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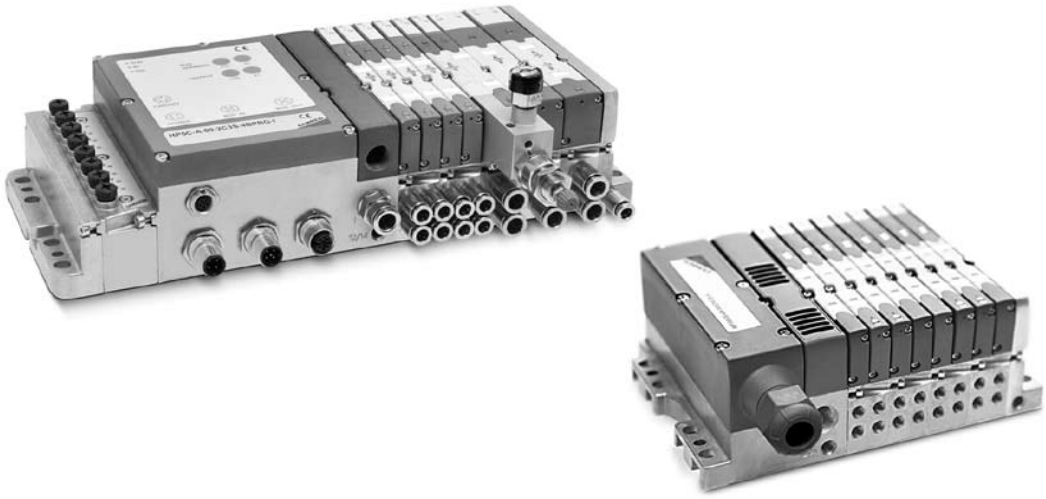
# Valve Islands Series H

Valve Island with Pneumatics and Electronics integrated. Available versions: Multipole (PNP and NPN) and Fieldbus (Profibus-DP, DeviceNet, CANopen). Valve functions: 2x2/2; 2x3/2; 5/2; 5/3 CC



**Thanks to new technology, to a large range of options and total flexibility, both in pneumatic and electrical components, the valve island Series H always offers the best solution for each application. The Series H has been designed to be used in numerous industrial fields, especially in automated systems.**

The design and especially the constructional characteristics make the series H ideal in all applications where reliability and quality of the components used is essential for the operation of all industrial automated and dynamic systems.

- Dimension 10,5 mm (modularity 2)
- Dimension 21 mm (modularity 1)



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## GENERAL DATA

New

| | |
|---|---|
| **PNEUMATIC SECTION** | |
| **Valve construction** | spool with seals |
| **Valve functions** | 5/2 monostable and bistable<br>5/3 CC<br>2 x 2/2 NO<br>2 x 2/2 NC<br>1 x 2/2 NC+ 1 x NO<br>2 x 3/2 NC<br>2 x 3/2 NO<br>1 x 3/2 NC+ 1 x 3/2 NO |
| **Materials** | aluminium spool and HNBR seals<br>brass cartridges<br>technopolymer body and end covers<br>alluminium subbase<br>other NBR seals |
| **Connections** | Inlets 2 and 4, size 1 = M7 or tube ø4 or tube ø6<br>Inlets 2 and 4, size 2 = G1/8 or tube ø6 or tube ø8<br>Supply, size 1 = G1/4 or tube ø8<br>Supply, size 2 = G1/4 or tube ø10<br>Pilot, size 1 and 2 = M7<br>Exhausts 3 and 5, size 1 and 2 = G1/4 or with silencer<br>Exhausts 82 e 84, size 1 and 2 = M7 or with silencer |
| **Temperature** | 0 ÷ 50°C |
| **Air specifications** | Filtered air class 5.4.4 according to ISO 8573.1<br>If lubrication is necessary use only oil with maximum viscosity 32 Cst. |
| **Valve sizes** | 10,5 mm<br>21 mm |
| **Working pressure** | - 0,9 ÷ 10 bar |
| **Pilot pressure** | 3 ÷ 7 bar |
| **Flow rate** | 10,5 mm = 400 Nl/min<br>21 mm = 700 Nl/min |
| **Mounting position** | any position |
| | |
| **INPUTS SECTION** | |
| **Voltage** | 24 V DC +/- 10% (directly supplied by the Valve Island) |
| **Power consumption** | 10 mA |
| **Working temperature** | 0°C ÷ 50°C |
| **Protection** | against overload (400 mA every 4 sensors) |
| **Protection class** | IP 65 |
| **Max. number of connecting inputs** | 64 |
| **Max. number of connecting inputs Modules** | 8 |
| | |
| **ELECTRIC SECTION** | |
| **Voltage** | 24 V DC +/- 10% (directly supplied by the Valve Island) |
| **Power consumption** | 0,5 W per coil |
| **Duty cycle** | ED 100% |
| **Protection class** | IP65 |
| **Max. number of coils - Multipole version** | 32 |
| **Max. number of coils - Fieldbus version** | 64 |



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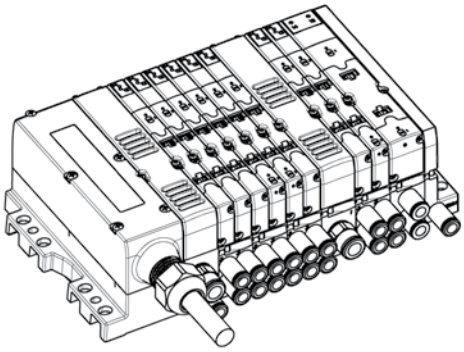
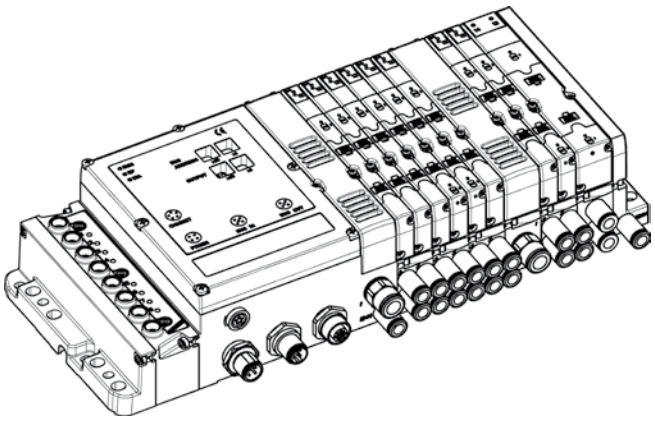
## Valve Islands Series H - Multipole and Expandable Fieldbus versions

New



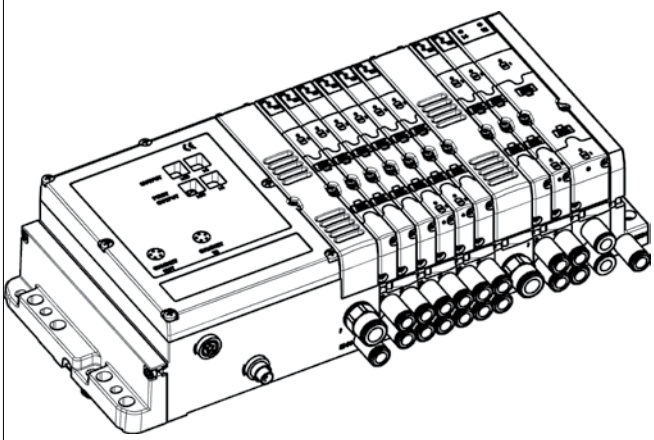


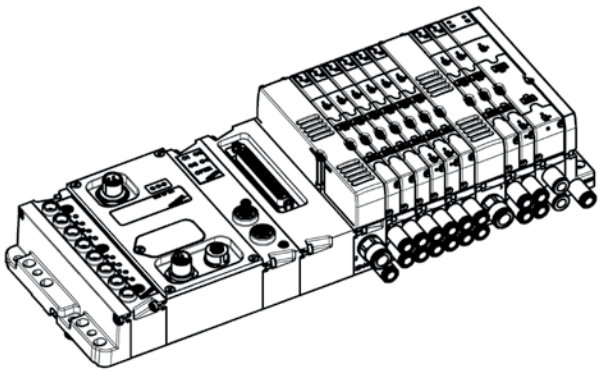
Multipole version:
In this configuration Series H can be connected rapidly and safely thanks to the multipole connection with wired cable of different sizes.

Expandable Fieldbus version:
This version enables a direct interface to fieldbus systems such as: Profibus-DP, DeviceNet and CANopen.The various types of electical and pneumatic elements that can be connected, and the possibility to decentralise the expansion Islands gives this model extreme flexibility.

## Valve Islands Series H - Expansion and Individual Fieldbus versions

New





Fieldbus Expansion (local fieldbus) version:
The Expansion islands can handle electrical and pneumatic outlets up to a 50 m distance from the Island that interfaces directly to theFieldbus net. These expansions communicate with the expandable fieldbus unit (above) through a local fieldbus (Cam.I.Net) and are connected through pre-wired cables (9 poles) of different lengths.

Individual Fieldbus version:
This version consists of an island that enables the handling of 64 Inputs and 64 Outputs. It does not enable the handling of the Expansions but it can can be equipped with all peripheral elements of the expandable versions.
The whole electronic system can be used in other types of Valve islands (see Individual Fieldbus node Series CX2 on page 2/3.20).

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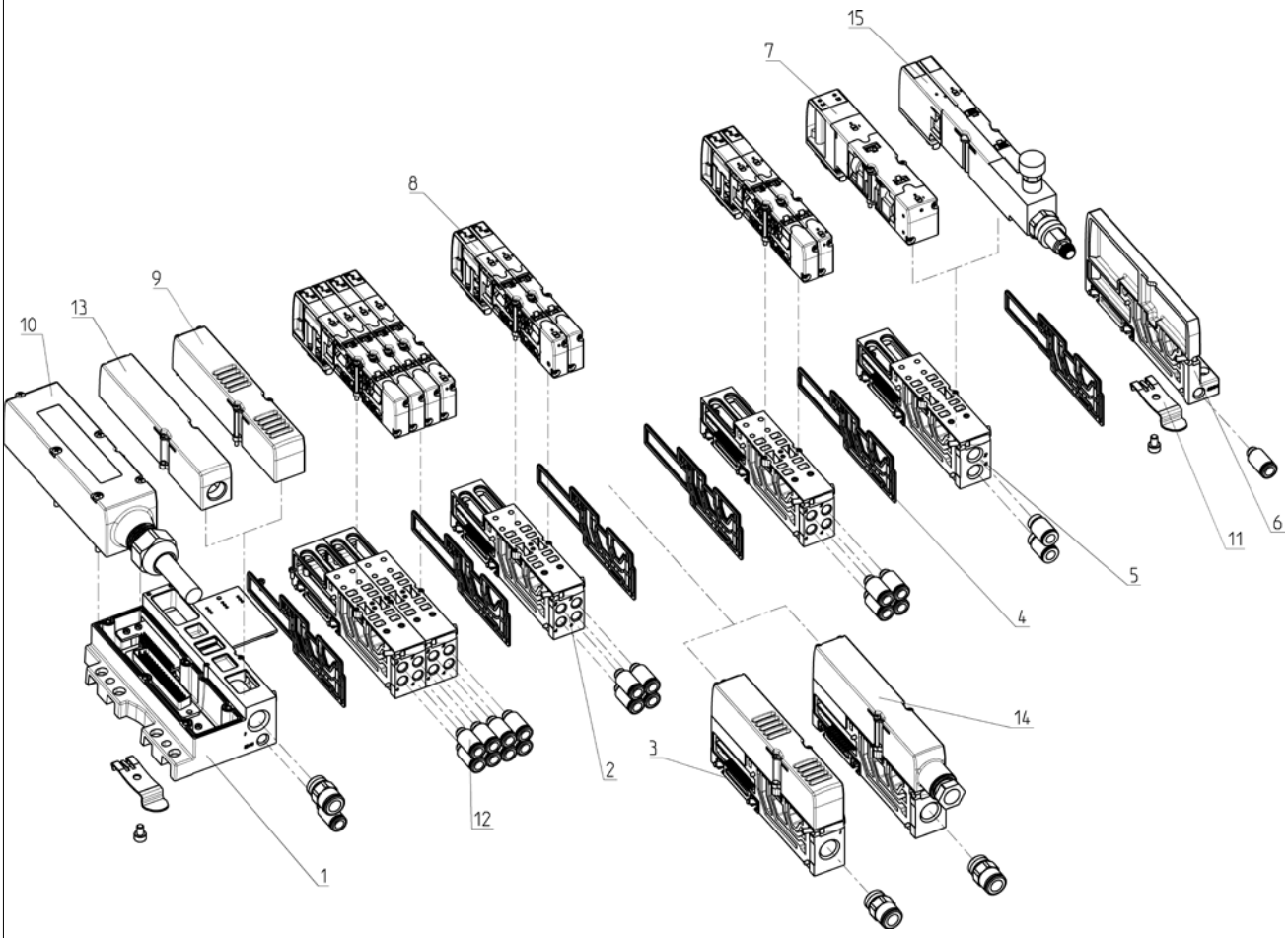
## Multipole version - components

