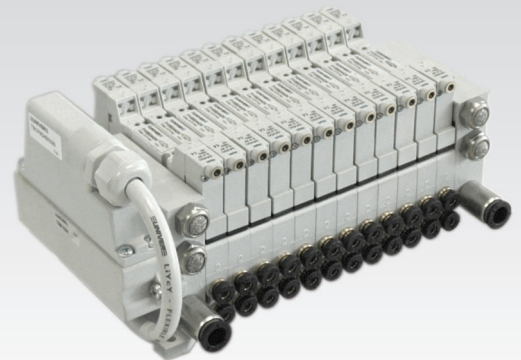


P10

10 mm COMPACT valves - threaded body and for sub-base mounting 90° ELECTROPILOT CONNECTION

- Standard consumption: 1 W; upon request low power consumption: 0,3W
- 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

Available ATEX version upon request



TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Commutation system	spool
Ways/Positions	3/2+3/2, 5/2, 5/3
Pressure	7 bar (electric control) 10 bar (pneumatic control)
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring, pneumatic, electric
Connections	M5 (P10F) - M5, M7, tube Ø 4 (P10B)
Nominal flow rate (NI/min)	310 (5/2) 230 (5/3) 250 (3/2+3/2)

CONSTRUCTIVE CHARACTERISTICS

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

ELECTRIC CHARACTERISTICS

Electropilot	B10 (0,3 W) B11 (1 W)
Voltage	24 V DC (± 10%)
Power consumption	B10 = 0,3 W, speed -up 1 W (25 ms) B11 = 1 W
Protection degree	IP65
Manual override	recessed button - 1 position

CODIFICATION KEY

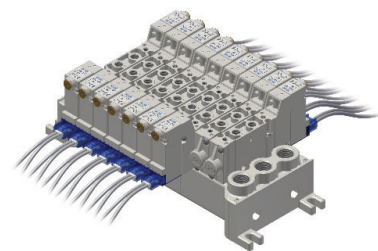
P	1	0	F	2	4	4	2	4		
	1	2	3	4	5	6	7			

1 Series P10F = threaded body P10B = body for sub-base	2 Type 2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c. 6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	3 Control 14 3 = pneumatic amplified 4 = electric amplified 90° (0,3W) 6 = electric amplified 90° (1W)	4 Return 12 0 = pneumomechanical spring 1 = mechanical spring 3 = pneumatic amplified 4 = electric amplified 90° (0,3W) 6 = electric amplified 90° (1W)
5 Voltage 24 = 24 V DC	6 Variant D = external pilot supply on valve body (P10 = M3)	7 ATEX option X = Atex (upon request)	

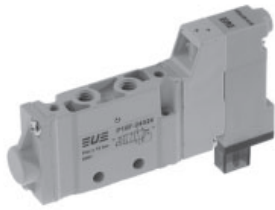
See ATEX Catalogue for types and versions

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

Version with in-line connections (upon request)

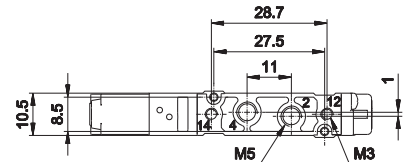
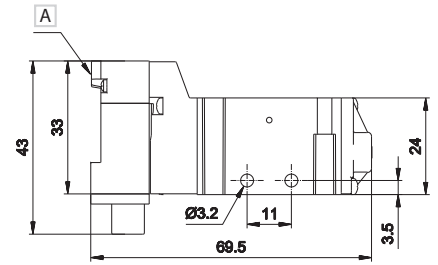


Single electric impulse



Weight (Kg): 0,054

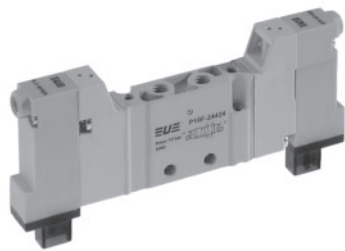
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		electric amplified	pneumo mechanical spring	1,5÷9	12	20	P10F24024 P10F26024
5/2		electric amplified	mechanical spring	1,9÷9	10	21	P10F24124 P10F26124



A Manual override

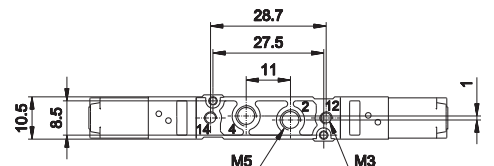
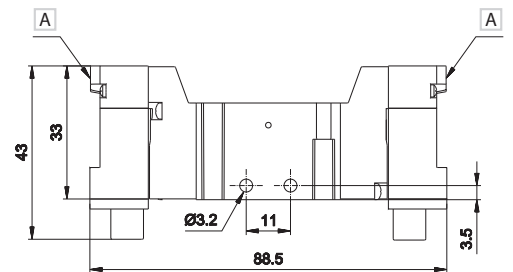
2 - 4 = Use
14 = Control
12 = Return

Double electric impulse



Weight (Kg): 0,069

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		electric amplified	electric amplified	0,7÷9	10	10	P10F24424 P10F26624
5/3 c.c.		electric amplified	electric amplified	1,5÷9	11	22	P10F34424 P10F36624
5/3 o.c.		electric amplified	electric amplified	1,5÷9	11	22	P10F44424 P10F46624
5/3 p.c.		electric amplified	electric amplified	1,5÷9	11	22	P10F54424 P10F56624
3/2 NC + 3/2 NC		electric amplified	electric amplified	1,3÷9	9	14	P10F64424 P10F66624
3/2 NC + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	P10F74424 P10F76624
3/2 NO + 3/2 NO		electric amplified	electric amplified	1,3÷9	9	14	P10F84424 P10F86624



A Manual override

2 - 4 = Use
14 = Control
12 = Return

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

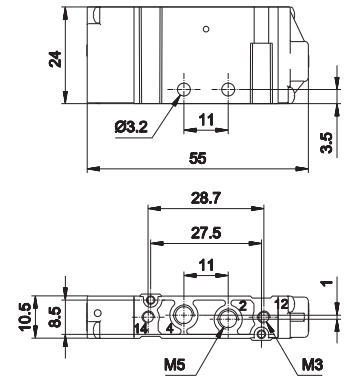
3

Single pneumatic impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumo mechanical spring	1,5÷10	8	14	P10F230
5/2		pneumatic amplified	mechanical spring	1,9÷10	7	16	P10F231



2 - 4 = Use
14 = Control
12 = Return

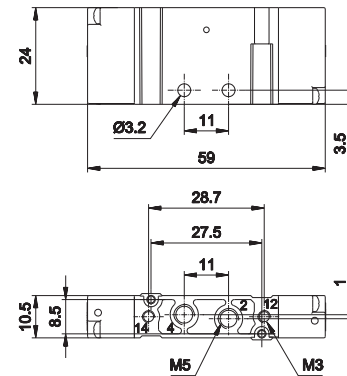
Double pneumatic impulse



Weight (Kg): 0,044

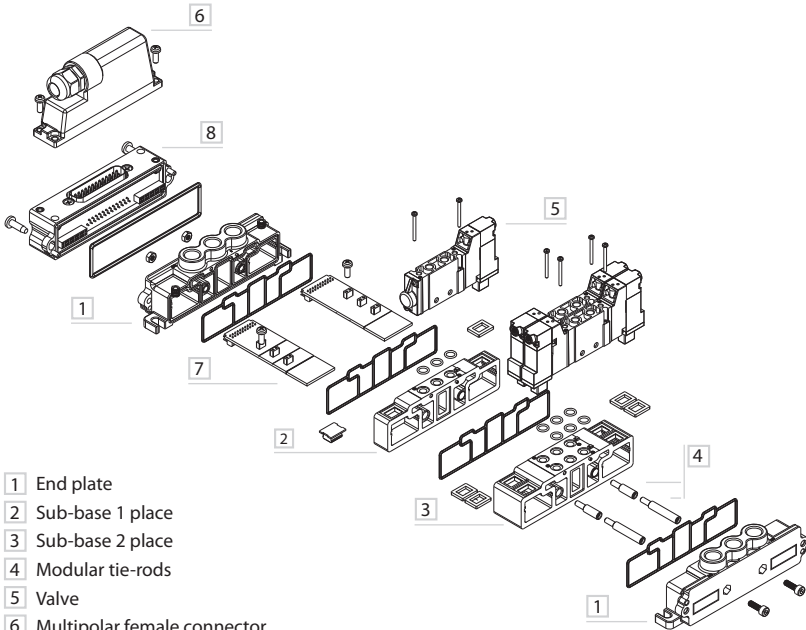
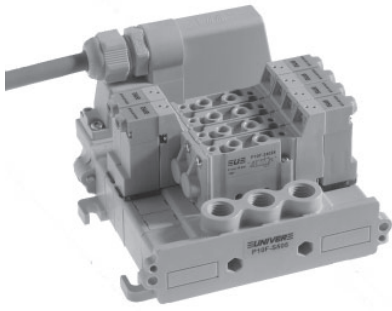
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumatic amplified	0,6÷10	6	6	P10F233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	P10F333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	P10F433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,5÷10	7	20	P10F533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	P10F633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	P10F733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	8	14	P10F833

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

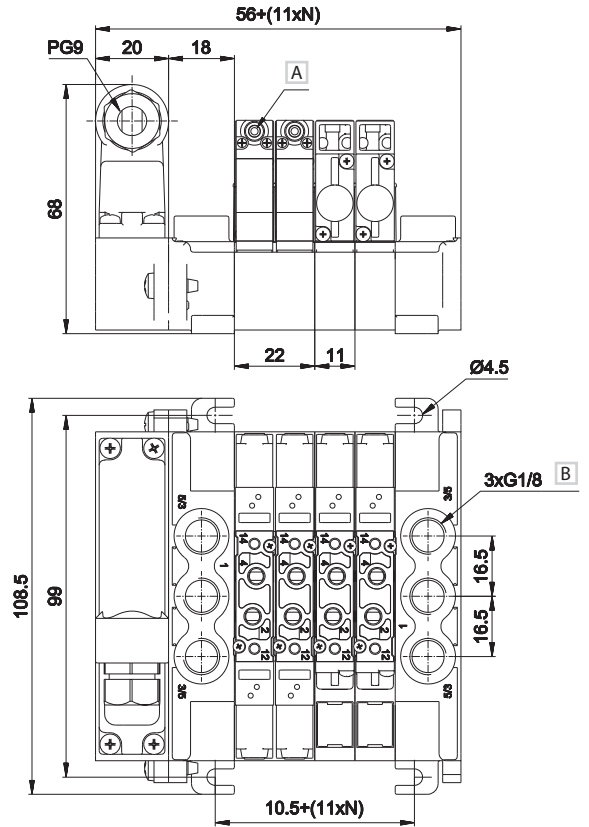


2 - 4 = Use
14 = Control
12 = Return

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



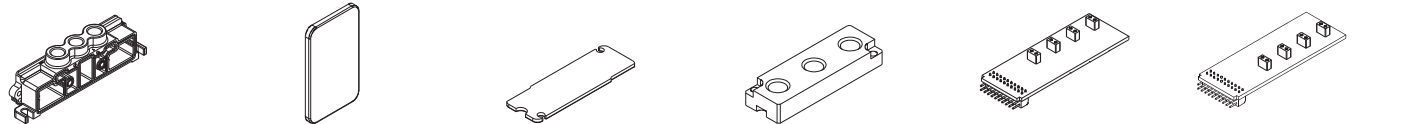
- 1 = Supply port
 - 2 - 4 = Use
 - 3 - 5 = Exhaust
 - 14 = Control
 - 12 = Return
- N = Number of valve places
- A Manual override
 - B Tightening torque
G1/8 = max 3 Nm

TIM1024 P10SF100 P10SF110 P10SF200 P10SF210 P10SF500



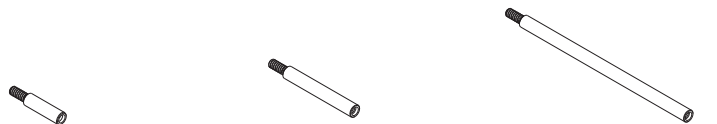
connection module 25 poles male type D-sub weight: 0,047 Kg	sub-base 1 place weight: 0,018 Kg	sub-base 1 place 1-3-5 closed weight: 0,02 Kg	sub-base 2 places weight: 0,04 Kg	sub-base 2 places 1-3-5 closed weight: 0,04 Kg	supply plate G1/8 left for TIM module weight: 0,04 Kg
----------------------------------------------------------------------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

P10SF505 P10SF550 P10SF560 P10SF570 P10SS14M 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

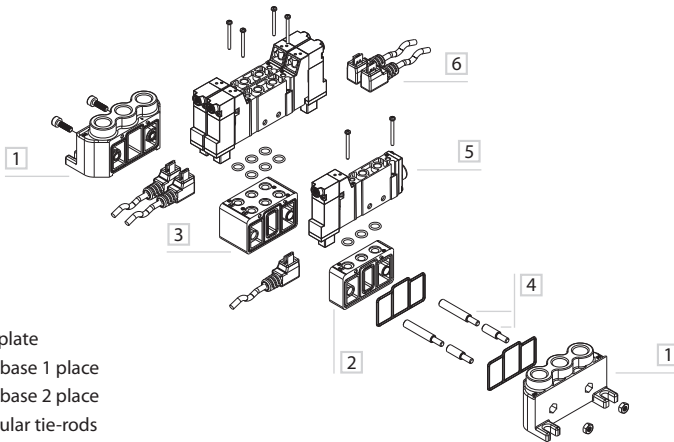
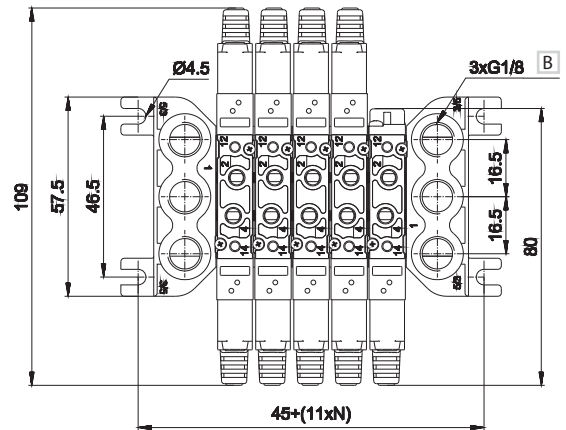
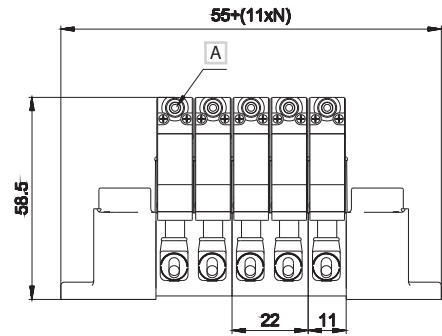
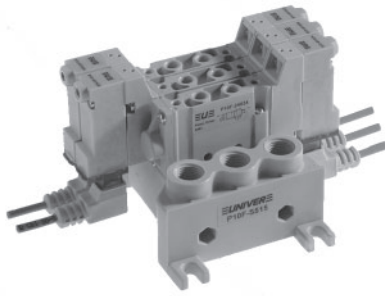


modular tie-rods 1 valve place (package 100 pcs.) weight: 0,001 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,007 Kg
-----------------------------------------------------------------------------	------------------------------------------------------------------------------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

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

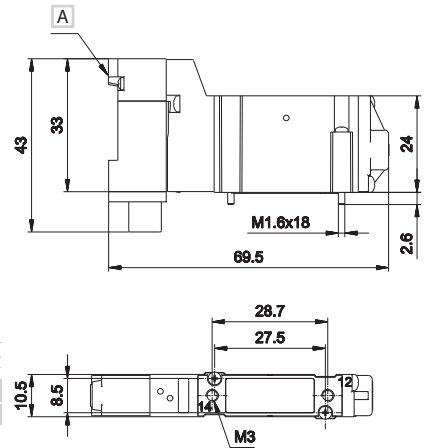
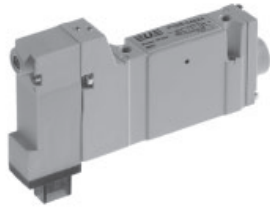
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return

- 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



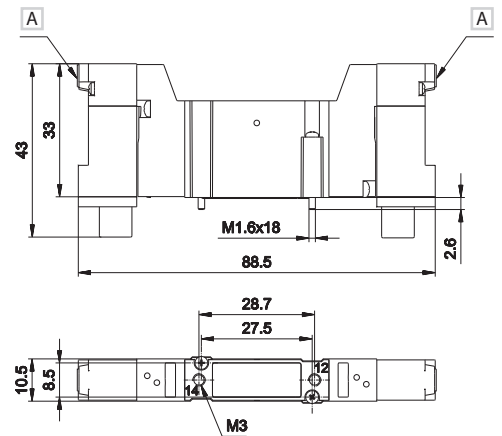
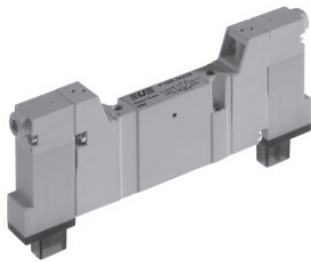
Weight (Kg): 0,054

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	bar	12	20	P10B24024 P10B26024
5/2		14	12	bar	10	21	P10B24124 P10B26124

