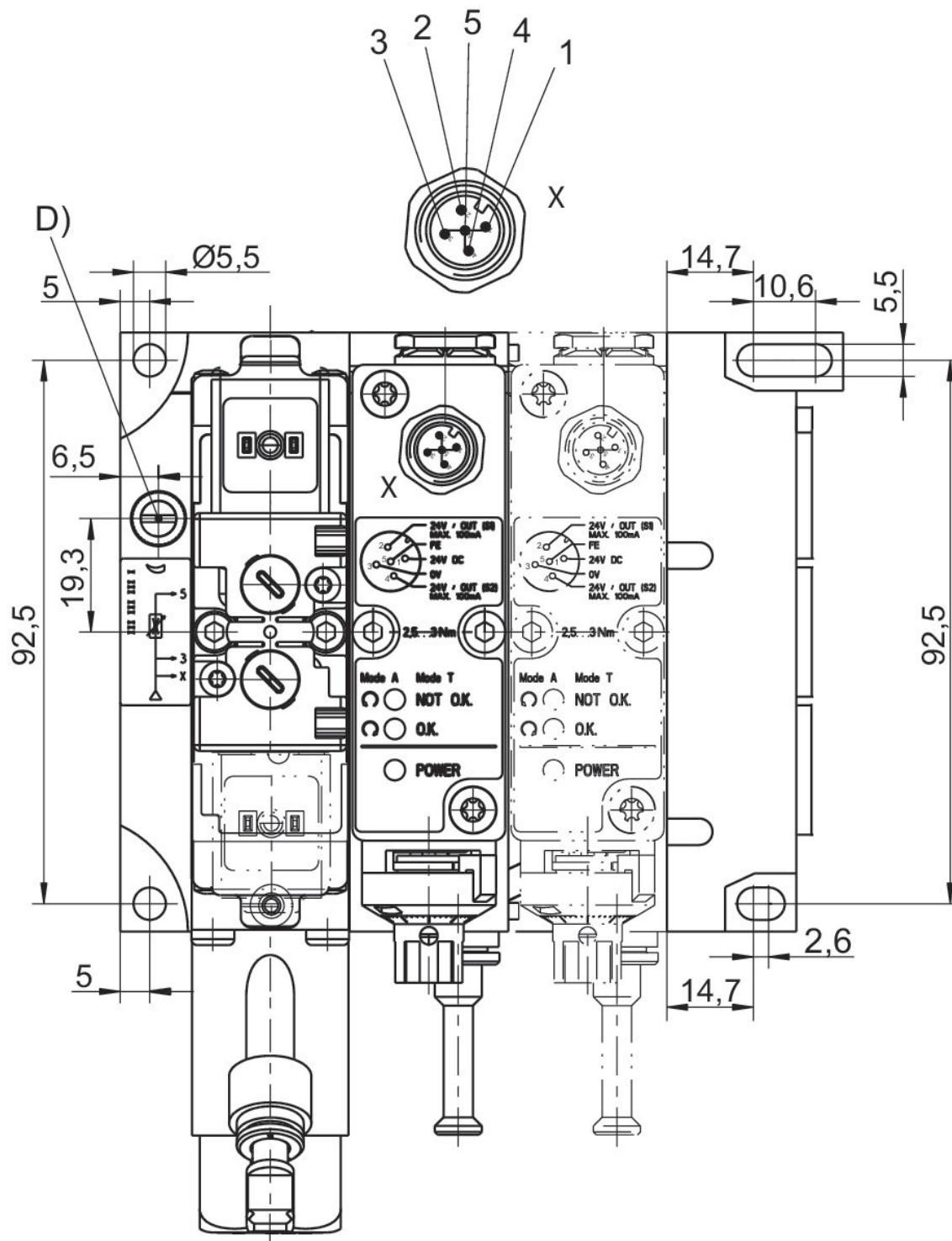


**Series MS01**

ISO 15407-1  
Plug  
form C  
G 1/4  
G 1/8



Version	input 1	Exhaust R1	Output 4	pilot control R2 exhaust	Min. detec- tion distance [mm]	Min. detec- tion distance [mm]	Part No.
1x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	3354418750
2x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	3354418740
3x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	3354418730
4x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	3354418720
5x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	3354418710
6x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	3354418700
7x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412011208
8x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412011209

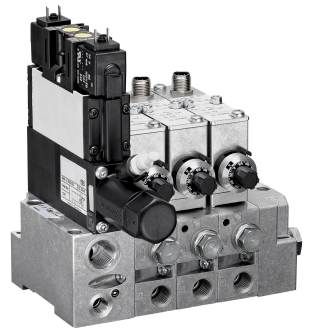


D = Throttle (cleaning pressure)

M12 contact assignment: contact 1: 24 V DC contact 2: output signal 24 V DC, S1 (working pressure), max. 100 mA contact 3: 0 V contact 4: output signal 24 V DC, S2 (testing), max. 100 mA contact 5: FE

