

Explosion Proof 3, 5 port solenoid valves

IECEX compliant solenoid valves for Australia and New Zealand

VF1/3/5000 Series -XAR4001, -XAR4002, -XAR4003

VP3/5/700 Series -XAR4010, -XAR4011, -XAR4012

VFN2000/200 Series -XAR4013, -XAR4014, -XAR4015

Features:

SMC Australia adapts Nass Magnet GmbH solenoid coils to SMC's pilot operated valve bodies. Nass solenoid operators have been tested by the Physikalisch-Technische Bundesanstalt (PTB) according to IECEX Standards.



When installed, the valves are certified for equipment protection by either of these:

• Intrinsic safety "i"

Zones/Marking 1,2 IEC Ex ia IIC/IIB T6
21, 22 n/a

Certificated by PTB - Certification No: IECEX PTB 08.0023



5 ports	VF1/3/5000 Series	-XAR4001
3 ports	VP3/5/700 Series	-XAR4010
5/3 ports NAMUR Interface	VFN2000/200 Series	-XAR4013

VF1000, VF3000 and VP300 **NOT** suited for block assembly (consult SMC)

• Intrinsic safety "i" and dust protection by enclosure

Zones/Marking 1,2 IEC Ex ia IIC/IIB T6
21, 22 IEC Ex t IIIC T80°C

Certificated by PTB - Certification No: IECEX PTB 13.0009



5 ports	VF1/3/5000 Series	-XAXTBC
3 ports	VP3/5/700 Series	-XAXTBC
5/3 ports NAMUR Interface	VFN2000/200 Series	-XAXTBC

VF1000, VF3000 and VP300 **NOT** suited for block assembly (consult SMC)

• Encapsulation "mb" and protection by enclosure "tb"

Zones/Marking 1,2 IEC Ex mb IIC T6
21, 22 IEC Ex mb tb IIIC T80°C

Certificated by PTB - Certificate No: IECEX PTB 04.0002X



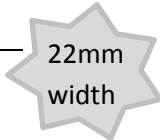
5 ports	VF1/3/5000 Series	-XAR4002
3 ports	VP3/5/700 Series	-XAR4011
5/3 ports NAMUR Interface	VFN2000/200 Series	-XAR4014

VF1000, VF3000 and VP300 **NOT** suited for block assembly (consult SMC)

• Encapsulation "mb" and protection by enclosure "tb"

Zones/Marking 1,2 IEC Ex mb IIC T4
21, 22 IEC Ex mb tb IIIC T130°C

Certificated by PTB - Certificate No: IECEX PTB 05.0006X



5 ports	VF1/3/5000 Series	-XAR4003
3 ports	VP3/5/700 Series	-XAR4012
5/3 ports NAMUR Interface	VFN2000/200 Series	-XAR4015

ALL suited for single and block assembly

(* All IECEx Certificates of Conformity are available on <http://iecex.iec.ch/>

Main Valve Specifications

VF1/3/5000 Series

Model		VF1000	VF3000	VF5000
Fluid		Air		
Operating pressure range (MPa) ^(Note 1)	Standard	2-position single/3-position	0.15 to 0.7	
		2-position double	0.1 to 0.7	
	High-pressure type	2-position single/3-position	0.15 to 1.0	
		2-position double	0.1 to 1.0	
Ambient and fluid temperature (°C) ^(Note 2)		-10 to 50 (No freezing)		
Max. operating frequency (Hz)	2-position single/double	10	10	5
	3-position	—	3	3
Manual override		Non-locking push type Push-turn locking slotted type		
Lubrication		Not required		
Mounting orientation		Unrestricted		

Note 1: Choose standard operating pressure for intrinsic safety and high operating pressure for encapsulated types.

Note 2: When using encapsulated solenoids in a manifold assemblies, max. operating and fluid temperature is 40°C

VP3/5/700 Series

Model		VP300	VP500	VP700
Fluid		Air		
Type of actuation		N.C. or N.O. (Convertible)		
Internal pilot ^(Note 1)	Standard	0.2 to 0.7		
	High-pressure type	0.2 to 1.0		
External pilot ^(Notes 1 and 3)	Standard	-100 kPa to 0.7		
	High-pressure type	-100 kPa to 1.0		
	Pilot pressure range	Same as operating pressure (Min. 0.2 MPa)		
Ambient and fluid temperature (°C) ^(Note 2)		-10 to 50 (No freezing)		
Max. operating frequency (Hz)		5		
Manual override		Non-locking push type Push-turn locking slotted type		
Pilot exhaust type		Individual exhaust		
Lubrication		Not required		
Mounting orientation		Unrestricted		

Note 1: Choose standard operating pressure for intrinsic safety and high operating pressure for encapsulated types.

