

3/2, 5/2, 5/3 and 2 x 3/2 Directional control valves,  
electromagnetically and pneumatically actuated, rest  
position and impulse versions

- 1 **High flow rate**
- I **Small volumetric size**
- I **Multiply proven sealing system**
- I **With and without manual override**
- I **Maintenance-free**
- I **Low power consumption**
- I **Application oriented pilot controls**
- I **Manifold system for easy assembly**
- I **Different pressure ranges possible**



#### Technical Data

##### Fluid:

Filtered (filter fineness < 50 µm), lubricated or non-lubricated  
compressed air

##### Actuation:

Electromagnetically or pneumatically controlled

##### Mounting position:

Optional

##### Connection :

G 1/8 up to G 3/8, NPT

##### Operating pressure :

1.5 up to 10 bar

##### Flow direction:

Fixed

##### Flow rate :

750 up to 2600 l/min

##### Temperatures :

Fluid: - 10 up to + 50 °C

Ambient: - 10 up to + 50 °C

##### Material:

Housing and base plate made of aluminium  
Spindle made of stainless steel,  
Piston, distance pieces and cover made of synthetic material,  
static and dynamic seals made of NBR,  
galvanised screws,  
springs made of stainless steel.

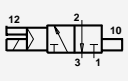
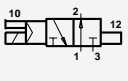
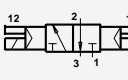
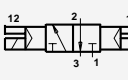
#### Ordering information

To place an order, choose the valve design and  
then complement with the code from Table 2.  
E.g. V61B513A-A213L for a 5/2 directional control  
valve, electromagnetically actuated, with return  
and a 24 V DC solenoid.



Valve choice

3/2 directional control valves, electropneumatically actuated

Symbol	Type	Size	Pilot supply	Pilot exhaust	Solenoid variant	Manual override	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.
 NC1)	V60A413A-A2***	XF5 G 1/8	internal	not collected	1	with detent	750	2 - 8	-	0.22	M01
	V60A423A-A2***	XF5 G 1/8	external	not collected	1	with detent	750	-0.9 - 8	3 - 8	0.22	M01
	V60A413D-C213A	XF5 G 1/8	internal	collected	2	with detent	750	2 - 10	-	0.21	M04
	V60A423D-C213A	XF5 G 1/8	external	collected	2	with detent	750	-0.9 - 10	3 - 10	0.21	M04
	V61B413A-A2***	XF8 G 1/4	internal	not collected	1	with detent	1300	2 - 8	-	0.29	M01
	V61B423A-A2***	XF8 G 1/4	external	not collected	1	with detent	1300	-0.9 - 8	3 - 8	0.29	M01
	V61B413D-C213A	XF8 G 1/4	internal	collected	2	with detent	1300	2 - 10	-	0.27	M04
	V61B423D-C213A	XF8 G 1/4	external	collected	2	with detent	1300	-0.9 - 10	3 - 10	0.27	M04
	V62C413A-A2***	XF13 G 3/8	internal	not collected	1	with detent	2600	2 - 8	-	0.52	M01
	V62C423A-A2***	XF13 G 3/8	external	not collected	1	with detent	2600	-0.9 - 8	3 - 8	0.52	M01
 NO1)	V60A313A-A2***	XF5 G 1/8	internal	not collected	1	with detent	750	2 - 8	-	0.22	M01
	V60A323A-A2***	XF5 G 1/8	external	not collected	1	with detent	750	-0.9 - 8	3 - 8	0.22	M01
	V60A313D-C213A	XF5 G 1/8	internal	collected	2	with detent	750	2 - 10	-	0.21	M04
	V60A323D-C213A	XF5 G 1/8	external	collected	2	with detent	750	-0.9 - 10	3 - 10	0.21	M04
	V61B313A-A2***	XF8 G 1/4	internal	not collected	1	with detent	1300	2 - 8	-	0.29	M01
	V61B323A-A2***	XF8 G 1/4	external	not collected	1	with detent	1300	-0.9 - 8	3 - 8	0.29	M01
	V61B313D-C213A	XF8 G 1/4	internal	collected	2	with detent	1300	2 - 10	-	0.27	M04
	V61B323D-C213A	XF8 G 1/4	external	collected	2	with detent	1300	-0.9 - 10	3 - 10	0.27	M04
	V62C313A-A2***	XF13 G 3/8	internal	not collected	1	with detent	2600	2 - 8	-	0.52	M01
	V62C323A-A2***	XF13 G 3/8	external	not collected	1	with detent	2600	-0.9 - 8	3 - 8	0.52	M01
	V60A411A-A3***	XF5 G 1/8	internal	not collected	1	without detent	750	1.5 - 8	-	0.30	M01
	V60A422A-A3***	XF5 G 1/8	external	not collected	1	without detent	750	-0.9 - 8	3 - 8	0.30	M01
	V60A411D-C313A	XF5 G 1/8	internal	collected	2	without detent	750	1.5 - 10	-	0.20	M04
	V60A422D-C313A	XF5 G 1/8	external	collected	2	without detent	750	-0.9 - 10	3 - 10	0.20	M04
	V61B411A-A3***	XF8 G 1/4	internal	not collected	1	without detent	1300	1.5 - 8	-	0.38	M01
	V61B422A-A3***	XF8 G 1/4	external	not collected	1	without detent	1300	-0.9 - 8	3 - 8	0.38	M01
	V61B411D-C313A	XF8 G 1/4	internal	collected	2	without detent	1300	1.5 - 10	-	0.27	M04
	V61B422D-C313A	XF8 G 1/4	external	collected	2	without detent	1300	-0.9 - 10	3 - 10	0.27	M04
	V62C411A-A3***	XF13 G 3/8	internal	not collected	1	without detent	2600	1.5 - 8	-	0.61	M01
	V62C422A-A3***	XF13 G 3/8	external	not collected	1	without detent	2600	-0.9 - 8	3 - 8	0.61	M01
	V62C411D-C313A	XF13 G 3/8	internal	collected	2	without detent	2600	1.5 - 10	-	0.50	M04
	V62C422D-C313A	XF13 G 3/8	external	collected	2	without detent	2600	-0.9 - 10	3 - 10	0.50	M04

\*\*\* Insert voltage code from table, or 000 für version without solenoid.

Selection of solenoid and voltage

Please insert **solenoid code** instead of \*\*\* under Valve type.

Solenoid variant 1

Voltage	Code	Power consumption Inrush / Hold	Single solenoid Type
22 mm Solenoid with plug interface DIN 43650 Form B			
12 V DC	12L	2 W	V10626-A12
24 V DC	13L	2 W	V10626-A13
24 V 50/60 Hz	14L	4 / 2.5 VA	V10626-A14
48 V 50/60 Hz	16L	4 / 2.5 VA	V10626-A16
110/120 V 50/60 Hz	18L	4 / 2.5 VA	V10626-A18
220/240 V 50/60 Hz	19L	6 / 5 VA	V10626-A19
22 mm Solenoid with plug interface "industrial standard"			
12 V DC	12J	2 W	QM/48/160/21
24 V DC	13J	2 W	QM/48/127/21
24 V 50/60 Hz	14J	4 / 2.5 VA	QM/48/164/21
48 V 50/60 Hz	16J	4 / 2.5 VA	QM/48/165/21
110/120 V 50/60 Hz	18J	4 / 2.5 VA	QM/48/166/21
220/240 V 50/60 Hz	19J	6 / 5 VA	QM/48/167/21

Technical data for solenoid variants 1 + 2:

Voltage tolerance: ±10%

Rating: 100% ED

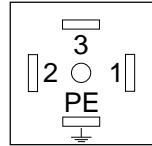
Protection class: IP 65 with sealed plugs (ISO 6952)