A Manual override

14 = Control
12 = Return

Double electric impulse



Weight (Kg): 0,069

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	bar	10	10	P10B24424 P10B26624
5/3 c.c.		14	12	bar	11	22	P10B34424 P10B36624
5/3 o.c.		14	12	bar	11	22	P10B44424 P10B46624
5/3 p.c.		14	12	bar	11	22	P10B54424 P10B56624
3/2 NC + 3/2 NC		14	12	bar	9	14	P10B64424 P10B66624
3/2 NC + 3/2 NO		14	12	bar	9	14	P10B74424 P10B76624
3/2 NO + 3/2 NO		14	12	bar	9	14	P10B84424 P10B86624

A Manual override

14 = Control
12 = Return

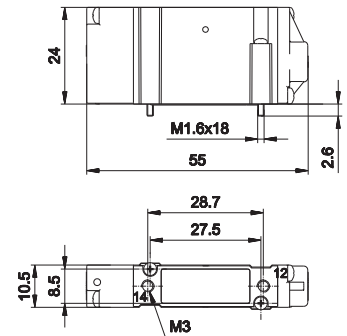
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single pneumatic impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure bar	Resp. Time (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



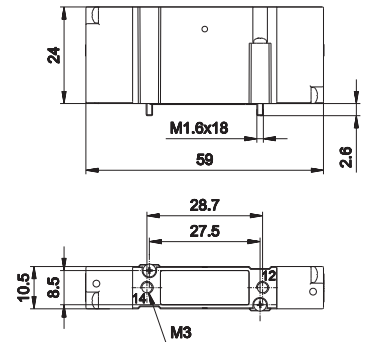
14 = Control
12 = Return

Double pneumatic impulse



Weight (Kg): 0,044

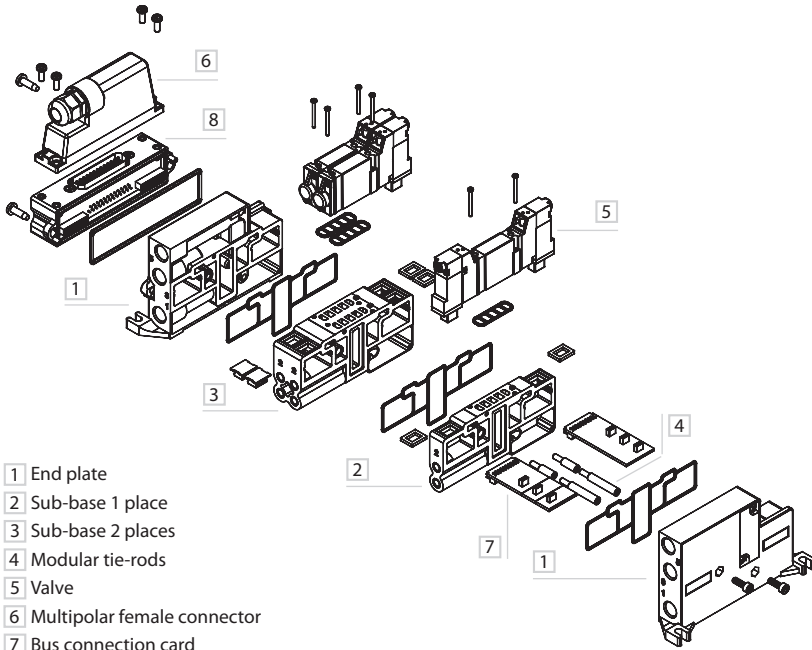
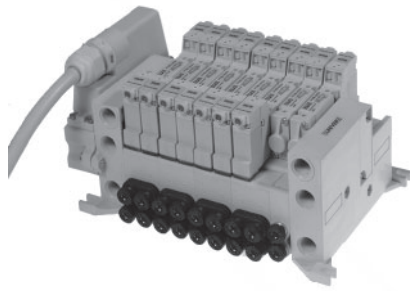
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,6÷9	6	6	P10B233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,5÷9	7	20	P10B433
5/3 p.c.		pneumatic amplified	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



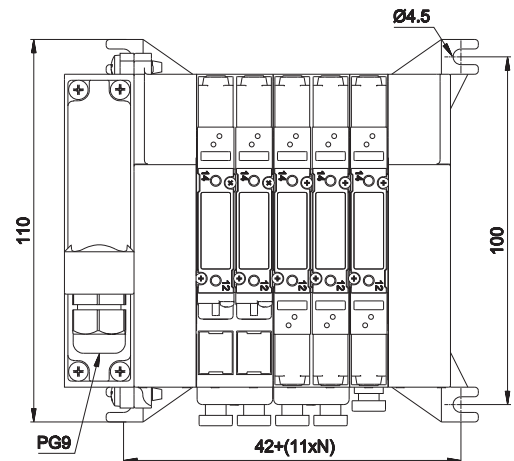
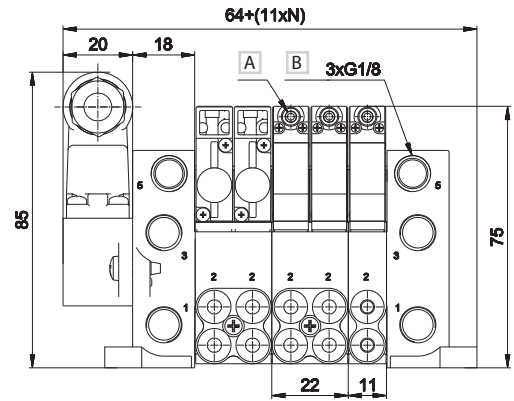
14 = Control
12 = Return

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

Integrated electric connection

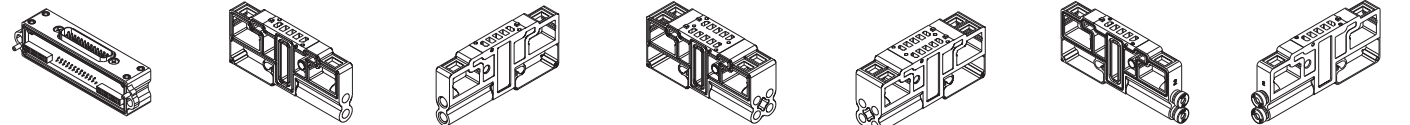


- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Bus connection card
- 8 Multipole connection module



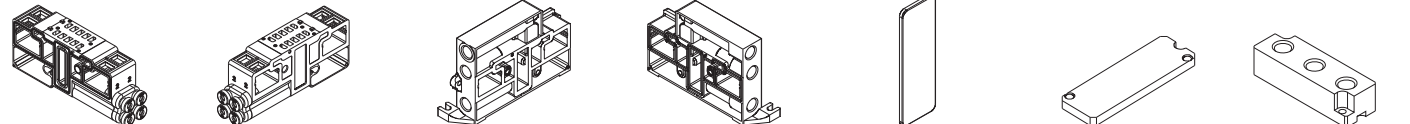
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve places
- A Manual override
- B Tightening torque
- G1/8 - M5 = max 3 Nm
- M7 = 2 Nm

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

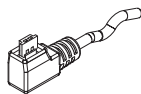
P10SS14**M P10SS12**M P10STR01 P10STR02 P10STR05



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

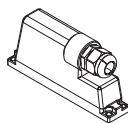
AZ4-SN003A
 100 nuts for tie-rods
AZ4-VN0310
 100 screws for tie-rods

D-535U40300
D-535U40500



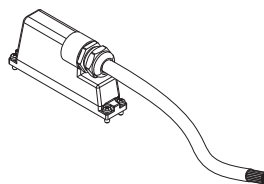
■ single connector with cable 3-5 m

TSCFN24S000



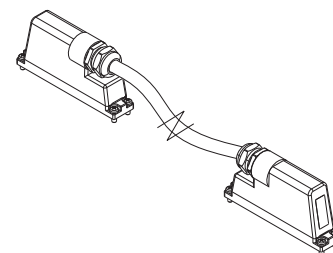
■ female connector 25 poles type D-sub no cable M3 x 8 fixing screws

TSCFN24S0300
TSCFN24S0500
TSCFN24S1000



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

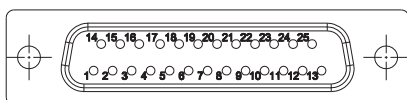
TSCFN16D0300
TSCFN16D0500
TSCFN16D1000



■ 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



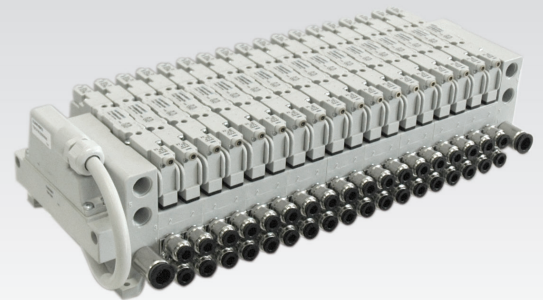
PIN No.	Colour	Coil	Control side		Valve No.
			TIM1524	TIM151806	
1	white	1	14	14	1
2	brown	2	12	12	1
3	green	3	14	14	2
4	yellow	4	12	12	2
5	grey	5	14	14	3
6	pink	6	12	12	3
7	blue	7	14	14	4
8	red	8	12	12	4
9	black	9	14	14	5
10	violet	10	12	12	5
11	grey-pink	11	14	14	6
12	red-blue	12	12	12	6
13	white-green	13	14	14	7
14	brown-green	14	12	14	7
15	white-yellow	15	14	14	8
16	yellow-brown	16	12	14	8
17	white-grey	17	14	14	9
18	grey-brown	18	12	14	9
19	white-pink	19	14	14	10
20	pink-brown	20	12	14	10
21	white-blue	21	14	14	11
22	brown-blue	22	12	14	11
23	white-red	23	14	14	12
24	brown-red	common	-	-	-
25	white-black	24	12	14	12

P15

15 mm COMPACT valves - threaded body and for sub-base mounting 90° ELECTROPILOT CONNECTION

- Standard consumption: 1W; upon request low power consumption: 0,3W
- Quick response times
- High flow rate: the development of the traditional UNIVER spool technology permits high flow rate values
- Compact design: the valve body (15 mm) allows reduced overall dimensions
- Complete solution
- Threaded body (P15F) and body for sub-base (P15B) 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 (singles and doubles) for a high versatility in the composition of valve manifolds
- Simplified installation
- Easy installation of tubes and fittings thanks to connections being all on the same side

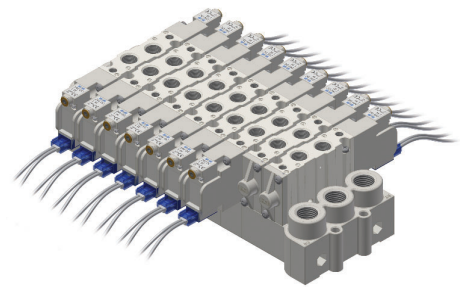
Available ATEX version upon request



TECHNICAL CHARACTERISTICS

Ambient temperature	-5 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	10 µm filtered air, with or without lubrication
Commutation system	spool
Ways/Positions	3/2+3/2, 5/2, 5/3
Pressure	electric control = Max 9 bar * pneumatic control = Max 10 bar
Control	indirect electro-pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring
Connections	G1/8 (P15F) - G1/8 tubo Ø 4-6-8 (P15B)
Nominal flow rate (NI/min)	800 (5/2) 720 (5/3) 720 (3/2+3/2)

Version with in-line connections
(upon request)



CONSTRUCTIVE CHARACTERISTICS

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

ELECTRIC CHARACTERISTICS

Electropilot	B10 (0,3 W) B11 (1 W)
Voltage	24 V DC (± 10%)
Power consumption	B10 = 0,3 W, speed-up 1 W (25 ms) B11 = 1 W
Protection degree	IP65
Manual override	recessed button - 1 position

CODIFICATION KEY

P	1	5	F	2	4	4	2	4		
	1			2	3	4	5	6	7	

1 Series	2 Type	3 Control 14	4 Return 12
P15F = threaded body P15B = Body for sub-base P15D = Threaded body 15 mm connector	2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c.	6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	0 = pneumomechanical spring 1 = mechanical spring 3 = pneumatic amplified 4 = electric amplified 90° (0,3W) 6 = electric amplified 90° (1W)

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

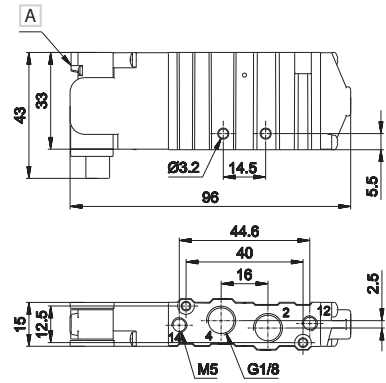
5 Voltage	6 Variant	7 ATEX option
24 = 24 V DC	D = external pilot supply on valve body (P15 = M5)	X = Atex (upon request) See ATEX Catalogue for types and versions

Single electric impulse



Weight (Kg): 0,138

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,9÷9	15	24	P15F24024 P15F26024
5/2		14	12	2÷9	12	21	P15F24124 P15F26124



A Manual override

2 - 4 = Use
14 = Control
12 = Return

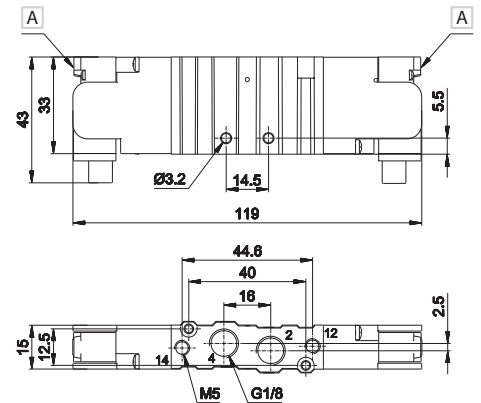
Double electric impulse



Weight (Kg): 0,158

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	0,7÷9	11	11	P15F24424 P15F26624
5/3 c.c.		14	12	1,6÷9	11	35	P15F34424 P15F36624
5/3 o.c.		14	12	1,6÷9	11	35	P15F44424 P15F66624
5/3 p.c.		14	12	1,6÷9	11	35	P15F54424 P15F56624
3/2 NC + 3/2 NC		14	12	1,5÷9	14	16	P15F64424 P15F66624
3/2 NC + 3/2 NO		14	12	1,5÷9	14	16	P15F74424 P15F76624
3/2 NO + 3/2 NO		14	12	1,5÷9	14	16	P15F84424 P15F86624

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

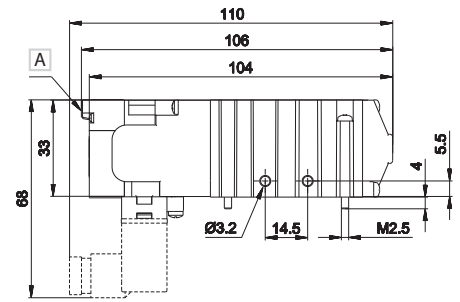
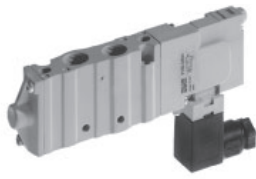


A Manual override

2 - 4 = Use
14 = Control
12 = Return

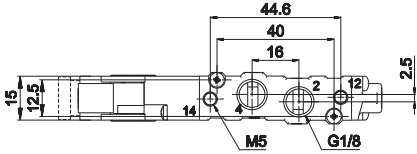
3

Single electric impulse



Weight (Kg): 0,142

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,9÷9	15	24	P15D24024 P15D26024

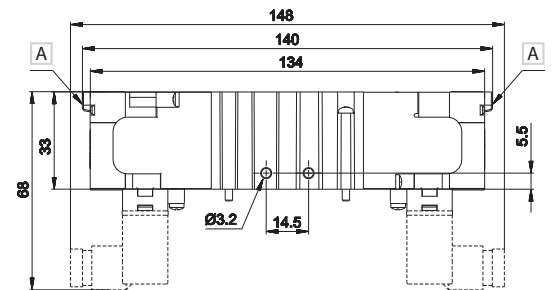
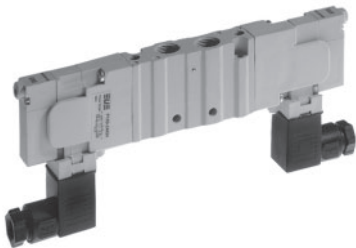


A Manual override

2 - 4 = Use
14 = Control
12 = Return

5/2		14	12	2÷9	12	21	P15D24124 P15D26124
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Double electric impulse



Weight (Kg): 0,166

> AM-5109 connector not included

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	0,7÷9	16	16	P15D24424 P15D26624

A Manual override

2 - 4 = Use
14 = Control
12 = Return

5/3 c.c.		14	12	1,6÷9	11	35	P15D34424 P15D36624
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5/3 o.c.		14	12	1,6÷9	11	35	P15D44424 P15D46624
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5/3 p.c.		14	12	1,6÷9	11	35	P15D54424 P15D56624
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3/2 NC + 3/2 NC		14	12	1,5÷9	14	16	P15D64424 P15D66624
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3/2 NC + 3/2 NO		14	12	1,5÷9	14	16	P15D74424 P15D76624
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3/2 NO + 3/2 NO		14	12	1,5÷9	14	16	P15D84424 P15D86624
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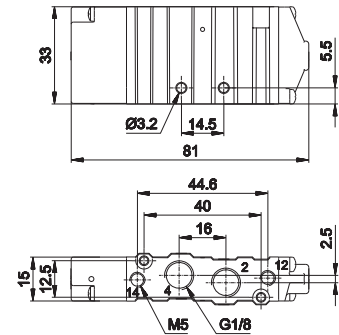
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

