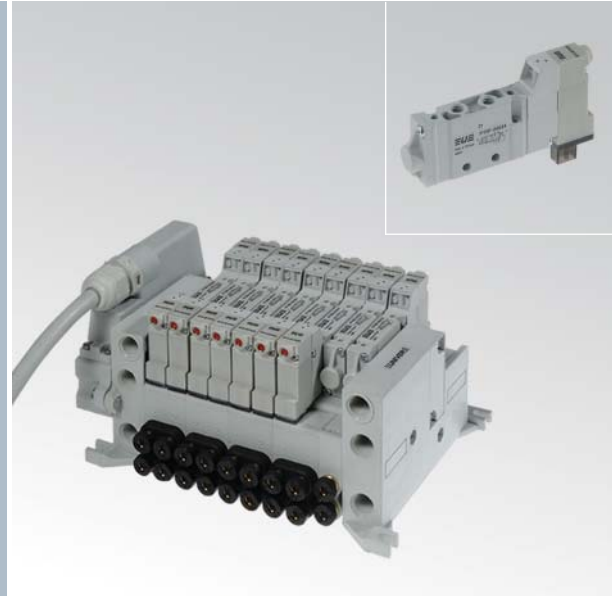


# P10

## 10mm COMPACT valves - threaded body and for sub-base mounting

- Low standard power consumption (0,32W): low power consumption electropilot B10 (standard version with LED)
- Quick response times
- High flow rate: the development of the traditional UNIVER spool technology permits high flow rate values
- Compact design: the valve body (10mm) allows reduced overall dimensions
- Complete solution
- Threaded body (P10F) and body for sub-base (P10B) in the following versions: 5/2 - 5/3 - 3/2+3/2
- External and multipolar electrical connections
- TC serial transmission system
- Maximum application flexibility
- Modular sub-base (single and double) for a high versatility in the composition of the valve manifolds
- Simplified installation
- Easy installation of tubes and fittings thanks to connections being all on the same side



### TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	max +50 °C
Fluid	filtered air 10 µm not dehumidified, lubricated or not
Commutation system	spool
Ways/Positions	<b>3/2+3/2, 5/2, 5/3</b>
Pressure	<b>electric control = max 9 bar</b> <b>pneumatic control = max 10 bar</b>
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring, pneumatic, electric
Connections	<b>P10F: M5, M7 P10B: M5, M7, tube Ø 4</b>
Nominal flow rate (NI/min)	<b>5/2 = 310 5/3 = 230 3/2+3/2 = 250</b>

### CONSTRUCTIVE CHARACTERISTICS

Valve body	zamak
Seals	nitrile rubber
Sub-base and actuators	selfextinguishing technopolymer
Spool	aluminum

### ELECTRIC CHARACTERISTICS

Electropilot	B10
Voltage	24 V DC (± 10%)
Power consumption	holding 0,32 W, pick-up 5,5 W (25 ms)
Protection degree	IP65
Manual override	button with tool

### CODIFICATION KEY

P	1	0	F	2	4	4	2	4	D
	1			2	3	4	5		6

<b>1 Series</b>	<b>2 Type</b>	<b>3 Control 14</b>
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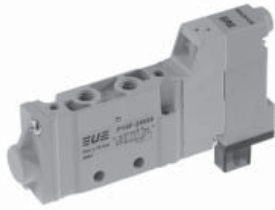
- |                              |                          |                                |
|------------------------------|--------------------------|--------------------------------|
| <b>P10F</b> = threaded valve | <b>2 = 5/2</b>           | <b>3 = pneumatic amplified</b> |
| <b>P10B</b> = valve for base | <b>3 = 5/3 c.c.</b>      | <b>4 = electric amplified</b>  |
|                              | <b>4 = 5/3 o.c.</b>      |                                |
|                              | <b>5 = 5/3 p.c.</b>      |                                |
|                              | <b>6 = 3/2+3/2 NC-NC</b> |                                |
|                              | <b>7 = 3/2+3/2 NC-NO</b> |                                |
|                              | <b>8 = 3/2+3/2 NO-NO</b> |                                |