New






| COMPONENTS | |
|---|---|
| **1** | Terminal |
| **2** | Threaded sub- base size 10,5 modularity 2 |
| **3** | Intermediate plate for suppl. inlet exhausts (with or without) integrated silencer |
| **4** | Interface seal |
| **5** | Threaded sub - base size 21 modularity 1 |
| **6** | Pneumatic terminal (right) |
| **7** | Solenoid valve Sizes 2 |
| **8** | Solenoid valve Sizes 1 |
| **9** | Silencer |
| **10** | Multipole connector (25 or 37 pole) with cable |
| **11** | Mounting bracket for DIN rail |
| **12** | Quick-release fittings |
| **13** | Cover to convey outlets 3 and 5 |
| **14** | Module for power supply separation |
| **15** | Valve size 10,5 with pressure regulator incorporated (total width of 21mm) |



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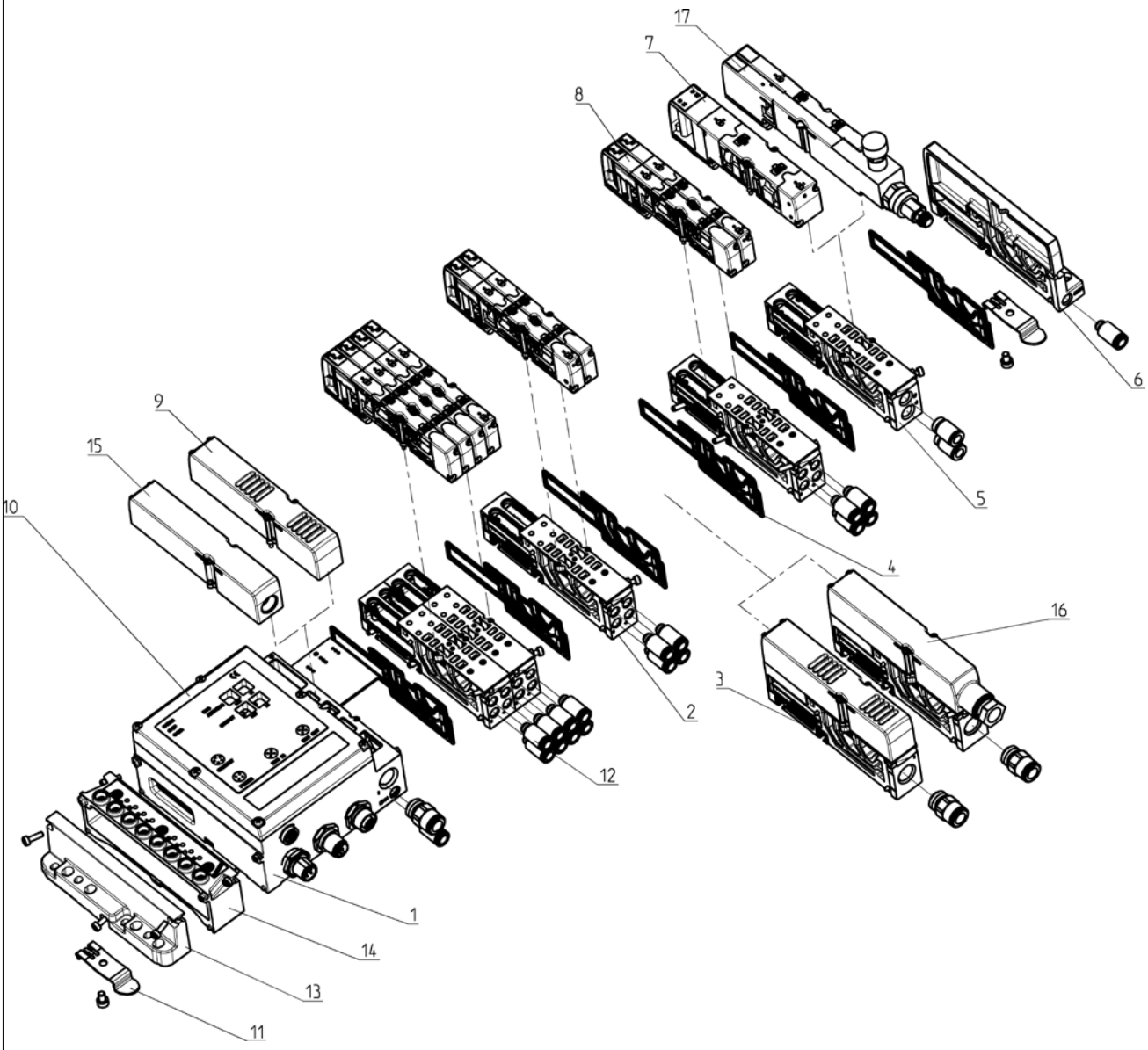
## Expandable Fieldbus version - components

New




| COMPONENTS | |
|---|---|
| **1** | Expandable Fieldbus node (Initial Module) |
| **2** | Threaded sub - base size 10,5 modularity 2 |
| **3** | Intermediate plate for suppl. inlet and exhausts (with or without integrated silencer) |
| **4** | Interface seals |
| **5** | Threaded sub- base size 21 modularity 1 |
| **6** | Pneumatic terminal (right) |
| **7** | Solenoid valve size 2 |
| **8** | Solenoid valve size 1 |
| **9** | Silencer |
| **10** | Cover |
| **11** | Mounting bracket for DIN rail |
| **12** | Quick-release fittings |
| **13** | Electric terminal (left) |
| **14** | Input module (8 inputs/module) |
| **15** | Cover to convey outlets 3 and 5 |
| **16** | Module for power supply separation |
| **17** | Valve size 10,5 with pressure regulator incorporated (total width of 21mm) |

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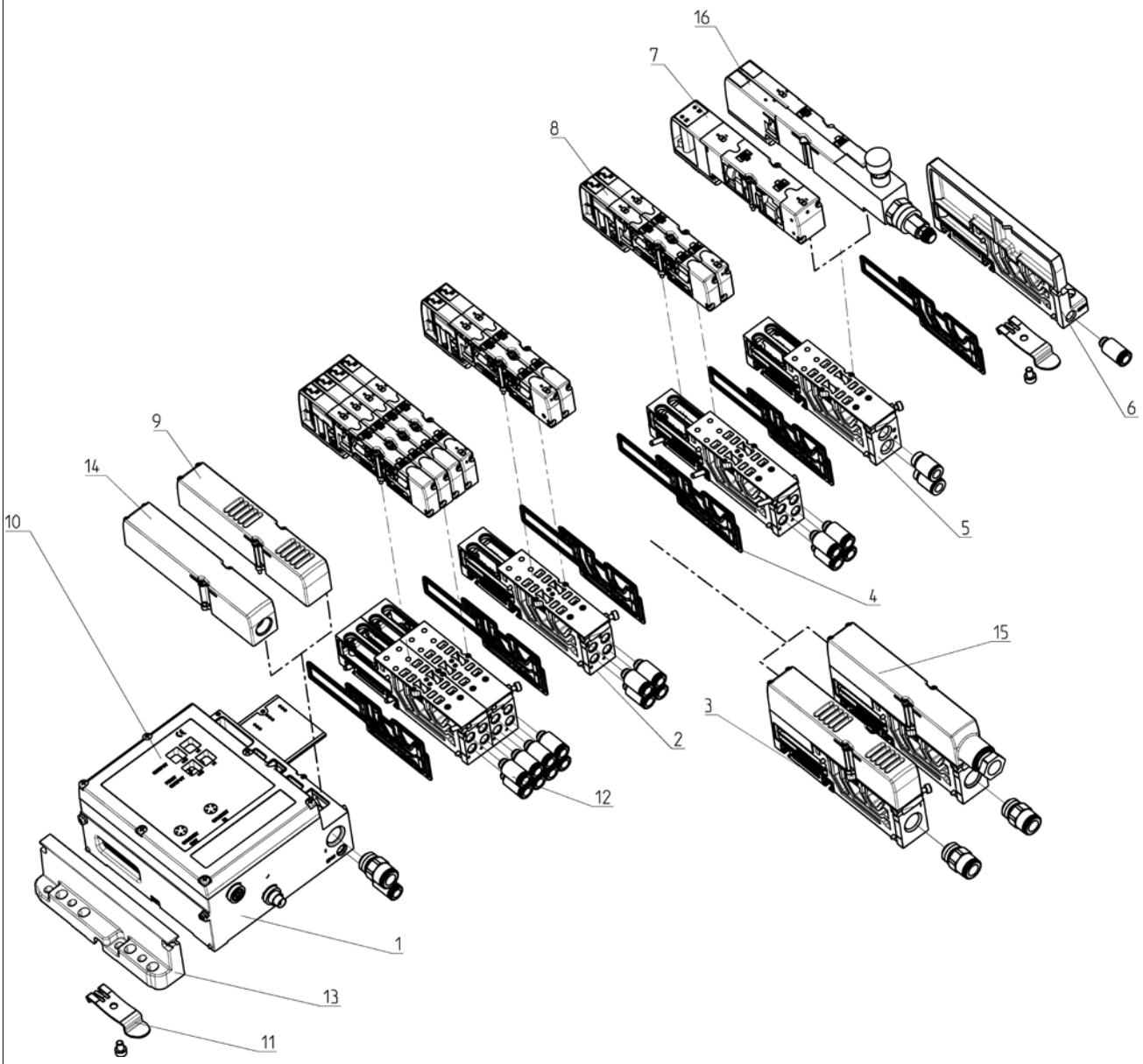
## Fieldbus expansion version - components

New




| COMPONENTS | |
|---|---|
| **1** | Expansion module (local fieldbus) |
| **2** | Threaded sub- base size 10,5 modularity 2 |
| **3** | Intermediate plate suppl. inlet and exhausts (with or without integrated silencer) |
| **4** | Interface seals |
| **5** | Threaded sub- base size 21 modularity 1 |
| **6** | Pneumatic terminal (right) |
| **7** | Solenoid valve size 2 |
| **8** | Solenoid valve size 1 |
| **9** | Silencer |
| **10** | Cover |
| **11** | Mounting bracket for DIN rail |
| **12** | Quick - release fittings |
| **13** | Electric terminal (left) |
| **14** | Cover to convey outlets 3 and 5 |
| **15** | Module for power supply separation |
| **16** | Valve size 10,5 with pressure regulator incorporated (total width 21mm) |