Connection plugs must be ordered separately – see page 13

Solenoid variant 2

Voltage	Code	Power consump. Inrush / Hold	Manual override	Twin pilot cpl. (with solenoids) Type
Twin pilot with plug interface DIN 43650 Form C (4 pin)				
24 V DC	13 A	2 W	press	9031703 9000 024 00
			detent	9031704 9000 024 00
			without	9031705 9000 024 00

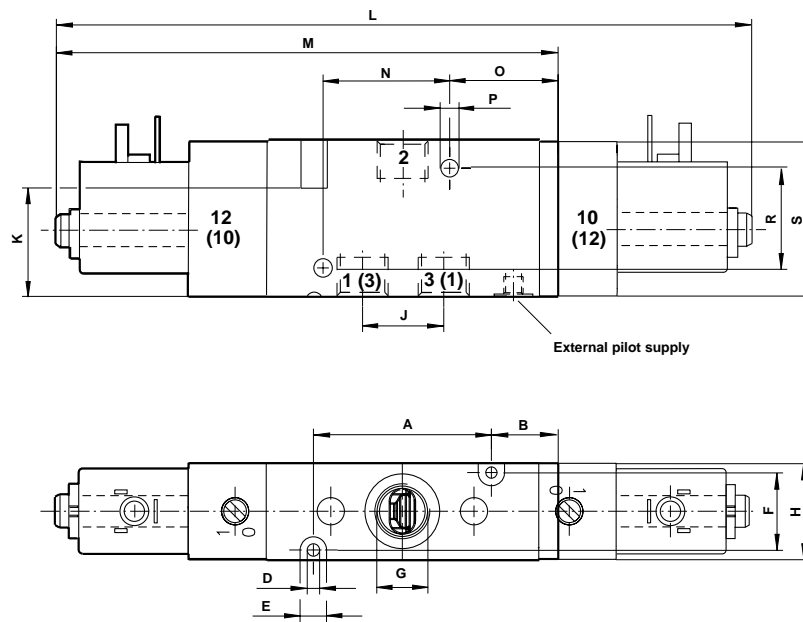
Plug configuration, valve side / Twin pilot

Symbol	Plug no.	Function	Actuation
	1	(+)	12 (Solenoid 2)
	2	(-)	12 + 14
	3	(+)	14 (Solenoid 1)
	PE	⊥	(Ground)

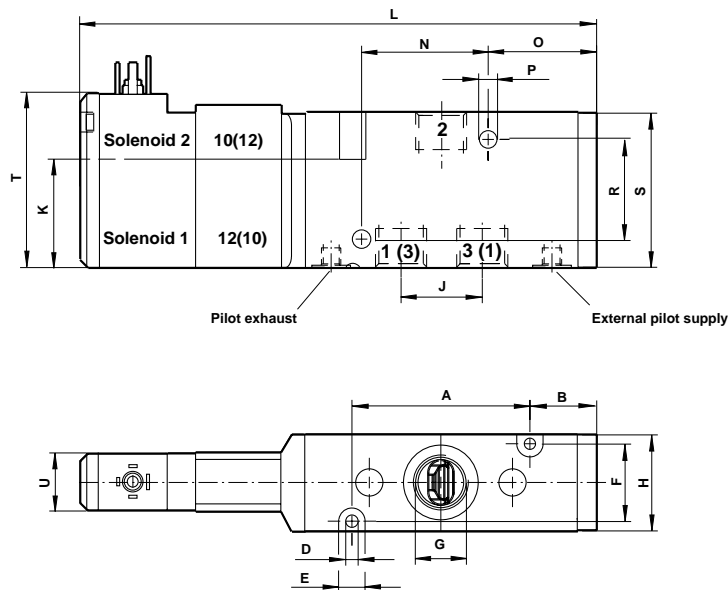


Dimensional drawings

01



04



Dimensional table 01

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Rest position	35	16	-	3.2	6.5	17	G 1/8	22	16.2	28	-	114	25	25	4.5	26	35	-	-
	Impuls	35	-	-	3.2	6.5	17	G 1/8	22	16.2	28	160	-	25	-	4.5	26	35	-	-
XF8 V61	Rest position	46	18	-	3.2	6.5	20	G 1/4	25	21	28	-	130	32	29	4.5	26	40	-	-
	Impuls	46	-	-	3.2	6.5	20	G 1/4	25	21	28	179	-	32	-	4.5	26	40	-	-
XF13 V62	Rest position	54	21	-	4.5	8	28	G 3/8	34	24.4	44	-	146	12	36	4.5	36	55	-	-
	Impuls	54	-	-	4.5	8	28	G 3/8	34	24.4	44	196	-	12	-	4.5	36	55	-	-

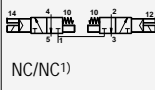
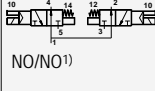
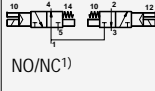
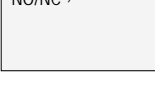
Dimensional table 04

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Double pilot	35	16	-	3.2	6.5	17	G 1/8	22	16.2	28	119	-	25	25	4.5	26	35	45	15
XF8 V61	Double pilot	46	18	-	3.2	6.5	20	G 1/4	25	21	28	133	-	32	29	4.5	26	40	45	15
XF13 V62	Double pilot	54	21	-	4.5	8	28	G 3/8	34	24.4	44	148	-	12	36	4.5	36	55	45	15



## Valve choice

### 2 x 3/2 directional control valves, electropneumatically actuated

Symbol	Type	Size	Pilot supply	Pilot exhaust	Solenoid variant	Manual override	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.	
 NC/NC <sup>1)</sup>	V60AA11A-A2***	XF5	G 1/8	internal	not collected	1	with detent	500	2 - 8	-	0.34	M02
	V60AA11D-C213A	XF5	G 1/8	internal	collected	2	with detent	500	2 - 10	-	0.24	M05
	V61BA11A-A2***	XF8	G 1/4	internal	not collected	1	with detent	950	2 - 8	-	0.43	M02
	V61BA11D-C213A	XF8	G 1/4	internal	collected	2	with detent	950	2 - 10	-	0.33	M05
	V62CA11A-A2***	XF13	G 3/8	internal	not collected	1	with detent	1900	2 - 8	-	0.73	M02
 NO/NO <sup>1)</sup>	V62CA11D-C213A	XF13	G 3/8	internal	collected	2	with detent	1900	2 - 10	-	0.63	M05
	V60AB11A-A2***	XF5	G 1/8	internal	not collected	1	with detent	500	2 - 8	-	0.34	M02
	V60AB11D-C213A	XF5	G 1/8	internal	collected	2	with detent	500	2 - 10	-	0.24	M05
	V61BB11A-A2***	XF8	G 1/4	internal	not collected	1	with detent	950	2 - 8	-	0.43	M02
	V61BB11D-C213A	XF8	G 1/4	internal	collected	2	with detent	950	2 - 10	-	0.33	M05
 NO/NC <sup>1)</sup>	V62CB11A-A2***	XF13	G 3/8	internal	not collected	1	with detent	1900	2 - 8	-	0.73	M02
	V62CB11D-C213A	XF13	G 3/8	internal	collected	2	with detent	1900	2 - 10	-	0.63	M05
	V60AC11A-A2***	XF5	G 1/8	internal	not collected	1	with detent	500	2 - 8	-	0.34	M02
	V60AC11D-C213A	XF5	G 1/8	internal	collected	2	with detent	500	2 - 10	-	0.24	M05
	V61BC11A-A2***	XF8	G 1/4	internal	not collected	1	with detent	950	2 - 8	-	0.43	M02
 NO/NC <sup>1)</sup>	V61BC11D-C213A	XF8	G 1/4	internal	collected	2	with detent	950	2 - 10	-	0.33	M05
	V62CC11A-A2***	XF13	G 3/8	internal	not collected	1	with detent	1900	2 - 8	-	0.73	M02
	V62CC11D-C213A	XF13	G 3/8	internal	collected	2	with detent	1900	2 - 10	-	0.63	M05

\*\*\* Insert voltage code from table, or 000 für version without solenoid.

