**New**
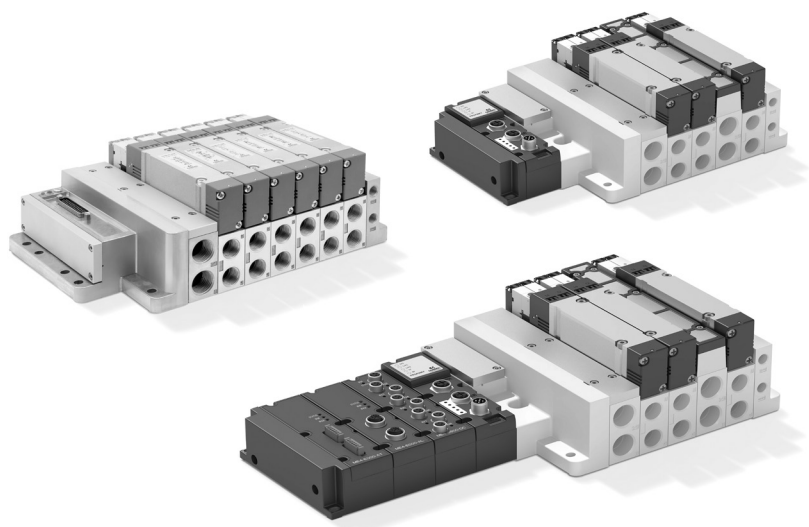
# Series D valve islands, Size 4, Multipole and Fieldbus

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

» 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 represent 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<br>5/3 CC; CO; CP<br>2 x 3/2 NC<br>2 x 3/2 NO<br>1 x 3/2 NC +1 x 3/2 NO |
| Materials | spool: AL<br>spool seals: HNBR<br>other seals: NBR<br>body: AL<br>end caps: polymer<br>individual subbase: AL |
| Connections | inlet 2 and 4, threaded G 3/8<br><br>supply 1: G 1/2<br>supply 12/14: G 1/8<br><br>exhaust 3 and 5: G 1/2 or integrated silencer<br>exhaust 82/84: G 1/8 |
| Temperature | 0 ÷ 50℃ |
| Air characteristics | compressed, filtered and non-lubricated air in class 7.4.4 according to ISO 8573-1:2010.<br>In case lubrication should be necessary, only use oils with a maximum viscosity of 32 Cst and the version with external servo-pilot supply.<br>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<br>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<br>MULTIPOLE VERSION | |
|---|---|
| Type of Sub-D connector | 25 or 44 pins |
| Max. absorption | 0.8 A (with Sub-D connector 25 pins)<br>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)<br>38 on 19 valve positions (with Sub-D connector 44 pins) |
| Signalling LED | Multipole: green LED - presence of power<br>red LED - anomaly<br>Valve: yellow LED - presence of power<br>blinking yellow LED - operating fault |

| ELCTRICAL SECTION<br>FIELDBUS 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<br>24 V DC +/-10% power supply |
| Max. number of coils to operate | 128 on 64 valve positions |
| Max. number of digital inputs<br>Max. number of analog inputs<br>Max. number of digital outputs<br>Max. number of analog outputs | 128<br>16<br>128<br>16 |

**More information can be found at**
http://catalogue.camozzi.com
**Series D "Instructions for use and maintenance"**

## VALVE SUBBASES

Given the dimensions of internal passages and connections, the subbases are of metal. Fittings can be positioned on the threaded outlets. The single modularity and the internal tie-rods of different lengths enable to create islands with a variable number of valve positions. On the left side of the valve subbase it is possible to insert seals to separate supply and/or exhaust (1). The positions after the seals need to be connected with pneumatic supply and exhaust by means of an intermediate subbase. The subbases are equipped with a 2-signal circuit board to control the coils on the solenoid valves.
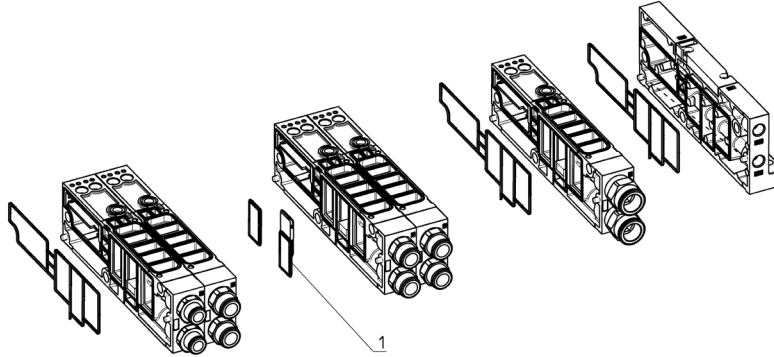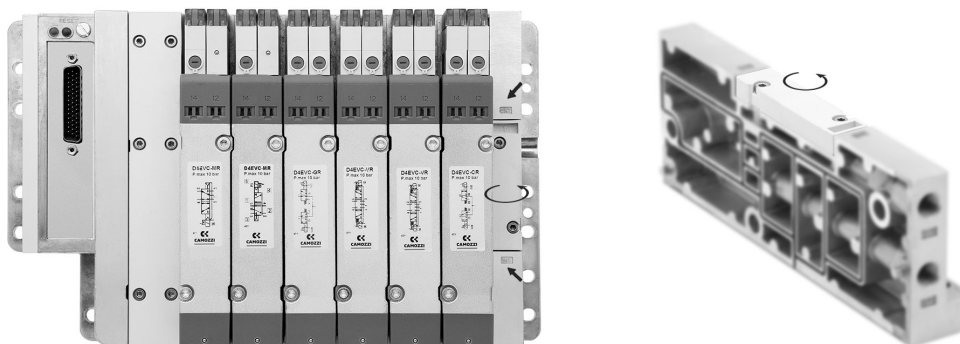


## INITIAL/INTERMEDIATE SUBBASES

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).
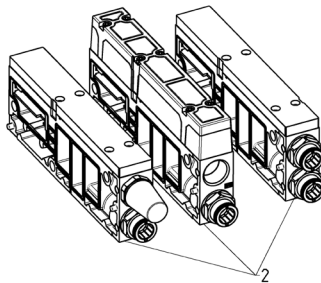


## SERVOPILOT

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.



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SERIES D4 VALVE ISLANDS

## 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".
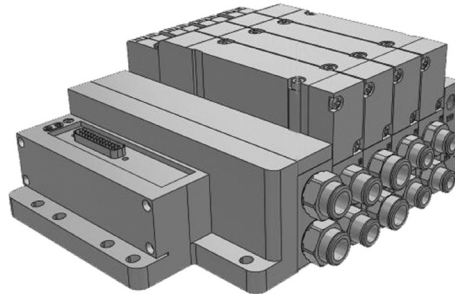
## MULTIPOLE VERSION

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.

## FIELDBUS 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.
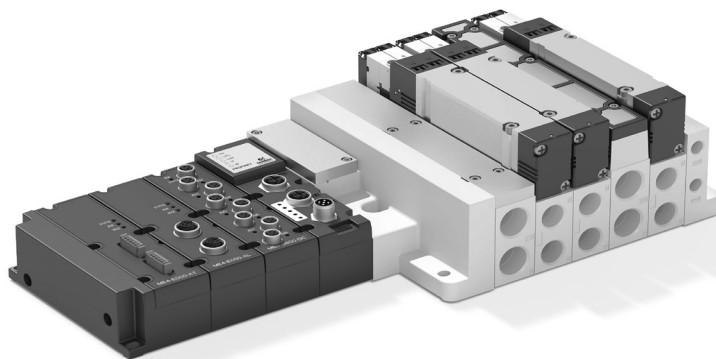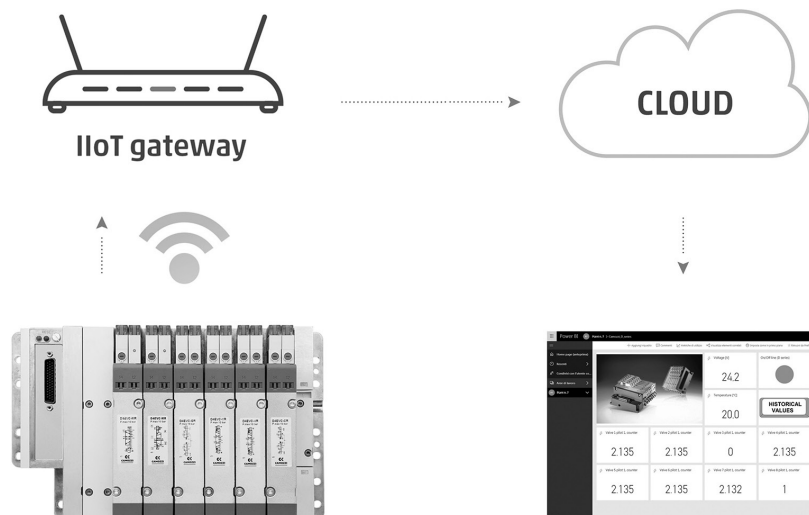
## ELECTRICAL MODULE

