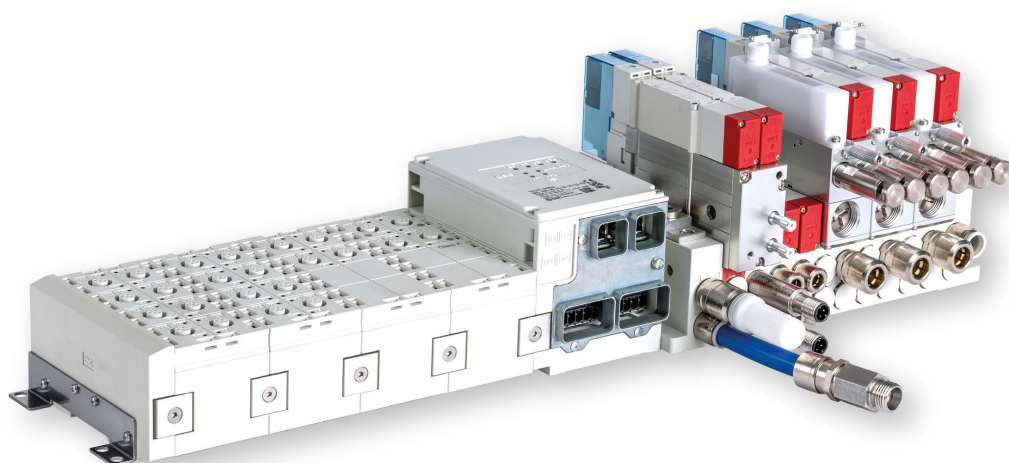


Project Manual for BMW

Valve Manifold – Body Shop





Change history

Revision	Date	Changes	Created	Checked	Released
0	2024-12-17	- First issue	Brink	Bock	Banzhaf
1	2025-01-29	- Modification of End plate with mounting bracket for electrical components: Type EX245-EA2-CEX50002 replaced by type EX245-EA2-3	Brink	Bock	Banzhaf
2	2025-04-03	- Tie rod set, type SV2000-55-2A-A, for manifold block assembly, series JSY51M-2P-1DA-C0, added - Chapter “Notes on the vulnerability scan” added - Data sheets revised - Drawings revised - Links revised - Editorially revised	Brink	Bock	Banzhaf
3	2025-10-16	- Modification of Valve manifold, maximum assembly with vacuum: Type JSY54422428BC8-4MBODLWWWW replaced by type JSY58444222BC8-4MBODLWWWW - Correction Solenoid valves, type JSY5*-5U-X11*: Type JSY5500R-5U-X110 added	Brink	Bock	Banzhaf
4	2026-04-17	- Figures revised - Editorially revised	Brink	Bock	Banzhaf
5	2026-04-27	- Chapter “Connection of the functional earth” added - Editorially revised	Brink	Bock	Banzhaf



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2 General notes

2.1 Purpose of the project manual

The purpose of this project manual is to define SMC product series and to present them to customers and their machine builders.

With this product selection and the presentation of customised solutions and services, the following topics, among others, should be optimally realised for the customer:

- Cost-effective, optimised production processes
- Energy-saving solutions
- Solutions for machine safety
- Solutions for maintenance
- Solutions for extending the service life

The project manual serves as a basis for selecting individual products that can be used as the basis for developing a customised solution in collaboration with SMC.

In order to achieve a fast delivery time, products in stock can be called up on the SMC website. If a product is not available from stock, a quick delivery can still be realised via an agreed customer stocking.

The information on the series always refers to the maximum level of functions and properties of the product series, which are not necessarily fulfilled by each individual product.

2.2 Navigation in the document



A click on this symbol in the footer leads to the table of contents.

2.3 Technical data

Specifications are subject to change without prior notice and any obligation on the part of the manufacturer.

2.4 Figures

The figures used in this project manual may differ from the actual design of the products.



2.5 Links to product information

The links in this project manual lead to product pages on SMC websites, data sheets or drawings with further information on the products.

2.6 Safety and warning notes

The safety and warning notes in this project manual as well as the safety and warning notes in the document “Handling Precautions for SMC Products” must be observed.

The document “Handling Precautions for SMC Products” can be found on the SMC website:

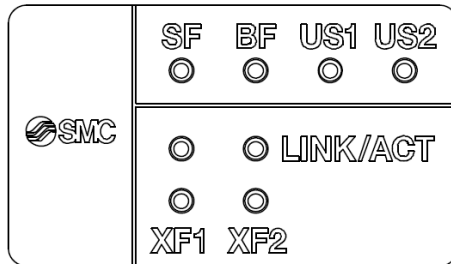
[Handling Precautions for SMC Products](#)



3 Notes on the vulnerability scan

Illustration of the flashing behaviour of the LEDs due to the response of the port available for firmware updates:

EX245-SPN2A



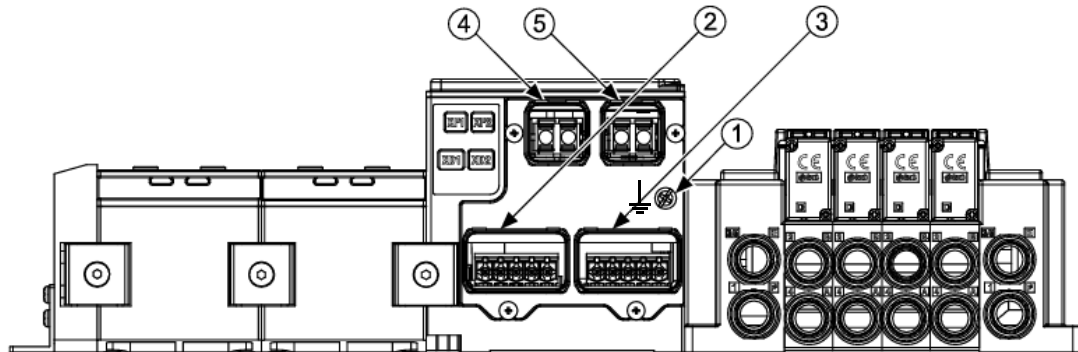
SF	BF	Meaning
Flashes alternately with 1 Hz		The port for firmware updates has been addressed.
SF ON BF OFF SF OFF BF ON		The device continues to work perfectly.

When the LEDs are flashing:

The valve manifold maintains the PROFINET communication and continues to process the information. It is still possible to set outputs and read in inputs

4 Connection of the functional earth

- ① M4, FE terminal screw (torque = 0.7 to 0.8 N•m)
- ② Push Pull connector (24 Volt), Power connection (XD1)
- ③ Push Pull connector (24 Volt), Power connection (XD2)
- ④ Push Pull connector (RJ45), PROFINET connection Port1 (XF1), Port type: MDI
- ⑤ Push Pull connector (RJ45), PROFINET connection Port2 (XF2), Port type: MDI-X



The functional earth can be connected in two ways:

- Option 1: Connection via the power supply connectors ② and ③
- Option 2: Connection via the functional earth screw ① (M4 screw)

The cable should be as short as possible and have the largest possible surface area.

Recommendation:

Cable cross-section $\geq 2.5 \text{ mm}^2$, cable lug for connection to functional earth screw ① (M4 screw)

Note:

Ground loops should be avoided.

5 Application description for the BMW valve manifold configurator from SMC

5.1 Notes on the BMW valve manifold configurator

The BMW valve manifold configurator from SMC was created in collaboration with BMW. The configuration options and maximum extensions of the valve manifold are specified by BMW. The valve manifold configurator only allows certain combinations with regard to I/O modules, bus nodes, pilot pressure control valve, self-monitoring safe exhaust valve with soft start-up function and valves. This means that the valve manifold configurator can only be used to create configurations that have been approved by BMW.

Examples of configurations

1) *Pilot pressure control valve*

If a checkmark is set for the pilot pressure control valve in the valve manifold configurator, an input module for the required pressure switch is automatically added. This input module cannot be deselected and is permanently linked to the pilot pressure control valve. If the checkmark is removed from the box for the pilot pressure control valve, the input module is automatically reduced and can be added manually if required.

2) *Self-monitoring safe exhaust valve with soft start-up function*

If a checkmark is placed in the valve manifold configurator for the self-monitoring safe exhaust valve with soft start-up function, an output module is automatically added. This output module cannot be deselected and is permanently linked to the self-monitoring safe exhaust valve with soft start-up function. If the checkmark is removed from the box for the self-monitoring safe exhaust valve with soft start-up function, the output module is automatically reduced and can be added manually if required.

3) *Vacuum ejector unit including base plate and push-in plug connector*

If a checkmark is set for the vacuum ejector unit in the valve manifold configurator, an IO-Link module is automatically added. This IO-Link module cannot be deselected and is permanently linked to the vacuum ejector unit. If the vacuum ejector unit is removed, the IO-Link module is automatically reduced. Only one IO-Link module is required for 1 - 4 vacuum ejector units.

5.2 Registration and login to the BMW valve manifold configurator

Registration for the valve manifold configurator

In order to use the valve manifold configurator, it is necessary to register via the SMC website. Registration is required before logging in for the first time. A one-off authorisation must be requested from SMC. This was a requirement on the part of BMW. The request for approval can be made via the SMC project managers.