Note 2: When using encapsulated solenoids in a manifold assemblies, max. operating and fluid temperature is 40°C

Note 3: External pilot is only indent option, expect longer deliveries.

VFN2000/200 Series

Model	VFN200	VFN2000
Fluid	Air	
Valve type	Normally closed	
Max. operating pressure	0.9 MPa	
Min. operating pressure	0.15 MPa	
Ambient and fluid temperature	-10 to +50°C	
Lubrication	Not required	
Manual override	Non-locking push type Push-turn locking slotted type	
Enclosure	Dustproof	
Port size	1/4	

Solenoid Specifications

Applicable Series		RFS part numbers					
VF1/3/5000 Series		-XAR4001	-XA *TBC	-XAR4002	-XAR4003		
VP3/5/700 Series		-XAR4010	-XA *TBC	-XAR4011	-XAR4012		
VFN Series		-XAR4013	-XA *TBC	-XAR4014	-XAR4015		
Coil Specifications							
Nass solenoid operator		type 1259 (*)	type 1262	type 0515	type 1215	type 0513	type 1213
Type of protection		Intrinsic safety "i"		Encapsulation "mb"		Encapsulation "mb"	
Temperature Class		T6		T6		T4	
Rated voltage		24VDC		24VAC, 48VAC, 110VAC, 240VAC	24VDC, 12VDC, 48VDC	110VAC, 240VAC	24VDC,
Electrical entry		DIN connector		Grommet		Grommet	
Ingress Protection		IP65		IP65		IP65	
Solenoid operator width		30mm		30mm		22mm	
EC Examination certificate No		IECEX PTB 13.0009		IECEX PTB 04.0002X		IECEX PTB 05.0006X	
Zones/Marking		1,2	IEC Ex ia IIC/IIB T6	IEC Ex ia IIC/IIB T6	IEC Ex mb IIC T6	IEC Ex mb IIC T4	
Equipment Protection Level (EPL)		21, 22	n/a	IEC Ex t IIIC T80°C	IEC Ex mb tb IIIC T80°C	IEC Ex mb tb IIIC T130°C	
CE Status		Ga / Db		Gb / Db		Gb / Db	
		CE compliant		CE compliant		CE compliant	

*) Type 1259 soon to be superseded by Type 1262, subject to stock

() Other voltages available on request

- ⚠ Refer to installation and operating instructions to understand specific limitations as to zones applications and how these valves must be installed to maintain legal and safety compliance for Hazardous Area application.
- ⚠ The ignition potential for the coils is rated for a wider range of temperatures than that of the operation requirements for the valve assembly.
- ⚠ These products are not suitable for Zone 0.
- ⚠ For Encapsulated valves, each solenoid operated has to be protected by a fuse according to the rated current (max 3x rated current) resp motor protection switch with short-circuit and fast thermal tripping protection. The fuse voltage has to be equal or higher than the rated solenoid voltage. The shutdown capability has to be equal or higher than the max. assumed short-circuit current at the installation point

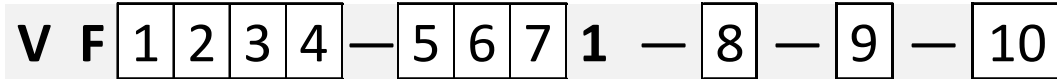
Flow Rate Characteristics

This is a brief summary of the max. flow-rate characteristics for these Series, if you require detailed information on flows for each valve model/type of actuation please refer to individual catalogues.