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.
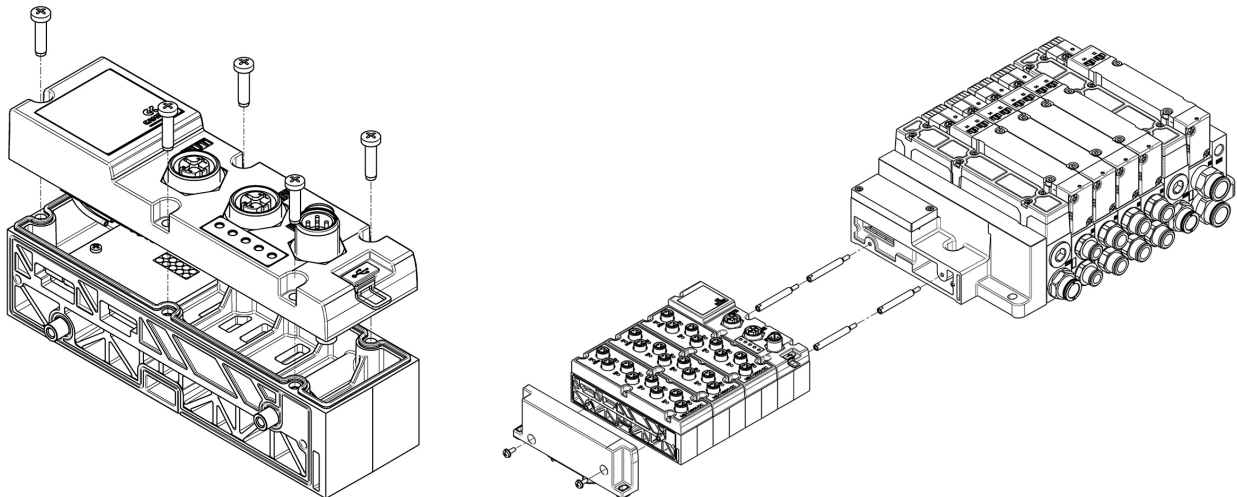


## COILVISION

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.
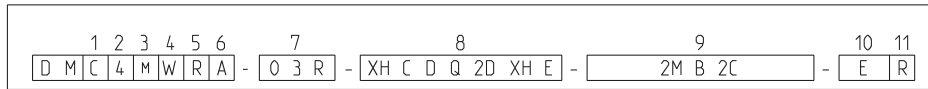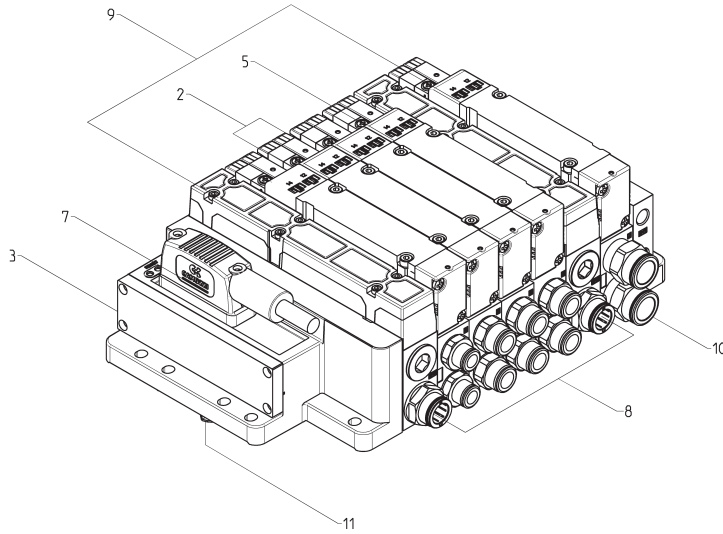


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## CODING EXAMPLE - MULTIPOLE VERSION

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

| | |
|---|---|
| **DM** | MODULAR ISLAND |
| **C** | VALVE<br>C= VC Model |
| **4** | SIZE<br>4= 25 mm |
| **M** | ELECTRICAL CONNECTION<br>M = Multipole 25 pin PNP<br>Q = Multipole 44 pin PNP |
| **W** | INTERFACE<br>O = without interface<br>W = WLAN |
| **R** | MANUAL OVERRIDE<br>P = push button<br>R = with push and turn device |
| **A** | SERVO-PILOT SUPPLY<br>A = internal<br>B = external<br>C = external with fitting (S6510 6-1/8) and threaded silencer (2931 1/8)<br>D = internal with integrated silencer |
| **03R** | CONNECTOR:<br>0 = without connector<br>CONNECTOR R WITH CABLE<br>03R = 3 mt<br>05R = 5 mt<br>10R = 10 mt<br>15R = 15 mt<br>20R = 20 mt<br>25R = 25 mt |
| **XHCDQ2DXHE** | SUBBASES<br>K = threaded subbase<br>C = with fittings for tube Ø8 (S6510 8-3/8)<br>D = with fittings for tube Ø10 (S6510 10-3/8)<br>E = with fittings for tube Ø12 (S6510 12-3/8)<br>F = with fittings for tube Ø14 (S6510 14-3/8)<br><br>SEALS<br>Q = seal on channels 1, 3, 5<br>R = seal on channel 1<br>S = seal on channels 3 and 5<br><br>INITIAL SUBBASE/INTERMEDIATE:*<br>X = supply (1) and exhausts (3, 5)<br>XS = supply (1) and exhausts (3, 5) with threaded silencer (2931 1/2)<br>XH = supply (1) and exhausts (3, 5) with silencer<br><br>* These subbases use the connection described in the Terminal Plates menu |
| **2MB2C** | VALVES<br>M = 5/2 monostable<br>B = 5/2 bistable<br>C = 2X3/2 NC<br>A = 2 X 3/2 NO<br>G = 2 X 3/2 (NC+NO)<br>V = 5/3 CC<br>K = 5/3 CO<br>N = 5/3 CP<br>L = free position |
| **E** | TERMINAL PLATES CONNECTIONS<br>K = threaded G 3/8<br>D = with fittings for tube Ø10 (S6510 10-1/2)<br>E = with fittings for tube Ø12 (S6510 12-1/2)<br>F = with fittings for tube Ø14 (S6510 14-1/2)<br>G = with fittings for tube Ø16 (S6510 16-1/2) |
| **R** | FIXING TYPE<br> = direct<br>R = DIN rail |

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## 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 D Q 2D XH E | – 2M B 2C | – E R |

| (1) | VALVE MODEL VC | (2) | SIZE | (3) | ELECTRICAL CONNECTION | (4) | INTERFACE | (5) | MANUAL OVERRIDE | (6) | SERVO-PILOT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | | 4 | | M | | 0 | | 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 | | | | |
| | | | | | S | | L | | | | |
| | | | | | INITIAL SUBBASE/INTERMEDIATE | | | | | | |
| | | | | | X | | | | | | |
| | | | | | XS | | | | | | |
| | | | | | XH | | | | | | |