<b>4 Return 12</b>	<b>5 Voltage</b>	<b>6 Variant</b>
--------------------	------------------	------------------

- |                                    |                     |  |
|------------------------------------|---------------------|--|
| <b>0</b> = pneumomechanical spring | <b>24</b> = 24 V DC | <b>D</b> = external servo-assistance of the pilot on valve body (P10 = M3) |
| <b>1</b> = mechanical spring       |                     |  |
| <b>3</b> = pneumatic amplified     |                     |  |
| <b>4</b> = electric amplified      |                     |  |

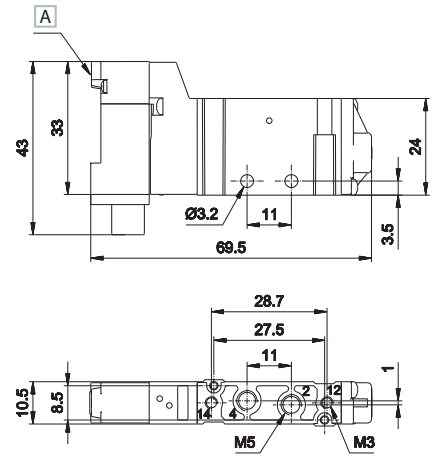
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single electric impulse



Weight (Kg): 0,054

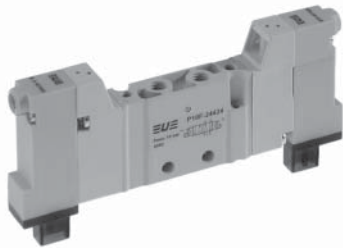
	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		electric amplified	pneumo mechanical spring	1,5÷9	12	20	<b>P10F24024</b>
5/2		electric amplified	mechanical spring	1,9÷9	10	21	<b>P10F24124</b>



A Manual override

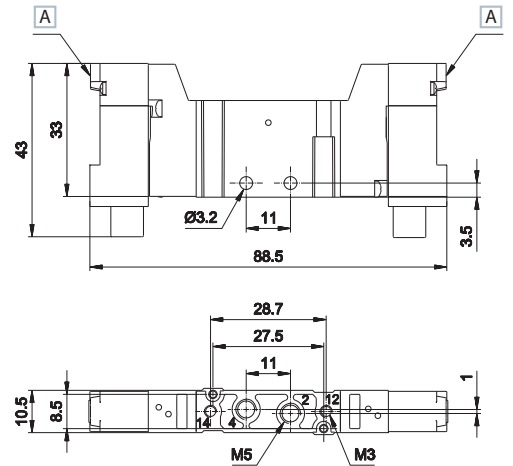
2 - 4 = Use  
14 = Control  
12 = Return

Double electric impulse



Weight (Kg): 0,069

	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		electric amplified	electric amplified	0,7÷9	10	10	<b>P10F24424</b>
5/3 c.c.		electric amplified	electric amplified	1,5÷9	11	22	<b>P10F34424</b>
5/3 o.c.		electric amplified	electric amplified	1,5÷9	11	22	<b>P10F44424</b>
5/3 p.c.		electric amplified	electric amplified	1,5÷9	11	22	<b>P10F54424</b>
3/2 NC + 3/2 NC		electric amplified	electric amplified	1,3÷9	9	14	<b>P10F64424</b>
3/2 NC + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	<b>P10F74424</b>
3/2 NO + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	<b>P10F84424</b>



A Manual override

2 - 4 = Use  
14 = Control  
12 = Return

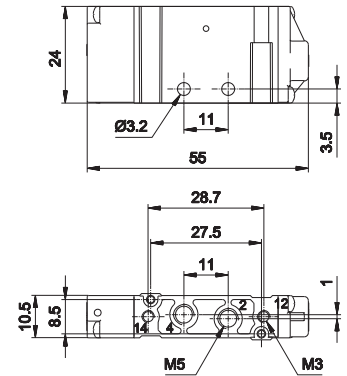
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single electric impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,5÷10	8	14	<b>P10F230</b>
5/2		pneumatic amplified	mechanical spring	1,9÷10	7	16	<b>P10F231</b>