Model	Flow characteristics	Flow characteristics	Flow characteristics
	4/2→5/3 (A/B→EA/EB)	4/2→5/3 (A/B→EA/EB)	4/2→5/3 (A/B→EA/EB)
	Cdm ³ /s · bar]	b	Cv
VF1000	0.53	0.28	0.13
VF3000	3.10	0.32	0.75
VF5000	10.00	0.49	2.90
VP300	4.20	0.23	1.00
VP500	8.90	0.20	2.10
VP700	15.30	0.22	3.70
VFN200N	5.41	0.31	1.38
VFN2000N	4.57	0.17	1.06

How to Order

VF1/3/5000 Series - Body Ported / Single Unit How to Order Valve



1 Body Size

1	VF1000
3	VF3000
5	VF5000

2 Type of Actuation

1	2 position single
2	2 position double
3	3 position closed centre
4	3 position exhaust centre
5	3 position pressure centre

*) Only 1 and 2 are available for VF1000

3 Body Model/Options

Symbol	VF1000	VF3000	VF5000
20	o	x	x
33	x	o	x
23	x	x	o

**) Other Body/Options available as indent

4 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia"	Encapsulation "mb"
		XAR4001	XAR4002/3
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

10 Bracket

Nil	Without bracket
F	VF1000/3000 single type - bracket CANNOT be retrofitted VF1000 Double type

5 Voltage

Symbol	Voltage	Intrinsic Safety "ia"	Encapsulation "mb"	Encapsulation "mb"
		XAR4001	XAR4002	XAR4003
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

6 Electrical entry

Symbol		Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

7 Manual Override

Nil	Push type
D	Push-turn locking type

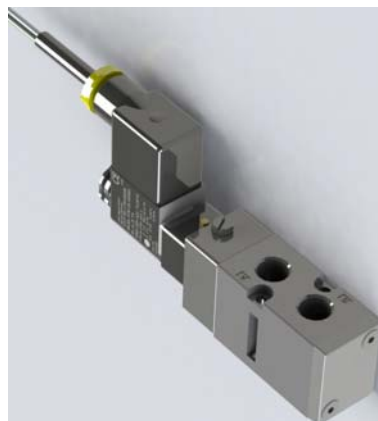
8 A, B Port size

Symbol	Port Size	VF1000	VF3000	VF5000
M5	M5x0.8	o*	x	x
01	1/8" BSP	o	o*	x
02	1/4" BSP	x	o	o*
03	3/8" BSP	x	x	o

*)indent only

9 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4001	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
		1,2	IEC Ex ia IIC/IIB T6
		21,22	IEC Ex t IIIC T80°C
XAR4002	Encapsulation "mb"	1,2	IEC Ex mb IIC T6
		21,22	IEC Ex mb tb IIIC T80°C
		1,2	IEC Ex mb IIC T4
XAR4003		21,22	IEC Ex mb tb IIIC T130°C



VF3/5000 Series – Base Mounted / Single Unit

How to Order Valve



V F 1 2 4 3 4 — 5 6 7 1 — 8 — 9

1 Body Size

3	VF3000
5	VF5000

2 Type of Actuation

1	2 position single
2	2 position double
3	3 position closed centre
4	3 position exhaust centre
5	3 position pressure centre

3 Body Option

Symbol	Option	VF3000	VF5000
3	Common exhaust	o	x
4	Pilot valve base exh	x	o

4 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia"	Encapsulation "mb"
		XAR4001	XAR4002/3
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

5 Voltage

Symbol	Voltage	Intrinsic Safety "ia"	Encapsulation "mb"	Encapsulation "mb"
		XAR4001	XAR4002	XAR4003
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

6 Electrical entry

Symbol		Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

7 Manual Override

Nil	Push type
D	Push-turn locking type

8 Port Size

Symbol	Port Size	VF3000	VF5000
Nil	Single unit without subplate		
02	1/4" BSP	o	o
03	3/8" BSP	o	o
04	1/2" BSP	x	o

* Without the sub-plate, two mounting screws and a gasket are included

9 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4001	Intrinsic Safety	1,2	IEC Ex ia IIC/IIB T6
		1,2	IEC Ex ia IIC/IIB T6
		21,22	IEC Ex t IIIC T80°C
XAR4002	Encapsulation	1,2	IEC Ex mb IIC T6
		21,22	IEC Ex mb tb IIIC T80°C
XAR4003	"mb"	1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C

How to Order Subplate (Single Unit)

V F 1 0 0 0 — 7 1 — 2

1 Body Size

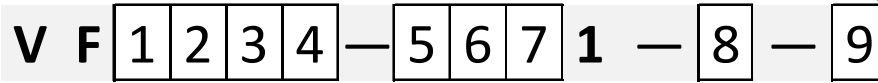
3	VF3000
5	VF5000

2 Port Size

Symbol	Port Size	VF3000	VF5000
1	1/4" BSP	o	o
2	3/8" BSP	o	o
3	1/2" BSP	x	o

VF1/3/5000 Series - Body Ported / Manifold

How to Order Valve (with a gasket and two mounting screws)



