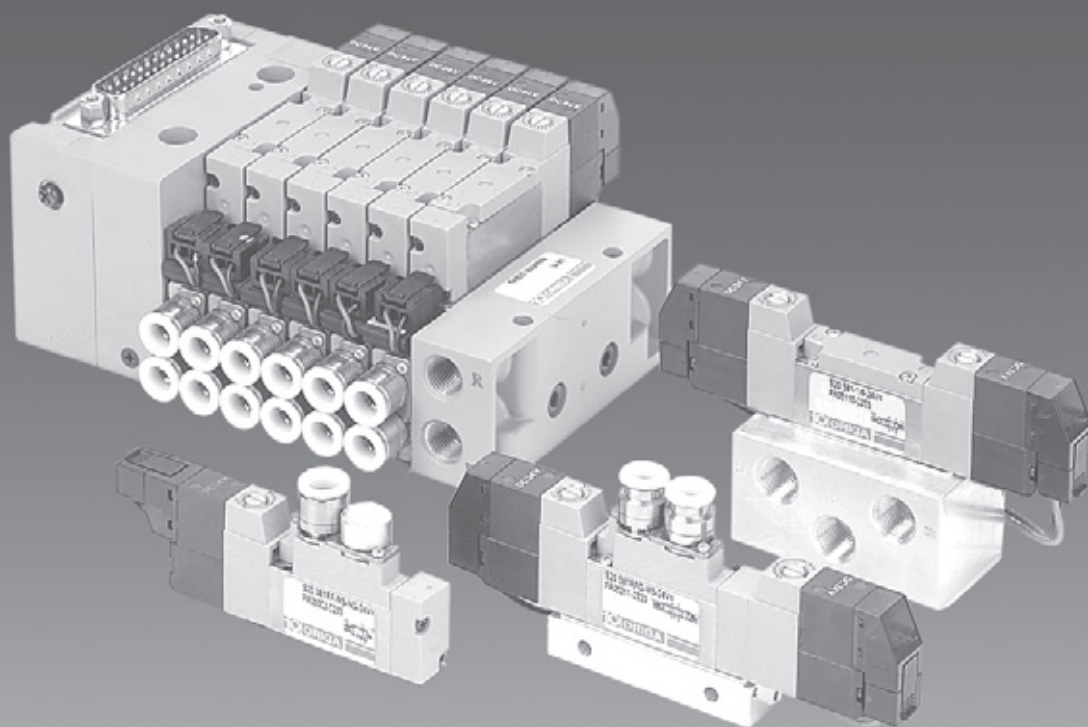
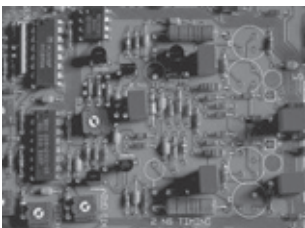


Miniature Pneumatics



HOERBIGER
ORIGA

Special tasks demand special automation concepts. With the addition of miniature pneumatics to their product range, HOERBIGER-ORIGA have taken a further important step in the direction of flexibility and versatility. »Intelligent solutions for automated movement« – now also in mini-pneumatics.



... for automated assembly work in the electronics industry



... for test procedures in the chemical industry



... for sorting processes in the pharmaceutical industry



... for assembly work in the production of optical equipment

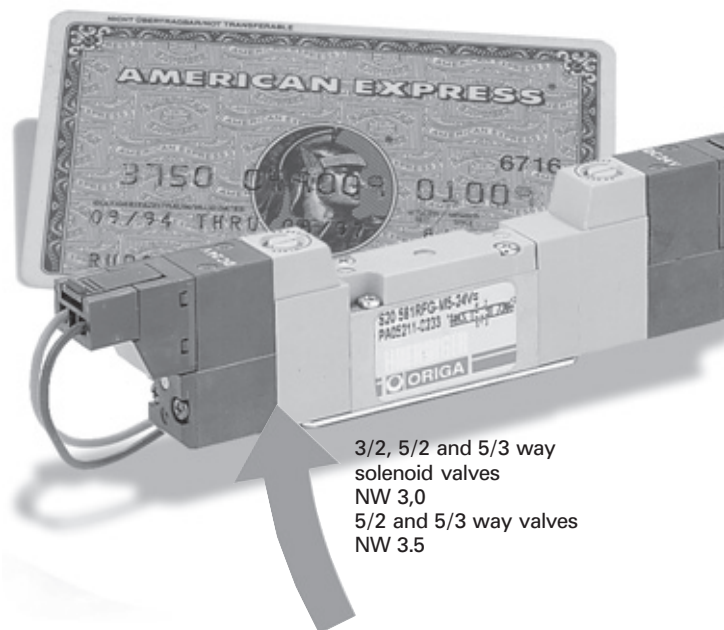
MINIATURE PNEUMATICS FOR SPECIAL APPLICATIONS

HOERBIGER-ORIGA miniature pneumatics are ideally suited for handling small, delicate components accurately and cost effectively. Providing for a high degree of automation for sensitive handling, positioning and assembly operations, applications are common place in the electronics, textile, and packaging industries, in the manufacture of clocks and spectacles, and in pharmaceutical, medical and dentistry production.

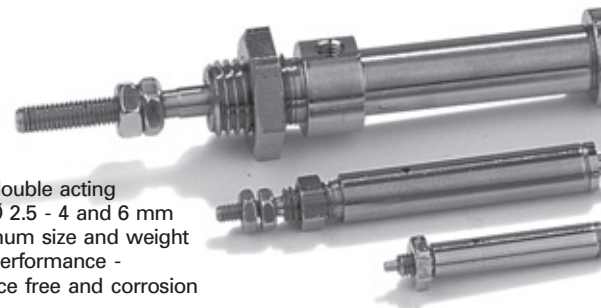
SOLUTIONS AS IN STANDARD PNEUMATICS

The basis for HOERBIGER-ORIGA's range is their wide experience from the standard pneumatic programme.

"Everything from one source" HOERBIGER-ORIGA offers customers a complete solution – simple space saving solutions for effective and economic automation.



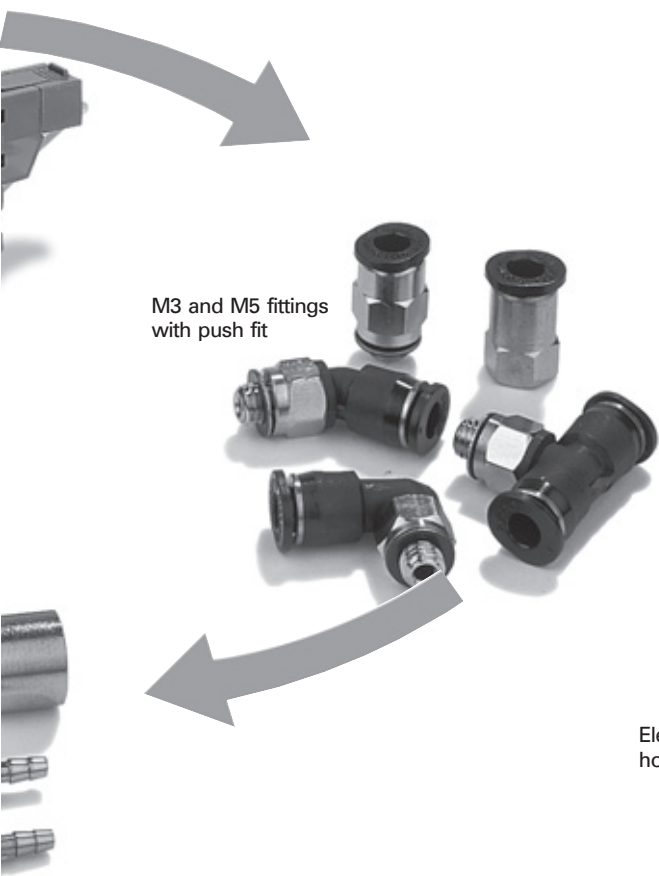
3/2, 5/2 and 5/3 way solenoid valves
NW 3,0
5/2 and 5/3 way valves
NW 3.5



Single or double acting cylinders \varnothing 2.5 - 4 and 6 mm with minimum size and weight and high performance - maintenance free and corrosion resistant.

Cylinders, valves and accessories are the basic components of any system. With a unified range, HOERBIGER-ORIGA offers the widest choice of options and combinations, opening the door for special system solutions.

... SIZE COMPARISON

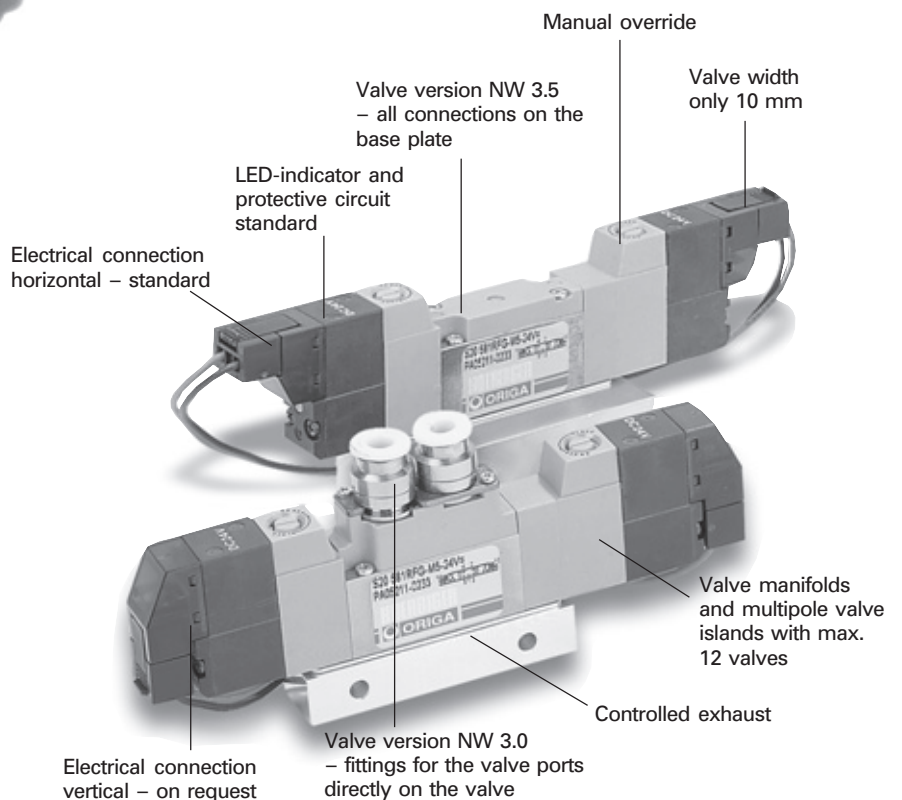


M3 and M5 fittings with push fit

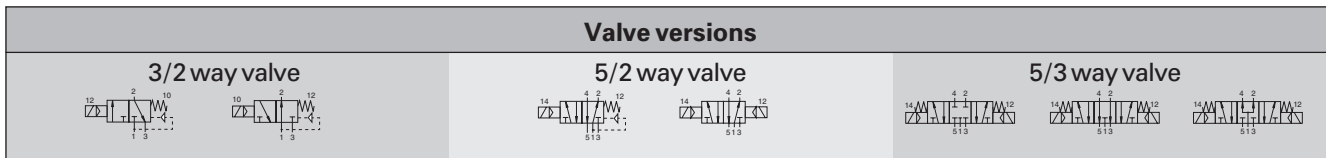
VALVES WITH AN OPTIMAL SIZE / PERFORMANCE RATIO

i.e.

