

The fieldbus system of the MVE series system allows the connection and control of valves and other inputs and outputs using the EtherNet / IP protocol. Up to 23 channels are available in one set for the control of associated valves (MVSY 100 and MVSY 156 series) as well as up to 8 input and output units, with 8 inputs or 8 outputs in each unit. It is therefore easy to connect and control the island with valves and send back to the control system, for example, the states of the end position sensors. The configuration can be modified using a web browser or using a configuration program on a computer. Both the main and I/O units have LEDs that inform the user of the status.

Order codes of fieldbus system with valve and serial interface

P MVE - 156C6-5B 4 □ - SSDC - G - EAP 2

Model - series MVSY 100	
100-5B	threads M5 on valve
100M-5M	threads G1/8" on manifold
Model - series MVSY 156	
156C4-5B	tube ø4 fitting on valve
156C6-5B	tube ø6 fitting on valve
156C8-5B	tube ø8 fitting on valve
156M4-5M	tube ø4 fitting on manifold
156M6-5M	tube ø6 fitting on manifold
156M8-5M	tube ø8 fitting on manifold

Number of valves	
2 to 12	number

Valve COM spec.	
-	-COM
N	+COM

SI unit	
	without
EA	EtherNet/IP

SI unit output	
P	-COM
N	+COM

Number of I/O units	
	none
1 to 8	number

Valve type		
S		5/2 monostable (with 1 coil)
D		5/2 bistable (with 2 coils)
C		5/3 with closed centre position
P		5/3 with pressure centre position
R		5/3 with exhaust centre position
B	blocking plate (w/o valve)	

Notes:

- SI unit output and valve COM spec. must be the same.
- The valve arrangement is numbered as the 1st station from the SI unit side, use as many letters as there are valves in the code
- I/O unit cannot be installed without SI unit.
- I/O units must be ordered and specified separately, they will be delivered separately.

Order codes of I/O units

Order code	Description
PMVE-100-DIPA	DI unit - 8 inputs PNP
PMVE-100-DINA	DI unit - 8 inputs NPN
PMVE-100-DOPB	DO unit - 8 outputs PNP
PMVE-100-DONB	DO unit - 8 outputs NPN

Example of order codes of fieldbus system assembly with valves and I/O units

PMVE-156M4-5M6-DSSSSS-G-EAP3

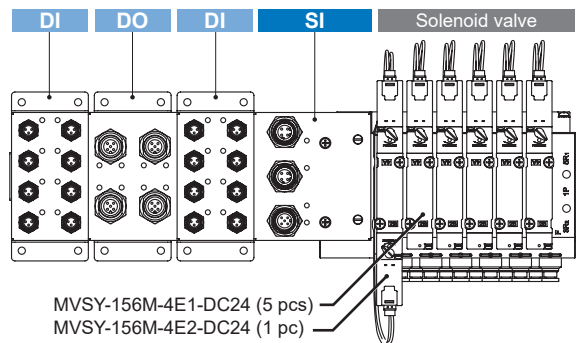
Set of 6 valves MVSY 156 (1x 5/2 bistable, 5x 5/2 monostable) with tube ø4 fittings on the manifold, -COM, incl. SI unit for 3 I/O units.

2 pcs ... PMVE-100-DIPA 2 digital input units PNP (total 16 inputs)

1 pc ... PMVE-100-DOPB Digital output unit PNP (total 8 outputs)

Technical data of SI unit (serial interface)

Description	Value
Interface protocol	EtherNet/IP
Communication speed	10/100 Mbps
Configuration file	EDS
Power connector	M12 (5 pins)
Control & input power supply	24V DC class 2, 2A
Output power supply	24V DC class 2, 2A
Consumption	12W
Polarity of output for valves	PNP (-COM), NPN (+COM)
Power supply of valves	24V DC class 2, 2A
Number of valve outputs	23
Suitable valves	MVSY 100, MVSY 156, 24V DC
Fail safe of valves	hold, off, setting value
Protective function for valve	short circuit protection
Working environment	temperature -20°C to +50°C, humidity 10% to 90% RH