Single pneumatic impulse



Weight (Kg): 0,042

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,9÷10	11	15	P15F230
5/2		pneumatic amplified	mechanical spring	2÷10	10	14	P15F231



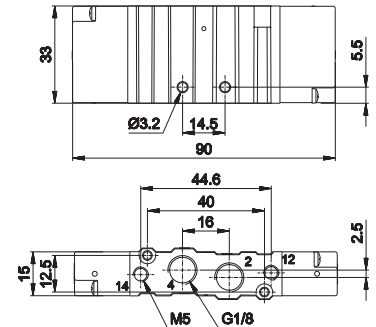
2 - 4 = Use
14 = Control
12 = Return

Double pneumatic impulse



Weight (Kg): 0,044

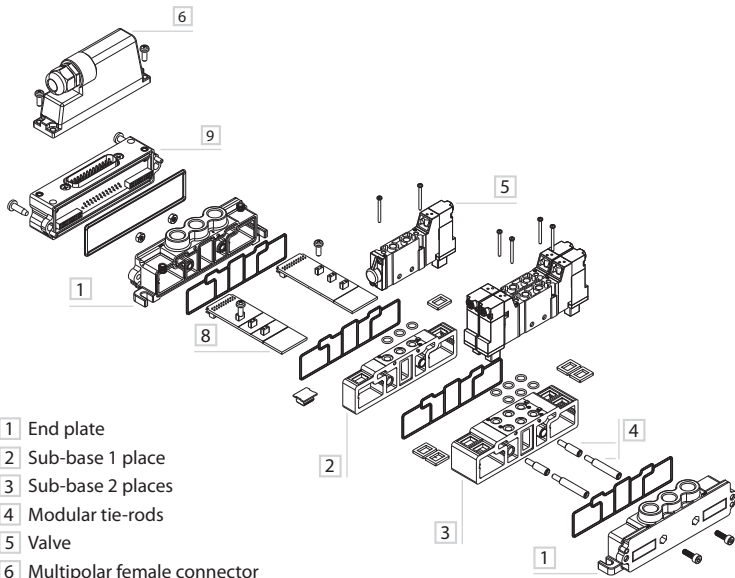
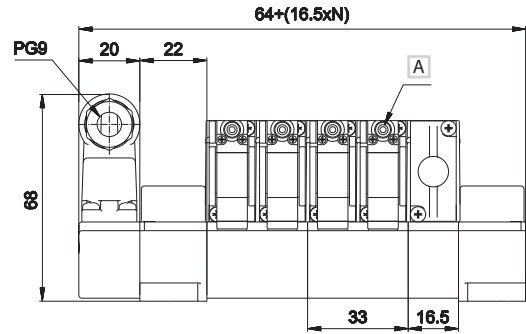
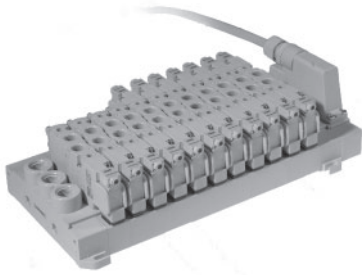
	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		pneumatic amplified	pneumatic amplified	0,7÷10	10	10	P15F233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	P15F333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	P15F433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,6÷10	9	21	P15F533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	P15F633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	P15F733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷10	10	14	P15F833



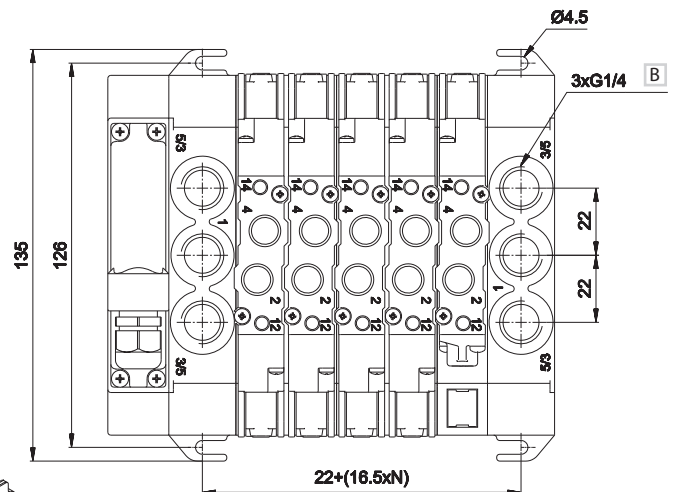
2 - 4 = Use
14 = Control
12 = Return

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

Integrated electric connection



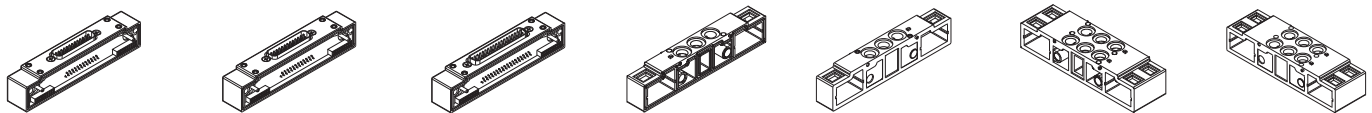
- 1 End plate
- 2 Sub-base 1 place
- 3 Sub-base 2 places
- 4 Modular tie-rods
- 5 Valve
- 6 Multipolar female connector
- 7 Single connector
- 8 Bus connection card
- 9 Multipole connection module



- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- A Manual override
- B Tightening torque G1/4 = max 10 Nm

N = Number of valve places

TIM1524	TIM151806	TIM1536	P15SF100	P15SF110	P15SF200	P15SF210
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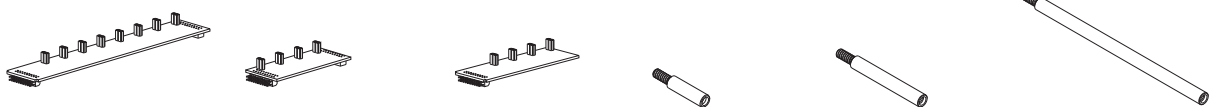
connection module 25 poles male 12+12 coils type D-sub weight: 0,047 Kg	connection module 25 poles male 18 coils, side 14 6 coils, side 12 type D-sub weight: 0,055 Kg	connection module 37 poles male 16+16 coils type D-sub weight: 0,057 Kg	sub-base 1 place weight: 0,037 Kg	sub-base 1 place 1-3-5 closed weight: 0,038 Kg	sub-base 2 places weight: 0,073 Kg	sub-base 2 places 1-3-5 closed weight: 0,074 Kg
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P15SF500	P15SF505	P15SF550	P15SF560	P15SF570	P15SS**01MC	P15SS**..M
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supply plate G1/4 left for TIM module weight: 0,064 Kg	supply plate G1/4 right weight: 0,065 Kg	supply pressure separator plate weight: 0,003 Kg	covering plate for unused valve place weight: 0,007 Kg	intermediate supply plate for threaded version weight: 0,011 Kg	U-bus connection card, male ** = side 14 or 12 weight: 0,004 Kg	bus connection card, male ** = side 14 or 12 .. = 04, 06, 08 places weight: 0,009 Kg 04 places 0,010 Kg 06 places 0,013 Kg 08 places
--------------------------------------------------------------	---------------------------------------------	--------------------------------------------------------	--------------------------------------------------------------	-----------------------------------------------------------------------	--------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------

P15SS**08MF	P15SS**04MFP	P15SS**04MP	P15STR01	P15STR02	P15STR05
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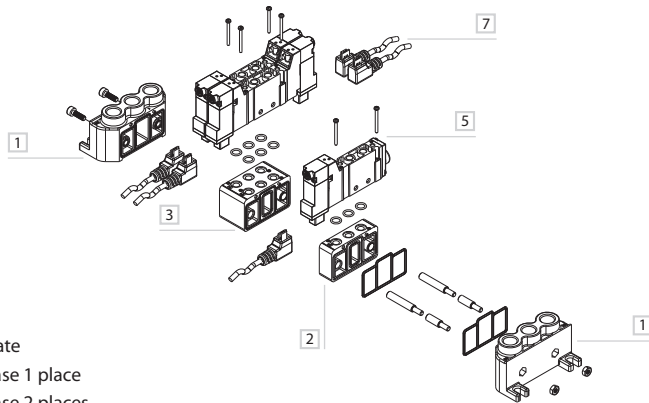
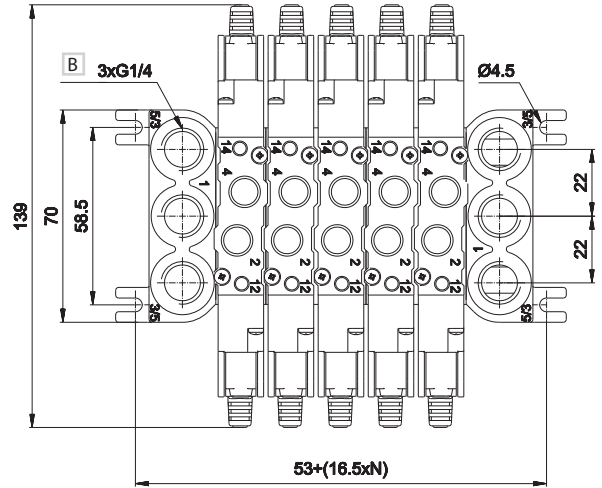
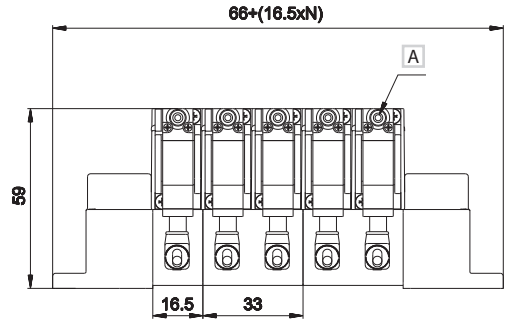
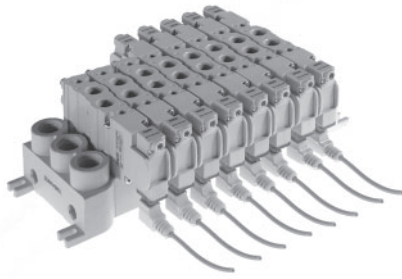


bus connection card male/female ** = side 14 or 12 weight: 0,014 Kg	bus connection card male/female extension ** = side 14 or 12 weight: 0,008 Kg	bus card extension ** = side 14 or 12 weight: 0,006 Kg	modular tie-rods 1 valve place (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,007 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,018 Kg
------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------	-----------------------------------------------------------------	-----------------------------------------------------------------------------	------------------------------------------------------------------------------	------------------------------------------------------------------------------

AZ4-SN004A
100 nuts M4 for tie-rods

AZ4-VN0414
100 screws 4x14 for tie-rods

Electric connection with external connector



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

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

- A Manual override
- B Tightening torque
- G1/4 = max 10 Nm

N = Number of valve places

3

P15SF300	P15SF310	P15SF400	P15SF410	P15SF515	P15SF550	P15SF560
sub-base 1 place weight: 0,023 Kg	sub-base 1 place 1-3-5 closed weight: 0,024 Kg	sub-base 2 places weight: 0,046 Kg	sub-base 2 places 1-3-5 closed weight: 0,048 Kg	supply plate right/left G1/4 weight: 0,050 Kg	supply pressure separator plate weight: 0,001 Kg	covering plate for unused valve place weight: 0,007 Kg

P15SF570	P15STR01	P15STR02	P15STR05
intermediate supply plate for threaded version weight: 0,009 Kg	modular tie-rods 1 valve place (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,007 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,018 Kg

AZ4-SN004A
100 nuts M4 for tie-rods

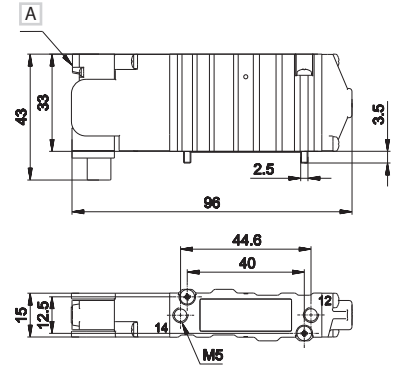
AZ4-VN0414
100 screws 4x14 for tie-rods

Single electric impulse



Weight (Kg): 0,138

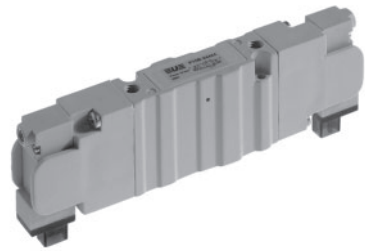
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	1,9÷9	15	24	P15B24024 P15B26024
5/2		14		2÷9	12	21	P15B24124 P15B26124



A Manual override

14 = Control
12 = Return

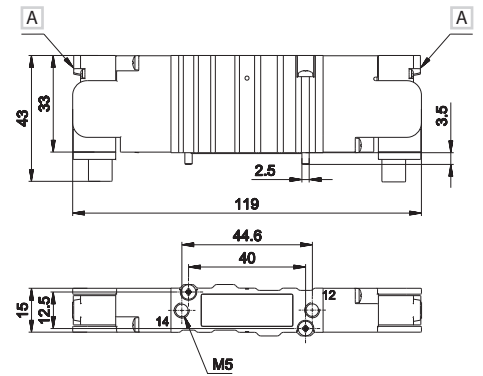
Double electric impulse



Weight (Kg): 0,158

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	0,7÷9	11	11	P15B24424 P15B26624
5/3 c.c.		14	12	1,6÷9	11	35	P15B34424 P15B36624
5/3 o.c.		14	12	1,6÷9	11	35	P15B44424 P15B46624
5/3 p.c.		14	12	1,6÷9	11	35	P15B54424 P15B56624
3/2 NC + 3/2 NC		14	12	1,5÷9	14	16	P15B64424 P15B66624
3/2 NC + 3/2 NO		14	12	1,5÷9	14	16	P15B74424 P15B76624
3/2 NO + 3/2 NO		14	12	1,5÷9	14	16	P15B84424 P15B86624

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



A Manual override

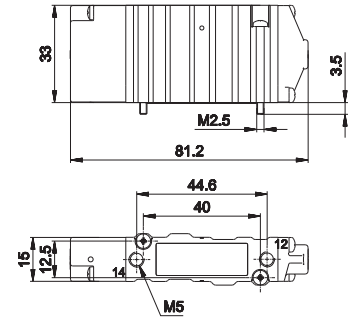
14 = Control
12 = Return

Single pneumatic impulse



Weight (Kg): 0,127

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumo mechanical spring	1,9÷9	11	15	P15B230
5/2		pneumatic amplified	mechanical spring	2÷9	10	14	P15B231



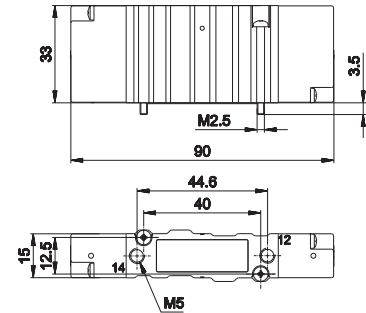
14 = Control
12 = Return

Double pneumatic impulse



Weight (Kg): 0,132

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					14	12	
5/2		pneumatic amplified	pneumatic amplified	0,7÷9	10	10	P15B233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,6÷9	9	21	P15B333
5/3 o.c.		pneumatic amplified	pneumatic amplified	1,6÷9	9	21	P15B433
5/3 p.c.		pneumatic amplified	pneumatic amplified	1,6÷9	9	21	P15B533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,3÷9	10	14	P15B633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	10	14	P15B733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,3÷9	10	14	P15B833

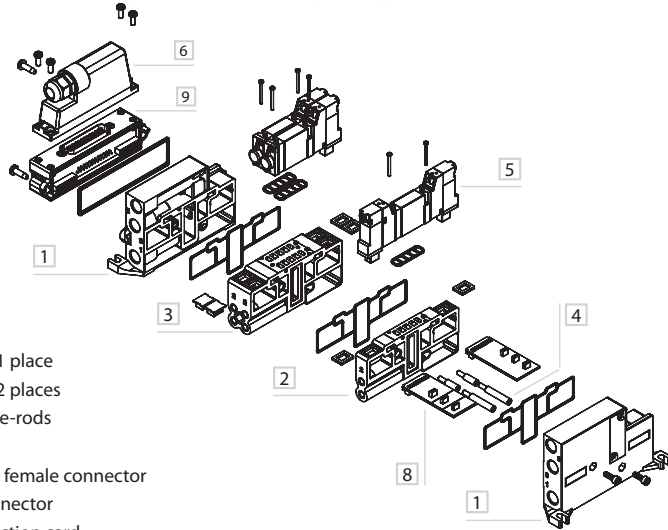
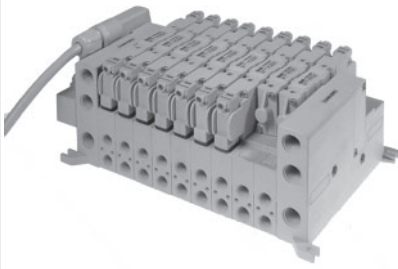


