

Valve disc for HDM valve terminal with 4 mm port

modular valve system, »HDM« series

MAX |||

Art. No. 106675

Type No. W 4



Exemplary illustration

These compact valve terminals, with a maximum flow rate of 800 NI/min, can be individually adapted to the specific conditions of each application thanks to the wide range of functions and various input and intermediate plates.

Since each valve terminal is a customer-specific combination of a series of individual elements, the catalogue only lists the available input, intermediate and end plates as well as the different valve discs and the 25-pin multi-pole connectors.

Suitable for filtered, unlubricated or lubricated compressed air. If lubrication is used, it must be continuous.

Bistable (latching) version of manual control also available on request.

The operating pressure is based on the installed input plates.

Technical data

Module description	valve
Version	2x 3/2-way, NO, monostable or 5/3-way, centre aerated
Port 2+4	Ø 4 mm
Manual control	monostable
Flow rate	200 NI/min
Temperature range	-10 to 60 °C
Power input	0.6 W per pilot
Piloting	max. 16 (e.g. 16 spring return valves)
Protection IP	IP 65
Material	aluminium

Commercial data

Customs tariff number	84818099
Country of origin	IT
eCl@ss 5.1.4	27291501
eCl@ss 9.0	27291390
UNSPSC_Code_v190501	40141603
UNSPSC_CodeDesc_v190501	Pneumatic valves

B2

HDM + MULTI-POLE CONNECTION

VALVES

HDM + MULTI-POLE CONNECTION

HDMs are the ideal solution for those requiring the unbeatable performance, flexibility and modularity of Multimach valves combined with sturdy mechanics and a high degree of protection against external agents. Each valve is enclosed in a reinforced technopolymer protective shell that acts as a shock-absorber and prevents the infiltration of dirt. The class of protection is IP65.

The smooth, rounded design makes HDMs ideal for applications requiring frequent washing without the deposit of residues. All the pneumatic connections are on one side, with built-in push-in fittings. The user interface is on another side so that the fitter and the service engineer have everything at hand.

Flexibility is total: there are 1-16 valves, input and output terminals for pipes of different sizes and intermediate modules for separate inputs and outputs. One very important new feature is that valves of different capacities can be mounted as required. Three different valve sizes can be combined at will.

This means a valve can be replaced at any time by another one offering a different performance. It only takes a few seconds to replace or add a valve. To do this, merely loosen the two grub screws fixing the valve to the adjacent ones. Since the electrical signal is relayed from one valve to the next by means of gold-plated contacts connected to an electronic board, the electrical connections are entirely automatic.

The ratio of the HDM's flow rate to its dimensions is unrivalled – miniaturisation and efficiency have reached a peak.

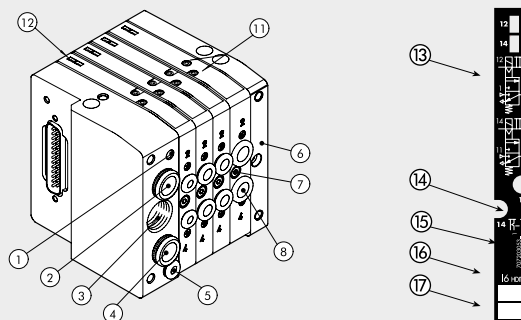


TECHNICAL DATA

Valve port connections	Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or Ø 12 mm automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port				
Connection on the end-plate for the supply of pilots	Automatic fitting Ø 4 mm				
Maximum number of pilots	16				
Maximum number of valves	16 (same as the max. no. of pilots)				
Operating temperature range	°C -10 to +60				
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous				
Pressure range	bar	X (pilot supply)		1-11 (valve supply)	
	Terminal 1-1	3 to 7		vacuum at 10	
	Terminal 1	3 to 7			
Voltage range		24VDC ± 10%			
Power	W	0.9			
Control		PNP o NPN			
Insulation class		F155			
Degree of protection		IP65 (with conveyed exhaust)			
Solenoid rating		100% ED			
Flow rate at 6.3 bar ΔP 1 bar	NI/min	11.5 mm Ø 4	11.5 mm Ø 6	14 mm Ø 8	23 mm Ø 8
	version 5/2 and 3/2	200	500	650	1000
	version 5/3	200	300	300	500
TRA/TRR 2x3/2 monostable at 6 bar	ms		8 / 45		8 / 60
TRA/TRR 5/2 monostable at 6 bar	ms		8 / 33		9 / 60
TRA/TRR 5/2 bistable at 6 bar	ms		20 / 20		8 / 8
TRA/TRR 5/3 cc monostable at 6 bar	ms		20 / 20		15 / 15
Note on use		Insert the pipes in the fittings, before passing air through the valves, otherwise the basket may be pulled out of its seat by the flow of air.			
Compatibility with oils		See chapter Z1			

COMPONENTS

- Exhaust - Solenoid pilot 82/84
- Valve supply - port 1
- Threaded connection of exhausts 3/5
- Valve supply - port 11
- Electrical control supply X
- Blind end-plate or right end-plate 1-11
- Screw for valve wall-mounting
- Utility port for pipe Ø 4, 6, 8 or 10 mm
- Manual control
- LED (LED on, solenoid valve energised)
- Pneumatic symbol
- Identification of the monostable or bistable manual control
- Valve ordering code
- Valve identification code
- Blank space for valve number

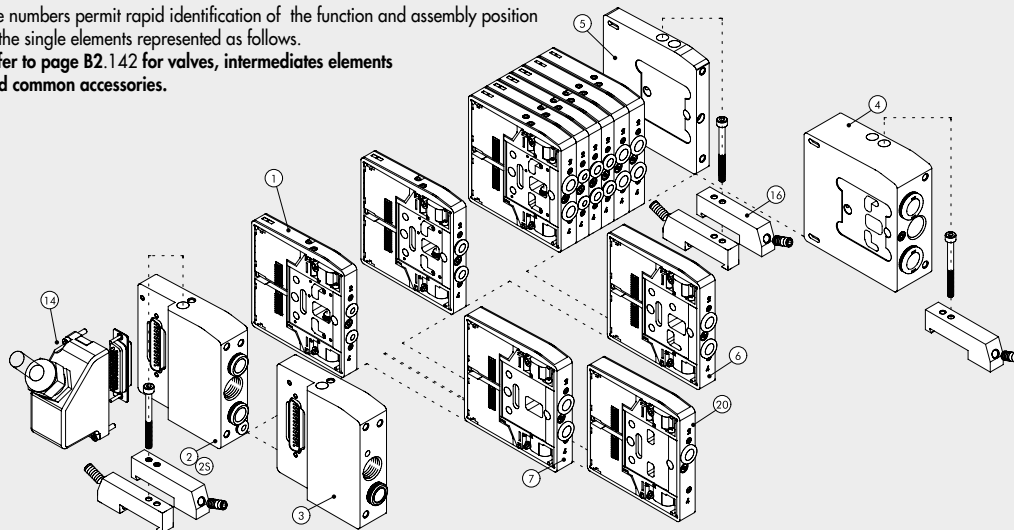


B2.114

THE MULTIMACH WORLD: FLEXIBILITY

The numbers permit rapid identification of the function and assembly position of the single elements represented as follows.

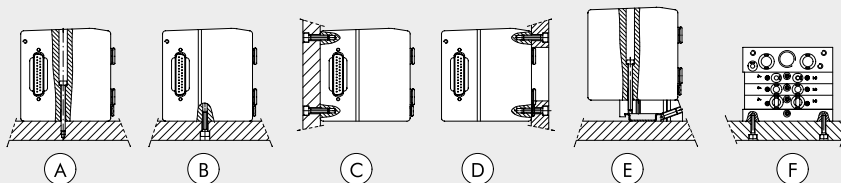
Refer to page B2.142 for valves, intermediate elements and common accessories.



VALVES

HDM + MULTI-POLE CONNECTION

FIXING THE BASE



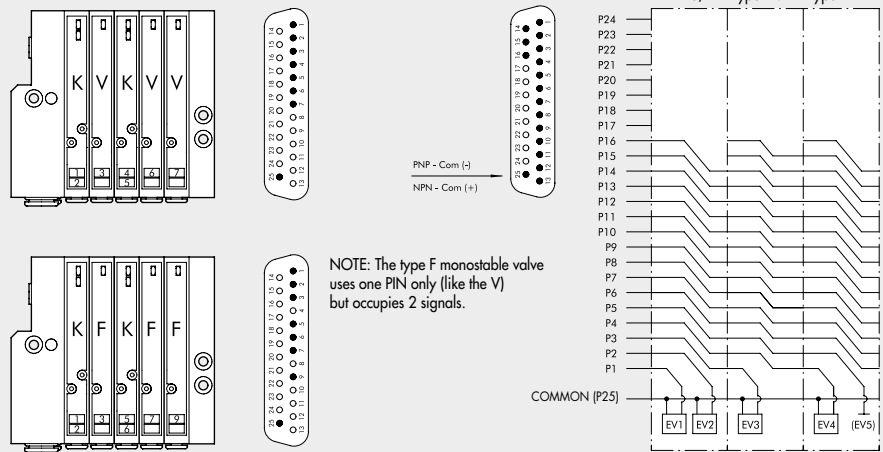
- (A) Fixing from above using the 1 or 1-11 input terminal and the blind terminal.
 - (B) Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the bottom and the rear of the terminals.
 - (C) Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the front of the terminals.
 - (D) An opening for the pipes is made in the plate.
 - (E) Fixing on the DIN bar with end-plate 1 or 1-11 and blind and plate, using the push-in bracket code 0227301600.
 - (F) Lateral fixing using the blind terminal, and its the M4 threads on the side lateral.
- Note: The sole fixing admitted is the one showed.**

SYNOPTIC, SIZES AND VERSIONS

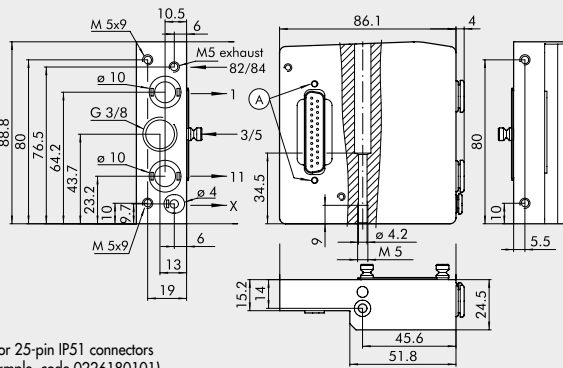
H D M VALVE	2 INPUT END-PLATE	8 ELECTRICAL BASE	M MANUAL TYPE	I 6 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 4 - 1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 pipe Ø 10 3 End-plate 1 pipe Ø 10 25 End-plate 1-11 pipe Ø 12	8 D-Sub 25 wire	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 85 Cartridge 8 - 23 mm 10 Cartridge 10	14 IP65 25-wire shell 16 n° 2 brackets for DIN bar

* Uses a single PIN (like the V) and occupies 2 signals.

WIRING DIAGRAM



② END-PLATE 1-11-25D - PIPE Ø10



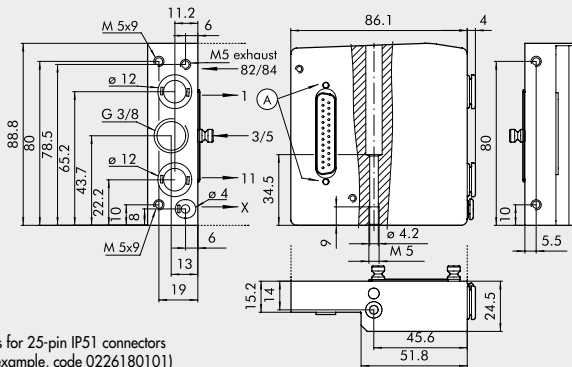
Ⓐ = Holes for 25-pin IP51 connectors
(for example, code 0226180101)

Code	Description	Weight [g]
0227301200	End-plate HDM 1-11-25D Ø10	370

This end-plate allows for supplies to be differentiated

- Port 2
- Port 4
- Pilot supply

②S END-PLATE 1-11-25D - PIPE Ø12

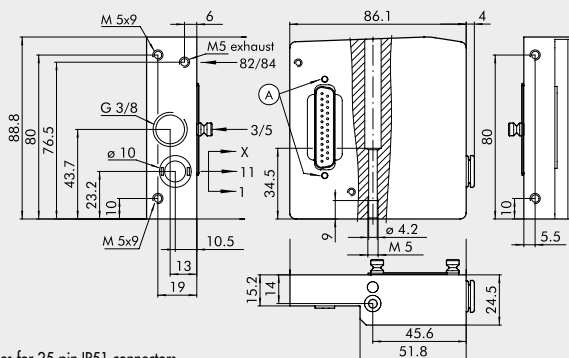


Ⓐ = Holes for 25-pin IP51 connectors
(for example, code 0226180101)

Code	Description	Weight [g]
0227301220	End-plate HDM 1-11-25D Ø12	370

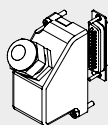
This end-plate allows for supplies to be differentiated

- Port 2
- Port 4
- Pilot supply

③ END-PLATE 1-25D - PIPE Ø10


A = Holes for 25-pin IP51 connectors
(for example, code 0226180101)

Code	Description	Weight [g]
0227301201	End-plate HDM 1-25D Ø10	370

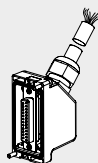
ACCESSORIES
⑭ 45° CONNECTOR KIT, 25 WIRES IP65


Code	Description	Weight [g]
0226180107	45° connector kit, 25 wires IP 65	65

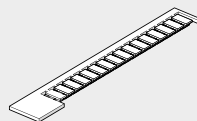
CABLES


Code	Description	Weight [g/m]
0226107201	10-wire cable	60
0226107101	19-wire cable	122
0226107102	25-wire cable	130

Specify the number of metres desired.

