FEATURES

- *High flow rate up to 1400 l/min*
- *Spool & Sleeve or rubber packed technology in the same dimension body*
- *Wide electrical connection selection : G3 or 580 Fieldbus Electronics, 25 or 37 Pin Sub-D connector, 19 Pin Round connector or Terminal Strip*
- *Internal or external pilot pressure supply capability and compliance with ISO standard 15407-2 26 mm*
- *Solenoid air operated valves which can be mounted on manifold bases*
- *580 Electronics (See X021-28)*

GENERAL

Operating pressure	See «SPECIFICATIONS» [1 bar =100 kPa]
Ambient temperature range (TS)	See «SPECIFICATIONS»
Rated flow conforming to ISO 6358	See «SPECIFICATIONS» C (5/2) = 4,31 x 10^{-8} m^3/s.Pa (sonic conductance) b (5/2) = 0,32 (critical pressure ratio)
Pneumatic base	High flow subbase or ISO 15407-2 26 mm
Connection	Joinable subbase
Response time	See «SPECIFICATIONS»

fluids (✳)	temperature range (TS)	technology	seal materials (✳)
air or inert gas filtered at 50 µm, lubricated or not	-10°C to +50°C	rubber packed	NBR (nitrile) + PUR (polyurethane)
	-10°C to +50°C	spool & sleeve	metal-to-metal sealing

CONSTRUCTION

MATERIALS IN CONTACT WITH FLUID (✳) Ensure that the compatibility of the fluids in contact with the materials is verified	
Body	Aluminium, E-coating treatment
Spool	Aluminium or st. steel (spool & sleeve)
Piston	POM (rubber packed)
Spring	Steel
Distribution seals	NBR [+ PUR (spool & sleeve)]
Other seals	NBR + FPM
Other materials	PAM (polyarylamide) ,
	GF 50% (glass fiber reinforced)
Pad mount gasket	NBR
Subbases	Aluminium, E-coating treatment

ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Electrical safety	IEC-EN 60730-1 / IEC-EN 60730-2-8
Electrical enclosure protection	IP65 (EN 60529)
Standard voltages	DC (=) : 24V
power ratings (hot/cold) (=)	1,4 W / 1,7 W