14 = Control
12 = Return

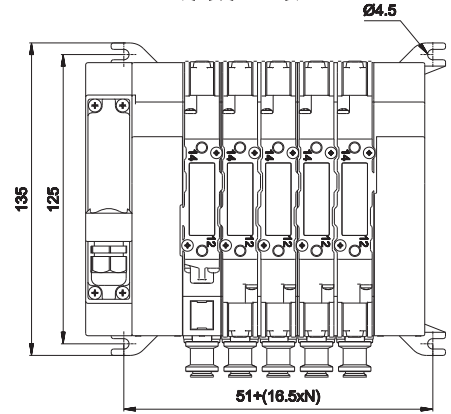
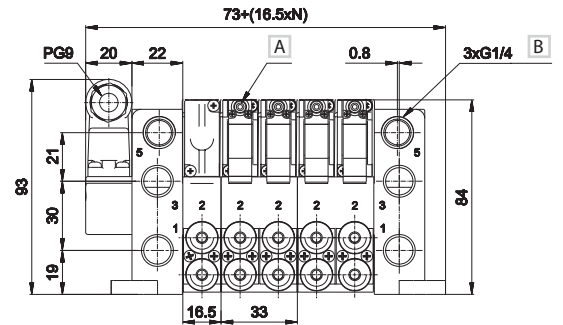
o.c. = open centres c.c. = closed centres p.c. = pressurized centres

3

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 Single connector
- 8 Bus connection card
- 9 Multipole connection module



- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- A Manual override
- B Tightening torque
- G1/4 = max 10 Nm
- G1/8 = max 3 Nm

N = Number of valve places

TIM1524	TIM151806	TIM1536	P15SB100	P15SB110	P15SB200	P15SB210
connection module 25 poles male 12+12 coils type D-sub weight: 0,047 Kg	connection module 25 poles male 18 coils side 14 6 coils side 12 type D-sub weight: 0,055 Kg	connection module 37 poles male 16+16 coils type D-sub weight: 0,057 Kg	sub-base 1 place side outlets G1/8 integrated version weight: 0,060 Kg	sub-base 1 place side outlets G1/8 integrated version 1-3-5 closed weight: 0,060 Kg	sub-base 2 places side outlets G1/8 weight: 0,133 Kg	sub-base 2 places side outlets G1/8 integrated version 1-3-5 closed weight: 0,133 Kg
P15SB300	P15SB310	P15SB400	P15SB410	P15SB500	P15SB505	P15SB550
sub-base 1 place side outlets for quick couplings integrated version weight: 0,060 Kg	sub-base 1 place side outlets for quick couplings 1-3-5 closed weight: 0,060 Kg	sub-base 2 places side outlets for quick couplings integrated version weight: 0,133 Kg	sub-base 2 places side outlets for quick couplings 1-3-5 closed weight: 0,133 Kg	supply plate G1/8 for TIM module weight: 0,127 Kg	supply plate G1/4 right weight: 0,124 Kg	supply pressure separator plate weight: 0,003 Kg
P15SB560	P15SB570	P15SS**01MC	P15SS**..M	P15SS**08MF	P15SS**04MFP	P15SS**04MP
covering plate for unused valve place weight: 0,007 Kg	intermediate supply plate for sub-base weight: 0,016 Kg	U-bus connection card, male ** = lato14 o 12 weight: 0,004 Kg	bus connection card male ** = side14 or 12 .. = 04, 06, 08 places weight: 0,009 Kg 04 places 0,010 Kg 06 places 0,013 Kg 08 places	bus connection card male/female extension ** = side14 or 12 weight: 0,014 Kg	bus connection card male/female extension ** = side14 or 12 weight: 0,008 Kg	bus card extension ** = side14 or 12 weight: 0,006 Kg
P15STR01	P15STR02	P15STR05	GZR-V100..			
modular tie-rods 1 valve place (package 100 pcs.) weight: 0,003 Kg	modular tie-rods 2 valve places (package 100 pcs.) weight: 0,007 Kg	modular tie-rods 5 valve places (package 100 pcs.) weight: 0,018 Kg	fitting .. = 04, 06, 08 places weight: 0,013 Kg			

AZ4-SN004A

100 nuts M4 for tie-rods

AZ4-VN0414

100 screws 4x14 for tie-rods

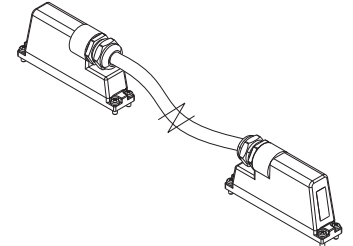
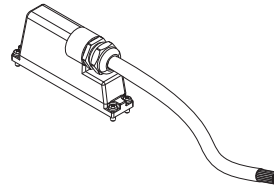
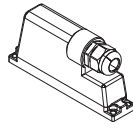
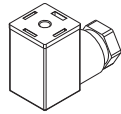
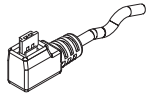
D-535U40300
D-535U40500

AM-5109

TSCFN24S000
TSCFN36S000

TSCFN24S0300
TSCFN24S0500
TSCFN24S1000
TSCFN32S0300
TSCFN32S0500
TSCFN32S1000

TSCFN16D0300
TSCFN16D0500
TSCFN16D1000



■ single connector with cable 3-5 m

■ 15 mm connector

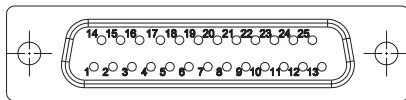
■ female connector 25/37 poles type D-sub no cable M3 x 8 fixing screws

■ female connector 25/37 poles type D-sub with cable 3-5-10 m M3 x 8 fixing screws

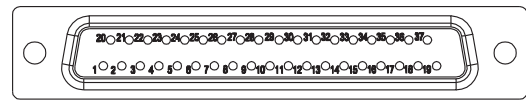
■ flying male/female connector sub D (upon request) prewired for 24 coils with cable Ø 8 mm (3-5-10 m length) suitable for mobile laying M3 x 8 fixing screws

Colour identification according to standard DIN 47100

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



Female D-SUB 37 poles for connection 16+16 coils



PIN No.	Colour	Coil	Control side		Valve No.
			TIM1524	TIM151806	
1	white	1	14	14	1
2	brown	2	12	12	1
3	green	3	14	14	2
4	yellow	4	12	12	2
5	grey	5	14	14	3
6	pink	6	12	12	3
7	blue	7	14	14	4
8	red	8	12	12	4
9	black	9	14	14	5
10	violet	10	12	12	5
11	grey-pink	11	14	14	6
12	red-blue	12	12	12	6
13	white-green	13	14	14	7
14	brown-green	14	12	14	7
15	white-yellow	15	14	14	8
16	yellow-brown	16	12	14	8
17	white-grey	17	14	14	9
18	grey-brown	18	12	14	9
19	white-pink	19	14	14	10
20	pink-brown	20	12	14	10
21	white-blue	21	14	14	11
22	brown-blue	22	12	14	11
23	white-red	23	14	14	12
24	brown-red	common	-	-	-
25	white-black	24	12	14	12

PIN No.	Colour	Coil	Control side		Valve No.
			TIM1524	TIM151806	
1	white	1	14	14	1
2	brown	2	12	12	1
3	green	3	14	14	2
4	yellow	4	12	12	2
5	grey	5	14	14	3
6	pink	6	12	12	3
7	blue	7	14	14	4
8	red	8	12	12	4
9	black	9	14	14	5
10	violet	10	12	12	5
11	grey-pink	11	14	14	6
12	red-blue	12	12	12	6
13	white-green	13	14	14	7
14	brown-green	14	12	14	7
15	white-yellow	15	14	14	8
16	yellow-brown	16	12	14	8
17	white-grey	17	14	14	9
18	grey-brown	18	12	14	9
19	white-pink	19	14	14	10
20	pink-brown	20	12	14	10
21	white-blue	21	14	14	11
22	brown-blue	22	12	14	11
23	white-red	23	14	14	12
24	brown-red	24	12	14	12
25	white-black	25	14	14	12
26	brown-black	26	12	14	13
27	grey-green	27	14	14	14
28	yellow-grey	28	12	14	14
29	pink-green	29	14	14	15
30	yellow-pink	30	12	14	15
31	green-blue	31	14	14	16
32	yellow-blue	32	12	14	16
33	-	not used	-	-	-
34	-	not used	-	-	-
35	-	not used	-	-	-
36	yellow-black	common	-	-	-
37	yellow-red shield	common law	-	-	-

3

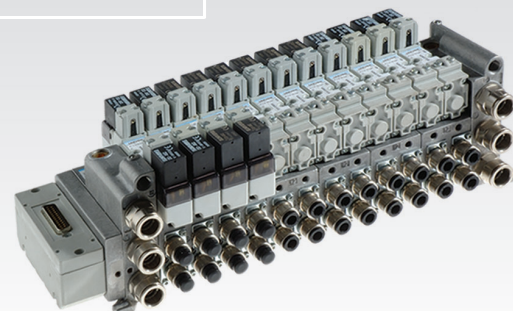
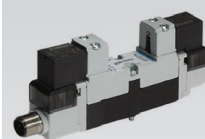
BD

ISO 15407-1/2 (VDMA 24563) ISO 02 (18 mm) - ISO 01 (26 mm) Valves

- BDE** = solenoid valves ISO 15407/2 with integrated electric connection
- BDB** = solenoid valves ISO 15407/1 with M12 electric connection
- BDA** = valves and solenoid valves ISO 15407/1 with standard electrical connection (without coils and connectors to be ordered separately)

- TC Serial communication system available for BDE series
- Modular sub-base ISO-VDMA
- Sub-base with increased capacity

Available ATEX version upon request



TECHNICAL CHARACTERISTICS

Ambient temperature	-20 ÷ +50 °C
Fluid temperature	Max +50 °C
Fluid	50 µm filtered air, with or without lubrication
Commutation system	spool
Ways/Positions	3/2+3/2, 5/2, 5/3
Pressure	electric control = 9 bar max pneumatic control = 10 bar max
Control	indirect electro - pneumatic, pneumatic
Return	mechanical spring, pneumomechanical spring
Nominal Ø (mm)	18 mm = 6, 26 mm = 8

Nominal flow rate (NI/min) for valves and solenoid valves side 18 mm (a)

Sub-base in die-cast aluminium according to standard

Fittings:	VDMA-ISO			Oversize		
	Ø4	Ø6	Ø8	Ø4	Ø6	Ø8
5/2	200	440	620	200	480	800
5/3	200	440	580	200	460	720
3/2+3/2	200	440	600	200	460	720

Nominal flow rate (NI/min) for valves and solenoid valves side 26 mm (b)

Sub-base in die-cast aluminium according to standard

Fittings:	VDMA-ISO				Oversize			
	Ø6	Ø8	Ø10	Ø12 ^(c)	Ø6	Ø8	Ø10	Ø12 ^(c)
5/2	500	950	1200	1250	500	1050	1500	1700
5/3	500	900	1100	1150	500	1050	1300	1400
3/2+3/2	500	950	1150	1250	500	1050	1450	1650

(a) = manifold sub-base 2 valve places and end plates with side connections in aluminium and fixing plate for fittings standard supplied with sub-base.

(b) = manifold sub-base 1 valve place and end plates with side connections in aluminium and fixing plate for fittings standard supplied with sub-base.

(c) = the external Ø of the G 3/8 fitting for tube Ø12 mm must not exceed 20 mm

CONSTRUCTIVE CHARACTERISTICS

Body valve	acetalic resin with aluminium cover
Seals	nitrile rubber
Sub-base	die-cast aluminium
Actuators	technopolymer
Spool	aluminium

ELECTRIC CHARACTERISTICS

Electropilot/Coil	A series/U05
Voltage	24 V DC (± 10%), 12 V DC upon request
Power consumption	2 W
Protection degree	IP65
Manual override	recessed button - 1 position

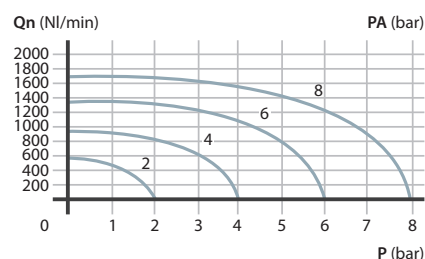
See ATEX Catalogue for types and versions

Subject to change

Flow rate characteristics

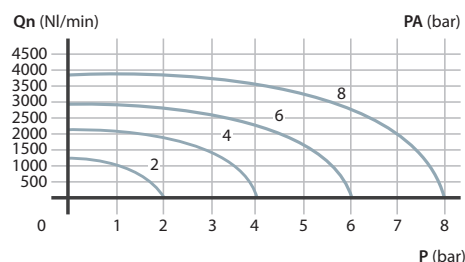
>> Valves and solenoid valves side 18 mm

5/2 Oversize sub-base for Ø8 mm tube



>> Valves and solenoid valves side 26 mm

5/2 Increased sub-base for Ø12 mm tube



P = Working pressure

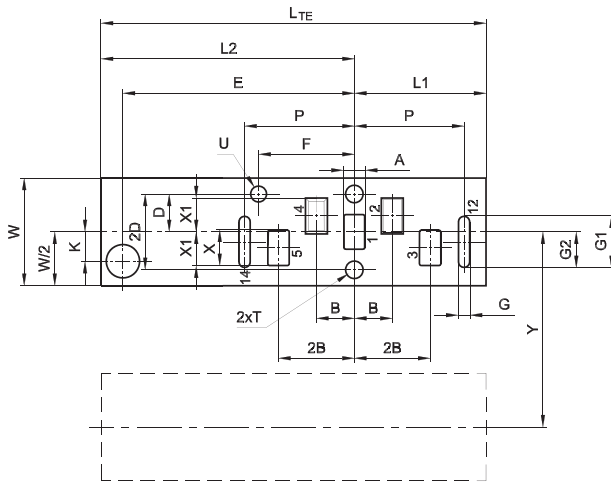
PA = Supply pressure

Qn = Nominal flow rate

ISO 15407 specifications

They establish the dimensions of the bearing surface and the minimum distance between two valve places, guaranteeing the interchangeability and possibility to include any valve providing it complies with above specifications.

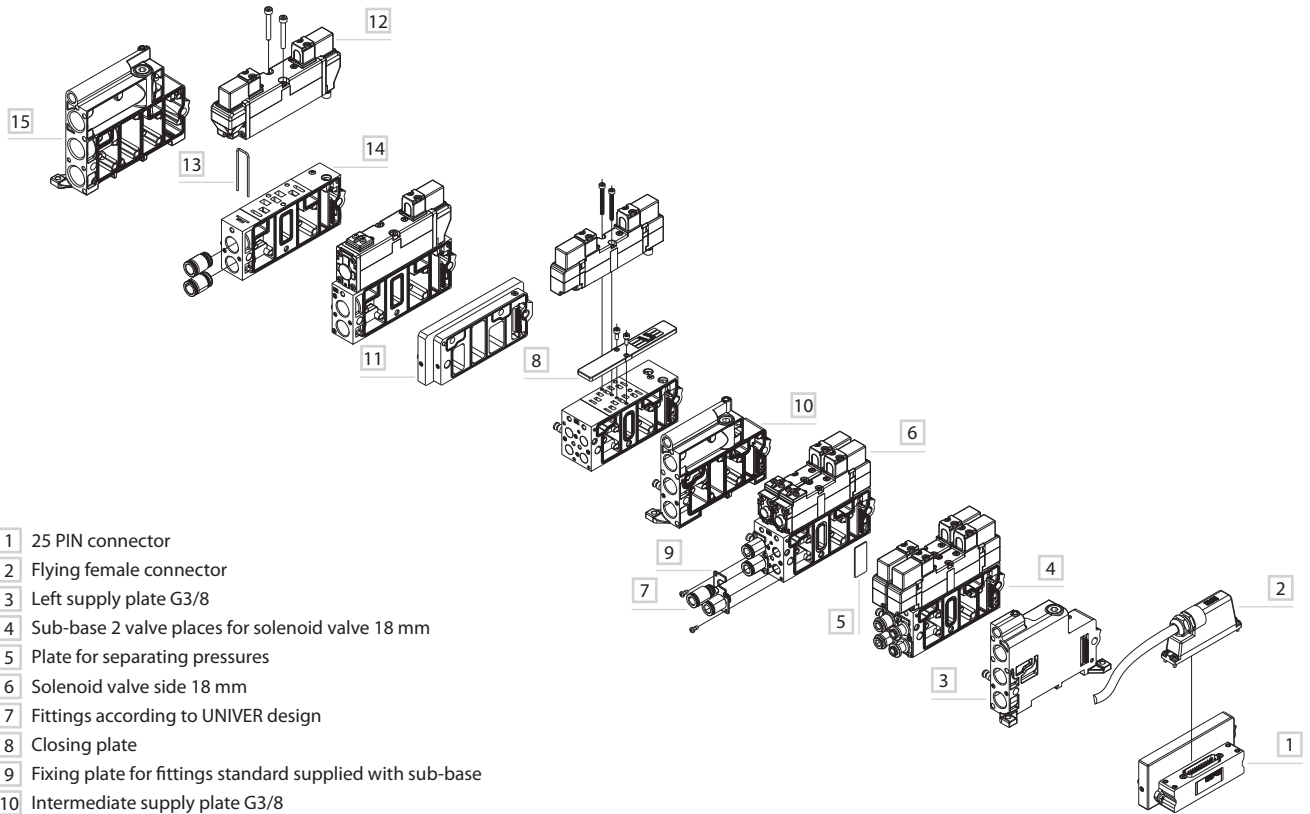
>> Dimensioning of the bearing surface according to ISO 15407-1/2 specification with integrated electric connector



Y = Min. distance between two interface axes of the same dimension mounting on the same manifolds