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## CODING EXAMPLE - FIELDBUS VERSION

| DM | C | 4 | 01 | W | R | A | - | 2A2Q | - | XHCDQ2DXHE | - | 2MB2C | - | E | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | |
|---|---|
| **DM** | MODULAR ISLAND |
| **C** | VALVE<br>C= VC Model |
| **4** | SIZE:<br>4= 25 mm |
| **01** | PROTOCOL<br>01 = PROFIBUS<br>03 = CANopen<br>04 = Ethernet/IP<br>05 = Ethercat<br>06 = PROFINET<br>07 = IO-LINK (cannot be configured with input and output modules) |
| **W** | INTERFACE<br>O = without interface<br>W = WLAN |
| **R** | MANUAL OVERRIDE<br>P = push button<br>R = with push and turn device |
| **A** | SERVO-PILOT SUPPLY:<br>A = internal<br>B = external<br><br>C = external with fitting (6512 6-1/8) and threaded silencer (2931)<br>D = internal with silencer |
| **2A2Q** | INPUT AND OUTPUT MODULES<br>0 = without<br>A = 8 Digital inputs M8<br>B = 16 Digital inputs, terminal block connection (Push-in)<br>C = 2 Analog inputs (config. 0-10V,±10V,0-20mA,4-20mA,±20mA) M12<br>D = 2 Analog inputs (config. 0-10V,±10V,0-20mA,4-20mA,±20mA), terminal block connection (Push-in)<br>E = 2 Inputs, BRIDGE M12<br>F = 2 Inputs, BRIDGE, terminal block connection (Push-in)<br>G = 2 Inputs, RTD M12 (PT100, PT200, PT500, PT1000)<br>H = 2 Inputs, RTD terminal block connection (Push-in) (PT100, PT200, PT500, PT1000)<br>L = 2 Inputs, TC M12 (THERMOCOUPLES)<br>M = 2 Inputs, TC terminal block connection (Push-in) (THERMOCOUPLES)<br>Q = 8 Digital outputs M8<br>R = 16 Digital outputs, terminal block connection (Push-in) |
| **XHCDQ2SXHE** | SUBBASES<br>K = threaded subbase<br>C = with fittings for tube Ø8 (S6510 8-3/8)<br>D = with fittings for tube Ø10 (S6510 10-3/8)<br>E = with fittings for tube Ø12 (S6510 12-3/8)<br>F = with fittings for tube Ø14 (S6510 14-3/8)<br><br>SEALS:<br>Q = seal on channels 1, 3, 5<br>R = seal on channel 1<br>S = seal on channels 3 and 5<br><br>INITIAL SUBBASE/INTERMEDIATE:*<br>X = supply (1) and exhausts (3, 5)<br>XS = supply (1) and exhausts (3, 5) with threaded silencer (2931)<br>XH = supply (1) and exhausts (3, 5) with silencer<br><br>* These subbases use the connection described in the Terminal Plates menu |
| **2MB2C** | VALVES<br>M = 5/2 Monostable<br>B = 5/2 Bistable<br>C = 2 X 3/2 NC<br>A = 2 X 3/2 NO<br>G = 2 X 3/2 (NC+NO)<br>V = 5/3 CC<br>K = 5/3 CO<br>N = 5/3 CP<br>L = Free position |
| **E** | TERMINAL PLATES CONNECTIONS<br>K = threaded G 3/8<br>D = with fittings for tube Ø10 (S6510 10-1/2)<br>E = with fittings for tube Ø12 (S6510 12-1/2)<br>F = with fittings for tube Ø14 (S6510 14-1/2)<br>G = with fittings for tube Ø16 (S6510 16-1/2) |
| **R** | FIXING TYPE<br>  = direct<br>R = DIN rail |

The choice made in the Terminal Plates section is also valid for the seal and additional sub-bases

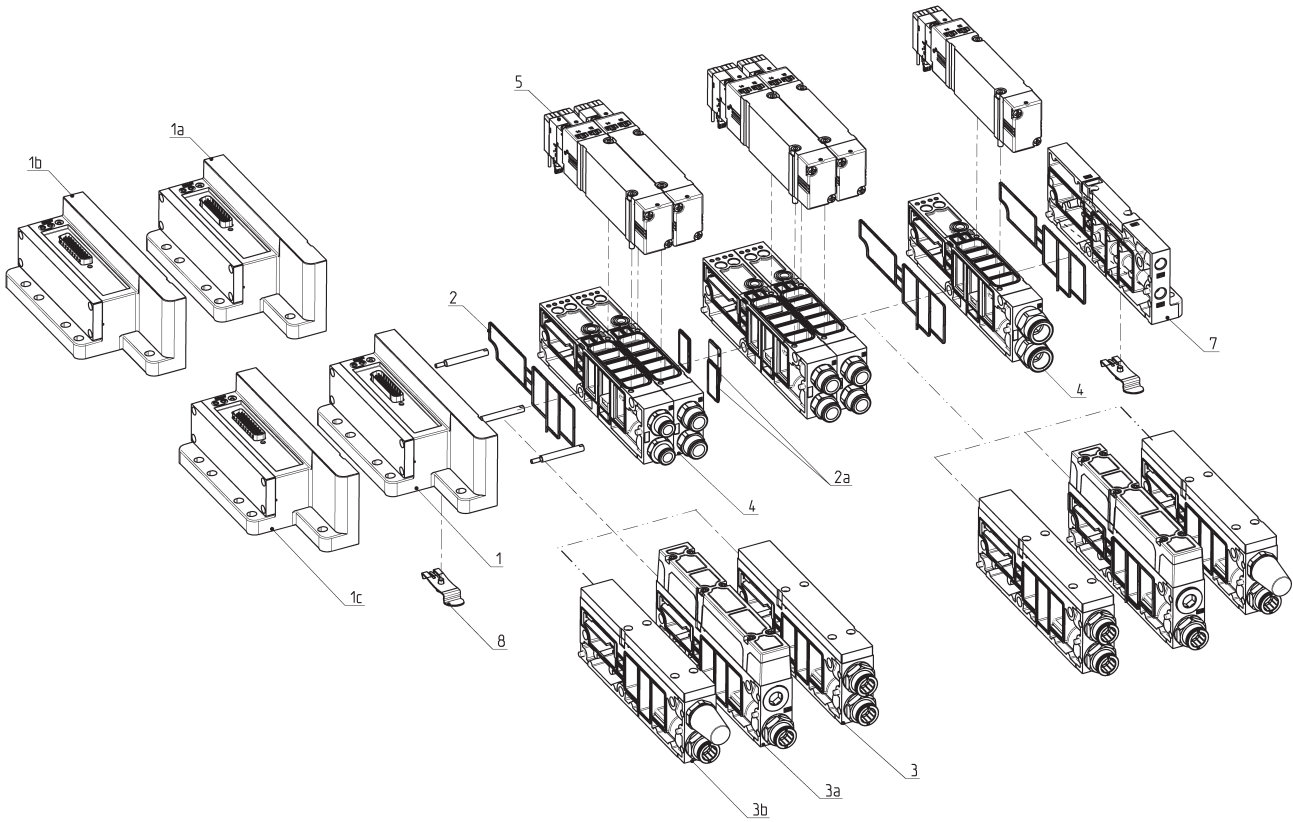# FIELDBUS VERSION CODING
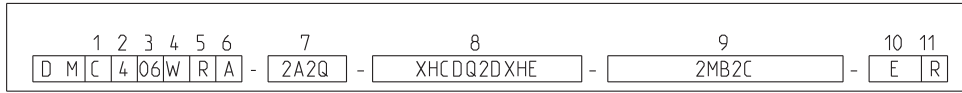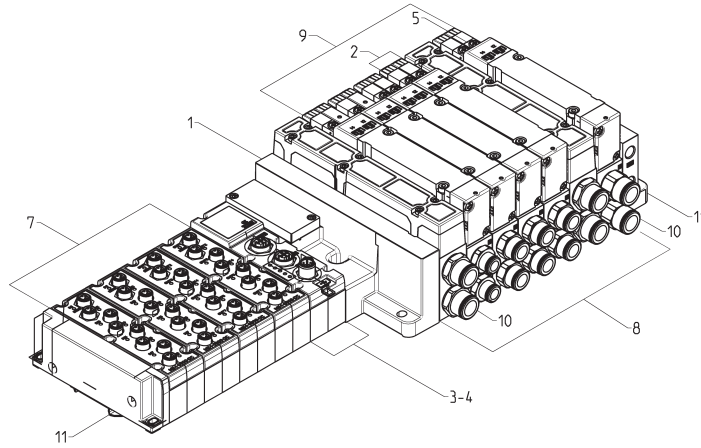
| (1) | VALVES | (2) | SIZE | (3) | PROTOCOL | (4) | INTERFACE | (5) | MANUAL OVERRIDE | (6) | SERVO-PILOT |
|-----|--------|-----|------|-----|----------|-----|-----------|-----|-----------------|-----|-------------|
| | VC | | 4 | | 01 | | 0 | | P | | A |
| | | | | | 03 | | W | | R | | B |
| | | | | | 04 | | | | | | |
| | | | | | 05 | | | | | | |
| | | | | | 06 | | | | | | |
| | | | | | 07 | | | | | | |
| **(7)** | **INPUT AND OUTPUT MODULES** | **(8)** | **SUBBASES** | **(9)** | **VALVES** | **(10)** | **TERMINAL PLATES CONNECTION** | **(11)** | **FIXING** | | |
| | 0 | | A | | M | | K | | R | | |
| | A | | B | | B | | D | | | | |
| | B | | SUBBASE | | C | | E | | | | |
| | C | | K | | A | | F | | | | |
| | D | | C | | G | | G | | | | |
| | E | | D | | V | | | | | | |
| | F | | E | | K | | | | | | |
| | G | | F | | N | | | | | | |
| | H | | SEALS | | L | | | | | | |
| | L | | INITAL SUBBASE INTERMEDIATE | | | | | | | | |
| | M | | X | | | | | | | | |
| | Q | | XS | | | | | | | | |
| | R | | XH | | | | | | | | |