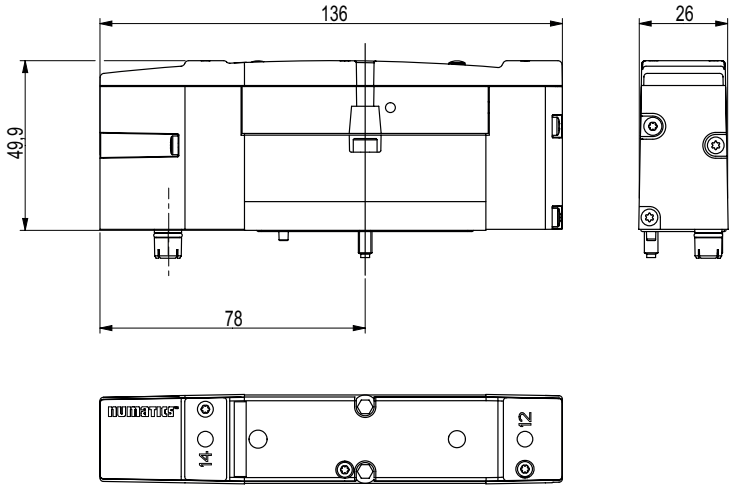
SPECIFICATIONS

function	type	symbol pilot (14) return (12)		rated flow at 6,3 bar l/min (ANR) 1→2 1→4	rated flow at 6,3 bar l/min (ANR) 2→3 4→5	response time open / closed (ms)	pilot pressure at 23°C (bar) min.	pilot pressure at 23°C (bar) max.	operating pressure port 1 min.	operating pressure port 1 max. (PS) air (∗) =	15-DIGIT PRODUCT CODE
SPOOL VALVE, RUBBER PACKED TECHNOLOGY, WITH IMPULSE MANUAL OPERATOR											
2 x 3/2 NC	K	spring	High flow subbase	1000	800	15 / 20	3,5 (a)	8	2	8	**R503A2BD0MA00F1**
			ISO subbase	900	800						
2 x 3/2 NO	N	spring	High flow subbase	950	950	15 / 20	3,5 (a)	8	2	8	**R503A2BA0MA00F1**
			ISO subbase	900	900						
5/2	S	spring	High flow subbase	1400	1300	20 / 60	2	8	-0,95	8	**R503A2B10MA00F1**
			ISO subbase	1200	1100						
	M	differential return	High flow subbase	1400	1300	28 / 40	3	8	-0,95	8	**R503A2BN0MA00F1**
			ISO subbase	1200	1100						
	J	solenoid air	High flow subbase	1400	1300	20 / 20	2	8	-0,95	8	**R503A2B40MA00F1**
			ISO subbase	1200	1100						
5/3	G	**W1** closed centre position	High flow subbase	1400	1300	15 / 20	4	8	-0,95	8	**R503A2B60MA00F1**
			ISO subbase	1200	1100						
	B	**W2** centre open to pressure	High flow subbase	1300	600	18 / 45	3	8	-0,95	8	**R503A2B70MA00F1**
			ISO subbase	1100	600						
	E	**W3** centre open to exhaust	High flow subbase	600	1300	18 / 45	3	8	-0,95	8	**R503A2B50MA00F1**
			ISO subbase	600	1100						
SPOOL VALVE, SPOOL AND SLEEVE TECHNOLOGY, WITH IMPULSE MANUAL OPERATOR											
5/2	S	spring	High flow subbase	1200	1200	20 / 60	2	8	-0,95	8	**R503A1B10MA00F1**
			ISO subbase	1100	1000						
	J	solenoid air	High flow subbase	1200	1200	15 / 15	2	8	-0,95	8	**R503A1B40MA00F1**
			ISO subbase	1100	1000						

(a) 3,5 bar for a pressure supply (P1) ≤ 7,5 bar (if > 7,5 bar, Pmin. = P1 - 4 b)

Plug in Valve

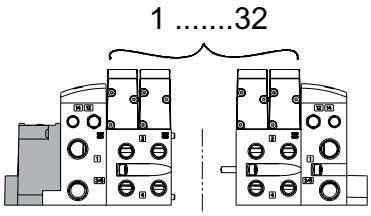
Dimensions (mm)



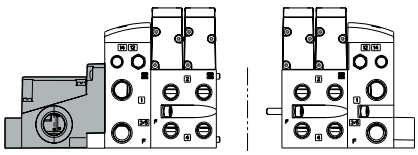
weight (kg)
0.236

Assembly kits

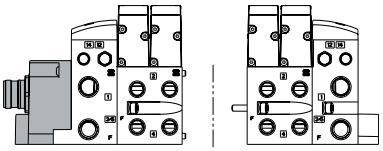
25 or 37 Pin Sub-D



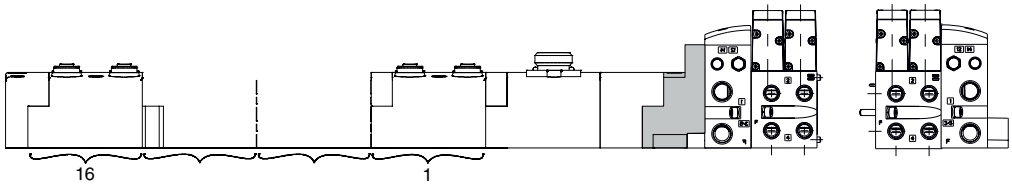
1-32 Terminal Strip



19 Pin Round Connector



Manifold assembly with G3 Electronics & Discrete I/O (see page 13 and X021-26)



1.a How to Order - Manifold Assembly kit

15-DIGIT PRODUCT CODE

G	503	A	V	3	B	3	0 0	V	A00

Thread connection
G = ISO 228/1
8 = NPT (contact us)
K = Push-in connectors

Product series
503

Revision letter
A = Initial release

Product type
V = Valve Manifold Assembly

Electronics
8 = **580 Fieldbus Electronics** (➠ page X021-28-17)
3 = **G3 Fieldbus Electronics**
J = 25 Pin Sub-D Connector
M = 37 Pin Sub-D Connector
Q = 19 Pin Round Connector
T = Terminal Strip 1-32
0 = No Electronics

Number of Valve Stations

B = 2	**N** = 14	**Z** = 26
D = 4	**P** = 16	**3** = 28
F = 6	**R** = 18	**5** = 30
H = 8	**T** = 20	**7** = 32
J = 10	**V** = 22	
L = 12	**X** = 24	

Options
A00 = Standard (no options)
MUF = Muffler in End Plates
DRM = DIN Rail Mount
DWM = DIN Rail Mount with Muffler
14X = External pilot supply from port 14
D12 = External pilot supply from port 14 and Muffler in End Plates
D14 = External pilot supply from port 14 and DIN Rail Mount
F06 = External pilot supply from port 14 Muffler in End Plates and DIN Rail Mount