1 Body Size

1	VF1000
3	VF3000
5	VF5000

2 Type of Actuation

1	2 position single
2	2 position double
3	3 position closed centre
4	3 position exhaust centre
5	3 position pressure centre

*) Only 1 and 2 are available for VF1000

3 Body Model/Options

Symbol	VF1000	VF3000	VF5000
33	o	o	x
23	x	x	o

**) Other Body/Options available as indent

4 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia"	Encapsulation "mb"
		XAR4001	XAR4002/3
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

6 Electrical entry

Symbol		Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

7 Manual Override

Nil	Push type
D	Push-turn locking type

8 A, B Port size

Symbol	Port Size	VF1000	VF3000	VF5000
M5	M5x0.8	o *	x	x
01	1/8" BSP	o	o *	x
02	1/4" BSP	x	o	o *
03	3/8" BSP	x	x	o

*) Indent only

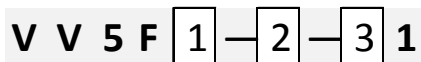
9 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4001	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
		1,2	IEC Ex ia IIC/IIB T6
XA*TBC		21,22	IEC Ex t IIIC T80°C
		1,2	IEC Ex mb IIC T6
XAR4002	Encapsulation "mb"	21,22	IEC Ex mb tb IIIC T80°C
		1,2	IEC Ex mb IIC T4
XAR4003		21,22	IEC Ex mb tb IIIC T130°C

5 Voltage

Symbol	Voltage	Intrinsic Safety "ia" XAR4001	Encapsulation "mb" XAR4002	Encapsulation "mb" XAR4003
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

How to Order Manifold



1 Body Size

1	VF1000
3	VF3000
5	VF5000

3 Stations

02	2 stations
....
20	20 stations

*) up to 10 stations for VV5F5-20 and up to 15 stations for VV5F5-21

2 Manifold Model

Symbol	P, R Port Size	VF1000	VF3000	VF5000
30	1/8" BSP	o	x	x
	1/4" BSP	x	o	x
20	3/8" BSP	x	x	o
21	1/2" BSP	x	x	o

*) A and B ports are on the top

**) Refer to table 1

Table 1

	VV5F1-30*	VV5F3-30*	VV5F5-2*
XAR4001	x *	x *	o
XA*TBC	x *	x *	o
XAR4002	x *	x *	o
XAR4003	o	o	o

*) When using VF1/3000 with 30mm coil (XAR4001, XAR4002) you cannot mount valves side by side please use 22mm width coil (XAR4003) or blanking plate.

Manifold Options

	Mounting screw	Gasket	Blanking plate
VF1000	DXT031-44-1	DXT144-12-2	DXT144-13-3A
VF3000	AXT620-32-1	DXT155-25-7	DXT031-38-5A
VF5000		DXT156-9-6	VF5000-70-1A

VF1/3/5000 Series – Base Mounted / Manifold

How to Order Valve (with a gasket and two mounting screws)



V F 1 2 4 3 4 – 5 6 7 **1** – 8

1 Body Size

3	VF3000
5	VF5000

2 Type of Actuation

1	2 position single
2	2 position double
3	3 position closed centre
4	3 position exhaust center
5	3 position pressure centre

3 Body Option

Symbol	Option	VF3000	VF5000
3	Main/Pilot valve common exh	o	x
4	Pilot valve base exhaust	x	o

4 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia"	
		XAR4001	XAR4002/3
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

5 Voltage

Symbol	Voltage	Intrinsic Safety "ia"		
		XAR4001	XAR4002	XAR4003
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

6 Electrical entry

Symbol		Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

7 Manual Override

Nil	Push type
D	Push-turn locking type

8 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4001	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/Tb T6
		21,22	IEC Ex ia IIC/Tb T6
XA*TBC	Intrinsic Safety "ia"	1,2	IEC Ex t IIIC T80°C
		21,22	IEC Ex t IIIC T80°C
XAR4002	Encapsulation "mb"	1,2	IEC Ex mb IIC T6
		21,22	IEC Ex mb tb IIIC T80°C
XAR4003	Encapsulation "mb"	1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C