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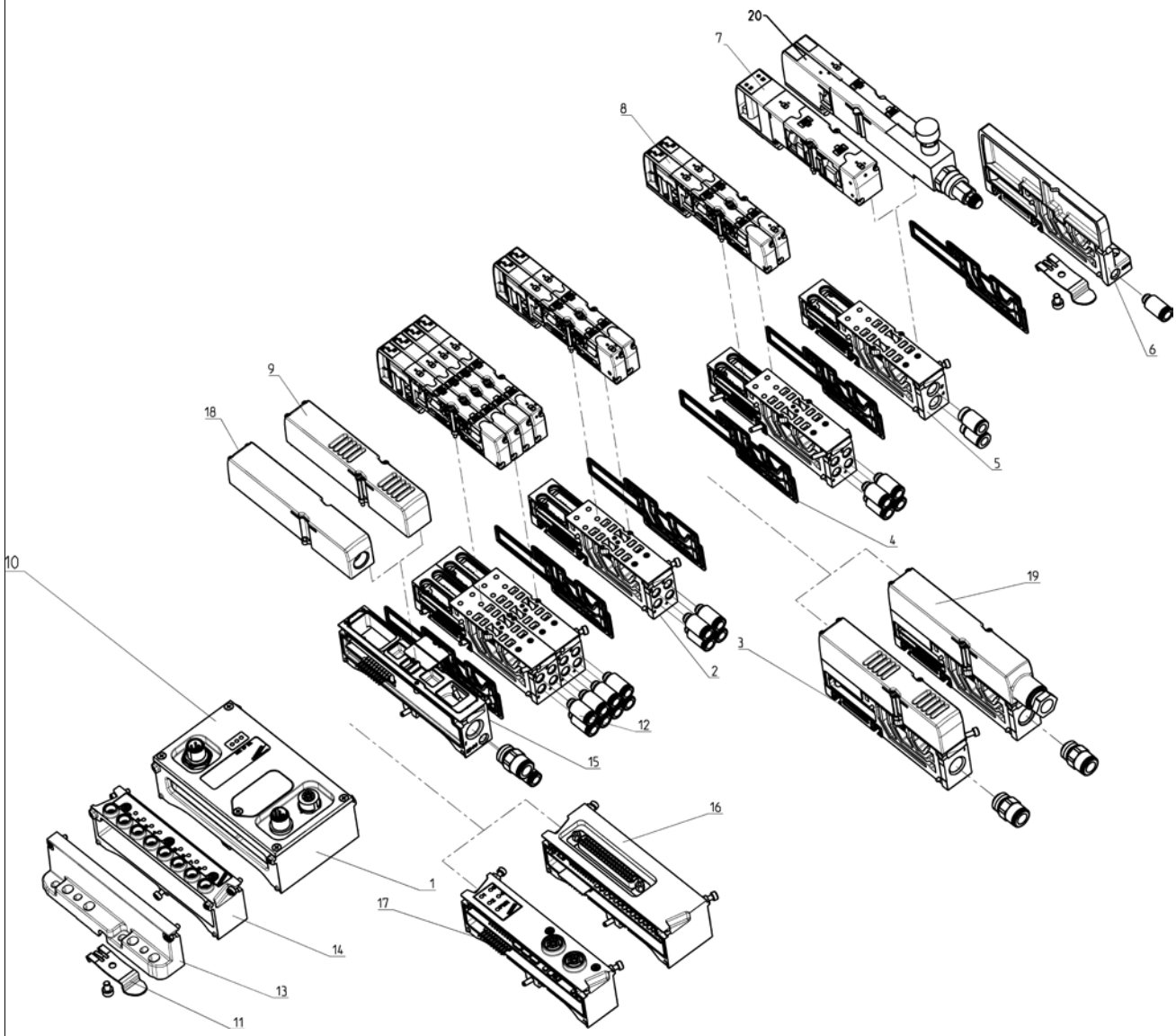
## Individual Fieldbus version - components

New




| COMPONENTS | | | |
|---|---|---|---|
| **1** | Individual Fieldbus node | **11** | Mounting bracket for DIN rail |
| **2** | Threaded subbase size 10,5 modularity 2 | **12** | Quick - release fittings |
| **3** | Intermed. plate for suppl. inlet/exh. (with/without integr. silencer) | **13** | Electric terminal (left) |
| **4** | Interface seals | **14** | Input module (8 inputs/module) |
| **5** | Threaded subbase size 21 modularity 1 | **15** | Electrical/pneumatic interface module for individual fieldbus node |
| **6** | Pneumatic terminal (right) | **16** | Digital output module (D-SUB - 37 pin) |
| **7** | Solenoid valve size 2 | **17** | Digital output module (2xM12 - 4 outputs) |
| **8** | Solenoid valve size 1 | **18** | Cover to convey outlets 3 and 5 |
| **9** | Silencer | **19** | Module for power supply separation |
| **10** | Cover | **20** | Valve size 10,5 with integrated pressure regulator |

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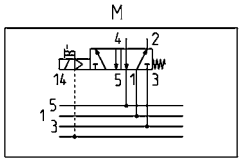
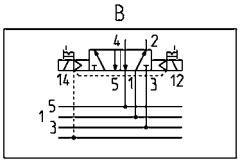
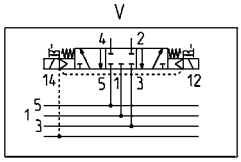
## SYMBOLS FOR SOLENOID VALVES



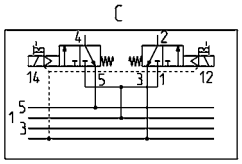

Valve code M - 5/2 way, Monostable



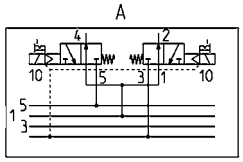

Valve code B - 5/2 way, Bistable



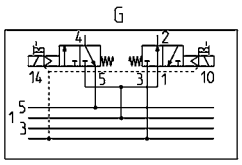

Valve code V - 5/3 way Centres Closed



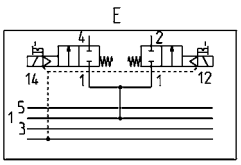

Valve code C - 2x3/2 way NC



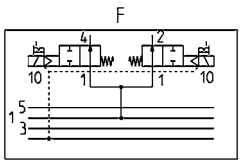

Valve code A - 2x3/2 way NO



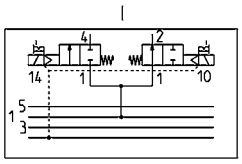

Valve code G - 1x3/2 NC + 1x3/2 NO



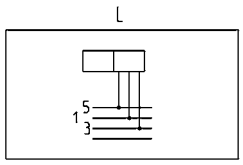

Valve code E - 2x2/2 way NC



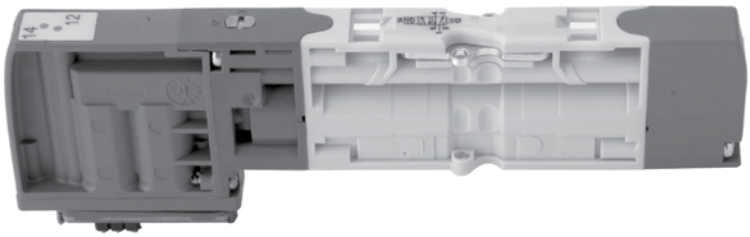

Valve code F - 2x2/2 way NO




Valve code I - 1x2/2 NC + 1x2/2 NO




Valve code L - Free position





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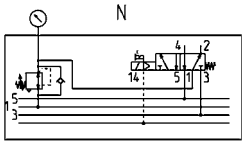
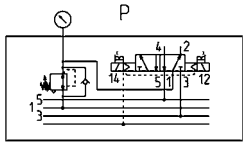
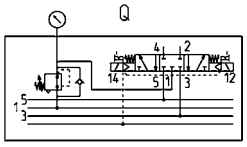
## SYMBOLS FOR SOLENOID VALVES WITH INCORPORATED REGULATOR IN THE SUB- BASE



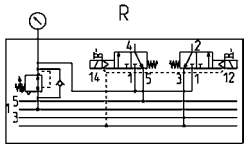

Valve code N - 5/2 way, Monostable



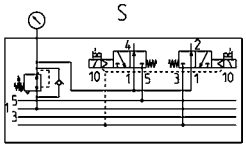

Valve code P - 5/2 way, Bistable



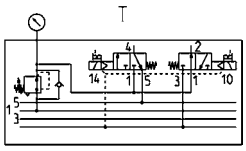

Valve code Q - 5/3 way Centres Closed



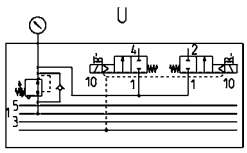

Valve code R - 2x3/2 way NC



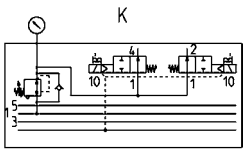

Valve code S - 2x3/2 way NO



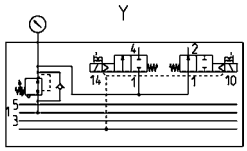

Valve code T - 1x3/2 NC+1x3/2 NO



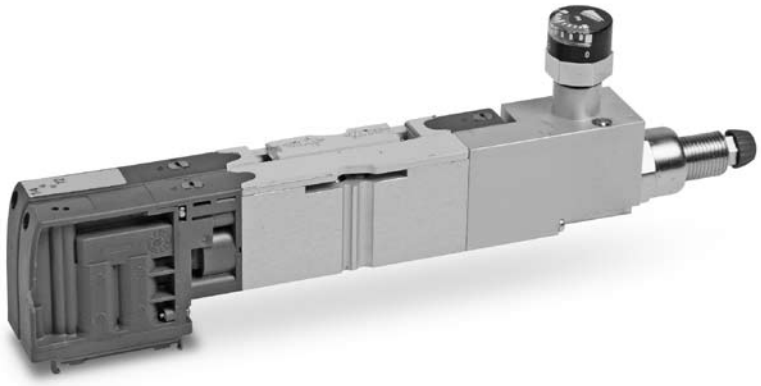

Valve code U - 2x2/2 way NC




Valve code K - 2 x 2/2 way NO




Valve code Y - 1x2/2 NC + 1x2/2 NO





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## AVAILABLE FUNCTIONS - SUB-BASES TYPES

Through subb. s. 10,5
A=M7; B=Ø4; C=Ø6

Subb. diaphr. lines 1-3-5
D=M7; E=Ø4; F=Ø6

Subb. diaphr. line 1
L=M7; M=Ø4; N=Ø6

Subb. diaphr. lines 3-5
G=M7; H=Ø4; I=Ø6

Subbase s. 21
Q=1/8; R=Ø6; S=Ø8

X = extra supply+exhaust
Y = X + silencier

K = Mod. f. power supply
sep. + extra inlet press.

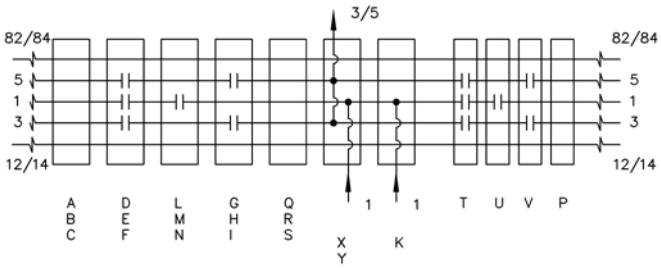
X = supply + exhaust
Y = X + silencer

U = Diaphragm seal
- Line 1

V = Diaphragm seal
- Lines 3; 5.

P = Through seal

T = Diaphragm seal
- Lines 1-3-5



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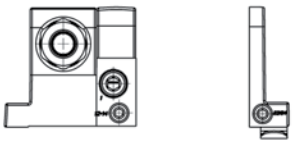
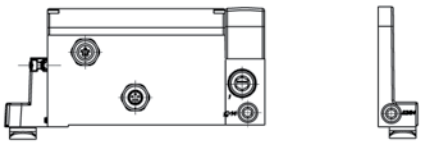
## Terminals Series H

New



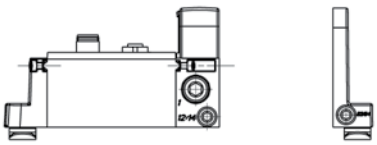
for Multipole version



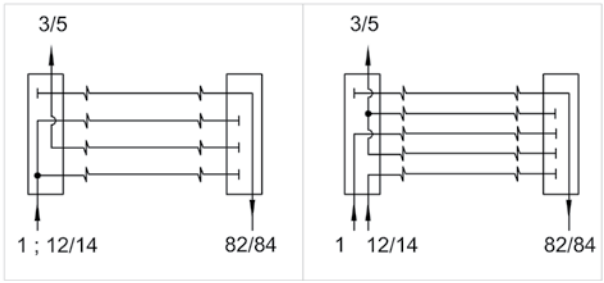
for Expandable Fieldbus version

## Terminals Series H

New



for Individual Fieldbus version




Cod.
A - C - E - G - I - M

Cod.
B - D - F - H - L - N

- For a description of the codes mentioned above see page 2.3.15.22 Section ( 6 ) for Multipole version.