PRE-WIRED 45° CONNECTOR KIT, 25 WIRES IP65


Code	Description	Weight [g]
0226960100	Connector IP 65 + 25-wire 45° cable L = 1 m	190
0226960250	Connector IP 65 + 25-wire 45° cable L = 2.5 m	390
0226960500	Connector IP 65 + 25-wire 45° cable L = 5 m	740

IDENTIFICATION PLATE KIT


Code	Description
0226107000	Identification plate kit

Comes in 16-pc. packs

WIRING DIAGRAM FOR PRE-WIRED PLUG CONNECTOR
25 PIN

Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire
1	blue/black	9	red/black	17	orange/white	25	green/black
2	red/brown	10	brown/white	18	green		
3	white/black	11	red/orange	19	yellow/black		
4	red/blue	12	light blue	20	white		
5	black/orange	13	yellow/white	21	blue/white		
6	yellow/red	14	yellow	22	brown		
7	black/brown	15	red/green	23	green/white		
8	white/red	16	orange	24	red		

HDM + AS-Interface

The HDM+AS-Interface system has been designed in such a way that the pneumatic input terminal contains all the electronics, signals and AS-I connectors. It is a very compact and sturdy system where everything is housed in a thick casing aluminium to protect the delicate components against impact. The valves and accessories are HDM standard, which means that you only need to replace the input terminal to convert the valve island with multiple connector into an AS-I island. All the advantages of the HDM system can be exploited: the possibility of mounting valves of different size, with fittings for pipes 4, 6, 8 or 10; the insertion of intermediate modules with separate power supply or outlets; aluminium valves with chemical nickel plating enclosed in a protective casing in reinforced technopolymer, with an index of protection IP65. The arrangement of the functions continues the traditional optimisation of the HDMs: the user interface of the valves and bus all on one side, so that the fitter and service engineer have everything within easy reach: all compressed air connections on the other side; the connectors for AS-I cables on the opposite side longitudinally, so that several valve islands can be arranged in line, fixed on a DIN bar.

There are many AS-I terminal variants to meet all possible requirements:

- with 1 node, for controlling up to 4 valve solenoid pilots;
- with 2 nodes, for controlling up to 8 solenoid pilots;
- with 1 node for output and input for controlling up to 4 solenoid pilots and receiving up to 4 input signals. The input connectors are M8 or M12;
- with 2 nodes for output and input for controlling up to 8 solenoid pilots and receiving up to 8 input signals with M8 connectors;
- power supply with the AS-I yellow cable only;
- power supply with two cables: the yellow AS-I cable and the black power supply cable.
- traditional V2.1 addressing or extended AB V3.0 address for an increase in the node numbers which can be connected up to 62 and for a better diagnostics

Note: if you use valves 8S type or 10 exploiting their flow capacity it is necessary that the feeding pressure is at least 6 bar (to avoid the pressure to decrease too much on the pilots).

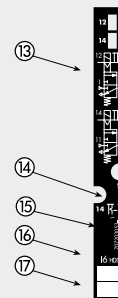
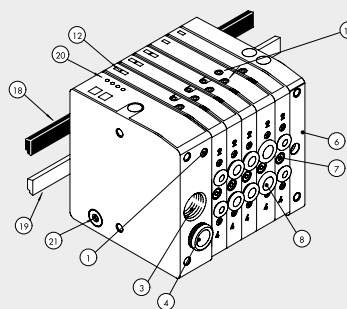


TECHNICAL DATA

Valve port connections	Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or 12* automatic fitting / 3/8 thread for exhaust part, M5 thread for exhaust pilot port				
Maximum number of pilots	Terminal with 1 node = 4 / terminal with 2 node = 8				
Maximum number of valves	Terminal with 1 node = 4 (same as the max. no. of pilots) / terminal with 2 node = 8 (same as the max. no. of pilots)				
Operating temperature range	°C -10 to +60				
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous				
Pressure range	X (pilot supply) 3 to 7 bar 1-11 (valve supply) vacuum at 10 bar				
Terminal 1-11	3 to 7 bar				
Terminal 1	24VDC ±10%				
Voltage range	0.9				
Power for each pilot	W F155				
Solenoid Pilot Insulation class	IP 65 (with conveyed exhaust, and unused INPUTS sealed with caps/plugs)				
Degree of protection	100% ED				
Solenoid rating	11.5 mm Ø 4 11.5 mm Ø 6 14 mm Ø 8 23 mm Ø 8 23 mm Ø 10				
Flow rate at 6.3 bar ΔP 1 bar	Nl/min				
version 5/2 and 3/2	200	500	650	1000	1200
version 5/3	200	300	300	500	500
TRA/TRR 2x3/2 monostable at 6 bar	ms	8 / 45		8 / 60	
TRA/TRR 5/2 monostable at 6 bar	ms	8 / 33		9 / 60	
TRA/TRR 5/2 bistable at 6 bar	ms	20 / 20		8 / 8	
TRA/TRR 5/3 cc monostable at 6 bar	ms	20 / 20		15 / 15	
Note on use	Insert the pipes in the fittings, before passing air through the valves, otherwise the basket may be pulled out of its seat by the flow of air.				
Compatibility with oils	* with right-end-plate 1-11 See chapter Z1				

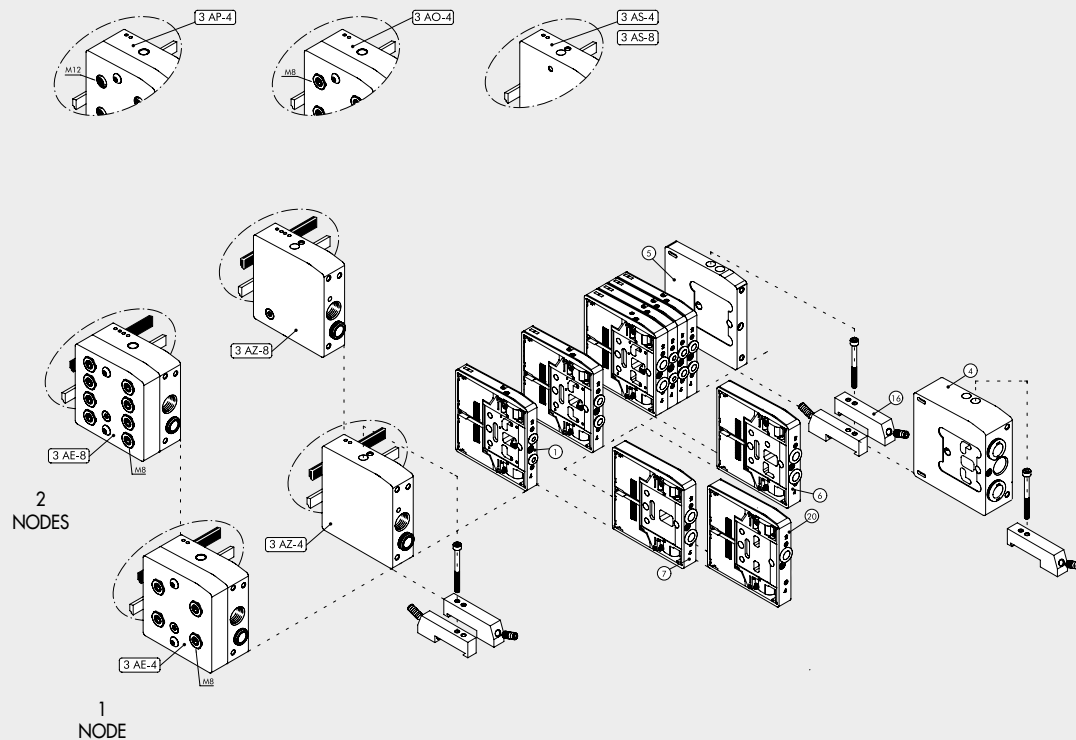
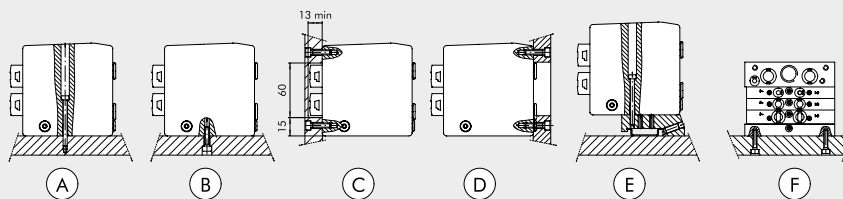
COMPONENTS

- Exhaust - Solenoid pilot 82/84
- Threaded connection of exhausts 3/5
- Valve supply - port 1-11-X
- Blind end-plate or right-end-plate 1-11
- Screw for valve wall-mounting
- Utility port for pipe Ø 4, 6, 8, 10 mm
- Manual control
- LED (LED on, solenoid valve energised)
- Pneumatic symbol
- Identification of the monostable or bistable manual control
- Valve ordering code
- Valve identification code
- Blank space for valve number
- Black cable for 24V (if present)
- AS-INTERFACE yellow cable
- AS-INTERFACE led



THE MULTIMACH WORLD: FLEXIBILITY

The numbers permit rapid identification of the function and assembly position of the single elements represented as follows.
Refer to page B2.142 for valves, intermediates elements and common accessories.


FIXING THE BASE


- (A) Fixing from above using the 1 or 1-11 input terminal and the blind terminal.
- (B) Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the bottom and the rear of the terminals.
- (C) Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the front of the terminals.
An opening for the pipes is made in the plate.
- (E) Fixing on the DIN bar with end-plate 1 or 1-11 and blind and plate, using the push-in bracket code 0227301600.
- (F) Lateral fixing using the blind terminal, and its the M4 threads on the side lateral.

Note: The sole fixing admitted is the one showed.

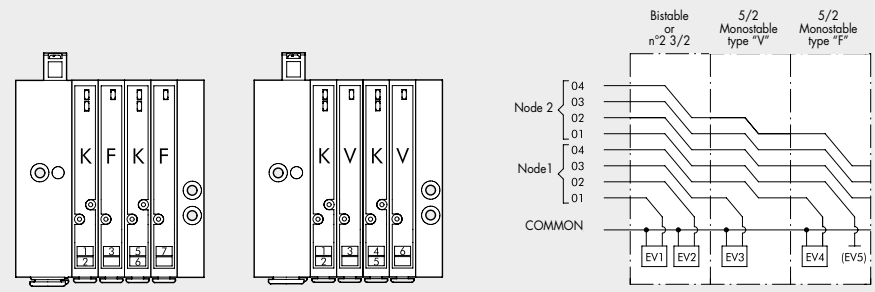
SYNOPTIC, SIZES AND VERSIONS

H D M VALVE	3 INPUT END-PLATE	A S - 4 ELECTRICAL BASE	M MANUAL TYPE	I 6 - W 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	3 End-plate 1	Version with standard address AS-4 1 node, 4 out, yellow cable AS-8 2 nodes, 8 out, yellow cable AO-4 1 node, 4 out e 4 in M8, yellow cable AP-4 1 node, 4 out e 4 in M12, yellow cable AZ-4 1 node, 4 out, yellow cable and black cable AZ-8 2 nodes, 8 out, yellow cable and black cable AE-4 1 node, 4 out e 4 in M8, yellow cable and black cable AE-8 2 nodes, 8 out e 8 in M8, yellow cable and black cable	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermede 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 85 Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

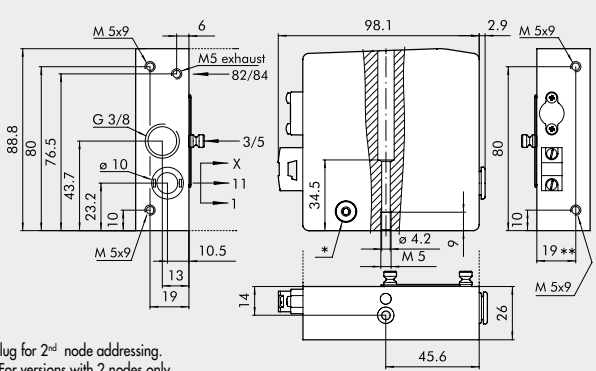
* Uses a single PIN (like the V) and occupies 2 signals

WIRING DIAGRAM

NOTE: The type f monostable valve uses one PIN only (like the V) but occupies 2 signals.