Login to the BMW valve manifold configurator

1. Register on the [SMC website](#) (Figure 1).

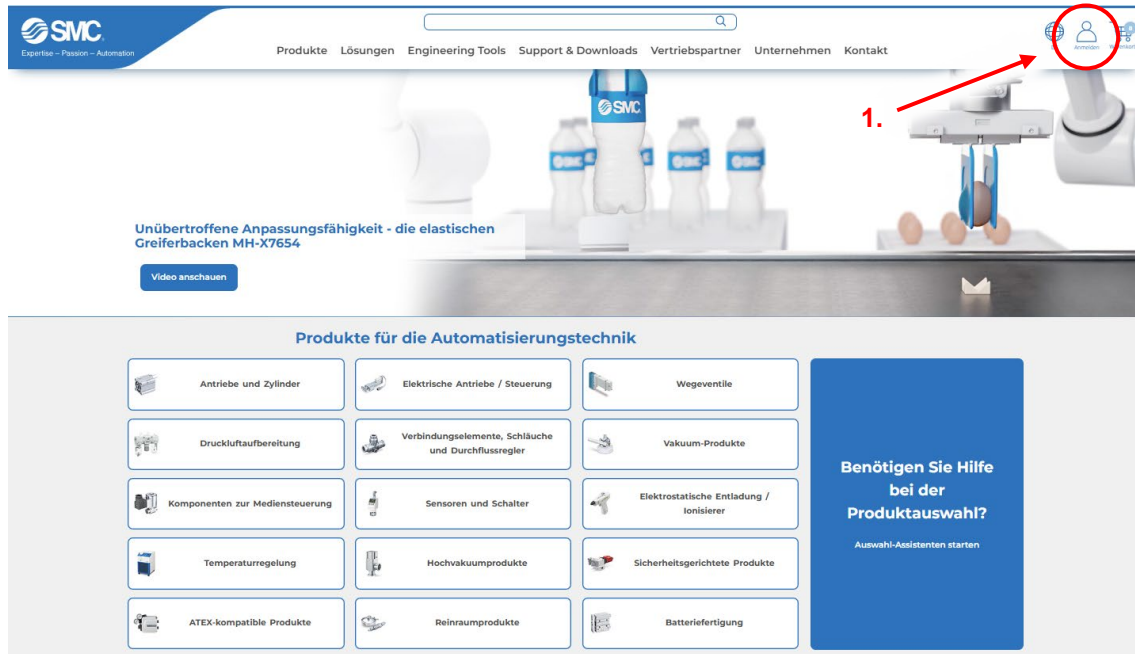


Figure 1

2. Navigate to the “Engineering Tools” menu item (Figure 2).
→ A drop-down menu opens.
3. Navigate to the “Configurators” menu item in the drop-down menu (Figure 2).
→ The submenu with the submenu item “2D Valve manifold configurator (2D-VIK)” opens.
4. Click on the submenu item “2D Valve manifold configurator (2D-VIK)” (Figure 2).
→ A website with various valve manifold configurators opens.

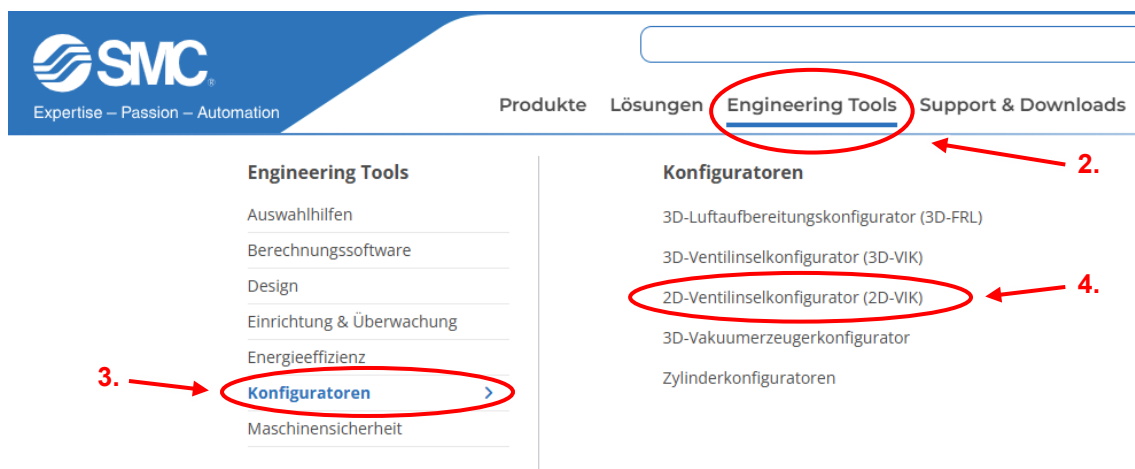


Figure 2

5. Click on the “Automotive industry” button (Figure 3).
→ A new website opens.
If the registration was successful and you are authorised, the “Bayerische Motoren Werke AG” button will appear on this web page.

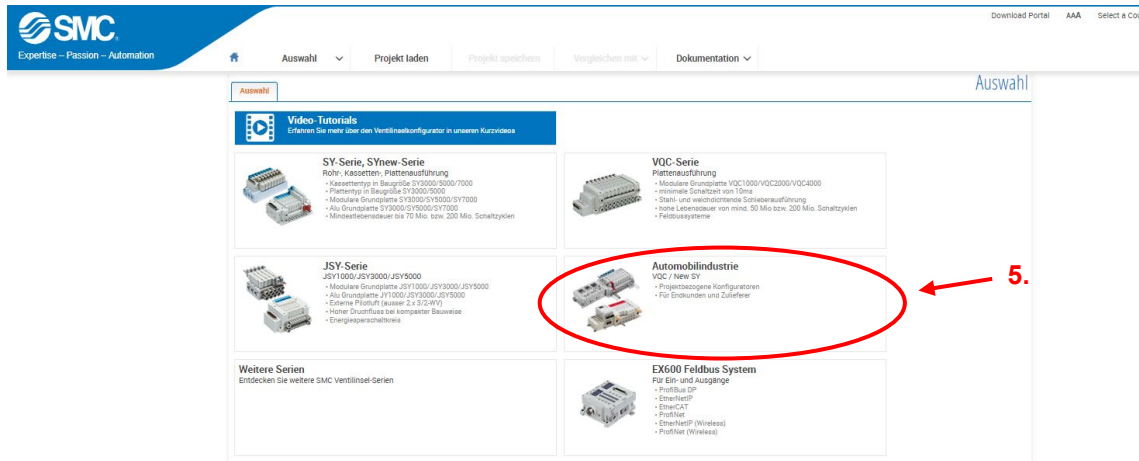


Figure 3

6. Click on the “Bayerische Motoren Werke AG” button (Figure 4).
→ The website with the authorised BMW valve manifold configurator opens.