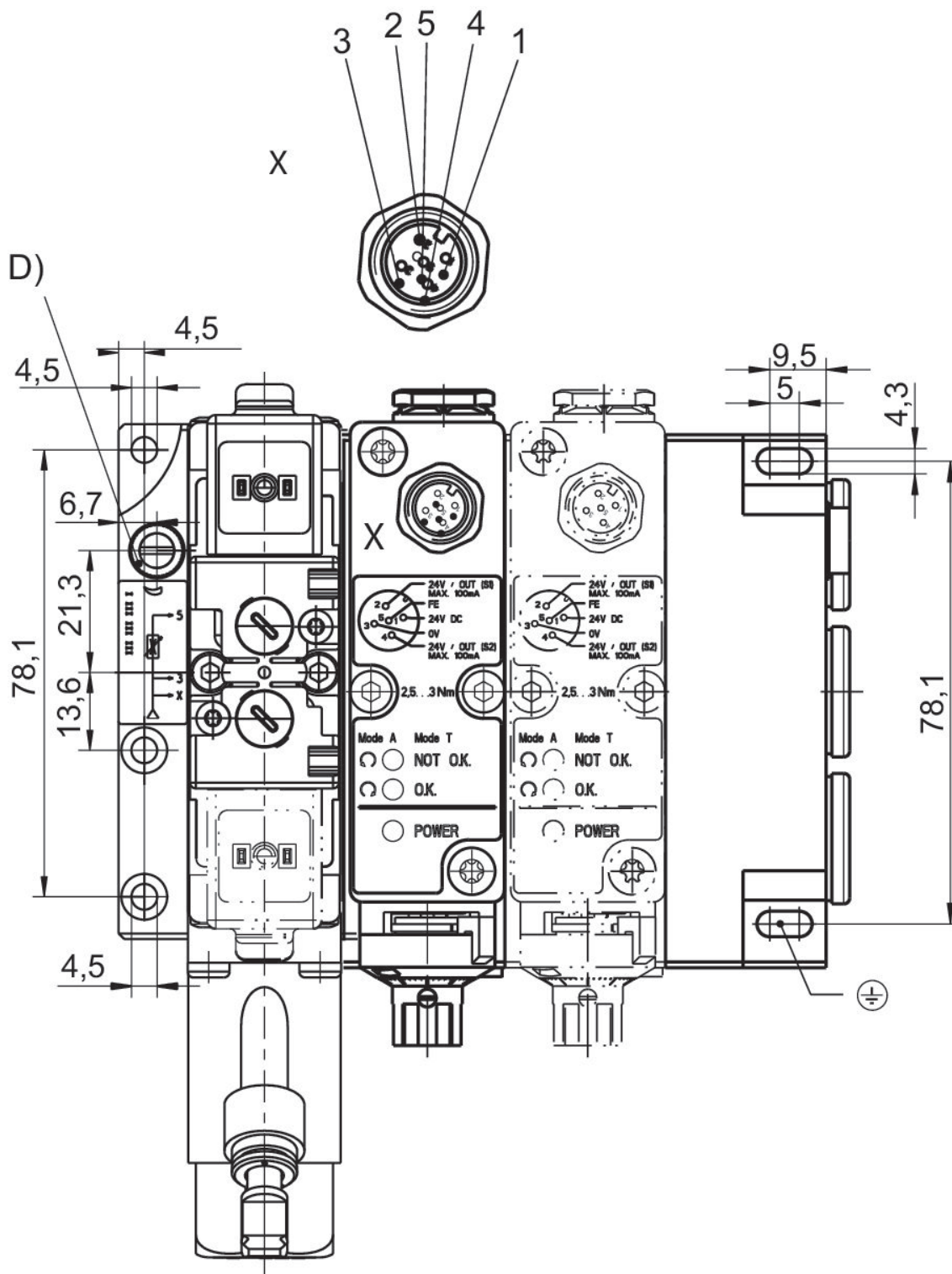
**Series MS01**

ISO 15407-1  
Plug  
form C  
G 3/8  
G 1/8



Version	input 1	Exhaust R1	Output 4	pilot control R2 exhaust	Min. detec- tion distance [mm]	Min. detec- tion distance [mm]	Part No.
1x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011175
2x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011176
3x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011177
4x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011178
5x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011179
6x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011180
7x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011181
8x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011182
1x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011183
2x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011184
3x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011185
4x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011186
5x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011187
6x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011188
7x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011189
8x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011190

Dimensions

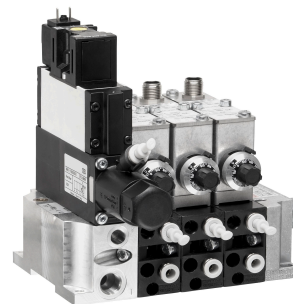


D = Throttle (cleaning pressure)

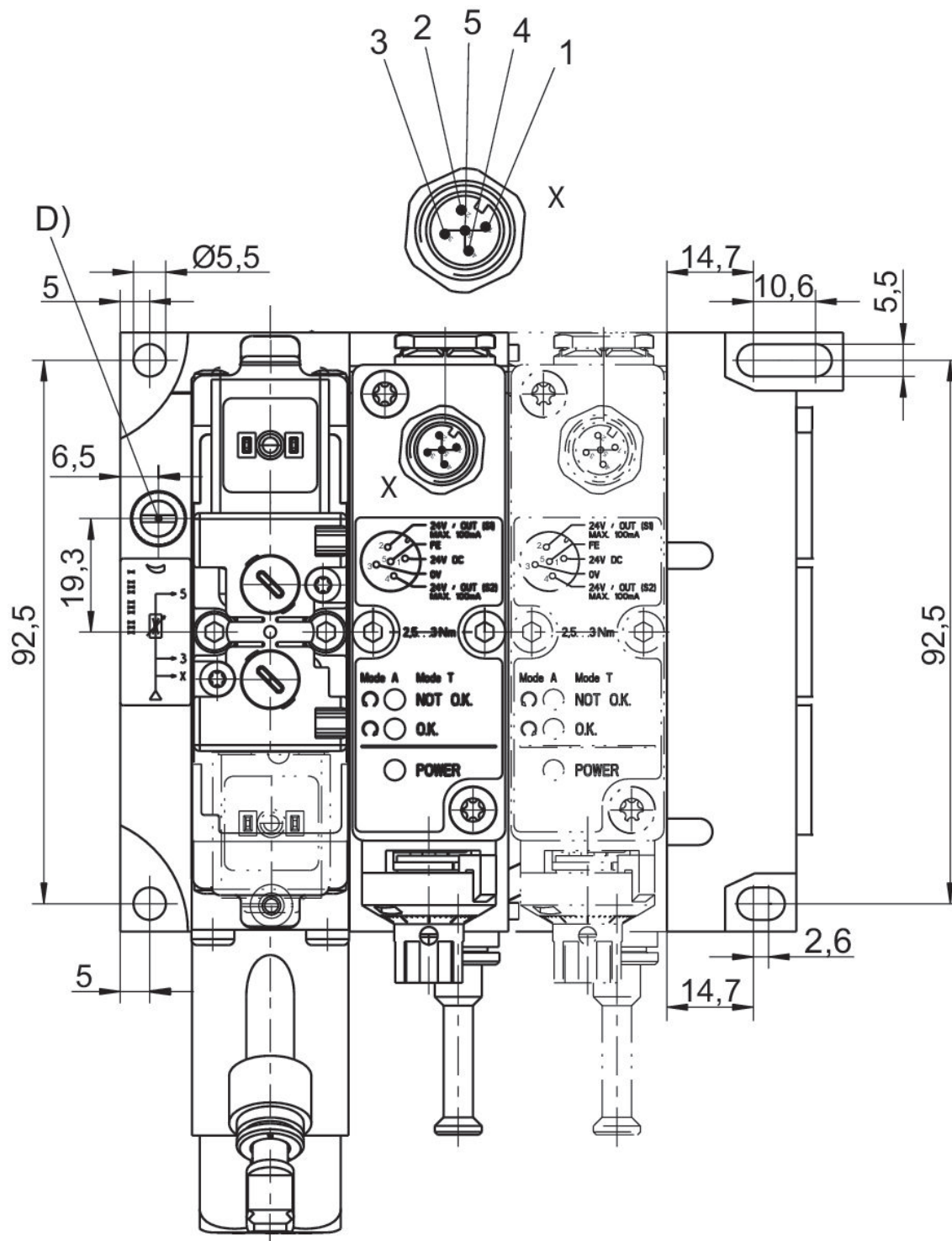
M12 contact assignment: contact 1: 24 V DC contact 2: output signal 24 V DC, S1 (working pressure), max. 100 mA contact 3: 0 V contact 4: output signal 24 V DC, S2 (testing), max. 100 mA contact 5: FE

**Series MS01**

ISO 15407-1  
Plug  
form C  
G 1/4  
G 1/8



Version	input 1	Exhaust R1	Output 4	pilot control R2 exhaust	Min. detec- tion distance [mm]	Min. detec- tion distance [mm]	Part No.
1x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412003461
2x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412003462
3x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412003463
4x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412003464
5x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412003465
6x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412003466
7x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412011212
8x	G 1/4	G 1/8	Ø 6x1	G 1/8	0.01	0.3	R412011213



D = Throttle (cleaning pressure)

M12 contact assignment: contact 1: 24 V DC contact 2: output signal 24 V DC, S1 (working pressure), max. 100 mA contact 3: 0 V contact 4: output signal 24 V DC, S2 (testing), max. 100 mA contact 5: FE