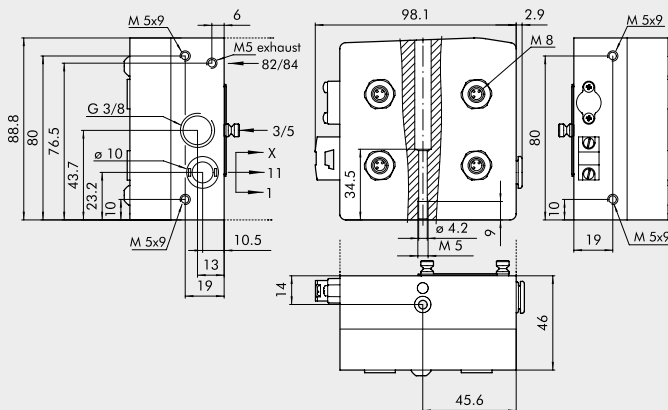


③ END-PLATE 1 AS-4, AS-8

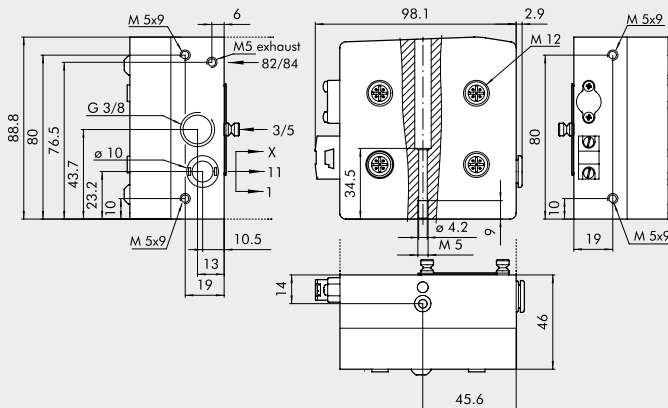


* M7 plug for 2nd node addressing.
N.B. For versions with 2 nodes only
** 21 for AS-8

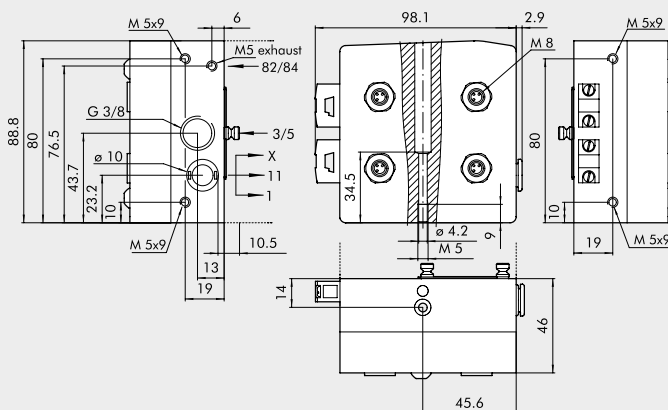
Code	Description	Weight [g]
0227301202	End-plate HDM 1 AS-4 1 node, 4 Out, yellow cable	465
0227301208	End-plate HDM 1 AS-8 2 nodes, 8 Out, yellow cable	454

③ END-PLATE 1 AO-4, M8


Code	Description	Weight [g]
0227301218	End-plate HDM 1 AO-4 1 node, 4 Out and 4 In M8, yellow cable	759

③ END-PLATE 1 AP-4, M12


Code	Description	Weight [g]
0227301212	End-plate HDM 1 AP-4 1 node, 4 Out and 4 In M12, yellow cable	756

③ END-PLATE 1 AE-4, M8


Code	Description	Weight [g]
0227301214	End-plate HDM 1 AE-4 1 node, 4 Out and 4 In M8, yellow cable and black cable	761

VALVES

HDM + AS-Interface

Technical drawing of the M5 exhaust system, showing front and side views with dimensions and labels.

Front View (Left):

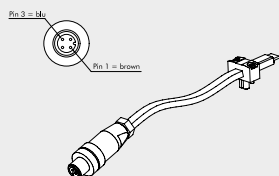
- Overall height: 88.8
- Overall width: 6
- Mounting holes: M 5x9 (top and bottom)
- Exhaust outlet: M5 exhaust 82/84
- Internal dimensions: 80, 76.5, 43.7, 23.2, 10, 10.5, 13, 19
- Internal hole: G 3/8
- Internal hole: $\varnothing 10$
- Internal hole: 3/5
- Internal hole: 11
- Internal hole: X

Side View (Right):

- Overall width: 98.1
- Overall height: 2.9
- Mounting holes: M 5x9 (top and bottom)
- Internal dimensions: 80, 10, 19**
- Internal hole: $\varnothing 4.2$
- Internal hole: M 5
- Internal hole: 9
- Internal hole: 34.5
- Internal hole: *
- Internal hole: 14
- Internal hole: 26
- Internal hole: 45.6

SPARES

AS-interface CONNECTOR KIT



M8 - M12 PLUG

B2.122

HDM + PROFIBUS-DP



The HDM+PROFIBUS system has been designed in such a way that the pneumatic input terminal contains all the electronics, signals and connectors. It is a very compact and sturdy system where everything is housed in a thick casing aluminium to protect the delicate components against impact. The valves and accessories are HDM standard, which means that you only need to replace the input terminal to convert the valve island with multiple connector into an PROFIBUS island. All the advantages of the HDM system can be exploited: the possibility of mounting valves of different size, with fittings for pipes 4, 6, 8 or 10; the insertion of intermediate modules with separate power supply or outlets; aluminium valves with chemical nickel plating enclosed in a protective casing in reinforced technopolymer, with an index of protection IP65.

The arrangement of the functions continues the traditional optimisation of the HDM: the user interface of the valves and bus all on one side, so that the fitter and service engineer have everything within easy reach: all compressed air connections are on the other side, and the electrical connectors and selectors are at the end of the island.

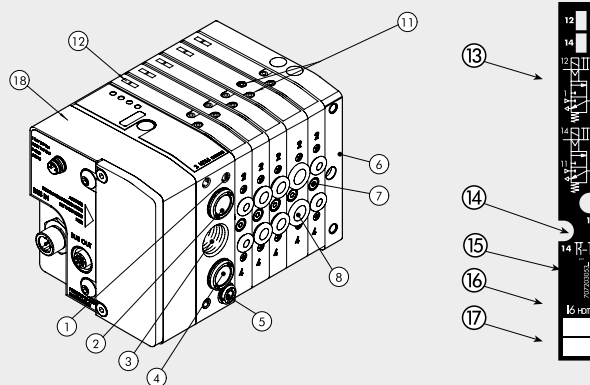
It is advisable to grounding the system to prevent electrical or electrostatic discharge from damaging the electronic circuit.


VALVES
HDM + PROFIBUS-DP

TECHNICAL DATA							
Valve port connections		Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or 12* automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port					
Connection on the end-plate 1-11 for the supply of pilots		Automatic fitting Ø 4 mm					
Maximum number of pilots		16					
Maximum number of valves		16 (same as the max. no. of pilots)					
Operating temperature range		-10 to +60					
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous					
Pressure range		X (pilot supply) 3 to 7 bar		1-11 (valve supply) vacuum at 10 bar			
		Terminal 1-11					
		Terminal 1					
Voltage range		3 to 7 bar 24 VDC ±10% (slave protected against overload and reverse polarity)					
Power for each pilot		W 0.9					
Solenoid Pilot Insulation class		F155					
Degree of protection		IP65 (with conveyed exhaust, and that - in case of no use - the BUS OUT connector gets plugged)					
Solenoid rating		100% ED					
Flow rate at 6.3 bar ΔP 1 bar		Nl/min	11.5 mm Ø 4	11.5 mm Ø 6	14 mm Ø 8	23 mm Ø 8	23 mm Ø 10
		version 5/2 and 3/2	200	500	650	1000	1200
		version 5/3	200	300	300	500	500
TRA/TRR 2x3/2 monostable at 6 bar		ms	8 / 45			8 / 60	
TRA/TRR 5/2 monostable at 6 bar		ms	8 / 33			9 / 60	
TRA/TRR 5/2 bistable at 6 bar		ms	20 / 20			8 / 8	
TRA/TRR 5/3 cc monostable at 6 bar		ms	20 / 20			15 / 15	
Note on use		Insert the pipes in the fittings, before passing air through the valves, otherwise the gasket may be pulled out of its seat by the flow of air.					
		*with right-end-plate 1-11					
		See chapter Z1					
Compatibility with oils							
Profibus-DP module for HDM valves							
Protection		Outputs protected against overloads and shortcircuits					
Max input power (all valves ON)		~500 mA					
Addressing		By rotary selectors					
Highest settable address number		99					
Default address		3					
Peripheral defect diagnosis		Local LED indicator and relay to Master					
Defects reported		Output shortcircuit or overload. Auxiliary power supply failure. Profibus communication active.					
Module status in the event of peripheral defect		The “peripheral defect” bit is active and accessible at the master station.					
Data bit value		0 = not enabled 1 = enabled					
Output status in the absence of communication		Disabled					

COMPONENTS

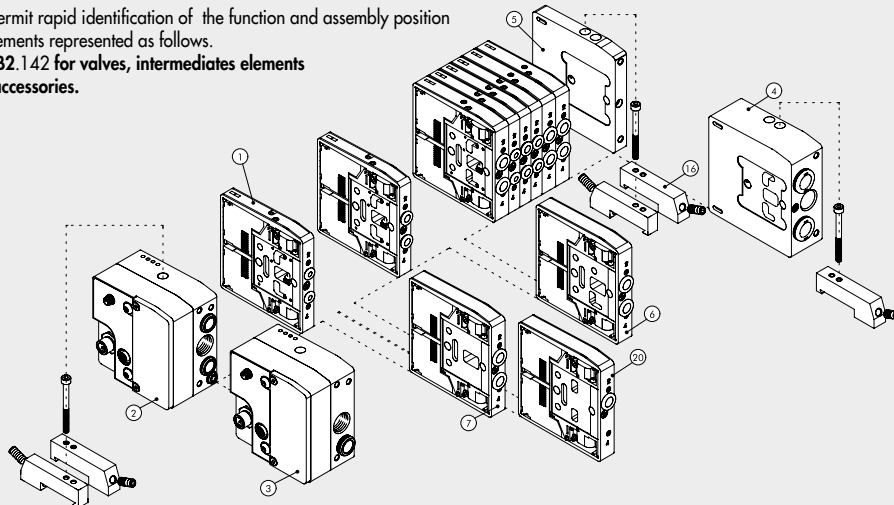
- ① Exhaust - Solenoid pilot 82/84
- ② Valve supply - port 1
- ③ Threaded connection of exhausts 3/5
- ④ Valve supply - port 11
- ⑤ Electrical control supply X
- ⑥ Blind end-plate or right-end-plate 1-11
- ⑦ Screw for valve wall-mounting
- ⑧ Utility port for pipe Ø 4, 6, 8 or 10 mm
- ⑨ Manual control
- ⑩ LED (LED on, solenoid valve energised)
- ⑪ Pneumatic symbol
- ⑫ Identification of the monostable or bistable manual control
- ⑬ Valve ordering code
- ⑭ Valve identification code
- ⑮ Blank space for valve number
- ⑯ Profibus terminal



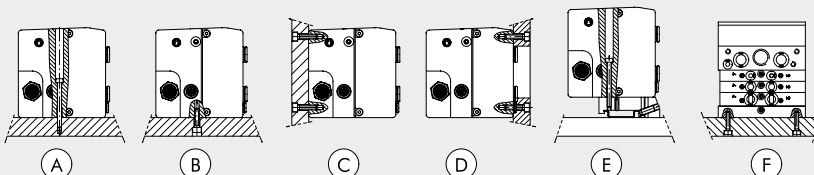
THE MULTIMACH WORLD: FLEXIBILITY

The numbers permit rapid identification of the function and assembly position of the single elements represented as follows.