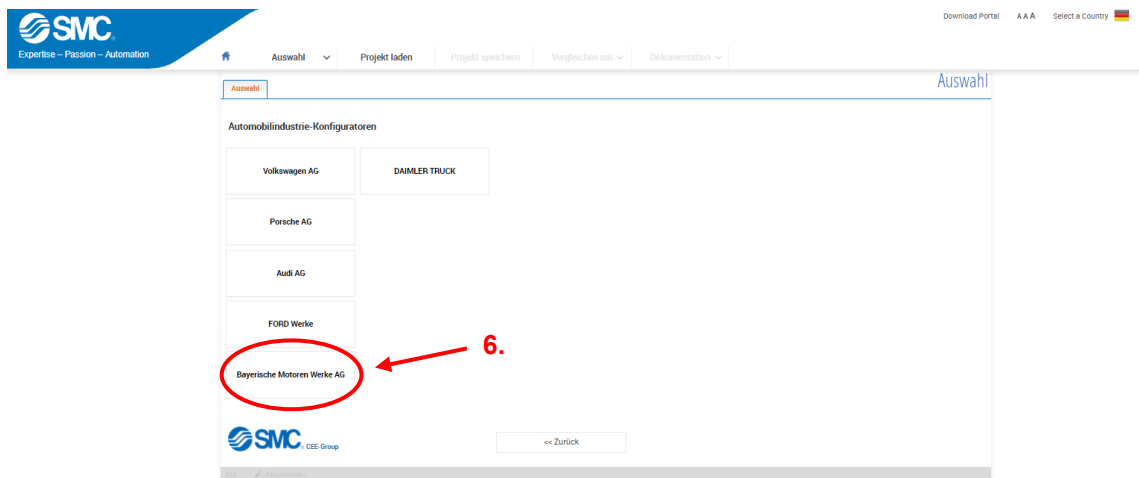


Figure 4

- ✓ You can start with the configuration.

5.3 Detailed description and instructions for the BMW valve manifold configurator

A detailed description and instructions for the BMW valve manifold configurator can be found under the following link:

[BMW valve manifold configurator](#)

6 Valve manifold assembly

6.1 Valve manifold, maximum assembly with vacuum, type JSY58444222BC8-4MBODLWWWW

Number of IO-Link for vacuum ejectors	1
Number of input or output modules	max. 6
Number of inputs, 16 inputs, 8 × M12 (5-pin)	max. 48
Permanently assigned plug input M12	2 × M12 plugs, permanently assigned for self-monitoring safe exhaust valve with soft start-up function for the 2 installed pressure sensors
Connection cable	on site
Number of outputs, 8 outputs, 4 × M12 (5-pin)	max. 24
Permanently assigned plug output M12	1 × M12 plug, permanently assigned for self-monitoring safe exhaust valve with soft start-up function
Number of valves	max. 5
Number of vacuum ejectors	max. 4



[Ventilinselkonfigurator - Technologie Karosseriebau - Projekt V8](#)

[Valve Manifold Configuration - Technology Body Shop Construction - Project V8](#)

[Benutzeranweisung SMC Ventilinsel FM-STÜLI Ausleitung](#)

6.2 Valve manifold, maximum assembly without vacuum, type JSY54442224BC8-EBBBBBBBBBBBBBBB

Number of input or output modules	max. 7
Number of inputs, 16 inputs, 8 × M12 (5-pin)	max. 56
Permanently assigned plug input M12	1 × M12 plug, permanently assigned for pilot pressure control valve for the installed pressure sensor
Connection cable	on site
Number of outputs, 8 outputs, 4 × M12 (5-pin)	max. 28
Number of valves without Pilot pressure control valve	max. 15
Number of valves with Pilot pressure control valve	max. 14
Number of valves	max. 15



[Ventilinselkonfigurator - Technologie Karosseriebau - Projekt V8](#)
[Valve Manifold Configuration - Technology Body Shop Construction - Project V8](#)

[Benutzeranweisung SMC Ventilinsel FM-STÜLI Ausleitung](#)

7 Valve manifold, electrical part and pressure sensor

7.1 Common technical data for all modules/units of the EX245 series



Rated voltage	24 VDC
Allowable instantaneous electrical stop	max. 1 ms
Protection class	IP65 (fully installed and equipped with protective cover) Complies with IEC 60529
Withstand voltage	500 VAC for 1 min (between FE and all accessible terminals)
Insulation resistance	min. 10 MΩ (500 VDC is given between FE and all accessible terminals)
Ambient temperature	Operation: -10 °C to 50 °C Storage: -20 °C to 60 °C
Ambient humidity	35 % to 85 % relative humidity (non-condensing)
Operating environment	No corrosive gas
Vibration resistance	10 Hz to 57 Hz (constant amplitude) 0.75 mm 57 Hz to 150 Hz (constant acceleration) 49 m/s ² 2 hours for each direction X, Y and Z complies with IEC 60068-2-6
Impact resistance	147 m/s ² is given 3 times for each direction X, Y and Z complies with IEC 60068-2-27
Standards	CE labelling in accordance with directive 2014/30/EU (EMC), 2011/65/EU (RoHS) UKCA labelling UL labelling (CSA)
Link	EX245

