

Series D valve islands, Size 4, Multipole and Fieldbus

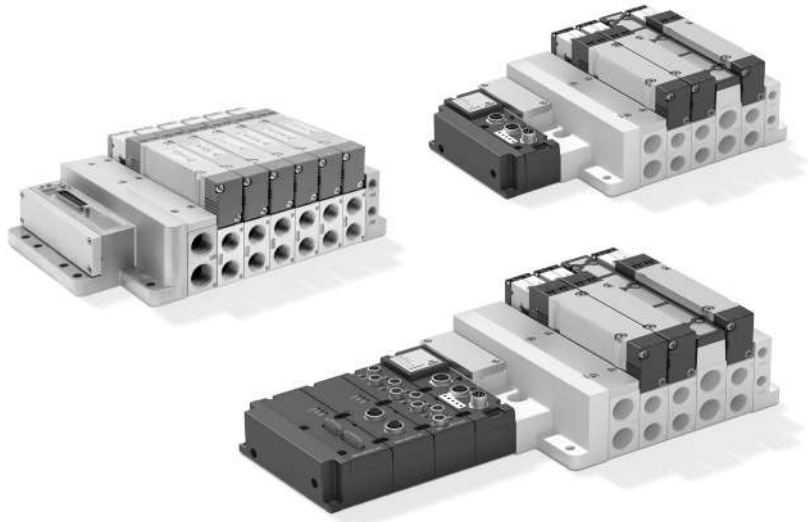
New

Fieldbus connection with the most common communication protocols
PROFIBUS-DP, PROFINET, CANopen, EtherNET/IP, EtherCAT and IO-Link

Multipole connection with 25 or 44 pins

Valve functions: 2x3/2; 5/2; 5/3 CC, CO, CP

COILVISION
TECHNOLOGY



- » Valve size 25 mm
- » Compact design
- » Individual modular subbases in metal
- » Highly expandable electrically and pneumatically
- » Flexibility in connecting and exchanging I/O modules
- » COILVISION technology to monitor performance parameters
- » Same subbase for monostable and bistable valves
- » Possibility to transmit operational data through WLAN
- » Blinking LEDs indicating different types of operating faults

Thanks to the large range of options available, the Series D valve island represents an excellent solution for all those applications that require pneumatic and electrical functions in restricted spaces.

The different electrical connection possibilities allow to create Islands with a high number of valve positions and different pressure zones. Moreover, the fieldbus version can manage both digital and analog electric input and output signals.

Small dimensions, high flows, subbases with individual pneumatic and electric modules, an easy subbase connection system, constant diagnosis and monitoring of performance parameters make this series a particularly innovative product.

One of the features of this series is the monitoring function regarding the correct operating of the solenoid valve.

The electronics installed both in the subbase and in the Sub-D and multi-serial connection module, enables to constantly monitor the efficiency of the driving coil of the solenoid valve.

Possible variations with respect to the ideal operating conditions, for example a higher power consumption, variation in response times and an increased temperature are indicated through different ways of blinking by the LED on the solenoid valve and by an electric alert signal that is sent to the PLC through the Sub-D module connecting cable or, in case of the multi-serial connection module, directly through the communication protocol.

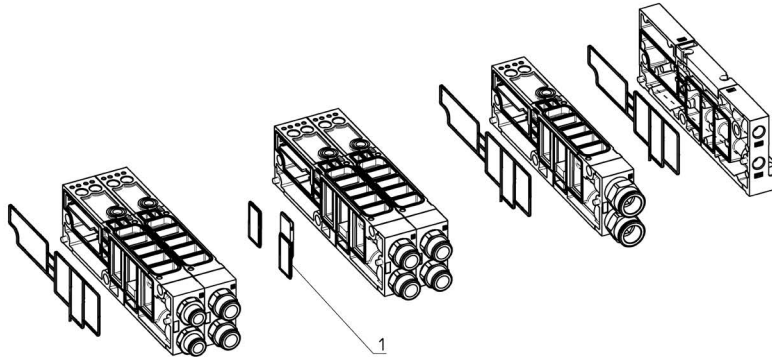
Manual, instruction sheet and configurator are available on the site <http://catalogue.camozzi.com> or by means of the QR code on the product's label.