For more information please visit our web page on www.sappv.cz/r/e13e

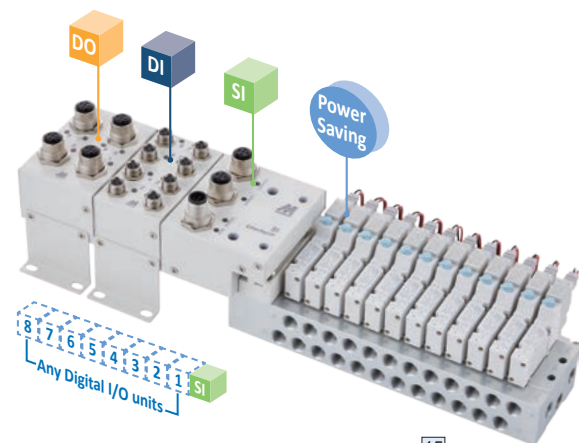
Technical data of DI unit (digital input)

Description	Value
Input type	PNP or NPN
Input connector	8x M8 (3 pins)
Number of inputs	8 (1 input / connector)
Sensor supplied voltage	24V DC
Max. sensor supplied current	0.25A / connector, 2A / unit
Rated input current	9 mA
ON voltage (NPN input)	≥17V
OFF voltage (PNP input)	≤5V
Features	Short / open - circuit detection
Power supply voltage	24V DC class 2, 2A
Working environment	temperature -10°C to +50°C, humidity 35% to 85% RH
Isolation	500V AC, 10MΩ

Technical data of DO unit (digital output)

Description	Value
Output type	PNP or NPN
Output connector	4x M12 (5 pins)
Number of outputs	8 (2 outputs / connector)
Rated load voltage	24V DC
Max. load current	0.5A / connector, 2A / unit
Features	Short / open - circuit detection
Power supply voltage	24V DC class 2, 2A
Working environment	temperature -10°C to +50°C, humidity 35% to 85% RH
Isolation	500V AC, 10MΩ

System and accessories diagram



Output Device DO

Valve	Others
K2	Relay buzzer Indicator light
MVSC-220	MVSE-300

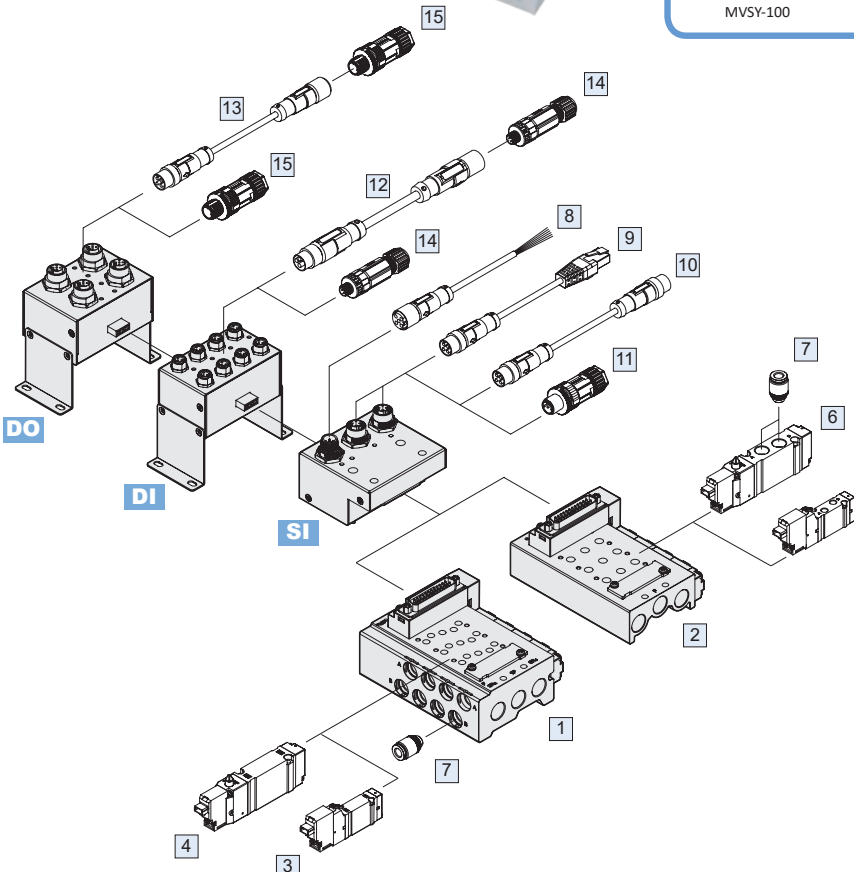
Input Device DI

Switch	Others
Pressure Switch	Proximate Sensor Photoelectric Switch Limit Switch
Flow rate Switch	Sensing Switch (For cylinder)