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SERIES D4 VALVE ISLANDS

## MULTIPOLE version COMPONENTS



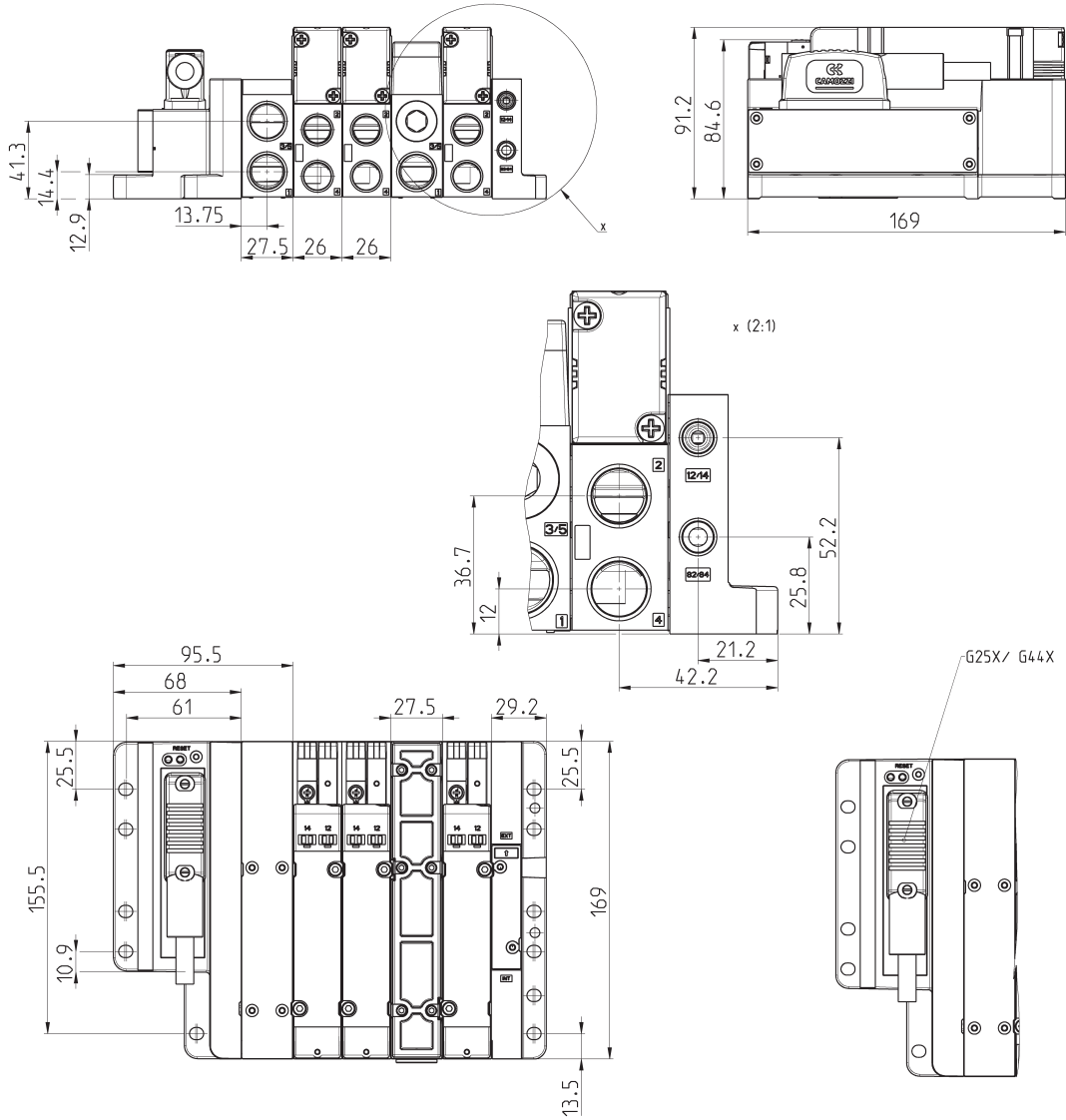| COMPONENTS | |
|---|---|
| **1** | Electric interface group - multipole 25 pins |
| **1a** | Electric interface group – multipole 25 pins WLAN interface |
| **1b** | Electric interface group - multipole 44 pins |
| **1c** | Electric interface group - multipole 44 pins WLAN interface |
| **2** | Interface 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 |

# FIELDBUS version COMPONENTS
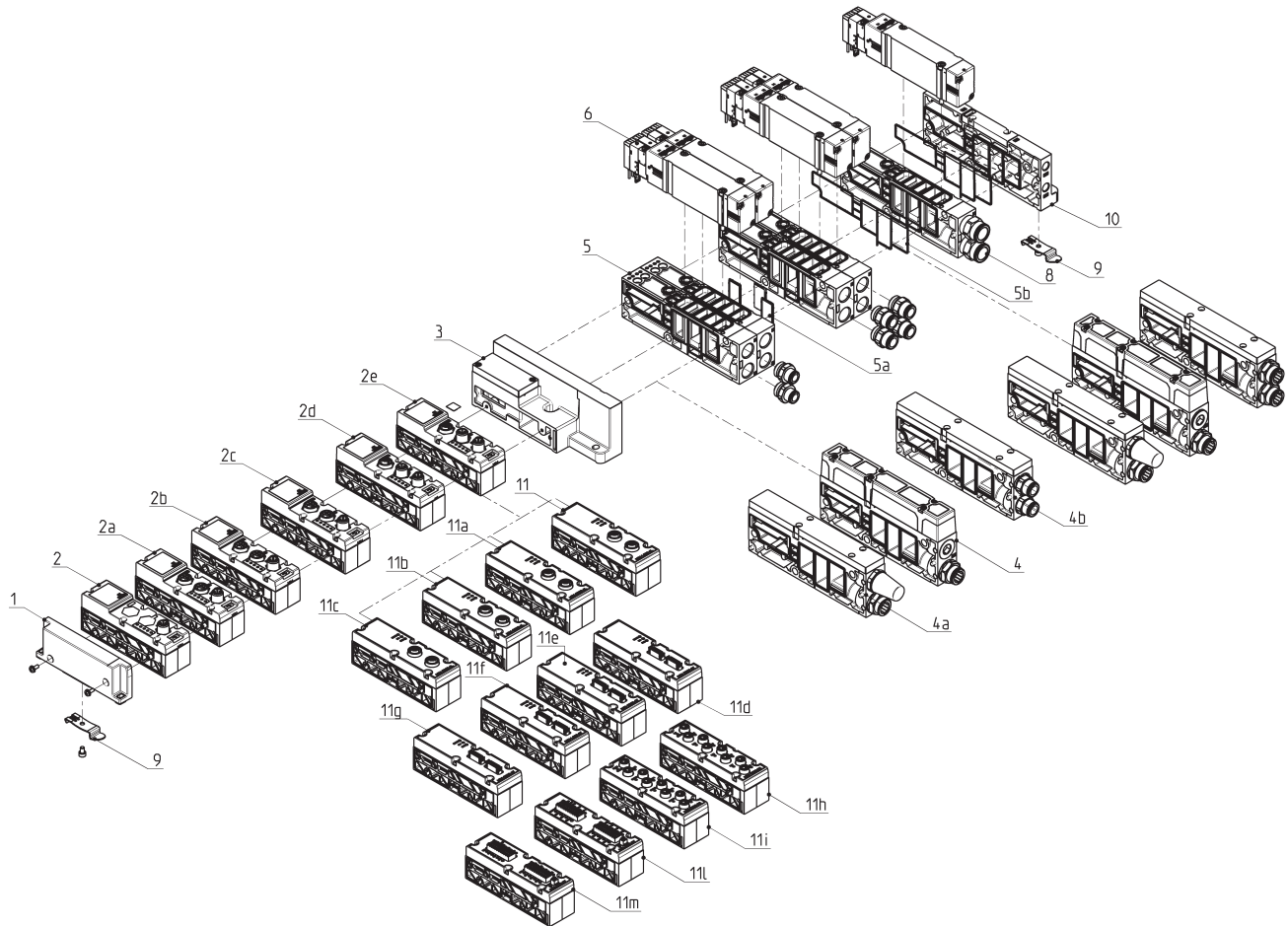


| COMPONENTS | | | |
|---|---|---|---|
| 1 | Terminal module | 8 | Fittings |
| 2 | IO-Link module | 9 | Mounting bracket for DIN rail |
| 2a | PROFINET module | 10 | Pneumatic supply module |
| 2b | EtherCAT module | 11 | 2 analog voltage/current Inputs, M12 |
| 2c | EtherNet/IP module | 11a | 2 analog load cell Inputs, M12 |
| 2d | CANopen | 11b | 2 analog thermocouple Inputs, M12 |
| 2e | PROFIBUS module | 11c | 2 analog Inputs Thermistor M12 |
| 3 | Fieldbus module interface | 11d | 2 analog voltage/current Inputs, terminal block |
| 4 | Supply and exhaust module with integrated silencer | 11e | 2 analog load cells Inputs, terminal block |
| 4a | Supply and exhaust module with threaded silencer | 11f | 2 analog thermocouple Inputs, terminal block |
| 4b | Additional conveyed supply and exhaust module | 11g | 2 analog Inputs Thermistor terminal block |
| 5 | Modular subbase size 4 | 11h | 8 Digital Inputs |
| 5a | Separator seal | 11i | 8 Digital Outputs |
| 5b | Interface seal | 11l | 16 Digital Inputs |
| 6 | Solenoid valve size 4 | 11m | 16 Digital Outputs |