- High flow
- Low weight
- Compact size
- Fast switching times
- Low energy consumption
- Easy installation
- Multipole version with rotating connector

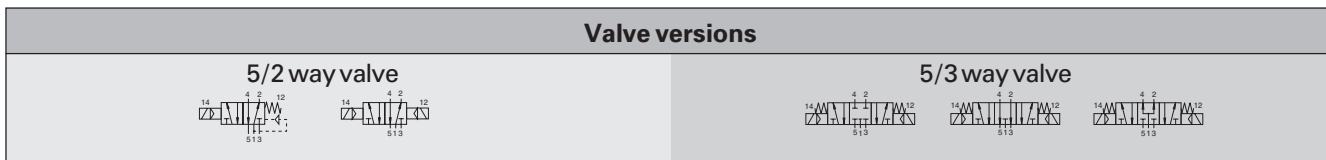


Valves NW 3.0 with fittings on ports 4 and 2



Version	Single valve without base plate	Version Single valve with base plate M5	Valve manifold	Valve island with multipole connector
electrical connection				
horizontal	O	O	X	X
vertical	X	X	X	X
Fittings				
Tube ODø 4 mm	X	X	X	X
Tube ODø 6 mm	O	O	X	X
Cable with connector				
Length 300 mm	-	O	X	integrated
Length 2000 mm	-	X	X	-
Voltage				
24 VDC	O	O	X	X
12 VDC	X	X	X	X

Valves NW 3.5 - all connections on baseplate

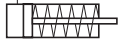

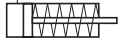
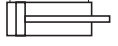


Version	Single valve without base plate	Version Single valve with baseplate G1/8	Valve manifold ⁽¹⁾	Valve island with multipole connector ⁽¹⁾
electrical connection				
horizontal	O	O	O	-
vertical	X	X	X	O
Fittings				
Tube ODø 4 mm	-	-	X	X
Tube ODø 6 mm	-	-	O	O
Cable with connector				
Length 300 mm	-	O	O	integrated
Length 2000 mm	-	X	X	-
Voltage				
24 VDC	O	O	O	O
12 VDC	X	X	X	X






O = Standard version
 X = On request
 - = not possible

⁽¹⁾ Valve ports (4 and 2) on the base plate with fittings, pressure supply (1) and exhausts (5 and 3) G1/8

Cylinder ø2.5 to 6 mm – single- and double acting

Symbol	Cylinder diameter (mm)	Stroke lengths (mm)	Connection	Page
	2.5	5, 10	Fitting for tubing ID 2 mm	24, 25
	4	5, 10, 15, 20	Fitting for tubing ID 2 mm	24, 25
	6	5, 10, 15, 20, 25	M3 Internal thread	24, 25
	6	5, 10, 15, 20, 25	M3 Internal thread	24, 25

Fittings – size M3 for tubing ODø 4 mm

Picture	Description	Page
	Tube fittings, straight - with parallel thread	26
	Threaded elbow tube fitting, short version	26
	Threaded elbow tube fitting, long version	26
	T-connector with parallel thread	26
	Y-connector, equal	27

3/2, 5/2 and 5/3 way valves NW 3.0

Base plate version

Actuation:
electrical, pilot operated
– by permanent signal
– by impulse

Series S 20

S20 381

S20 581

Versions

- Single valve without base plate
- Single valve with base plate
- Manifold version

Delivery includes:

Single valve without base plate:
1 Valve without connector
Gasket carrier with gasket
2 Mounting screws

Please order the connector separately
– see order instructions on page 23

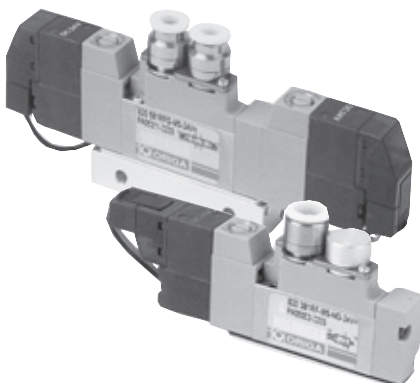
Single valve with base plate:
1 Valve on base plate,
cable (length 300 mm)
with connector

Characteristics to VDI 3290

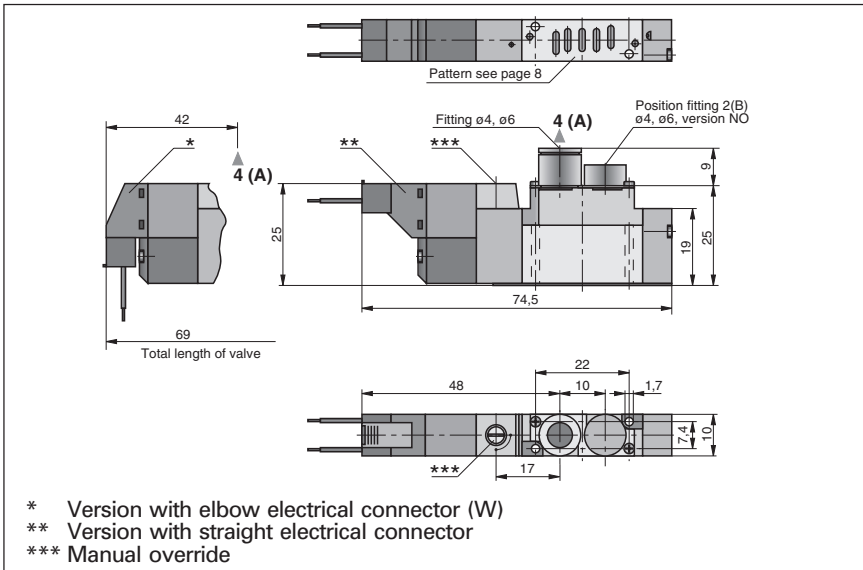
Pressures quoted as gauge pressures

Characteristic	Symbol	Unit	Description
General			
Type			Spool valve
Mounting			On base plate
Tube connection			Through base plate – M5
– Air supply and exhaust			
– Valve ports:			Fitting for tube ODø 6 mm (ø 4 mm on request)
Weight		g	≤ 45
Nominal diameter		mm	3,0
Installation			In any position
Ambient and medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	+5 +50
Medium			Filtered (5µm) compressed air or inert gases, lubricated or unlubricated.
Materials			
Housing			Al
Seals			NBR
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar bar	2 7
Nominal flow	Q_n	l/min	205
Actuation			
Electrical			Direct
Voltage type			Direct current
Nominal voltage	U_n	V	24 (12 V on request)
Power consumption		W	0.7
Relative operating factor	ED	%	100
Electrical protection			IP 40
Insulating class			F to VDE 0580
Connection			2-pole connector, – for cable, see order instructions
Indicator light			LED in each solenoid
Protective circuit			Integrated

For accessories see page 23



Dimensions (mm) – 3/2 way single valve without base plate



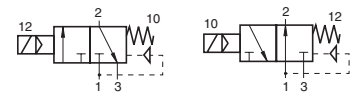
3/2 way solenoid valve NW 3.0

– Base plate version

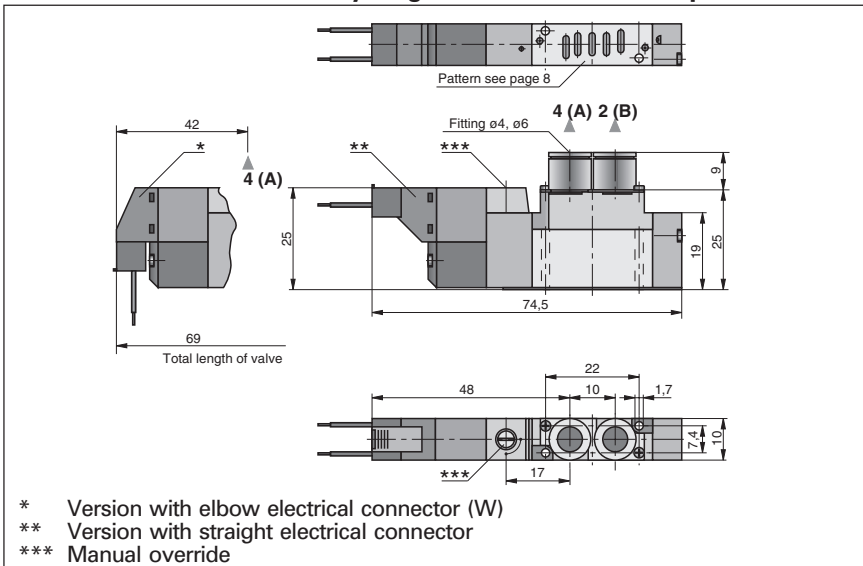
- single valve without base plate
- "normally closed" and "normally open" versions.
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 381RRF-30NG (NO)
S20 381RRF-30NG (NO)-W ***

For base plates see page 17
For RPL manifold see page 20, 21
For order instructions see page 11



Dimensions (mm) – 5/2 way single valve without base plate



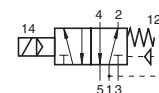
5/2 way solenoid valve (permanent signal version) NW 3.0

– Base plate version

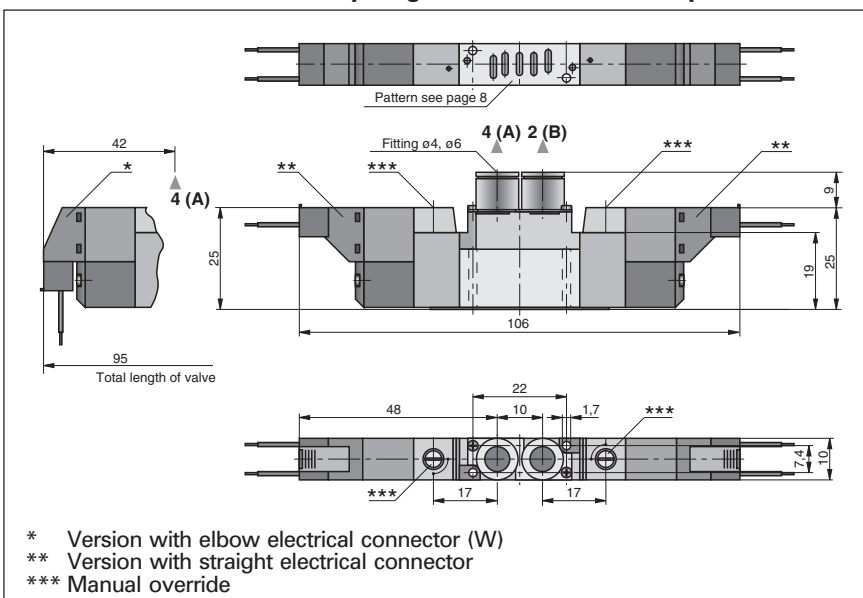
- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 581RRF-30
S20 581RRF-30-W ***

For base plates see page 17
For RPL manifold see page 20, 21
For order instructions see page 11



Dimensions (mm) – 5/2 way single valve without base plate



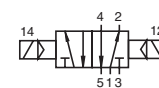
5/2 way solenoid valve (impulse version) NW 3.0

– Base plate version

- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

**Typ: S20 581-30
S20 581-30-W ***

For base plates see page 17
For RPL manifold see page 20, 21
For order instructions see page 11



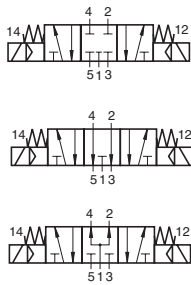
5/3 way solenoid valve (permanent signal version) NW 3.0

– Base plate version

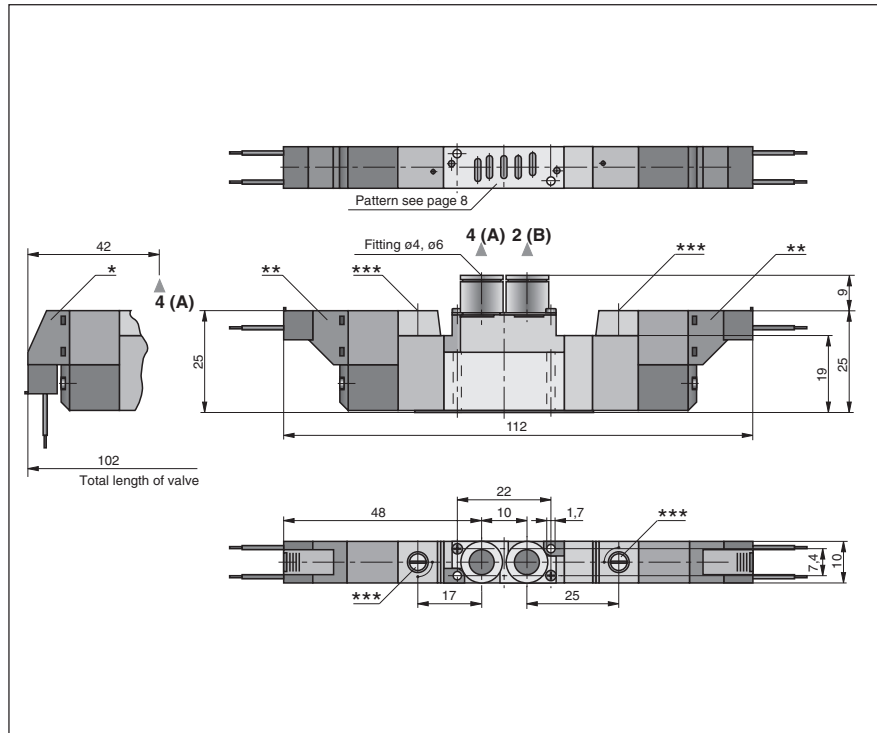
- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

Type: **S20 581 RF.-30**
S20 581 RF.-30-W *

For base plates see page 17
For RPL manifold see page 20, 21
For order instructions see page 11



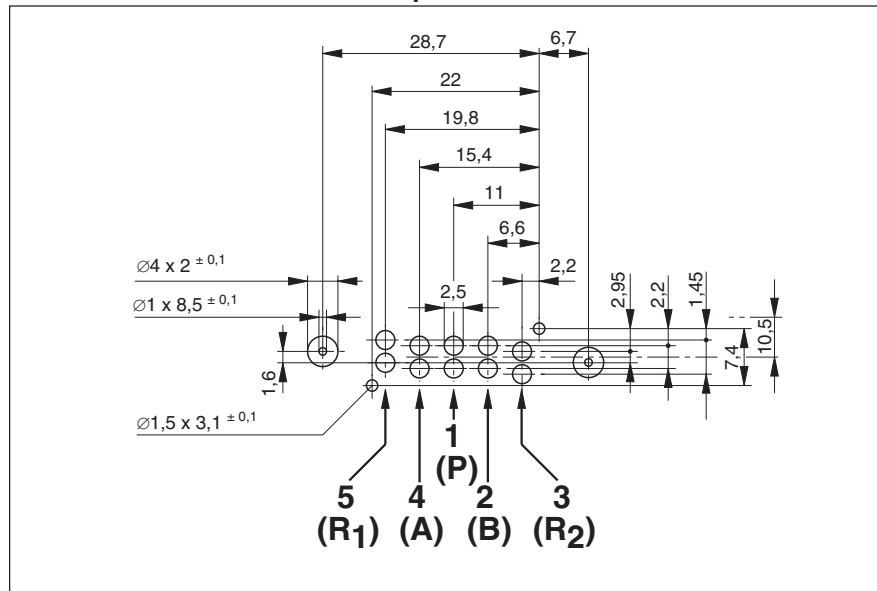
Dimensions (mm) – 5/3 way single valve without base plate