U = Position bore, depth V

	A	B	D	E	F	G	G1	G2	K	L1	L2	LTE	P	T	U	V	W	X	X1	Y
										min.	min.	min.					min.			
18 mm	3,5	7	6,25	50	17	2	8	6	3,35	25	55,5	80,5	20	M3	3,2	4	18	6,5	5,25	19
26 mm	5,5	9,5	9,5	58	24	3	13	9	7,35	33	63,5	96,5	27,5	M4	3,2	4	26	9	8,5	27



- 1 25 PIN connector
- 2 Flying female connector
- 3 Left supply plate G3/8
- 4 Sub-base 2 valve places for solenoid valve 18 mm
- 5 Plate for separating pressures
- 6 Solenoid valve side 18 mm
- 7 Fittings according to UNIVER design
- 8 Closing plate
- 9 Fixing plate for fittings standard supplied with sub-base
- 10 Intermediate supply plate G3/8
- 11 Interface for connecting valves side 18/26 mm
- 12 Solenoid valve side 26 mm
- 13 Clamping fork for fittings
- 14 Sub-base 1 valve place for solenoid valve 26 mm
- 15 Right supply plate G1/2

3

CODIFICATION KEY

B	D	E	-	3	3	4	4	2	4	
1				2	3	4	5	6		7

1 Series	2 Size	3 Type	4 Control 14
BDE = solenoid valves with integrated electric connection 24 V DC (including coil and connector) BDB = solenoid valves with integrated electric connection 24 V DC, with M12 connector (including coil and connector)	3 = side 18 mm 4 = side 26 mm	2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c. 6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	4 = electric amplified

5 Return 12	6 Coil voltage	7 Options
0 = pneumomechanical spring 1 = mechanical spring 4 = electric amplified 7 = electric not amplified	24 = 24 V DC (standard) 12 = 12 V DC (upon request)	D = externally servoassisted electropilot

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

B	D	A	-	3	3	4	4		
1				2	3	4	5	6	7

1 Series	2 Size	3 Type	4 Control 14
BDA = valves and solenoid valves (without coil and connectors to be ordered separately)	3 = side 18 mm 4 = side 26 mm	2 = 5/2 3 = 5/3 c.c. 4 = 5/3 o.c. 5 = 5/3 p.c. 6 = 3/2+3/2 NC-NC 7 = 3/2+3/2 NC-NO 8 = 3/2+3/2 NO-NO	3 = pneumatic amplified 4 = electric amplified only DC 5 = electric amplified DC and AC

5 Return 12	6 Options	7 ATEX Options
0 = pneumomechanical spring 1 = mechanical spring 2 = pneumatic not amplified 3 = pneumatic amplified 4 = electric amplified only DC 5 = electric amplified DC and AC 7 = electric non amplified only DC 8 = electric non amplified DC and AC	D = externally servoassisted electropilot	X = Atex (upon request) See ATEX Catalogue for types and versions

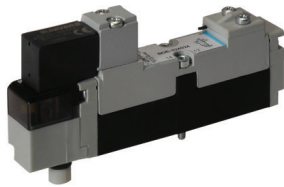
o.c. = open centres c.c. = closed centres p.c. = pressurized centre

>> Coils U05 side 15 mm

Part no.	Nominal voltage		Frequency	Power consumption			
	DC v	AC v		CCW		CA	VA
			HZ	rating	start	rating	start
DD-040	-	24	50/60	-	-	2,3	3,2
DD-042	12	-	-	2,5	2,5	-	-
DD-050	-	48	50/60	-	-	2,3	3,2
DD-051	24	-	-	2	2	-	-
DD-052	24	-	-	2,5	2,5	-	-
DD-060	-	110	50/60	-	-	3,5	3,2
DD-070	-	230	50/60	-	-	2,3	3,2

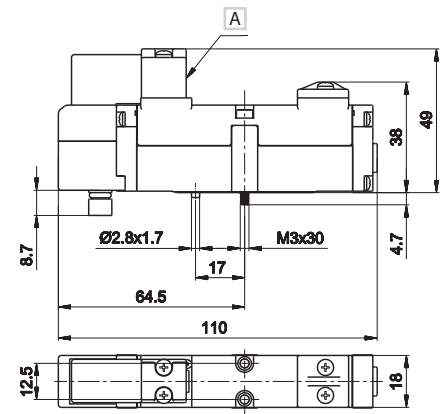
LED connector AM-5109/AM5105 24V DC 50/60 Hz
It can rotate by 180° on the coil - IP65 - cable connection PG9

Single electric impulse 18 mm



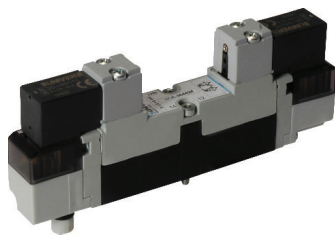
Weight (Kg): 0,112

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 pneumo mechanical spring	1,8÷9	15	25	BDE-324024
5/2		14 electric amplified	mechanical spring	2,5÷9	14	37	BDE-324124



A Manual override

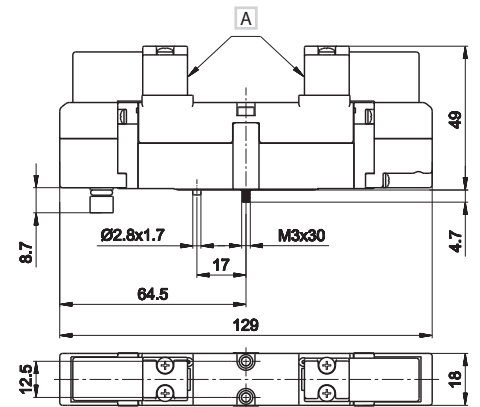
Double electric impulse 18 mm



Weight (Kg): 0,131

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	0,8÷9	16	16	BDE-324424
5/3 c.c.		14 electric amplified	12 electric amplified	2,1÷9	14	31	BDE-334424
5/3 o.c.		14 electric amplified	12 electric amplified	2,1÷9	14	31	BDE-344424
5/3 p.c.		14 electric amplified	12 electric amplified	2,1÷9	31	14	BDE-354424
3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDE-364424
3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDE-374424
3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDE-384424

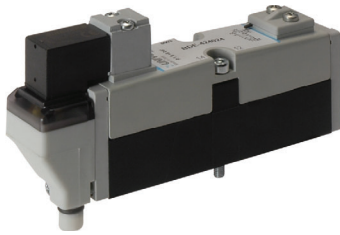
o.c. = open centres c.c. = closed centres p.c. = pressurized centres



A Manual override

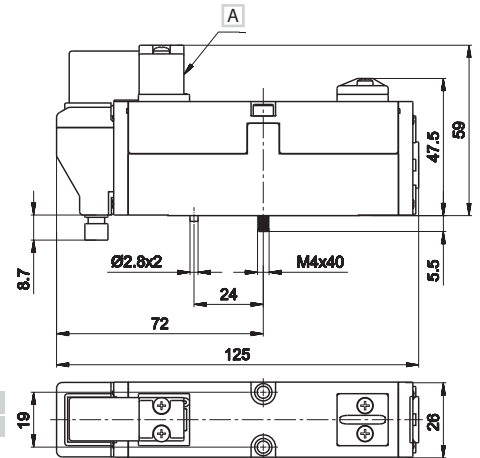
3

Single electric impulse 26 mm



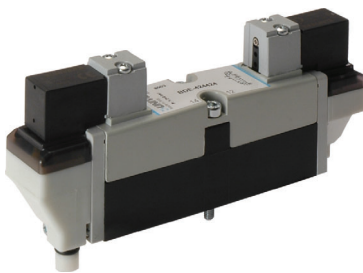
Weight (Kg): 0,205

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 pneumo mechanical spring	1,8÷9	21	40	BDE-424024
5/2		14 electric amplified	mechanical spring	2,5÷9	20	50	BDE-424124



A Manual override

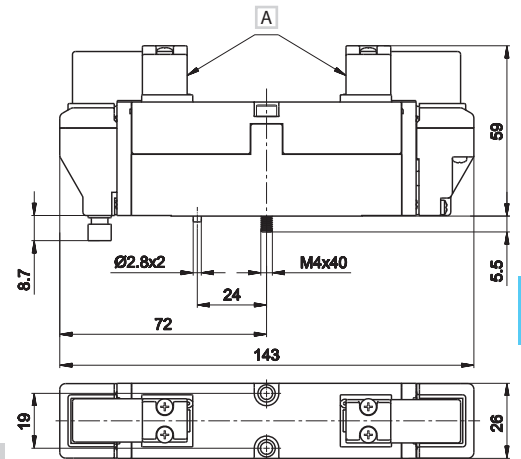
Double electric impulse 26 mm



Weight (Kg): 0,232

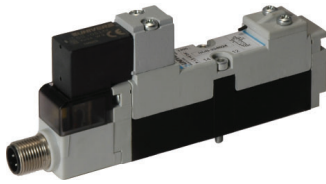
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	0,8÷9	17	17	BDE-424424
5/3 c.c.		14 electric amplified	12 electric amplified	2,1÷9	16	54	BDE-434424
5/3 o.c.		14 electric amplified	12 electric amplified	2,1÷9	16	54	BDE-444424
5/3 p.c.		14 electric amplified	12 electric amplified	2,1÷9	63	16	BDE-454424
3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,8÷9	20	27	BDE-464424
3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	20	27	BDE-474424
3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	20	27	BDE-484424

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



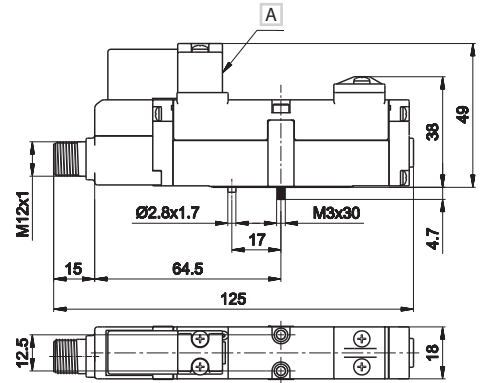
A Manual override

Single electric impulse 18 mm



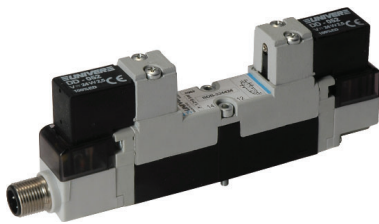
Weight (Kg): 0,117

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 pneumo mechanical spring	1,8÷9	15	25	BDB-324024
5/2		14 electric amplified	31 mechanical spring	2,5÷9	14	37	BDB-324124



A Manual override

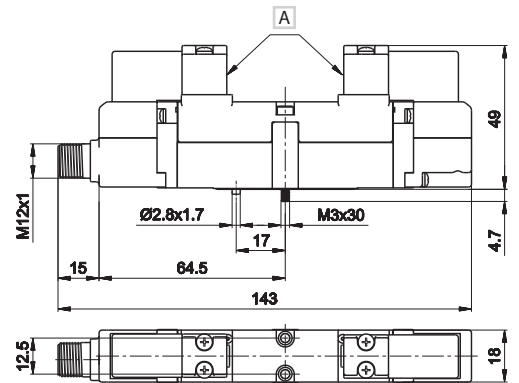
Double electric impulse 18 mm



Weight (Kg): 0,136

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	0,8÷9	16	16	BDB-324424
5/3 c.c.		14 electric amplified	12 electric amplified	2,1÷9	14	31	BDB-334424
5/3 o.c.		14 electric amplified	12 electric amplified	2,1÷9	14	31	BDB-344424
5/3 p.c.		14 electric amplified	12 electric amplified	2,1÷9	31	14	BDB-354424
3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDB-364424
3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDB-374424
3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDB-384424

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

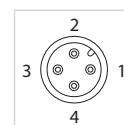
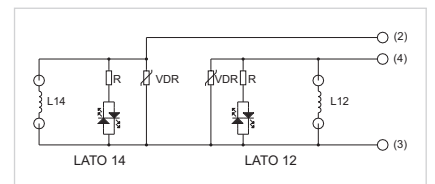


A Manual override

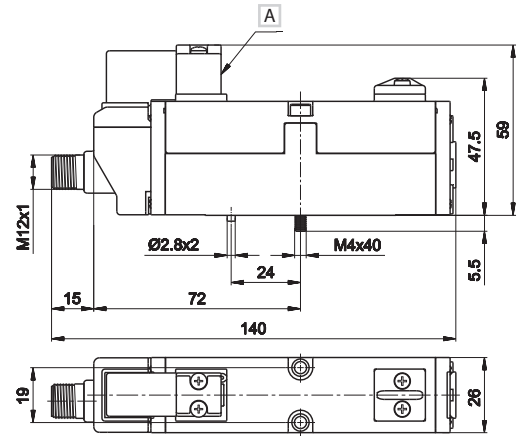
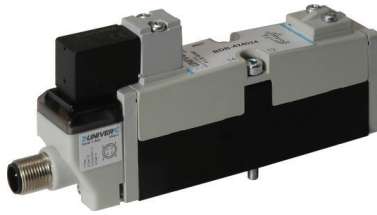
ELECTRIC CHARACTERISTICS

- Electric connector M12x1
- IP 65 protection degree
- 24 V DC voltage
- 2,5 W nominal power
- DD-052** series coil (without faston)
- ED 100%
- LED indicator

Available upon request other voltages
max 48V DC



Single electric impulse 26 mm

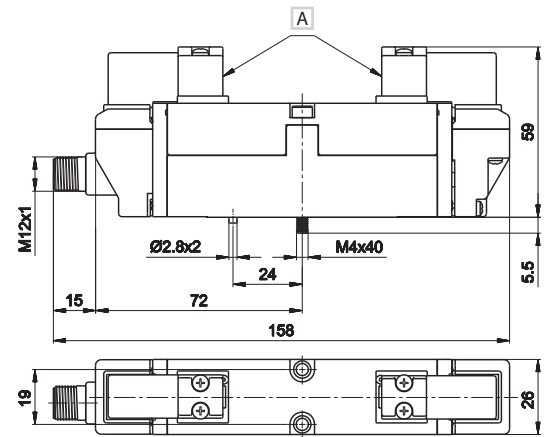
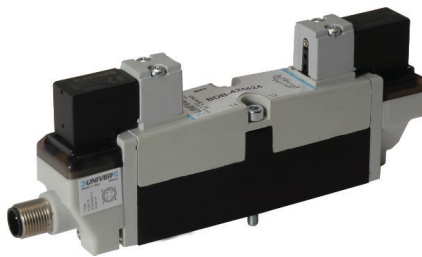


A Manual override

Weight (Kg): 0,205

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 molla pneumo mechanical	1,8÷9	21	40	BDB-424024
5/2		14 electric amplified	12 molla mechanical	2,5÷9	20	50	BDB-424124

Double electric impulse 26 mm



A Manual override

Weight (Kg): 0,236

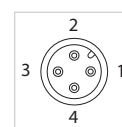
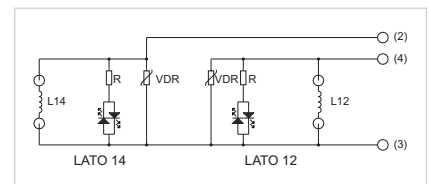
	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	2,5÷9	17	17	BDB-424424
5/3 c.c.		14 electric amplified	12 electric amplified	2,1÷9	16	54	BDB-434424
5/3 o.c.		14 electric amplified	12 electric amplified	2,1÷9	16	54	BDB-444424
5/3 p.c.		14 electric amplified	12 electric amplified	2,1÷9	63	16	BDB-454424
3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,8÷9	20	27	BDB-464424
3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	20	27	BDB-474424
3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	20	27	BDB-484424

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

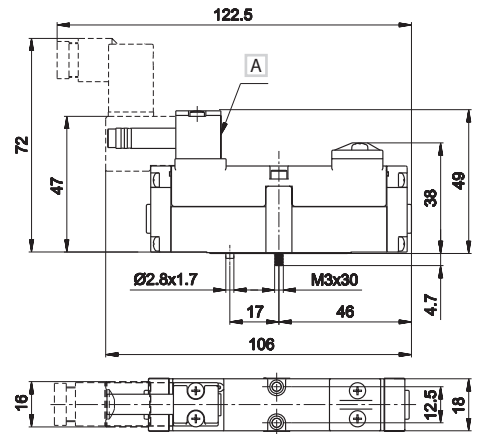
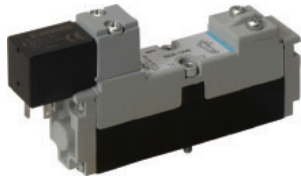
ELECTRIC CHARACTERISTICS

- Electric connector M12x1
- IP 65 protection degree
- 24 V DC voltage
- 2,5 W nominal power
- DD-052** series coil (without faston)
- ED 100%
- LED indicator

Available upon request other voltages
max 48V DC



Single electric impulse 18 mm

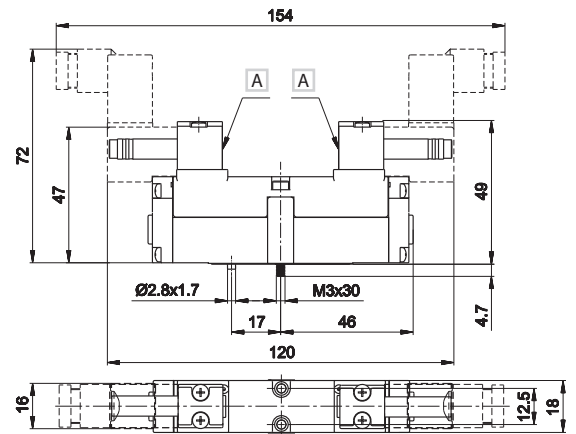
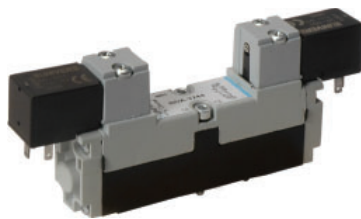