1) NC – Normally closed, NO – Normally open

## Selection of solenoid and voltage

Please insert **solenoid code** instead of \*\*\* under Valve type.

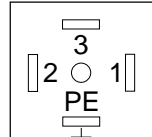
### Solenoid variant 1

Voltage	Code	Power consumption Inrush / Hold	Single solenoid Type
22 mm Solenoid with plug interface DIN 43650 Form B			
12 V DC	12L	2 W	V10626-A12
24 V DC	13L	2 W	V10626-A13
24 V 50/60 Hz	14L	4 / 2.5 VA	V10626-A14
48 V 50/60 Hz	16L	4 / 2.5 VA	V10626-A16
110/120 V 50/60 Hz	18L	4 / 2.5 VA	V10626-A18
220/240 V 50/60 Hz	19L	6 / 5 VA	V10626-A19
22 mm Solenoid with plug interface "industrial standard"			
12 V DC	12J	2 W	QM/48/160/21
24 V DC	13J	2 W	QM/48/127/21
24 V 50/60 Hz	14J	4 / 2.5 VA	QM/48/164/21
48 V 50/60 Hz	16J	4 / 2.5 VA	QM/48/165/21
110/120 V 50/60 Hz	18J	4 / 2.5 VA	QM/48/166/21
220/240 V 50/60 Hz	19J	6 / 5 VA	QM/48/167/21

### Solenoid variant 2

Voltage	Code	Power consump. Inrush / Hold	Manual override	Twin pilot cpl. (with solenoids) Type
Twin pilot with plug interface DIN 43650 Form C (4 pin)				
24 V DC	13 A	2 W	press detent without	9031703 9000 024 00 9031704 9000 024 00 9031705 9000 024 00

### Plug configuration, valve side / Twin pilot

Symbol	Plug no.	Function	Actuation
	1	(+)	12 (Solenoid 2)
	2	(-)	12 + 14
	3	(+)	14 (Solenoid 1)
	PE	⏏	(Ground)

Technical data for solenoid variants 1 + 2:

Voltage tolerance: ±10%

Rating: 100% ED

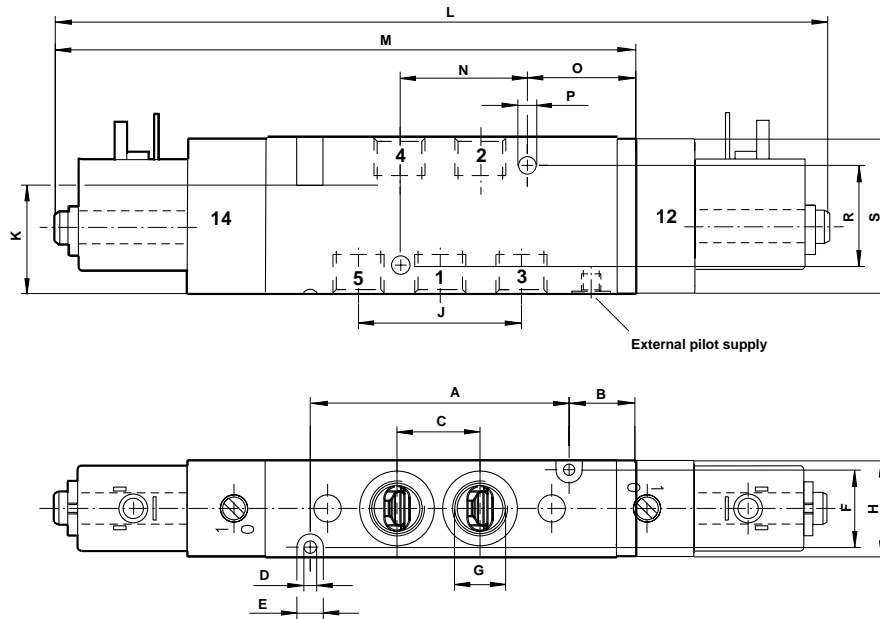
Protection class: IP 65 with sealed plugs (ISO 6952)

Connection plugs must be ordered separately – see page 13

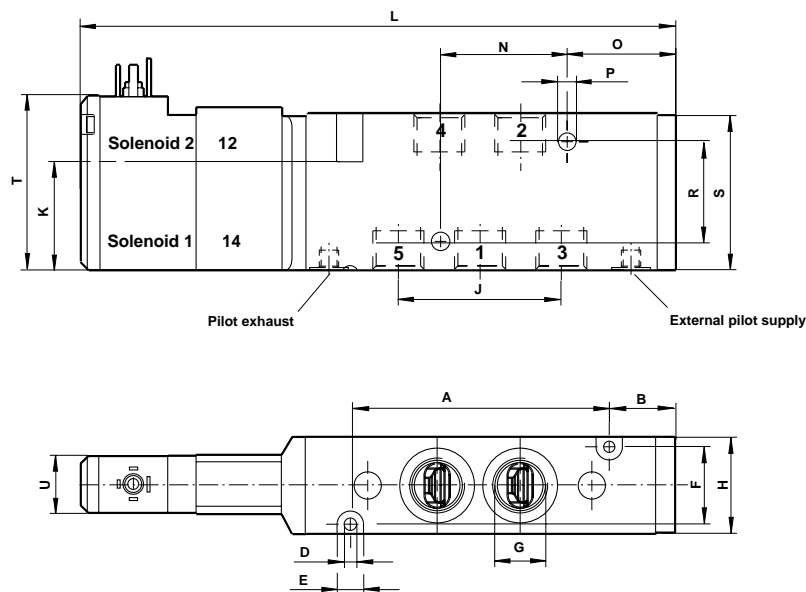


Dimensional drawings

02



05



Dimensional table 02

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Rest position	50	16	16.2	3.2	6.5	17	G 1/8	22	32,4	28	-	129	25	25	4.5	26	35	-	-
	Impuls	50	-	16.2	3.2	6.5	17	G 1/8	22	32,4	28	175	-	25	-	4.5	26	35	-	-
XF8 V61	Rest position	66	18	-	3.2	6.5	20	G 1/4	25	42	28	-	150	32	29	4.5	26	40	-	-
	Impuls	66	-	-	3.2	6.5	20	G 1/4	25	42	28	199	-	32	-	4.5	26	40	-	-
XF13 V62	Rest position	78	21	-	4.5	8	28	G 3/8	34	48.8	44	-	170	12	60	4.5	36	55	-	-
	Impuls	78	-	-	4.5	8	28	G 3/8	34	48.8	44	220	-	12	-	4.5	36	55	-	-

Dimensional table 05

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Double pilot	50	16	16.2	3.2	6.5	17	G 1/8	22	32,4	28	134	-	25	25	4.5	26	35	45	15
XF8 V61	Double pilot	66	18	16.2	3.2	6.5	20	G 1/4	25	42	28	153	-	32	29	4.5	26	40	45	15
XF13 V62	Double pilot	78	21	16.2	4.5	8	28	G 3/8	34	48.8	44	172	-	12	60	4.5	36	55	45	15