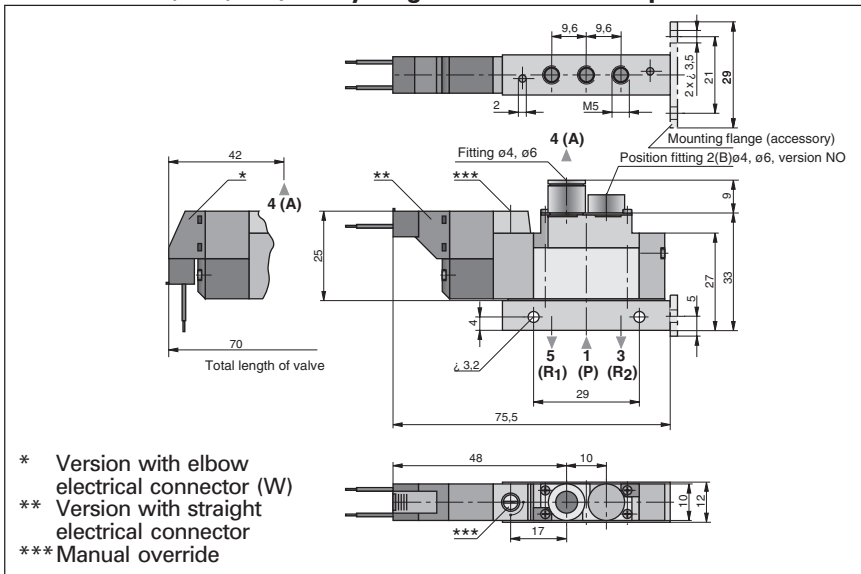
- * Version with elbow electrical connector (W)
- ** Version with straight electrical connector
- *** Manual override

Connection pattern for 3/2, 5/2 and 5/3 way solenoid valves

Dimensions (mm) – connection pattern



Dimensions (mm) – 3/2 way single valve with base plate M5



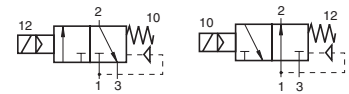
3/2 way solenoid valve NW 3.0

– Base plate version

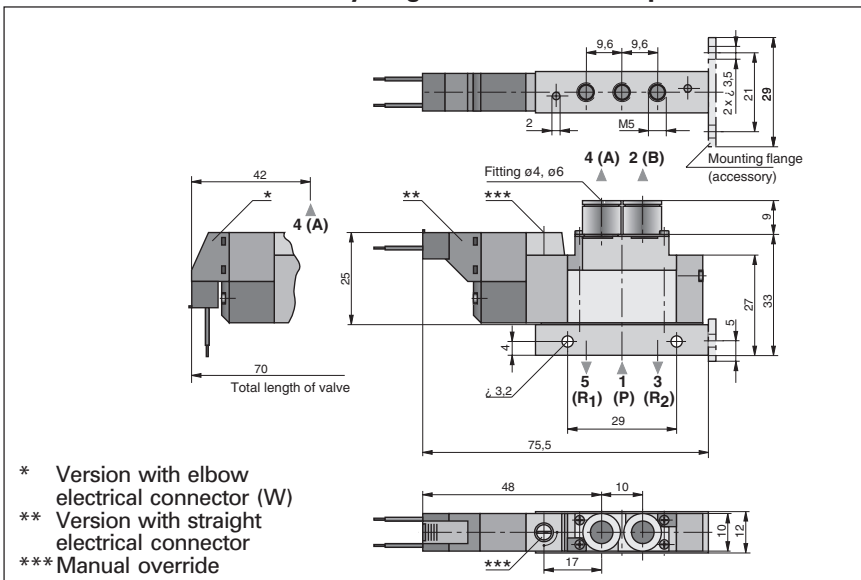
- single valve with base plate M5
- "normally closed" and "normally open" versions
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 381RRF-30NG (NO)-G
 S20 381RRF-30NG (NO)-G-W ***

For order instructions see page 11



Dimensions (mm) – 5/2 way single valve with base plate M5



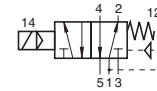
5/2 way solenoid valve (permanent signal version) NW 3.0

– Base plate version

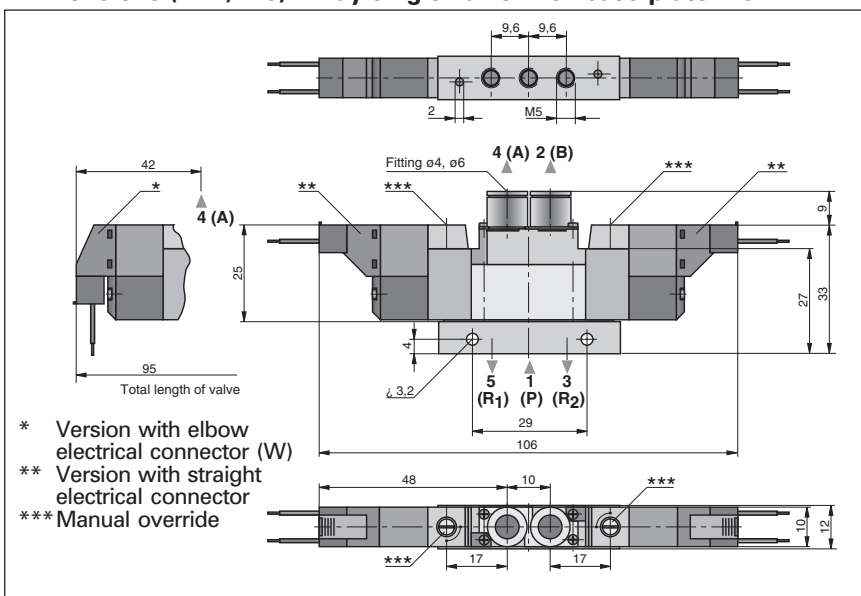
- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 581RRF-30-G
 S20 581RRF-30-G-W ***

For order instructions, see page 11



Dimensions (mm) – 5/2 way single valve with base plate M5



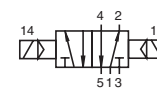
5/2 way solenoid valve (impulse version) NW 3.0

– Base plate version

- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 581-30-G
 S20 581-30-G-W ***

For order instructions, see page 11



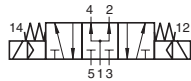
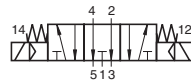
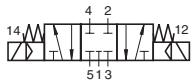
5/3 way solenoid valve (permanent signal version) NW 3.0

– Base plate version

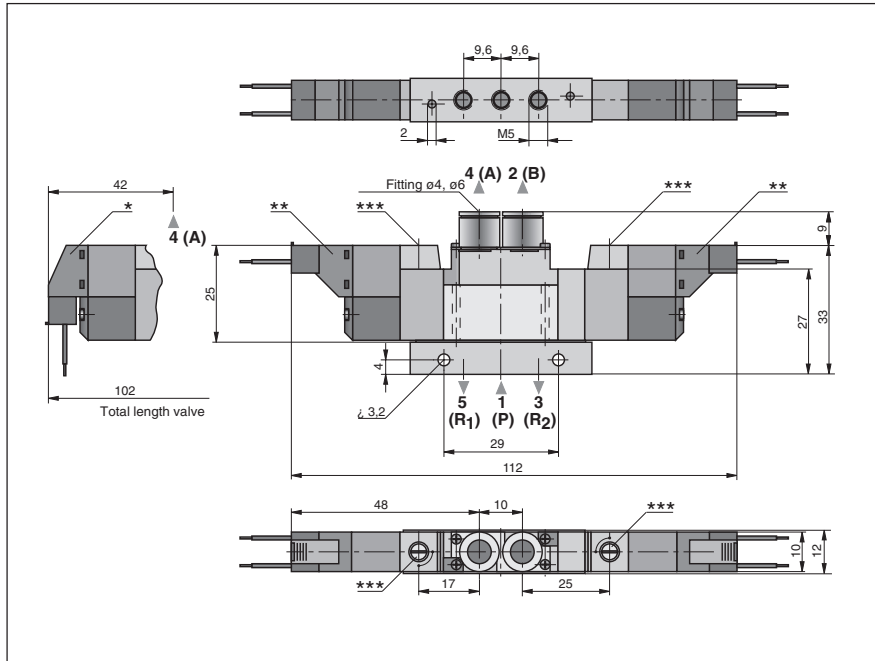
- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

Type: **S20 581RF.-G**
S20 581RF.-G-W *

For order instructions, see page 11



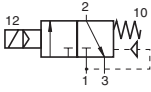
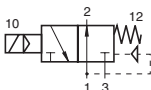
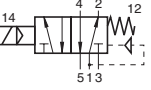
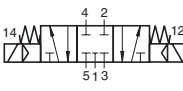
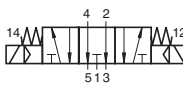
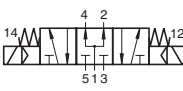
Dimensions (mm) – 5/3 way valve with base plate M5



- * Version with elbow electrical connector (W)
- ** Version with straight electrical connector
- *** Manual override

Order Instructions

Order Instructions

Actuation		Version	Symbol	Order Instructions	
				Type	Order No.
electrical by permanent signal, spring return (air piloted)		- Normally closed - Without base plate - Valve ports with fittings		S20 381RRF-30-NG	PA 05004-0233
				S20 381RRF-30-NG-W*	PA 05004-0293
				S20 381RRF-30-NG-G	PA 05002-0233
				S20 381RRF-30-NG-G-W*	PA 05002-0293
				S20 381RRF-30-NO	PA 05005-0233
				S20 381RRF-30-NO-W*	PA 05005-0293
		- Normally open - Without base plate - Valve ports with fittings		S20 381RRF-30-NO	PA 05005-0233
				S20 381RRF-30-NO-W*	PA 05005-0293
				S20 381RRF-30-NO-G	PA 05003-0233
				S20 381RRF-30-NO-G-W*	PA 05003-0293
				S20 581RRF-30	PA 05113-0233
				S20 581RRF-30-W*	PA 05113-0293
electrical, by impulse	- Without base plate - Valve ports with fittings		S20 581RRF-30-G	PA 05109-0233	
			S20 581RRF-30-G-W*	PA 05109-0293	
	- With base plate M5 - Valve ports with fittings		S20 581RRF-30	PA 05114-0233	
			S20 581RRF-30-W*	PA 05114-0293	
electrical, by permanent signal, spring return to middle position	Middle position closed	- Without base plate - Valve ports with fittings		S20 581RFG-30	PA 05217-0233
				S20 581RFG-30-W*	PA 05217-0293
		- With base plate M5 - Valve ports with fittings		S20 581RFG-30-G	PA 05211-0233
				S20 581RFG-30-G-W*	PA 05211-0293
	Middle position vented	- Without base plate - Valve ports with fittings		S20 581RFE-30	PA 05218-0233
				S20 581RFE-30-W*	PA 05218-0293
		- With base plate M5 - Valve ports with fittings		S20 581RFE-30-G	PA 05212-0233
				S20 581RFE-30-G-W*	PA 05212-0293
	Middle position pressurised	- Without base plate - Valve ports with fittings		S20 581RFB-30	PA 05219-0233
				S20 581RFB-30-W*	PA 05219-0293
		- With base plate M5 - Valve ports with fittings		S20 581RFB-30-G	PA 05213-0233
				S20 581RFB-30-G-W*	PA 05213-0293

* = version with vertical electrical connector

5/2 and 5/3 way valve NW 3.5

Base plate version

Actuation:
electrical, pilot operated
– by permanent signal
– by impulse

Series S 20

S20 381

S20 581

Versions

- Single valve without base plate
- Single valve with base plate
 - Manifold version

Delivery includes:

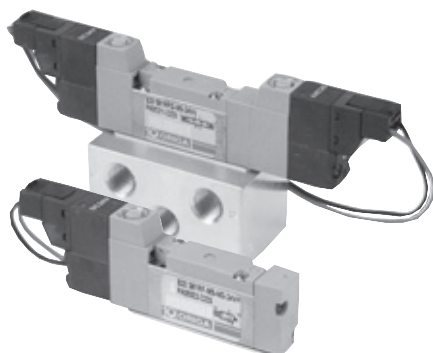
Single valve without base plate:

- 1 Valve without connector
- Gasket carrier with gasket
- 2 Mounting screws

Please order the connector separately
– see order instructions on page 23

Single valve with base plate:

- 1 Valve on base plate,
cable (length 300 mm)
with connector



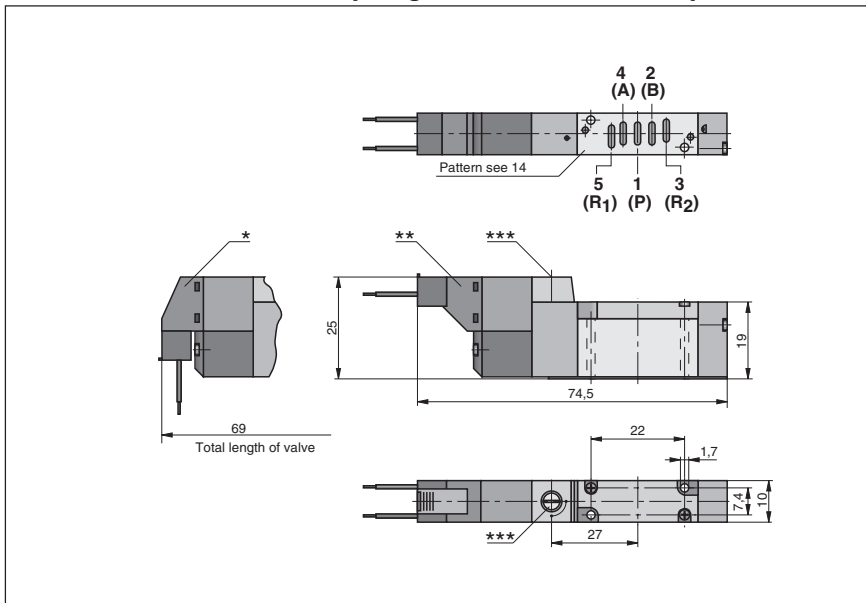
Characteristics to VDI 3290

Pressures quoted as gauge pressures

Characteristic	Symbol	Unit	Description
General			
Type			Spool valve
Mounting			On base plate
Tube connection			On base plate – G1/8
– Air supply and exhaust			On base plate – G1/8
– Valve ports:			On base plate – G1/8
Weight		g	≤ 45
Nominal diameter		mm	3.5
Installation			In any position
Ambient and medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	+5 +50
Medium inert			Filtered (5µm) compressed air or gases, lubricated or unlubricated.
Materials			
Housing			Al
Seals			NBR
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar bar	2 7
Nominal flow	Q_n	l/min	245
Actuation			
Electrical			Direct
Voltage type			Direct current
Nominal voltage	U_n	V	24 (12 V on request)
Power consumption		W	0.7
Relative operating factor	ED	%	100
Electrical protection			IP 40
Insulating class			F to VDE 0580
Connection			2-pole connector, – for cable, see order instructions
Indicator light			LED in each solenoid
Protective circuit			Integrated

For accessories see page 23

Dimensions (mm) – 5/2 way single valve without base plate



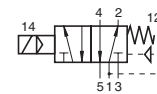
**5/2 way solenoid valve
(permanent signal version)
NW 3.5**

– Base plate version

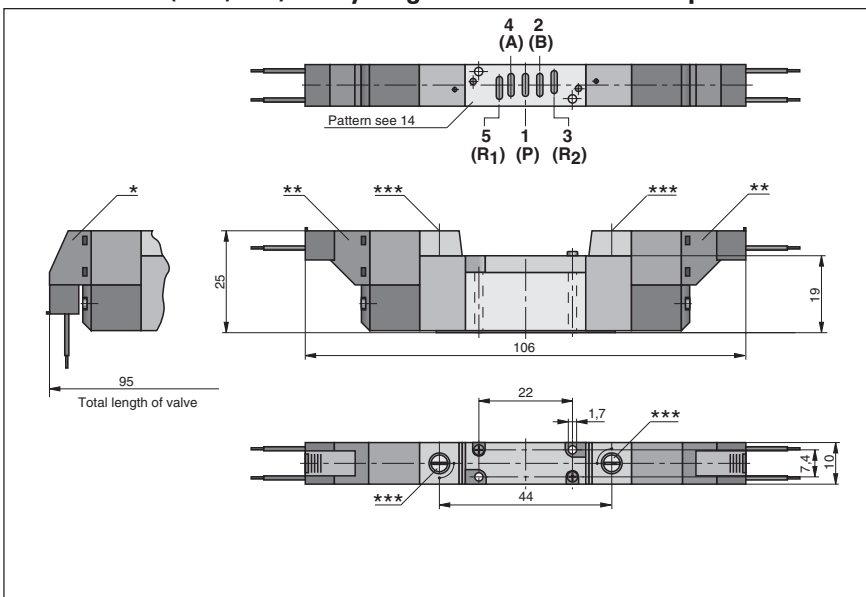
- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 581RRF-35F
S20 581RRF-35F-W ***

For base plates see page 17
For RPL manifold see page 17
For order instructions see page 16



Dimensions (mm) – 5/2 way single valve without base plate



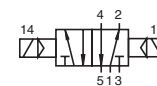
**5/2 way solenoid valve
(impulse version)
NW 3.5**

– Base plate version

- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

**Type: S20 581-35F
S20 581-35F-W ***

For base plates see page 17
For RPL manifold see page 17
For order instructions see page 16



- * Version with elbow electrical connector (W)
- ** Version with straight electrical connector
- *** Manual override

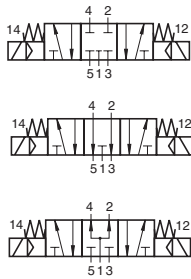
5/3 way solenoid valve (permanent signal version) NW 3.5

- Base plate version

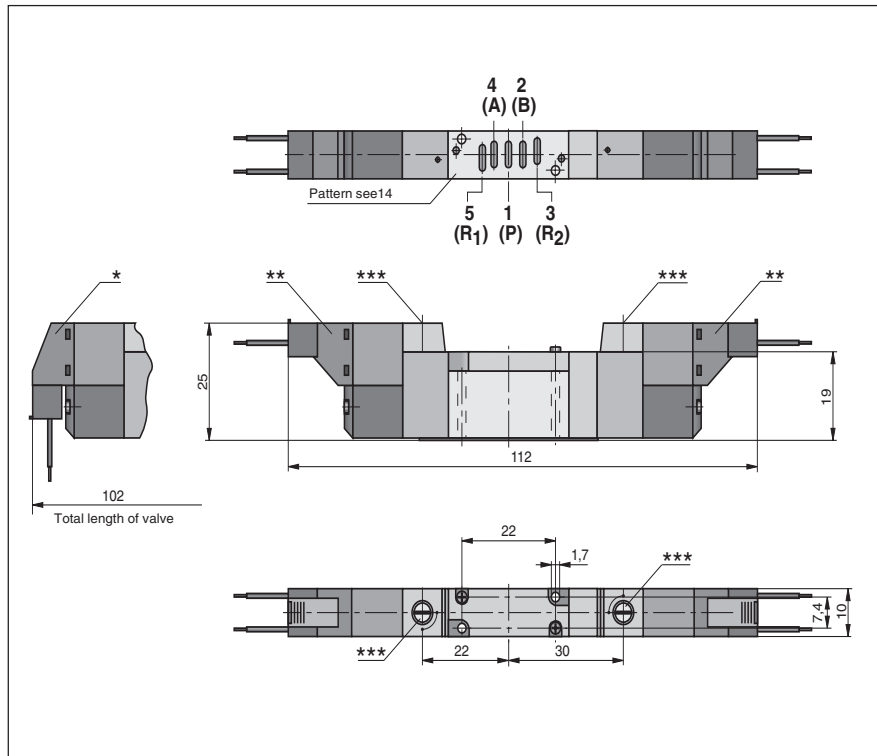
- single valve without base plate
- with straight electrical connector
- with elbow electrical connector (W)*

Type: **S20581RF.-35F**
S20581RF.-35F-W*

For base plates see page 17
For RPL manifold see page 20, 21
For order instructions see page 16



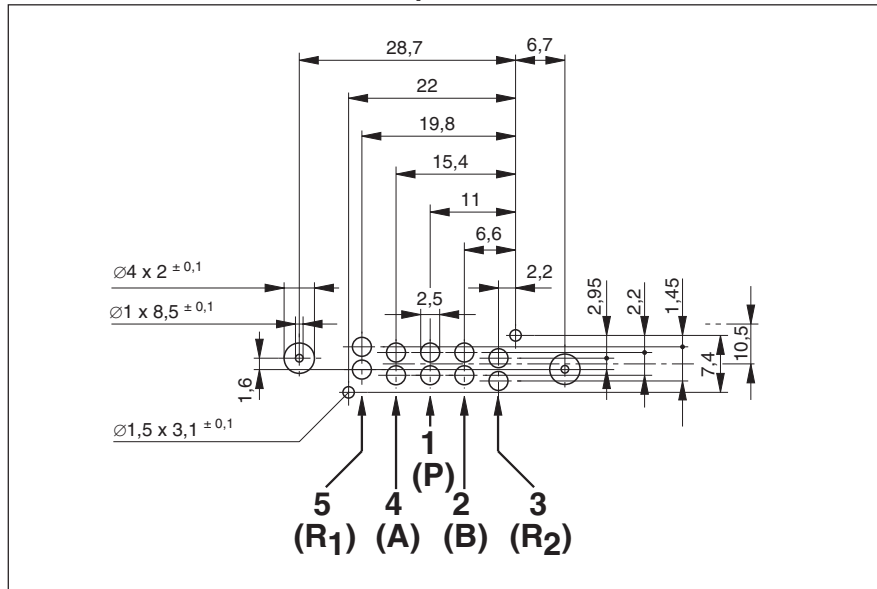
Dimensions (mm) – 5/3 way single valve without base plate



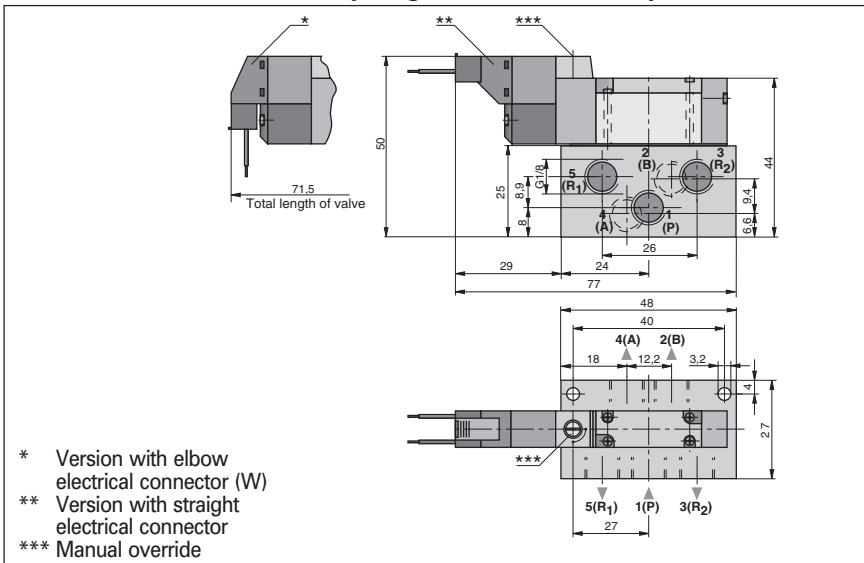
- * Version with elbow electrical connector (W)
- ** Version with straight electrical connector
- *** Manual override

Connection pattern for 5/2 and 5/3 way solenoid valve

Dimensions (mm) – Connection pattern



Dimensions (mm) – 5/2 way single valve with base plate G1/8

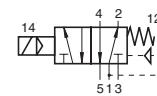


5/2 way solenoid valve (permanent signal version) NW 3.5

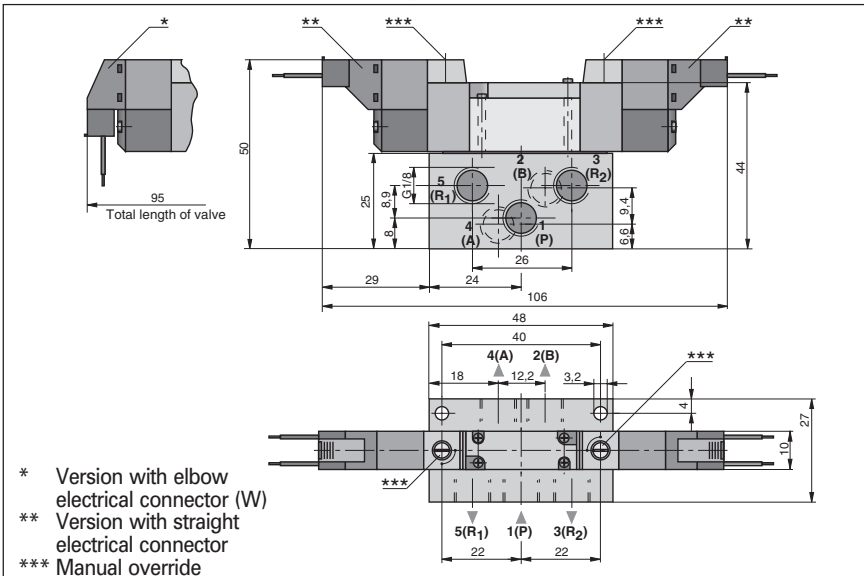
- Base plate version
- single valve with base plate G1/8
- with straight electrical connector
- with elbow electrical connector (W)*