End Plate Style
V = Vertical

End Plate Port Size
Used with the first digit «G» or «8»:
3 = 3/8 (manifold base)
Used with the first digit «K»:
K = 8 x 10 mm (push-in connector)
M = 10 x 12 mm (push-in connector)

Maximum Solenoid Outputs

Terminal Strip 1-32	25 Pin Sub-D Connector	37 Pin Sub-D Connector	19 Pin Round Connector	G3 Fieldbus Electronics
32	22	32	16	32

*Note: Maximum number of valve stations is determined by:
- The electrical connection type.
- The valve type: single and/or double solenoid valves
- Combination of all stations cannot exceed 32

1.b How to Order - Manifold assemblies and subbase

How to Order
Subbases
15-DIGIT PRODUCT CODE

G	503	A	M	V2	2	0	A00	3	0

Thread connection
G = ISO 228/1
8 = NPT (contact us)
K = Push-in connectors

Product series
503 (26 mm valve)

Revision letter
A = Initial release

Product type
M = Manifold base
Z = Mid station supply

Mounting
S2 = Manifold base, 2 stations, side port, single Z-Board™
M2 = Manifold base, 2 stations, side port, double Z-Board™
V2 = Manifold base, 2 stations, side port
NJ = Manifold base, 2 stations, side port, single Z-Board™, Zoned Power, Second station
NL = Manifold base, 2 stations, side port, double Z-Board™, Zoned Power, Second station
NN = Manifold base, 2 stations, side port, single Z-Board™, Zoned Power, First station
NP = Manifold base, 2 stations, side port, double Z-Board™, Zoned Power, First station
NK = Manifold base, 2 stations, side port, single Z-Board™, Zoned Power & Pilot, Second station
NM = Manifold base, 2 stations, side port, double Z-Board™, Zoned Power & Pilot, Second station
NQ = Manifold base, 2 stations, side port, single Z-Board™, Zoned Power, First station, Zoned Pilot Second Station
NR = Manifold base, 2 stations, side port, double Z-Board™, Zoned Power, First station, Zoned Pilot Second Station
NS = Manifold base, 2 stations, side port, single Z-Board™, Zoned Pilot Second Station
NT = Manifold base, 2 stations, side port, double Z-Board™, Zoned Pilot Second Station

Thread connection
G = ISO 228/1
8 = NPT (contact us)
K = Push-in connectors

Product series
503 (26 mm valve)

Revision letter
A = Initial release

Product type
M = Manifold base
Z = Mid station supply

Mounting
S2 = Manifold base, 2 stations, side port, single Z-Board™
M2 = Manifold base, 2 stations, side port, double Z-Board™
V2 = Manifold base, 2 stations, side port

Not use

Interface
1 = Pneumatic high flow
2 = ISO 15407-2 (26 mm)

Options
A00 = Standard (internal pilot)
14X = External pilot supply from port 14
56Y = 4-pin straight M12 connector in mounting Standard (internal pilot)
59W = External pilot supply from port 14 + 4-pin straight M12 connector in mounting

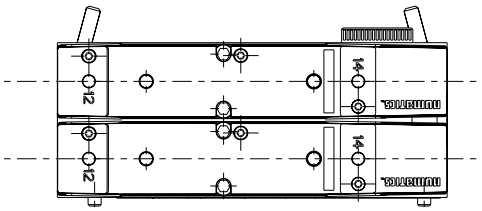
Wiring option
M = Plug-in

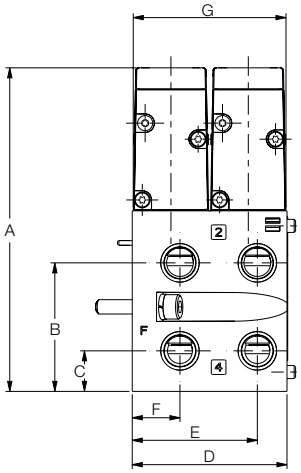
Port connection (2-4)
Used with the first digit «G» or «8»:
2 = 1/4

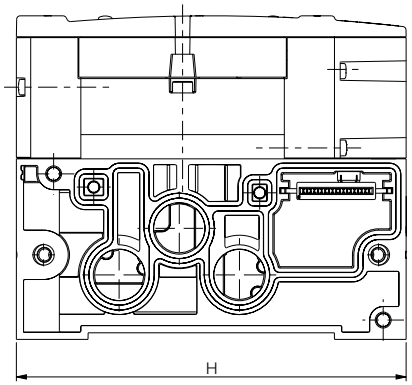
Used with the first digit «K»:
H = 6 x 8 mm [push-in connector only]
K = 8 x 10 mm [push-in connector only]