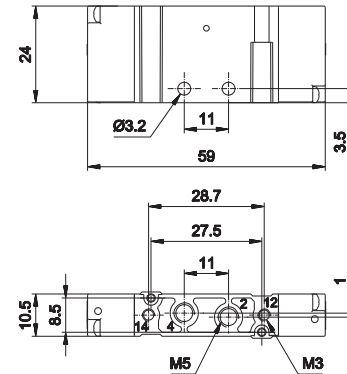
2 - 4 = Use  
14 = Control  
12 = Return

Double electric impulse



Weight (Kg): 0,044

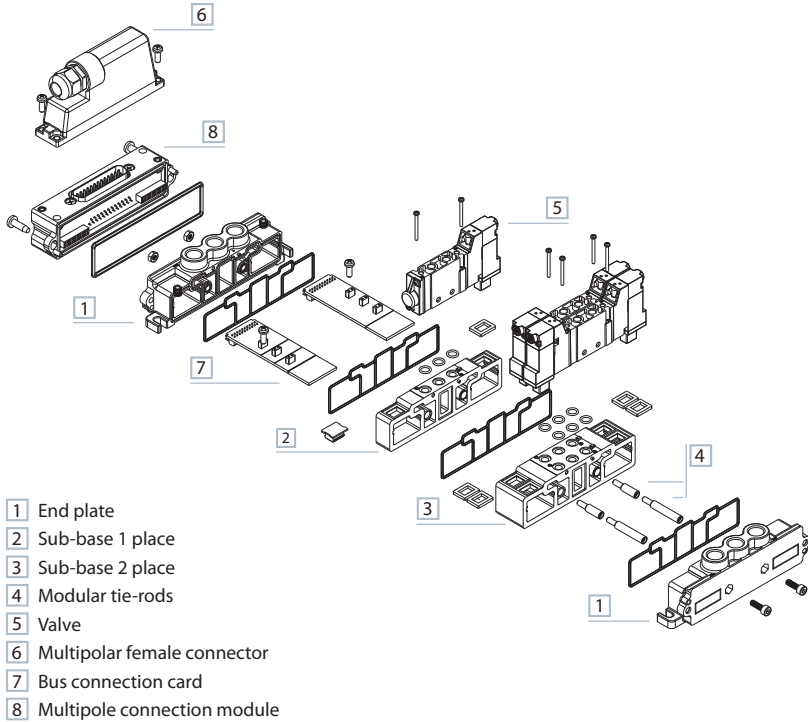
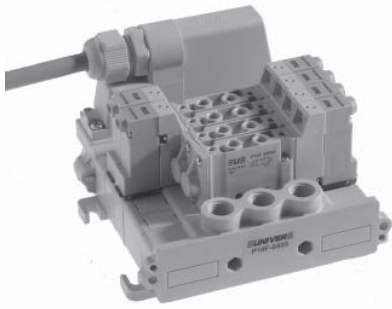
	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,6÷10	6	6	<b>P10F233</b>
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	<b>P10F333</b>
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	<b>P10F433</b>
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	<b>P10F533</b>
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	<b>P10F633</b>
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	<b>P10F733</b>
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	<b>P10F833</b>