Refer to page B2.142 for valves, intermediate elements and common accessories.



FIXING THE BASE



- A Fixing from above using the 1 or 1-11 input terminal and the blind terminal.
- B Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the bottom and the rear of the terminals.
- C Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the front of the terminals.
- D An opening for the pipes is made in the plate.
- E Fixing on the DIN bar with end-plate 1 or 1-11 and blind and plate, using the push-in bracket code 0227301600.
- F Lateral fixing using the blind terminal, and its the M4 threads on the side lateral.

Note: The sole fixing admitted is the one showed.

SYNOPTIC, SIZES AND VERSIONS

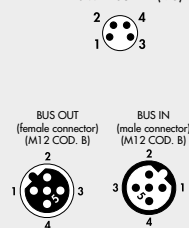
H D M VALVE	2 INPUT END-PLATE	P ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	P Profibus-DP	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 85 Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

* Uses a single PIN (like the V) and occupies 2 signals.

WIRING DIAGRAM

POWER SUPPLY (M8)

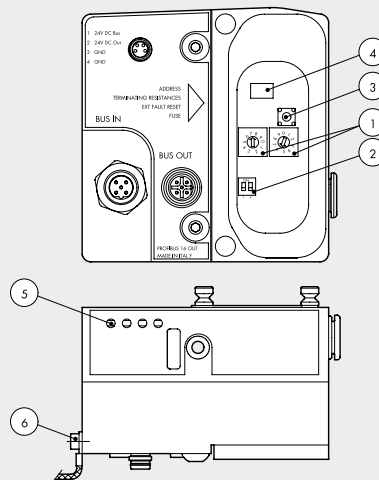
1 = +24V bus (brown)
2 = +24V valve (white)
3 = GND (blue)
4 = GND (black)



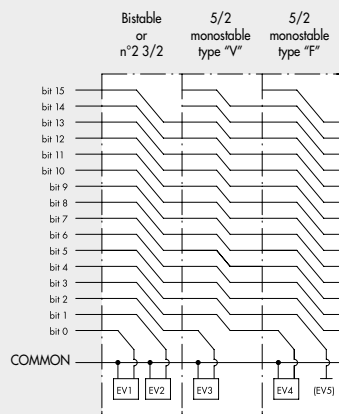
1 = +5V*
2 = A
3 = OV*
4 = B
5 = Shield

* DO NOT CONNECT PIN 1 and PIN 3: to be used only for feeding of the external terminating resistors.
- For correct communication, use Profibus cables at least 1 metre long.
- The shield should be evenly distributed around the thread. Should this not be possible, the shield can be connected to pin 5. Both of these methods can also be used in combination.

- 1 Addressing
- 2 Terminal resistances
- 3 Reset button faulty
- 4 Resettable fuse
- 5 Indicator Led
- 6 Grounding



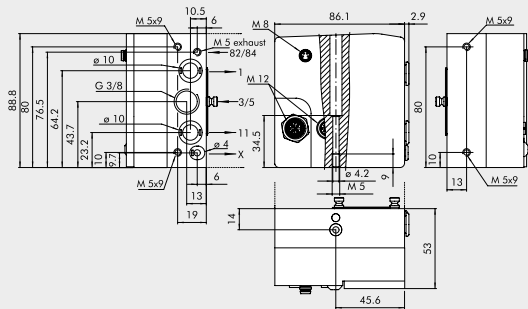
NOTE: The type F monostable valve uses one PIN only (like the V) but occupies 2 signals.



VALVES

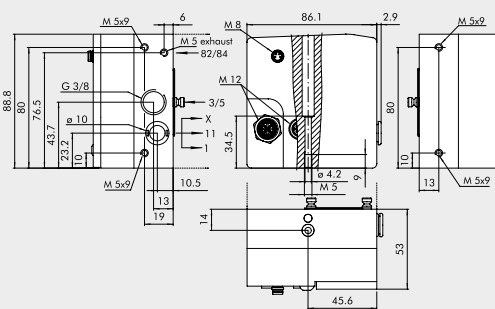
HDM + PROFIBUS-DP

② END-PLATE 1-11 PROFIBUS-DP



Code	Description	Weight [g]
0227301231	End-plate HDM 1-11 PROFIBUS	730

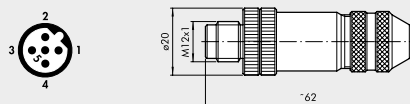
③ END-PLATE 1 PROFIBUS-DP



Code	Description	Weight [g]
0227301230	End-plate HDM 1 PROFIBUS	730

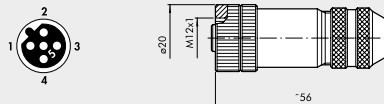
ACCESSORIES

M12 MALE CONNECTOR OUT-BUS



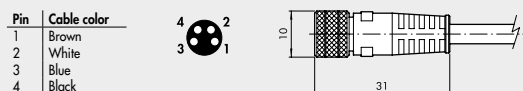
Code	Description
0240009035	M12 male connector B coding

M12 FEMALE CONNECTOR IN-BUS



Code	Description
0240009036	M12 female connector B coding

M8 CONNECTOR FOR POWER SUPPLY



Pin	Cable color
1	Brown
2	White
3	Blue
4	Black

Code	Description
0240009060	M8 4-pin female connector for power supply, cable L = 3 m
0240009037	M8 4-pin female connector for power supply, cable L = 5 m
0240009058	M8 4-pin female connector for power supply, cable L = 10 m
0240009059	M8 4-pin female connector for power supply, cable L = 15 m
0240009P60 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 3 m
0240009P37 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 5 m
0240009P58 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 10 m
0240009P59 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 15 m

* Very flexible cables, class 6 according to IEC 60228

M8 - M12 PLUG



Code	Description
0240009039	Plug M8
0240009040	Plug M12

HDM + EtherNet/IP



The HDM+EtherNet/IP system has been designed in such a way that the pneumatic input terminal contains all the electronics, signals and connectors. It is a very compact and sturdy system where everything is housed in a thick casing aluminium to protect the delicate components against impact.

The valves and accessories are HDM standard, which means that you only need to replace the input terminal to convert the valve island with multiple connector into an EtherNet/IP island. All the advantages of the HDM system can be exploited: the possibility of mounting valves of different size, with fittings for pipes 4, 6, 8 or 10; the insertion of intermediate modules with separate power supply or outlets; aluminium valves with chemical nickel plating enclosed in a protective casing in reinforced technopolymer, with an index of protection IP65.

The arrangement of the functions continues the traditional optimisation of the HDM: the user interface of the valves and bus all on one side, so that the fitter and service engineer have everything within easy reach: all compressed air connections are on the other side, and the electrical connectors and selectors are at the end of the island.

It is advisable to grounding the system to prevent electrical or electrostatic discharge from damaging the electronic circuit.


VALVES

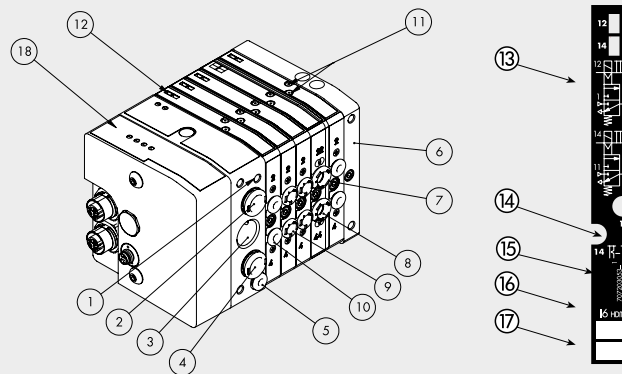
HDM + EtherNet/IP

TECHNICAL DATA

Valve port connections	Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or 12* automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port				
Connection on the end-plate 1-11 for the supply of pilots	Automatic fitting Ø 4 mm				
Maximum number of pilots	16				
Maximum number of valves	16 (same as the max. no. of pilots)				
Operating temperature range	-10 to +60 °C				
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous				
Pressure range	X (pilot supply) 3 to 7 bar 1-11 (valve supply) vacuum at 10 bar				
Terminal 1-11	3 to 7 bar				
Terminal 1	24 VDC ±10% (slave protected against overload and reverse polarity)				
Voltage range	0.9 F155				
Power for each pilot	IP65 (with conveyed exhaust, and that - in case of no use - the BUS OUT connector gets plugged)				
Solenoid Pilot Insulation class	100% ED				
Degree of protection					
Solenoid rating					
Flow rate at 6.3 bar ΔP 1 bar	Nl/min				
version 5/2 and 3/2					
version 5/3					
TRA/TRR 2x3/2 monostable at 6 bar	ms	11.5 mm Ø 4	11.5 mm Ø 6	14 mm Ø 8	23 mm Ø 8
TRA/TRR 5/2 monostable at 6 bar	ms	200	500	650	1000
TRA/TRR 5/2 bistable at 6 bar	ms	200	300	300	500
TRA/TRR 5/3 cc monostable at 6 bar	ms		8 / 45		8 / 60
Note on use			8 / 33		9 / 60
			20 / 20		8 / 8
			20 / 20		15 / 15
Compatibility with oils	Insert the pipes in the fittings, before passing air through the valves, otherwise the gasket may be pulled out of its seat by the flow of air.				
	*with right-end-plate 1-11				
	See chapter Z1				
EtherNet/IP module for HDM valves					
Field buses	EtherNet/IP - 10/100 Mbit/s - Half-duplex - Full-duplex - Supports Auto-Negotiation				
Factory settings	Module name: Cmseries - Address IP 192.168.192.30				
Addressing	Software DHCP/BOOTP				
Voltage range	24VDC ± 10%				
Maximum number of pilots (Out)	16				
Maximum number of valves	16 (depending on the maximum number of solenoids)				
Icc bus supply current	Nominal Icc 120 mA - Instantaneous Icc (< 2 ms) 450 mA				
Maximum absorption of a valve distribution block with 16 mono-stable valves	Nominal Icc with 120mA OFF valves - Nominal Icc with 580 mA ON valves				
Protections	Module protected against overload and polarity reversal. Outputs protected against overloads and short-circuits				
Connections	Field bus: 2 M12 Female, D-coded, internal switch				
	Supply: M8 4 pin - input: M8 3 pin				
Data bit value	0 = not enabled - 1 = enabled				
Output status in the absence of communication	Disabled				

COMPONENTS

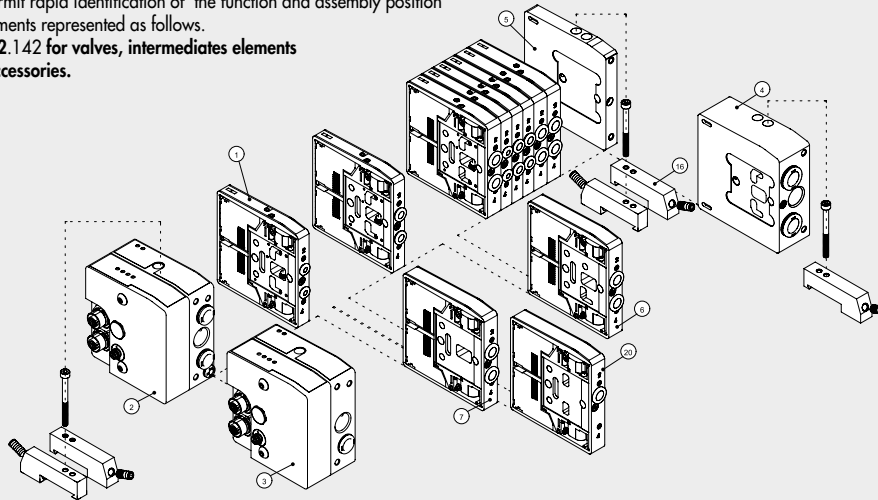
- ① Exhaust - Solenoid pilot 82/84
- ② Valve supply - port 1
- ③ Threaded connection of exhausts 3/5
- ④ Valve supply - port 11
- ⑤ Electrical control supply X
- ⑥ Blind end-plate or right-end-plate 1-11
- ⑦ Screw for valve wall-mounting
- ⑧ Utility port for pipe Ø 4, 6, 8 or 10 mm
- ⑨ Manual control
- ⑩ LED (LED on, solenoid valve energised)
- ⑪ Pneumatic symbol
- ⑫ Identification of the monostable or bistable manual control
- ⑬ Valve ordering code
- ⑭ Valve identification code
- ⑮ Blank space for valve number
- ⑯ Profibus EtherNet/IP



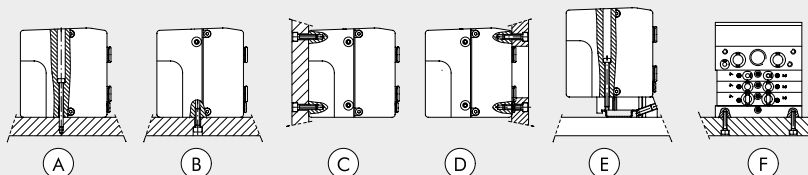
THE MULTIMACH WORLD: FLEXIBILITY

The numbers permit rapid identification of the function and assembly position of the single elements represented as follows.