Weight (Kg): 0,107

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 pneumo mechanical spring	bar 1,8÷9	15	25	BDA-3240
5/2		14 electric amplified	mechanical spring	2,5÷9	14	37	BDA-3241

A Manual override

Double electric impulse 18 mm



Weight (Kg): 0,123

	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14 electric amplified	12 electric amplified	bar 0,8÷9	16	16	BDA-3244
5/3 c.c.		14 electric amplified	12 electric amplified	2,1÷9	14	31	BDA-3344
5/3 o.c.		14 electric amplified	12 electric amplified	2,1÷9	14	31	BDA-3444
5/3 p.c.		14 electric amplified	12 electric amplified	2,1÷9	31	14	BDA-3544
3/2 NC + 3/2 NC		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDA-3644
3/2 NC + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDA-3744
3/2 NO + 3/2 NO		14 electric amplified	12 electric amplified	1,8÷9	17	22	BDA-3844

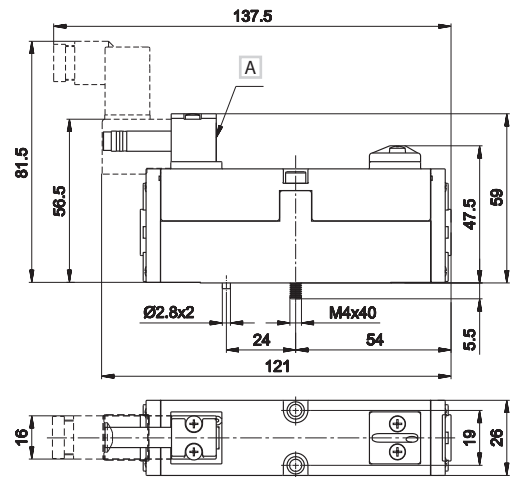
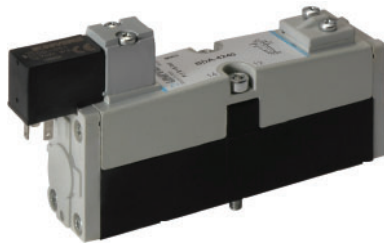
A Manual override

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

BDA solenoid valves are supplied without coils and connectors

3

Single electric impulse 26 mm

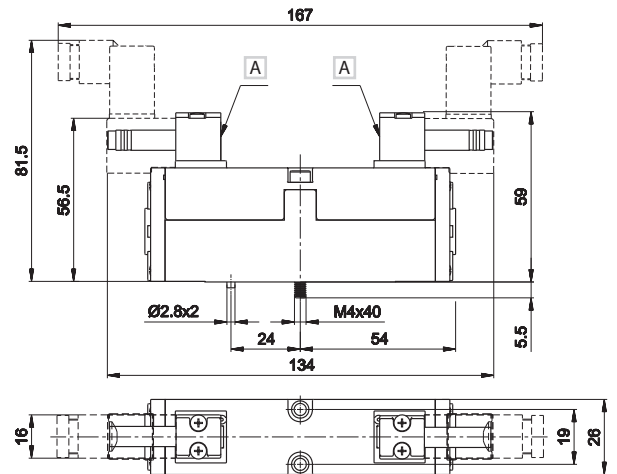
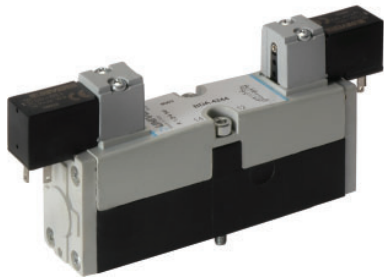


Weight (Kg): 0,197

	Symbol	Mando	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	bar	21	40	BDA-4240
		electric amplified	pneumo mechanical spring	1,8÷9			
5/2		14	12	bar	20	50	BDA-4241
		electric amplified	mechanical spring	2,5÷9			

A Manual override

Double electric impulse 26 mm



Weight (Kg): 0,218

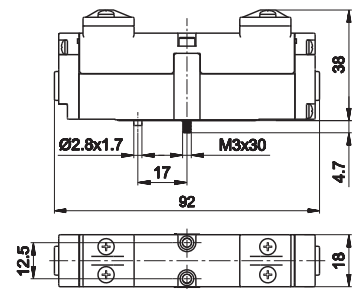
	Symbol	Control	Return	Pressure	Resp. Time (ms)		Part no.
					En.	De-en.	
5/2		14	12	bar	17	17	BDA-4244
		electric amplified	electric amplified	1,2÷9			
5/3 c.c.		14	12	bar	16	54	BDA-4344
		electric amplified	electric amplified	2,1÷9			
5/3 o.c.		14	12	bar	16	54	BDA-4444
		electric amplified	electric amplified	2,1÷9			
5/3 p.c.		14	12	bar	63	16	BDA-4544
		electric amplified	electric amplified	2,1÷9			
3/2 NC + 3/2 NC		14	12	bar	20	27	BDA-4644
		electric amplified	electric amplified	1,8÷9			
3/2 NC + 3/2 NO		14	12	bar	20	27	BDA-4744
		electric amplified	electric amplified	1,8÷9			
3/2 NO + 3/2 NO		14	12	bar	20	27	BDA-4844
		electric amplified	electric amplified	1,8÷9			

A Manual override

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

BDA solenoid valves are supplied without coils and connectors

Single/double **pneumatic impulse 18 mm**



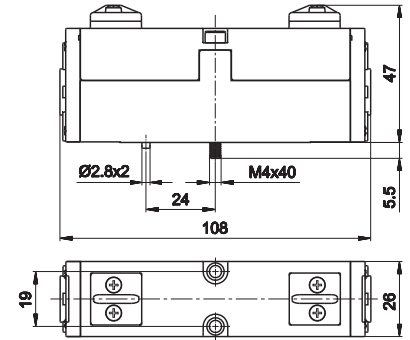
Weight (Kg): 0,092/0,098

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
		14	12		En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,8÷10	13	30	BDA-3230
5/2		pneumatic amplified	mechanical spring	2,5÷10	11	35	BDA-3231
5/2		pneumatic amplified	pneumatic amplified	0,8÷10	8	8	BDA-3233
5/3 c.c.		pneumatic amplified	pneumatic amplified	2,1÷10	9	15	BDA-3333
5/3 o.a.		pneumatic amplified	pneumatic amplified	2,1÷10	9	15	BDA-3433
5/3 p.p.		pneumatic amplified	pneumatic amplified	2,1÷10	9	15	BDA-3533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,8÷10	5	14	BDA-3633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,8÷10	5	14	BDA-3733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,8÷10	5	14	BDA-3833

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

3

Single/double **pneumatic impulse 26 mm**

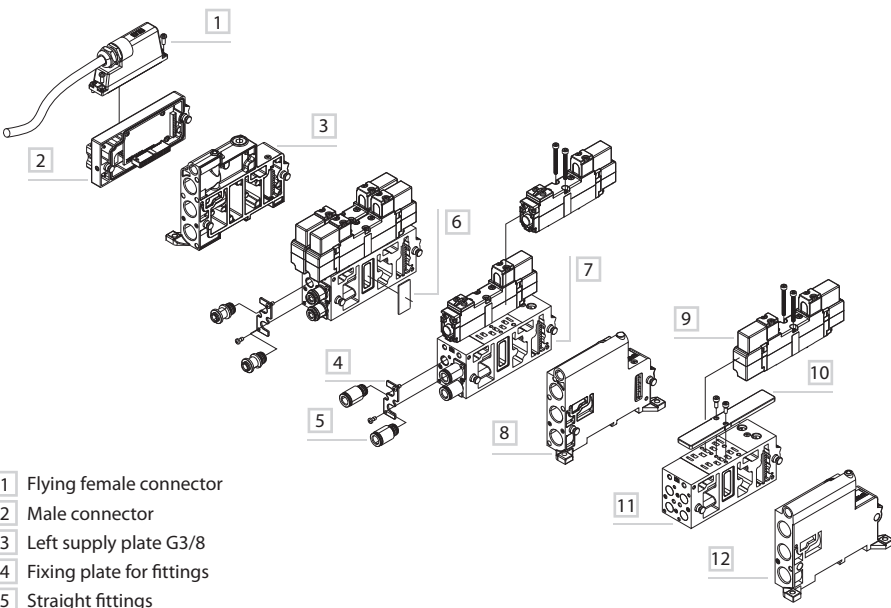
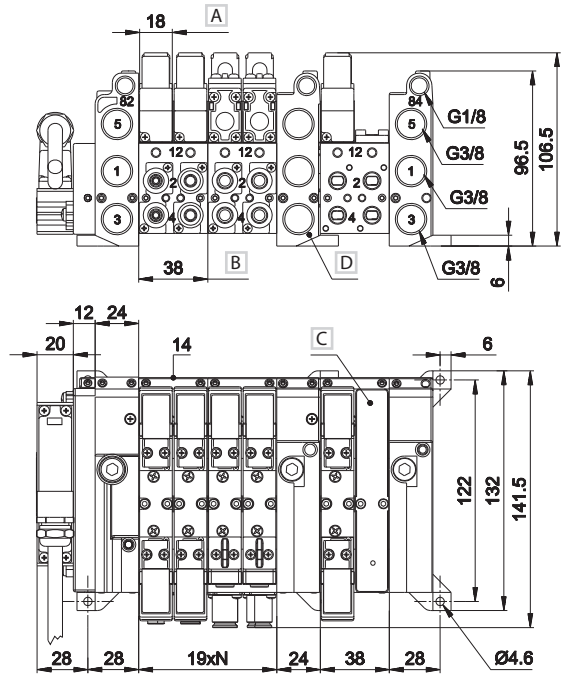
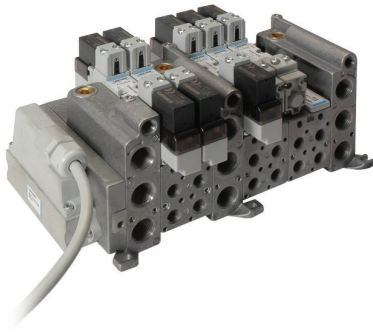


Weight (Kg): 0,185/0,204

	Symbol	Control	Return	Pressure bar	Resp. Time (ms)		Part no.
		14	12		En.	De-en.	
5/2		pneumatic amplified	pneumo mechanical spring	1,8÷10	15	33	BDA-4230
5/2		pneumatic amplified	mechanical spring	2,5÷10	13	38	BDA-4231
5/2		pneumatic amplified	pneumatic amplified	1,2÷10	10	10	BDA-4233
5/3 c.c.		pneumatic amplified	pneumatic amplified	1,2÷10	14	18	BDA-4333
5/3 e.s.		pneumatic amplified	pneumatic amplified	1,2÷10	14	18	BDA-4433
5/3 p.p.		pneumatic amplified	pneumatic amplified	1,2÷10	14	18	BDA-4533
3/2 NC + 3/2 NC		pneumatic amplified	pneumatic amplified	1,8÷10	8	14	BDA-4633
3/2 NC + 3/2 NO		pneumatic amplified	pneumatic amplified	1,8÷10	8	14	BDA-4733
3/2 NO + 3/2 NO		pneumatic amplified	pneumatic amplified	1,8÷10	8	14	BDA-4833

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

Integrated electric connection side 18 mm



- A Valve thickness
- B Sub-base 2 valve
- C Closing plate for unused valve place BDF-3185
- D Intermediate supply plate
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve places

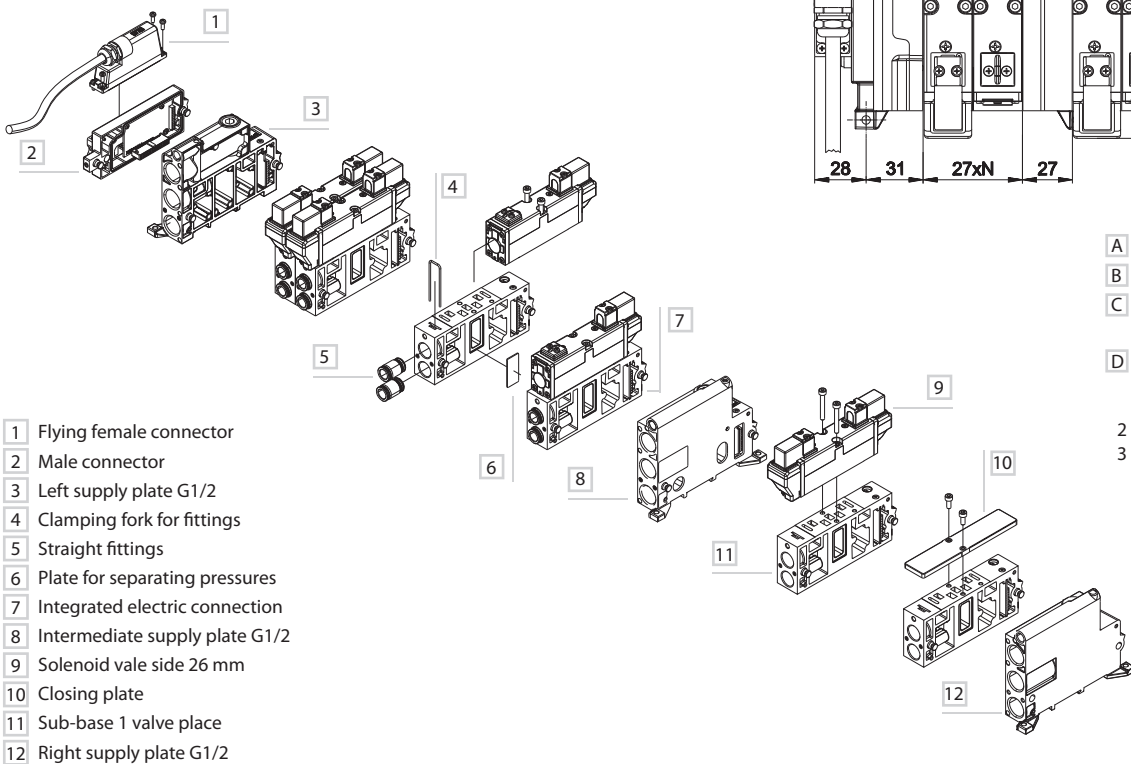
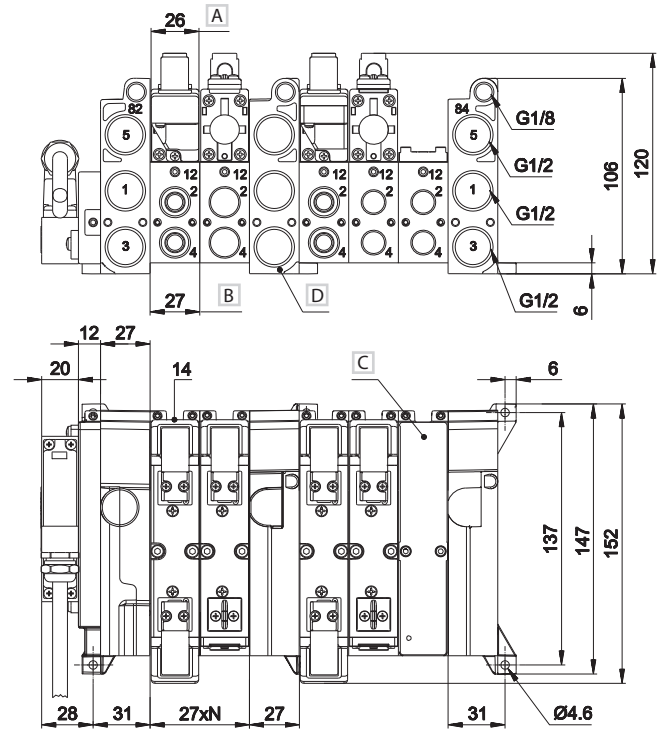
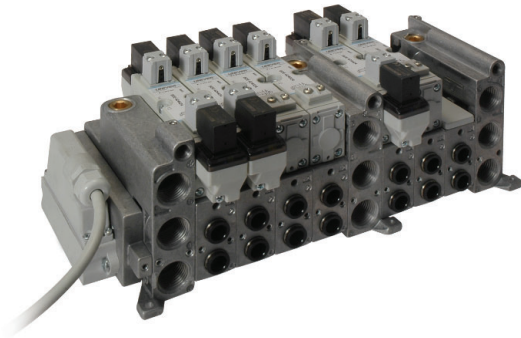
3

- 1 Flying female connector
- 2 Male connector
- 3 Left supply plate G3/8
- 4 Fixing plate for fittings
- 5 Straight fittings
- 6 Plate for separating pressures
- 7 Integrated electric connection
- 8 Intermediate supply plate G3/8
- 9 Solenoid valve side 18 mm
- 10 Closing plate
- 11 Sub-base 2 valve places
- 12 Right supply plate G3/8

BDF-3100	BDF-3115	BDF-3120	BDF-3140TIM	BDF-3180	BDF-3185	BDF-3190
left supply plate G3/8 with integrated electric connection weight: 0,292 Kg	right supply plate G3/8 weight: 0,276 Kg	intermediate supply plate G3/8 with integrated electric connection weight: 0,29 Kg	multiway connection module, 25 poles male type D side 18 mm weight: 0,158 Kg	plate for separating supply pressures weight: 0,002 Kg	plate for closing unused valve place weight: 0,038 Kg	interface for connecting valves side 18-26 mm with integrated electric connection weight: 0,216 Kg
BDF-3210 (b)	BDF-3230 (a) - (b)	BDF-3310 (b)	BDF-3330 (a) - (b)	BDF-3400	GZR-100	GZR-V10004/06/08
sub base 2 places according to VDMA-ISO specifications flow rate 620 NI/min G1/8 connections weight: 0,324 Kg	sub base 2 places according to VDMA-ISO specifications flow rate 620 NI/min for fittings Ø 4-6-8 mm weight: 0,334 Kg	sub base 2 places with increased capacity 800 NI/min G1/8 connections weight: 0,322 Kg	sub base 2 places with increased capacity 800 NI/min for fittings Ø 4-6-8 mm weight: 0,334 Kg	single sub-base 1 place with increased capacity G1/8 connections weight: 0,12 Kg	screw plug weight: 0,01 Kg	fittings according to UNIVER design (package 50 pcs.) GZR-V10004 Ø4 mm GZR-V10006 Ø6 mm GZR-V10008 Ø8 mm weight: 0,01 Kg each.