- For a description of the codes mentioned above see page 2.3.15.24 / 25 Section ( 7 ) for Fieldbus version.

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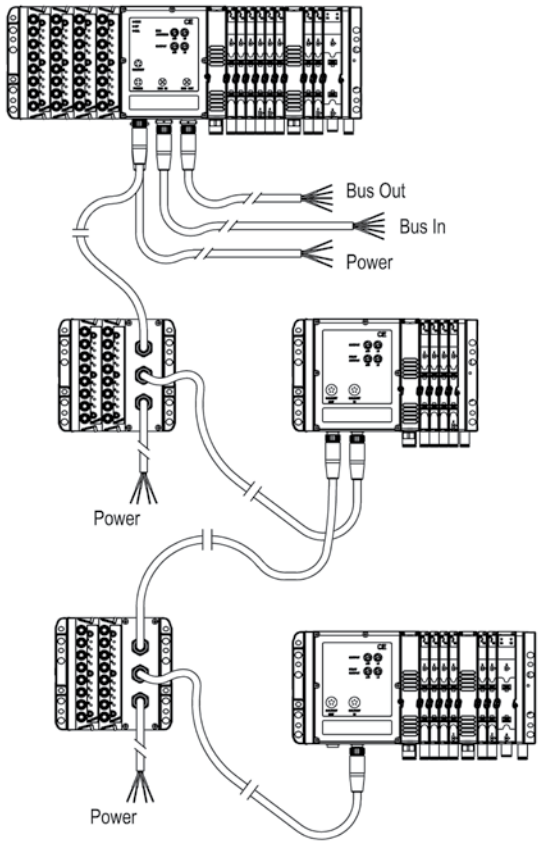
## Expandable Fieldbus System with both Initial and Expansion Modules

New

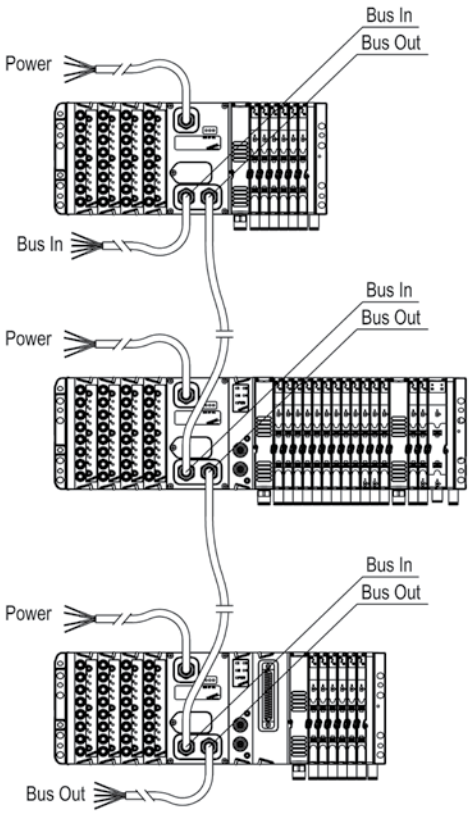
Electrical connections on the same side as the pneumatic connections. Bus-In Bus-out system for connection to the Fieldbus network. Double electrical supplies, one for control and the other for power.
CamiNet outlet to transfer signals to the Expansion modules, with a possibility of connecting a maximum of 15 Expansion modules up to a maximum distance of 50 m. All the internal connections are on circuit boards with plug-in connectors to make future modifications easier to achieve. The Initial module electronics are capable of handling 64 inputs and 64 outputs. The outputs are on the right hand side of the unit and the inputs on the left hand side. The 64 output units allow connection of up to 32 positions for monostable or bistable valves. Custom Made versions enable up to 60 monostable valves (10,5mm only). Any outputs not used on the IM (initial module) are transferred for use by the expansion units. Different types of elements are available for Outputs, the features of these elements determine the maximum number that can be used. The addressing and configuration is done through rotary switches located under the cover and the LEDs indicate the working state. Expansion modules are only capable of handling Outputs, up to the maximum number allowed for each IM (taken into account the number of outputs used by the IM). Connections between each of the modules are done by using cables (5 core) in various pre-cut lengths with M9 connectors. The use of expansion modules linked via the CamiNet line proves more economical as it does not require a supply and Fieldbus connection, also enabling the use of less powerful controllers.




## Individual Fieldbus version - Characteristics

New

- Both this version and the Initial Module plus expansion version can be equipped with solenoid valves in size 1 and size 2, or a mixture of both sizes (in this case there's no need to reduce the number of valve pos. available ).
- Multiple pressure zones and separate electrical supplies are available using intermediate plates.
- Electrical connections on the same side as the pneumatic connections.
- Bus-In Bus-out system for connection to the Fieldbus network
- Double electrical supplies, one for control and the other for power.
- Addressing via rotary switches.
- LEDs indicating the working state.
- All the internal connections are on circuit boards with plug-in connectors to make future modifications easier to achieve.
- Handling of a max of 64 inputs and 64 outputs. The outputs are on the right hand side of the unit and the inputs on the left hand side. The 64 output units allow connection of up to 32 positions for monostable or bistable valves. Custom Made versions enable up to 60 monostable valves (10,5mm only).
- Each island represents a node in the field bus network and as it does not have any local Fieldbus outlet it is particularly suited to a single applications or applications with a limited number of Valve islands.
- This feature enables economic solutions, as there is a large choice of various Input and Output modules available, which are the same as the Expansion versions.



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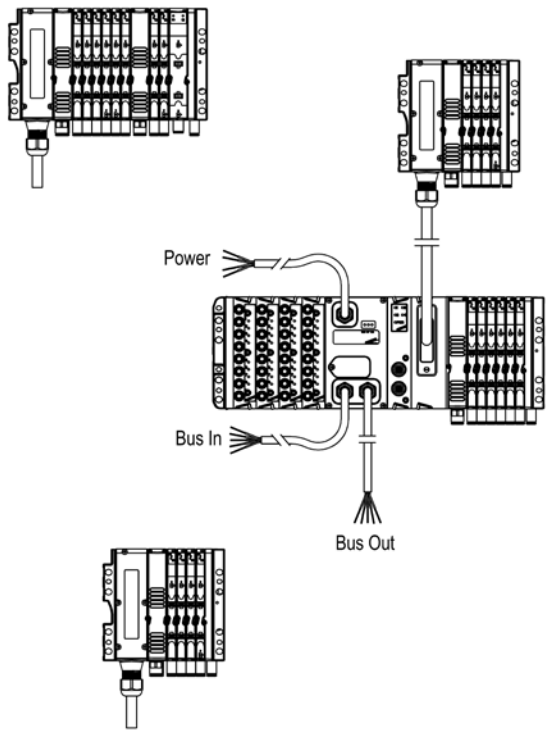
## Multipole version - Characteristics

New

- It can be equipped with Solenoid valves in size 1 (10,5mm) and size 2 (21mm), or a mixture of both sizes ( in this case there's no need to reduce the number of valve positions available ).
- Multiple pressure zones and separate electrical supplies are available using intermediate plates.
- This versions is available in PNP or NPN version.
- The multiplole connector with a pre wired cable (standard length 3 or 5 meter) is available in two versions, with 25 or 37 pins. The 25 pin version allows connection of up to 12 positions for monostable or bistable valves, (10 pos. 21mm).
The 37 pin version allows connection of up to 16 positions for monostable or bistable valves, (14 pos. for 21mm).
- Custom Made versions enable up to 28 monostable valves.



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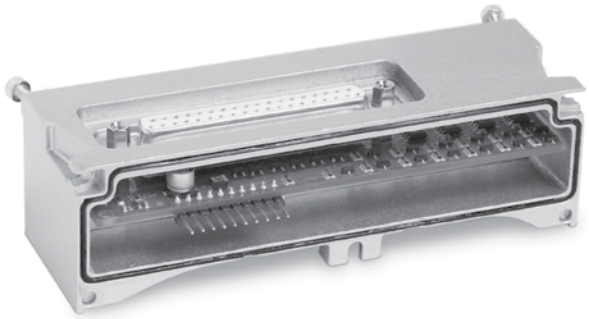
## Digital output module (D-SUB - 37 pin) Mod. ME-xxxx-DD

New



GENERAL DATA

| | ME-0032-DD | ME-0024-DD | ME-0016-DD | ME-0008-DD |
|---|---|---|---|---|
| **Number of digital outputs** | 32 | 24 | 16 | 8 |
| **Connection** | D-SUB 37 poles female | D-SUB 37 poles female | D-SUB 37 poles female | D-SUB 37 poles female |
| **Number of connectors** | 1 | 1 | 1 | 1 |
| **Dimensions** | 130 x 38 mm | 130 x 38 mm | 130 x 38 mm | 130 x 38 mm |
| **Type of signal** | 24 V DC PNP | 24 V DC PNP | 24 V DC PNP | 24 V DC PNP |
| **Overload protection** | 1 A every 8 outputs | 1 A every 8 outputs | 1 A every 8 outputs | 1 A every 8 outputs |
| **Power consumption without load** | 5 mA | 5 mA | 5 mA | 5 mA |
| **Protection class** | IP65 | IP65 | IP65 | IP65 |
| **Operating temperature** | 0°C ÷ 50 °C | 0°C ÷ 50 °C | 0°C ÷ 50 °C | 0°C ÷ 50 °C |
| **Material** | Aluminium | Aluminium | Aluminium | Aluminium |
| **Weight** | 100 g | 100 g | 100 g | 100 g |

## Digital output module M12 DUO Mod. ME-0004-DL

New

GENERAL DATA

| | ME-0004-DL |
|---|---|
| **Number of digital outputs** | 4 |
| **Connection** | M12 5 poles Duo female |
| **Number of connectors** | 2 |
| **Dimensions** | 130 x 25 mm |
| **Signalling** | 1 Yellow Led for each single outlet<br>1 Green Led for power supply presence on the module |
| **Outlet voltage** | 24 V DC |
| **Type of signal** | 24 V DC PNP |
| **Overload protection - Supply voltage** | total 900 mA |
| **Power consumption without load** | 10 mA |
| **Protection class** | IP65 |
| **Temperature** | 0°C ÷ 50 °C |
| **Material** | Aluminium |
| **Weight** | 100 g |



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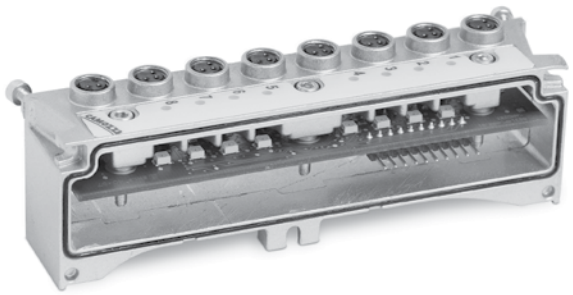
## Digital input Module Mod. ME-0800-DC*

New

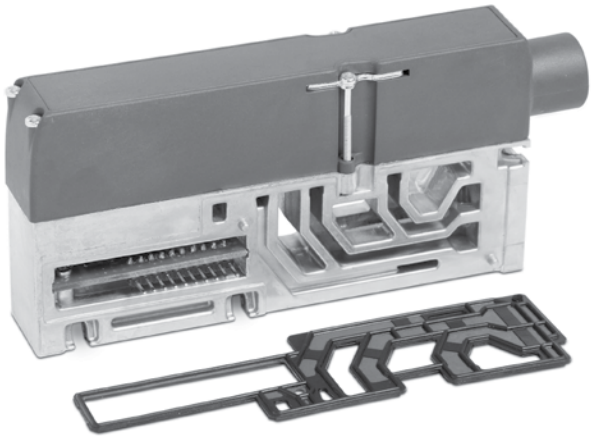
* not for DeviceNet



| GENERAL DATA | |
|---|---|
| **Number of digital inputs** | 8 |
| **Connection** | M8 - 3 pin female |
| **Number of connectors** | 8 |
| **Dimensions** | 130 x 25 mm |
| **Signal** | 1 yellow Led for each inlet |
| **Sensors supply** | 24 V DC |
| **Overloaded protection** | 400 mA every 4 sensors |
| **Power consumption** | 10 mA |
| **Type of signal** | PNP |
| **Protection class** | IP65 |
| **Operating temperature** | 0°C ÷ 50°C |
| **Material** | Aluminium |
| **Weight** | 110 g |

## Module for electr. power supply separation + supplem. inlet press. Mod. HA0S-K

New



| GENERAL DATA | |
|---|---|
| **Connection** | 3 poles |
| **Dimensions** | 130 x 20 mm |
| **Signalling** | None |
| **Supply** | 24 V dc (+/- 10%) |
| **Electrical protection** | Fuse 2 A |
| **Protection class** | IP 65 |
| **Temperature** | 0°C ÷ 50 °C |
| **Material** | Plastic - Aluminium |
| **Weight** | 100 g |

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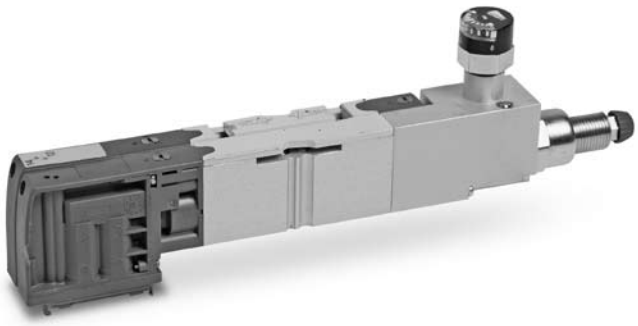
## Valve with integrated pressure regulator Mod. HP2V

New

This solution has the advantage of reducing the valve island's overall height compared to traditional "sandwich" solutions. The total width of this valve is 21mm. With the integrated pressure regulator it is possible to set the supply pressure (port 1) of the valve.