Refer to page B2.142 for valves, intermediate elements and common accessories.



FIXING THE BASE



- A Fixing from above using the 1 or 1-11 input terminal and the blind terminal.
- B Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the bottom and the rear of the terminals.
- C Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the front of the terminals.
An opening for the pipes is made in the plate.
- D Fixing on the DIN bar with end-plate 1 or 1-11 and blind and plate, using the push-in bracket code 0227301600.
- E Lateral fixing using the blind terminal, and its the M4 threads on the side lateral.

Note: The sole fixing admitted is the one showed.

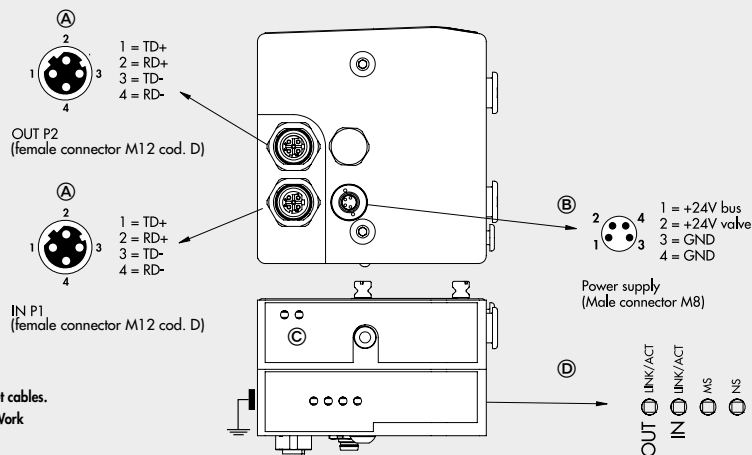
SYNOPTIC, SIZES AND VERSIONS

H D M VALVE	2 INPUT END-PLATE	EN ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	EN EtherNet/IP	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 85 Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

* Uses a single PIN (like the V) and occupies 2 signals.

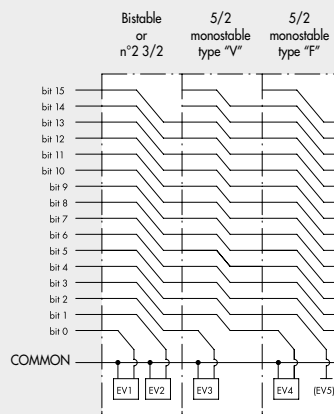
WIRING DIAGRAM

- Ⓐ Connection to the EtherNet/IP network
- Ⓑ Connection for node supply and auxiliary valve supply
- Ⓒ HDM diagnostics indicator light
- Ⓓ EtherNet/IP diagnostics indicator light



WARNING
For correct communication use only Industrial Ethernet cables.
Cat. 5 / Class D 100 MHz, like the one in the Metal Work catalogue.

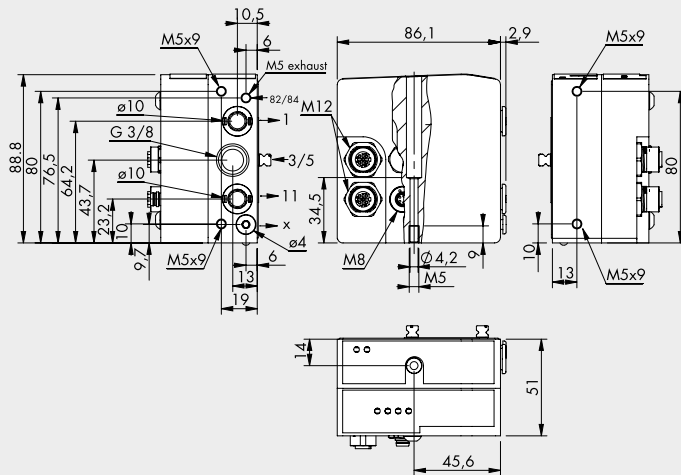
NOTE: The type F monostable valve uses one PIN only (like the V) but occupies 2 signals.



VALVES

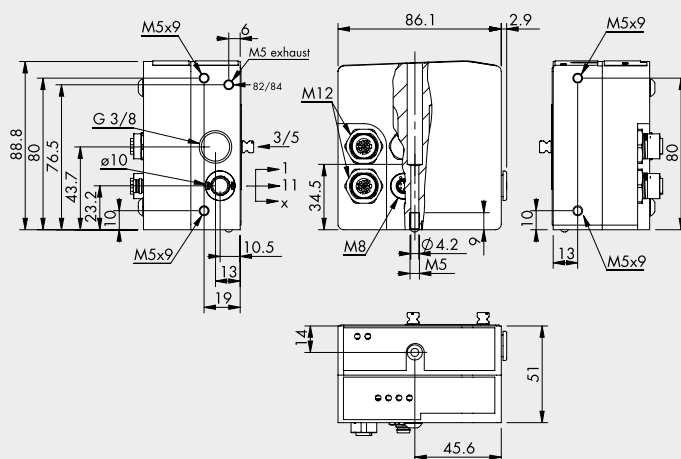
HDM + EtherNet/IP

② END-PLATE 1-11 EtherNet/IP



Code	Description	Weight [g]
0227301242	End-plate HDM 1-11 EtherNet/IP	730

③ END-PLATE 1 EtherNet/IP

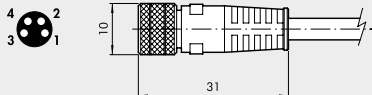


Code	Description	Weight [g]
0227301243	End-plate HDM 1 EtherNet/IP	730

ACCESSORIES

M8 CONNECTOR FOR POWER SUPPLY

Pin	Cable color
1	Brown
2	White
3	Blue
4	Black



Code	Description
0240009060	M8 4-pin female connector for power supply, cable L = 3 m
0240009037	M8 4-pin female connector for power supply, cable L = 5 m
0240009058	M8 4-pin female connector for power supply, cable L = 10 m
0240009059	M8 4-pin female connector for power supply, cable L = 15 m
0240009P60 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 3 m
0240009P37 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 5 m
0240009P58 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 10 m
0240009P59 *	M8 4-pin female connector for power supply, H-FLEX CL6, cable L = 15 m

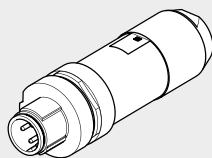
* Very flexible cables, class 6 according to IEC 60228

M12 PLUG



Code	Description
0240009040	Plug M12

M12 BUS CONNECTOR, D-CODED



Code	Description
0240005051	M12 BUS connector, D-coded

Note: Can be used for BUS units in the EtherNet family (Profinet IO, EtherCAT, EtherNet/IP....)

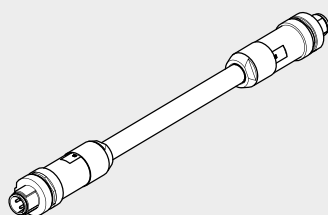
BUS CABLE



Code	Description
0240005220	BUS cable L = 20 m

Note: Can be used for BUS units in the EtherNet family (Profinet IO, EtherCAT, EtherNet/IP....)

STRAIGHT CONNECTOR FOR M12-M12 BUS, D-CODED



Code	Description
0240005103	Straight connector for M12-M12 BUS, D-coded, with 3 m cable
0240005105	Straight connector for M12-M12 BUS, D-coded, with 5 m cable
0240005110	Straight connector for M12-M12 BUS, D-coded, with 10 m cable

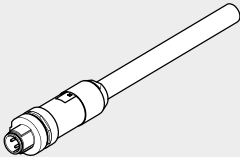
Note: Can be used for BUS units in the EtherNet family (Profinet IO, EtherCAT, EtherNet/IP....)

VALVES

HDM + EtherNet/IP

STRAIGHT CONNECTOR FOR M12 BUS, D-CODED

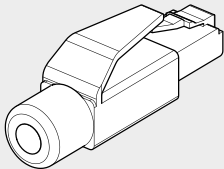
Pin	Cable color
1	Yellow
2	White
3	Red
4	Blue



Code	Description
0240005093	Straight connector for M12 BUS, D-coded, with 3 m cable
0240005095	Straight connector for M12 BUS, D-coded, with 5 m cable
0240005100	Straight connector for M12 BUS, D-coded, with 10 m cable

Note: Can be used for BUS units in the EtherNet family (Profinet IO, EtherCAT, EtherNet/IP....)

RJ45 CONNECTOR



Code	Description
0240005050	RJ45 connector with 4 contacts according to IEC 60603-7

NOTES

HDM + CANopen



The HDM+CANopen system has been designed in such a way that the pneumatic input terminal contains all the electronics, signals and connectors. It is a very compact and sturdy system where everything is housed in a thick casing aluminium to protect the delicate components against impact. Two versions of end-plate are available: one can handle up to 16 controls (16 Out) and one up to 16 controls and 8 inputs (16 Out + 8 In). The input connectors are M12. Two inputs can be connected to each connector. The functions are arranged to ensure the same optimisation as the HDMs. The user interface is all on one side to facilitate the work of the fitter and service engineer. All pneumatic connections are on one side; the electrical connectors and selectors are on top of the island.

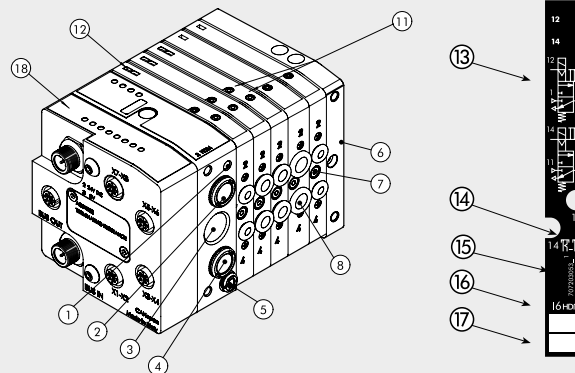

VALVES

HDM + CANopen

TECHNICAL DATA	
Valve port connections	Ø 4,6,8,10 mm automatic fitting for ports 2 and 4 / power supply port for Ø10 or 12* automatic fitting / 3/8 thread for exhaust port, M5 thread for exhaust pilot port
Connection on the end-plate 1-11 for the supply of pilots	Automatic fitting Ø 4 mm
Maximum number of pilots	16
Maximum number of valves	16 (same as the max. no. of pilots)
Operating temperature range	-10 to +60 °C
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous
Pressure range	X (pilot supply) 3 to 7 bar 1-11 (valve supply) vacuum at 10 bar
Terminal 1-11	3 to 7 bar
Terminal 1	3 to 7 bar
Voltage range	24VDC ±10% (slave protected against overload and reverse polarity)
Power for each pilot	0.9 W
Solenoid Pilot Insulation class	F155
Degree of protection	IP65 (with conveyed exhausts and with not used connectors plugged)
Solenoid rating	100% ED
Flow rate at 6.3 bar ΔP 1 bar	11.5 mm Ø 4 11.5 mm Ø 6 14 mm Ø 8 23 mm Ø 8 23 mm Ø 10
version 5/2 and 3/2	200 500 650 1000 1200
version 5/3	200 300 300 500 500
TRA/TRR 2x3/2 monostable at 6 bar	ms 8 / 45 8 / 60
TRA/TRR 5/2 monostable at 6 bar	ms 8 / 33 9 / 60
TRA/TRR 5/2 bistable at 6 bar	ms 20 / 20 8 / 8
TRA/TRR 5/3 cc monostable at 6 bar	ms 20 / 20 15 / 15
Note on use	Insert the pipes in the fittings, before passing air through the valves, otherwise the gasket may be pulled out of its seat by the flow of air.
Compatibility with oils	* with right-end-plate 1-11 See chapter Z1
CANopen module for HDM valves	
Protection	Outputs protected against overloads and shortcircuits
Max input power (all valves ON)	~800 mA
Addressing	By DIP SWITCH
Highest settable address number	127
Default address	1
Peripheral defect diagnosis	Local LED indicator and relay to Master
Defects reported	Output shortcircuit or overload. Auxiliary power supply failure. CANopen communication active.
Module status in the event of peripheral defect	The "peripheral defect" bit is active and accessible at the master station.
Data bit value	0 = not enabled 1 = enabled
Output status in the absence of communication	Disabled
INPUT module for HDM valves	
Sensor supply voltage	24 VDC ±10% (depending on the supply of the CANopen module)
Max sensor power (distributed over eight connectors)	40 mW
Type of input	PNP for sensor 2-3 wires according to EN 60947-5-2
Protection	Protected inputs against overload and short-circuit
Active INPUT signalling	One LED for each INPUT