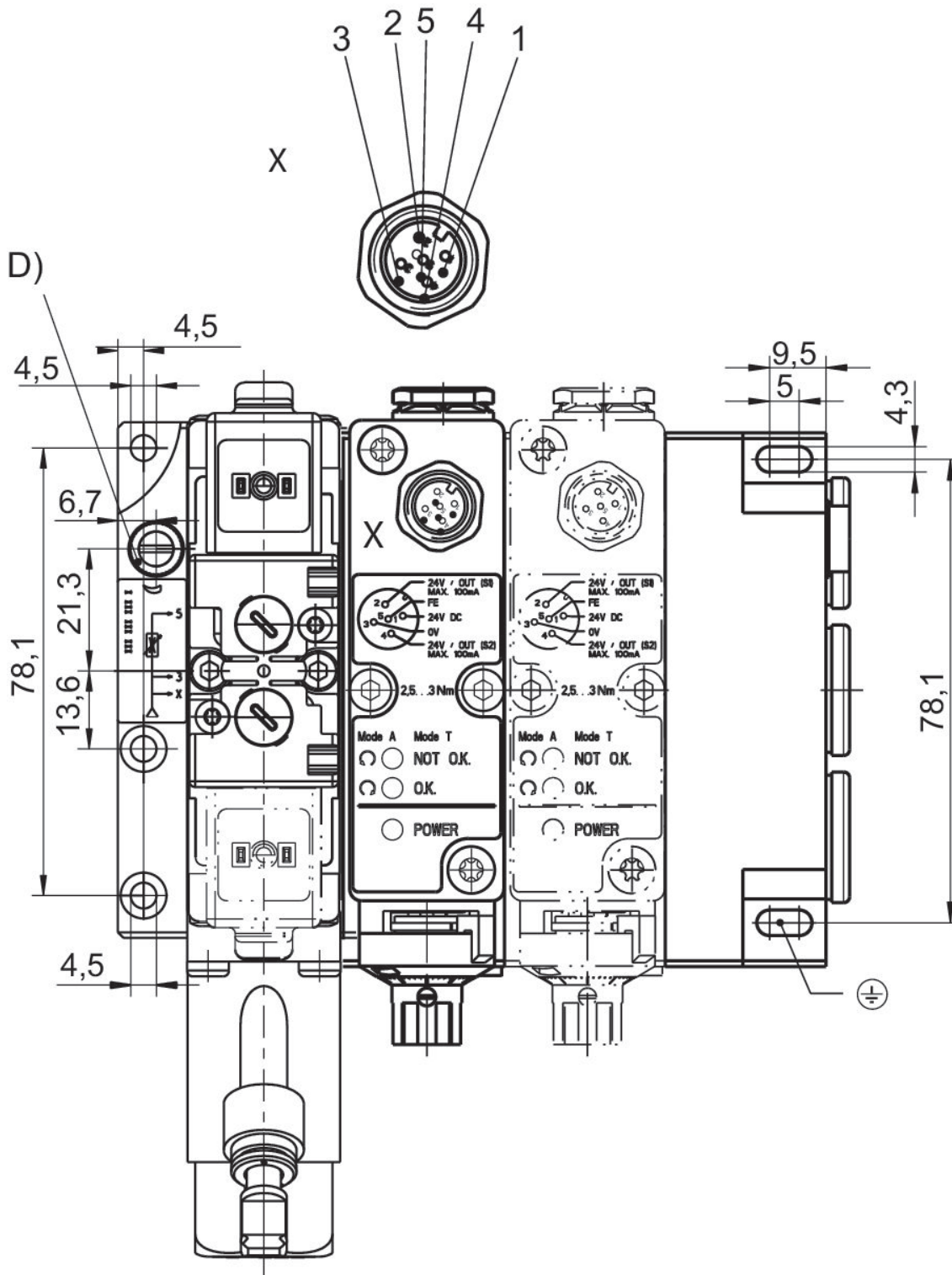
**Series MS01**

ISO 15407-1  
Plug  
form C  
G 3/8  
G 1/8



Version	input 1	Exhaust R1	Output 4	pilot control R2 exhaust	Min. detec- tion distance [mm]	Min. detec- tion distance [mm]	Part No.
1x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011191
2x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011192
3x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011193
4x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011194
5x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011195
6x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011196
7x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011197
8x	G 3/8	G 1/8	G 1/4	G 1/8	0.01	0.3	R412011198
1x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011199
2x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011200
3x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011201
4x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011202
5x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011203
6x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011204
7x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011205
8x	3/8 NPT	1/8 NPT	1/4 NPT	1/8 NPT	0.01	0.3	R412011206

Dimensions



D = Throttle (cleaning pressure)

M12 contact assignment: contact 1: 24 V DC contact 2: output signal 24 V DC, S1 (working pressure), max. 100 mA contact 3: 0 V contact 4: output signal 24 V DC, S2 (testing), max. 100 mA contact 5: FE

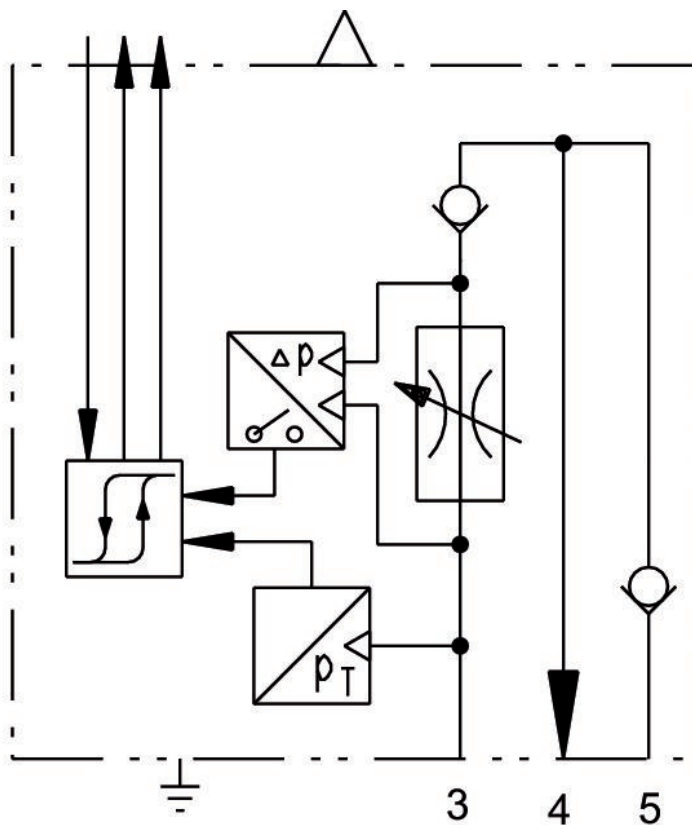
**Pneumatic position monitoring, Series MS01**

ISO 15407-1  
Plug  
M12  
CE declaration of conformity  
5-pin



Min. detection distance [mm]	Min. detection distance [mm]	Part No.
0.01	0.3	R412011545