## Valve choice

### 5/2 directional control valves, electropneumatically actuated

Symbol	Type	Size	Pilot supply	Pilot exhaust	Solenoid variant	Manual override	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.	
	V60A513A-A2***	XF5	G 1/8	internal	not collected	1	with detent	750	2 - 8	-	0.24	M02
	V60A523A-A2***	XF5	G 1/8	external	not collected	1	with detent	750	-0.9 - 8	3 - 8	0.24	M02
	V60A513D-C213A	XF5	G 1/8	internal	collected	2	with detent	750	2 - 10	-	0.23	M05
	V60A523D-C213A	XF5	G 1/8	external	collected	2	with detent	750	-0.9 - 10	3 - 10	0.23	M05
	V61B513A-A2***	XF8	G 1/4	internal	not collected	1	with detent	1300	2 - 8	-	0.33	M02
	V61B523A-A2***	XF8	G 1/4	external	not collected	1	with detent	1300	-0.9 - 8	3 - 8	0.33	M02
	V61B513D-C213A	XF8	G 1/4	internal	collected	2	with detent	1300	2 - 10	-	0.32	M05
	V61B523D-C213A	XF8	G 1/4	external	collected	2	with detent	1300	-0.9 - 10	3 - 10	0.32	M05
	V62C513A-A2***	XF13	G 3/8	internal	not collected	1	with detent	2600	2 - 8	-	0.62	M02
	V62C523A-A2***	XF13	G 3/8	external	not collected	1	with detent	2600	-0.9 - 8	3 - 8	0.62	M02
	V60A511A-A3***	XF5	G 1/8	internal	not collected	1	without detent	750	2 - 8	-	0.33	M02
	V60A522A-A3***	XF5	G 1/8	external	not collected	1	without detent	750	-0.9 - 8	3 - 8	0.33	M02
	V60A511D-C313A	XF5	G 1/8	internal	collected	2	without detent	750	2 - 10	-	0.23	M05
	V60A522D-C313A	XF5	G 1/8	external	collected	2	without detent	750	-0.9 - 10	3 - 10	0.23	M05
	V61B511A-A3***	XF8	G 1/4	internal	not collected	1	without detent	1300	2 - 8	-	0.42	M02
	V61B522A-A3***	XF8	G 1/4	external	not collected	1	without detent	1300	-0.9 - 8	3 - 8	0.42	M02
	V61B511D-C313A	XF8	G 1/4	internal	collected	2	without detent	1300	2 - 10	-	0.32	M05
	V61B522D-C313A	XF8	G 1/4	external	collected	2	without detent	1300	-0.9 - 10	3 - 10	0.32	M05
	V62C511A-A3***	XF13	G 3/8	internal	not collected	1	without detent	2600	2 - 8	-	0.72	M02
	V62C522A-A3***	XF13	G 3/8	external	not collected	1	without detent	2600	-0.9 - 8	3 - 8	0.72	M02
	V62C511D-C313A	XF13	G 3/8	internal	collected	2	without detent	2600	2 - 10	-	0.62	M05
	V62C522D-C313A	XF13	G 3/8	external	collected	2	without detent	2600	-0.9 - 10	3 - 10	0.62	M05

\*\*\* Insert voltage code from table, or 000 für version without solenoid.

## Selection of solenoid and voltage

Please insert **solenoid code** instead of \*\*\* under Valve type.

### Solenoid variant 1

Voltage	Code	Power consumption Inrush / Hold	Single solenoid Type
22 mm Solenoid with plug interface DIN 43650 Form B			
12 V DC	12L	2 W	V10626-A12
24 V DC	13L	2 W	V10626-A13
24 V 50/60 Hz	14L	4 / 2.5 VA	V10626-A14
48 V 50/60 Hz	16L	4 / 2.5 VA	V10626-A16
110/120 V 50/60 Hz	18L	4 / 2.5 VA	V10626-A18
220/240 V 50/60 Hz	19L	6 / 5 VA	V10626-A19
22 mm Solenoid with plug interface "industrial standard"			
12 V DC	12J	2 W	QM/48/160/21
24 V DC	13J	2 W	QM/48/127/21
24 V 50/60 Hz	14J	4 / 2.5 VA	QM/48/164/21
48 V 50/60 Hz	16J	4 / 2.5 VA	QM/48/165/21
110/120 V 50/60 Hz	18J	4 / 2.5 VA	QM/48/166/21
220/240 V 50/60 Hz	19J	6 / 5 VA	QM/48/167/21

### Solenoid variant 2

Voltage	Code	Power consump. Inrush / Hold	Manual override	Twin pilot cpl. (with solenoids) Type
Twin pilot with plug interface DIN 43650 Form C (4 pin)				
24 V DC	13 A	2 W	press detent without	9031703 9000 024 00 9031704 9000 024 00 9031705 9000 024 00

### Plug configuration, valve side / Twin pilot

Symbol	Plug no.	Function	Actuation
	1	(+)	12 (Solenoid 2)
	2	(-)	12 + 14
	3	(+)	14 (Solenoid 1)
	PE	⊥	(Ground)

Technical data for solenoid variants 1 + 2:

Voltage tolerance: ±10%

Rating: 100% ED

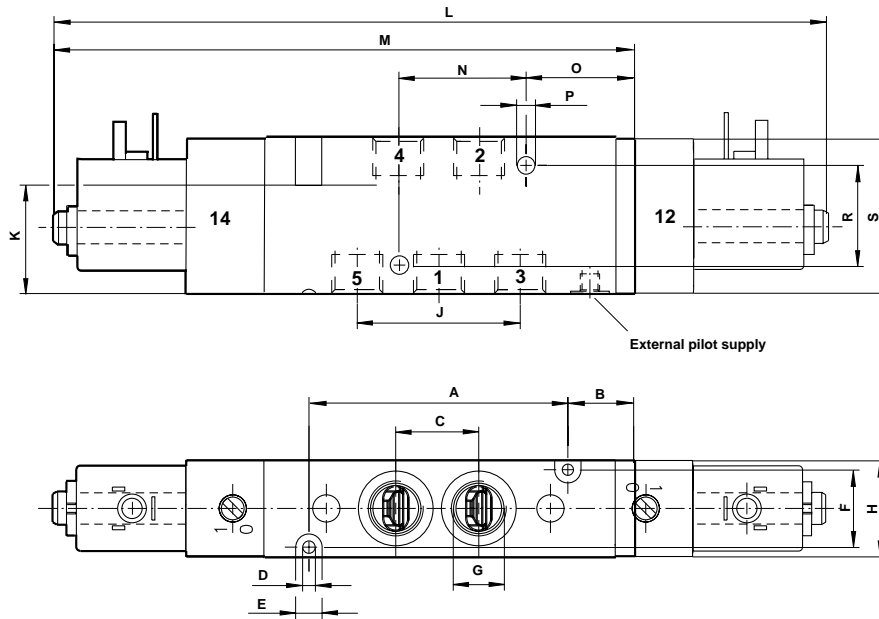
Protection class: IP 65 with sealed plugs (ISO 6952)