(a) = sub-base including fixing plates for fittings (fittings excluded) (b) = part no. codification: 0 = electric integrated

Integrated electric connection side 26 mm



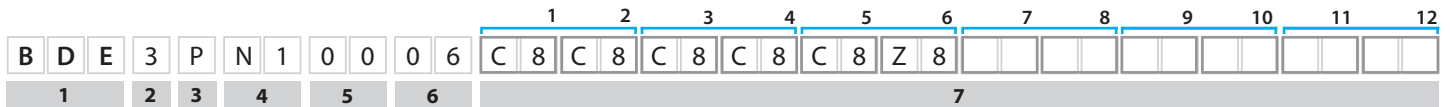
- 1 Flying female connector
- 2 Male connector
- 3 Left supply plate G1/2
- 4 Clamping fork for fittings
- 5 Straight fittings
- 6 Plate for separating pressures
- 7 Integrated electric connection
- 8 Intermediate supply plate G1/2
- 9 Solenoid valve side 26 mm
- 10 Closing plate
- 11 Sub-base 1 valve place
- 12 Right supply plate G1/2

- A Valve thickness
- B Sub-base 1 place valve
- C Closing plate for unused valve place BDF-4185
- D Intermediate supply plate
- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve place

BDF-4100	BDF-4115	BDF-4120	BDF-4140TIM	BDF-4180	BDF-4185
left supply plate G1/2 with integrated electric connection weight: 0,396 Kg	right supply plate G1/2 weight: 0,418 Kg	intermediate supply plate G1/2 with integrated electric connection weight: 0,396 Kg	multiway connection module, 25 poles male type D side 26 mm weight: 0,158 Kg	plate for separating supply pressures weight: 0,002 Kg	plate for closing unused valve place weight: 0,08 Kg
BDF-4210/20 (b)	BDF-4230 (a) - (b)	BDF-4310/20(b)	BDF-4330/31/32 (a) - (b)	BDF-4400	GZR-VV1006/08/10
sub base 1 place according to VDMA-ISO specification flow rate 1250 NI/min G1/4 connections BDF-4210 weight: 0,254 Kg G3/8 connections BDF-4220 weight: 0,246 Kg	sub base 1 place according to VDMA-ISO specification flow rate 1250 NI/min for fittings Ø 6-8-10 mm BDF-4230 weight: 0,23 Kg	sub base 1 place with increased capacity flow rate 1700 NI/min G1/4 connections BDF-4310 weight: 0,254 Kg G3/8 connections BDF-4320 weight: 0,246 Kg	sub base 1 place with increased capacity flow rate 1700 NI/min for fittings Ø 6-8-10 mm BDF-4330 weight: 0,23 Kg	single sub-base 1 place with increased capacity G3/8 connections weight: 0,226 Kg	fittings according to UNIVER design (package 50 pcs.) GZR-VV1006 Ø 6mm GZR-VV1008 Ø 8mm GZR-VV1010 Ø 10mm weight: 0,014 Kg each.

(a) = sub-base including fixing plates for fittings (fittings excluded) (b) = part no. codification: 0 = electric integrated

CONFIGURATION KEY



1 Valve series BDE = Solenoid valves with integrated electrical connection 24 V DC	2 Valve size 3 = 18 mm	3 Electrical Connection and Bus Modules ** M* = Multipin C = CANopen P = Profinet D = DeviceNet B = Profibus L* = IO Link E = Ethernet T = EtherCAT
----------------------------------------------------------------------------------------------	----------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

* = Auxiliary Inputs and Outputs cannot be added
** = For more details see section "Serial Communication Systems"

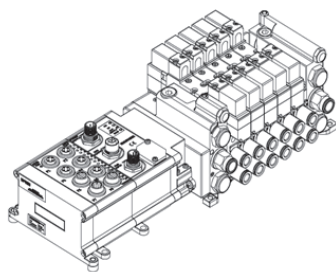
4 Auxiliary Inputs	5 Auxiliary Outputs														
<table border="1"> <thead> <tr> <th>INPUT module M12</th> <th>Number of modules</th> </tr> </thead> <tbody> <tr> <td>0 = no additional module</td> <td>0 no additional module</td> </tr> <tr> <td>N = 16 input</td> <td>1-2-3-4 up to max. 4 modules</td> </tr> <tr> <td>H = 8 input</td> <td>1-2-3-4-5-6-7-8 up to max. 8 modules</td> </tr> </tbody> </table>	INPUT module M12	Number of modules	0 = no additional module	0 no additional module	N = 16 input	1-2-3-4 up to max. 4 modules	H = 8 input	1-2-3-4-5-6-7-8 up to max. 8 modules	<table border="1"> <thead> <tr> <th>OUTPUT module M12</th> <th>Number of modules</th> </tr> </thead> <tbody> <tr> <td>0 = no additional module</td> <td>0 no additional module</td> </tr> <tr> <td>U = 8 output</td> <td>1-2-3-4-5-6-7-8 up to max. 8 modules (Profinet, Ethernet) up to max. 5 modules (Profibus, CANopen, DeviceNet)</td> </tr> </tbody> </table>	OUTPUT module M12	Number of modules	0 = no additional module	0 no additional module	U = 8 output	1-2-3-4-5-6-7-8 up to max. 8 modules (Profinet, Ethernet) up to max. 5 modules (Profibus, CANopen, DeviceNet)
INPUT module M12	Number of modules														
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6 Valve Places	7 Valve/Base Stations
<p>02 = 2 places 04 = 4 places 06 = 6 places 08 = 8 places 10 = 10 places 12 = 12 places up to max. 24 signals</p>	<p>Every station is made of 1 double sub-base hosting 2 valve places. The choice of the sub-base kind is valid for the complete station</p> <p>Valve A = 5/2 monostable mechanical spring B = 5/2 monostable pneumatic spring C = 5/2 bistable D = 5/3 c.c. E = 5/3 o.c. F = 5/3 p.c. G = 3/2+3/2 NC-NC H = 3/2+3/2 NC-NO L = 3/2+3/2 NO-NO Z = closing plate V = void place</p> <p>Sub-base kind 1 = ISO interface - G1/8 (fittings not included) 2 = ISO interface - tube 4 3 = ISO interface - tube 6 4 = ISO interface - tube 8 5 = OVERSIZED interface - G1/8 (fittings not included) 6 = OVERSIZED interface - tube 4 7 = OVERSIZED interface - tube 6 8 = OVERSIZED interface - tube 8</p> <p>o.c. = open centres c.c. = closed centres p.c. = pressurized centre</p>

Note

- External pilot supply available upon request
- Special configurations available upon request
- Accessories (fittings, silencers, supply adapters, connectors, intermediate supply plates etc) can be added upon request

Example



Part no BDE3806201221

Description BDE3PN10006C8C8C8C8Z8+accessories

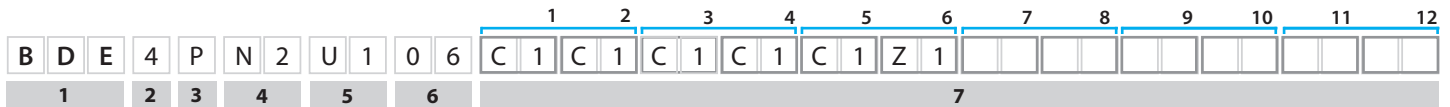
BDE3PN10006C8C8C8C8Z8

BDE-324424	5/2 bistable EL/EL	5
BDF-3100	left plate 3/8 electrical integrated	1
BDF-3115	right plate 3/8	1
BDF-3140TIM	module TIM 25 poles male	1
BDF-3185	closing plate	1
BDF-3330	2 pos. OVERSIZED base electrical integrated	3
GZR-V10008	straight fitting Ø 8	12
TCXPN	ProfiNet module 16 inputs M12	1
TC16I812	16 inputs M12	1
TFP060	2 module supports 6 mm VDMA 18-26	1

Accessories (to be requested separately)

HC510018	silencer 1/8	2
HC510038	silencer 3/8	4
HA260800	plug Ø 8	2
HA261000	plug Ø 10	1
HB041038	straight male tube 10 3/8	2

CONFIGURATION KEY



1 Valve series BDE = Solenoid valves with integrated electrical connection 24 V DC	2 Valve size 3 = 26 mm	3 Electrical Connection and Bus Modules ** M* = Multipin C = CANopen P = Profinet D = DeviceNet B = Profibus L* = IO Link E = Ethernet T = EtherCAT
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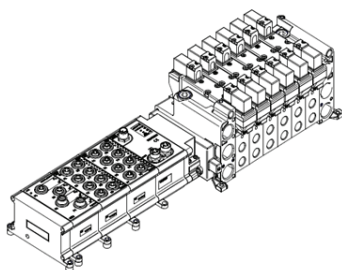
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6 Valve Places	7 Valve/Base Stations
<p>02 = 2 places 03 = 3 places 04 = 4 places 05 = 5 places 06 = 6 places 07 = 7 places 08 = 8 places 09 = 9 places 10 = 10 places 11 = 11 places 12 = 12 places</p> <p>up to max. 24 signals</p>	<p>Every station is made of 1 double sub-base hosting 2 valve places. The choice of the sub-base kind is valid for the complete station</p> <p>Valve</p> <p>A = 5/2 monostable mechanical spring B = 5/2 monostable pneumatic spring C = 5/2 bistable D = 5/3 c.c. E = 5/3 o.c. F = 5/3 p.c. G = 3/2+3/2 NC-NC H = 3/2+3/2 NC-NO L = 3/2+3/2 NO-NO Z = closing plate V = void place</p> <p>Sub-base kind</p> <p>1 = ISO interface - G1/4 (fittings not included) 2 = ISO interface - G3/8 (fittings not included) 3 = ISO interface - tube 6 4 = ISO interface - tube 8 5 = ISO interface - tube 10 6 = OVERSIZED interface - G1/4 (fittings not included) 7 = OVERSIZED interface - G3/8 (fittings not included) 8 = OVERSIZED interface - tube 6 9 = OVERSIZED interface - tube 8 10 = OVERSIZED interface - tube 10</p> <p>o.c. = open centres c.c. = closed centres p.c. = pressurized centre</p>

Note

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- Accessories (fittings, silencers, supply adapters, connectors, intermediate supply plates etc) can be added upon request

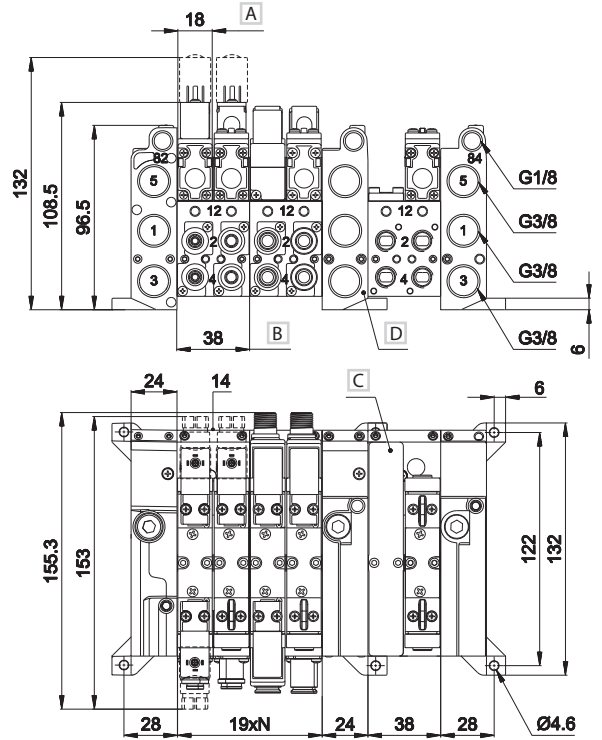
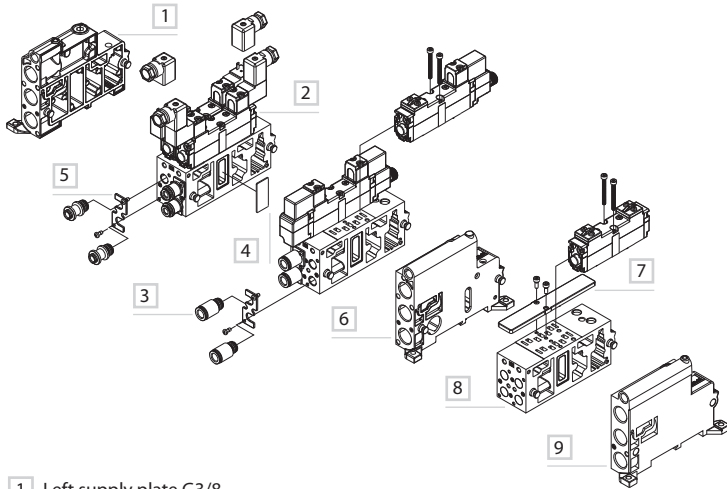
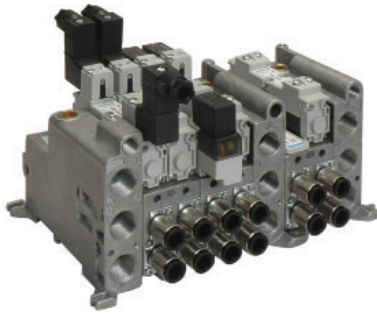
Example



Part no BDE4206201211
Description BDE4PN2U106C1C1C1C1C1

BDE4PN2U106C1C1C1C1C1		
BDE-424424	5/2 bistable EL/EL	6
BDF-4100	left plate 3/8 electrical integrated	1
BDF-4115	right plate 1/2	1
BDF-4140TIM	module TIM 25 poles male	1
BDF-4210	base 1/4 port. VDMA electrical integrated	6
TCXPN	module ProfiNet 32	1
TC16I812	16 Input M12	2
TC8U412	8 output M12	1
TFP060	2 module supports 6 mm VDMA 18-26	4

Electric connection with external connector side 18 mm



- A Valve thickness
- B Sub-base 2 places valve
- C Closing plate for unused valve place BDF-3185
- D Intermediate supply plate

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve places

3

- 1 Left supply plate G3/8
- 2 Solenoid valve
- 3 Straight fittings
- 4 Plate for separating pressures
- 5 Fixing plate for fittings
- 6 Intermediate supply plate G3/8
- 7 Closing plate
- 8 Sub-base 2 valve places
- 9 Right supply plate G3/8

BDF-3110 BDF-3115 BDF-3125 BDF-3180 BDF-3185 BDF-3191 BDF-3400

left supply plate G3/8 weight: 0,288 Kg	right supply plate G3/8 weight: 0,276 Kg	intermediate supply plate G3/8 without integrated electric connection weight: 0,31 Kg	plate for separating pressures weight: 0,002 Kg	plate for closing unused valve place weight: 0,038 Kg	interface for connecting valves side 18-26 mm with integrated electric connection weight: 0,212 Kg	single sub-base 1 place with increased capacity G1/8 connections weight: 0,12 Kg

BDF-3210/1/2 (b) BDF-3230/1/2 (a) - (b) BDF-3310/1/2 (b) BDF-3330/1/2 (a) - (b) GZR-100 GZR-V10004/6/8 DD-051/..