Dimensions (mm)

Plug in Valve Mounted







A	B	C	D	E	F	G	H
112.9	44.9	14.2	54	43.7	16.7	53.3	136

2.a How to Order - Valves

15-DIGIT PRODUCT CODE

R	503	A	2	B	4	0	M	A00	F1

Thread connection
R = Pad mount

Product series
503 (26 mm valve)

Revision letter
A = Initial release

Actuation
1 = Spool and sleeve
2 = Rubber packed

Valve type
B = Solenoid pilot
(With impulse manual operator)

Function
A = 2x3/2 NO, dual 3-way (1)
D = 2x3/2 NC, dual 3-way (1)
N = 5/2, Differential air return (1)
1 = 5/2, spring return
4 = 5/2, solenoid air return
5 = 5/3, W3, open center to exhaust (1)
6 = 5/3, W1, center closed (1)
7 = 5/3, W2, open center to pressure (1)
(1) Only with rubber packed version.

Electrical interface
M = Plug-in (with LED indicator / DC)

Options
Plug-in valves
(External piloting) (1)
A00 = Standard (No option)
With impulse manual operator
11B = With maintained manual operator
11M = Without manual operator
14B = Internal pilot supply from port 1
83B = 10 b max. pressure - non UL certified
81G = 11B + 14B
82M = 11B + 83B
82N = 11M + 83B
82K = 11M + 14B
82P = 14B + 83B
69N = 14B + 11M + 83B
69P = 14B + 11B + 83B

Voltage - class
F1 = 24 V DC - class F

(1) Used external spool valves (internal/external supply configurated in the end plate kits).
For internal piloting, contact us.

2.b How to Order - Regulators

15-DIGIT PRODUCT CODE

R	503	A	R	S	1	2	J	A00	1	0

Thread connection
R = Pad mount

Product series
503 (26 mm valve)

Revision letter
A = Initial release

Product type
R = Pressure regulator

Regulator type
S = Single regulator - Pressure to port 1
D = Double regulator - Pressure to ports 5 & 3
E = Double regulator - Pressure to ports 4 & 2, without valve
T = Double regulator - Pressure to ports 1 & 3, 2 pressure selector

Pressure range
1 = 0,7 to 9 bar
3 = 0,2 to 2 bar
4 = 0,3 to 4 bar

Gauge type
2 = bar (standard)

Wiring option
J = Plug-in

Options
16N = Jumper on 14 end
16P = Jumper on 12 end
14M = Tamperproof needle cartridge assembly or regulator

A00 = Standard (no options)

Interface
1 = Pneumatic high flow
2 = ISO 15407-2

Not use

3. How to Order - G3 Electronics

G3 EP1 00 R 0 STD

Electronics Protocols

CO1	=	CANopen®
DL1	=	DeviceLogix
DN1	=	DeviceNet™
EC1	=	EtherCAT®
ED1	=	EtherNET/IP™ DLR
EM1	=	ModBus®/TCP
EP1	=	EtherNet/IP™
PL1	=	POWERLINK
PT1	=	PROFIBUS-DP®
PN1	=	PROFINET®
DS2	=	Backplane extension Valve Manifold
DS3	=	Backplane extension I/O Assembly

Number of I/O Modules

00	=	0
01	=	1
02	=	2
03	=	3
04	=	4
05	=	5
06	=	6
07	=	7
08	=	8
09	=	9
10	=	10
11	=	11
12	=	12
13	=	13
14	=	14
15	=	15
16	=	16

Left Mounting

D	=	w/ Backplane extension Out
H	=	w/ Terminating Resistor

Special Options

STD	=	Standard
DRM	=	DIN Rail Mounting
E23	=	Fieldbus assembly without valves
E28	=	Valve Side 25 pin Sub D NPN output module
E40	=	Auto recovery Module (ARM)
G32	=	DRM-Din Rail Mounting E40-Auto Recovery Module (ARM)
G33	=	DRM-Din Rail Mounting E28-Valve Side 25 pin Sub D NPN output module
G34	=	E28-Valve Side 25 pin Sub D NPN output module E40-Auto Recovery Module (ARM)
G36	=	E23-Fieldbus assembly without valves DRM-Din Rail Mounting
J32	=	DRM-Din Rail Mounting E28-Valve Side 25 pin Sub D NPN output module E40-Auto Recovery Module (ARM)

Modification

0	=	Initial release