GENERAL DATA

PNEUMATIC SECTION	
Valve construction	spool with seals
Valve functions	5/2 monostable and bistable 5/3 CC, CO, CP 2x3/2 NC 2x3/2 NO 1x3/2 NC + 1x3/2 NO
Materials	spool: AL spool seals: HNBR other seals: NBR body: AL end caps: polymer individual subbase: AL
Connections	inlet 2 and 4, threaded G 3/8 supply 1: G 1/2 supply 12/14: G 1/8 exhaust 3 and 5: G 1/2 or integrated silencer exhaust 82/84: G 1/8
Temperature	0 ÷ 50°C
Air characteristics	compressed, filtered and non-lubricated air in class [7:4:4] according to ISO 8573-1:2010. In case lubrication should be necessary, only use oils with a maximum viscosity of 32 Cst and the version with external servo-pilot supply. The air quality of the servo-pilot supply must be of class [7:4:4] according to ISO 8573-1:2010 (do not lubricate).
Valve sizes	4 = 25 mm
Operating pressure	-0,9 ÷ 10 bar
Pilot pressure	2,5 ÷ 7 bar 4,5 ÷ 7 bar (with operating pressure exceeding 6 bar for the version 2x3/2)
Flow rate	2000 NL/min
Mounting position	any position
Protection class	IP 65
ELECTRICAL SECTION MULTIPOLE VERSION	
Type of Sub-D connector	25 or 44 pins
Max. absorption	0.8 A (with Sub-D connector 25 pins) 1 A (with Sub-D connector 44 pins)
Supply voltage	24 V DC +/- 10%
Max. number of coils to operate	22 on 11 valve positions (with Sub-D connector 25 pins) 38 on 19 valve positions (with Sub-D connector 44 pins)
Signalling LED	Multipole: green LED - presence of power red LED - anomaly Valve: yellow LED - presence of power blinking yellow LED - operating fault
ELECTRICAL SECTION FIELD BUS VERSION	
General data	see Multi-serial Modules section on the next pages
Max. absorption	2.5 A
Supply voltage	24 V DC +/-10% logic supply 24 V DC +/-10% power supply
Max. number of coils to operate	128 on 64 valve positions
Max. number of digital inputs	128
Max. number of analog inputs	16
Max. number of digital outputs	128
Max. number of analog outputs	16
IO-Link version	
Max n° of coils to operate	64 on 32 valve positions
Input and Output	No
Type of port	Class B
IODD Configuration file	up to 12, 24 or 32 valve positions per island
(The IO-Link module on the valve island is auto-configured to operate with the right IODD)	
More information can be found at http://catalogue.camozzi.com Series D "Instructions for use and maintenance"	

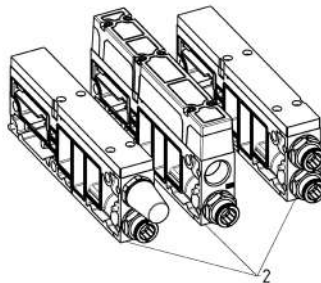
INTERMEDIATE SUBBASES

Intermediate subbases with a diaphragm or additional supply function allow to create diversified pressure and/or exhaust zones, add an incoming air flow and increase the exhaust flow. Furthermore there are subbases available that, besides the aforementioned functions, can interrupt the pneumatic actuation to the coils. This prevents, independently of the electric signal being present or not, to actuate the monostable and bistable valves. The intermediate subbases do not need to be calculated in the number of valve positions.



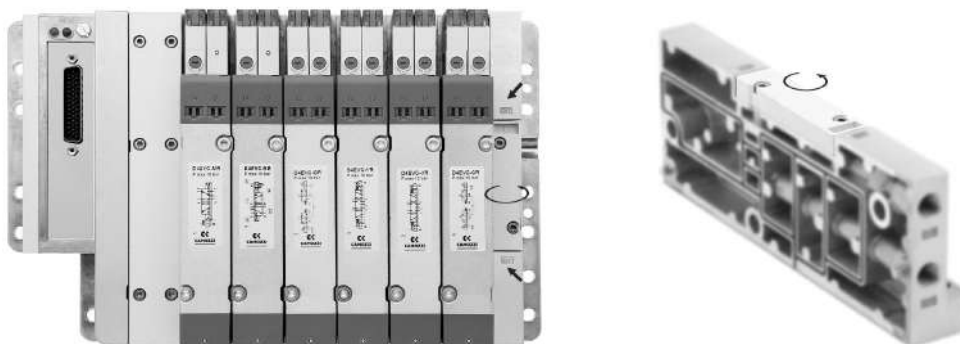
INITIAL/INTERMEDIATE SUBBASES

These intermediate subbases can be positioned as desired with the valve subbases and enable to connect a supply and exhaust source. One of these must always be present within the valve island. Available in three versions, they provide the possibility to exhaust the air by means of a silencer placed in the upper part or on the front, or by means of a connection in order to convey the exhaust to the desired direction. These subbases do not use electric signals and are not to be considered when counting the positions. After inserting the seals (1) on the valve subbases, you need to insert one of these subbases (2).



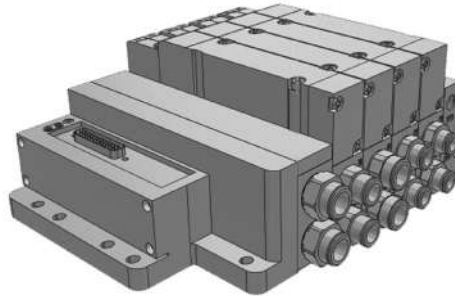
SERVOPILOT

The right terminal includes the device to select the servopilot, either internal or external, which can be selected by rotating the device. By applying the right servopilot pressure to connection 12/14, it is possible to use the solenoid valves with different pressures compared to the standard range and with vacuum. By means of separator seals it is also possible to section the island, creating a combination of pressure and vacuum zones.