Circuit symbol



**2x3/2-directional valve, Series CD01-PA**

ISO 15407-1

Plug

EN 175301-803, form C

Base plate connection

Electrically

Free of substances that impair surface wetting in the coating process

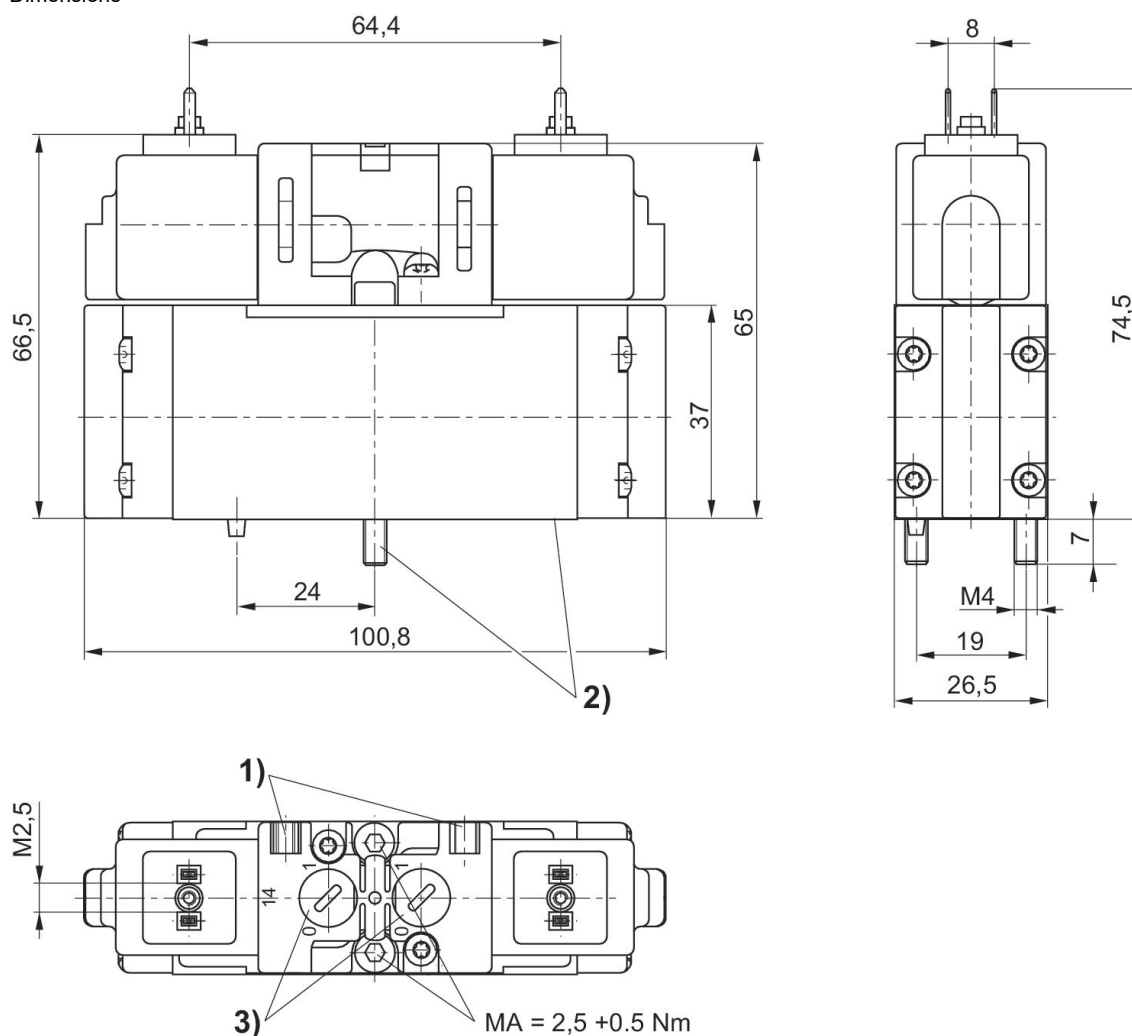
base plate DIN ISO 15407-1

base plate DIN ISO 15407-1



Function	Operational voltage	Pilot	Part No.
NO/NO	24 V	External	5763960220

Dimensions



1) mounting space for name plate 2) screws and seals captive 3) manual override

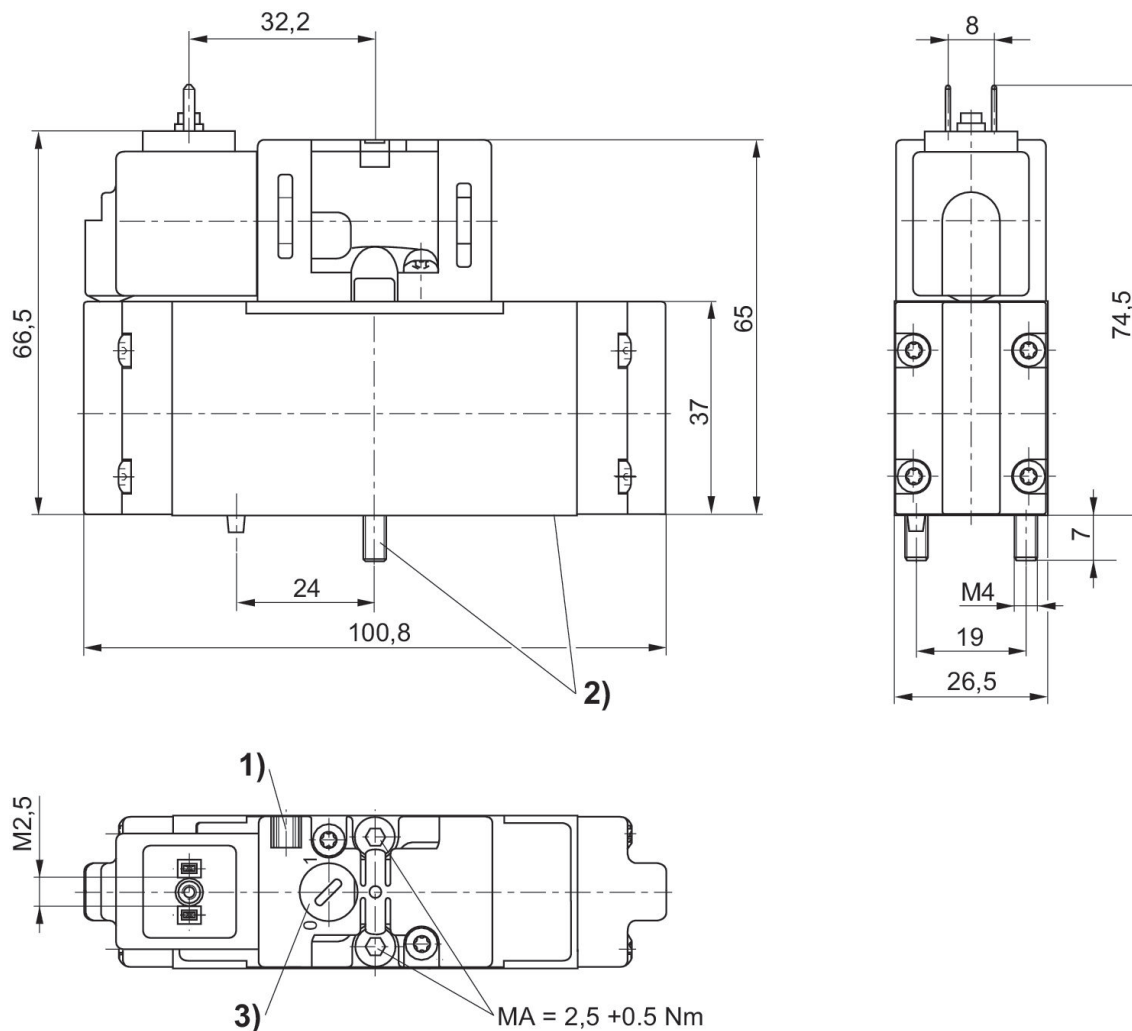
**5/2-directional valve, Series CD01-PA**