Connection plugs must be ordered separately – see page 13

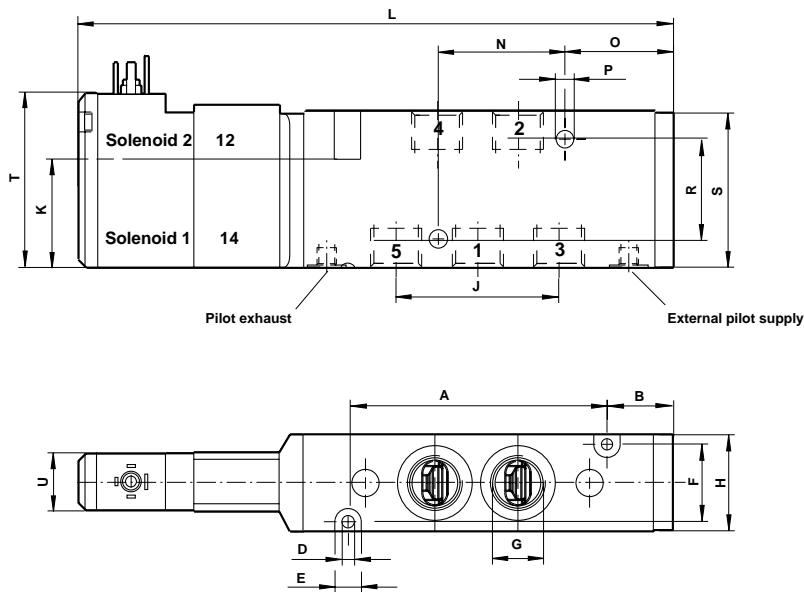


Dimensional drawings

02



05



Dimensional table 02

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Rest position	50	16	16.2	3.2	6.5	17	G 1/8	22	32,4	28	-	129	25	25	4.5	26	35	-	-
	Impuls	50	-	16.2	3.2	6.5	17	G 1/8	22	32,4	28	175	-	25	-	4.5	26	35	-	-
XF8 V61	Rest position	66	18	-	3.2	6.5	20	G 1/4	25	42	28	-	150	32	29	4.5	26	40	-	-
	Impuls	66	-	-	3.2	6.5	20	G 1/4	25	42	28	199	-	32	-	4.5	26	40	-	-
XF13 V62	Rest position	78	21	-	4.5	8	28	G 3/8	34	48.8	44	-	170	12	60	4.5	36	55	-	-
	Impuls	78	-	-	4.5	8	28	G 3/8	34	48.8	44	220	-	12	-	4.5	36	55	-	-

Dimensional table 05

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Double pilot	50	16	16.2	3.2	6.5	17	G 1/8	22	32,4	28	134	-	25	25	4.5	26	35	45	15
XF8 V61	Double pilot	66	18	16.2	3.2	6.5	20	G 1/4	25	42	28	153	-	32	29	4.5	26	40	45	15
XF13 V62	Double pilot	78	21	16.2	4.5	8	28	G 3/8	34	48.8	44	172	-	12	60	4.5	36	55	45	15



Valve choice

5/3 directional control valves, electropneumatically actuated

Symbol	Type	Size	Pilot supply	Pilot exhaust	Solenoid variant	Manual override	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.
 NC <sup>1)</sup>	V60A611A-A2***	XF5 G 1/8	internal	not collected	1	with detent	500	3 - 8	-	0.35	M03
	V60A622A-A2***	XF5 G 1/8	external	not collected	1	with detent	500	-0.9 - 8	3 - 8	0.35	M03
	V60A611D-C213A	XF5 G 1/8	internal	collected	2	with detent	500	3 - 10	-	0.25	M06
	V60A622D-C213A	XF5 G 1/8	external	collected	2	with detent	500	-0.9 - 10	3 - 10	0.25	M06
	V61B611A-A2***	XF8 G 1/4	internal	not collected	1	with detent	950	3 - 8	-	0.47	M03
	V61B622A-A2***	XF8 G 1/4	external	not collected	1	with detent	950	-0.9 - 8	3 - 8	0.47	M03
	V61B611D-C213A	XF8 G 1/4	internal	collected	2	with detent	950	3 - 10	-	0.37	M06
	V61B622D-C213A	XF8 G 1/4	external	collected	2	with detent	950	-0.9 - 10	3 - 10	0.37	M06
	V62C611A-A2***	XF13 G 3/8	internal	not collected	1	with detent	1900	3 - 8	-	0.81	M03
	V62C622A-A2***	XF13 G 3/8	external	not collected	1	with detent	1900	-0.9 - 8	3 - 8	0.81	M03
 NO <sup>1)</sup>	V60A711A-A2***	XF5 G 1/8	internal	not collected	1	with detent	500	3 - 8	-	0.35	M03
	V60A722A-A2***	XF5 G 1/8	external	not collected	1	with detent	500	-0.9 - 8	3 - 8	0.35	M03
	V60A711D-C213A	XF5 G 1/8	internal	collected	2	with detent	500	3 - 10	-	0.25	M06
	V60A722D-C213A	XF5 G 1/8	external	collected	2	with detent	500	-0.9 - 10	3 - 10	0.25	M06
	V61B711A-A2***	XF8 G 1/4	internal	not collected	1	with detent	950	3 - 8	-	0.47	M03
	V61B722A-A2***	XF8 G 1/4	external	not collected	1	with detent	950	-0.9 - 8	3 - 8	0.47	M03
	V61B711D-C213A	XF8 G 1/4	internal	collected	2	with detent	950	3 - 10	-	0.37	M06
	V61B722D-C213A	XF8 G 1/4	external	collected	2	with detent	950	-0.9 - 10	3 - 10	0.37	M06
	V62C711A-A2***	XF13 G 3/8	internal	not collected	1	with detent	1900	3 - 8	-	0.81	M03
	V62C722A-A2***	XF13 G 3/8	external	not collected	1	with detent	1900	-0.9 - 8	3 - 8	0.81	M03
 2+4 <sup>1)</sup>	V60A811A-A2***	XF5 G 1/8	internal	not collected	1	with detent	500	3 - 8	-	0.35	M03
	V60A822A-A2***	XF5 G 1/8	external	not collected	1	with detent	500	-0.9 - 8	3 - 8	0.35	M03
	V60A811D-C213A	XF5 G 1/8	internal	collected	2	with detent	500	3 - 10	-	0.25	M06
	V60A822D-C213A	XF5 G 1/8	external	collected	2	with detent	500	-0.9 - 10	3 - 10	0.25	M06
	V61B811A-A2***	XF8 G 1/4	internal	not collected	1	with detent	950	3 - 8	-	0.47	M03
	V61B822A-A2***	XF8 G 1/4	external	not collected	1	with detent	950	-0.9 - 8	3 - 8	0.47	M03
	V61B811D-C213A	XF8 G 1/4	internal	collected	2	with detent	950	3 - 10	-	0.37	M06
	V61B822D-C213A	XF8 G 1/4	external	collected	2	with detent	950	-0.9 - 10	3 - 10	0.37	M06
	V62C811A-A2***	XF13 G 3/8	internal	not collected	1	with detent	1900	3 - 8	-	0.81	M03
	V62C822A-A2***	XF13 G 3/8	external	not collected	1	with detent	1900	-0.9 - 8	3 - 8	0.81	M03
 2+4 <sup>1)</sup>	V62C811D-C213A	XF13 G 3/8	internal	collected	2	with detent	1900	3 - 10	-	0.71	M06
	V62C822D-C213A	XF13 G 3/8	external	collected	2	with detent	1900	-0.9 - 10	3 - 10	0.71	M06

\*\*\* Insert voltage code from table, or 000 für version without solenoid.

<sup>1)</sup> NC – Normally closed, NO – Normally open, 2+4 – Central open pressure

Selection of solenoid and voltage

Please insert **solenoid code** instead of \*\*\* under Valve type.