CONFIGURATOR

The island configuration is of minimum three positions including the possible base for additional supply and/or exhaust. The maximum number of positions depends on the selected type of electrical connection. To correctly compose the commercial code and to download drawings, please use the configurator present at <http://catalogue.camozzi.com> in the sections "Configurators" or "CamoZZi Partcommunity".



MULTIPOLE VERSION

The multipole version can be connected quickly and safely through the connecting cable with angled outlet of 25 or 44 pins to the electric Sub-D connector integrated in the island. The single modularity of the subbases allows to create islands with up to a maximum of 11 or 19 valve positions according to the type of connecting cable used.

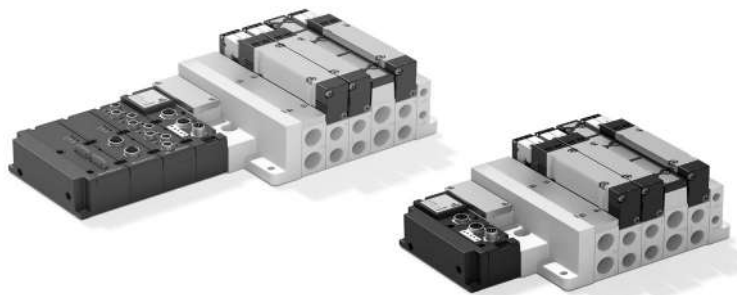


FIELD BUS and IO-LINK VERSION

The new CX4 fieldbus module integrated in the Series D valve island enables to interface with the most common fieldbus protocols. Besides managing the pneumatic part (the same as the Multipole version) different kinds of electric modules can be managed. With this configuration it is possible to enlarge the pneumatic part up to a maximum of 64 valve positions with double command and the electric part up to 128 digital inputs and 128 digital outputs, besides 16 analog inputs and 16 analog outputs. Besides the standard voltage and current versions, the analog modules are also available in 2-channel Bridge, RTD and TC versions.

Also in the IO-Link version, the interface module is part of the Series CX4.

In this configuration, the I/O Modules cannot be integrated in the island, a maximum of 64 coils can be managed on 32 valve positions.

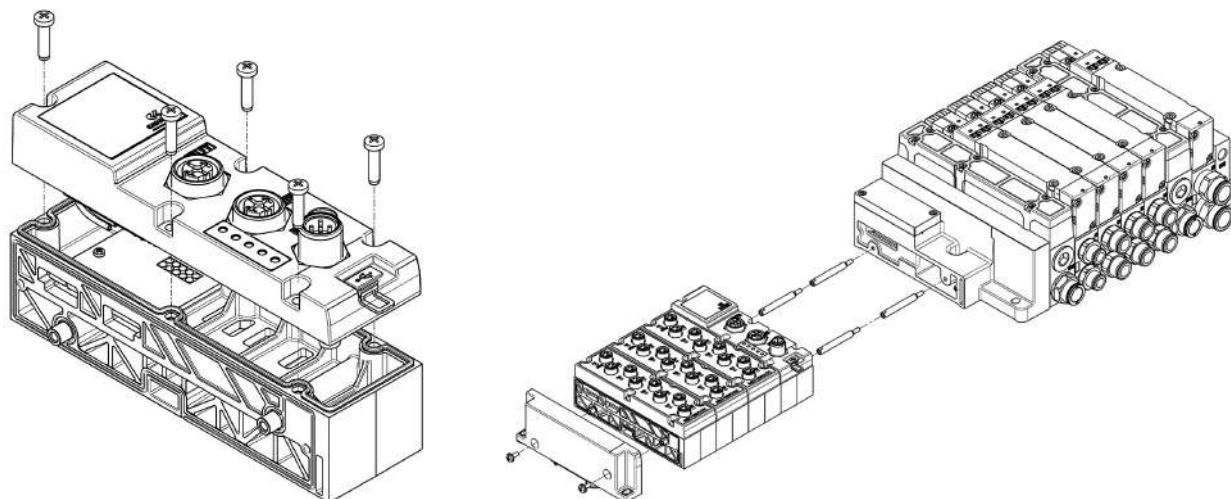


ELECTRICAL MODULE

The electric modules are composed of two parts: the base to connect the different modules, which is the same for all types, and different covers on which the connectors are positioned.

This solution enables to easily change the connection points with the sensors or functions of the machine.

Also the electric modules, like the subbases in the pneumatic part, can be added or removed thanks to the modular connection system.