7.2 SI unit, type EX245-SPN2A

Technical data

Dimensions (W × L × H)	85.0 × 127.5 × 89.5 mm
Weight	465 g
Housing material	PBT
Max. number of modules	8
Max. number of digital inputs	128
Max. number of digital outputs	64 (independent of solenoid valves)
Max. number of IO-Link ports	32
Compatible modules	Input module, Output module, IO-Link module



Electrical data

Internal current consumption at 24 VDC (via US1)	max. 200 mA
Protection against polarity reversal	yes (US1 and US2)
Loop through current between power connector XD1 to XD2	max. 16 A
Operating voltage US1	24 VDC +20 %/-15 %
Max. current US1	6 A total
Under-voltage detection US1	detected: < ca. 19.2 VDC
Operating voltage US2	24 VDC +20 %/-15 %
Max. current US2	4 A ((independent of valves)
Voltage drop to valve supply US2	max. 1.2 V at 24 VDC
Galvanic isolation	yes (between US1 and US2)

Solenoid valve

Compatible valve series	JSY3000, JSY5000 SY3000, SY5000 VQC2000, VQC4000
Max. number of solenoid valves	32 solenoid coils
Load	Solenoid valve with surge voltage suppressor (24 VDC), max. 1 W (SMC)
Output type of solenoid	Source/PNP (negative COM)
Over current protection	yes
Over current detection	yes

Fieldbus

Bus protocol	PROFINET
Conformance class C	yes (only for IRT switch function)
FSU (Fast Start Up)	yes
MRP (Media Redundancy Protocol)	yes
MRPD (Media Redundancy for Planned Duplication)	yes
Shared device	yes
PROFenergy	yes
System redundancy S2	yes
Web server function	yes
Firmware update	yes
Net Load Class III	yes
Maintenance alarm for fibre-optic cable	-
Vendor ID	0083h
Device ID	0011h
GSD file	GSDML-V2.3*- SMC-EX245-SPN-*****.xml



Plug

Communication connector	Push pull connector (RJ45), 2 pieces
Power supply connector	Push pull connector (24 V), 2 pieces

Transmission speed

100 Mbps full duplex

Link

[EX245-SPN2A](#)

Part number	Link data sheet	BMW material number
EX245-SPN2A	EX245-SPN2A	3C3A230

7.3 Digital input module, type EX245-DX1

Technical data

Dimensions (W × L × H)	54 × 120 × 61 mm
Weight	265 g
Housing material	Nylon, PBT

Electrical data

Internal current consumption at 24 VDC	max. 50 mA
Voltage drop to US1 (sensor/input)	max. 1.6 V
Input connection type	8 × M12, 5-pins sockets with double allocation
Overvoltage protection	yes, more than 28 VDC at US1 (sensor/input)
Overcurrent protection	yes
Sensor supply current per connector	max. 0.5 A
Sensor supply current per module	max. 2 A
Status indication	yes (per input)
Overcurrent indicator	yes (per connector)

Digital input

Number of inputs	16
Input type	PNP
Signal 1	11 to 30 V
Signal 0	-3 to 5 V
Permissible residual current	max. 1.5 mA
Input current signal 1	typically 4.5 mA

Link

[EX245-DX1](#)



Part number	Link data sheet	BMW material number
EX245-DX1	EX245-DX1	3C3A231

7.4 Digital output module, type EX245-DY1

Technical data

Dimensions (W × L × H)	54 × 120 × 61 mm
Weight	255 g
Housing material	Nylon, PBT
Electrical data	
Internal current consumption at 24 VDC	max. 50 mA
Voltage drop to load supply	max. 1.6 V
Load connection	4 × M12, 5-pins socket with double allocation
Overvoltage protection	yes, more than 28 VDC at US2 (solenoid coil/output)
Overcurrent protection	yes
Output current per output	max. 0.5 A
Output current per module	max. 2 A
Status indication	yes (per output)
Overcurrent indicator	yes (per output)

Digital output

Number of outputs	8
Output type	PNP

Link [EX245-DY1](#)



Part number	Link data sheet	BMW material number
EX245-DY1	EX245-DY1	3C3A232

7.5 IO-Link module, type EX245-LA1

Technical data

Dimensions (W × L × H)	54 × 120 × 61 mm
Weight	265 g
Housing material	Nylon, PBT
Compatible SI unit	EX245-SPN1A, EX245-SPN2A

Electrical data

Internal current consumption at 24 VDC	max. 50 mA
Device power supply (L+)	0.5 A/Connector (2 A/module)

IO-Link

IO-Link version	Version 1.1
IO-Link port class	Class A
Communication speed	COM1 (4.8 kB/s) COM2 (38.4 kB/s) COM3 (230.4 kB/s) changes automatically according to the connected device
Number of IO-Link ports	4

Digital input

Pin number	4
Input type	PNP
Protection	Short-circuit protection
Nominal input current per input	approx. 5.8 mA
ON voltage	min. 13 V
OFF voltage	max. 8 V

Digital output

Pin number	4
Output type	PNP
Max. load current	0.25 A/output (supplied from the power supply for sensor/logic US1)
Protection	Short-circuit protection

Link

[EX245-LA1](#)



IO-Link port type	Part number	Link data sheet	BMW material number
Class A	EX245-LA1	EX245-LA1	3C3A233

7.6 End plate with mounting bracket for electrical components, type EX245-EA2-3

Description	End plate for electrical input/output side Mounting bracket for adapting drilling patterns for series JSY/SY
Technical data	
Dimensions (W × L × H)	27.6 × 120 × 61.5 mm
Weight	120 g
Housing material	Nylon
Bracket	with bracket for series JSY/SY
Link	EX245-EA2-3