Solenoid variant 1

Voltage	Code	Power consumption Inrush / Hold	Single solenoid Type
22 mm Solenoid with plug interface DIN 43650 Form B			
12 V DC	12L	2 W	V10626-A12
24 V DC	13L	2 W	V10626-A13
24 V 50/60 Hz	14L	4 / 2.5 VA	V10626-A14
48 V 50/60 Hz	16L	4 / 2.5 VA	V10626-A16
110/120 V 50/60 Hz	18L	4 / 2.5 VA	V10626-A18
220/240 V 50/60 Hz	19L	6 / 5 VA	V10626-A19
22 mm Solenoid with plug interface "industrial standard"			
12 V DC	12J	2 W	QM/48/160/21
24 V DC	13J	2 W	QM/48/127/21
24 V 50/60 Hz	14J	4 / 2.5 VA	QM/48/164/21
48 V 50/60 Hz	16J	4 / 2.5 VA	QM/48/165/21
110/120 V 50/60 Hz	18J	4 / 2.5 VA	QM/48/166/21
220/240 V 50/60 Hz	19J	6 / 5 VA	QM/48/167/21

Solenoid variant 2

Voltage	Code	Power consump. Inrush / Hold	Manual override	Twin pilot cpl. (with solenoids) Type
Twin pilot with plug interface DIN 43650 Form C (4 pin)				
24 V DC	13 A	2 W	press	9031703 9000 024 00
			detent	9031704 9000 024 00
			without	9031705 9000 024 00

Plug configuration, valve side / Twin pilot

Symbol	Plug no.	Function	Actuation
	1	(+)	12 (Solenoid 2)
	2	(-)	12 + 14
	3	(+)	14 (Solenoid 1)
	PE	⊥	(Ground)

Technical data for solenoid variants 1 + 2:

Voltage tolerance: ±10%

Rating: 100% ED

Protection class: IP 65 with sealed plugs (ISO 6952)

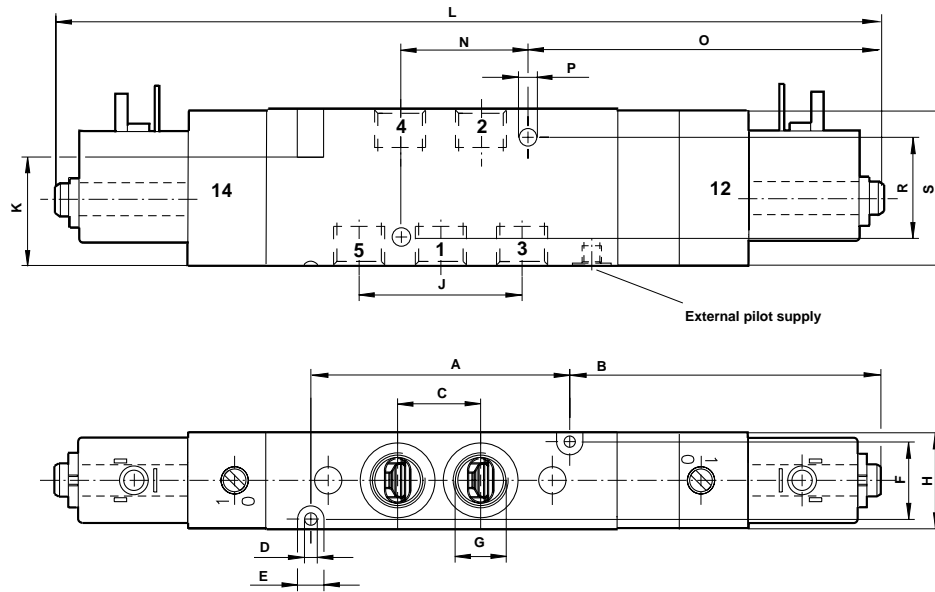
Connection plugs must be ordered separately – see page 13



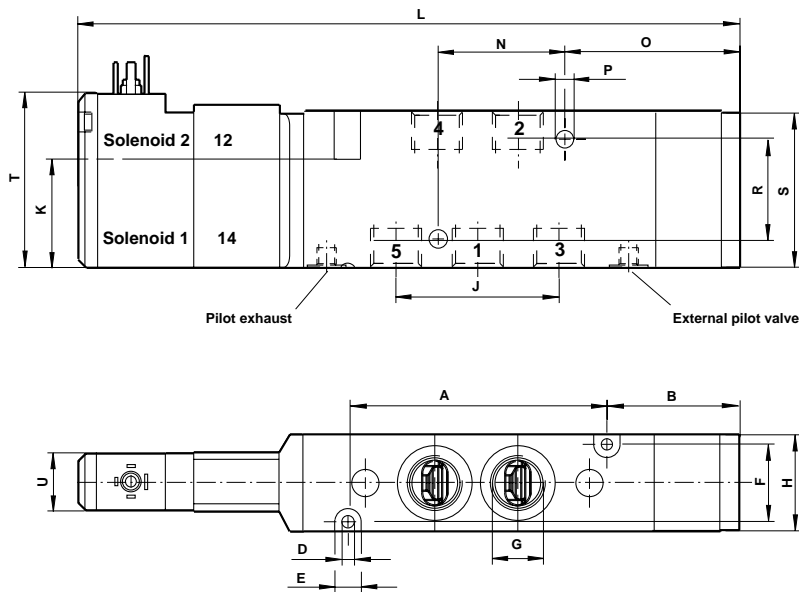


Dimensional drawings

03



06



Dimensional table 03

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Rest position	50	-	16.2	3.2	6.5	17	G 1/8	22	32,4	28	189	-	25	-	4.5	26	35	-	-
XF8 V61	Rest position	66	-	21	3.2	6.5	20	G 1/4	25	42	28	217	-	32	-	4.5	26	40	-	-
XF13 V62	Rest position	78	-	24.4	4.5	8	28	G 3/8	34	48.8	44	242	-	12	-	4.5	36	55	-	-

Dimensional table 06

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	Double pilot	50	30	16.2	3.2	6.5	17	G 1/8	22	32,4	28	148	-	25	39	4.5	26	35	45	15
XF8 V61	Double pilot	66	36	21	3.2	6.5	20	G 1/4	25	42	28	171	-	32	47	4.5	26	40	45	15
XF13 V62	Double pilot	78	43	24.4	4.5	8	28	G 3/8	34	48.8	44	194	-	12	82	4.5	36	55	45	15



Valve choice

3/2 directional control valves, pneumatically actuated

Symbol	Type		Size	Operator 12	Operator 10	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.
 NC <sup>1)</sup>	V60A4D7A-X5090	XF5	G 1/8	Air	Spring	750	-0.9 - 10	2.5 - 10	0.13	M07
	V61B4D7A-X5090	XF8	G 1/4	Air	Spring	1300	-0.9 - 10	2.5 - 10	0.21	M07
	V62C4D7A-X5090	XF13	G 3/8	Air	Spring	2600	-0.9 - 10	2.5 - 10	0.43	M07
 NO <sup>1)</sup>	V60A3D7A-X5090	XF5	G 1/8	Spring	Air	750	-0.9 - 10	2.5 - 10	0.13	M07
	V61B3D7A-X5090	XF8	G 1/4	Spring	Air	1300	-0.9 - 10	2.5 - 10	0.21	M07
	V62C3D7A-X5090	XF13	G 3/8	Spring	Air	2600	-0.9 - 10	2.5 - 10	0.43	M07
	V60A4DDA-X5020	XF5	G 1/8	Air	Air	750	-0.9 - 10	1.5 - 10	0.13	M07
	V61B4DDA-X5020	XF8	G 1/4	Air	Air	1300	-0.9 - 10	1.5 - 10	0.21	M07
	V62C4DDA-X5020	XF13	G 3/8	Air	Air	2600	-0.9 - 10	1.5 - 10	0.43	M07

2 x 3/2 directional control valves, pneumatically actuated

Symbol	Type		Size	Operator	Operator	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.
 NC/NC <sup>1)</sup>	V60AADDA-X5020	XF5	G 1/8	14 Air	12 Air	500	2 - 10	2 - 10	0.18	M08
	V61BADDA-X5020	XF8	G 1/4	14 Air	12 Air	950	2 - 10	2 - 10	0.28	M08
	V62CADDA-X5020	XF13	G 3/8	14 Air	12 Air	1900	2 - 10	2 - 10	0.60	M08
 NO/NO <sup>1)</sup>	V60ABDDA-X5020	XF5	G 1/8	10 Air	10 Air	500	2 - 10	2 - 10	0.18	M08
	V61BBDDA-X5020	XF8	G 1/4	10 Air	10 Air	950	2 - 10	2 - 10	0.28	M08
	V62CBDDA-X5090	XF13	G 3/8	10 Air	10 Air	1900	2 - 10	2 - 10	0.60	M08
 NO/NC <sup>1)</sup>	V60ACDDA-X5020	XF5	G 1/8	10 Air	12 Air	500	2 - 10	2 - 10	0.18	M08
	V61BCDDA-X5020	XF8	G 1/4	10 Air	12 Air	950	2 - 10	2 - 10	0.28	M08
	V62CCDDA-X5020	XF13	G 3/8	10 Air	12 Air	1900	2 - 10	2 - 10	0.60	M08

Hint: Internal resetting via pressure and spring.