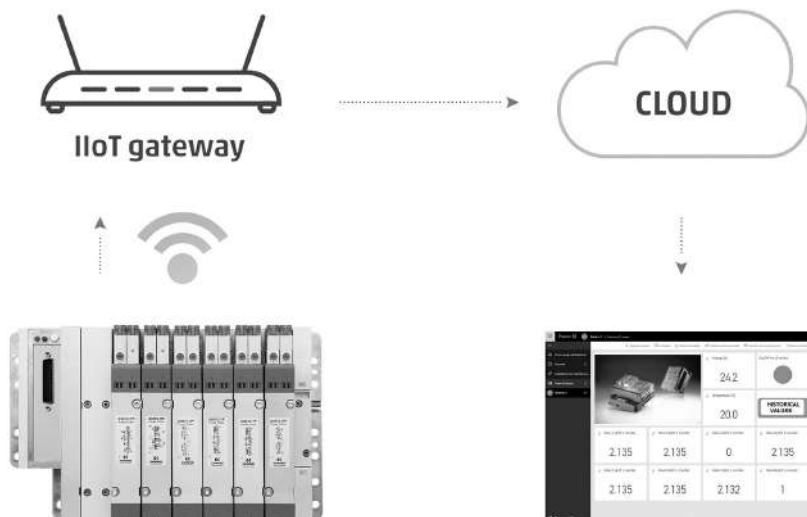


COILVISION

This is a standard function in all our valve islands with Multipole and Serial connection. Its purpose is to monitor the proper function of each solenoid valve individually, particularly the solenoid. The electronics installed in the subbase allows to constantly monitor the efficiency of the driving coil of the solenoid valve. Possible variations with respect to the ideal operating conditions, like for example a higher power consumption, different response times or an increased temperature, are reported by means of a blinking yellow LED of the interested solenoid.

Besides the blinking of this LED, also a general red LED blinks located on the Sub-D module.

These indications are combined with an alert message sent to the PLC. By selecting code W from the "Interface" menu of the encryption code, besides the described signals, it is possible to gather all operational data of the islands and send them through WLAN to the corporate net or onto the Cloud to be analysed.



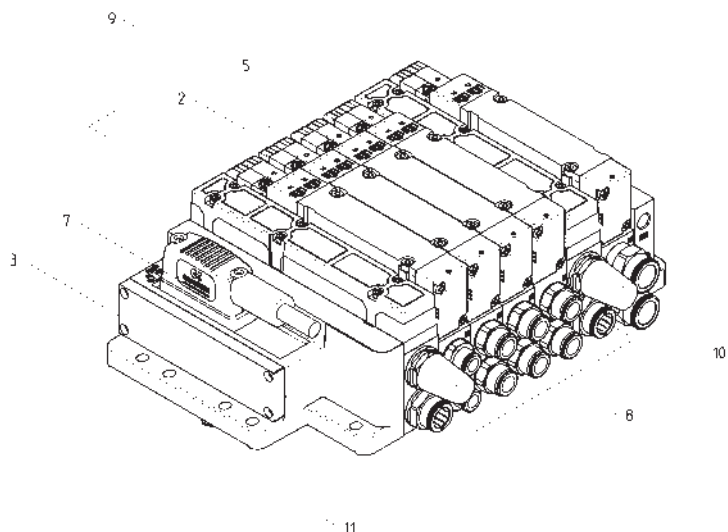
CODING EXAMPLE - MULTIPOLE VERSION

DM	C	4	M	W	R	A	-	03R	-	XHCDQ2DXHE	-	2MB2C	-	E	R
----	---	---	---	---	---	---	---	-----	---	------------	---	-------	---	---	---

DM	MODULAR ISLAND
C	VALVE C = VC Model
4	SIZE 4 = 25 mm
M	ELECTRICAL CONNECTION M = Multipole 25 pin PNP Q = Multipole 44 pin PNP
W	INTERFACE O = without interface W = WLAN
R	MANUAL OVERRIDE P = push button R = with push and turn device
A	SERVO-PILOT SUPPLY A = internal B = external C = external with fitting (S6510 6-1/8) and threaded silencer (2931 1/8) D = internal with threaded silencer (2931 1/8)
03R	CONNECTOR: 0 = without connector CONNECTOR R WITH CABLE 03R = 3 mt 05R = 5 mt 10R = 10 mt 15R = 15 mt 20R = 20 mt 25R = 25 mt
XHCDQ2DXHE	SUBBASES K = threaded subbase C = with fittings for tube Ø8 (S6510 8-3/8) D = with fittings for tube Ø10 (S6510 10-3/8) E = with fittings for tube Ø12 (S6510 12-3/8) F = with fittings for tube Ø14 (S6510 14-3/8) SEALS Q = seal on channels 1, 3, 5 R = seal on channel 1 V = seal on channels 3 and 5 INITIAL SUBBASE/INTERMEDIATE:* X = supply (1) and exhausts (3, 5) XS = supply (1) and exhausts (3, 5) with threaded silencer (2931 1/2) XH = supply (1) and exhausts (3, 5) with silencer * These subbases use the connection described in the Terminal Plates menu
2MB2C	VALVES M = 5/2 monostable B = 5/2 bistable C = 2x3/2 NC A = 2x3/2 NO G = 2x3/2 (NC+NO) V = 5/3 CC K = 5/3 CO N = 5/3 CP L = free position
E	TERMINAL PLATES CONNECTIONS K = threaded G 3/8 D = with fittings for tube Ø10 (S6510 10-1/2) E = with fittings for tube Ø12 (S6510 12-1/2) F = with fittings for tube Ø14 (S6510 14-1/2) G = with fittings for tube Ø16 (S6510 16-1/2)
R	FIXING TYPE = direct R = DIN rail