Part number	Link data sheet	BMW material number
EX245-EA2-3	EX245-EA2-3	3C3A229

7.7 Pressure sensor, type F08-M2-J5000-M12-M_S0.3_R0.2

Description	Customized exclusive product only for SMC Deutschland GmbH and other companies of the SMC Corporation group
Manufacturer	MP-Sensor
General data	
Setting options	Switch points; NO/NC; hysteresis/window mode; On/Off delay; programming lock ex works
Operating medium	Filtered, dry or oiled air and non-corrosive gases
Protection class	IP65
MTTF (40 °C)	697 years
Electrical data	
Electrical connection	M12 × 1, 4-pole
Operating voltage	9...30 VDC (UL: class 2 source only)
Current consumption	< 25 mA
Short-circuit/ reverse polarity protection	yes/yes
Switching output	
Output signal	2 × PNP
Output voltage	approx.: $U_b - 1.5 \text{ V}$
Max. output current	max. 250 mA each output
Output function	NO/NC (programmable)
Accuracy	±2 % FS
Repeatability	±0.2 % FS
Mechanical data	
Material housing	Stainless steel 1.4305
Material process connection	Brass, nickel-plated
Mounting position	any (port down when using oiled air)
Weight	32 g
Pressure range	
Measuring range	-0.1...1 MPa
Max. overpressure	1.5 MPa Overpressure not continuously allowed





Operating conditions

Operating temperature	Operation: 0...+80 °C (UL: 0...+60 °C) Fluid: 0...+80 °C (UL: 0...+60 °C) Storage: -20...+85 °C
Air humidity	30...85 % RH



Norms and standards

EMC/Interference immunity	EN 61000-6-2
EMC/Interference emission	EN 61000-6-4
Vibration resistance	DIN EN 60068-2-6: 20 G, 10-2000 Hz, XYZ
Shock resistance	DIN EN 60068-2-27: 50 G, 11 ms, XYZ
UL approval	E511277
LABS conformity	VDMA 24364-B1/B2/C1-L/W

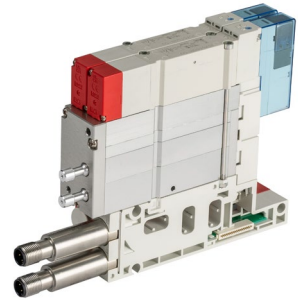
Part number	Link data sheet	BMW material number
F08-M2-J5000-M12-M_S0.3_R0.2	F08-M2-J5000-M12-M_S0.3_R0.2	3C3A236



8 Exhaust valve, pilot pressure control valve, solenoid valves and vacuum ejector unit

8.1 Self-monitoring safe exhaust valve with soft start-up function including end plate, type JSY51M-250P-3A

Actuation	5/2-way solenoid valve, monostable with spring return pilot-controlled
Rated voltage	24 VDC
Operating pressure	0.35 to 0.7 MPa
Ambient and fluid temperatures	5 to 50 °C (no freezing)
Voltage tolerance	-8 to 10 %
Power consumption	2 × 0.4 W
Inrush current	0.8 W (for 2 valves)
Holding current	0.2 W (for 2 valves)

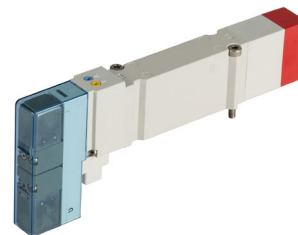


Part number	Link data sheet	BMW material number
JSY51M-250P-3A	JSY51M-250P-3A	3C3A228



8.2 5/2-way Pilot pressure control valve, spring return type, type JSY5100T-5NZ-X310

Description	Releases the external auxiliary control air/pilot air
End cap colour	red
Actuation	5/2-way solenoid valve, monostable spring return type
Pilot type	internal pilot
Rated voltage	24 VDC
Energy saving function	yes
Operating pressure	0.25 to 0.7 MPa
Operating display	yes
Surge voltage suppressor	yes
Accessories	Manifold block assembly, series JSY51M-2P-2DA-C0 BMW material number 3C3A224

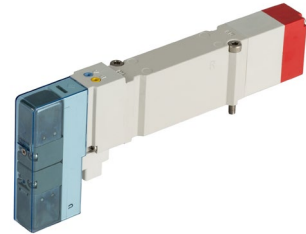


Part number	Link data sheet	BMW material number
JSY5100T-5NZ-X310	JSY5100T-5NZ-X310	3C3A223



8.3 Solenoid valves, type JSY5*-5U-X11*

End cap colour	red
Pilot pressure	external
Rated voltage	24 VDC
Light	yes
Surge voltage suppressor	yes
Accessories	Manifold block assembly, type JSY51M-2P-1DA-C8-CEAC20067, BMW material number 3C40F39
Link	JSY

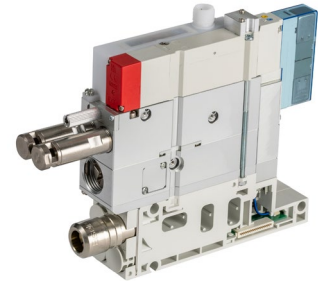


Actuation	Part number	Link data sheet	BMW material number
5/2-way solenoid valve, monostable	JSY5100R-5U-X110	JSY5100R-5U-X110	3C3A215
5/2-way solenoid valve, bistable with detent	JSY5200R-5U-X112	JSY5200R-5U-X112	3C3A216
5/3-way solenoid valve, exhaust centre	JSY5400R-5U-X110	JSY5400R-5U-X110	3C3A218
5/3-way solenoid valve, pressure centre	JSY5500R-5U-X110	JSY5500R-5U-X110	3C3A219