<sup>1)</sup> NC – Normally closed, NO – Normally open, 2+4 – Central open pressure

5/2 directional control valves, pneumatically actuated

Symbol	Type		Size	Operator 12	Operator 10	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.
	V60A5D7A-X5090	XF5	G 1/8	Air	Spring	750	-0.9 - 10	2.5 - 10	0.16	M08
	V61B5D7A-X5090	XF8	G 1/4	Air	Spring	1300	-0.9 - 10	2.5 - 10	0.26	M08
	V62C5D7A-X5090	XF13	G 3/8	Air	Spring	2600	-0.9 - 10	2.5 - 10	0.56	M08
	V60A5DDA-X5020	XF5	G 1/8	Air	Air	750	-0.9 - 10	1.5 - 10	0.17	M08
	V61B5DDA-X5020	XF8	G 1/4	Air	Air	1300	-0.9 - 10	1.5 - 10	0.27	M08
	V62C5DDA-X5020	XF13	G 3/8	Air	Air	2600	-0.9 - 10	1.5 - 10	0.58	M08

5/3 directional control valves, pneumatically actuated

Symbol	Type		Size	Operator 12	Operator 10	Flow (l/min)	Operating pressure (bar)	Pilot pressure external (bar)	Weight (kg)	Dimensional drawing No.
 NC <sup>1)</sup>	V60A6DDA-X5020	XF5	G 1/8	Air	Air	500	-0.9 - 10	3 - 10	0.20	M09
	V61B6DDA-X5020	XF8	G 1/4	Air	Air	950	-0.9 - 10	3 - 10	0.32	M09
	V62C6DDA-X5020	XF13	G 3/8	Air	Air	1900	-0.9 - 10	3 - 10	0.67	M09
 NO <sup>1)</sup>	V60A7DDA-X5020	XF5	G 1/8	Air	Air	500	-0.9 - 10	3 - 10	0.20	M09
	V61B7DDA-X5020	XF8	G 1/4	Air	Air	950	-0.9 - 10	3 - 10	0.32	M09
	V62C7DDA-X5020	XF13	G 3/8	Air	Air	1900	-0.9 - 10	3 - 10	0.67	M09
 2+4 <sup>1)</sup>	V60A8DDA-X5020	XF5	G 1/8	Air	Air	500	-0.9 - 10	3 - 10	0.20	M09
	V61B8DDA-X5020	XF8	G 1/4	Air	Air	9500	-0.9 - 10	3 - 10	0.32	M09
	V62C8DDA-X5020	XF13	G 3/8	Air	Air	1900	-0.9 - 10	3 - 10	0.67	M09

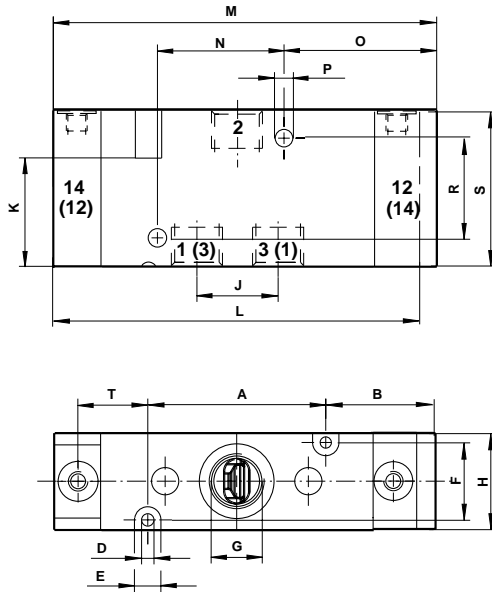
Hint: Reversal switching in middle position via spring.

<sup>1)</sup> NC – Normally closed, NO – Normally open, 2+4 – Central open pressure

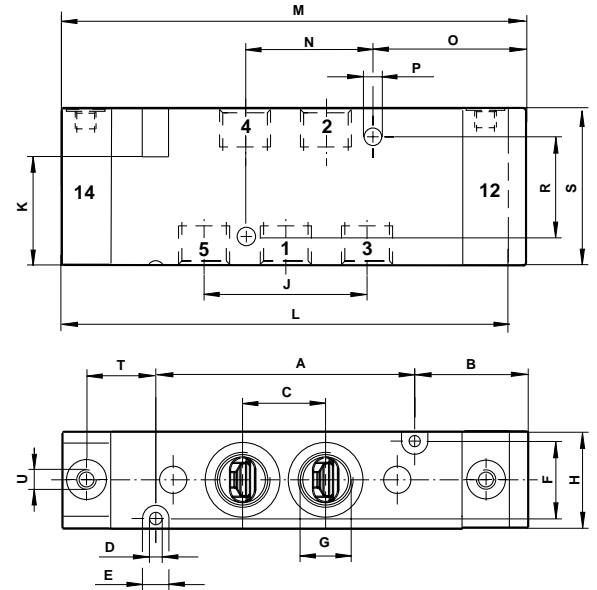


Dimensional drawings

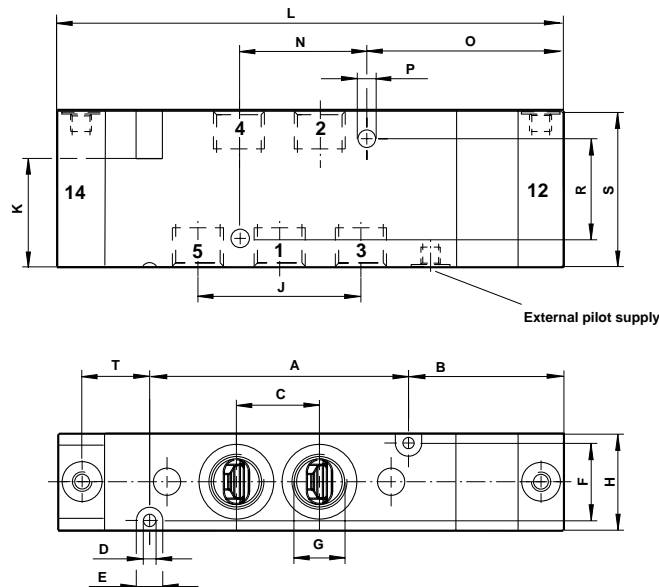
07



08



09



Dimensional table 07

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	3/2 Rest posit.	35	29	-	3.2	6.5	17	G 1/8	22	16.2	28	80	86	25	37	4.5	26	35	17	M5
XF5 V60	3/2 Impuls	35	23	-	3.2	6.5	17	G 1/8	22	16.2	28	80	86	25	31	4.5	26	35	17	M5
XF8 V61	3/2 Rest posit.	46	35	-	3.2	6.5	20	G 1/4	25	21	28	94	105	32	46	4.5	26	40	18	M5
XF8 V61	3/2 Impuls	46	24	-	3.2	6.5	20	G 1/4	25	21	28	94	105	32	35	4.5	26	40	18	M5
XF13 V62	3/2 Rest posit.	54	43	-	4.5	8	28	G 3/8	34	24.4	44	108	124	12	58	4.5	36	55	21	M5
XF13 V62	3/2 Impuls	54	27	-	4.5	8	28	G 3/8	34	24.4	44	108	124	12	42	4.5	36	55	21	M5

