

HDM + MULTI-POLE CONNECTION

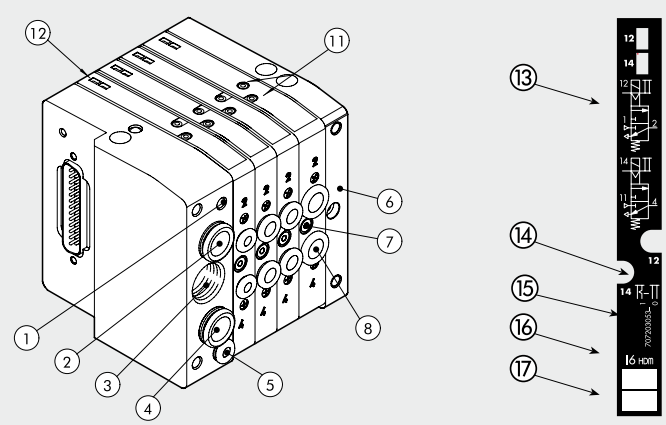
HDMs are the ideal solution for those requiring the unbeatable performance, flexibility and modularity of Multimach valves combined with sturdy mechanics and a high degree of protection against external agents. Each valve is enclosed in a reinforced technopolymer protective shell that acts as a shock-absorber 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 5/32", 1/4", 5/16" mm automatic fitting for ports 2 and 4 / power supply port for Ø 3/8 or 1/2 automatic fitting / 3/8 thread for exhaust port, 10/32 UNF thread for exhaust pilot port | | | | |
| Connection on the end-plate for the supply of pilots | | Automatic fitting Ø 5/32 | | | | |
| Maximum number of pilots | | 16 | | | | |
| Maximum number of valves | | 16 (same as the max. no. of pilots) | | | | |
| Operating temperature range | °F | 14 to + 140 | | | | |
| Fluid | | Filtered air without lubrication; lubrication, if used, must be continuous | | | | |
| Flow rate at 91 psi ΔP 14.5 psi | scfm | 0.45 in Ø5/32-Cv15 | 0.45 in Ø1/4-Cv14 | 0.55 in Ø5/16-Cv8 | 0.9 in Ø5/16 | 0.9 in Ø3/8 |
| | | 7 | 17.7 | 23 | 35.3 | 42.5 |
| | | 7 | 10.6 | 10.6 | 17.7 | 17.7 |
| Pressure range | psi | X (pilot supply) | | | 1-11 (valve supply) | |
| | Terminal 1-11 | 43.5-100 | | | vacuum at 145 | |
| | Terminal 1 | 43.5 - 100 | | | | |
| Voltage range | | 24VDC ± 10% | | | | |
| Power | W | 0.9 | | | | |
| Control | | PNP or NPN | | | | |
| Insulation class | | F155 | | | | |
| Degree of protection | | IP65 (with conveyed exhaust) | | | | |
| Solenoid rating | | 100% ED | | | | |
| TRA/TRR 2x3/2 monostable at 87 psi | ms | 8 / 45 | | | 8 / 60 | |
| TRA/TRR 5/2 monostable at 87 psi | ms | 8 / 33 | | | 9 / 60 | |
| TRA/TRR 5/2 bistable at 87 psi | ms | 20 / 20 | | | 8 / 8 | |
| TRA/TRR 5/3 cc monostable at 87 psi | 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 | | Please refer to page 5-4 of the technical documentation | | | | |