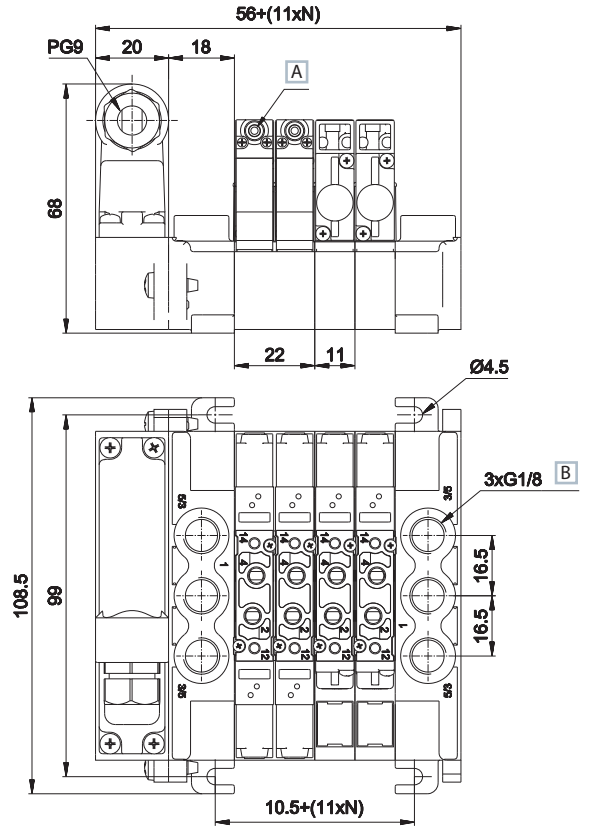
2 - 4 = Use  
14 = Control  
12 = Return

o.c. = open centres    c.c. = closed centres    p.c. = pressurized centres

Integrated electric connection



- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 place
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Bus connection card
- 8 Multipole connection module



- 1 = Supply port
  - 2 - 4 = Use
  - 3 - 5 = Exhaust
  - 14 = Control
  - 12 = Return
  - N = Number of valve places
- A Manual override
  - B Tightening torque  
G1/8 = max 3 Nm

**TIM1024**      **P10SF100**      **P10SF110**      **P10SF200**      **P10SF210**      **P10SF500**

connection module 25 poles male type D-sub weight: 0,047 Kg	sub-base 1 place weight: 0,018 Kg	sub-base 1 place 1-3-5 closed weight: 0,02 Kg	sub-base 2 places weight: 0,04 Kg	sub-base 2 places 1-3-5 closed weight: 0,04 Kg	supply plate G1/8 left for TIM module weight: 0,04 Kg

**P10SF505**      **P10SF550**      **P10SF560**      **P10SF570**      **P10SS14\*\*M**      **P10SS12\*\*M**

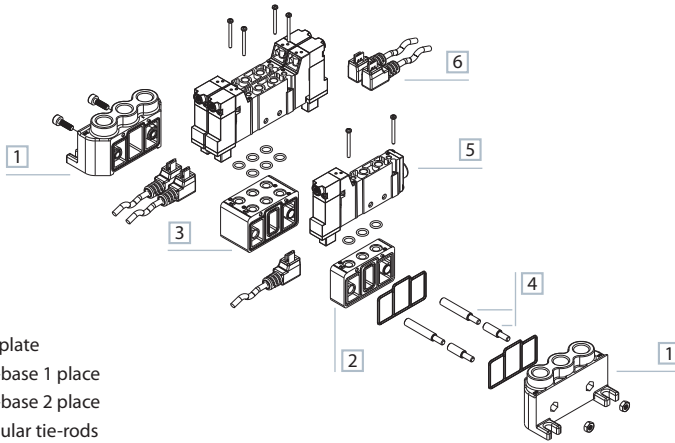
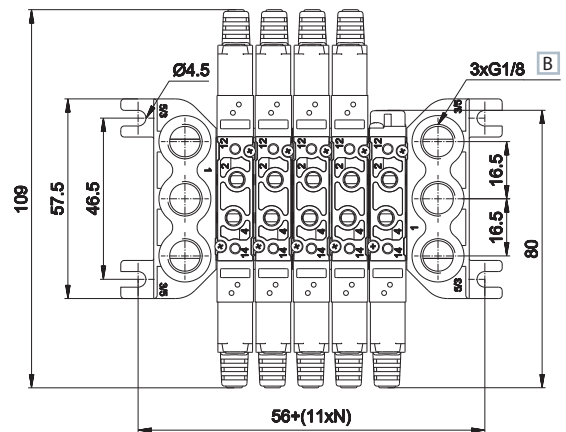
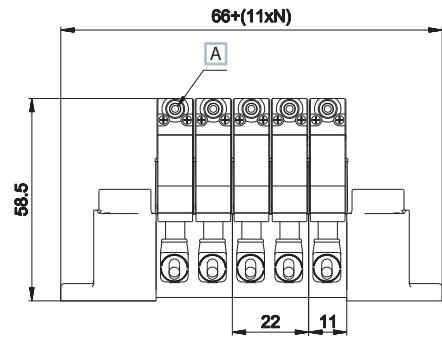
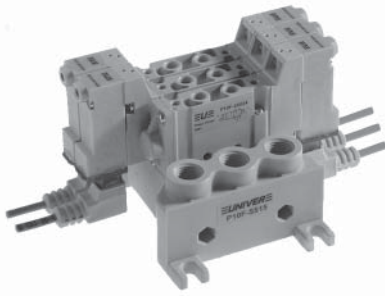
supply plate G1/8 right weight: 0,04 Kg	supply pressure separator plate weight: 0,002 Kg	covering plate for unused valve place weight: 0,003 Kg	intermediate supply plate for threaded version weight: 0,004 Kg	bus connection card, side 14 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg	bus connection card, side 12 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg

**P10STR01**      **P10STR02**      **P10STR05**

modular tie-rods 1 valve place (package 100 pcs.) weight: 0,001 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,007 Kg

- AZ4-SN003A**  
100 nuts M3 for tie-rods
- AZ4-VN0310**  
100 screws for tie-rods

Electric connection with external connector



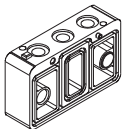
- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 place
- 4 Modular tie-rods
- 5 Valve
- 6 Single connection

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

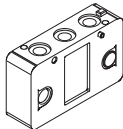
- A Manual override
- B Tightening torque  
G1/8 = max 3 Nm

N = Number of valve places

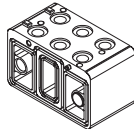
**P10SF300    P10SF310    P10SF400    P10SF410    P10SF515    P10SF550**



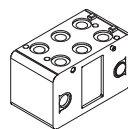
sub-base 1 place  
weight: 0,011 Kg



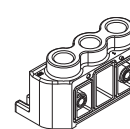
sub-base 1 place  
1-3-5 closed  
weight: 0,013 Kg



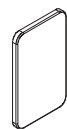
sub-base 2 places  
weight: 0,024 Kg



sub-base 2 places  
1-3-5 closed  
weight: 0,026

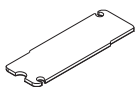


supply place  
G1/8 right/left  
weight: 0,032 Kg

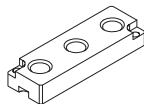


supply pressure  
separator plate  
weight: 0,003 Kg

**P10SF560    P10SF570    P10STR01    P10STR02    P10STR05**



covering plate for  
unused valve place  
weight: 0,003 Kg



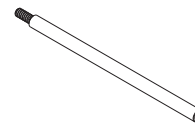
intermediate supply plate  
for threaded version  
weight: 0,004 Kg



modular tie-rods  
1 valve place  
(package 100 pcs.)  
weight: 0,001 Kg



modular tie-rods  
2 valve places  
(package 100 pcs.)  
weight: 0,003 Kg

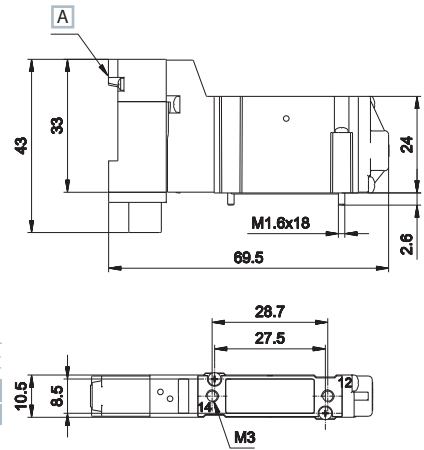
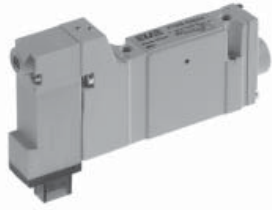