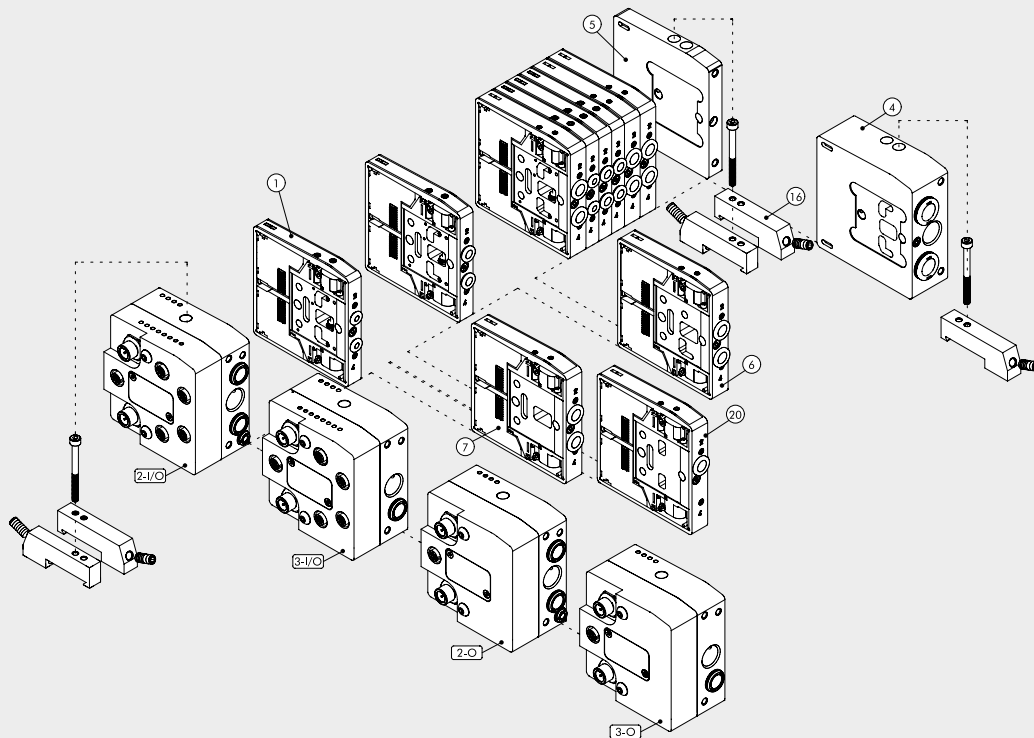
COMPONENTS

- ① Exhaust - Solenoid pilot 82/84
- ② Valve supply - port 1
- ③ Threaded connection of exhausts 3/5
- ④ Valve supply - port 11
- ⑤ Electrical control supply X
- ⑥ Blind end-plate or right-end-plate 1-11
- ⑦ Screw for valve wall-mounting
- ⑧ Utility port for pipe Ø 4, 6, 8 or 10 mm
- ⑪ Manual control
- ⑫ LED (LED on, solenoid valve energised)
- ⑬ Pneumatic symbol
- ⑭ Identification of the monostable or bistable manual control
- ⑮ Valve ordering code
- ⑯ Valve identification code
- ⑰ Blank space for valve number
- ⑱ CANopen terminal

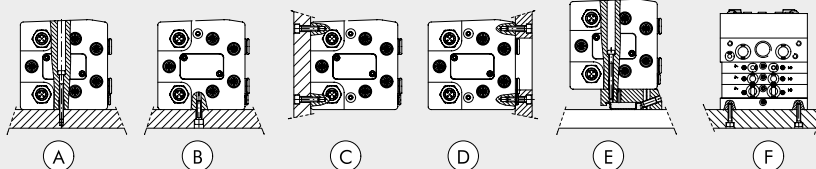

THE MULTIMACH WORLD: FLEXIBILITY

The numbers permit rapid identification of the function and assembly position of the single elements represented as follows.

Refer to page B2.142 for valves, intermediates elements and common accessories.



FIXING THE BASE



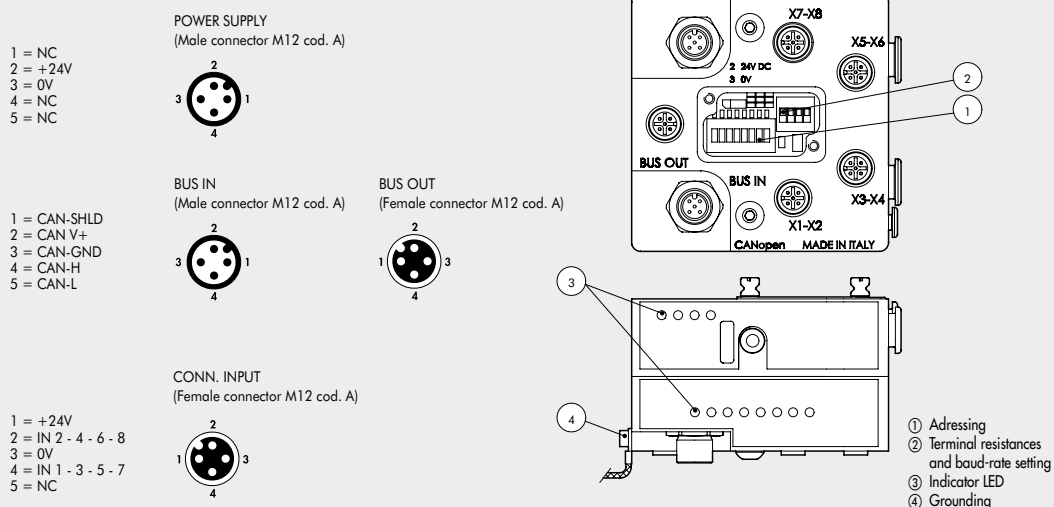
- Ⓐ Fixing from above using the 1 or 1-11 input terminal and the blind terminal.
 Ⓑ Ⓒ Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the bottom and the rear of the terminals.
 Ⓓ Fixing from above using the 1 or 1-11 input terminal and the blind terminal, using the M5 threads on the front of the terminals.
 An opening for the pipes is made in the plate.
 Ⓔ Fixing on the DIN bar with end-plate 1 or 1-11 and blind and plate, using the push-in bracket code 0227301600.
 Ⓕ Lateral fixing using the blind terminal, and its the M4 threads on the side lateral.
Note: The sole fixing admitted is the one showed.

SYNOPTIC, SIZES AND VERSIONS

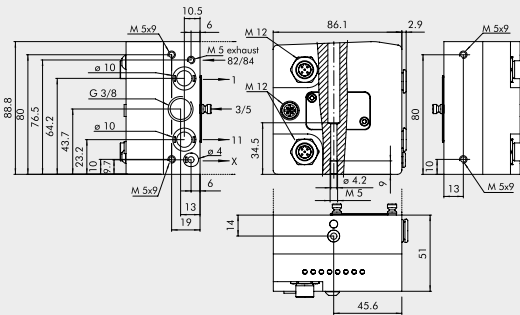
H D M VALVE	2 INPUT END-PLATE	CAN O ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	CAN O CANopen 16 OUTPUT CAN I/O CANopen 8 INPUT e 16 OUTPUT	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 right-end-plate 1-11 pipe Ø12 5 blind end-plate 6 Passing-intermede 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 8S Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

* Uses a single PIN (like the V) and occupies 2 signals.

WIRING DIAGRAM



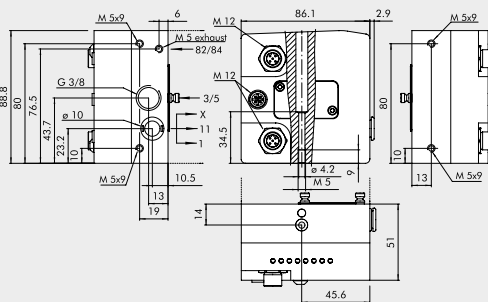
2 - O **END-PLATE 1-11 CANopen O**



Code	Description	Weight [g]
0227301251	End-plate 1-11 HDM CANopen OUTPUT	745

Handles 16 OUTPUTS (solenoid pilots)

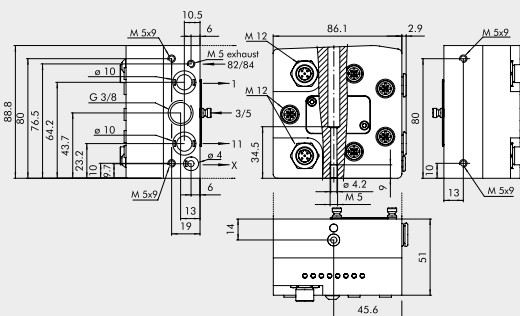
3 - O **END-PLATE 1 CANopen O**



Code	Description	Weight [g]
0227301253	End-plate 1 HDM CANopen OUTPUT	746

Handles 16 OUTPUTS (solenoid pilots)

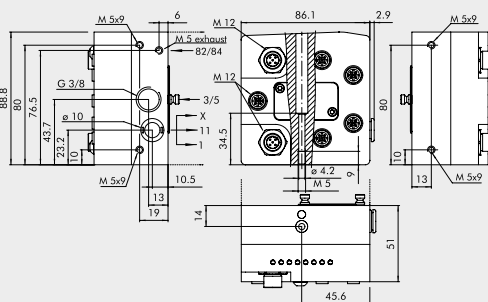
2 - I/O **END-PLATE 1-11 CANopen I/O**



Code	Description	Weight [g]
0227301250	End-plate 1-11 HDM CANopen IN-OUT	734

Handles 16 OUTPUTS and 8 INPUTS

3 - I/O **END-PLATE 1 CANopen I/O**



Code	Description	Weight [g]
0227301252	End-plate 1 HDM CANopen IN-OUT	735

Handles 16 OUTPUTS and 8 INPUTS



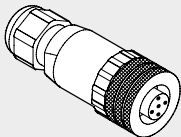
ACCESSORIES

M12 PLUG FOR BUS OUT E INPUT CANopen



Code	Description
0240009040	Plug M12

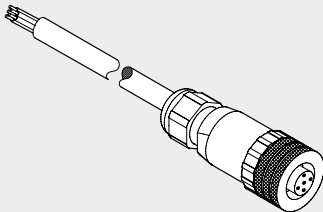
STRAIGHT CONNECTOR FOR CANopen POWER SUPPLY



Code	Description
W0970513001	5-pin M12x1 straight connector

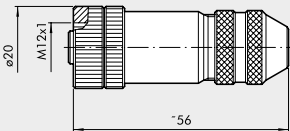
STRAIGHT CONNECTOR WITH CANopen POWER CABLE

Pin	Cable color
1	Brown
2	White
3	Blue
4	Black
5	Grey



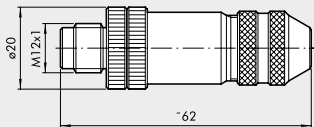
Code	Description
W0970513002	5-pin M12x1 straight connector with wire L = 5 m