COMPONENTS

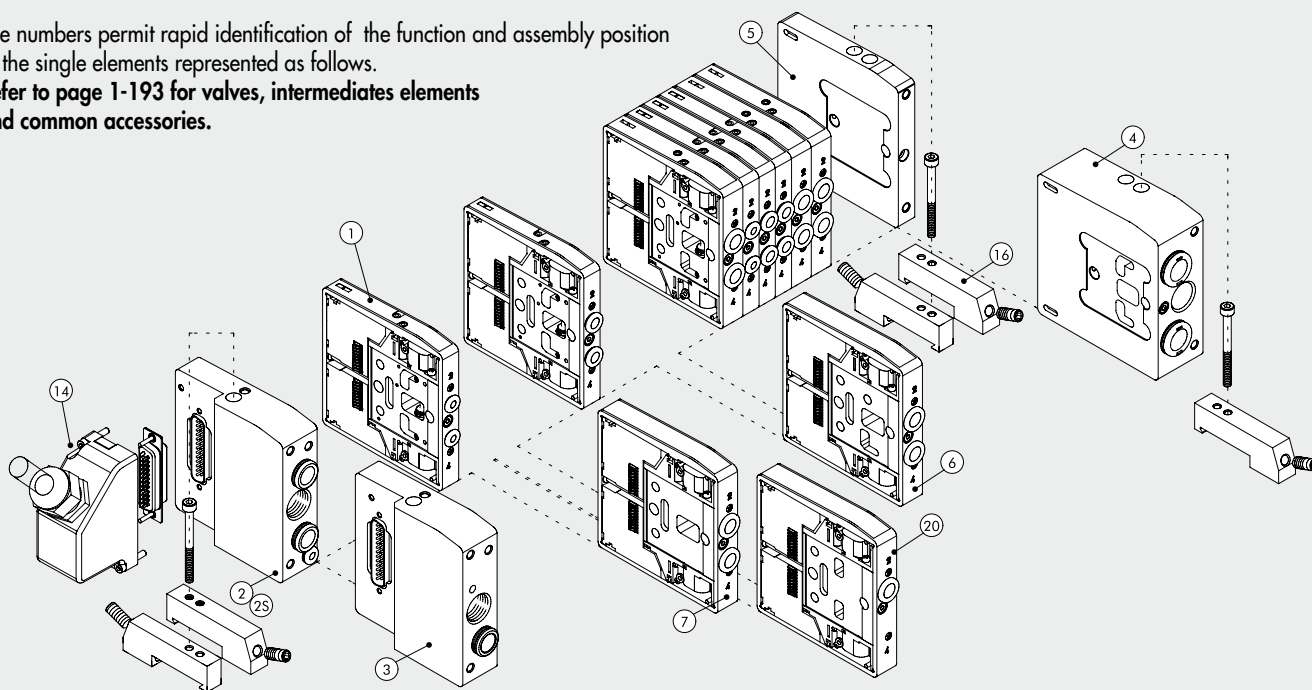
- ① Exhaust - Solenoid pilot 82/84
- ② Valve supply - port 1
- ③ Threaded connection of exhausts 3/5
- ④ Valve supply - port 11
- ⑤ Electrical control supply X
- ⑥ Blind end-plate or right end-plate 1-11
- ⑦ Screw for valve wall-mounting
- ⑧ Utility port for pipe Ø 5/32-1/4-5/16-3/8
- ⑪ Manual control
- 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



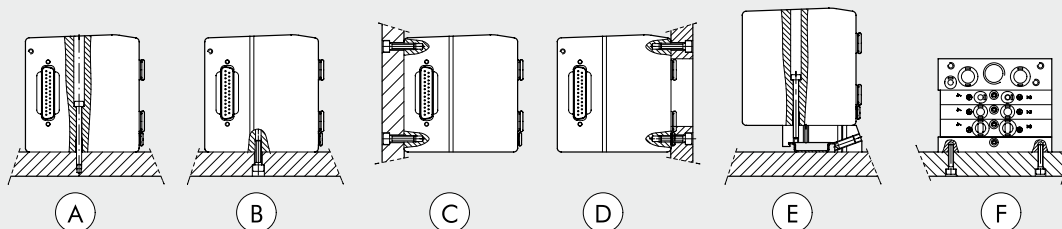
THE MULTIMACH WORLD: FLEXIBILITY

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

Refer to page 1-193 for valves, intermediates elements and common accessories.



FIXING THE BASE



- (A) Fixing from above using the 1 or 1-1 input terminal and the blind terminal.
- (B) Fixing from above using the 1 or 1-1 input terminal and the blind terminal, using the 10-32 UNF threads on the bottom and the rear of the terminals.
- (C) Fixing from above using the 1 or 1-1 input terminal and the blind terminal, using the 10-32 UNF 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.