The choice of the fitting made in the Terminal Plates section is also valid for the initial subbase/intermediate

CODING MULTIPOLE VERSION

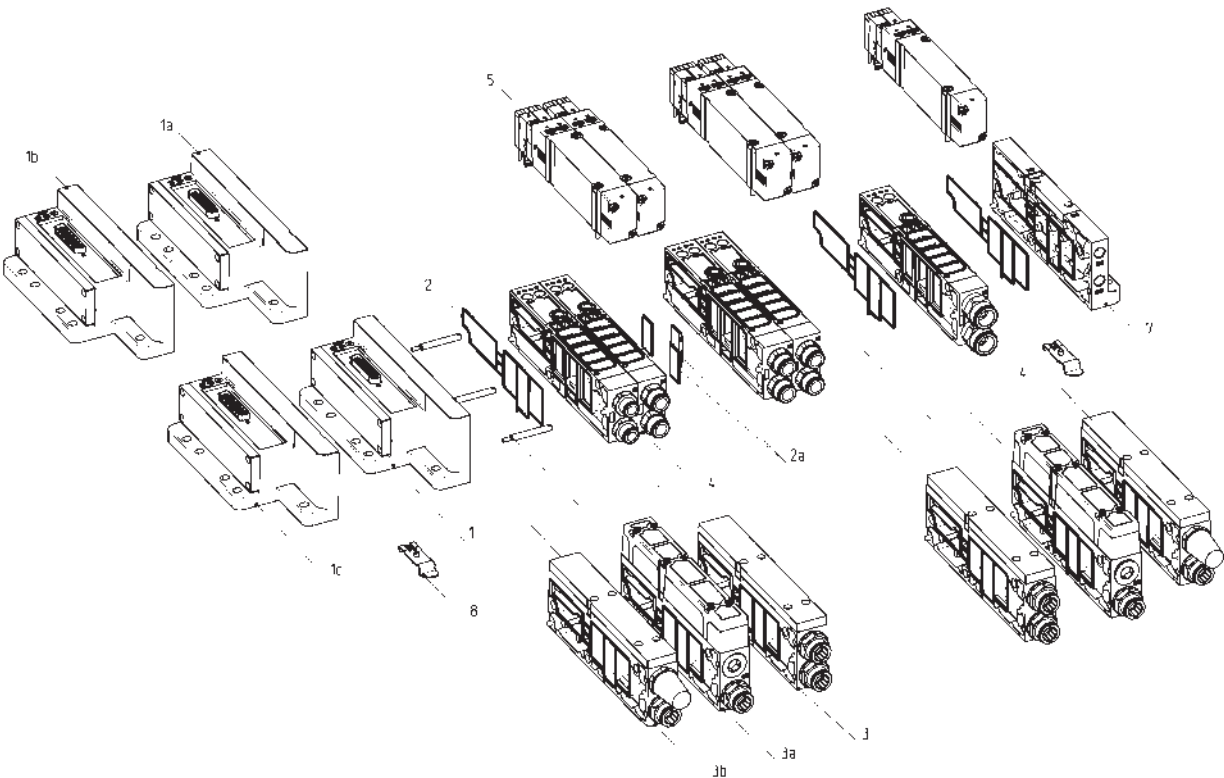


1 2 3 4 5 6						7		8				9				10 11										
D	M	C	4	M	W	R	A	0	3	R	-	XH	C	J	J	20	XH	E	-	2	M	3	20	-	E	R

(1)	VALVE MODEL VC	(2)	SIZE	(3)	ELECTRICAL CONNECTION	(4)	INTERFACE	(5)	MANUAL OVERRIDE	(6)	SERVO-PILOT
	C		4		M		O		P		A
					Q		W		R		B
											C
											D
(7)	CONNECTION			(8)	SUBBASES	(9)	VALVES	(10)	TERMINAL PLATES CONNECTION	(11)	MOUNTING
	0				K		M		K		R
	03R				C		B		D		
	05R				D		C		E		
	10R				E		A		F		
	15R				F		G		G		
	20R				SEALS		V				
	25R				Q		K				
					R		N				
					V		L				
					INITIAL SUBBASE/INTERMEDIATE						
					X						
					XS						
					XH						