modular tie-rods  
5 valve places  
(package 100 pcs.)  
weight: 0,007 Kg

**AZ4-SN003A**  
100 nuts for tie-rods

**AZ4-VN0310**  
100 screws for tie-rods

Single electric impulse



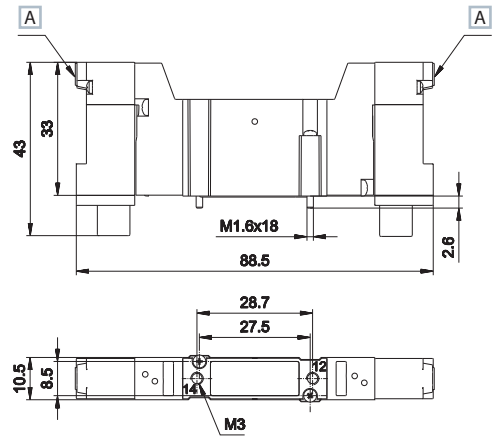
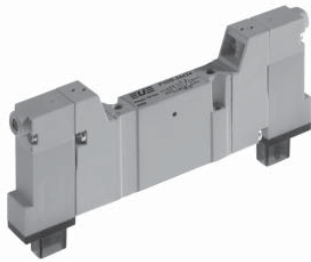
Weight (Kg): 0,054

	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		electric amplified	pneumo mechanical spring	1,5÷9	12	20	P10B24024
5/2		electric amplified	mechanical spring	1,9÷9	10	21	P10B24124

A Manual override

14 = Control  
12 = Return

Double electric impulse



Weight (Kg): 0,069

	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		electric amplified	electric amplified	0,7÷9	10	10	P10B24424
5/3 c.c.		electric amplified	electric amplified	1,5÷9	11	22	P10B34424
5/3 o.c.		electric amplified	electric amplified	1,5÷9	11	22	P10B44424
5/3 p.c.		electric amplified	electric amplified	1,5÷9	11	22	P10B54424
3/2 NC + 3/2 NC		electric amplified	electric amplified	1,3÷9	9	14	P10B64424
3/2 NC + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	P10B74424
3/2 NO + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	P10B84424

A Manual override

14 = Control  
12 = Return

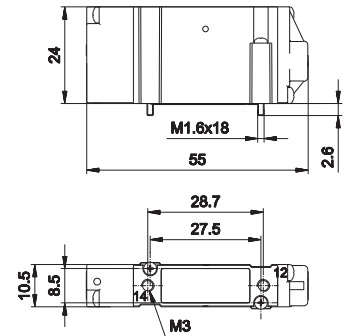
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

**Single pneumatic impulse**



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,5÷9	8	14	P10B230
5/2		pneumatic amplified	mechanical spring	1,9÷9	7	16	P10B231