Attached valves

MVSY-100	MVSY-156
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SI	Serial interface
DI	Digital input
DO	Digital output



Pos.	Description	Page
1	Manifold (ports on manifold)	5-18
2	Manifold (body ported valves)	5-18
3	Valve MVSY-100 (manifold type)	5-18
4	Valve MVSY-156 (manifold type)	5-18
5	Valve MVSY-100 (body ported)	5-18
6	Valve MVSY-156 (body ported)	5-18
7	Fittings	10-2
8	Supply cable PM125B-SFW... (M12, 5 pin)	5-34
9	Cable w/conn. PM124D-SMSR... (M12, 4 pin)	5-34
10	Cable w/conn. PM124D-SMSM... (M12, 4 pin)	5-34
11	Connector PM124D-SM (M12, 4 pin)	5-34
12	Cable w/connectors PM83-SFSM... (M8, 3 pin)	5-34
13	Cable w/conn. PM124A-SFSM... (M12, 4 pin)	5-34
14	Connector PM83-SM (M8, 3 pin)	5-34
15	Connector PM124A-SM (M12, 4 pin)	5-34



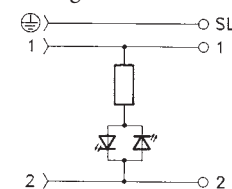
Standard connector type 22 with cable grommet PG9

Order codes	Type	Voltage [V]	Wiring	Colour	Weight [kg]
N230-363	standard	up to 250	—	black	0.02
N230-391	with red LED	10 to 50	a	transparent	0.02
N230-392	with red LED and varistor	10 to 30	b	transparent	0.02
N230-393	with red LED	70 to 250	a	transparent	0.02
N230-394	with red LED and varistor	70 to 250	b	transparent	0.02

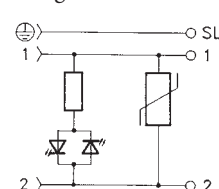


Wiring

Wiring a



Wiring b



Connector DIN 43650, form A, type 30 with cable grommet PG9

Order codes	Type	Voltage [V]	Wiring	Colour	Weight [kg]
N230-592	standard	up to 250	—	grey	0.02
N230-582	with red LED	10 to 50	a	transparent	0.02
N230-567	with red LED and varistor	10 to 30	b	transparent	0.02
N230-584	with red LED	70 to 250	a	transparent	0.02
N230-585	with red LED and varistor	70 to 250	b	transparent	0.02



Plug connector with cable for valve series MVSY

Order codes	Type
PMVSY-C5	straight, cable 5 m
PMVSY-C10	straight, cable 10 m



Cables and connectors for Fieldbus system series MVE

Order codes	Type	1st side	2nd side
PM125B-SFW-PVC-2M	Cable with connector M12, 5 pins, B coded, length 2m, (supply of SI unit)		
PM124D-SMSR-PVC-3M	Cable with connector M12, 4 pins, D coded, with RJ45 connector, length 3m, (communication of SI unit)		
PM124D-SMSM-PVC-3M	Cable with connectors M12, 4 pins, D coded, length 3m, (communication of SI unit)		
PM83-SFSM-PVC-3M	Cable with connectors M8, 3 pins, length 3m, (digital inputs of DI unit)		
PM124A-SFSM-PVC-3M	Cable with connectors M12, 4 pins, A coded, length 3m, (digital outputs of DO unit)		
PM124D-SM	Connector M12, 4 pins, D coded, (communication of SI unit)		
PM83-SM	Connector M8, 3 pins, (digital inputs of DI unit)		
PM124A-SM	Connector M12, 4 pins, A coded, (digital outputs of DO unit)		