How to Order Manifold

V V 5 F 1 – 4 0 – 2 2 – 0 2

1 Series

Symbol	Series	P, R port size	A, B port size
3	VF3000	1/4" BSP	1/4" BSP
5	VF5000	3/8" BSP	1/4" BSP

*) A and B ports are made on the bottom

**) Refer to Table 1

2 Stations

02	2 stations
....
20	20 stations

*) up to 10 stations for VV5F5

Table 1

	VV5F3-40	VV5F5-40
XAR4001	x *	o
XA*TBC	x *	o
XAR4002	x *	o
XAR4003	o	o

*) When using VF3000 with 30mm coil (XAR4001, XAR4002) you cannot mount valves side by side please use 22mm width coil (XAR4003) or blanking plate.

Manifold Options

	Mounting screw	Gasket	Blanking plate
VF3000	DXT031-44-1	DXT031-30-11	DXT031-38-5A
VF5000	AXT620-32-1	DXT156-9-8	VF5000-70-1A

VP3/5/700 Series - Body Ported / Single Unit

How to Order Valve



1 Series

3	VP300
5	VP500
7	VP700

2 Pilot Type

Nil	Internal Pilot
R	External Pilot

3 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia" XAR4010	ncapsulation "mb" XAR4011/12
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

7 A, B Port size

Symbol	Port Size	VP300	VP500	VP700
01	1/8" BSP	o	x	x
02	1/4" BSP	o	o	x
03	3/8" BSP	x	o	o
04	1/2" BSP	x	x	o

8 Type of Actuation

A	N.C.
B	N.O.

4 Voltage

Symbol	Voltage	Intrinsic Safety "ia"	Encapsulation "mb"	Encapsulation "mb"
		XAR4010	XAR4011	XAR4012
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

5 Electrical entry

Symbol	Entry	Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

6 Manual Override

Nil	Push type
D	Push-turn locking type

9 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4010	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
		21,22	IEC Ex t IIIC T80°C
XA*TBC	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
		21,22	IEC Ex t IIIC T80°C
XAR4011	Encapsulation "mb"	1,2	IEC Ex mb IIC T6
		21,22	IEC Ex mb tb IIIC T80°C
XAR4012	Encapsulation "mb"	1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C



VP3/5/700 Series – Base Mounted / Single Unit

How to Order Valve



V P 1 4 4 2 3 – 4 5 6 1 – 7 8 – 9

1 Series

3	VP300
5	VP500
7	VP700

2 Pilot Type

Nil	Internal Pilot
R	External Pilot

3 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia" XAR4010	Encapsulation "mb" XAR4011/12
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

7 A, B Port size

Symbol	Port Size	VP300	VP500	VP700
Nil	Without sub-plate			
01	1/8" BSP	o	x	x
02	1/4" BSP	o	o	x
03	3/8" BSP	x	o	o
04	1/2" BSP	x	x	o

* Without the sub-plate, two mounting screws and a gasket are included

8 Type of Actuation

A	N.C.
B	N.O.

4 Voltage

Symbol	Voltage	Intrinsic Safety "ia" XAR4010	Encapsulation "mb" XAR4011	Encapsulation "mb" XAR4012
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

5 Electrical entry

Symbol	Entry	Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

6 Manual Override

Nil	Push type
D	Push-turn locking type

9 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4010	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
		21,22	IEC Ex ia IIC/IIB T6
XA*TBC	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
		21,22	IEC Ex t IIIC T80°C
XAR4011	Encapsulation "mb"	1,2	IEC Ex mb IIC T6
		21,22	IEC Ex mb tb IIIC T80°C
XAR4012	Encapsulation "mb"	1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C

How to Order Subplate

V P 1 0 0 – 2 0 2 – 2

1 Series

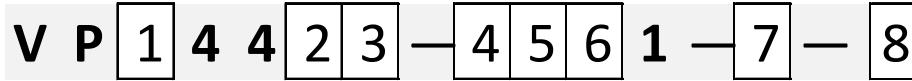
3	VP344
5	VP544
7	VP744

2 Port Size

Symbol	VP344	VP544	VP744
1	1/8" BSP	1/4" BSP	3/8" BSP
2	1/4" BSP	3/8" BSP	1/2" BSP

VP3/5/700 Series – Base Mounted / Manifold

How to Order Valve (with a gasket and two mounting screws)