1010 l/min  
Single Solenoid  
ISO 15407-1  
Plug  
EN 175301-803, form C  
Base plate connection  
Electrically  
Free of substances that impair surface wetting in the coating process  
base plate DIN ISO 15407-1  
base plate DIN ISO 15407-1



Operational voltage	Pilot	Part No.
24 V	External	5763600220

Dimensions



1) mounting space for name plate 2) screws and seals captive 3) manual override

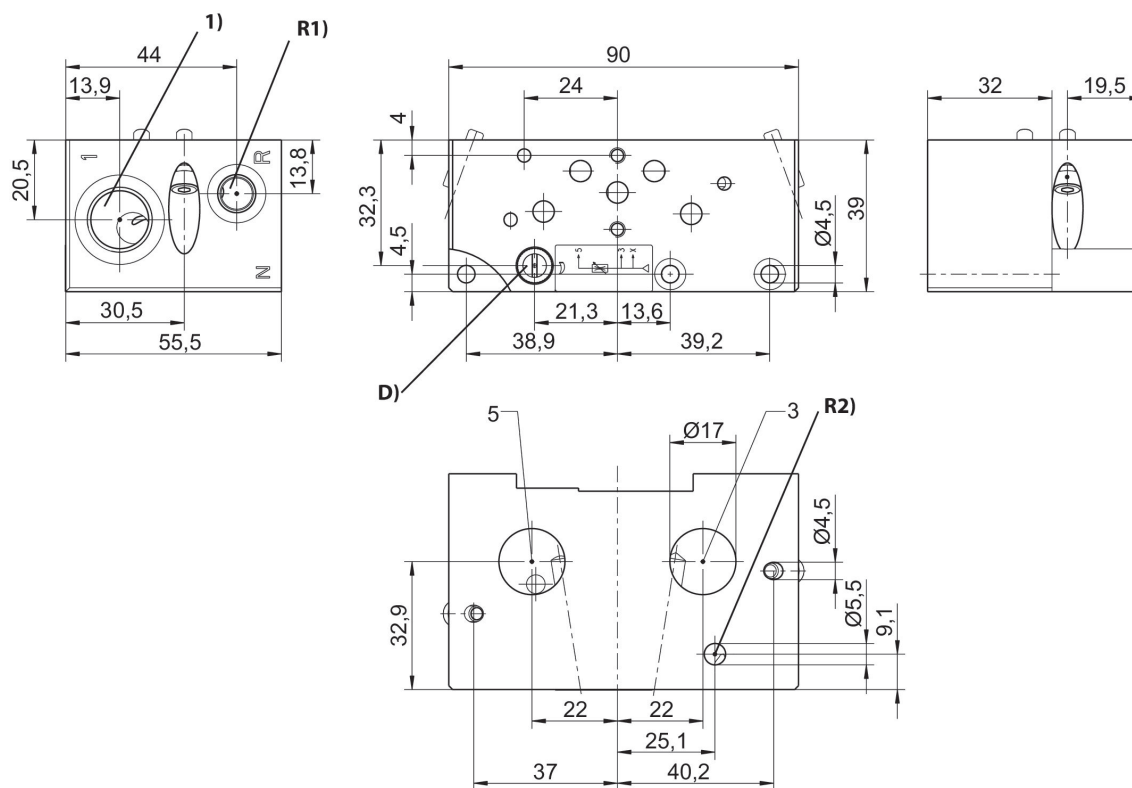
**Supply plate**

ISO 15407-1  
MS01-AL  
Internal thread  
Free of substances that impair surface wetting in the coating process



Compressed air connection input	Compressed air connection, exhaust	Compressed air connection pilot air exhaust	Connection direction	Max. number of valve positions	Part No.
G 3/8	G 1/8	G 1/8	Up	1	R412009674
3/8-18 NPTF	1/8 NPT	1/8-27 NPTF	Up	1	R412009781

**Dimensions**



1) Operating pressure  
D = Throttle (cleaning pressure)  
R1) Test module exhaust/sealing air connection (max. [[1] bar]) R2) Pilot control exhaust

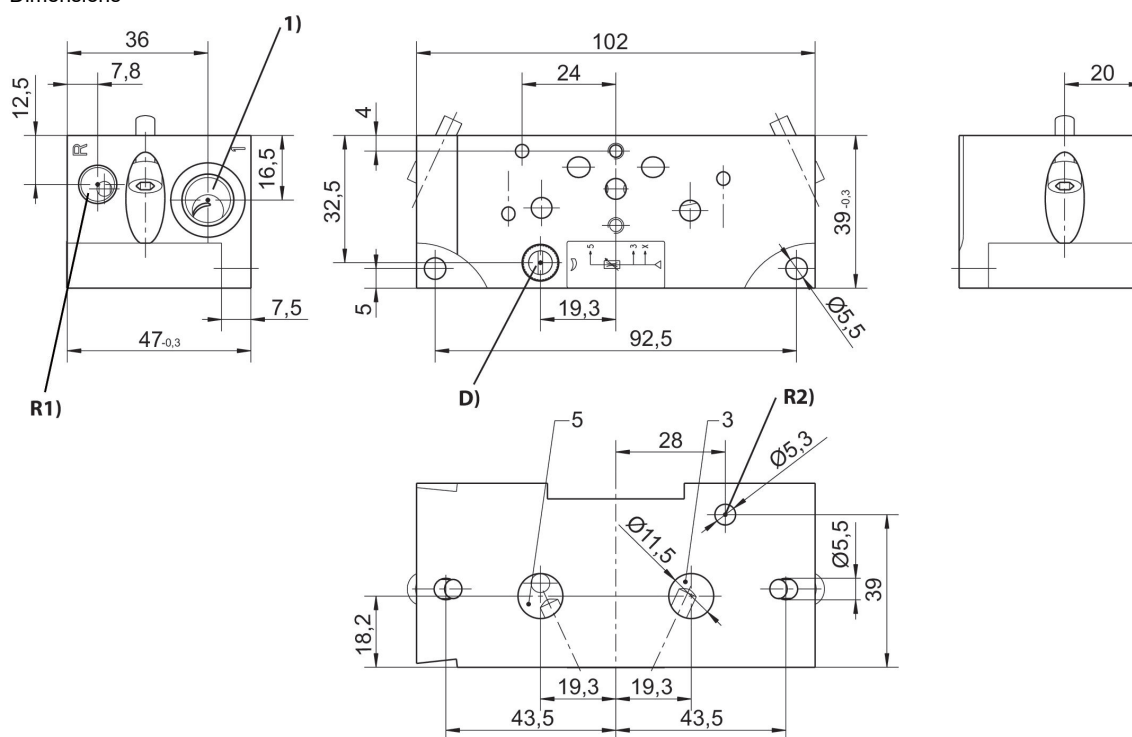
**Supply plate**

ISO 15407-1  
MS01-PA  
Internal thread  
Free of substances that impair surface wetting in the coating process  
G 3/8