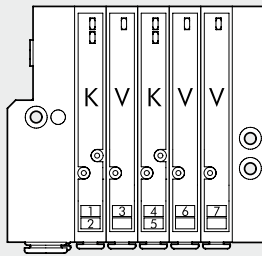
Note: The sole fixing admitted is the one showed.

KEY TO CODES

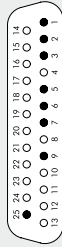
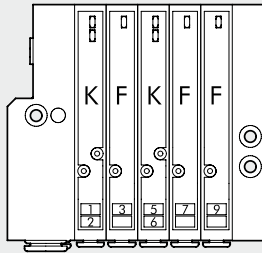
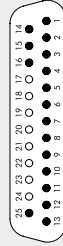
| H D M VALVE | 2 INPUT END-PLATE | 8 ELECTRICAL BASE | M MANUAL TYPE | 16U - W 8 - W 6U - O 4 - L 8 - 5 TYPE OF VALVE | 1 4 - 1 6 FURTHER DETAILS |
|------------------------------|---|----------------------|--|--|---|
| Heavy duty Multimach IP65 | 2U End-plate 1-11 pipe Ø 3/8 3U End-plate 1 pipe Ø 3/8 2SU End-plate 1-11 pipe Ø 1/2 | 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 pipe Ø 1/2 5 Blind end-plate 6 Passing-intermede 7 Blind intermediate 20 Exhaust section 4 Cartridge 5/32 6U Cartridge 1/4 8 Cartridge 5/16 - 0.55 in 8S Cartridge 5/16 - 0.9 in 10 Cartridge 3/8 | 14 IP65 25-wire shell 16 n° 2 brackets for DIN bar |

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

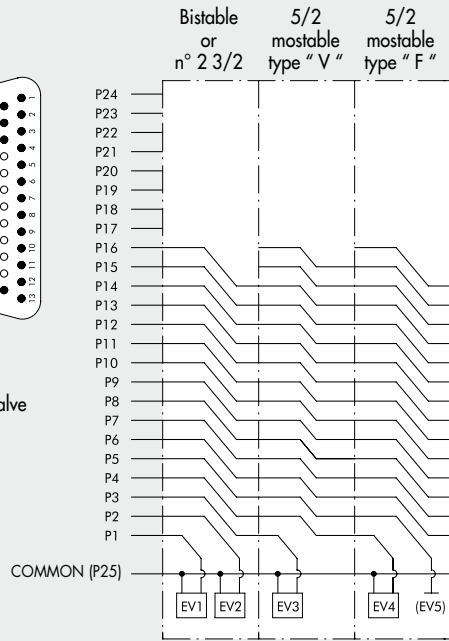
WIRING DIAGRAM



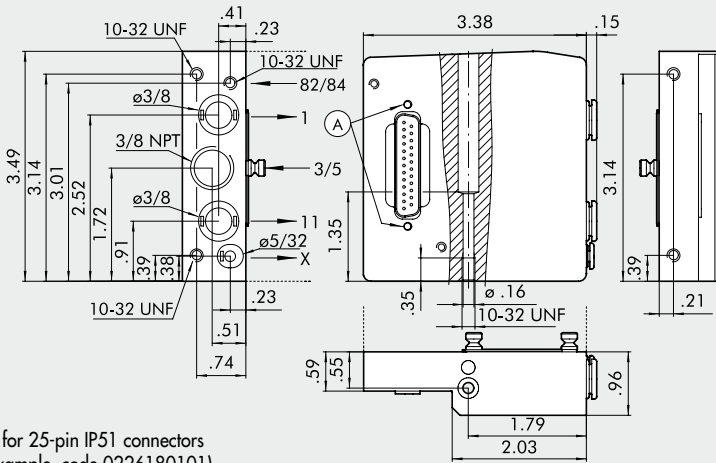
PNP - Com (-)
NPN - Com (+)