FEMALE CONNECTOR FOR CANopen BUS-IN



Code	Description
0240009055	M12 female connector, A coding

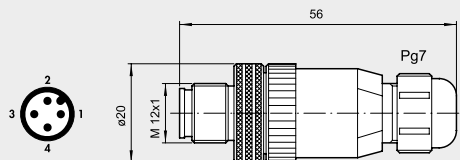
MALE CONNECTOR FOR CANopen BUS-OUT



Code	Description
0240009038	Male connector Bus A coding

VALVES

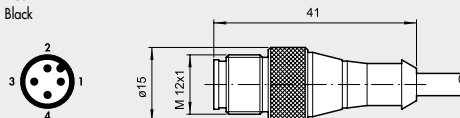
HDM + CANopen

STRAIGHT CONNECTOR WITHOUT CABLE FOR CANopen INPUT


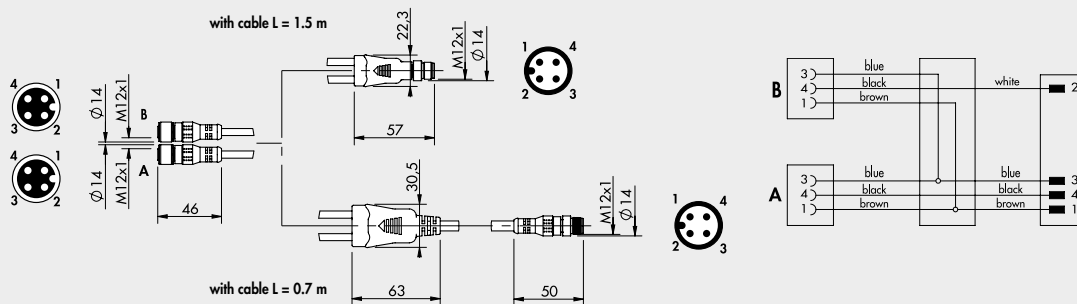
Code	Description
0240009021	Straight fitting without cable

STRAIGHT CONNECTOR WITH CABLE FOR CANopen INPUT

Pin	Cable colour
1	Brown
2	White
3	Blue
4	Black



Code	Description
0240009002	Straight, with 1.5 m cable
0240009003	Straight, with 5 m cable

M12 Y-CONNECTOR WITH CABLE FOR DIGITAL CANopen INPUT


Code	Description
0240009032	Y-connector M12 4-pin M / double M12 4-pin F with cable L = 1.5 m
0240009049	Y-connector M12 4-pin M / double M12 4-pin F with cable L = 0.7 m

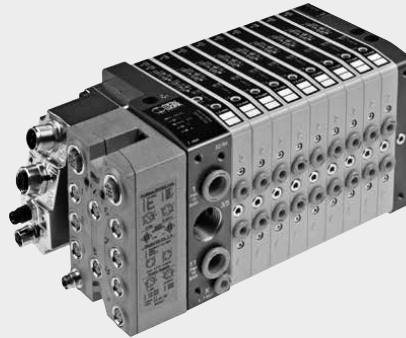
HDM + B&R



An advanced field bus system interfacing with the Multimach world. B&R has developed a new standard for automation, called FORMULA X. For further details about features, functions and qualities of this system, reference must be made to the B&R documentation, also available on the web site www.br-automation.com

An overview is given below.

The X-system is a system handling analogue and digital inputs and outputs for local or remote use, which B&R defines as decentralised backplane. Different types of modules are available. We present those designed for connection with Multimach and HDM valve islands. We only indicate the B&R's code root, since each type of module comes in different variants, that differ by number of signals handled, that can be 8, 16 or 24, and by type of signal, that can be input, output or input/output indifferently. Common to all the modules is the presence of 4 connections: a signal input, a signal output for the following modules, a power input (24V DC), a power output for the following modules.


VALVES

HDM + B&R

B&R CONNECTORS AND MODULES

IP20 7XV---50-11 SMART CONNECTOR

It is a plug connector with IP20 protection that contains the X system electronics. It can be connected with HDM islands, using the special input end-plate, type 1, code 0227301207 or the special input end-plate type 1-11, code 0227301206.



IP67 7XV---50-51 SMART CONNECTOR

It is a plug connector with IP67 protection, that contains the X system electronics. It can be connected with HDM islands, using the special input end-plate type 1, code 0227301207, or the special input end-plate, type 1-11 code 0227301206.



X67 I/O SYSTEM MODULES

These are modules with IP67 protection, connected to the X system, for handling inputs and outputs. It is interesting to note that their size is such that they can be fixed directly to the HDM input end-plate type 1-11, code 0227301206

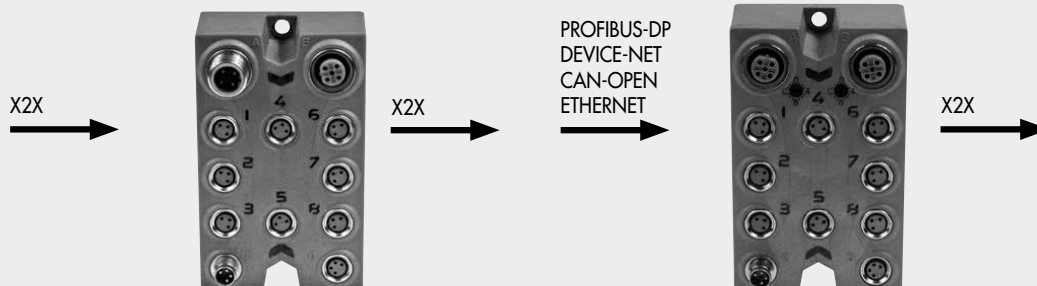
(N.B. NOT to be fixed to the HDM end-plate type 1, code 0227301207).

X67 BUS CONTROLLER MODULES

These are modules with protection IP67, receiving a signal according to one of the DP Profibus, CAN open, Device Net, Ethernet Powerlink protocols (the module code differs obviously according to the protocol being controlled). The output signal is according to the X-system.

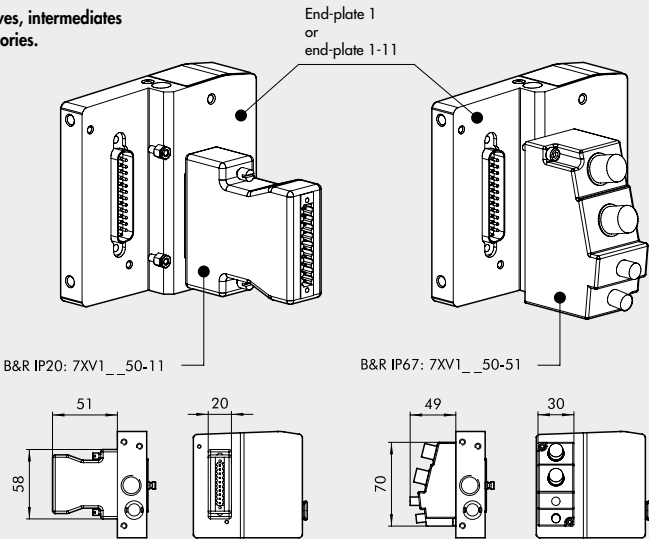
These are gateways converting the signals of a field bus into an X-system. These modules control the inputs and/or outputs via the M8 connectors provided. They can be fixed directly to the HDM input end-plate type 1-11, code 0227301206

(N.B. NOT to be fixed to the HDM end-plate, type 1, code 0227301207).

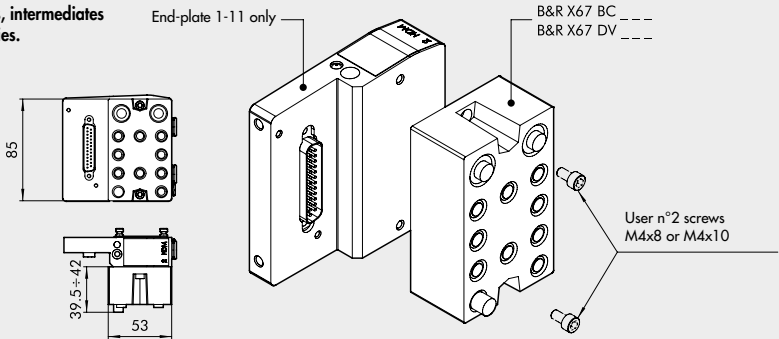


APPLICATIONS OF B&R MODULES TO HDM END-PLATES

Refer to page B2.142 for valves, intermediates elements and common accessories.



Refer to page B2.142 for valves, intermediates elements and common accessories.

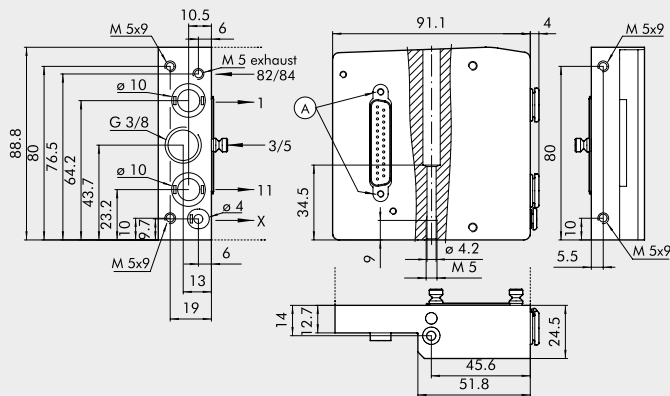


SYNOPTIC, SIZES AND VERSIONS

H D M VALVE	2 INPUT END-PLATE	B & R ELECTRICAL BASE	M MANUAL TYPE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 6 FURTHER DETAILS
Heavy duty Multimach IP65	2 End-plate 1-11 3 End-plate 1	B&R Fit for B&R	M Monostable manual control B Bistable manual control	I n° 2 3/2 NC W n° 2 3/2 NO L 3/2 NO + 3/2 NC V 5/2 monostable K 5/2 bistable O 5/3 monostable *F 5/2 monostable 4 Right-end-plate 1-11 pipe Ø12 5 Blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 4 6 Cartridge 6 8 Cartridge 8 - 14 mm 85 Cartridge 8 - 23 mm 10 Cartridge 10	16 n° 2 brackets for DIN bar

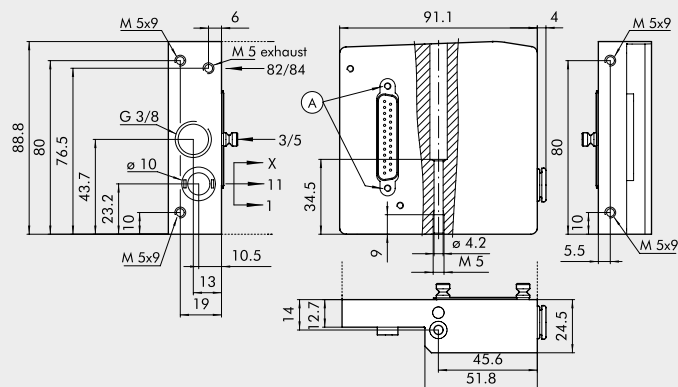
* Uses a single PIN (like the V) and occupies 2 signals.

HDM 1-11 END-PLATE FOR B&R



Code	Description	Weight [g]
0227301206	HDM 1-11 end-plate kit for B&R	340

HDM 1 END-PLATE FOR B&R



Code	Description	Weight [g]
0227301207	HDM 1 end-plate kit for B&R	380

NOTES

VALVES

HDM + B&R

B2

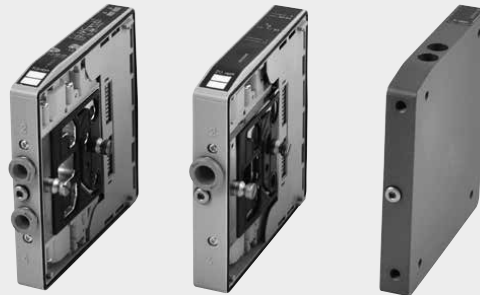
HDM - VALVES, INTERMEDIATES ELEMENTS AND ACCESSORIES

VALVES

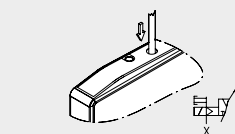
HDM - VALVES, INTERMEDIATES ELEMENTS AND ACCESSORIES

HDM valve can be included in islands with any available input terminal. The same valve can be connected to the multiple connection end-plate and all the field bus end-plates.