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## MULTIPOLE version 25 and 44 pin DIMENSIONS

x (2:1)

G25X/ G44X

## FIELDBUS version DIMENSIONS

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## CODING EXAMPLE

| D | 4 | E | VC | - | M | P |
|---|---|---|----|---|---|---|

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

## AVAILABLE FUNCTION - SYMBOLS FOR SOLENOID VALVES



M = 5/2, Monostable

B = 5/2, Bistable

V = 5/3 Centres Closed

C = 2 x 3/2 NC

A = 2 x 3/2 NO

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

K = 5/3 CO

N = 5/3 CP
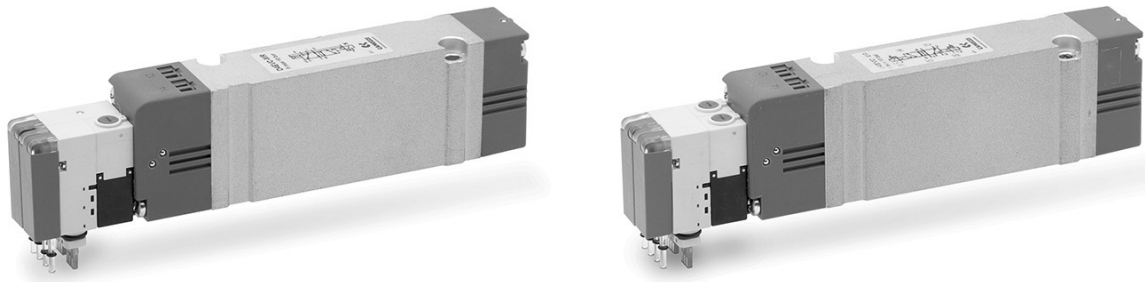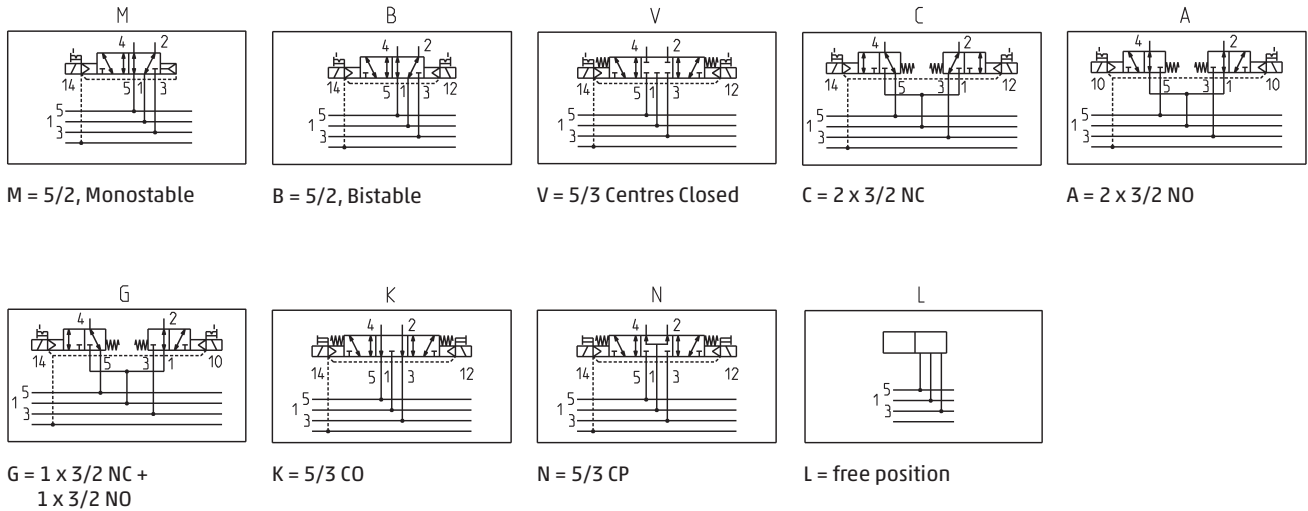
L = free position

## Plate to cover non used valve positions

The supply includes:
1 plate
2 fixing screws

D4EVC-L

## Subbase for additional valve positions

| D | AM | 4 | S | - | T | T |
|---|----|---|---|---|---|---|

| | |
|---|---|
| **D** | SERIES |
| **AM** | ACCESSORIES<br>AM = modular accessories |
| **4** | SIZE<br>4 = 25 |
| **S** | COMPONENT<br>S = modular subbase |
| **T** | VERSION<br>T = threaded valves subbase |
| **T** | TIE ROD<br> = without tie rod<br>T = with tie rod |
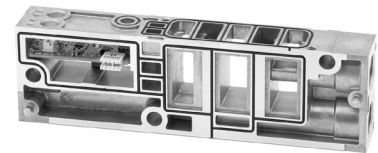
## Initial/intermediate subbase with supply and exhaust

| D | AM | 4 | S | - | XH | - | T |
|---|----|---|---|---|----|---|---|

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

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SERIES D4 VALVE ISLANDS
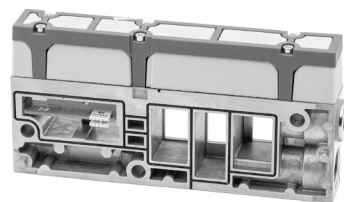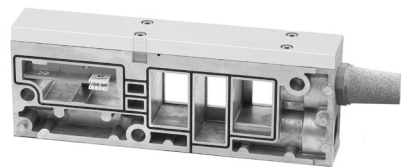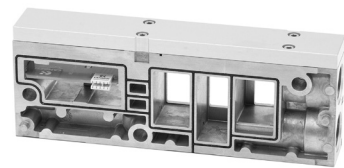
## Cover plate for initial/intermediate subbase

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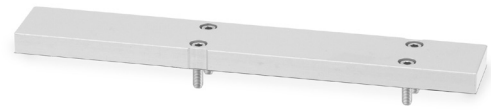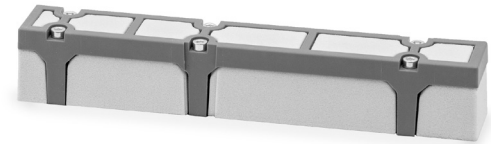


DAM40-C

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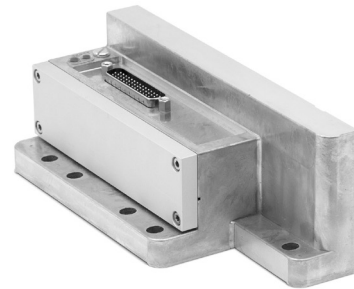
We advise to replace this component at least once a year.