8.4 Vacuum ejector unit including base plate and push-in plug connector, type ZK2H14V-X163

Housing design	for manifold base
Exhaust type	High noise reduction silencer exhaust
Energy saving function	yes
Vacuum switch	yes
Vacuum switch setting	yes, with TMG-Tool
Adjustable blow-off impulse	yes
Electrical connection	M12 IO-Link
Vacuum connection type	Push-in plug connector 12 mm



Part number	Link data sheet	BMW material number
ZK2H14V-X163	ZK2H14V-X163	3C3A234



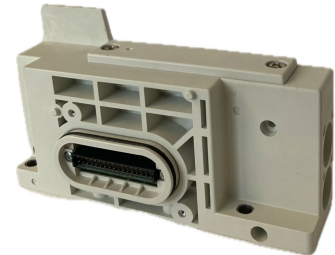
9 Valve manifold, mechanical pneumatic part

9.1 End plate, D side, type JSY51M-1P-17A-*

Types

JSY51M-1P-17A-C0

- without Push-in plug connector



JSY51M-1P-17A-
CEAC20063

- P/R connection with two Push-in-plug connectors 12 mm:
 - 1 × type KQSY50-C12-X1336 (SMC), BMW material number 3C40F27
 - 1 × type SA1790-1509VR01 (Eisele), BMW material number 3C3A244



Link

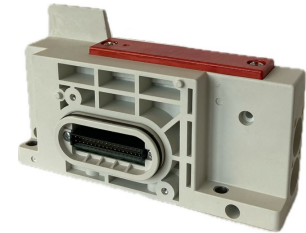
[JSY](#)

Type	Part number	Link data sheet	BMW material number
without Push-in plug connector	JSY51M-1P-17A-C0	JSY51M-1P-17A-C0	3C3A239
P/R connection with 2 × push-in plug connectors 12 mm	JSY51M-1P-17A-CEAC20063	JSY51M-1P-17A-CEAC20063	3C40F37

9.2 End plate, D side, with P bridged to X, type JSY51M-1P-16A-*

Description with P bridged to X
Cover plate colour red
Types

JSY51M-1P-16A-C0 • without push-in plug connector



JSY51M-1P-16A-CEAC20065 • P/R connection with two push-in plug connectors 12 mm:
– 1 × type KQSY50-C12-X1336 (SMC), BMW material number
– 1 × type SA1790-1509VR01 (Eisele), BMW material number 3C3A244



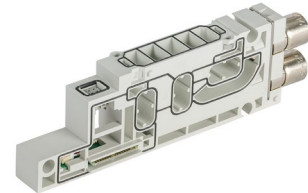
Link [JSY](#)

Type	Part number	Link data sheet	BMW material number
without push-in plug connector	JSY51M-1P-16A-C0	JSY51M-1P-16A-C0	3C3A237
P/R connection with 2 × push-in plug connectors 12 mm	JSY51M-1P-16A-CEAC20065	JSY51M-1P-16A-CEAC20065	3C40F38

9.3 Manifold block assembly, series JSY51M-2P-1DA-*

Types

- | | |
|-----------------------------|---|
| JSY51M-2P-1DA-C0 | <ul style="list-style-type: none"> • without push-in plug connector • without tie rod set type SV2000-55-2A-A, BMW material number 3C58020 |
| JSY51M-2P-1DA-C8-CEAC20067 | <ul style="list-style-type: none"> • with two push-in plug connectors 8 mm: <ul style="list-style-type: none"> – 2 × type SA1790-1206VR01 (Eisele), BMW material number 3C3A242 • including tie rod set type SV2000-55-2A-A, BMW material number 3C58020 |
| JSY51M-2P-1DA-C10-CEAC20068 | <ul style="list-style-type: none"> • with two push-in plug connectors 10 mm: <ul style="list-style-type: none"> – 2 × type SA1790-1408VR01 (Eisele), BMW material number 3C3A243 • including tie rod set type SV2000-55-2A-A, BMW material number 3C58020 |



Link

[JSY](#)

Type	Part number	Link data sheet	BMW material number
without push-in plug connector	JSY51M-2P-1DA-C0	JSY51M-2P-1DA-C0	3C3A227
with 2 × push-in plug connectors 8 mm	JSY51M-2P-1DA-C8-CEAC20067	JSY51M-2P-1DA-C8-CEAC20067	3C40F39
with 2 × push-in plug connectors 10 mm	JSY51M-2P-1DA-C10-CEAC20068	JSY51M-2P-1DA-C10-CEAC20068	3C40F40



9.4 Manifold block assembly for pilot pressure control valve, series JSY51M-2P-2DA-C0

Colour	red
Wiring	double wiring
Connection	without push-in plug connector, connections must be equipped with a pressure sensor and a sealing plug
Tie rod set	including tie rod set type SV2000-55-2A-A, BMW material number 3C58020
Accessories	• Pressure sensor, type F08-M2-J5000-M12-M_S0.3_R0.2 (MP-Sensor), BMW material number 3C3A236 • Sealing plug, type JSY51M-62P-1A (SMC), BMW material number 3C40F33