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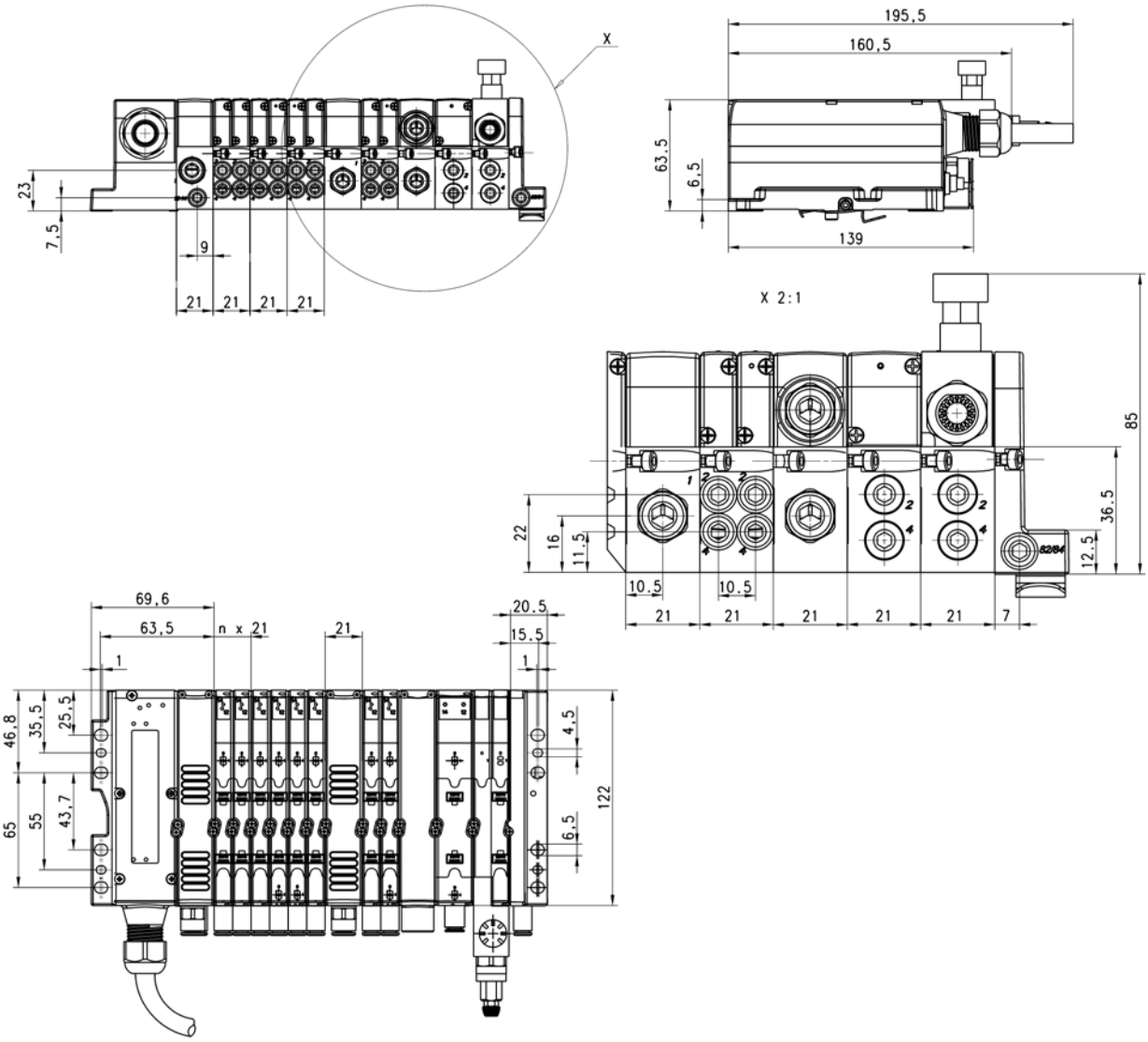
## Multipole version - dimensions

New



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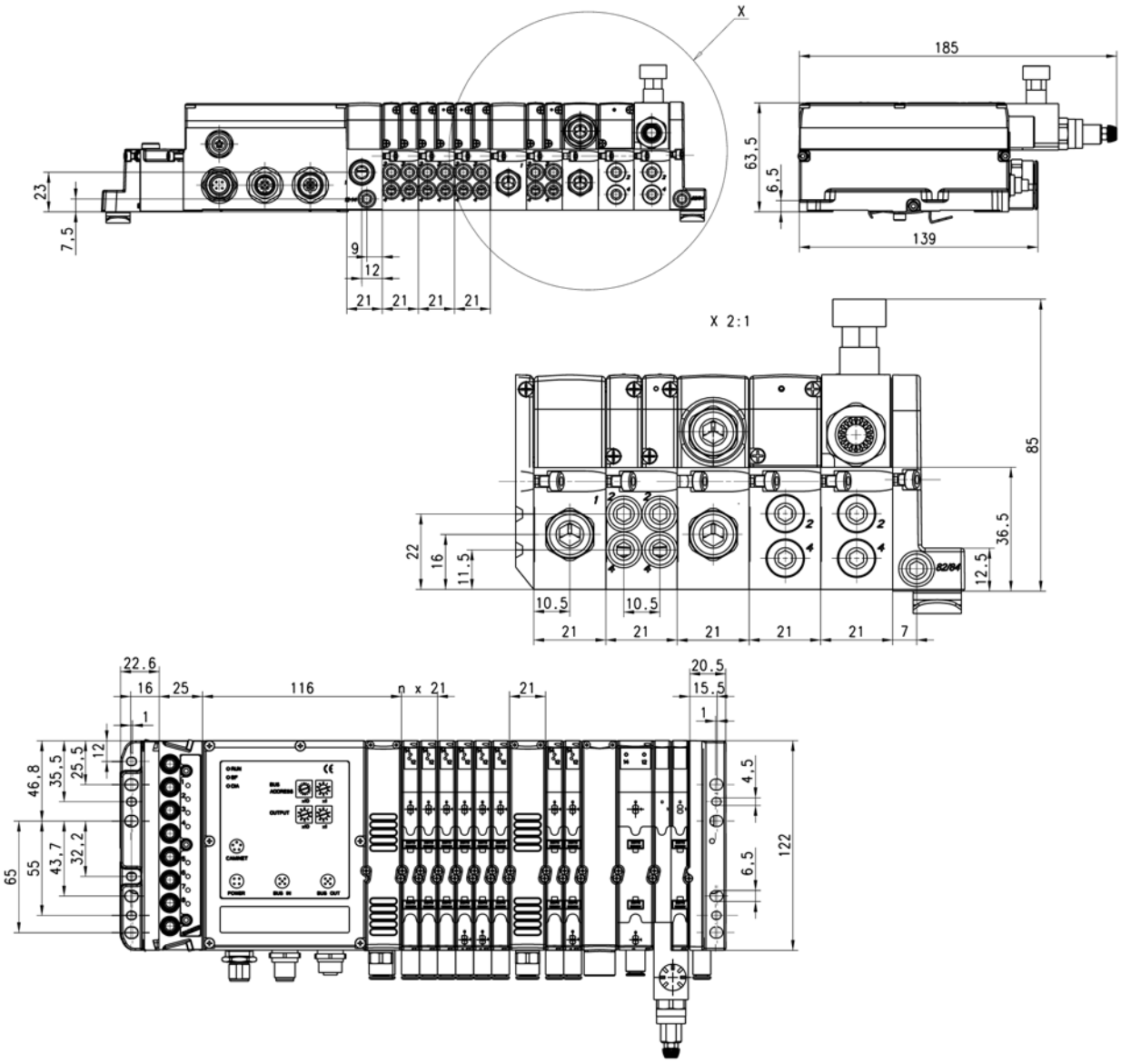
## Expandable Fieldbus version - dimensions

New



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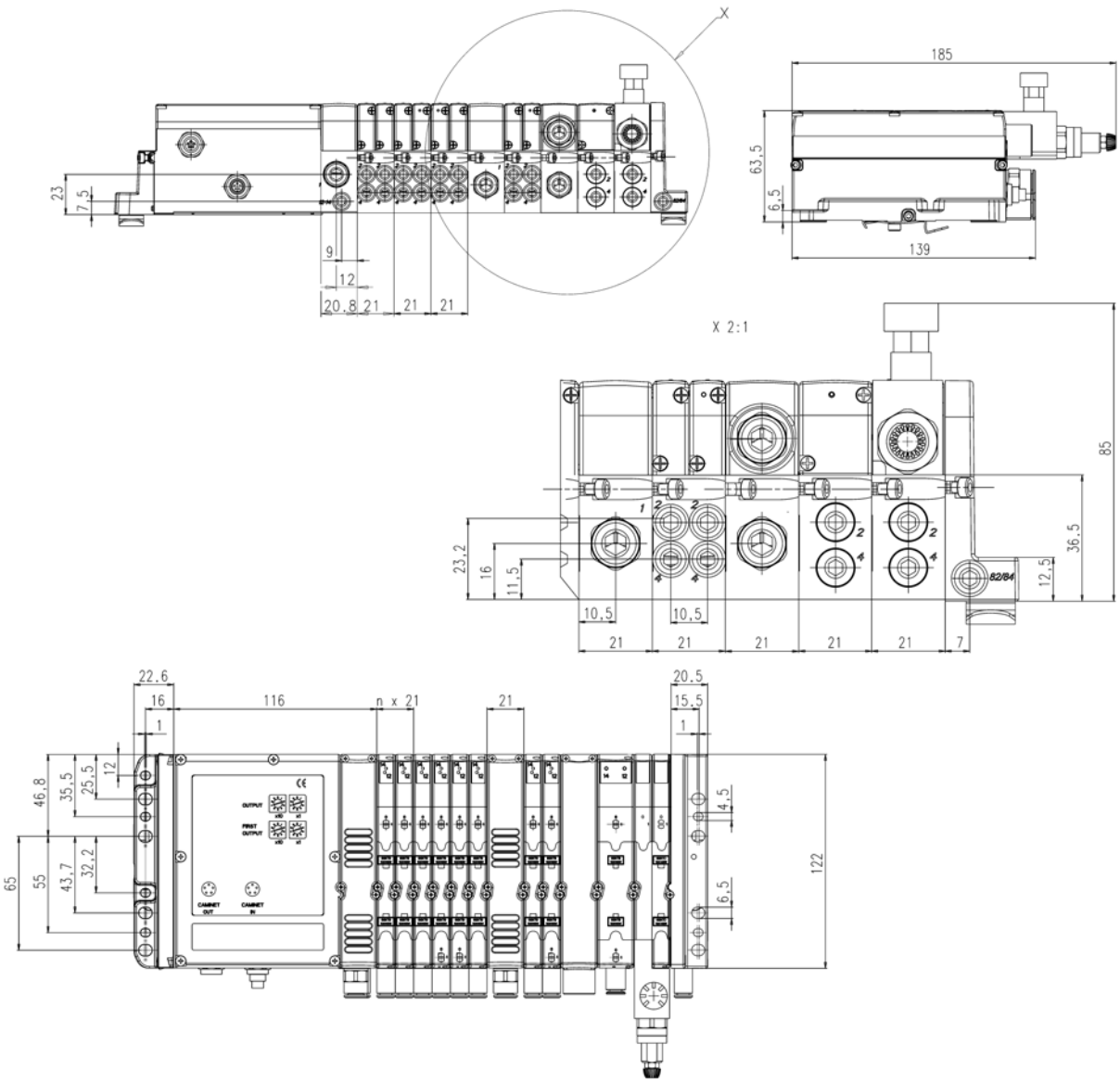
## Fieldbus expansion version - dimensions