DAM40-H

## Multipole terminal

| D | AM | 4 | T | - | Q | 0 |
|---|----|---|---|---|---|---|

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



## Right terminal with internal/external servopilot
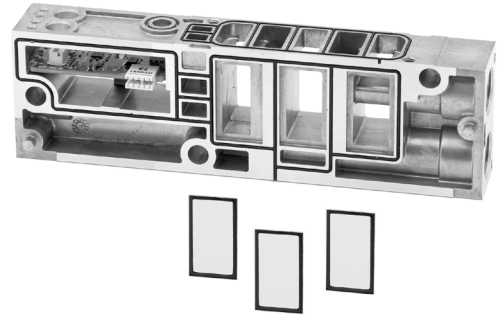
The supply includes:
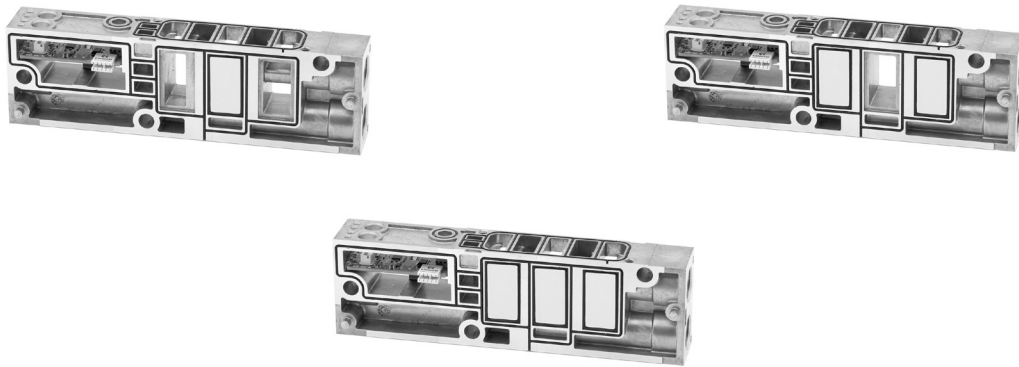3 fixing screws M5
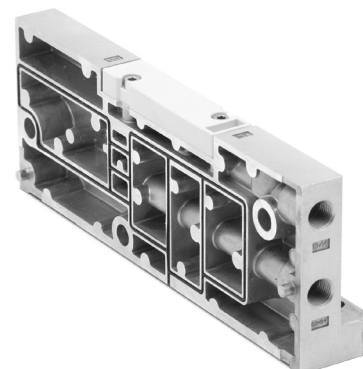


DAM40-RT

## 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.
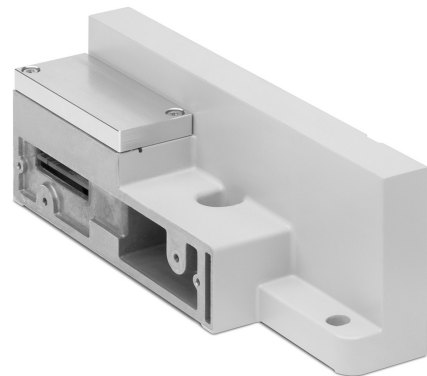
Description of seal assembly below



| | Seals channel |
|---|---|
| **DAM4D-R** | 1 |
| **DAM4D-S** | 3; 5 |
| **DAM4D-Q** | 1; 3; 5 |



## Connection interface between electrical section and valves



**ME4-00D4-DI**

## Closing terminal of fieldbus electrical section



**CX4AP-L**

## Multi-serial modules; variants

Fieldbus protocols are very popular in pneumatic applications, thanks to their benefits in terms of reduced wiring, ease of maintenance, diagnostic possibilities and high number of I/O.
The serial node for valve islands is available for the main communication protocols according to the table below.
The node enables to manage islands that can be expanded up to a maximum of:
64 valve positions with double command
128 digital input signals
128 digital output signals
16 analog input signals
16 analog output signals
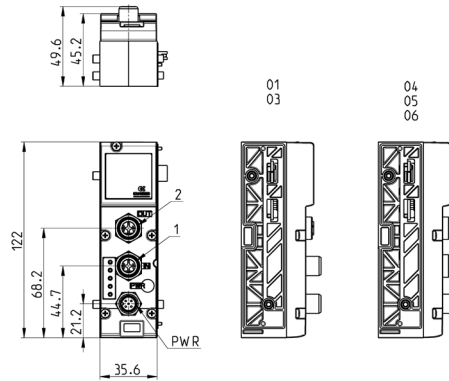
| Mod. | Fieldbus Protocol | 1 | 2 | Bus-IN connector | Bus-OUT connector |
|------|-------------------|-----|-----|------------------|-------------------|
| 01 | PROFIBUS | Bus-OUT | Bus-IN | M12 B 5-pin male | M12 B 5-pin female |
| 03 | CANopen | Bus-OUT | Bus-IN | M12 A 5-pin male | M12 A 5-pin female |
| 04 | EtherNet/IP | Bus-IN | Bus-OUT | M12 D 5-pin female | M12 D 5-pin female |
| 05 | EtherCAT | Bus-IN | Bus-OUT | M12 D 5-pin female | M12 D 5-pin female |
| 06 | PROFINET | Bus-IN | Bus-OUT | M12 D 5-pin female | M12 D 5-pin female |

## Digital input module Mod. ME4-0800-DC and ME4-1600-DT

The Digital input module can be connected at the left of the Multi-serial module and can be placed in any order with other, both digital and analog Input/Output modules.
The module integrates diagnostic functions and is available in versions with:
- Eight M8 3-pin connectors.
- Terminal block (Push-in) for the connection of 16 inputs
In the terminal block version, power supply is normally provided by the valve island directly.
In case of loads exceeding 800mA, power supply is provided by an external power supply to be connected to a 2-pin terminal block connector (PWR)
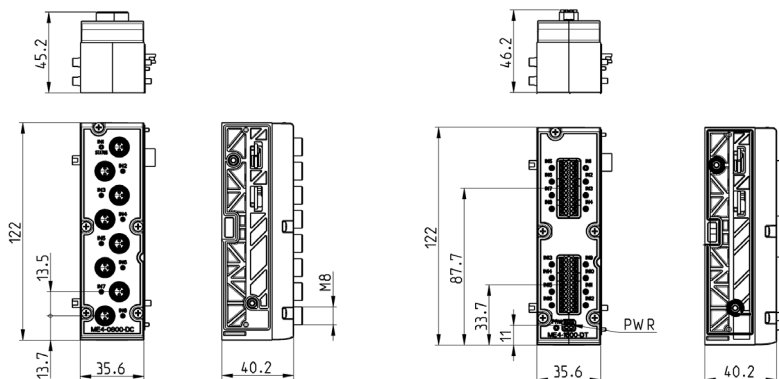
| Mod. | Coding reference | Number of digital inputs | Connection | Number of connectors | Dimensions | Signalling | Sensor supply | Overvoltage protection | Absorption | Type of signal | Protection class | Operating temperature | Weight |
|------|------------------|--------------------------|------------|---------------------|------------|-----------|---------------|------------------------|------------|----------------|------------------|----------------------|--------|
| **ME4-0800-DC** | A | 8 | M8 3 pin female | 8 | 122 x 35.6 mm | 8 yellow led 1 red led | 24 V DC | 400 mA for 4 sensors | 10 mA | PNP | IP65 | 0 ÷ 50°C | 110 g |
| **ME4-1600-DT** | B | 16 | Terminal block (push-in) | 2 (+1) | 122 x 35.6 mm | 8 yellow led 1 red led | 24 V DC | Internal: 800 mA for 16 sensors External: 2 A for 16 sensors | 10 mA | PNP | IP20 | 0 ÷ 50°C | 110 g |

## Digital power output module Mod. ME4-0004-DL and ME4-0016-DT

The digital output module can be connected only in presence of a CPU or Expansion
module, at the left of the CPU module and can be placed in any order with other, both digital and analog Input/
Output devices and with the initial module of the subnet. It is available in two versions:
- eight M8 3-pin connectors
- Terminal block (Push-in) for the connection of 16 outputs

For both versions, the outputs can be configured individually or as PNP or NPN through a software.

The 8 outputs M8 version can supply 24W and is directly supplied through the CPU node.
The 16 outputs, terminal block version is supplied externally through a terminal block, 3-pin connector, providing
48W and a voltage  supply of 12-32V to the outputs.
The module is equipped with diagnostics (Status)
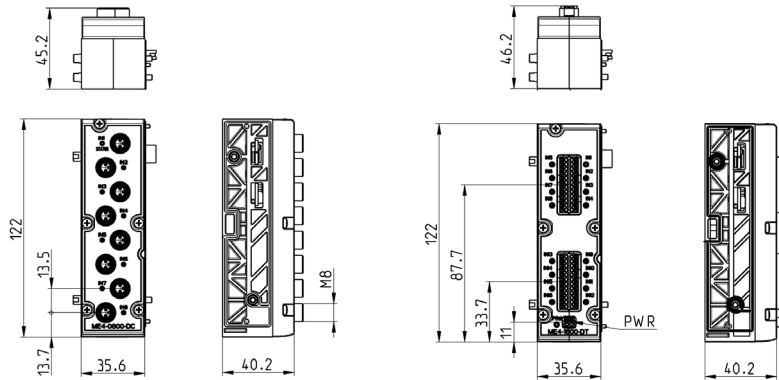


| Mod. | Coding reference | N° of digital outputs | Connection | Number of connectors | Dimensions | Signalling | Supply outputs | Max current per module | Max power per digital output | Type of signal | Protection class | Operating temperature | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ME4-0008-DC | Q | 8 | M8 3-pin female | 8 | 122 x 35,6 mm | 8 yellow led 1 red led | 24 V DC | 1 A | 3 W | NPN/PNP | IP65 | 0 ÷ 50°C | 100 g |
| ME4-0016-DT | R | 16 | Terminal block (Push-in) | 2 | 122 x 35,6 mm | 8 yellow led 1 red led | 12-32 V DC | 2 A | 3 W | NPN/PNP | IP20 | 0 ÷ 50°C | 100 g |

## Analog input module Mod. ME4-C000-AL and ME4-C000-AT

The analog input module can be connected at the left of the CPU module and can be placed in any order with
other Input/Output devices.
It is possible to configure every analog input as differential input 0-10V, ±10V,
0-20mA, 4-20mA, ±20mA  with a resolution up to 16 bit.