1 Series

3	VP300
5	VP500
7	VP700

2 Pilot Type

Nil	Internal Pilot
R	External Pilot

3 Pressure Specifications

Symbol	Pressure	Intrinsic Safety "ia"	Encapsulation "mb"
		XAR4010	XAR4011/12
Nil	Standard (0.7MPa)	o	x
K	High pressure (1MPa)	x	o

5 Electrical entry

Symbol	Entry	Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

6 Manual Override

Nil	Push type
D	Push-turn locking type

7 Type of Actuation

A	N.C.
B	N.O

4 Voltage

Symbol	Voltage	Intrinsic Safety "ia"	Encapsulation "mb"	Encapsulation "mb"
		XAR4010	XAR4011	XAR4012
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

8 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4010	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
XA*TBC		1,2	IEC Ex ia IIC/IIB T6
XAR4011	Encapsulation "mb"	21,22	IEC Ex t IIIC T80°C
XAR4012		1,2	IEC Ex mb IIC T6
		21,22	IEC Ex mb tb IIIC T80°C
		1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C

How to Order Manifold



1 Series

3	VP300
5	VP500
7	VP700

4 Stations

02	2 stations
....
20	20 stations

2 Exhaust Type

41	Common exhaust
42	Individual exhaust

5 Port Size

Symbol	Port Size	Applicable Series
02	1/4" BSP	VP300
03	3/8" BSP	VP500
04	1/2" BSP	VP700

3 Pilot Type

Nil	Internal Pilot
R	External Pilot

*) When the external pilot type manifold,

Manifold Options

	Mounting screw (1pc)	Gasket	Blanking plate
VP344	VP300-224-1	VP300-217-1	VP300-25-1A
VP544	VP500-224-1	VP500-217-1	VP500-25-1A
VP744	VP700-224-1	VP700-217-1	VP700-25-1A

VFN200/2000 Series - Namur Interface

How to Order 3 Ports Valve



V F N 2 1 2 N — 1 2 3 — 02 — 4

1 Voltage

Symbol	Voltage	Intrinsic Safety "ia" XAR4013	Encapsulation "mb" XAR4014	Encapsulation "mb" XAR4015
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

2 Electrical entry

Symbol	Entry	Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

Note) For 3/2 with double solenoid, please use VFN2120N-***-02-D-XAR40***

3 Manual Override

A	Push type
B	Push-turn locking type

4 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4013	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
XA*TBC		1,2,22	IEC Ex ia IIC/IIB T6 IEC Ex t IIIC T80°C
XAR4014	Encapsulation "mb"	1,2	IEC Ex mb IIC T6
XAR4015		21,22	IEC Ex mb tb IIIC T80°C
		1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C

How to Order 5 Ports Valve

V F N 2 1 2 0 N — 2 3 4 — 02 — 5

1 Solenoid

1	Single solenoid
2	Double Solenoid

2 Voltage

Symbol	Voltage	Intrinsic Safety "ia" XAR4013	Encapsulation "mb" XAR4014	Encapsulation "mb" XAR4015
3	110VAC 50/60Hz	x	o	o
5	24VDC	o	o	o
6	12VDC	x	o	x
7	240VAC 50/60Hz	x	o	o
8	48VAC 50/60Hz	x	o	x
B	24VAC 50/60Hz	x	o	x
Y	48VDC 50/60Hz	x	o	x
9	Other voltages (RFP)	x	o	o

3 Electrical entry

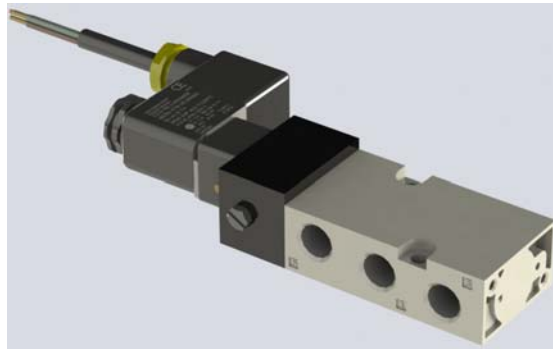
Symbol	Entry	Intrinsic Safety "ia"	Encapsulation "mb"
D	DIN Terminal	o	x
G	Grommet with 3m cable	x	o