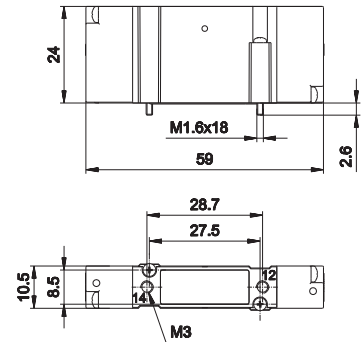
14 = Control  
12 = Return

**Double pneumatic impulse**



Weight (Kg): 0,044

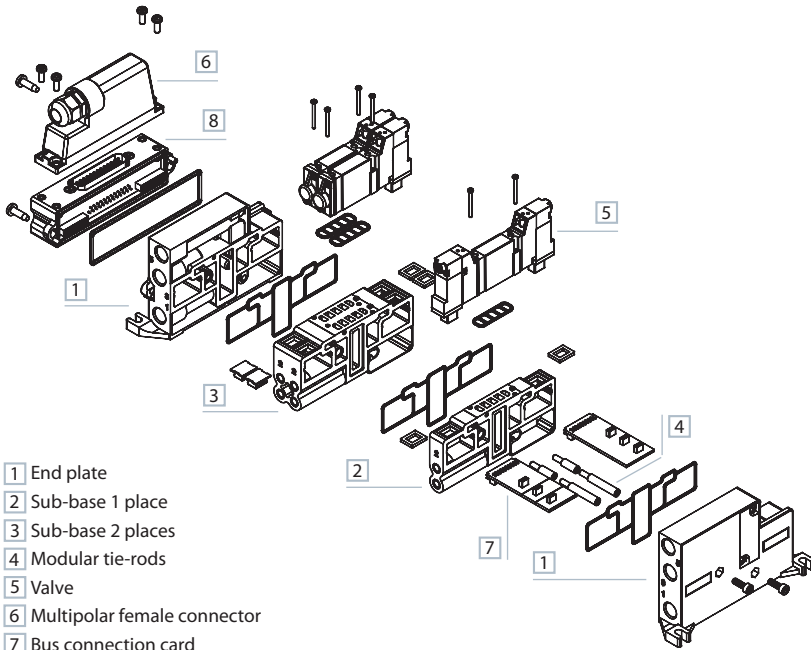
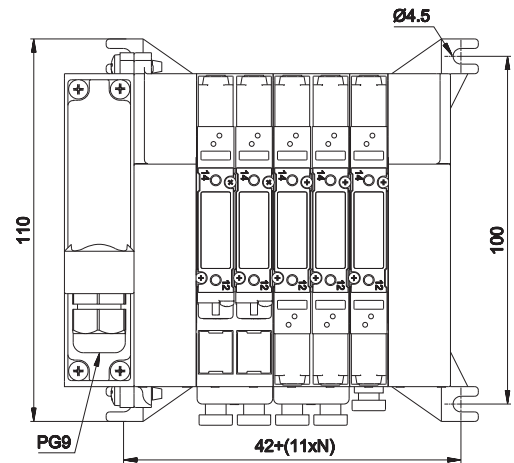
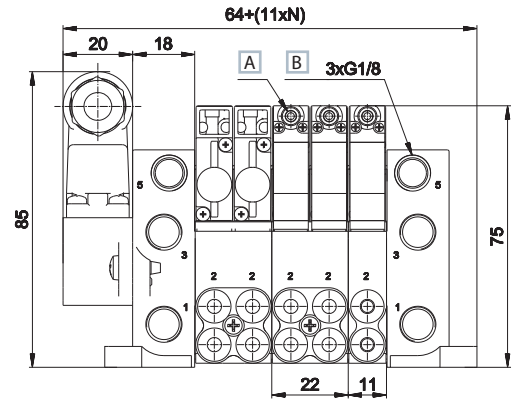
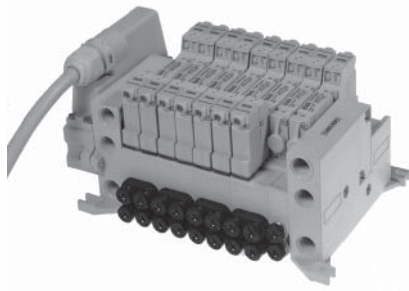
	Symbol	Control	Return	Pressure bar	Times (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,6÷9	6	6	P10B233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷9	8	14	P10B633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	8	14	P10B733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	8	14	P10B833



14 = Control  
12 = Return

o.c. = open centres    c.c. = closed centres    p.c. = pressurized centres

Integrated electric connection



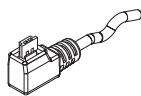
- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Bus connection card
- 8 Multipole connection module

- 1 = Supply port
  - 2 - 4 = Use
  - 3 - 5 = Exhaust
  - 14 = Control
  - 12 = Return
  - N = Number of valve places
- A Manual override
  - B Tightening torque
- G1/8 - M5 = max 3 Nm  
M7 = 2 Nm