Compressed air connection input	Compressed air connection, exhaust	Compressed air connection pilot air exhaust	Connection direction	Max. number of valve positions	Part No.
G 3/8	G 1/8	G 1/8	Up	1	8985121502

**Dimensions**



1) Operating pressure  
D = Throttle (cleaning pressure)  
R1) Test module exhaust/sealing air connection (max. [[1] bar]) R2) Pilot control exhaust

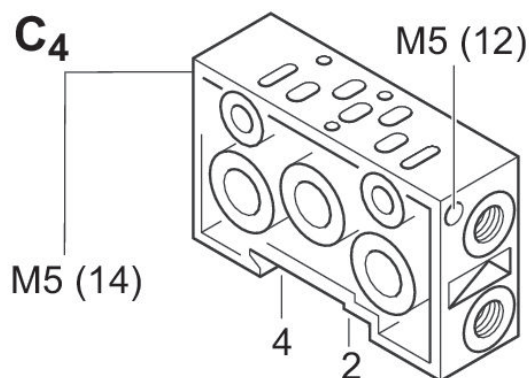
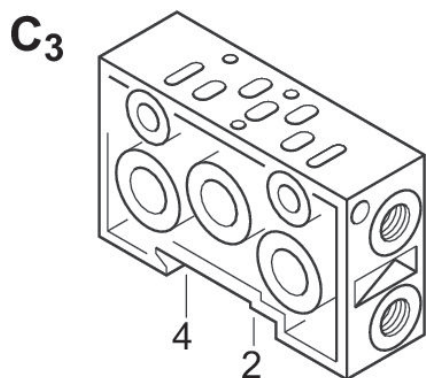
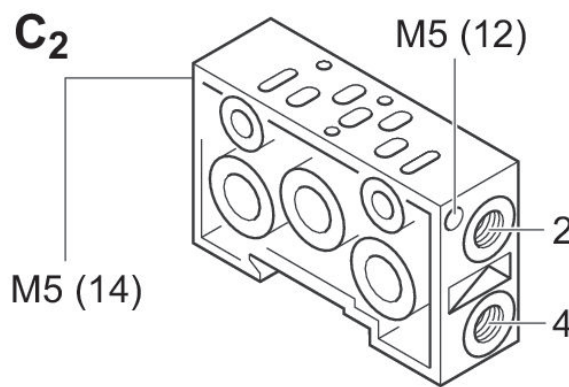
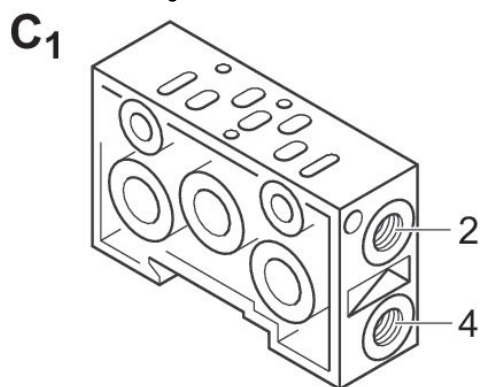
**Base plate**

ISO 15407-1



Type	Compressed air connection output	Compressed air connection pilot air	Compressed air connection pilot air exhaust	Connection direction	Max. number of valve positions	Part No.
C1	G 1/4			On the side	1	1825504023
C1	Ø 10x1			On the side	1	1825504025
C2	G 1/4	M5	M5	On the side	1	1825504026
C3	G 1/4			Down	1	1825504029
C4	G 1/4	M5	M5	Down	1	1825504030

Overview drawing



n	a	x ±0,3
2	108	94
3	135	121

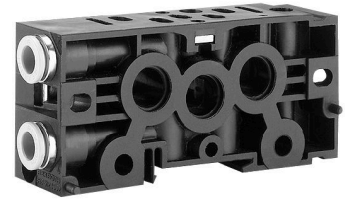


n	a	x ±0,3
4	162	148
...	...	...
...	...	...
n	= 27*(2+n)	= 40+27*n

**Base plate, ports 2 and 4 on side**

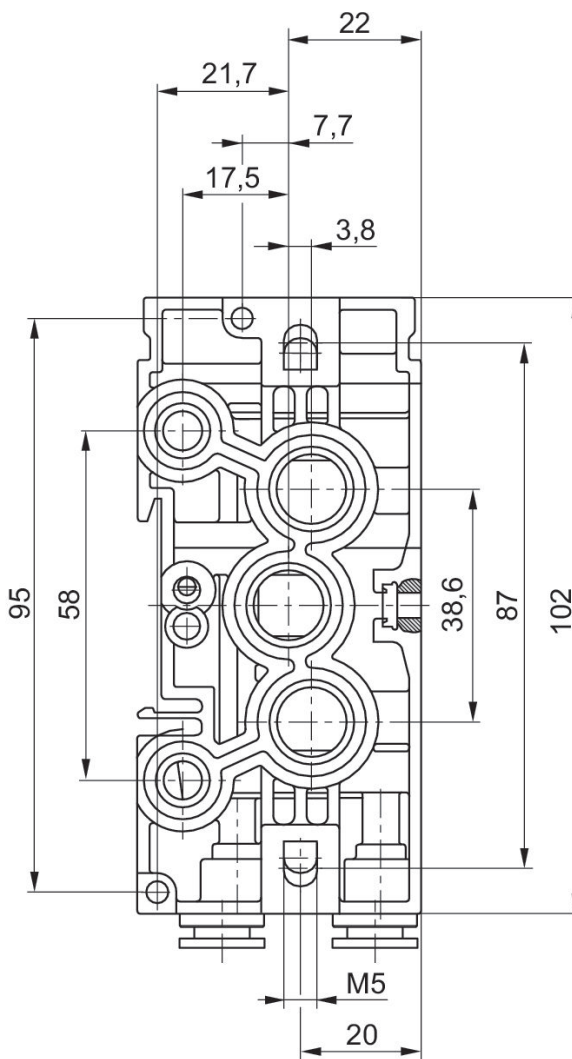
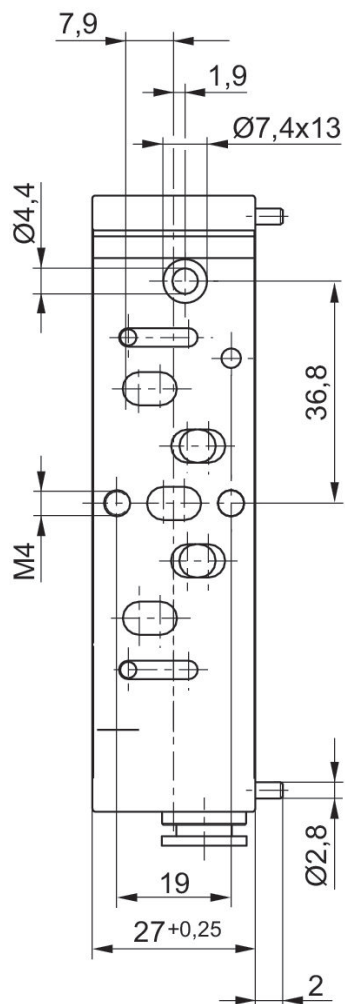
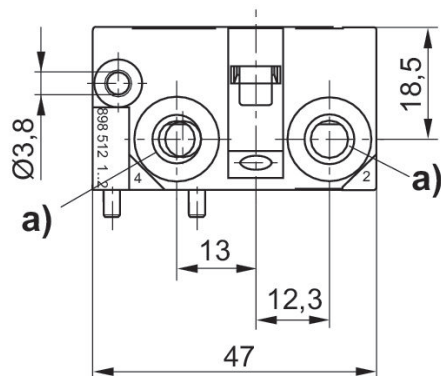
ISO 15407-1