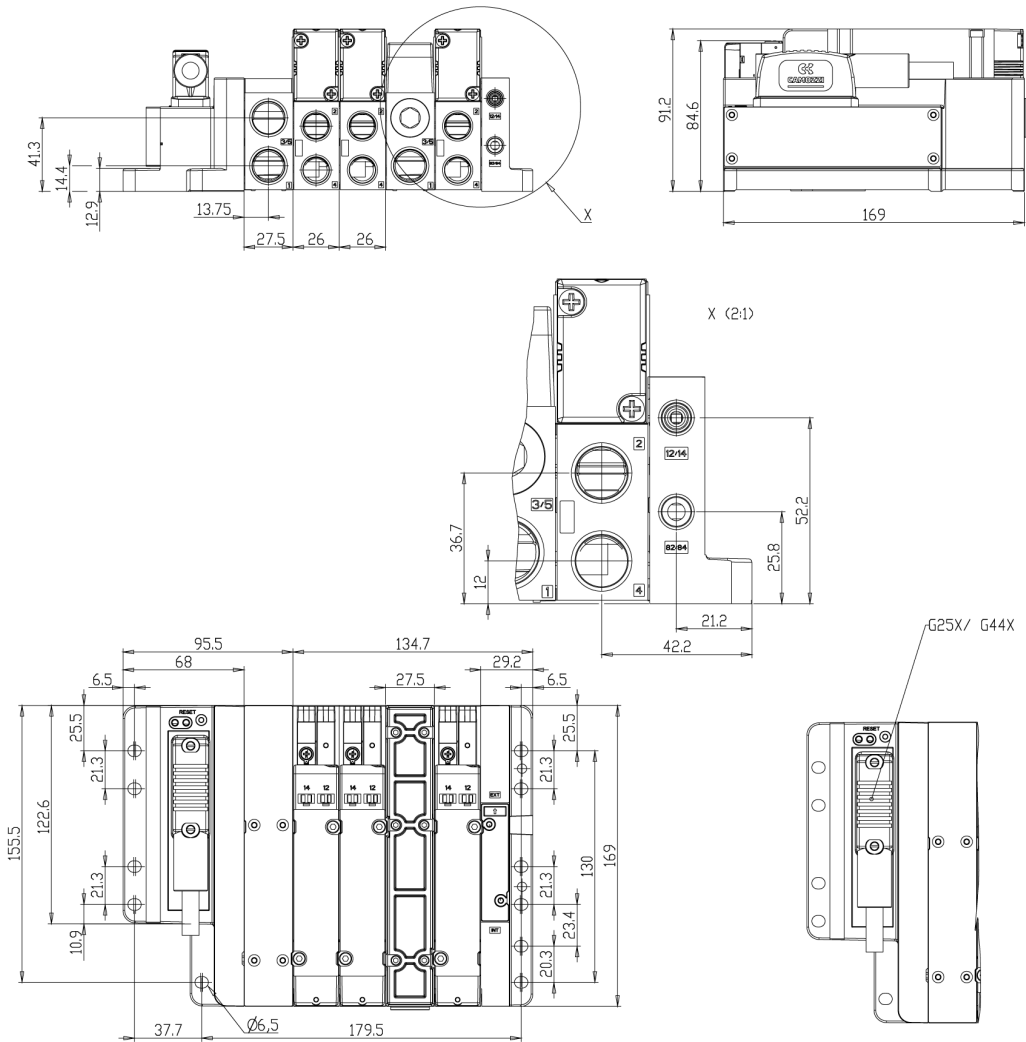
MULTIPOLE version
COMPONENTS

SERIES D4 VALVE ISLANDS



COMPONENTS	
1	Electric interface group - multipole 25 pins
1a	Electric interface group - multipole 25 pins WLAN interface
1b	Electric interface group - multipole 44 pins
1c	Electric interface group - multipole 44 pins WLAN interface
2	Interface seals
2a	Separator seals
3	Additional module to convey supply and exhaust channels
3a	Module to convey supply and to silence the exhaust channel integrated
3b	Module to convey supply and to silence the exhaust channel threaded
4	Modular subbase size 4
5	Solenoid valve size 4
7	Terminal plate
8	Mounting bracket for DIN rail

MULTIPOLE version 25 and 44 pin DIMENSIONS

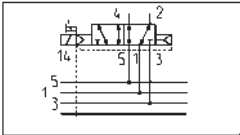


CODING EXAMPLE

D	4	E	VC	-	M	P
D	SERIES					
4	SIZE: 4 = 25 mm					
E	VERSION: E = solenoid valve					
VC	COMPONENT: VC = plugin valve					
M	TYPE OF SOLENOID VALVE M = 5/2 monostable B = 5/2 bistable C = 2 x 3/2 NC A = 2 x 3/2 NO G = 2 x 3/2 (NC+NO) V = 5/3 CC K = 5/3 CO N = 5/3 CP					
P	MANUAL OVERRIDE: P = push button R = with push and turn device					