External voltage of 24 V is available to supply the sensor connected (max 0,25A/channel). The output is protected
against short-circuit.

The module is equipped with diagnostics (Status) and is available both in the version with two M12 connectors
with 5 contacts, and in terminal block version with Push-in spring connection.
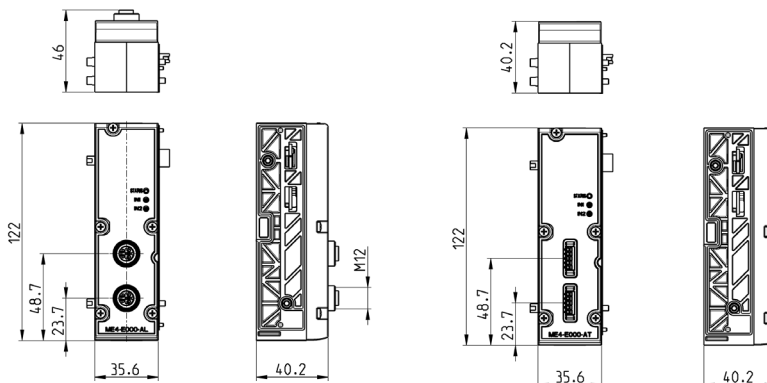


| Mod. | Coding reference | Number of analog inputs | Connection | Number of connectors | Dimension | Signalling | Sensor supply | Overvoltage protection | Absorption | Protection class | Operating temperature | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ME4-C000-AL | C | 2 (Config. 0-10V,±10V,0-20mA,4-20mA,±20mA) | M12 A 5-pin female | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | 24 V DC | 500 mA shared between the two channels | max 20 mA | IP65 | 0 ÷ 50°C | 110 g |
| ME4-C000-AT | D | 2 (Config. 0-10V,±10V,0-20mA,4-20mA,±20mA) | Terminal block 5-pin (Push-in) | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | 24 V DC | 500 mA shared between the two channels | max 20 mA | IP20 | 0 ÷ 50°C | 110 g |

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SERIES D4 VALVE ISLANDS

## ▌ Analog input module Mod. ME4-E000-A*, ME4-G000-A* and ME4-L000-A*

The analog input module can be connected at the left of the CPU module and can be placed in any order with other, both digital and analog Input/Output devices.

Analog, 2-channel Bridge module (ME4-E000-A*):
Sensor data acquisition module with Resistor Bridge-type (4-wire) output, like strain gauge, non isolated.
The module is able to process the two channel inputs with gain factor from 1mV/V to 255mV/V, with a resolution of up to 24bit.
Supply voltage of the sensor +5V (max 0,05A/channel). The output is protected against short-circuit.

Analog, 2-channel RTD module (ME4-G000-A*):
RTD Temperature sensor data acquisition module, in 2/3/4-wire configuration, non isolated.
The module is able to process the following sensor types:
PT100, PT200, PT500, PT1000, Ni100, Ni120, Ni1000, with a resolution of up to 16bit.
Typical measuring fields range from -200 ÷ +850 °C (PT sensors) and -60 ÷ +250 °C (Ni sensors)
Analog, 2-channel TC (thermocouples) module  (ME4-L000-A*):

TC temperature sensor data acquisition module in 2-wire configuration, non isolated.
The module is able to process the following sensor types:
J, K, B, E, N, R, S, T, with a resolution of up to 16bit.

All modules are equipped with diagnostics (Status).
The characteristics of the single input can be configured by a software for all analog module types.
The modules are available both in the version with two M12 connectors with 5 contacts, and in the terminal block version with Push-in spring connection.
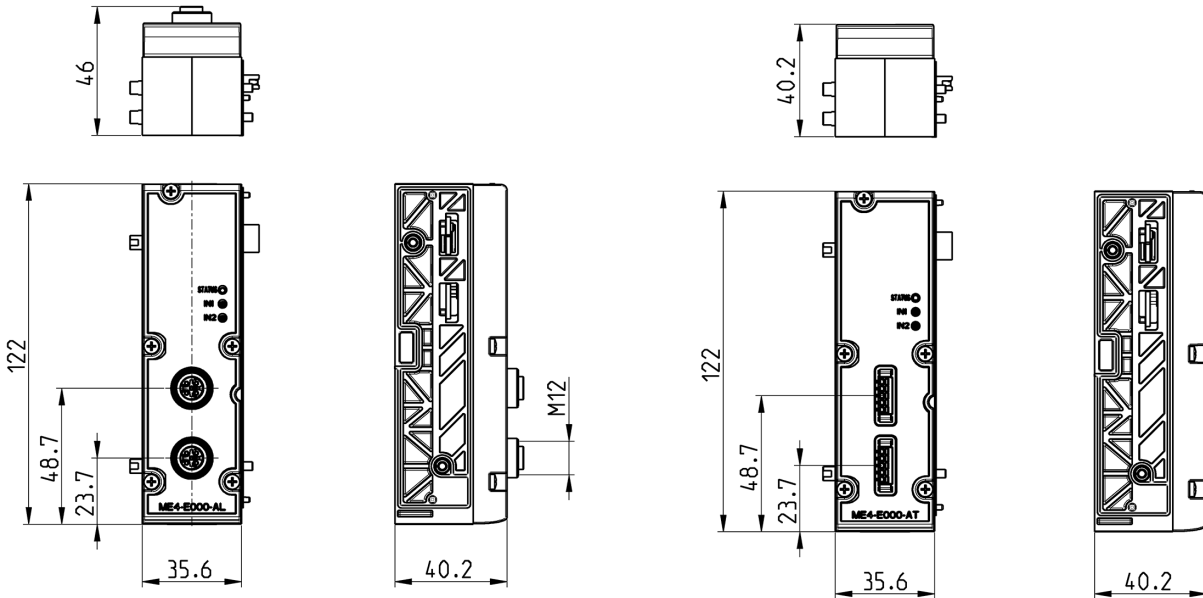


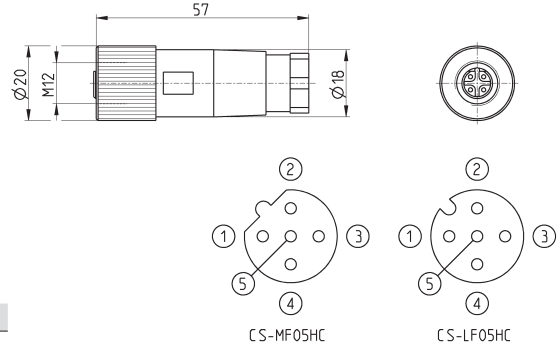| Mod. | Coding reference | Numbers of analog inputs | Connection | Number of connectors | Dimension | Signalling | Absorption | Protection class | Operating temperature | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| **ME4-E000-AL** | E | 2 M12 bridge inputs | M12 A 5-pin female | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | max 20 mA | IP65 | 0 ÷ 50°C | 110 g |
| **ME4-E000-AT** | F | 2 bridge inputs with terminal block (Push-in) | Terminal block (Push-in) 5-pin | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | max 20 mA | IP20 | 0 ÷ 50°C | 110 g |
| **ME4-G000-AL** | G | 2 RTD M12 inputs | M12 A 5-pin female | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | max 20 mA | IP65 | 0 ÷ 50°C | 110 g |
| **ME4-G000-AT** | H | 2 RTD inputs with terminal block (Push-in) | Terminal block (Push-in) 5-pin | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | max 20 mA | IP20 | 0 ÷ 50°C | 110 g |
| **ME4-L000-AL** | L | 2 TC M12 inputs | M12 A 5-pin female | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | max 20 mA | IP65 | 0 ÷ 50°C | 110 g |
| **ME4-L000-AT** | M | 2 TC inputs with terminal block (Push-in) | Terminal block (Push-in) 5-pin | 2 | 122 x 35,6 mm | 2 yellow led 1 red led | max 20 mA | IP20 | 0 ÷ 50°C | 110 g |

## Tie-rods for valve size 4

| Mod. | Valve positions | NOTE |
|------|-----------------|------|
| DA4K-2 | 2 | * |
| DA4K-4 | 4 | * |
| DA4K-6 | 6 | * |
| DA4K-8 | 8 | * |
| DA4K-10 | 10 | * |
| DA4K-1 | - | ** |

* Tie-rod.
The supply includes
3 tie-rods and 3 screws.