TIM1024	P10SB100/107	P10SB110/117	P10SB200/207	P10SB210/217	P10SB304	P10SB314
connection module 25 poles male type D-sub weight: 0,047 Kg	sub-base 1 place side outlets M5, M7 weight: 0,031 Kg	sub-base 1 place side outlets M5, M7 1-3-5 closed weight: 0,033 Kg	sub-base 2 places side outlets M5, M7 weight: 0,062 Kg	sub-base 2 places side outlets M5, M7 1-3-5 closed weight: 0,067 Kg	sub-base 1 place side outlets with quick couplings pipe 4 weight: 0,034 Kg	sub-base 1 place side outlets with quick couplings pipe 4 1-3-5 closed weight: 0,034 Kg
P10SB404	P10SB414	P10SB500	P10SB505	P10SB550	P10SB560	P10SB570
sub-base 2 places side outlets with quick couplings pipe 4 weight: 0,073 Kg	sub-base 1 place side outlets with quick couplings pipe 4 1-3-5 closed weight: 0,068 Kg	supply plate G1/8 left for TIM module weight: 0,074 Kg	supply plate G1/8 right weight: 0,074 Kg	supply pressure separator plate weight: 0,004 Kg	covering plate for unused valve place weight: 0,002 Kg	intermediate supply plate for sub-base weight: 0,007 Kg
P10SS14**M	P10SS12**M	P10STR01	P10STR02	P10STR05		
bus connection card, side 14 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg	bus connection card, side 12 ** = 04, 06, 08, 10, 12 places weight: 0,006 Kg	modular tie-rods 1 valve place (package 100 pcs.) weight: 0,001 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,007 Kg	<b>AZ4-SN003A</b> 100 nuts for tie-rods	<b>AZ4-VN0310</b> 100 screws for tie-rods

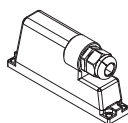


D-535U40300  
D-535U40500



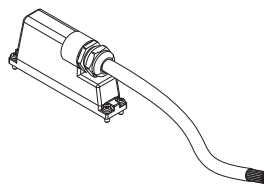
■ single connector with cable 3-5 m

TSCFN24S000



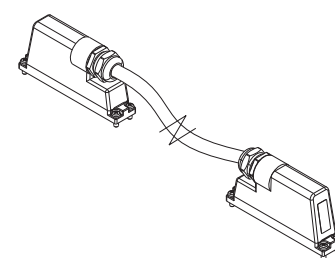
■ female connector 25 poles type D-sub no cable M3 x 8 fixing screws

TSCFN24S0300  
TSCFN24S0500  
TSCFN24S1000



■ female connector 25 poles type sub-D cable 3-5-10 m M3 x 8 fixing screws

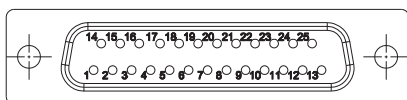
TSCFN16D0300  
TSCFN16D0500  
TSCFN16D1000



■ flying male/female connector sub D (upon request) prewired for 24 coils with cable Ø 8 mm (3-5-10 m length) suitable for mobile laying M3 x 8 fixing screws

Colour identification according to standard DIN 47100

Female D-SUB 25 poles for connection 12+12 coils



PIN No.	Colour	Coil	Control side	ValveN°
1	white	1	14	1
2	brown	2	12	1
3	green	3	14	2
4	yellow	4	12	2
5	grey	5	14	3
6	pink	6	12	3
7	blue	7	14	4
8	red	8	12	4
9	nero	9	14	5
10	black	10	12	5
11	grey-pink	11	14	6
12	red-blue	12	12	6
13	white-green	13	14	7
14	brown-green	14	12	7
15	white-yellow	15	14	8
16	yellow-brown	16	12	8
17	white-grey	17	14	9
18	grey-brown	18	12	9
19	white-pink	19	14	10
20	pink-brown	20	12	10
21	white-blue	21	14	11
22	brown-blue	22	12	11
23	white-red	23	14	12
24	brown-red brown-black shield	common low	-	-
25	white-black	24	12	12