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



2 END-PLATE 1-11-25D



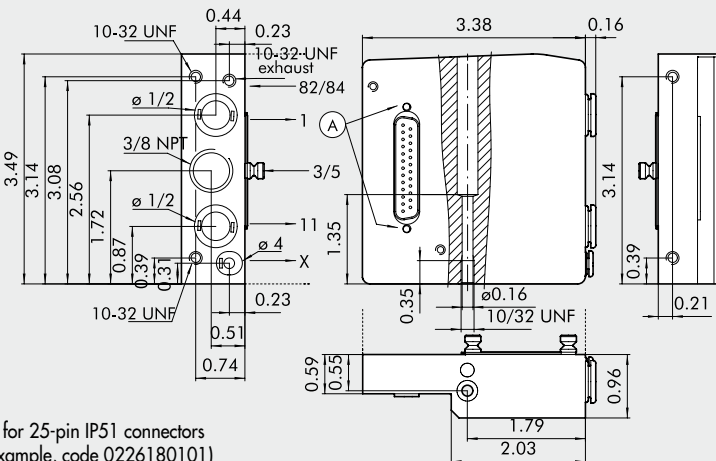
Ⓐ = Holes for 25-pin IP51 connectors (for example, code 0226180101)

| Code | Description | Weight [lb] |
|-------------|---------------------------------|-------------|
| 0227301200U | End-plate HDM 1-11-25D Ø 3/8 | 0.815 |

This end-plate allows for supplies to be differentiated

- Port 2
- Port 4
- Pilot supply

2S END-PLATE 1-11-25D - PIPE Ø1/2

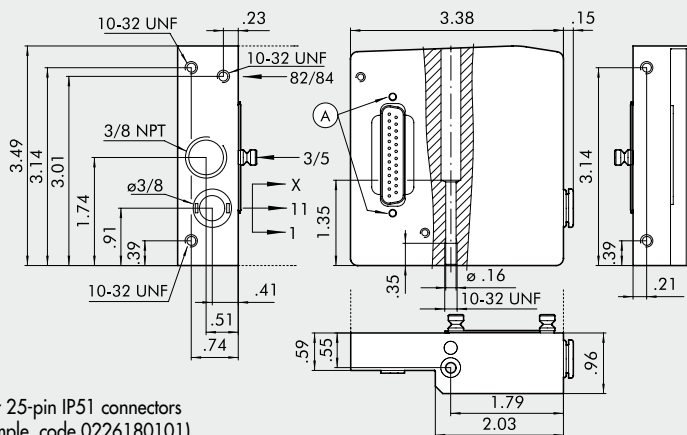


Ⓐ = Holes for 25-pin IP51 connectors (for example, code 0226180101)

| Code | Description | Weight [lb] |
|-------------|---------------------------------|-------------|
| 0227301220U | End-plate HDM 1-11-25D Ø 1/2 | 0.815 |

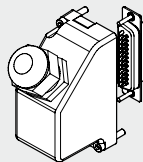
This end-plate allows for supplies to be differentiated

- Port 2
- Port 4
- Pilot supply

③ END-PLATE 1-25D


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

| Code | Description | Weight [lb] |
|-------------|------------------------------|-------------|
| 0227301201U | End-plate HDM 1-25D Ø 3/8 | 0.815 |

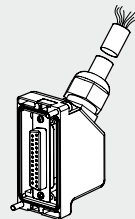
ACCESSORIES
⑭ 45° CONNECTOR KIT, 25 WIRES IP65


| Code | Description | Weight [lb] |
|------------|-----------------------------------|-------------|
| 0226180107 | 45° connector kit, 25 wires IP 65 | 0.143 |

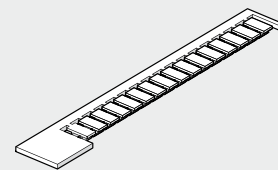
CABLES


| Code | Description | Weight [lb] |
|------------|---------------|-------------|
| 0226107201 | 10-wire cable | 0.130 |
| 0226107101 | 19-wire cable | 0.269 |
| 0226107102 | 25-wire cable | 0.287 |

Specify the number of inch desired.