** Joint bolt for odd positions.
The supply includes 3 joint bolts.

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## Straight female M12 connectors for Bus-IN

CS-MF05HC          CS-LF05HC

| Mod. | description | type of connector | connection | Fieldbus |
|------|-------------|-------------------|------------|----------|
| CS-LF05HC | for wiring | straight | M12 A 5 pin female | CANopen |
| CS-MF05HC | for wiring | straight | M12 B 5 pin female | PROFIBUS |

## Straight male M12 connectors for Bus-OUT
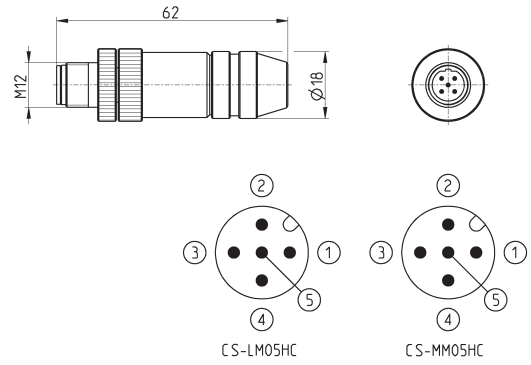
CS-LM05HC          CS-MM05HC

| Mod. | description | type of connector | connection | Fieldbus |
|------|-------------|-------------------|------------|----------|
| CS-LM05HC | for metal wiring | straight | M12 A 5 pin male | CANopen |
| CS-MM05HC | for metal wiring | straight | M12 B 5 pin male | PROFIBUS |

## 3 pin male M8 wiring connector for digital input modules
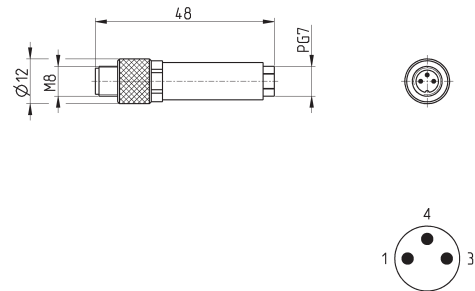
| Mod. | description | type of connector | connection | cable length (m) |
|------|-------------|-------------------|------------|------------------|
| CS-DM03HB | for wiring | straight | M8 3 pin male | - |

## Male wiring connector for Bus-IN and Bus-OUT

For PROFINET, EtherCAT, EtherNet/IP
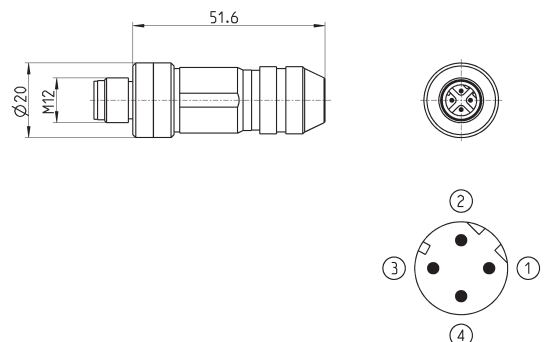
| Mod. | description | type of connector | connection | cable length (m) |
|------|-------------|-------------------|------------|------------------|
| CS-SM04H0 | for metal wiring | straight | M12 D 4 pin | - |

## Right angle Sub-D female connector 25-44 pins

Protection class IP65
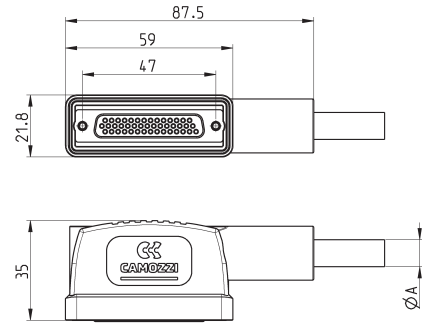
| Mod. | ⌀A | PIN | cable length (m) |
|------|-----|-----|------------------|
| G25X1-3 | 10 | 25 | 3 |
| G25X1-5 | 10 | 25 | 5 |
| G25X1-10 | 10 | 25 | 10 |
| G25X1-15 | 10 | 25 | 15 |
| G25X1-20 | 10 | 25 | 20 |
| G25X1-25 | 10 | 25 | 25 |
| - | | | |
| G44X1-3 | 13 | 44 | 3 |
| G44X1-5 | 13 | 44 | 5 |
| G44X1-10 | 13 | 44 | 10 |
| G44X1-15 | 13 | 44 | 15 |
| G44X1-20 | 13 | 44 | 20 |
| G44X1-25 | 13 | 44 | 25 |

87.5
59
47
21.8
35
⌀A

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## USB to Micro USB cable Mod. G11W-G12W-2

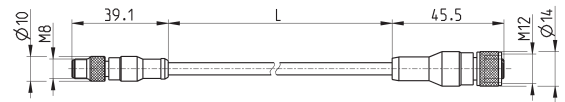For the hardware configuration
of the Camozzi products
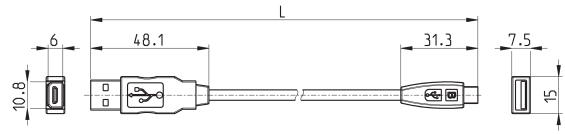
| Mod. | description | connections | material for outer sheath | cable length "L" (m) |
|---|---|---|---|---|
| **G11W-G12W-2** | black shielded cable 28 AWG | standard USB to Micro USB | PVC | 2 |

## Adapter cable, M8 3-pin male - M12 4-pin female

Protection class: IP69K
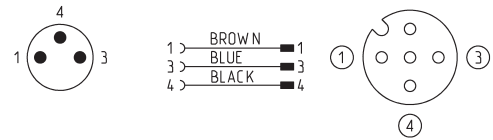
| Mod. | description | max voltage | max current | Nr conn. wires | connections | outer sheath | cable "L" (m) |
|---|---|---|---|---|---|---|---|
| **CS-AG03HB-C250** | 3-pin cable 24 AWG, high flexibility | 50V AC / 60V DC | 3 A | 3 | M8 3-pin male - M12 4-pin fem. | PUR black | 2.5 |
| **CS-AG03HB-C500** | 3-pin cable 24 AWG, high flexibility | 50V AC / 60V DC | 3 A | 3 | M8 3-pin male - M12 4-pin fem. | PUR black | 5 |

## Cables with straight connectors

For PROFINET, EtherCAT, EtherNet/IP
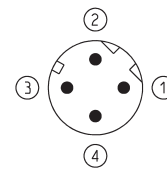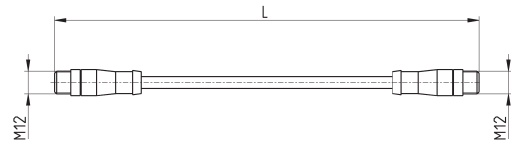
| Mod. | description | type of connector | connection | L [ cable length ] (m) |
|---|---|---|---|---|
| **CS-SB04HB-D100** | moulded cable | straight | 2x M12 D 4 pin male | 1 |
| **CS-SB04HB-D500** | moulded cable | straight | 2x M12 D 4 pin male | 5 |
| **CS-SB04HB-DA00** | moulded cable | straight | 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
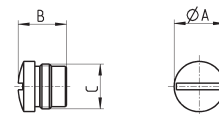
| Mod. | A | B | C [ Connection ] |
|---|---|---|---|
| **CS-DFTP** | 10 | 11 | M8 |
| **CS-LFTP** | 13.5 | 13 | M12 |

## Identification plates
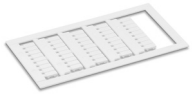
The packaging contains
45 identification plates 9x5mm

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Mod.
**HP1/E**

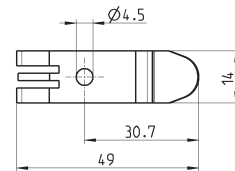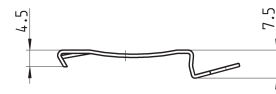## Mounting brackets for DIN rail

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

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

Mod.
**PCF-D4**

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