Type: **S20 581RRF-35F-G**
S20 581RRF-35F-G-W *

For order instructions see page 16



Dimensions (mm) – 5/2 way single valve with base plate G1/8

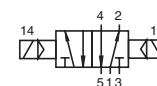


5/2 way solenoid valve (impulse version) NW 3.5

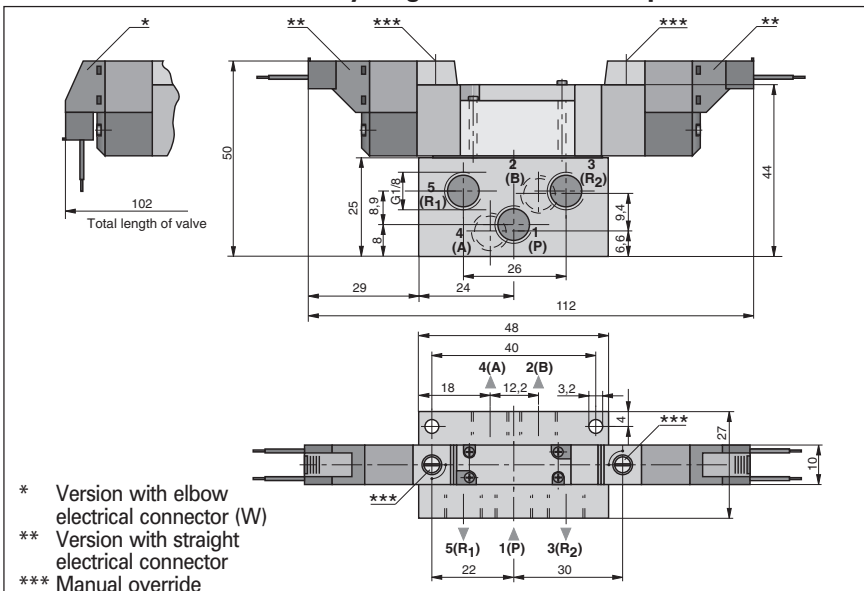
- Base plate version
- single valve with base plate G1/8
- with straight electrical connector
- with elbow electrical connector (W)*

Type: **S20 581-35F-G**
S20 581RRF-35F-G-W *

For order instructions see page 16



Dimensions (mm) – 5/3 way single valve with base plate G1/8

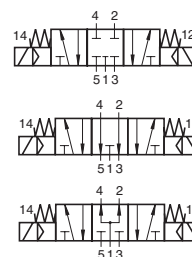


5/3 way solenoid valve (permanent signal version) NW 3.5

- Base plate version
- single valve with base plate G1/8
- with straight electrical connector
- with elbow electrical connector (W)*

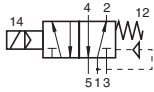
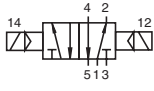
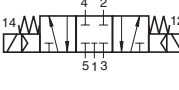
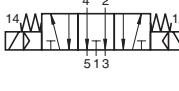
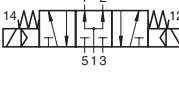
Type: **S20 581RF.-35F-G**
S20 581RRF-35F-G-W *

For order instructions see page 16



Directional Valves – 5/2 and 5/3 Way Valves NW 3.5

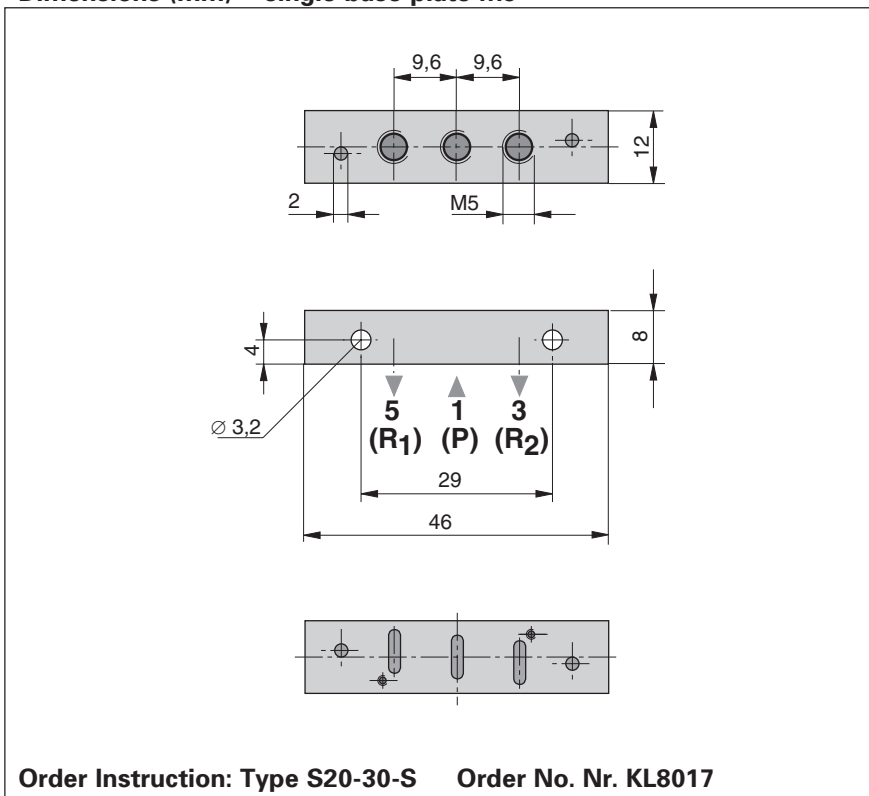
Order Instructions

Actuation		Version	Symbol	Type	Order Instructions Order No.
electrical by permanent signal, spring return (air piloted)		- Flange version without base plate		S20 581RRF-35F	PA 05115-0233
				S20 581RRF-35F-W*	PA 05115-0293
	- Flange version with base plate G1/8	S20 581RRF-35F-G		PA 05111-0233	
		S20 581RRF-35F-G-W*		PA 05111-0293	
electrical by impulse		- Flange version without base plate		S20 581-35F	PA 05116-0233
				S20 581-35F-W*	PA 05116-0293
	- Flange version with base plate G1/8	S20 581-35F-G		PA 05112-0233	
		S20 581-35F-G-W*		PA 05112-0293	
electrical by permanent signal, spring return to middle position	Middle position closed	- Flange version without base plate		S20 581RFG-35F	PA 05220-0233
				S20 581RFG-35F-W*	PA 05220-0293
		- Flange version with base plate G1/8		S20 581RFG-35F-G	PA 05214-0233
				S20 581RFG-35F-G-W*	PA 05214-0293
	Middle position vented	- Flange version without base plate		S20 581RFE-35F	PA 05221-0233
				S20 581RFE-35F-W*	PA 05221-0293
		- Flange version with base plate G1/8		S20 581RFE-35F-G	PA 05215-0233
				S20 581RFE-35F-G-W*	PA 05215-0293
	Middle position pressurised	- Flange version without base plate		S20 581RFB-35F	PA 05222-0233
				S20 581RFB-35F-W*	PA 05222-0293
		- Flange version with base plate G1/8		S20 581RFB-35F-G	PA 05216-0233
				S20 581RFB-35F-G-W*	PA 05216-0293

* = Version with vertical electrical connector

Single Base Plates

Dimensions (mm) – single base plate M5



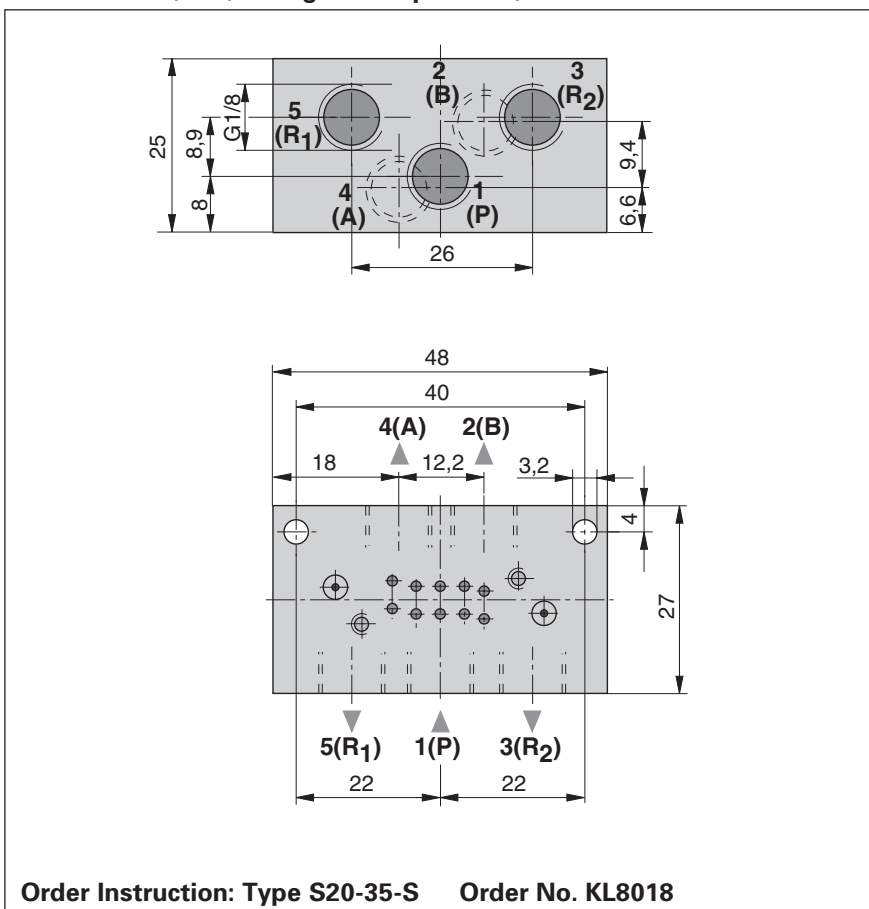
Single base plates for 3/2, 5/2 and 5/3 way solenoid valves NW 3.0

- Single base plate M5
– for valves NW 3.0

Type: S20-30-S



Dimensions (mm) – single base plate G1/8



Single base plates for 5/2 and 5/3 way solenoid valve NW 3.0 and 3.5

- Single base plate G1/8
– for valves NW 3.5

Type: S20-35-S



5/2 and 5/3 Way Valves NW 3.5

Manifold Version

5/2 and 5/3 way solenoid valve NW 3,5

– Manifold version for individual wire operation, completely assembled

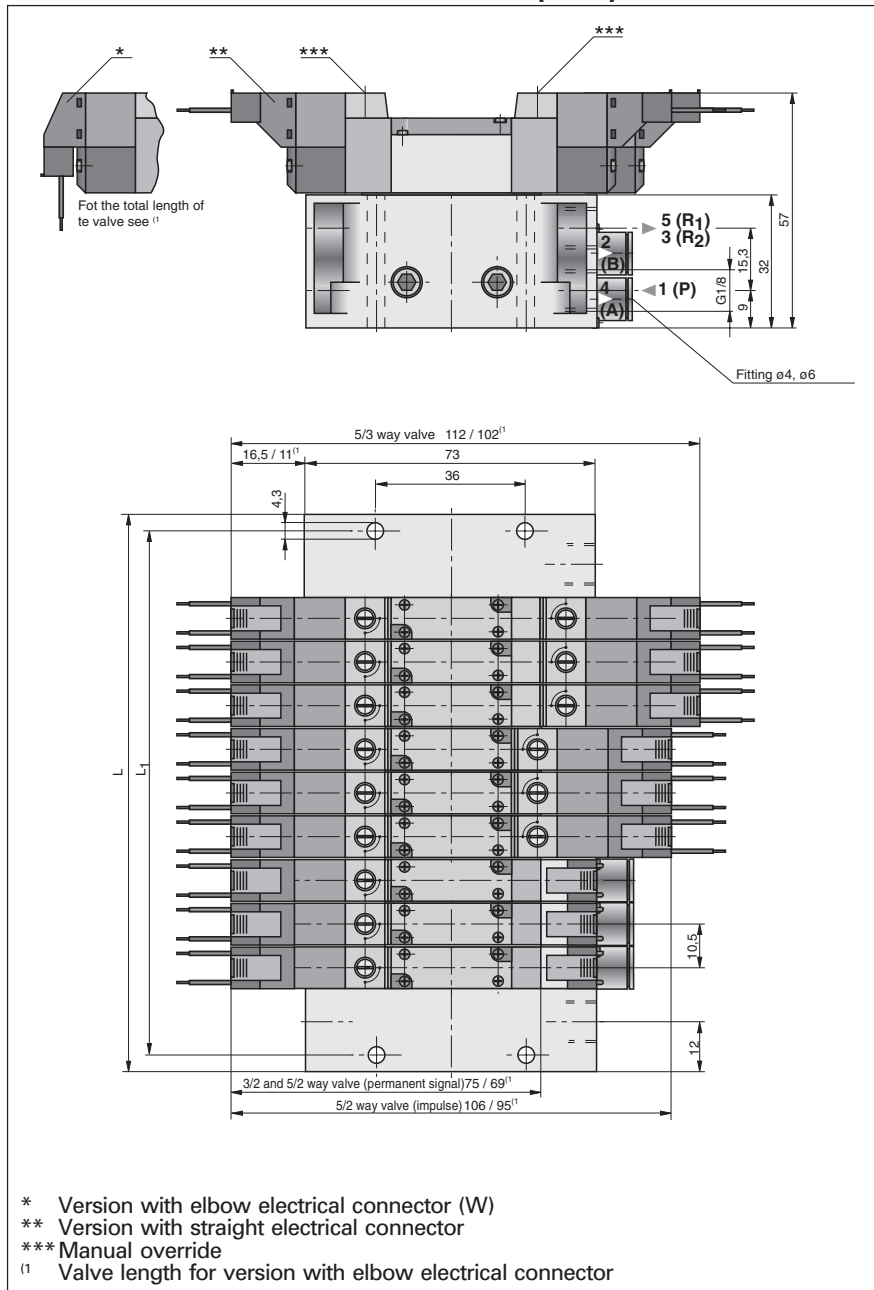
- valve ports on the base plate (fittings)
- with straight electrical connector
- with elbow electrical connector