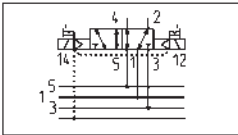
AVAILABLE FUNCTION - SYMBOLS FOR SOLENOID VALVES

M



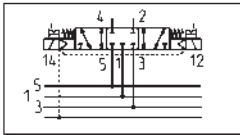
M = 5/2, Monostable

B



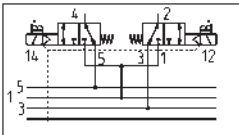
B = 5/2, Bistable

V



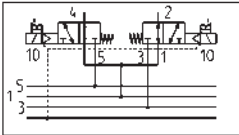
V = 5/3 Centres Closed

C



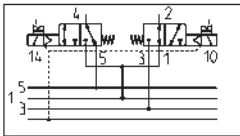
C = 2 x 3/2 NC

A



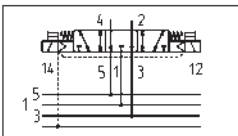
A = 2 x 3/2 NO

G



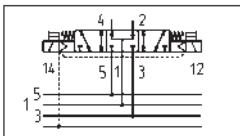
G = 1 x 3/2 NC +
1 x 3/2 NO

K



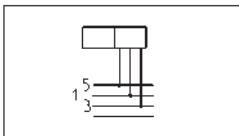
K = 5/3 CO

N



N = 5/3 CP

L



L = free position



Plate to cover non used valve positions

The supply includes:
1 plate
2 fixing screws



Mod.
D4EVC-L

Subbase for additional valve positions

D	AM	4	S	-	T	T
D	SERIES					
AM	ACCESSORIES AM = modular accessories					
4	SIZE 4 = 25					
S	COMPONENT S = modular subbase					
T	VERSION T = threaded valves subbase					
T	TIE ROD = without tie rod T = with tie rod					



Initial/intermediate subbase with supply and exhaust

D	AM	4	S	-	XH	-	T
D	SERIES						
AM	ACCESSORIES AM = modular accessories						
4	SIZE 4 = 25 mm						
S	COMPONENT S = intermediate subbase						
XH	SUBBASE FOR ADDITIONAL FLOW XC = supply (1) and additional exhaust (3,5) XS = supply (1) and exhausts (3, 5) with threaded silencer (2931) XH = supply (1) and exhaust (3,5) with integrated silencer						
T	TIE ROD = without tie rod T = with tie rod						



Cover plate for initial/intermediate subbase

This plate is used in case you want to change an intermediate subbase with integrated silencer into a subbase with conveyed exhaust.



Exhaust silencer for initial/intermediate subbase

This silencer is used in case you want to change an intermediate subbase with conveyed exhaust into a subbase with integrated silencer.

We advise to replace this component at least once a year.



Mod.
DAM40-H

Multipole terminal

D	AM	4	T	-	Q	0
D	SERIES					
AM	ACCESSORIES AM = modular accessories					
4	SIZE 4 = 25 mm					
T	COMPONENT T = electrical left terminal plate					
Q	TYPE OF TERMINAL PLATE M = multipole 25 pins					Q = multipole 44 pins
0	INTERFACE 0 = without interface					W = WLAN



Right terminal with internal/external servopilot

The supply includes:
 3 fixing screws M5

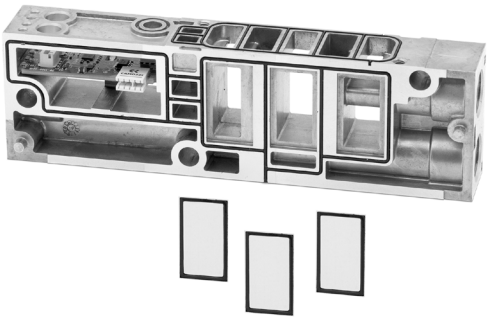


Mod.
DAM40-RT

Seals to separate supply and/or exhaust channels

NB These seals are inserted on the valve subbases and need to be combined with an initial/ intermediate subbase.

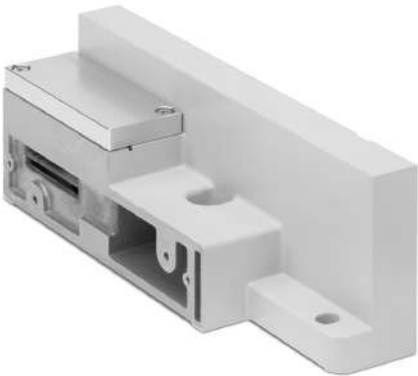
Description of seal assembly below



	Seals channel
DAM4D-R	1
DAM4D-V	3; 5
DAM4D-Q	1; 3; 5



Connection interface between electrical section and valves



Mod.
ME4-00D4-DI

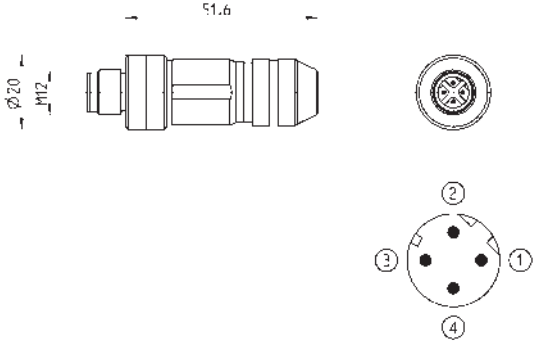
Closing terminal of fieldbus electrical section