New



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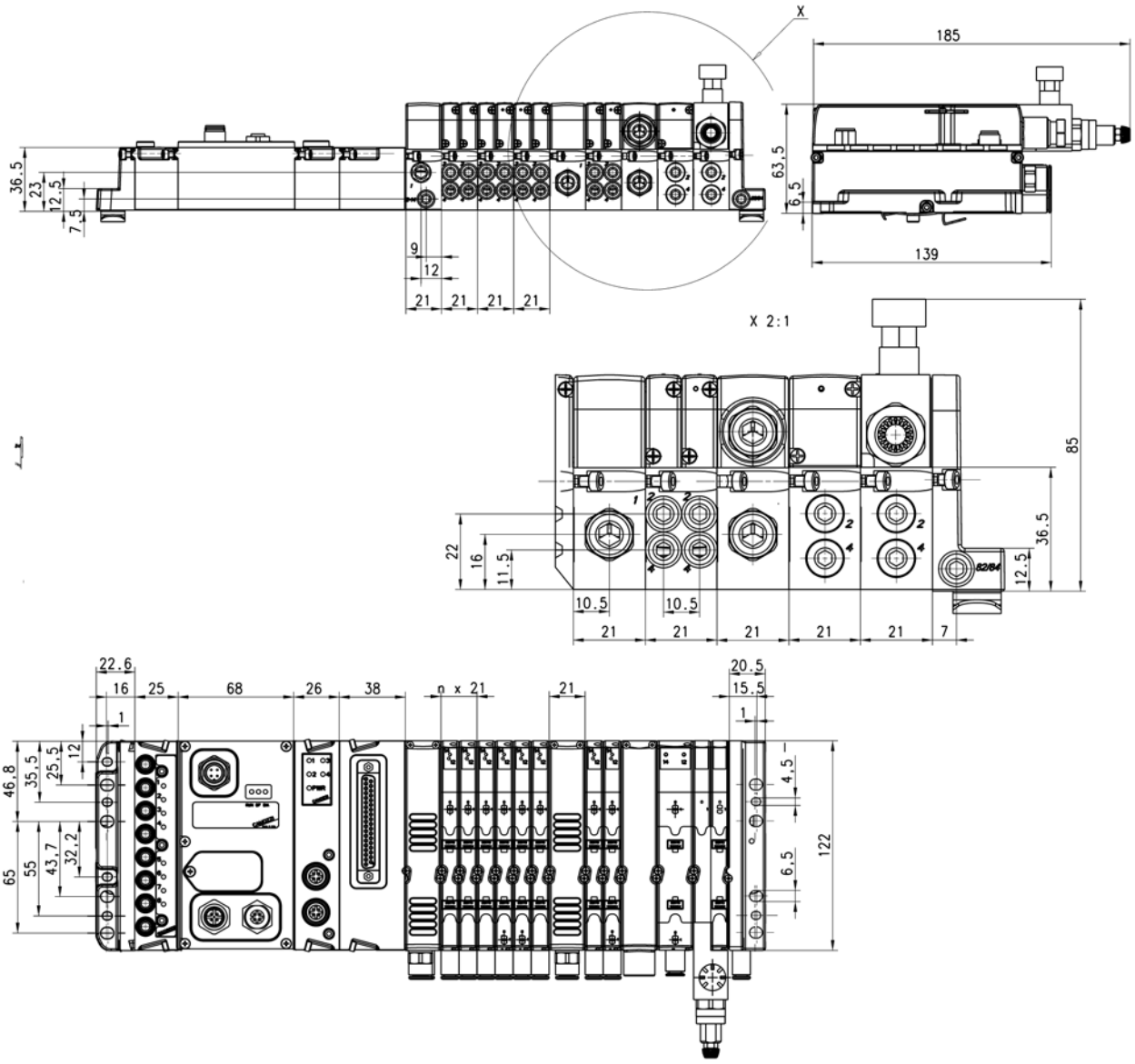
## Individual Fieldbus version - dimensions

New



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## CODING EXAMPLE - MULTIPOLE VERSION

| H | P | 5 | M | - | 03 | - | ABCS | - | MMCCBBB | - | A |
|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | |
|---|---|---|---|
| **H** | Series | | |
| **P** | Type:<br>P = Pneumatic<br>A = Accessories | | |
| **5** | Size:<br>1 = 10,5<br>2 = 21<br>5 = Mixed (both 10,5 and 21) | | |
| **M** | Electrical connector:<br>M = Multipole 25 pin PNP<br>N = Multipole 25 pin NPN<br>H = Multipole 37 pin PNP<br>L = Multipole 37 pin NPN | | |
| **03** | Cable length of the multipole<br>03 = 3 mt<br>05 = 5 mt<br>10 = 10 mt<br>15 = 15 mt<br>20 = 20 mt<br>25 = 25 mt<br>30 = 30 mt<br>x = length to be defined in meters | | |
| **ABCS** | Type of sub-bases and seals:<br><br>Sub-base for two valves Size 1 (10,5mm):<br>A = threaded M7 (ports 2 and 4)<br>B = fittings for tube Ø4 (ports 2 and 4)<br>C = fittings for tube Ø6 (ports 2 and 4)<br>D = channel 1; 3 ; 5 closed - threaded M7<br>E = channel 1; 3 ; 5 closed - cartridge Ø4 (ports 2 and 4)<br>F = channel 1; 3 ; 5 closed - cartridge Ø6 (ports 2 and 4)<br>G = channel 3 ; 5 closed - threaded M7<br>H = channel 3 ; 5 closed - cartridge Ø4 (ports 2 and 4)<br>I = channel 3 ; 5 closed - cartridges Ø6 (ports 2 and 4)<br>L = channel 1 closed - threaded M7<br>M = channel 1 closed - cartridge Ø4 (ports 2 and 4)<br>N = channel 1 closed - cartridge Ø6 (ports 2 and 4) | Sub-bases for solenoid valves size 2:<br><br>Q = threaded G 1/8<br>R = fittings for tube Ø6<br>S = fittings for tube Ø8<br><br>Supplementary pressures and exhaust:<br>X = supplementary pressure supply and exh.<br>Y = supplementary pressure supply and exh. (with integrated silencer) | Sub-bases for electrical supply:<br>K = Module for electrical power supply separation<br>+ supplementary inlet pressure<br><br>Seals:<br>T = diaphragm seal - channel 1;3;5<br>U = diaphragm seal - channel 1<br>V = diaphragm seal - channel 3; 5 |
| **MMCCBBB** | Type of solenoid valve<br>Size 1 and 2:<br>M = 5/2 Monostable<br>B = 5/2 Bistable<br>V = 5/3 Centres Closed<br>C = 2 x 3/2 NC<br>A = 2 x 3/2 NO<br>G = 1 x 3/2 NC + 1 x 3/2 NO<br>E = 2 x 2/2 NC<br>F = 2 x 2/2 NO<br>I = 1 x 2/2 NC + 1 x 2/2 NO<br>L = Free position | Solenoid valve + Pressure regulator on inlet 1 (SIZE 2 ONLY):<br>N = 5/2 Monostable<br>P = 5/2 Bistable<br>Q = 5/3 Centres Closed<br>R = 2 x 3/2 NC<br>S = 2 x 3/2 NO<br>T = 1 x 3/2 NC + 1 x 3/2 NO<br>U = 2 x 2/2 NC<br>X = 2 x 2/2 NO<br>Y = 1 x 2/2 NC + 1 x 2/2 NO | |
| **A** | Terminal plates:<br><br>Threaded:<br>A = 1; 12/14 in common<br>3/5; 82/84 threaded ports<br>B = 1; 12/14 separate<br>3/5; 82/84 threaded ports<br>C = 1; 12/14 in common<br>3/5; 82/84 with integrated silencer<br>D = 1; 12/14 separate<br>3/5; 82/84 with integrated silencer | Terminal plates:<br><br>With cartridges Ø 8 :<br>E = 1; 12/14 in common<br>3/5; 82/84 conveyable<br>F = 1; 12/14 separate<br>3/5; 82/84 conveyable<br>G = 1; 12/14 in common<br>3/5; 82/84 with integrated silencer<br>H = 1; 12/14 separate<br>3/5; 82/84 with integrated silencer | Terminal plates:<br><br>With cartridges Ø 10 :<br>I = 1; 12/14 in common<br>3/5; 82/84 conveyable<br>L = 1; 12/14 separate<br>3/5; 82/84 conveyable<br>M = 1; 12/14 in common<br>3/5; 82/84 with integrated silencer<br>N = 1; 12/14 separate<br>3/5; 82/84 with integrated silencer |

In presence of identical consequent codes both for the sub bases as for the valves you need to substitute the letter with the number. Ex: HP5M-03-ABCS-MMCCBBB-A is converted to Ex: HP5M-03-ABCS-2M2C3B-A.

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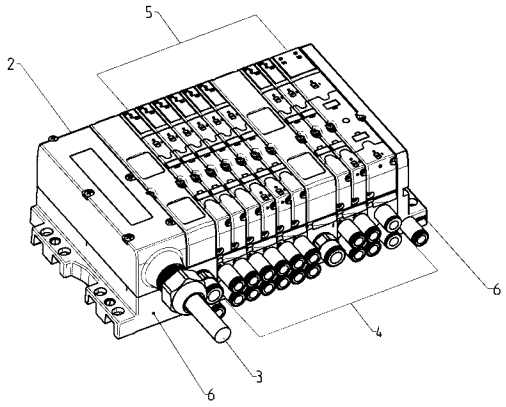
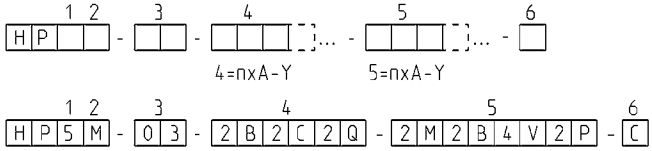
## Coding example - Multipole version