Free of substances that impair surface wetting in the coating process



Compressed air connection output	Connection direction	Max. number of valve positions	Part No.
Ø 6x1	On the side	1	8985121122

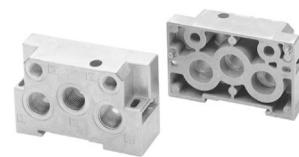
Dimensions



a) push-in fitting or thread connection

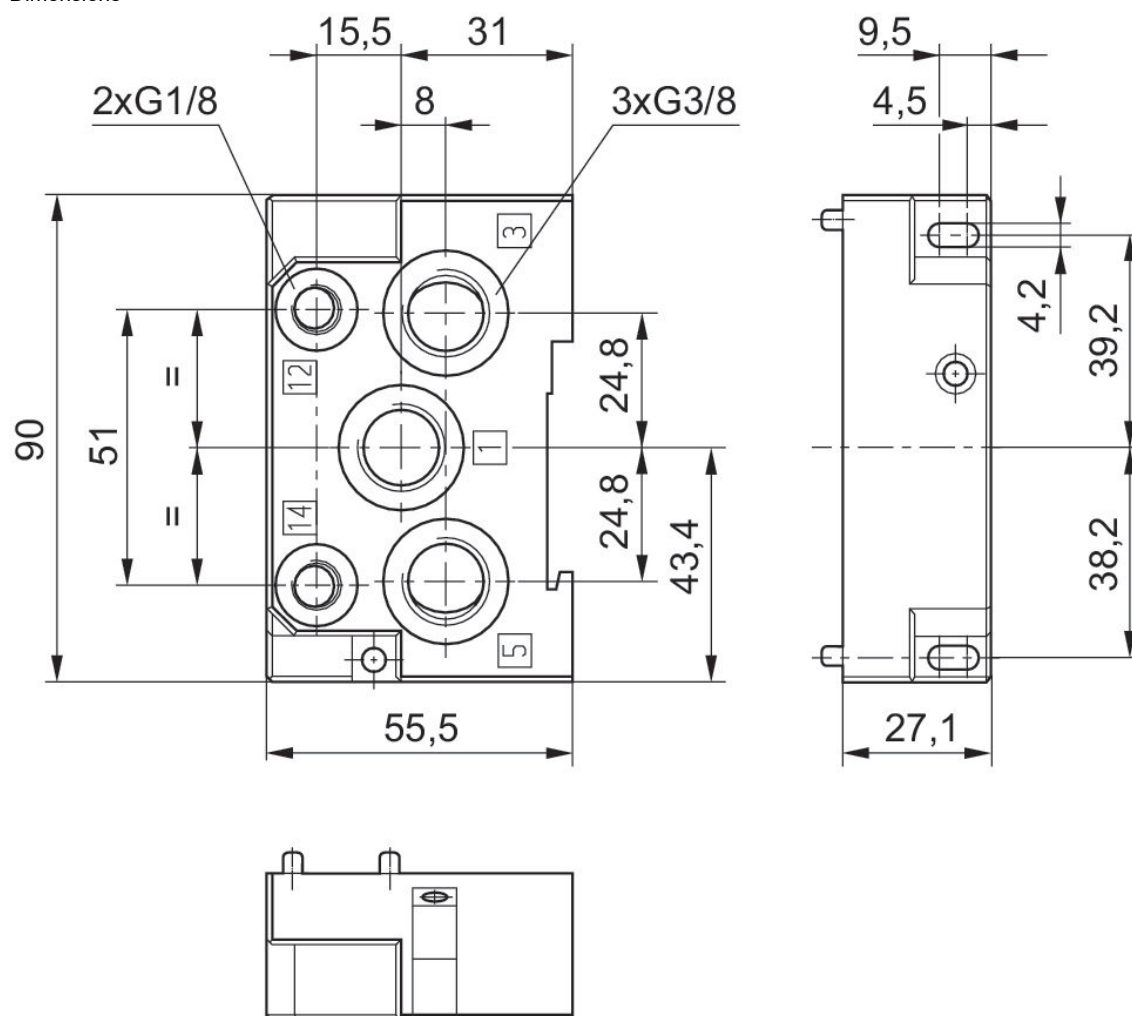
**End plate left, End plate right**

ISO 15407-1  
Internal thread



Compressed air connection input	Compressed air connection, exhaust	Compressed air connection pilot air	Compressed air connection pilot air exhaust	Part No.
G 3/8	G 3/8	G 1/8	G 1/8	1825504031

Dimensions



n	a	x ±0,3
2	108	94
3	135	121
4	162	148
...	...	...

n	a	x ±0,3
...	...	...
n	= 27*(2+n)	= 40+27*n

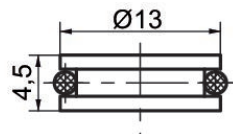
## Separator

ISO 15407-1  
MS01-PA  
CD01-PA



Type	Part No.
Separator for connections 1, 3, 5	R412015167

### Dimensions



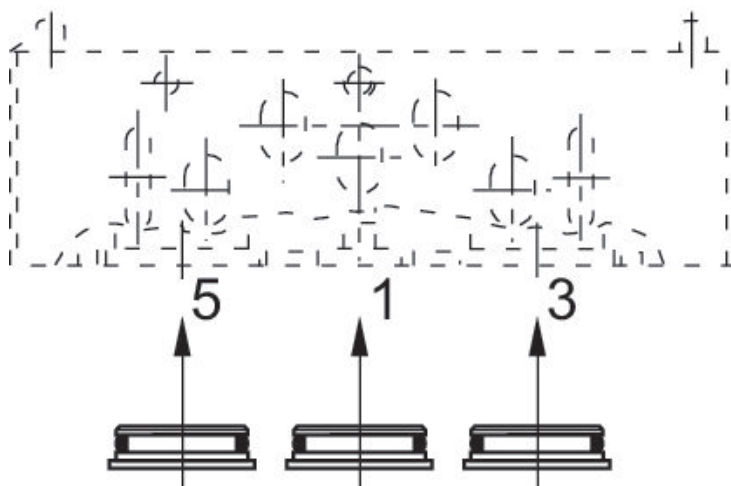
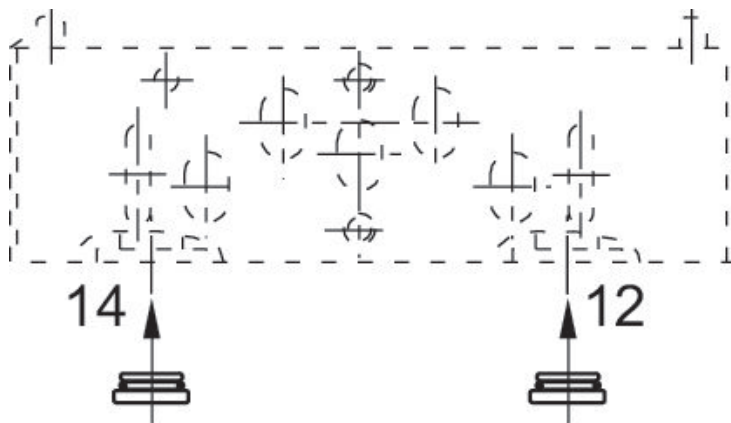
**Separator**