Note: if you use valves 85 type or 10 exploiting their flow capacity, it is appropriate to choose the inlet end plate 1-11 type by feeding the pilots separately (to avoid the pressure to decrease too much on the pilots). If you use simultaneously more than one valve 85 or 10 it is necessary to potentiate the pneumatic feeding by inserting end plates having 12 mm pipe and/or through intermediate modules

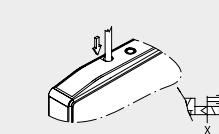


MANUAL CONTROLS



MONOSTABLE OVERRIDE PORT 2
servo-assisted

- Press and hold the manual control in position (not necessary for bistable type K valve)
- Release the manual control:
 - The manual control returns to the home position.
 - Valves type I, W, L, V, F, and O reposition.
 - The type K valve remains switched



MONOSTABLE OVERRIDE PORT 4
servo-assisted

- Press and hold the manual control in position (not necessary for bistable type K valve)
- Release the manual control:
 - The manual control returns to the home position.
 - Valves type I, W, L, V and F reposition.
 - The type K valve remains switched

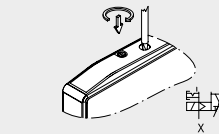
With type F and V valves, this manual control is not present.

N.B.: The pilot power supply X must be present.

N.B.: The pilot power supply X must be present.

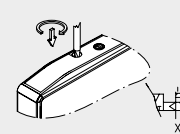
- The reference code for the monostable control ends in 0 (2 for type F).

Example: 707203053 - 0



BISTABLE OVERRIDE PORT 2
servo-assisted

- Press the manual control right in then turn it clockwise 90 degrees and leave it in position.
- Rotate the manual control 90 degrees anticlockwise, and then release it:
 - The manual control returns to the home position.
 - Valves type I, W, L, V, F, and O reposition.
 - The type K valve remains switched



BISTABLE OVERRIDE PORT 4
servo-assisted

- Press the manual control right in then turn it 90 degrees clockwise and leave it in position.
- Rotate the manual control 90 degrees anticlockwise, and then release it:
 - The manual control returns to the home position.
 - Valves type I, W, L and O reposition.
 - The type K valve remains switched

With type F and V valves, this manual control is not present.

N.B.: The pilot power supply X must be present.

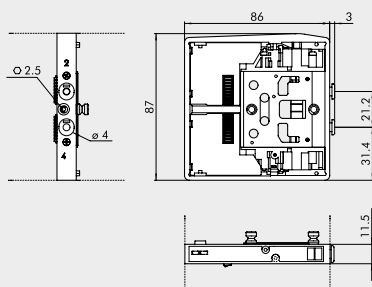
N.B.: The pilot power supply X must be present.

- The reference code for the monostable control ends in 1 (3 for type F).

Example: 707203053 - 1

1 VALVE DIMENSIONS HDM Ø 4

*uses a single PIN (like the V) and occupies 2 signals

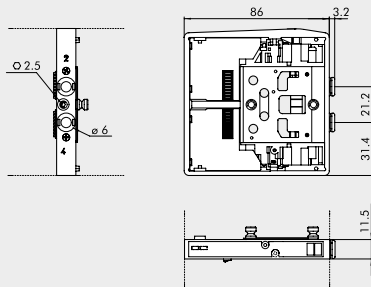


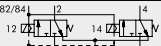
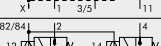
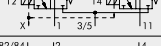
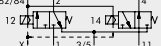
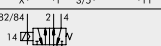
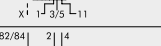
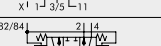
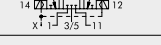
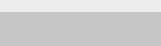
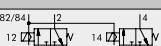
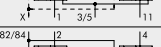
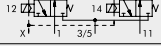
Symbol		Code	Manual control	Weight [g]
HDM I4		7071030530	monostable	130
		7071030531	bistable	
HDM W4		7071030630	monostable	130
		7071030631	bistable	
HDM L4		7071030730	monostable	130
		7071030731	bistable	
HDM V4		7071030130	monostable	115
		7071030131	bistable	
HDM *F4		7071030132	monostable	115
		7071030133	bistable	
HDM K4		7071030110	monostable	130
		7071030111	bistable	
HDM O4		7071030210	monostable	130
		7071030211	bistable	

B2.142

① VALVE DIMENSIONS HDM Ø 6

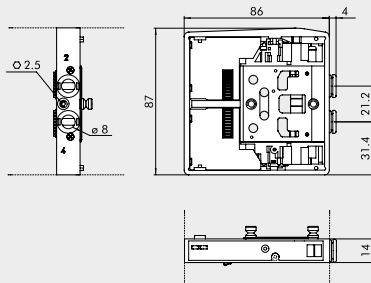
*uses a single PIN (like the V) and occupies 2 signals

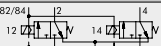
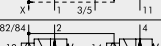
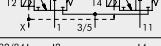
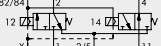
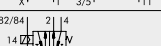
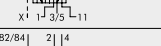
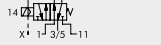
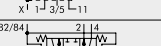
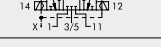
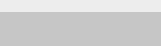
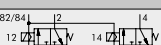
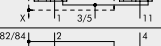
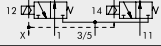


Symbol		Code	Manual control	Weight [g]
HDM		7072030530	monostable	130
I6		7072030531	bistable	
HDM		7072030630	monostable	130
W6		7072030631	bistable	
HDM		7072030730	monostable	130
L6		7072030731	bistable	
HDM		7072030130	monostable	115
V6		7072030131	bistable	
HDM		7072030132	monostable	115
*F6		7072030133	bistable	
HDM		7072030110	monostable	130
K6		7072030111	bistable	
HDM		7072030210	monostable	130
O6		7072030211	bistable	

① VALVE DIMENSIONS HDM Ø 8

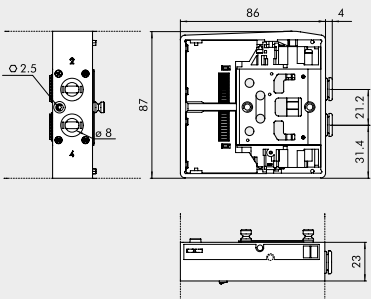
*uses a single PIN (like the V) and occupies 2 signals

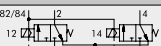
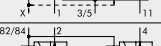
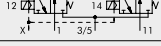
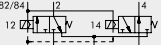
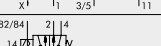
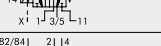
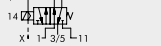
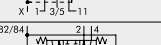
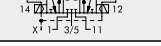
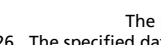


Symbol		Code	Manual control	Weight [g]
HDM		7073030530	monostable	140
I8		7073030531	bistable	
HDM		7073030630	monostable	140
W8		7073030631	bistable	
HDM		7073030730	monostable	140
L8		7073030731	bistable	
HDM		7073030130	monostable	130
V8		7073030131	bistable	
HDM		7073030132	monostable	130
*F8		7073030133	bistable	
HDM		7073030110	monostable	140
K8		7073030111	bistable	
HDM		7073030210	monostable	140
O8		7073030211	bistable	

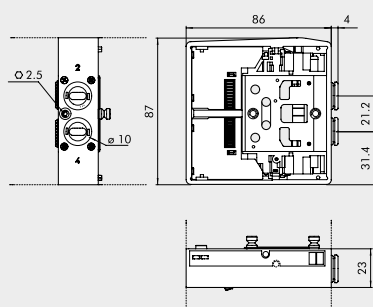
① VALVE DIMENSIONS HDM Ø 8S

*uses a single PIN (like the V) and occupies 2 signals

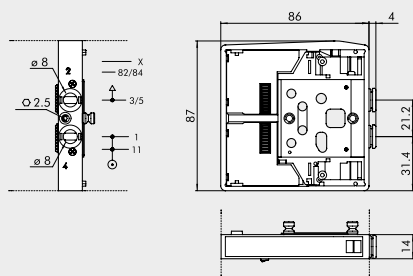
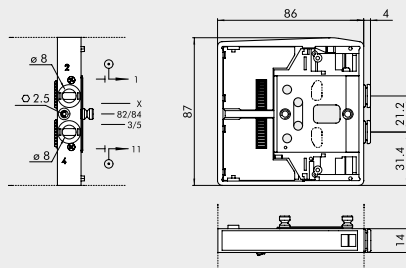


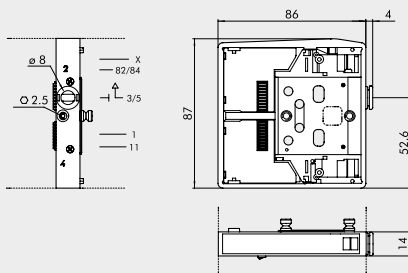
Symbol		Code	Manual control	Weight [g]
HDM		7077030530	monostable	260
I8S		7077030531	bistable	
HDM		7077030630	monostable	260
W8S		7077030631	bistable	
HDM		7077030730	monostable	260
L8S		7077030731	bistable	
HDM		7077030130	monostable	241
V8S		7077030131	bistable	
HDM		7077030132	monostable	241
*F8S		7077030133	bistable	
HDM		7077030110	monostable	253
K8S		7077030111	bistable	
HDM		7077030210	monostable	262
O8S		7077030211	bistable	

*uses a single PIN (like the V) and occupies 2 signals

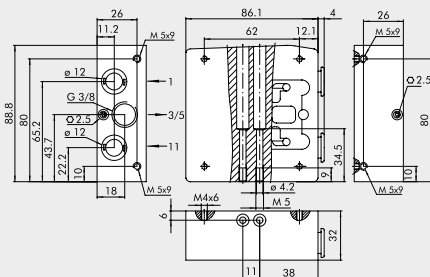


Symbol		Code	Manual control	Weight [g]
HDM I10		7078030530 7078030531	monostable bistable	250
HDM W10		7078030630 7078030631	monostable bistable	250
HDM L10		7078030730 7078030731	monostable bistable	250
HDM V10		7078030130 7078030131	monostable bistable	231
*F10		7078030132 7078030133	monostable bistable	231
HDM K10		7078030110 7078030111	monostable bistable	243
HDM O10		7078030210 7078030211	monostable bistable	252

[illegible][illegible]

20 INTERMEDIATE EXHAUST SWITCH


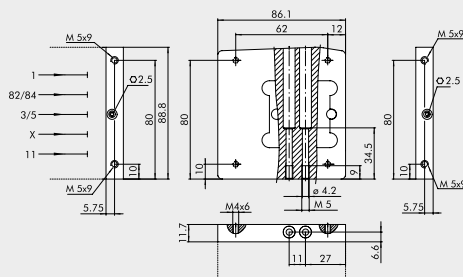
Code	Description	Weight [g]
0227301303	Intermediate exhaust switch HDM	125

4 RIGHT-END-PLATE 1-11 PIPE Ø 12


Code	Description	Weight [g]
0227301221	Righ-end-plate HDM 1-11 Ø 12	630

This end-plate allows for supplies to be differentiated:

- Port 2
- Port 4

5 BLIND END-PLATE


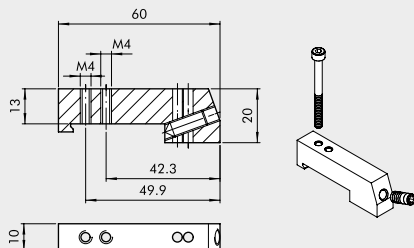
Code	Description	Weight [g]
0227301500	Blind end-plate HDM	230

VALVES

HDM - VALVES, INTERMEDIATES ELEMENTS AND ACCESSORIES

ACCESSORIES

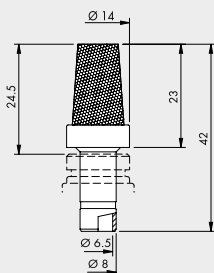
16 CONNECTION BRACKETS ON DIN BAR



Code	Description	Weight [g]
0227301600	Connection brackets on din bar HDM/CM	30

Supplied complete with one M4x45 screws and one M6 grub screw
Individually packed

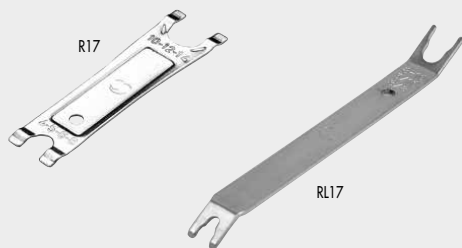
SILENCER FOR FITTING, Ø 8



Code	Description	Flow rate at 6.3 bar [l/min]	Weight [g]
W0970530084	Silencer for fitting, Ø 8	2400	15

At the 3/5-exhaust port of the intermediate throughreference 6 and of the exhaust switch reference 20

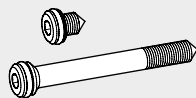
R17 - PIPE RELEASE SPANNER



Code	Rif.	Length [mm]	Ø Tube
2L17001	RL17	140	from 3 to 10
2017001	R17	95	from 4 to 14

SPARES

GRUB SCREW KIT



Code	Description
0227301800	Grub screw for Multimach HDM/CM

Comes in 1 + 1 pc. packs