CODE

| HP (1) | | (2) Electrical connection | | (3) Cable length: | | (4) Sub-base for two valves Size 1 (10,5mm) | | (5) Type of Solenoid valve size 1 and 2 | | (6) Terminal plates - Threaded |
|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 10 | **M** | Multip. 25 pin PNP | **03** | 03 m | **A** | Threaded M7 | **M** | 5/2 Monostable | **A** 1; 12/14 in common 3/5; 82/84 threaded ports |
| **2** | 21 | **N** | Multip. 25 pin NPN | **05** | 05 m | **B** | fittings for tube Ø4 | **B** | 5/2 Bistable | **B** 1; 12/14 separate 3/5; 82/84 threaded ports |
| **5** | Mixed | **H** | Multip. 37 pin PNP | **10** | 10 m | **C** | fittings for tube Ø6 | **V** | 5/3 Centres Closed | **C** 1; 12/14 in common 3/5; 82/84 w. integr. silencer |
| | | **L** | Multip. 37 pin NPN | **15** | 15 m | **D** | channel 1; 3; 5 closed - threaded M7 | **C** | 2 x 3/2 NC | **D** 1; 12/14 separate 3/5; 82/84 w. integr. silencer |
| | | | | **20** | 20 m | **E** | channel 1; 3; 5 closed - cartridge Ø4 | **A** | 2 x 3/2 NO | Terminal plates - w. cartr. Ø8 on port |
| | | | | **25** | 25 m | **F** | channel 1; 3; 5 closed - cartridge Ø6 | **G** | 1 x 3/2 NC + 1 x 3/2 NO | **E** 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | **30** | 30 m | **G** | channel 3; 5 closed threaded M7 | **E** | 2 x 2/2 NC | **F** 1; 12/14 separate 3/5 ; 82/84 conveyable |
| | | | | **X** | length to be defined in meters | **H** | channel 3; 5 closed - cartridge Ø4 | **F** | 2 x 2/2 NO | **G** 1; 12/14 in common 3/5; 82/84 w. integr. silencer |
| | | | | | | **I** | channel 3; 5 closed - cartridge Ø6 | **I** | 1 x 2/2 NC + 1 x 2/2 NO | **H** 1; 12/14 separate 3/5; 82/84 w. integr. silencer |
| | | | | | | **L** | channel 1 closed - threaded M7 | **L** | Free position | Terminal plates - w. cartr. Ø10 on port 1 |
| | | | | | | **M** | channel 1 closed - cartridge Ø4 | | Valves with integr. pressure reg. online 1 (Size 2 only) | **I** 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | **N** | channel 1 closed - cartridge Ø6 | **N** | 5/2 Monostable | **L** 1; 12/14 separate 3/5; 82/84 conveyable |
| | | | | | | | Sub- base for Valves size 2 | **P** | 5/2 Bistable | **M** 1; 12/14 in common 3/5 ; 82/84 with integrated silencer |
| | | | | | | **Q** | Threaded G1/8 | **Q** | 5/3 Centres Closed | **N** 1; 12/14 separate 3/5; 82/84 w. integr. silencer |
| | | | | | | **R** | fittings for tube Ø6 | **R** | 2 x 3/2 NC | |
| | | | | | | **S** | fittings for tube Ø8 | **S** | 2 x 3/2 NO | |
| | | | | | | | Supplem. press. and exhaust: | **T** | 1 x 3 /2 N.C. 1 x 3 /2 NO | |
| | | | | | | **X** | Supplem. pressure supply and exhaust | **U** | 2 x 2/2 NC | |
| | | | | | | **Y** | Supplem. press. supply and exh. (w. integ. silencer) | **X** | 2 x 2/2 NO | |
| | | | | | | | Sub-base for electrical supply | **Y** | 1 x 2 /2 N.C. 1 x 2 /2 NO | |
| | | | | | | **K** | Module for electrical power supply separation + supplementary inlet pressure | | | |
| | | | | | | | Seals | | | |
| | | | | | | **T** | Diaphr. seal - channel 1; 3; 5 | | | |
| | | | | | | **U** | Diaphr. seal - channel 1 | | | |
| | | | | | | **V** | Diaphr. seal - channel 3; 5 | | | |



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## CODING EXAMPLE - FIELDBUS VERSION

| H | P | 5 | P | - | 3A | - | XC | - | ABCS | - | MMCCBBB | - | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | |
|---|---|---|---|
| **H** | Series | | |
| **P** | Type:<br>P = Pneumatic<br>A = Accessories | | |
| **5** | Size:<br>1 = 10,5<br>2 = 21<br>5 = Mixed (both 10,5 and 21) | | |
| **P** | Electrical Connection:<br>P = Profibus-DP (expandable)<br>C = CANopen (expandable)<br>D = DeviceNet (expandable)<br>E = Expansion (only for P-C-D)<br>F = Profibus-DP - Individual Fieldbus<br>G = CANopen - Individual Fieldbus<br>R = DeviceNet - Individual Fieldbus | | |
| **3A** | Input Modules:<br>0 = Without inputs<br>A = Input module - 8 digital (8xM8) | | |
| **XC** | Output Modules:<br>0 = Without outputs<br>B = Output module - 4 digital (2xM12)<br>C = 8 Output Sub-D 37 pin<br>D = 16 Output Sub-D 37 pin<br>E = 24 Output Sub-D 37 pin<br>F = 32 Output Sub-D 37 pin<br>X = Pneum. Electr. Interface<br>Y = Pneum. Electr. Interface + external power supply | | |
| **ABCS** | Sub-bases for two solenoid valves (size 1):<br>A = threaded M7 (ports 2 and 4)<br>B = fittings for tube Ø4 (ports 2 and 4)<br>C = fittings for tube Ø6 (ports 2 and 4)<br>D = channel 1; 3 ; 5 closed - threaded M7<br>E = channel 1; 3 ; 5 closed - cartridge Ø4 (ports 2 and 4)<br>F = channel 1; 3 ; 5 closed - cartridge Ø6 (ports 2 and 4)<br>G = channel 3; 5 closed - threaded M7<br>H = channel 3; 5 closed - cartridge tube Ø 4<br>I = channel 3; 5 closed - cartridge tube Ø 6<br>L = channel 1 closed - threaded M7<br>M = channel 1 closed - cartridge tube Ø 4<br>N = channel 1 closed - cartridge tube Ø 6 | Sub-bases for solenodi valves (size 2):<br>Q = threaded G1/8<br>R = fittings for tube Ø6<br>S = fittings for tube Ø8<br><br>Supplementary pressure and exhaust:<br>X = supplementary pressure supply and exhaust<br>Y = supplementary pressure supply and exhaust (with integrated silencer) | Sub-bases for electrical supply:<br>K = module for electrical power supply separation + supplementary inlet pressure<br><br>Seals:<br>T = diaphragm seal - channel 1; 3; 5<br>U = diaphragm seal - channel 1<br>V = diaphragm seal - channel 3 and 5 |
| **MMCCBBB** | Type of Solenoid valve<br>Size 1 and Size 2:<br>M = 5/2 Monostable<br>B = 5/2 Bistable<br>V = 5/3 Centres Closed<br>C = 2 x 3/2 NC<br>A = 2 x 3/2 NO<br>G = 1 x 3/2 NC + 1 x 3/2 NO<br>E = 2 x 2/2 NC<br>F = 2 x 2/2 NO<br>I = 1 x 2/2 NC + 1 x 2/2 NO<br>L = free position | Solenoid valve + Pressure regulator on channel 1 - Size 2 ONLY:<br>N = 5/2 Monostable<br>P = 5/2 Bistable<br>Q = 5/3 Centres Closed<br>R = 2 x 3/2 NC<br>S = 2 x 3/2 NO<br>T = 1 x 3/2 NC + 1 x 3/2 NO<br>U = 2 x 2/2 NC<br>X = 2 x 2/2 NO<br>Y = 1 x 2/2 NC + 1 x 2/2 NO | |
| **A** | Terminal plates:<br><br>Threaded:<br>A = 1; 12/14 in common<br>3/5; 82/84 threaded ports<br>B = 1; 12/14 separate<br>3/5; 82/84 threaded ports<br>C = 1; 12/14 in common<br>3/5; 82/84 with integrated silencer<br>D = 1; 12/14 separate<br>3/5; 82/84 with integrated silencer | Terminal plates:<br><br>With cartridges Ø 8 :<br>E = 1; 12/14 in common<br>3/5; 82/84 conveyable<br>F = 1; 12/14 separate<br>3/5; 82/84 conveyable<br>G = 1; 12/14 in common<br>3/5; 82/84 with integrated silencer<br>H = 1; 12/14 separate<br>3/5; 82/84 with integrated silencer | Terminal plates:<br><br>With cartridges Ø 10 :<br>I = 1; 12/14 in common<br>3/5; 82/84 conveyable<br>L = 1; 12/14 separated<br>3/5; 82/84 conveyable<br>M = 1; 12/14 in common<br>3/5; 82/84 with integrated silencer<br>N = 1; 12/14 separated<br>3/5; 82/84 with integrated silencer |

X and Y sub bases e K will be equipped with the threads or cartridges of the same size of the port 1, see the choice “Terminal plates”. In presence of identical consequent codes both for sub-bases and for valves, you need to substitute the letter with the number.
Ex: HP5P-AAA-XC-ABCS-MMCCBBB-A is converted to Ex: HP5P-3A-XC-2M2C3B-A.

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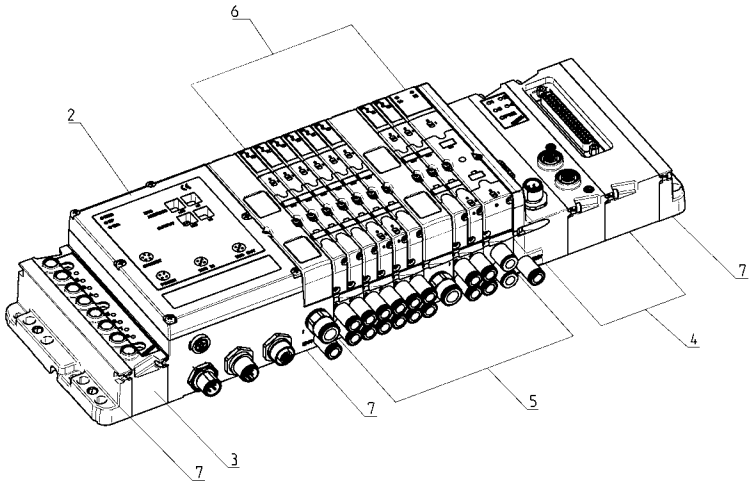
2

CONTROL

## CODING EXAMPLE - EXAPANDABLE FIELDBUS VERSION




| 1 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|
| H P | | | | | |
| | | 4=nxB-Y | 5=nxA-Y | 6=nxA-Y | |
| H P 1 P | 0 | 2 B 2 C | 7 C U Y 3 C Y | 2 V 4 C 7 M L 6 A | C |

CODE

| HP ( 1 ) | | ( 2 ) | | ( 3 ) | | ( 4 ) | | ( 5 ) | | ( 6 ) | | ( 7 ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | | Electrical connector | | Input modules | | Output modules | | Sub-base for 2 valves Size 1 (10,5mm) | | Type of Solenoid valve size 1 and 2 | | Terminal plates |
| **1** | 10,5 | **P** | Profibus-DP (expandable) | **0** | Without inputs | **0** | Without outputs | **A** | Threaded M7 | **M** | 5/2 Monostable | **A** | 1; 12/14 in common 3/5; 82/84 threaded |
| **2** | 21 | **C** | CANopen (expandable) | **A** | Input module - 8 digital (8xM8) | **X** | Right terminal+outputs (don't use on vers. F) | **B** | fittings for tube Ø4 | **B** | 5/2 Bistable | **B** | 1; 12/14 separate 3/5; 82/84 threaded |
| **5** | Mixed | **D** | DeviceNet (expandable) | | | **Y** | Right terminal with el. supply+outputs (don't use on vers. F) | **C** | fittings for tube Ø6 | **V** | 5/3 Centres Closed | **C** | 1; 12/14 in common 3/5; 82/84 w.silencer |
| | | **E** | only for P-C-D Expansion | | | **B** | 4 outputs M12 duo | **D** | channel 1; 3; 5 closed - threaded M7 | **C** | 2 x 3/2 NC | **D** | 1; 12/14 separate 3/5; 82/84 w. silencer |
| | | | | | | **C** | 8 outputs SUB-D 37 pin | **E** | channel 1; 3; 5 closed - cartridge Ø4 | **A** | 2 x 3/2 NO | | Terminal plates - with cartridges Ø8 for size 1 |
| | | | | | | **D** | 16 outputs SUB-D 37 pin | **F** | channel 1; 3; 5 closed - cartridge Ø6 | **G** | 1 x 3/2 NC + 1 x 3/2 NO | **E** | 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | **E** | 24 outputs SUB-D 37 pin | **G** | channel 3; 5 closed threaded M7 | **E** | 2 x 3/2 NC | **F** | 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | | | **H** | channel 3; 5 closed - cartridge Ø4 | **F** | 2 x 3/2 NO | **G** | 1; 12/14 in common 3/5; 82/84 w. silencer |
| | | | | | | | | **I** | channel 3; 5 closed - cartridge Ø6 | **I** | 1 x 2/2 NC + 1 x 2/2 NO | **H** | 1; 12/14 separate 3/5; 82/84 w. silencer |
| | | | | | | | | **L** | channel 1 closed - threaded M7 | **L** | Free position | | Term. plates - w. cartr. Ø8 (size 2 and 5) |
| | | | | | | | | **M** | channel 1 closed - cartridge Ø4 | | Valves w. integr. press. reg. online 1 (size 2) | **I** | 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | | | **N** | channel 1 closed - cartridge Ø6 | **N** | 5/2 Monostable | **L** | 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | | | | Sub- base for Valves size 2 | **P** | 5/2 Bistable | **M** | 1; 12/14 in common 3/5; 82/84 w. silencer |
| | | | | | | | | **Q** | Threaded G1/8 | **Q** | 5/3 Centres Closed | **N** | 1; 12/14 separate 3/5; 82/84 w. silencer |
| | | | | | | | | **R** | fittings for tube Ø6 | **R** | 2 x 3/2 NC | | |
| | | | | | | | | **S** | fittings for tube Ø8 | **S** | 2 x 3/2 NO | | |
| | | | | | | | | | Suppl. press. + exhaust | **T** | 1 x 3/2 NC + 1 x 3/2 NO | | |
| | | | | | | | | **X** | Supplem. press. supply and exh. | **U** | 2 x 2/2 NC | | |
| | | | | | | | | **Y** | Supplem. press. supply and exh. (w. silencer) | **X** | 2 x 2/2 NO | | |
| | | | | | | | | | Sub-base for electr. supply | **Y** | 1 x 2/2 NC + 1 x 2/2 NO | | |
| | | | | | | | | **K** | Electr. supply separ. + suppl. inlet press. | | | | |
| | | | | | | | | | Seals | | | | |
| | | | | | | | | **T** | Diaphr. channel 1; 3; 5 | | | | |
| | | | | | | | | **U** | Diaphr. channel 1 | | | | |
| | | | | | | | | **V** | Diaphr. channel 3; 5 | | | | |