ISO 15407-1  
MS01-AL  
CD01-PA



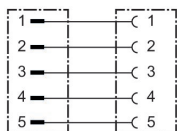
Type	Part No.
Separator for connections 1, 3, 5	1820220039
For connections 12 and 14	1820220040

Dimensions



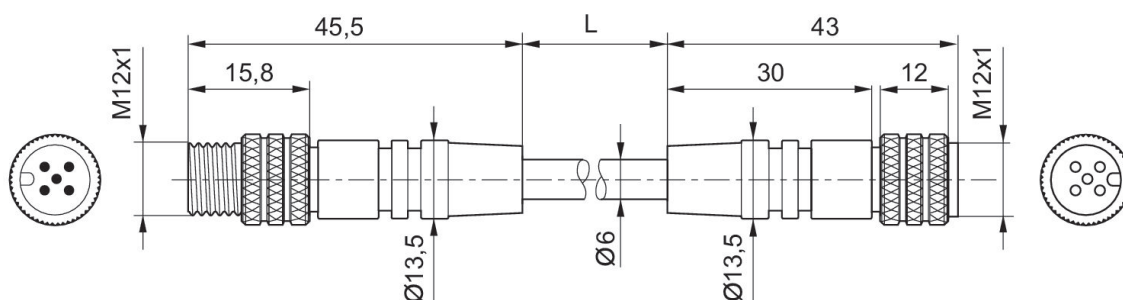
**Round plug connector, Series CON-RD**

Plug  
Socket  
M12x1  
M12x1  
5-pin  
5-pin



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, coding	Electrical connection 2, type	Electrical connection 2, thread size	Electrical connection 2, coding	Cable length [m]	Cable-Ø [mm]	Wire cross-section [mm²]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
36 V DC / 30 V AC	4	shielded	Socket	M12x1	A-coded	Plug	M12x1	A-coded	0.3	6	0.34	-25	80	8946054662
36 V DC / 30 V AC	4	shielded	Socket	M12x1	A-coded	Plug	M12x1	A-coded	0.5	6	0.34	-25	80	8946054672
36 V DC / 30 V AC	4	shielded	Socket	M12x1	A-coded	Plug	M12x1	A-coded	1	6	0.34	-25	80	8946054682
36 V DC / 30 V AC	4	shielded	Socket	M12x1	A-coded	Plug	M12x1	A-coded	2	6	0.34	-25	80	8946054692
36 V DC / 30 V AC	4	shielded	Socket	M12x1	A-coded	Plug	M12x1	A-coded	5	6	0.34	-25	80	8946054702
36 V DC / 30 V AC	4	shielded	Socket	M12x1	A-coded	Plug	M12x1	A-coded	10	6	0.34	-25	80	8946054712

**Dimensions**

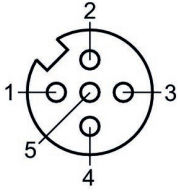


L = cable length



**8946054662, 8946054672, 8946054682, 8946054692, 8946054702, 8946054712**

Pin assignment, socket

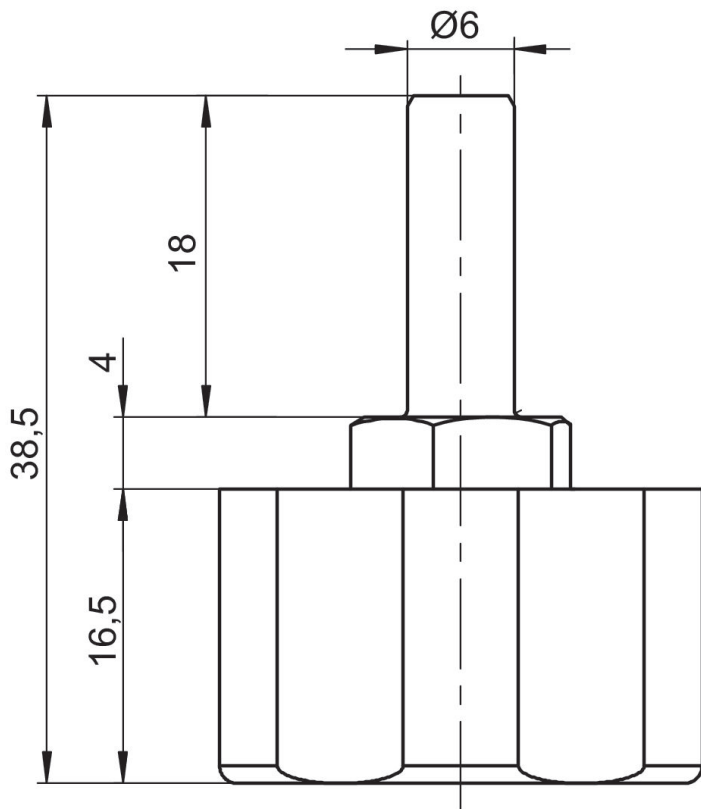
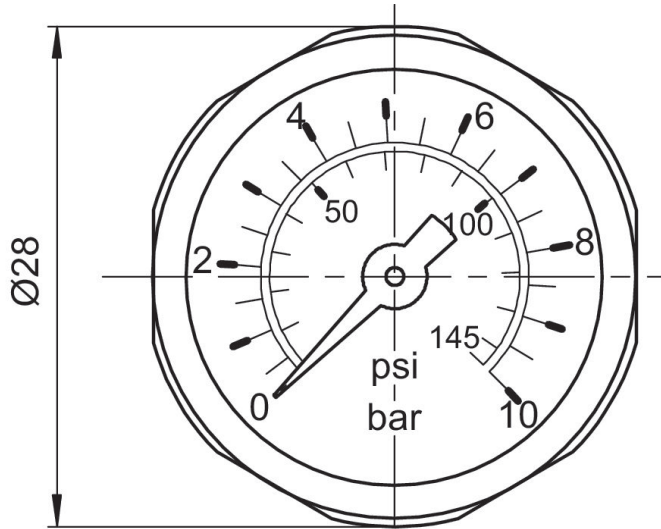


**Pressure gauge**



Type	Nominal diameter [mm]	Port	Min. main scale display range [bar]	Max. main scale display range [bar]	Min. main scale display range [bar]	Max. main scale display range [bar]	Part No.
Bourdon tube pressure gauge	28	Ø 6	0	4	0	4	R412003960
Bourdon tube pressure gauge	28	Ø 6	0	10	0	10	3530200300

Dimensions in mm

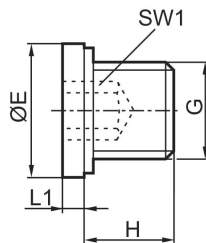


**Blanking screw, gasket**



G	Delivery unit [piece]	Part No.
G 3/8	25	1823462030
G 1/8	25	1823462028

Dimensions



Part No.	Port G	Ø E	H	L1	SW1
1823462028	G 1/8	14	8	3	5
1823462029	G 1/4	18	12	3	6
1823462030	G 3/8	22	12	3	8
1823462031	G 1/2	26	14	4	10
1823462032	G 3/4	32	16	4	12
1823462033	G 1	39	16	5	17

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