4 Manual Override

A	Push type
B	Push-turn locking type

5 RFS Number

Symbol	Protection Type	Zones	IECEx Marking
XAR4013	Intrinsic Safety "ia"	1,2	IEC Ex ia IIC/IIB T6
XA*TBC		1,2,22	IEC Ex ia IIC/IIB T6 IEC Ex t IIIC T80°C
XAR4014	Encapsulation "mb"	1,2	IEC Ex mb IIC T6
XAR4015		21,22	IEC Ex mb tb IIIC T80°C
		1,2	IEC Ex mb IIC T4
		21,22	IEC Ex mb tb IIIC T130°C



Other Series available as Request for Special (expect longer deliveries)

Below Series are also available with IECEX compliant coils but they are not fully standardised, please consult SMC if you require more information, delivery and price.

EVS7-6/8/10 Series - Solenoid Valve (ISO CNOMO) - 5 Ports



AV Series – Soft Start-up Valve - 3 Ports



VNB Series - Process Valve - 2 Ports



Spare coils

Protection Method		RFS part number	Coil Type	Coil part number	Voltage	Temperature Class
Intrinsic Safety "ia"	zones 1, 2	XAR4001, XAR4010, XAR4013	type 1259	108-030-1083	24VDC	T6
	zones 1,2,21,22	XA*TBC, XA*TBC, XA*TBC,	type 1262	108-030-1160	24VDC	T6
Encapsulation "mb"	zones 1,2,21,22	XAR4002, XAR4011, XAR4014	type 1215	108-030-1070	12VDC	T6
				108-030-1075	24VDC	T6
				108-030-1077	48VDC	T6
			type 0515	108-030-0036	24VAC	T6
				108-030-0037	48VAC	T6
				108-030-0038	110VAC	T6
		XAR4003, XAR4012, XAR4015	type 1213	108-030-1027 *)	12VDC	T4
				108-030-1028	24VDC	T4
				108-030-1029 *)	48VDC	T4
			type 0513	108-030-0004 *)	24VAC	T4
				108-030-0002	110VAC	T4
				108-030-0003	240VAC	T4

*) indent only

Documents

Each order receives ONE hard copy of below documents:

- 1) Installation Instructions, 2) Drawing, 3) IECEx Certificate of Conformity, 4) Nass coil operating instructions, 5) Operation Instructions for SMC's valve series

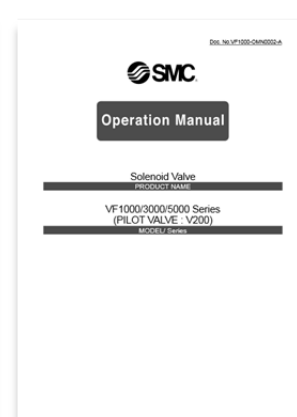
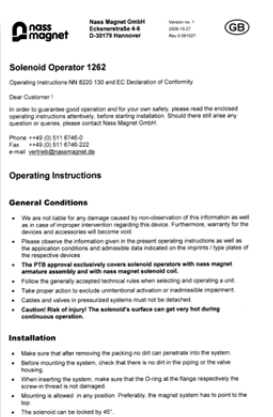
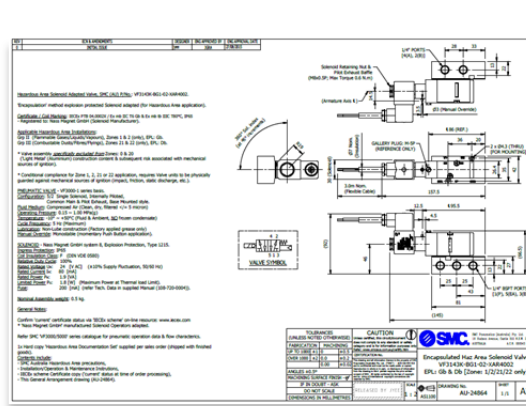
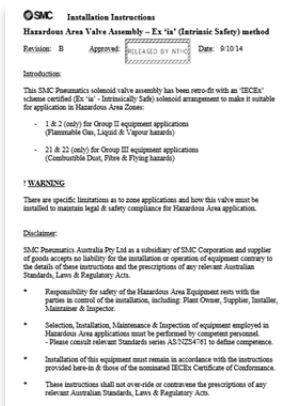




Figure shows SMC's VF3000 double solenoid type base mounted with encapsulation "mb" coil (3m length) and set of documents provided.

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