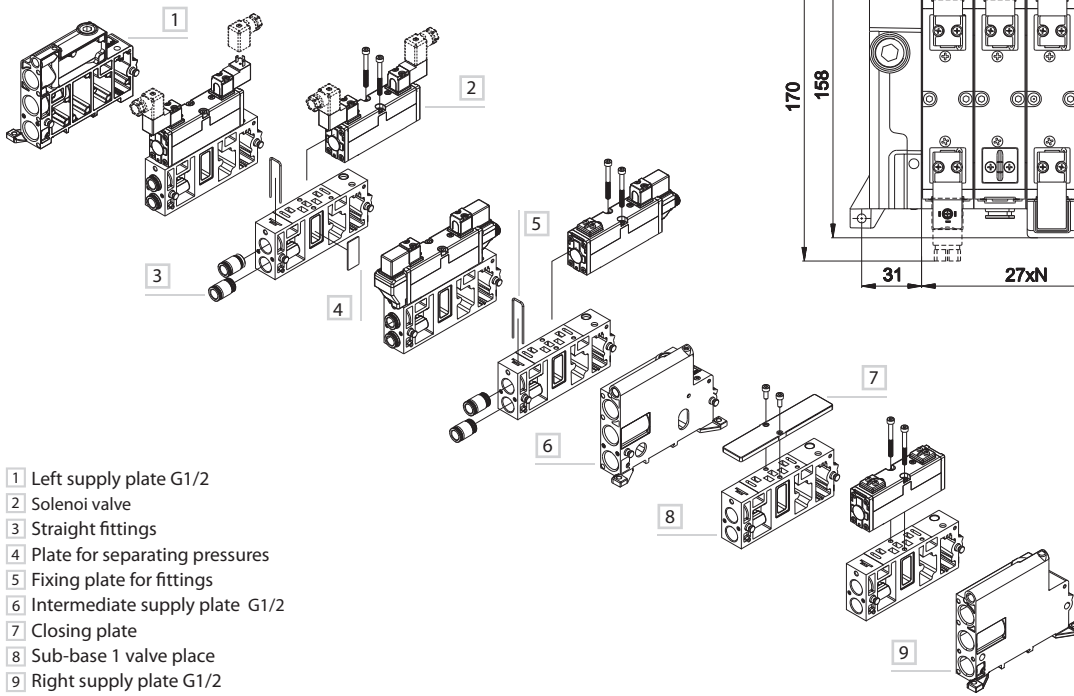
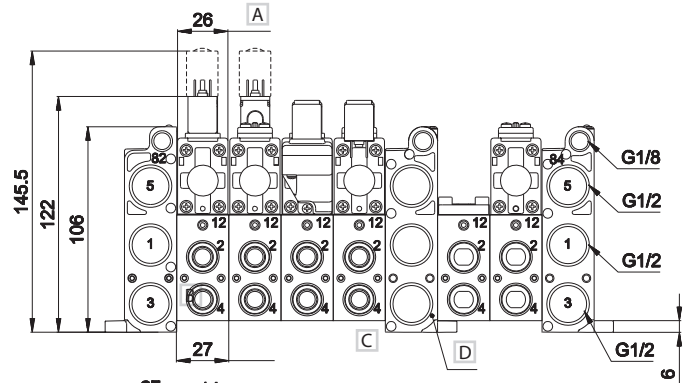
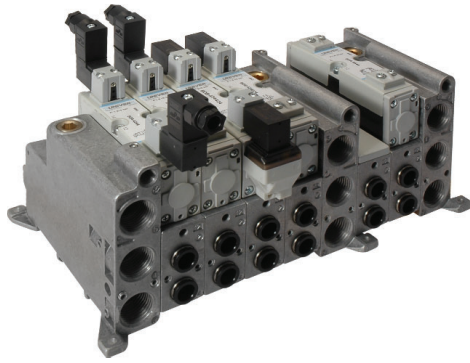
sub base 2 places according to VDMA-ISO specifications flow rate 620 NI/min G1/8 connections BDF-3210 BDF-3211 BDF-3212 weight: 0,316 Kg	sub base 2 places according to VDMA-ISO specifications flow rate 620 NI/min for fittings Ø 4-6-8 mm BDF-3230 BDF-3231 BDF-3232 weight: 0,326 Kg	sub base 2 places with increased capacity 800 NI/min attacchi G1/8 BDF-3310 BDF-3311 BDF-3312 weight: 0,316 Kg	sub base 2 places with increased capacity flow rate 800 NI/min for fittings Ø 4-6-8 mm BDF-3330 BDF-3331 BDF-3332 weight: 0,326 Kg	screw plug weight: 0,01 Kg	fittings according to UNIVER design (package 50 pcs.) GZR-V10004 Ø4 mm GZR-V10006 Ø6 mm GZR-V10008 Ø8 mm weight: 0,01 Kg cad.	U05 coil side 15 mm (for technical features refer to section "Accessories->Coils") weight: 0,019 Kg

(a) = sub-base including fixing plates for fittings (fittings excluded)
(b) = part no. codification: 0 = electric integrated

1 = electric non integrated

2 = only pneumatic

Electric connection with external connector side 26 mm



- 1 Left supply plate G1/2
- 2 Solenoi valve
- 3 Straight fittings
- 4 Plate for separating pressures
- 5 Fixing plate for fittings
- 6 Intermediate supply plate G1/2
- 7 Closing plate
- 8 Sub-base 1 valve place
- 9 Right supply plate G1/2

- A Valve thickness
- B Sub-base 1 places valve
- C Closing plate for unused valve place BDF-4185
- D Intermediate supply plate

- 1 = Supply port
- 2 - 4 = Use
- 3 - 5 = Exhaust
- 14 = Control
- 12 = Return
- N = Number of valve places

BDF-4110 BDF-4115 BDF-4125 BDF-4180 BDF-4185 BDF-4400

left supply plate G1/2 weight: 0,428 Kg	right supply plate G1/2 weight: 0,418 Kg	intermediate supply plate G1/2 without integrated electric connection weight: 0,42 Kg	plate for separating supply pressures weight: 0,002 Kg	plate for closing unused valve place weight: 0,08 Kg	single sub-base 1 place with increased capacity G3/8 connections weight: 0,226 Kg

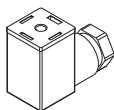
BDF-4210/.. (b) BDF-4230/1/2 (a) - (b) BDF-4311/.. (b) BDF-4330/1/2 (a) - (b) GZR-VV1006/8/10 DD-051/..

sub base 1 place according to VDMA-ISO specification flow rate 1250 NI/min G1/4 connect. G3/8 connect. BDF-4210 BDF-4220 BDF-4211 BDF-4221 BDF-4212 BDF-4222 weight: 0,244 Kg weight: 0,236 Kg	sub base 1 place according to VDMA-ISO specification flow rate 1250 NI/min for fittings Ø 6-8-10 mm BDF-4230 BDF-4231 BDF-4232 weight: 0,22 Kg	sub base 1 place with increased capacity 1700 NI/min G1/4 connect. G3/8 connect. BDF-4310 BDF-4320 BDF-4311 BDF-4321 BDF-4312 BDF-4322 weight: 0,244 Kg weight: 0,236 Kg	sub base 1 place with increased capacity 1700 NI/min for fittings Ø 6-8-10 mm BDF-4330 BDF-4331 BDF-4332 weight: 0,22 Kg	fittings according to UNIVER design (package 50 pcs.) GZR-VV1006 Ø 6mm GZR-VV1008 Ø 8mm GZR-VV1010 Ø 10mm weight: 0,014 Kg cad.	U05 coil side 15 mm (for technical features refer to section "Accessories>Coils") weight: 0,019 Kg

(a) = sub-base including fixing plates for fittings (fittings excluded)
 (b) = part no. codification: 0 = electric integrated 1 = electric non integrated 2 = only pneumatic

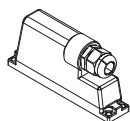
Electric connection

AM-5109



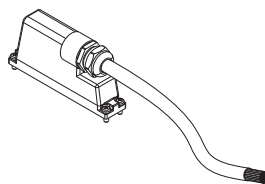
■ 15 mm connector

TSCFN24S000



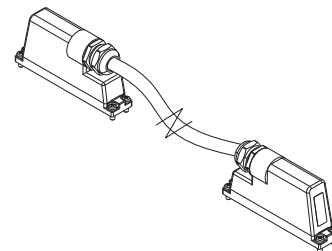
■ female connector
25 poles type D-sub
no cable
M3 x 8 fixing screws

TSCFN24S0300
TSCFN24S0500
TSCFN24S1000



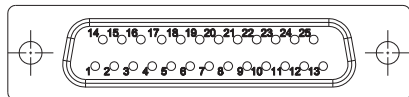
■ female connector
25 poles type D-sub
cable 3-5-10 m
M3 x 8 fixing screws

TSCFN16D0300
TSCFN16D0500
TSCFN16D1000



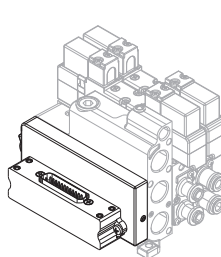
■ male/female flying connector
sub D (upon request)
prewired for 24 coils with
cable Ø 8 mm (3-5-10 m length)
suitable for mobile laying
M3 x 8 fixing screws

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



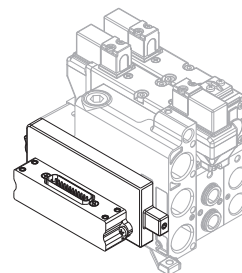
PIN No.	Control side	Valve N°	Colour	Coil
1	14	1	white	1
2	12	1	brown	2
3	14	2	green	3
4	12	2	yellow	4
5	14	3	grey	5
6	12	3	pink	6
7	14	4	blue	7
8	12	4	red	8
9	14	5	black	9
10	12	5	violet	10
11	14	6	grey-pink	11
12	12	6	red-blue	12
13	14	7	white-green	13
14	12	7	green-brown	14
15	14	8	white-yellow	15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

BDF-3140 TIM



■ multiway connection module
25 poles male type D
side 18 mm

BDF-4140 TIM



■ multiway connection module
25 poles male type D
side 26 mm

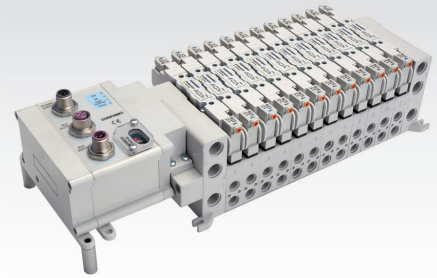
COMMUNICATION SYSTEMS

Possibility to configure manifolds with serial communication systems

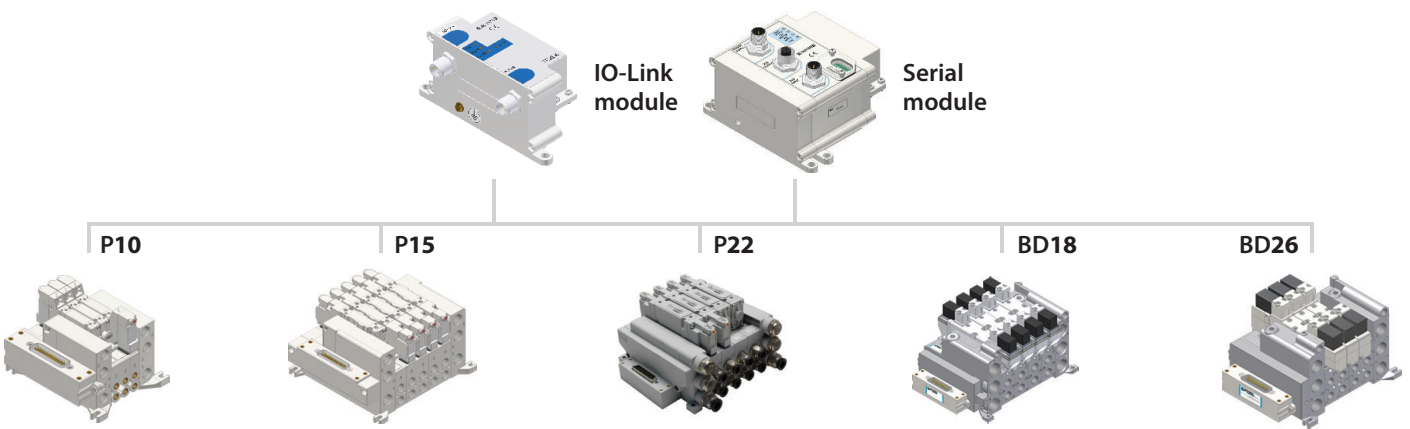


CHARACTERISTICS

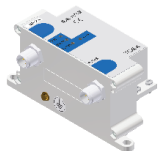
Controlled devices	Manifolds, Digital input M12/M8, Output M12
Handling capacity	Max 64 inputs + 64 outputs (PROFIBUS-DP, CANopen, DeviceNet)
	Max 64 inputs + 88 outputs (PROFINET, EtherNet/IP, EtherCAT)
Integrated configuration	Max 24 coils (IO-Link)
	BD series (VDMA) 18 - 26 mm
	P10 - P15 - P22 series (COMPACT)
Distributed configuration	Remote expansion modules for valve manifolds with sub-D 25 plug-in (NO IO-Link)
Protocols	IO-Link, CANopen, DeviceNet, PROFINET, PROFIBUS-DP, EtherNet/IP, EtherCAT



Communication systems

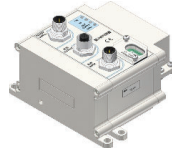


IO-Link



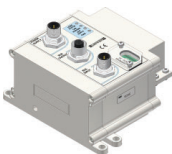
Part No.	TCXLKB
Auxiliary power supply	1 x M12 - 5 pins male and Fieldbus (port class B)
Diagnostics	Optical, Primary, Extended
Capacity max I/O	24 coils

PROFIBUS-DP



Part No.	TCXP
Auxiliary power supply	1 x M12 - 4 pins male
Fieldbus	1 x M12 - 4 pins male B code
Connectors	1 x M12 - 4 pins female B code
Diagnostics	Optical, Primary, Extended
Capacity max I/O	64 In - 40 Out
	24 coils

CANopen



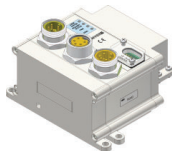
Part No.	TCXC
Auxiliary power supply	1 x M12 - 4 pins male
Fieldbus	1 x M12 - 5 pins male
Connectors	1 x M12 - 5 pins female
Diagnostics	Optical, Primary, Extended
Capacity max I/O	64 In - 40 Out
	24 coils
LSS Slave	supported

EtherNet/IP



Part No.	TCXEN
Auxiliary power supply	1 x M12 - 4 pins male
Fieldbus	2 x M12 - 4 pins female D code
Connectors	
Diagnostics	Optical, Primary, Extended
Capacity max I/O	64 In - 64 Out
	24 coils

DeviceNet



Part No.	TCXD
Auxiliary power supply	1 x 7/8" - 4 pins male
Fieldbus	1 x 7/8" - 5 pins male
Connectors	1 x 7/8" - 5 pins female
Diagnostics	Optical, Primary, Extended
Capacity max I/O	64 In - 40 Out
	24 coils

EtherCAT



Part No.	TCXEC
Auxiliary power supply	1 x M12 - 4 pins male
Fieldbus	2 x M12 - 4 pins female D code
Connectors	
Diagnostics	Optical, Primary, Extended
Capacity max I/O	64 In - 64 Out
	24 coils

PROFINET



Part No.	TCXPN
Auxiliary power supply	1 x M12 - 4 pins male
Fieldbus	2 x M12 - 4 pins female
Connectors	D code
Diagnostics	Optical, Primary, Extended
Capacity max I/O	64 In - 64 Out
	24 coils
FSU	supported

Expansion modules (not available for IO-Link)

<p>TC8I412 8 Digital inputs M12</p>	<p>TC16I812 16 Digital inputs M12</p>	<p>TC8U412 8 Digital outputs M12</p>	<p>TC8I808 8 Digital inputs M8</p>	<p>TCR32ID 16+16 Digital inputs</p> <p>TCR32UD 16+16 Digital outputs</p>	<p>TCXU578 Auxiliary supply module 7/8"</p>
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Accessories for serial modules

<p>TZ-F4M12</p> <p>CANopen, ProfiBus, ProfiNet EtherNet/IP, EtherCat IO-Link port class A Power Supply Connector M12 female 4 poles</p>	<p>TZ-F5M12</p> <p>CANopen IO-Link port class A/B Input Bus M12 female 5 poles</p>	<p>TZ-M5M12/T</p> <p>TZ-M5M12 CANopen Output Bus M12 male 5 poles</p> <p>TZ-M5M12T CANopen, Bus terminating connector M12 male 5 poles</p>	<p>TZ-F478</p> <p>DeviceNet Power Supply Connector 7/8 female 4 poles</p>	<p>TZ-F578</p> <p>DeviceNet Input Bus 7/8 female 5 poles</p>
<p>TZ-M578/T</p> <p>TZ-M578 DeviceNet Input Bus 7/8 male 5 poles</p> <p>TZ-M578T DeviceNet Bus terminating connector 7/8 male 5 poles</p>	<p>TZ-F4M12-B</p> <p>ProfiBus Input Bus M12 female 5 poles B-code</p>	<p>TZ-M4M12-B/BT</p> <p>TZ-M4M12-B ProfiBus Output Bus M12 male 4 poles B-code</p> <p>TZ-M4M12-BT ProfiBus Bus terminating connector M12 male 4 poles B-code</p>	<p>TZ-M4M12-D</p> <p>ProfiNet, EtherNet/IP, EtherCat Input/Output Bus M12 male 4 poles D-code</p>	<p>TSCFN16...</p> <p>TSCFN16D0300 Prewired cable, sub-D, 25 poles, 16 signals 3 m</p> <p>TSCFN16D0500 Prewired cable, sub-D 25 poles, 16 signals 5 m</p> <p>TSCFN16D1000 Prewired cable, sub-D 25 poles, 16 signals 10 m</p>

Assembly scheme (excluding IO-Link)

- FieldBus Module
- Auxiliary Module - Inputs 8 x M8
- Auxiliary Module - Inputs 4 x M12
- Auxiliary Module - Outputs 4 x M12
- TCXX end cover included (1 pc)
- TCXX cover screws included (4 pcs.)
- I/O tie-rods included (4 pcs.)
- TFP010 1 mm for valves P10F-P15F (2 pcs.)
TFP060 6 mm for valves BD 18-26 mm (2 pcs.)
TFP178 17,5 mm for valves P10B (2 pcs.)
TFP257 25,7 mm for valves P15B (2 pcs.)
- Adaptor for 18-26 mm VDMA Manifold