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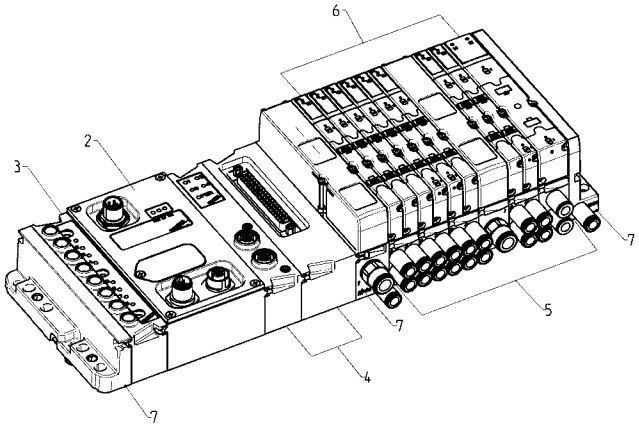
## CODING EXAMPLE - INDIVIDUAL FIELDBUS VERSION




1 2 - 3 - 4 ... - 5 ... - 6 ... - 7

HP□□ - □□ - □□□ ... - □□□ ... - □□□ ... - □

4=nxB-Y 5=nxA-Y 6=nxA-Y

1 2 - 3 - 4 - 5 - 6 - 7

HP1R - 2A - 1B1C - 7CUY3CY - 2V4C7ML6A - C

CODE

| HP (1) | | (2) | | (3) | | (4) | | (5) | | (6) | | (7) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | | Eletrical Connection | | Input Modules | | Output Modules | | Sub-base for 2 valves Size 1 (10,5mm) | | Type of solenoid valve Size 1 and 2 | | Terminal plates - Threaded |
| **1** | 10,5 | **F** | Profibus-DP | **0** | Without inputs | **0** | Without outputs | **A** | Threaded M7 | **M** | 5/2 Monostable | **A** | 1; 12/14 in common 3/5; 82/84 threaded |
| **2** | 21 | **G** | CANopen | **A** | Input module - 8 digital (8xM8) | **X** | Right terminal+outputs (don't use on vers. F) | **B** | fittings for tube Ø4 | **B** | 5/3 Bistable | **B** | 1; 12/14 separate; 3/5; 82/84 threaded |
| **5** | Mixed | **R** | DeviceNet | | | **Y** | Right terminal with el. supply+outputs (don't use on vers. F) | **C** | fittings for tube Ø6 | **V** | 5/3 Centres Closed | **C** | 1; 12/14 in common; 3/5; 82/84 w. silencer |
| | | | | | | **B** | 4 outputs M12 duo | **D** | channel 1; 3; 5 closed - threaded M7 | **C** | 2 x 3/2 NC | **D** | 1; 12/14 separate; 3/5; 82/84 w. silencer |
| | | | | | | **C** | 8 outputs SUB-D 37 pin | **E** | channel 1; 3; 5 closed - cartridge Ø4 | **A** | 2 x 3/2 NO | | Terminal plates - w. cartr. Ø8 for Size 1 |
| | | | | | | **D** | 16 outputs SUB-D 37 pin | **F** | channel 1; 3; 5 closed - cartridge Ø6 | **G** | 1 x 3/2 NC + 1 x 3/2 NO | **E** | 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | **E** | 24 outputs SUB-D 37 pin | **G** | channel 3; 5 closed threaded M7 | **E** | 2 x 2/2 NC | **F** | 1; 12/14 separate 3/5; 82/84 conveyable |
| | | | | | | | | **H** | channel 3; 5 closed - cartridge Ø4 | **F** | 2 x 2/2 NO | **G** | 1; 12/14 in common 3/5; 82/84 w. silencer |
| | | | | | | | | **I** | channel 3; 5 closed - cartridge Ø6 | **I** | 1 x 2/2 NC + 1 x 2/2 NO | **H** | 1; 12/14 separate 3/5; 82/84 w. silencer |
| | | | | | | | | **L** | channel 1 closed - threaded M7 | **L** | Free position | | Term. plates - w. cartr. Ø8 (size 2 and 5) |
| | | | | | | | | **M** | channel 1 closed - cartridge Ø4 | | Valves w. integr. press. reg. online (size 2) | **I** | 1; 12/14 in common 3/5; 82/84 conveyable |
| | | | | | | | | **N** | channel 1 closed - cartridge Ø6 | **N** | 5/2 Monostable | **L** | 1; 12/14 separate 3/5; 82/84 conveyable |
| | | | | | | | | | Sub- base for Valves size 2 | **P** | 5/3 Bistable | **M** | 1; 12/14 in common 3/5; 82/84 w. silencer |
| | | | | | | | | **Q** | Threaded G1/8 | **Q** | 5/3 Centres Closed | **N** | 1; 12/14 separate 3/5; 82/84 w. silencer |
| | | | | | | | | **R** | fittings for tube Ø6 | **R** | 2 x 3/2 NC | | |
| | | | | | | | | **S** | fittings for tube Ø8 | **S** | 2 x 3/2 NO | | |
| | | | | | | | | | Suppl. press. + exhaust | **T** | 1 x 3/2 NC + 1 x 3/2 NO | | |
| | | | | | | | | **X** | Supplem. press. supply + exh. | **X** | 2 x 2/2 NC | | |
| | | | | | | | | **Y** | Supplem. press. supply + exh. (w. silencer) | **Y** | 1 x 2/2 NC + 1 x 2/2 NO | | |
| | | | | | | | | | Sub-base for electrical supply | | | | |
| | | | | | | | | **K** | Electr. supply separ. + suppl. inlet press. | | | | |
| | | | | | | | | | Seals | | | | |
| | | | | | | | | **T** | Diaphr. channel 1; 3; 5 | | | | |
| | | | | | | | | **U** | Diaphr. channel 1 | | | | |
| | | | | | | | | **V** | Diaphr. channel 3; 5 | | | | |

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## CODING EXAMPLE: VALVE - SUB-BASES

| | | |
|---|---|---|
| | CODING EXAMPLE OF SINGLE VALVE (Spare part) | |
| **HP1V-M** | | |
| H | Series | |
| P | Type:<br>P = Pneumatic | |
| 1 | Size:<br>1 = 10,5<br>2 = 21 | |
| V | Type of accessory:<br>V = Solenoid valve | |
| - | | |
| M | Type of Solenoid Valve:<br>M = 5/2 Monostable<br>B = 5/2 Bistable<br>V = 5/3 Centres Closed<br>C = 2 x 3/2 NC<br>A = 2 x 3/2 NO<br>G = 1 x 3/2 NC + 1 x 3/2 NO<br>E = 2 x 2/2 NC<br>F = 2 x 2/2 NO<br>I = 1 x 2/2 NC + 1 x 2/2 NO<br>L = Free position | Solenoid valve +regulator + sub base<br>N = 5/2 Monostable<br>P = 5/2 Bistable<br>Q = 5/3 Centres Closed<br>R = 2 x 3/2 NC<br>S = 2 x 3/2 NO<br>T = 1 x 3/2 NC + 1 x 3/2 NO<br>U = 2 x 2/2 NC<br>X = 2 x 2/2 NO<br>Y = 1 x 2/2 NC + 1 x 2/2 NO |
| | | |
| | CODING EXAMPLE OF SUB-BASES - Accessories | |
| **HHA1S-A** | | |
| H | Series | |
| A | Type:<br>A = Accessories | |
| 1 | Size:<br>0 = For X-Y-K-T-U-V<br>1 = 10,5<br>2 = 21 | |
| S | Type of accessory:<br>R = Sub base Multipole<br>S = Sub base Fieldbus<br>G = Seals | |
| - | | |
| A | Type of sub-base:<br>A = Through - threaded M7<br>D = channel 1; 3; 5 closed - threaded M7<br>G = channel 3; 5 closed - threaded M7<br>L = channel 1 closed - threaded M7<br>Q = Threaded G1/8 (ports 2 and 4)<br>X = supplementary pressure supply and exhaust<br>Y = supplementary pressure supply and exhaust (with integrated silencer)<br>K = Module for electrical power supply separation + supplementary inlet pressure | Type of seal:<br>T = diaphragm seal - channel 1;3;5<br>U = diaphragm seal - channel 1<br>V = diaphragm seal - channel 3;5<br>P = Through |



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## CODING EXAMPLE - TERMINALS - INPUT/OUTPUT MODULES - MULTIPOLE CONNECTIONS

| | |
|---|---|
| | TERMINALS CODING EXAMPLE - Accessories |
| **HA0M-A** | |
| **H** | Series |
| **A** | Type:<br>A = Accessories |
| **0** | Size:<br>0 = Not defined |
| **M** | Electrical connection:<br>M = Multipole PNP<br>N = Multipole NPN<br>P = Profibus-DP (expandable)<br>C = CANopen (expandable)<br>D = DeviceNet (expandable)<br>E = Expansion<br>F = Terminals for individual Fieldbus |
| **-** | |
| **A** | End blocks:<br>A = 1 - 12/14 common 3/5 threaded<br>B = 1 - 12/14 separated 3/5 threaded<br>C = 1 - 12/14 common 3/5 with integrated silencer<br>D = 1 - 12/14 separated 3/5 with integrated silencer |
| | |
| | EXAMPLE OF INPUT/OUTPUT MODULE CODING - Accessories |
| **HA01-D** | |
| **H** | Series |
| **A** | Type:<br>A = Accessories |
| **0** | Size:<br>0 = Not defined |
| **1** | Type of accessory:<br>1 = Input Module<br>2 = Output Module |
| **-** | |
| **D** | Type of module<br>D = Digital |
| | |
| | Multipole Connector - Accessory |
| **G4X1-H-3** | G4X1-H-3 = Multipole Pin 25 poles IP-65 90° series H cable of 3 m<br>G4X1-H-5 = Multipole Pin 25 poles IP-65 90° series H cable of 5 m<br>G9X1-H-3 = Multipole Pin 37 poles IP-65 90° series H cable of 3 m<br>G9X1-H-5 = Multipole Pin 37 poles IP-65 90° series H cable of 5 m |



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