Mod.
CX4AP-L

Male wiring connector for Bus-IN and Bus-OUT

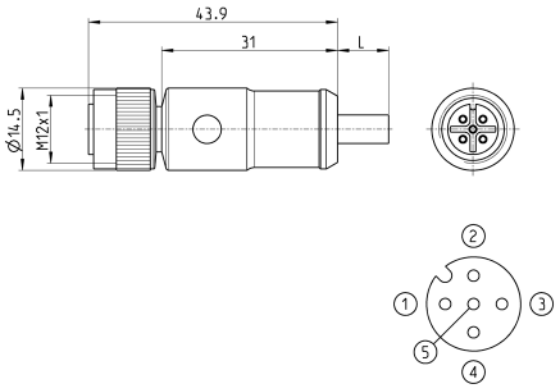
For PROFINET, EtherCAT, EtherNet/IP



Mod.	description	type of connector	connection	cable length (m)
CS-SM04H0	for metal wiring	straight	M12 D 4 pin	-

Cable with M12 5 pin connector, 90°, female, shielded

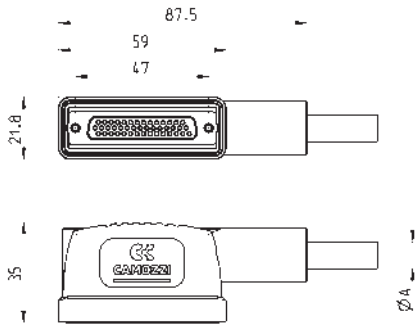
For IO-Link power supply and signal



Mod.	Cable length (m)
CS-LF05HB-D200	2
CS-LF05HB-D500	5

Right angle Sub-D female connector 25-44 pins

Protection class IP65

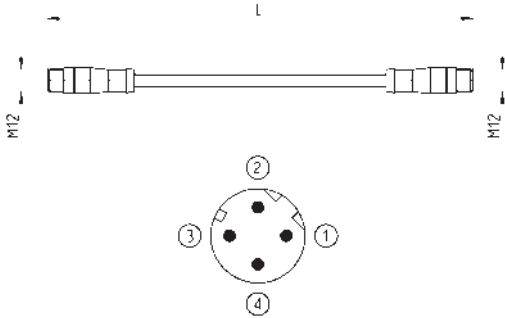


Mod.	gA	PIN	cable length (m)
G25X1-3	10	25	3
G25X1-5	10	25	5
G25X1-10	10	25	10
G25X1-15	10	25	15
G25X1-20	10	25	20
G25X1-25	10	25	25
-			
G44X1-3	13	44	3
G44X1-5	13	44	5
G44X1-10	13	44	10
G44X1-15	13	44	15
G44X1-20	13	44	20
G44X1-25	13	44	25

Cables with straight connectors



For PROFINET, EtherCAT, EtherNet/IP

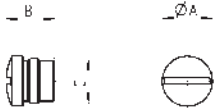


Mod.	description	type of connector	connection	L [cable length] (m)
CS-SB04HB-D100	moulded cable	straight	2x M12 D 4 pin male	1
CS-SB04HB-D500	moulded cable	straight	2x M12 D 4 pin male	5
CS-SB04HB-DA00	moulded cable	straight	2x M12 D 4 pin male	10
CS-SB04HB-DD00	moulded cable	straight	2x M12 D 4 pin male	15
CS-SB04HB-DG00	moulded cable	straight	2x M12 D 4 pin male	20
CS-SB04HB-DJ00	moulded cable	straight	2x M12 D 4 pin male	25

M8 and M12 connector cover caps



For digital and analog input/output modules and subnet



Mod.	A	B	C [Connection]
CS-DFTP	10	11	M8
CS-LFTP	13.5	13	M12

Identification plates



The packaging contains
45 identification plates 9x5mm

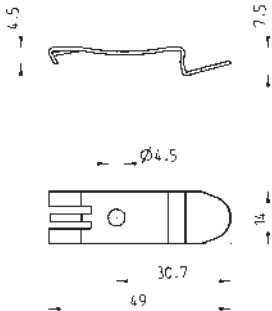
Mod.
HP1/E

Mounting brackets for DIN rail



DIN EN 50022 (mm 7,5 x 35 - width 1)

Supplied with:
2x plates
2x screws M4x6 UNI 5931



Mod.
PCF-E520