Type: S20-35F

For order instructions see page 24

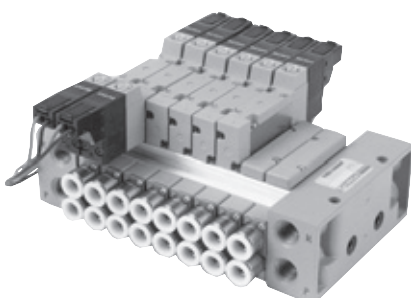
For further dimensions of the valves see pages 13, 14

Dimensions (mm) – manifold version, completely assembled



Dimension table (mm)

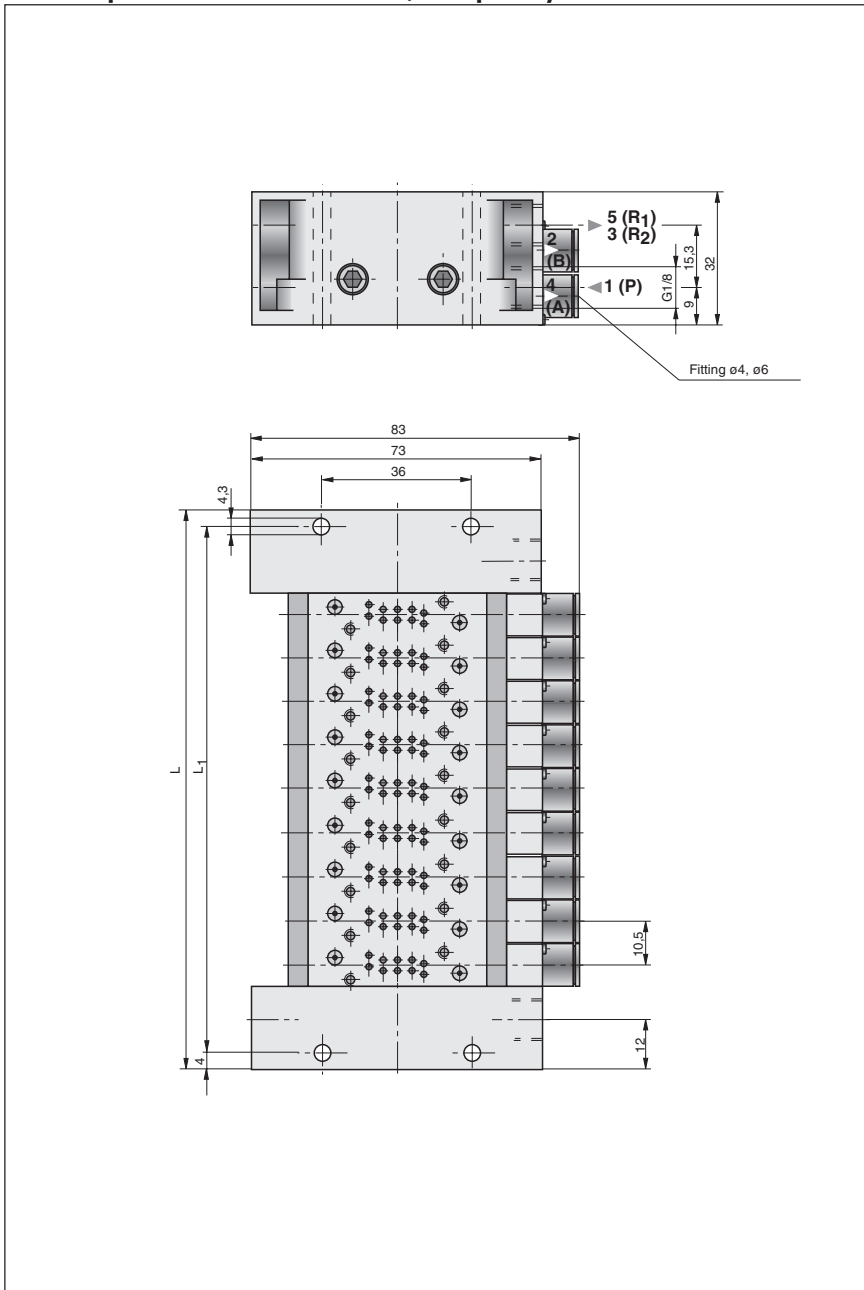
Number of Valves	Dimension		
	L	L ₁	L ₂
2	61	53	36
3	71.5	63.5	46.5
4	82	74	57
5	92	84.5	67.5
6	103	95	78
7	113.5	105.5	88.5
8	124	116	99
9	134.5	126.5	109.5
10	145	137	120
11	155.5	147.5	130.5
12	166	158	141



Base Plate for Valve Manifolds

Dimensions (mm)

– base plate for valve manifolds, completely assembled



Base plate for valve manifolds

- Base plate with fittings for valve ports
- for individual wire operation
- completely assembled

- valve ports on the base plate (fittings)
- with straight electrical connector
- with elbow electrical connector

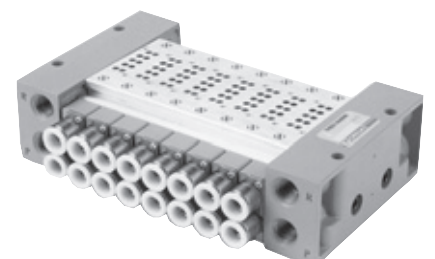
Type: S20-35F-G

For order instructions see page 24

For further dimensions of the valves see pages 13, 14

Dimension table (mm)

Number of Valves	Dimension		
	L	L ₁	L ₂
2	61	53	36
3	71.5	63.5	46.5
4	82	74	57
5	92	84.5	67.5
6	103	95	78
7	113.5	105.5	88.5
8	124	116	99
9	134.5	126.5	109.5
10	145	137	120
11	155.5	147.5	130.5
12	166	158	141



Valve Islands – Multipole Version

Manifold Version

5/2 and 5/3 way solenoid valve NW 3,5

– Manifold version
with Sub-D multipole connector,
completely assembled

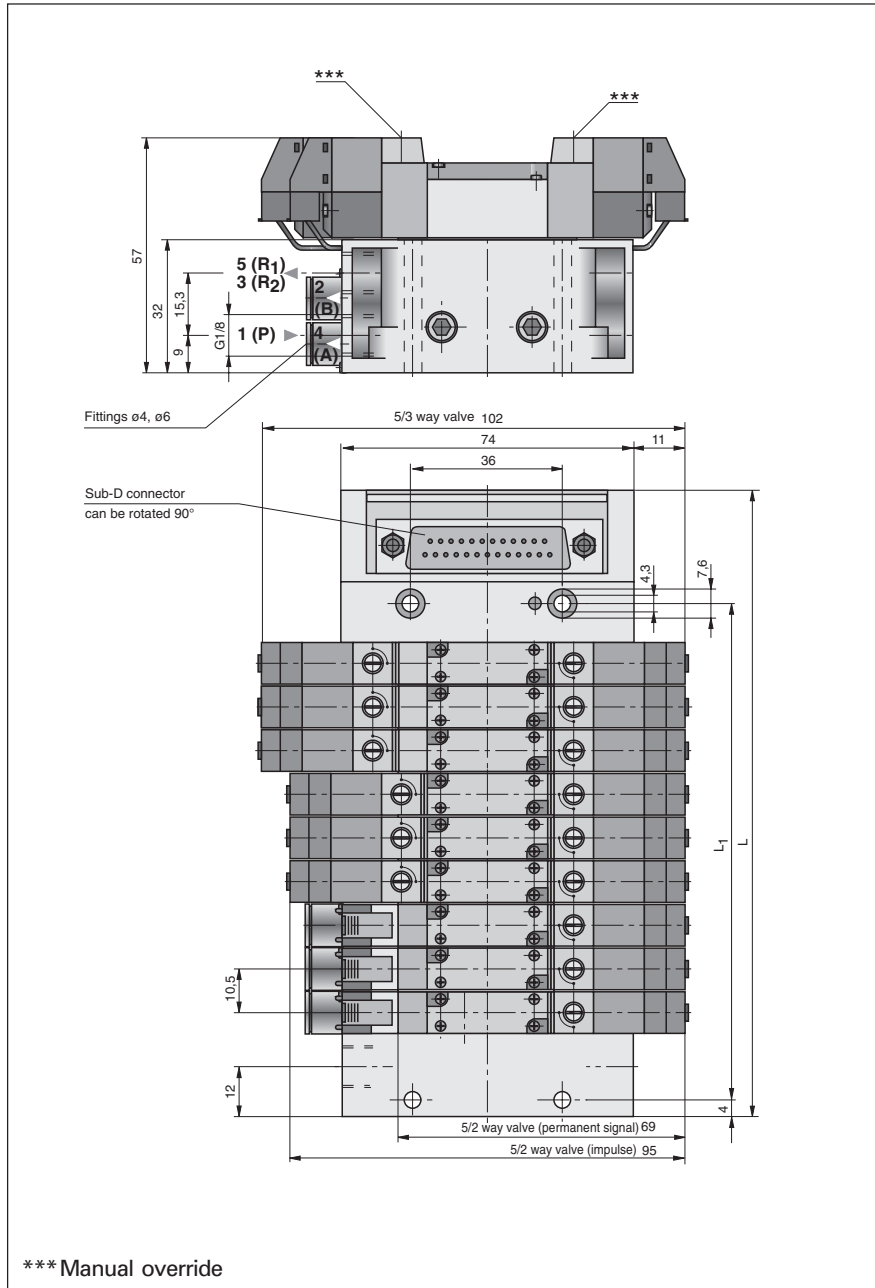
- valve ports on the base plate (fittings)
- with elbow electrical connector

Type: IM-35F-W

For order instructions see page 22

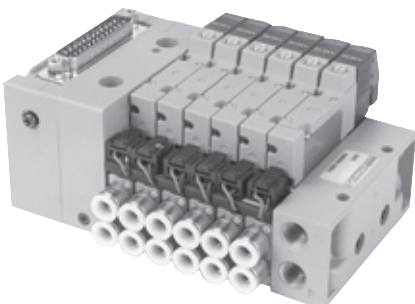
For further dimensions of the valves see pages 13, 14

Dimensions (mm) – manifold version, completely assembled



Dimension table (mm)

Number of Valves	Dimension	
	L	L ₂
2	82	46
3	92.5	56.5
4	103	67
5	113.5	77.5
6	124	88
7	134.5	98.5
8	145	109
9	155.5	119.5
10	166	130
11	176.5	140.5
12	187	151

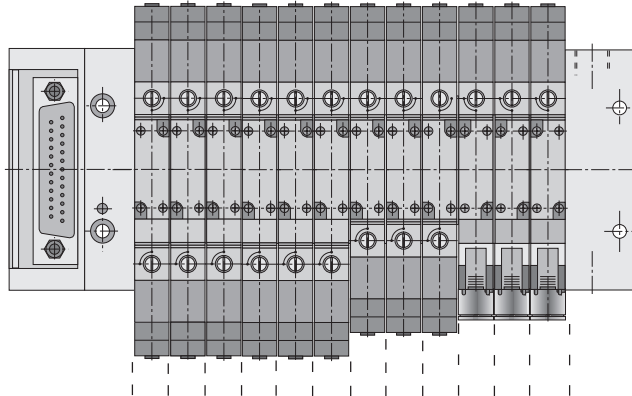


Valve Islands – Multipole Version

Order Instructions

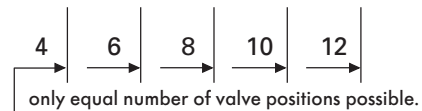
Order example:

Valve island with multipole connector, 12 fold equipped with:
 3 off 5/3 way valves S20 581RFG-35F
 3 off 5/3 way valves S20 581RFB-35F
 1 off 5/3 way valves S20 581RFE-35F
 3 off 5/2 way valves S20 581-35F
 3 off 5/2 way valves S20 581RRF-35F



Order example	Order no.							No. of valves	Valve position												
	P	A	0	5	3	0	2		1	2	3	4	5	6	7	8	9	10	11	12	
	P	A	0	5	3	0	2	1	2	G	G	G	B	B	E	J	J	J	G	G	G

For a neutral order key for your order, see page 29



Valve manifolds (fittings for ODø 6mm)*		
PA 05303	Electrical connection: horizontally, fittings on the base plate (2+4), NW 3,5 Type: S20-35F	
PA 05302 (on request)	Electrical connection: horizontally, fittings directly on the valve (2+4), NW 3,0 Type: S20-30	

Valve islands with multipole connector (fittings for ODø 6mm)*		
PA 05306	Valve without ports 2+4 all connections in the base plate Type: IM-35F-W	
PA 05301 (on request)	Valve with fittings (ports 2+4) ports 1, 3, 5 in the base plate, Type: IM-30-W	

* Versions with fittings ODø 4 mm on request

Base plate complete, for valve manifold – without valves, type: S20-35F-G		
PD 44232	For valves without ports 2+4 all connections in the base plate with fittings ODø 6 mm –	
PD 44233 (on request)	with fittings ODø 4 mm	
PD 44231 (on request)	without fittings	
Base plate complete, for valve islands – without valves, type: IM-35F-G		
PD 44235	Multipole version all connections in the base plate with fittings ODø 6 mm	
PD 44236 (on request)	with fittings ODø 4 mm	
PD 44234 (on request)	without fittings	

Please make sure to specify the codes for the correct valve types.