Part number	Link data sheet	BMW material number
JSY51M-2P-2DA-C0	JSY51M-2P-2DA-C0	3C3A224



9.5 End plate, U side, series JSY51M-3P-7A-*

Types

JSY51M-3P-7A-C0

- without push-in plug connector



JSY51M-3P-7A-
CEAC20066

- P/R connection with two push-in plug connectors 12 mm:
 - 1 × type KQSY50-C12-X1336 (SMC), BMW material number 3C40F27
 - 1 × type SA1790-1509VR01 (Eisele), BMW material number 3C3A244



JSY51M-3P-7A-
CEAC20062

- Supply of the vacuum side via R-channel with one push-in plug connector 12 mm and a sealing plug:
 - 1 × type KQSY50-C12-X1336 (SMC), BMW material number 3C40F27
 - 1 × type JSY51M-62P-1A (SMC), BMW material number 3C40F33



Type	Part number	Link data sheet	BMW material number
without push-in plug connector	JSY51M-3P-7A-C0	JSY51M-3P-7A-C0	3C3A238
P/R connection with 2 × push-in plug connector 12 mm	JSY51M-3P-7A-CEAC20066	JSY51M-3P-7A-CEAC20066	3C40F41
Supply of the vacuum side via R-channel with 1 × push-in plug connector 12 mm, 1 × sealing plug	JSY51M-3P-7A-CEAC20062	JSY51M-3P-7A-CEAC20062	3C40F42

9.6 Blanking plate, series JSY51M-26P-1A

Description

Cover for empty space

Link

[JSY](#)



Part number	Link data sheet	BMW material number
JSY51M-26P-1A	JSY51M-26P-1A	3C3A222

9.7 Tie rod set, type SV2000-55-2A-A

Description

- required accessories for manifold block assemblies of the series JSY51M-2P-1DA-C0, BMW material number 3C3A227
- 1 tie rod set consists of 3 pieces
- separate order necessary



Number of tie rods per set	Part number	BMW material number
3	SV2000-55-2A-A	3C58020

10 Silencers, connectors and valve manifold supply line

10.1 Silencer, compact resin type, one-touch fitting connection, type AN30-C12

Max. operating pressure	1.0 MPa
Ambient and fluid temperature	5 to 60 °C
Noise reduction	30 dB(A)
Link	AN10-C to AN30-C



Size	Applicable one-touch fitting size	Part number	Link data sheet	BMW material number
30	ø 12 mm	AN30-C12	AN30-C12	3C3A217

10.2 Plug, series KQ2P

Operating pressure range	-0.1 MPa to 1 MPa
Test pressure (at 23 °C)	3 MPa
Ambient and fluid temperature	Air: -5 to 60 °C Water: 0 to 40 °C (no freezing)
Link	KQ2P



Applicable one-touch fitting size	Part number	Link	BMW material number
ø 8 mm	KQ2P-08	KQ2P-08	3C3A235
ø 10 mm	KQ2P-10	KQ2P-10	3C3A221
ø 12 mm	KQ2P-12	KQ2P-12	3C3A220

When using plugs, it must be ensured that the KQ2P series from SMC is used.

If plugs made of metal are used, leaks may occur.



10.3 Push-in plug connector with release sleeve, straight, series SA1790*

Material	Nickel-plated brass/brass
Seal	NBR/HNBR
Manufacturer	Eisele



Applicable size of push-in plug connector	Part number	Link data sheet	BMW material number
ø 8 mm	SA1790-1206VR01	SA1790-1206VR01	3C3A242
ø 10 mm	SA1790-1408VR01	SA1790-1408VR01	3C3A243
ø 12 mm	SA1790-1509VR01	SA1790-1509VR01	3C3A244



10.4 Valve manifold supply line (P connection), type SRE-CEAC40078

Max. operating pressure	1 MPa
Min. operating pressure	-0.095 MPa
Ambient and fluid temperature	-5 to 60 °C
Thread	M16 × 1,5
Cone	Inner cone, metallic sealing compatible with 24° pipe connection (DIN EN ISO 8434-1)
P connection	Outer diameter: 12 mm
Components of the hose connection assembly	
Tubing (SMC)	Type DE-SWELD1208B-50, BMW material number 3C40F28 Polyurethane tubing, flame-retardant, series SWELD Tubing outer diameter: 12 mm Tubing inner diameter: 8 mm Length: 70 mm Colour: black
Straight screw-in connection (Eisele)	Type 628-0409, BMW material number 3C40F30 for tubing with outer diameter: 12 mm Thread: G 1/4" Material: Nickel-plated brass Whitworth pipe thread chambered O-ring Seal: NBR Temperature range: -20 to +80 °C Working pressure range: -0.95 to 16 bar suitable for compressed air, vacuum
Straight screw-on connector (CONEXA)	Type CF-GAI_10_LR_X, BMW material number 3C40F29



Part number	Link data sheet	BMW material number
SRE-CEAC40078	SRE-CEAC40078	3C40F43



11 Further links

SMC Europe Website:

[SMC Europe](#)

SMC Engineering Tools:

[Engineering Tools](#)

Toolbox for safety solutions (Online) - PneuSAFE:

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Graphic tool for pneumatic diagrams design (Online) - PneuDraw:

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