Dimensional table 08

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	5/2 Rest pos.	50	29	16.2	3.2	6.5	17	G 1/8	22	32.4	28	95	101	25	37	4.5	26	35	17	M5
XF5 V60	5/2 Imp.+2x3/2	50	23	16.2	3.2	6.5	17	G 1/8	22	32.4	28	95	101	25	31	4.5	26	35	17	M5
XF8 V61	5/2 Rest pos.	66	35	21	3.2	6.5	20	G 1/4	25	42	28	114	125	32	46	4.5	26	40	18	M5
XF8 V61	5/2 Imp.+2x3/2	66	24	21	3.2	6.5	20	G 1/4	25	42	28	114	125	32	35	4.5	26	40	18	M5
XF13 V62	5/2 Rest pos.	78	43	24.4	4.5	8	28	G 3/8	34	48.8	44	132	148	12	82	4.5	36	55	21	M5
XF13 V62	5/2 Imp.+2x3/2	78	27	24.4	4.5	8	28	G 3/8	34	48.8	44	132	148	12	66	4.5	36	55	21	M5

Dimensional table 09

Type	Version	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5 V60	5/3	50	37	16.2	3.2	6.5	17	G 1/8	22	32.4	28	109	-	25	45	4.5	26	35	17	M5
XF8 V61	5/3	66	42	21	3.2	6.5	20	G 1/4	25	42	28	132	-	32	53	4.5	26	40	18	M5
XF13 V62	5/3	78	49	24.4	4.5	8	28	G 3/8	34	48.8	44	154	-	12	88	4.5	36	55	21	M5



## XF Manifold System

### Manifold plate

Valve ports	XF5 / V60		XF8 / V61		XF13 / V62	
	Type	Weight (kg)	Type	Weight (kg)	Type	Weight (kg)
2	2221002 0000 000 00	0.23	2221102 0000 000 00	0.28	2221202 0000 000 00	0.50
3	2221003 0000 000 00	0.28	2221103 0000 000 00	0.45	2221203 0000 000 00	0.85
4	2221004 0000 000 00	0.61	2221104 0000 000 00	0.72	2221204 0000 000 00	1.25
6	2221006 0000 000 00	0.86	2221106 0000 000 00	1.02	2221206 0000 000 00	1.79
8	2221008 0000 000 00	1.11	2221108 0000 000 00	1.32	2221208 0000 000 00	2.33
10	2221010 0000 000 00	1.36	2221110 0000 000 00	1.62	2221210 0000 000 00	2.87
12	2221012 0000 000 00	1.61	2221112 0000 000 00	1.92	2221212 0000 000 00	3.41
14	2221014 0000 000 00	1.86	2221114 0000 000 00	2.22	2221214 0000 000 00	3.95
16	2221016 0000 000 00	2.11	2221116 0000 000 00	2.52	2221216 0000 000 00	4.49
18	2221018 0000 000 00	2.36	2221118 0000 000 00	2.82	2221218 0000 000 00	5.03
20	2221020 0000 000 00	2.61	2221120 0000 000 00	3.12	2221220 0000 000 00	5.57

### Accessories

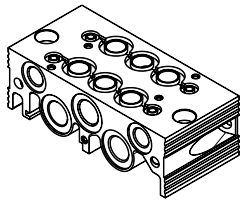
For manifold	Blanking plate complete** Type	Pressure shut-off part for 2fold + 3fold* Type	Pressure shut-off part for 4fold – 20fold* Type
XF5 / V60	0100561 0000 000 00	0701208 0000 000 00	0100567 0000 000 00
XF8 / V61	0100563 0000 000 00	0701209 0000 000 00	0100569 0000 000 00
XF13 / V62	0100565 0000 000 00	0701210 0000 000 00	0100571 0000 000 00

\* Necessary for separate supply of two different pressures.

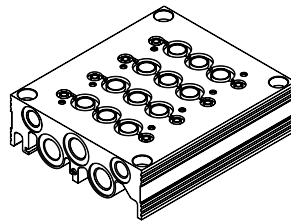
\*\* For closing reserve valve ports.

Included in the delivery scope: seals and fastening screws.

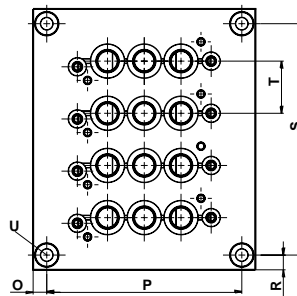
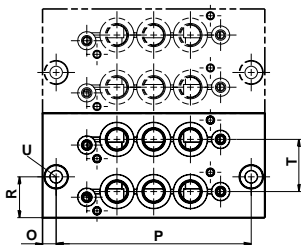
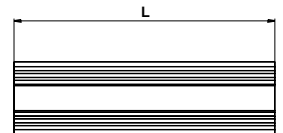
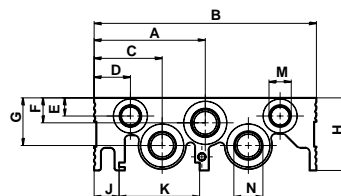
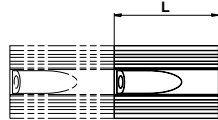
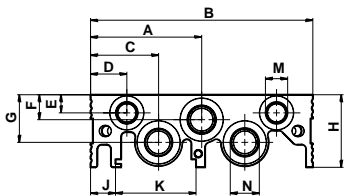
### Manifold plate 2fold + 3fold



### Manifold plate 4fold – 20fold



### Dimensional drawings



### Dimensional table

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U
XF5–2fold	49	98	30	16	8	11	21	32	11	35,5	46	G 1/8	G 1/4	6	86	18		23	for M5
XF5–3-20fold	49	98	30	16	8	11	21	32	11	35,5	(x-23)+23	G 1/8	G 1/4	6	86	6,5	(x-23)+10	23	for M5
XF8–2fold	52	104	26	9	8	13	20	33	10	35,5	52	G 1/8	G 3/8	40	24	26		26	for M5
XF8–3-20fold	52	104	26	9	8	13	20	33	10	35,5	(x-26)+23	G 1/8	G 3/8	40	24	6,5	(x-26)+10	26	for M5
XF13–2fold	60	120	29	9	8	15	22	38	13	35,5	70	G 1/8	G 1/2	44	32	35		35	for M6
XF13–3-20fold	60	120	29	9	8	15	22	38	13	35,5	(x-35)+26	G 1/8	G 1/2	44	32	7	(x-35)+12	35	for M6



## Device plug connectors for actuating solenoids with protection class IP 65

Picture	Designation	Electrical circuit diagram	Application temperature (°C)	Operating voltage (V)	Type
	Connector acc. to industrial standard, without cable without LED		-40 ... +125	12 ... 250 DC/AC	0657868 0000 000 00
	Connector acc. to DIN 43650 Form B, without cable without LED		-40 ... +125	12 ... 250 DC/AC	0680003 0000 000 00
	Connector acc. to industrial standard, without cable, with LED and extinguished diode or glow lamp		-40 ... +100 -40 ... +100	15 ... 30 DC 150 ... 250 DC/AC	0680000 0000 000 00 0680001 0000 000 00
	Connector acc. to DIN 43650 Form B, without cable, with LED and extinguished diode or glow lamp		-40 ... +100 -40 ... +100	15 ... 30 DC 150 ... 250 DC/AC	0664811 0000 000 00 0664812 0000 000 00
	Connector acc. to DIN 43650 Form C, without cable, without LED		-40 ... +90	12 ... 250 DC/AC	0588666 0000 000 00