Order code for valves and blanking plates


Code	Symbol	Description	Data sh.
A	—	Blanking plate on valve position	Page 23
M		5/2 way solenoid valve, permanent signal with spring return (air piloted) Type: S20 581RRF-...	Page 7, 13
J		5/2 way solenoid valve, by impulse Type: S20 581-...	Page 7, 13
G		5/3 way solenoid valve, spring return to middle position, middle position closed Type: S20 581RFG-...	Page 8, 14
B		5/3 way solenoid valve, spring return to middle position, middle position pressurised Type: S20 581RFB-.../..	Page 8, 14
E		5/3 way solenoid valve, spring return to middle position, middle position vented Type: S20 581RFE-...	Page 8, 14
C		3/2 way solenoid valve, by permanent signal with spring return (air piloted), normally closed Type: S20 381RRF-...-NG	Page 7
O		3/2 way solenoid valve, by permanent signal with spring return (air piloted), normally open Type: S20 381RRF-...-NO	Page 7

Number of valves


04	up to 4 valves
06	5 and 6 valves
08	7 and 8 valves
10	9 and 10 valves
12	11 and 12 valves

Accessories


Cable with Sub-D Connector

Picture	Cable length	Order Instructions	
		Type	Order No.
	1.0 m	GSK-25-1	KL9012
	3.0 m	GSK-25-3	KL9013
	5.0 m	GSK-25-5	KL9014


Cable with standard connector (packages of 10 pieces)

Picture	Cable length	Order Instructions	
		Type	Order No.
	0.3 m	GSD-2-03	KL9015
	2.0 m	GSD-2-20	KL9016


Special gasket (packages of 10 pieces)

Picture	Order Instructions	
	Type	Order No.
	S20-30-D	KL8013


Gasket carrier (packages of 10 pieces)

Picture	Order Instructions	
	Type	Order No.
	S20-30-M	KL8014

Blanking plate with mounting screws (packages of 5 pieces)

Picture	Order Instructions	
	Type	Order No.
	S20-30-B	KL8015

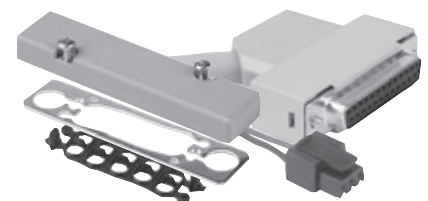
Valve mounting screws (packages of 100 pieces)

Picture	Order Instructions	
	Type	Order No.
	KL8016	

Accessories

- for solenoid valves NW3.0 and 3.5
- for valve manifolds
- for valve islands with multipole connector

- Cable with Sub-D connector
- Cable with standard connector
- Gasket
- Gasket carrier
- Blanking plate with mounting screws
- Valve mounting screws



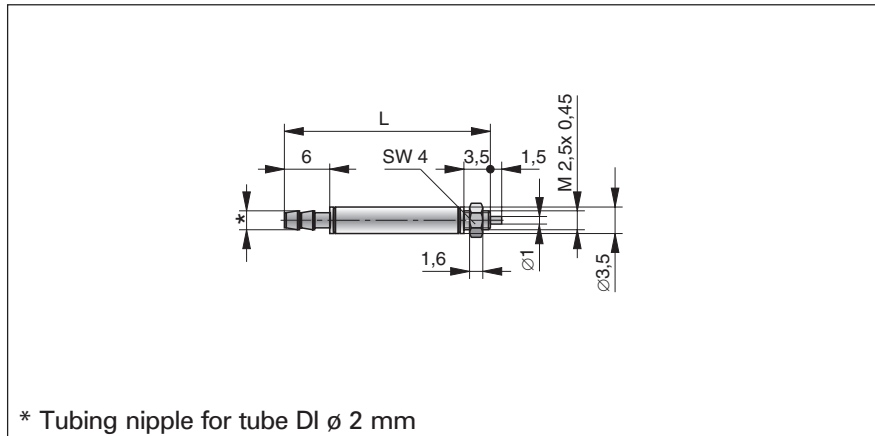
Cylinder \varnothing 2.5 mm single acting

Type: MR3002

Dimension table (mm)

Type	Stroke (mm)	Dimension L
MR3002	5	27.5
	10	34

Dimensions (mm) – type MR3002



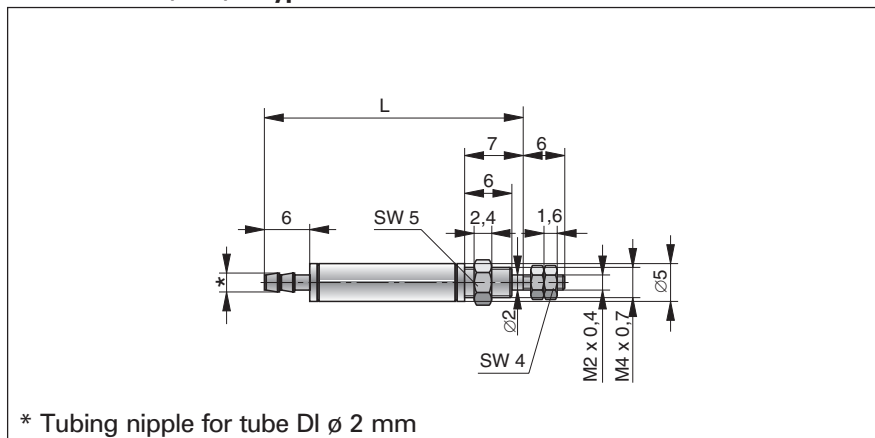
Cylinder \varnothing 4 mm single acting

Type: MR3004

Dimension table (mm)

Type	Stroke (mm)	Dimension L
MR3004	5	34
	10	40
	15	47
	20	52

Dimensions (mm) – type MR3004



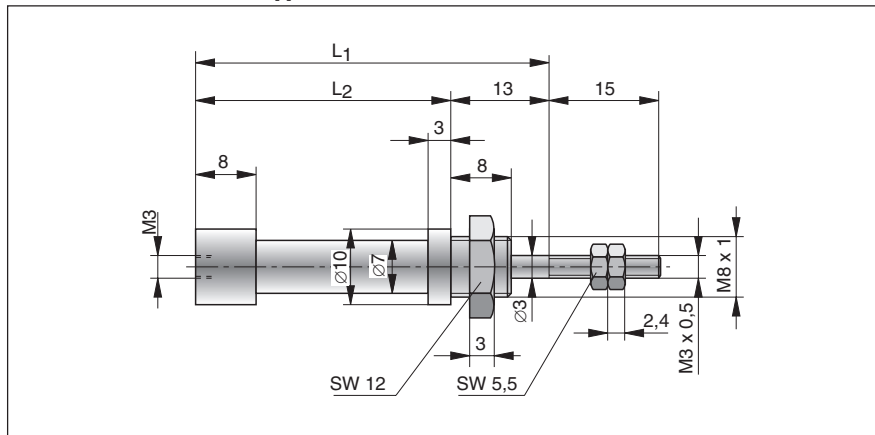
Cylinder \varnothing 6 mm single acting

Type: MR3006

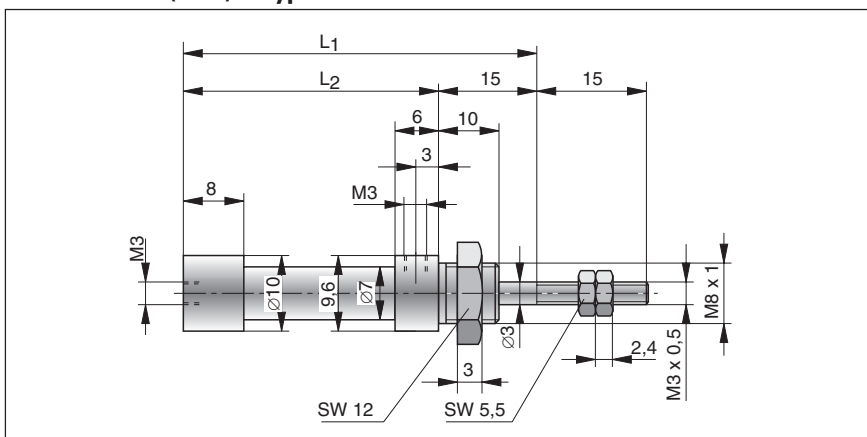
Dimension table (mm)

Type	Stroke (mm)	Dimension	
		L ₁	L ₂
MR3006	5	47	34
	10	52	39
	15	58	45
	20	65	52
	25	73	60

Dimensions (mm) – type MR3006



Dimensions (mm) – type MR2006



**Cylinder $\varnothing 6$ mm
double acting**

Type: MR2006

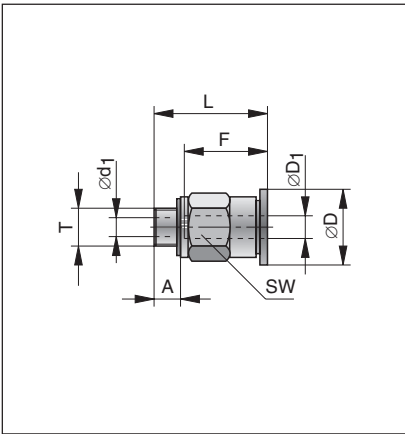
Dimension table (mm)

Type	Stroke (mm)	Dimension	
		L_1	L_2
MR2006	5	49	34
	10	54	39
	15	59	44
	20	64	49
	25	69	54

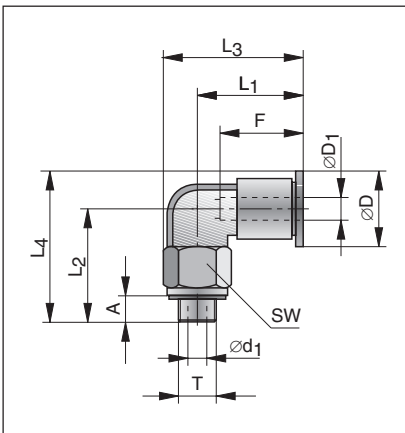
Order Instructions

Series	Symbol	Piston \varnothing (mm)	Stroke (mm)	Order Instructions	
				Type	Order No.
single acting without cushioning		2.5	5	MR3002/005	PA67770-0005
			10	MR3002/010	PA67770-0010
		4	5	MR3004/005	PA67780-0005
			10	MR3004/010	PA67780-0010
			15	MR3004/015	PA67780-0015
			20	MR3004/020	PA67780-0020
		6	5	MR3006/005	PA67790-0005
			10	MR3006/010	PA67790-0010
			15	MR3006/015	PA67790-0015
			20	MR3006/020	PA67790-0020
25	MR3006/025		PA67790-0025		
double acting without cushioning		6	5	MR2006/005	PA67800-0005
			10	MR2006/010	PA67800-0010
			15	MR2006/015	PA67800-0015
			20	MR2006/020	PA67800-0020
			25	MR2006/025	PA67800-0025

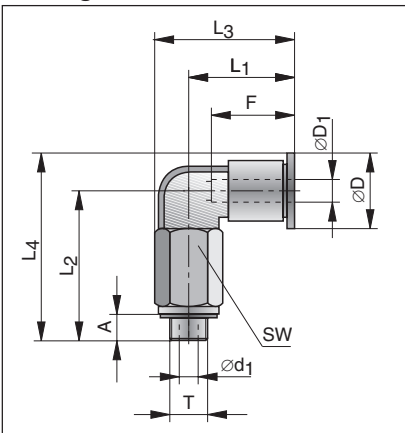
Tube fitting straight



**Elbow tube fitting
- short version**



**Elbow tube fitting
- long version**



Dimension table (mm) – order instructions and weights

Order Instruction Type	Order No.	A	$\varnothing D$	$\varnothing D_1$ (*)	F	L	T	SW	$\varnothing d_1$	Wght. (g)
GS2-M3	KL5059	3	8	4	9.5	14	M3x0.5	8	1.5	4

* for tube outer diameter

Dimension table (mm) – order instructions and weights

Order Instruction Type	Order No.	A	$\varnothing D$	$\varnothing D_1$ (*)	F	L ₁	L ₂	L ₃	L ₄	T	SW	$\varnothing d_1$	Wght. (g)
LDS2-M3	KL5060	3	8	4	95	12.4	12.5	16.2	16.5	M3x0.5	8	1.5	2.3

* for tube outer diameter

Dimension table (mm) – order instructions and weights

Order Instruction Type	Order No.	A	$\varnothing D$	$\varnothing D_1$ (*)	F	L ₁	L ₂	L ₃	L ₄	T	SW	$\varnothing d_1$	Wght. (g)
LDSL2-M3	KL5061	3	8	4	9.5	12.4	24.5	16.2	28.5	M3x0.5	8	1.5	10

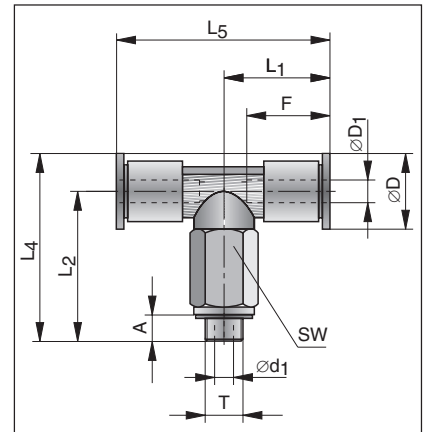
* for tube outer diameter

Dimension table (mm) – order instructions and weights

Order Instruction Type	Order No.	A	∅D	∅D ₁ (*)	F	L ₁	L ₂	L ₄	L ₅	T	SW	∅d ₁	Wght. (g)
TDS2-M3	KL5062	3	8	4	9.5	12.4	12.5	16.5	24.8	M3x0.5	8	1.5	2.8

* for tube outer diameter

T-connector with thread

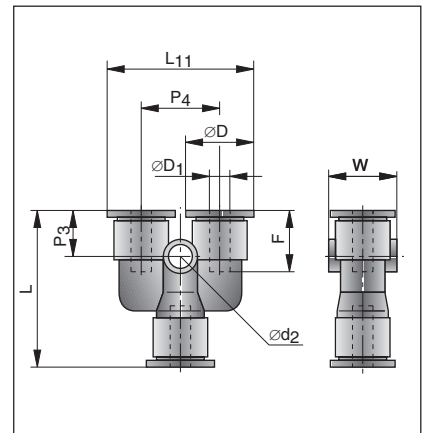


Dimension table (mm) – order instructions and weights

Order Instruction Type	Order No.	∅D	∅D ₁ (*)	F	L	L ₁₁	P ₃	P ₄	W	∅d ₂	Wght. (g)
YS-4	KL5058	8	3	8.5	23.7	15.7	9.5	9	8	3.2	3.4

* for tube outer diameter

Y-connector

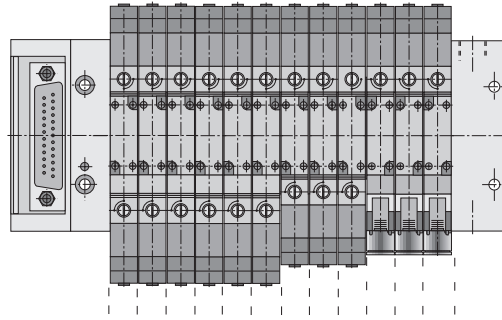


For additional fittings M5 and G1/8, please refer to the catalogue "Pneumatic Accessories" A4P021E

Order Key for your Order

Order example:

Valve island with multipole connector, 12 fold equipped with:
 3 off 5/3 way valves S20 581RFG-35F
 3 off 5/3 way valves S20 581RFB-35F
 1 off 5/3 way valves S20 581RFE-35F
 3 off 5/2 way valves S20 581-35F
 3 off 5/2 way valves S20 581RRF-35F



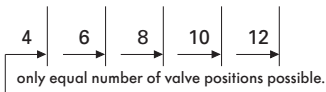
Order example

	Order no.	No. of valves	Valve position											
			1 2 3 4 5 6 7 8 9 10 11 12											

Valve manifolds (fittings for ODø 6mm)*		
PA 05303	Electrical connection: horizontally, fittings on the base plate (2+4), NW 3,5 Type: S20-35F	
PA 05302 (on request)	Electrical connection: horizontally, fittings directly on the valve (2+4), NW 3,0 Type: S20-30	
Valve islands with multipole connector (fittings for ODø 6mm)*		
PA 05306	Valve without ports 2+4 all connections in the base plate Type: IM-35F-W	
PA 05301 (on request)	Valve with fittings (ports 2+4) ports 1, 3, 5 in the base plate, Type: IM-30-W	

* Versions with fittings ODø 4 mm on request

Base plate complete, for valve manifold – without valves, type: S20-35F-G		
PD 44232	For valves without ports 2+4 all connections in the base plate with fittings ODø 6 mm –	
PD 44233 (on request)	with fittings ODø 4 mm	
PD 44231 (on request)	without fittings	
Base plate complete, for valve islands – without valves, type: IM-35F-G		
PD 44235	Multipole version all connections in the base plate with fittings ODø 6 mm	
PD 44236 (on request)	with fittings ODø 4 mm	
PD 44234 (on request)	without fittings	



Please make sure to specify the codes for the correct valve types.

Order code for valves and blanking plates

Code	Symbol	Description	Data sh.
A	—	Blanking plate on valve position	Page 23
M		5/2 way solenoid valve, permanent signal with spring return (air piloted) Type: S20 581RRF-...	Page 7, 13
J		5/2 way solenoid valve, by impulse Type: S20 581-...	Page 7, 13
G		5/3 way solenoid valve, spring return to middle position, middle position closed Type: S20 581RFG-...	Page 8, 14
B		5/3 way solenoid valve, spring return to middle position, middle position pressurised Type: S20 581RFB-.../...	Page 8, 14
E		5/3 way solenoid valve, spring return to middle position, middle position vented Type: S20 581RFE-...	Page 8, 14
C		3/2 way solenoid valve, by permanent signal with spring return (air piloted), normally closed Type: S20 381RRF-...-NG	Page 7
O		3/2 way solenoid valve, by permanent signal with spring return (air piloted), normally open Type: S20 381RRF-...-NO	Page 7

Number of valves	
04	up to 4 valves
06	5 and 6 valves
08	7 and 8 valves
10	9 and 10 valves
12	11 and 12 valves

Order key for order no.		
Company		
Street		
Postal code / City		
Person responsible	Tel.	Fax
Date		
Signature		



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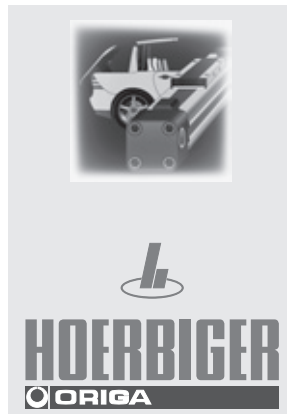
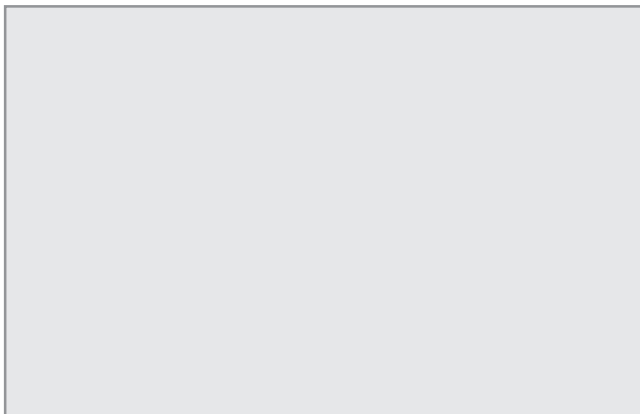
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AE	HOERBIGER SERVICE MIDDLE EAST FZE • Jebel Ali Free • P.O. Box 07153 • Dubai, United Arab Emirates • Tel. +971 +4 8814567 • Fax +971 +4 8817123 • e-mail: office@hoerbiger.ae
AT	HOERBIGER-ORIGA Pneumatik GmbH • Dr. Alexander-Schärf-Straße 12 • AT-2700 Wiener Neustadt • Tel. +43 +2622 26071-269 • Fax +43 +2622 26071-266 • e-mail: info-hoat-sales.pn@hoerbiger.com
AU	HOERBIGER AUSTRALIA PTY.LTD. • 21 David Street • AU-3175 Dandenong, Victoria • Tel. +61 (0)3 9793 9488 • Fax +61 (0)3 9706 8152 • e-mail: info-hoau-sales@hoerbiger.com
CH	HOERBIGER-ORIGA AG • Industriestr. 30 • CH-8112 Otelfingen (Zürich) • Tel. +41 (0)1 846 6860 • Fax +41 (0)1 846 6870 • e-mail: info-hoch-sales@hoerbiger.com
CN	HOERBIGER (WUXI) AUTOMATION TECHNOLOGY CO., LTD. • A2-A, Machinery & Electronics Park • Wuxi National High-Tech Zone • Wuxi 214028, China • Tel. +86 510 520 3468 • Fax +86 510 520 3498 • e-mail: info-wuxi@hoerbiger.com
DE	HOERBIGER-ORIGA GmbH • Industriestr. 8 • DE-70794 Filderstadt • Tel. +49 (0)7158 1703-0 • Fax +49 (0)7158 64870 • e-mail: info-hode-sales@hoerbiger.com
ES	HOERBIGER-ORIGA S.A. • Pol. Ind. El Nogal • c/Nogal 8 • ES-28110 Algete (Madrid) • Tel. +34 91 629 09 00 • Fax +34 91 629 24 08 • e-mail: origa@hoerbigeroriga.es
FR	HOERBIGER-ORIGA S.A. • 11 avenue de Norvège • FR-91978 Courtaboeuf • Tel.+33 (0)1 69 29 22 00 • Fax +33 (0)1 69 29 22 10 • e-mail: info-hofr-sales@hoerbiger.com
GB	HOERBIGER-ORIGA Ltd. • Tewkesbury Industrial Estate • Tewkesbury GL 20 8 ND GB • Tel. +44 1684 85 00 00 • Fax +44 1684 85 05 55 • e-mail: info-hogb-sales@hoerbiger.com
IT	HOERBIGER-ORIGA S.R.L. • Via Martiri della Libertà 4/6 • IT-20060 Liscate (MI) • Tel. +39 02 95 35 03 07 • Fax +39 02 95 35 05 13 • e-mail: info-hoit-sales@hoerbiger.com
JP	HOERBIGER AUTOMATION Technology Representative Office Japan • 501, 2-17-11 Shin-Yokohama, Kohokoku • JP-222-0033 Yokohama • Tel. +81 (0)45 4760 636 • Fax +81 (0)45 4760 637 • e-mail: tadashi.andoh@hoerbiger.com
NL	HOERBIGER-ORIGA B.V. • Plaza 11C • NL-4782 SL Moerdijk • Tel. +31 168 356 600 • Fax. +31 168 356 601 • e-mail: info-honl-sales@hoerbiger.com
NO	HOERBIGER-ORIGA AS • Postboks 2173 Strømsø • NO-3003 Drammen • Tel. +47 3 288 08 40 • Fax +47 32 82 83 20 • e-mail: info-hose-sales@hoerbiger.com
MY	HOERBIGER-ORIGA Sdn Bhd • No. 10 & 12 Lorong IKS Juru 3 • MY-14100 Simpang Ampat, Penang • Tel. +60 (0)4 508 10 11 • Fax +60 (0)4 508 21 22 • e-mail: info-hosg-sales@hoerbiger.com
PT	HOERBIGER-ORIGA S.A. • Rua Luz Soriano, 42 • P-4200-380 Porto • Tel. +35 1 22 550 71 79 • Fax. +35 1 22 509 22 51 • e-mail: hoerbigerportugal@sapo.pt
SE	HOERBIGER-ORIGA AB • Kungsgatan 14, Box 67 • SE-73622 Kungsör • Tel. +46 227 411 00 • Fax +46 227 411 29 • e-mail: info-hose-sales@hoerbiger.com
SG	HOERBIGER-ORIGA Pte Ltd • 5012 #05-01 Ang Mo Kio Ave 5, Techplace II • SG-569876 Singapore • Tel. +65 6483 2959 • Fax +65 6483 29 79 • e-mail: info-hosg-sales@hoerbiger.com
US	HOERBIGER-ORIGA Corporation • 100 West Lake Drive • IL-60139 Glendale Heights, Illinois, USA • Tel. +1 630 871 830-0 • Fax +1 630 871 1515 • e-mail: info-hous-sales@hoerbiger.com
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