PRE-WIRED 45° CONNECTOR KIT, 25 WIRES IP65


| Code | Description | Weight [lb] |
|------------|--|-------------|
| 0226960100 | Connector IP 65 + 25-wire 45° cable L = 35 inch | 0.418 |
| 0226960250 | Connector IP 65 + 25-wire 45° cable L = 99 inch | 0.860 |
| 0226960500 | Connector IP 65 + 25-wire 45° cable L = 197 inch | 1.631 |

IDENTIFICATION PLATE KIT


| Code | Description |
|------------|--------------------------|
| 0226107000 | Identification plate kit |

Comes in 16-pc. packs

WIRING DIAGRAM FOR PRE-WIRED PLUG CONNECTOR
25 PIN

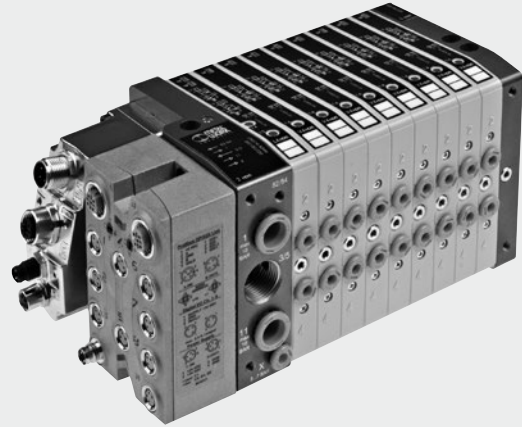
| Position of electrical contact | Colour of the corresponding wire | Position of electrical contact | Colour of the corresponding wire | Position of electrical contact | Colour of the corresponding wire |
|--------------------------------|----------------------------------|--------------------------------|----------------------------------|---------------------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

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.

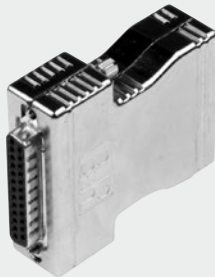
The X-system is a system handling analogue and digital inputs and outputs for local or remote use, which B&R defines as decentralised backplane. Different types of modules are available. We present those designed for connection with Multimach and HDM valve islands. We only indicate the B&R's code root, 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.



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 0227301207U or the special input end-plate type 1-11, code 0227301206U.



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 0227301207U, or the special input end-plate, type 1-11 code 0227301206U.

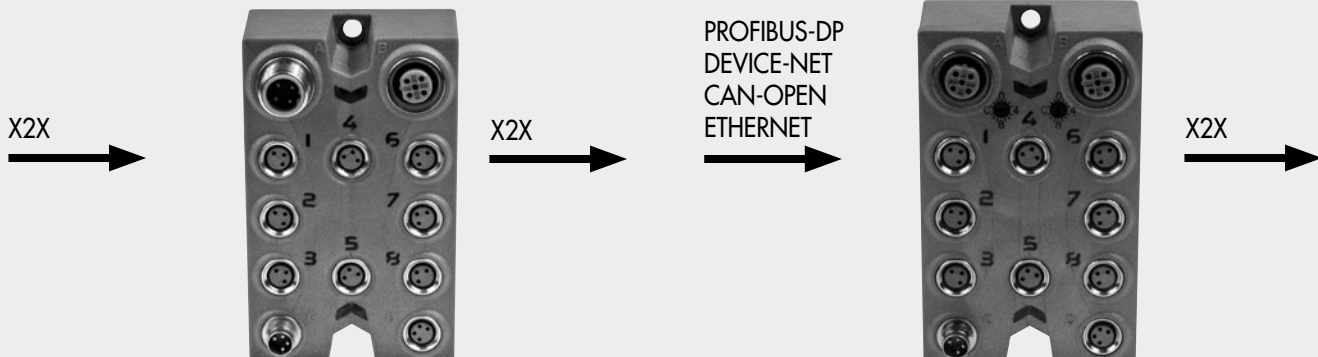


X67 I/O SYSTEM MODULES

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 0227301206U
(N.B. NOT to be fixed to the HDM end-plate type 1, code 0227301207U).

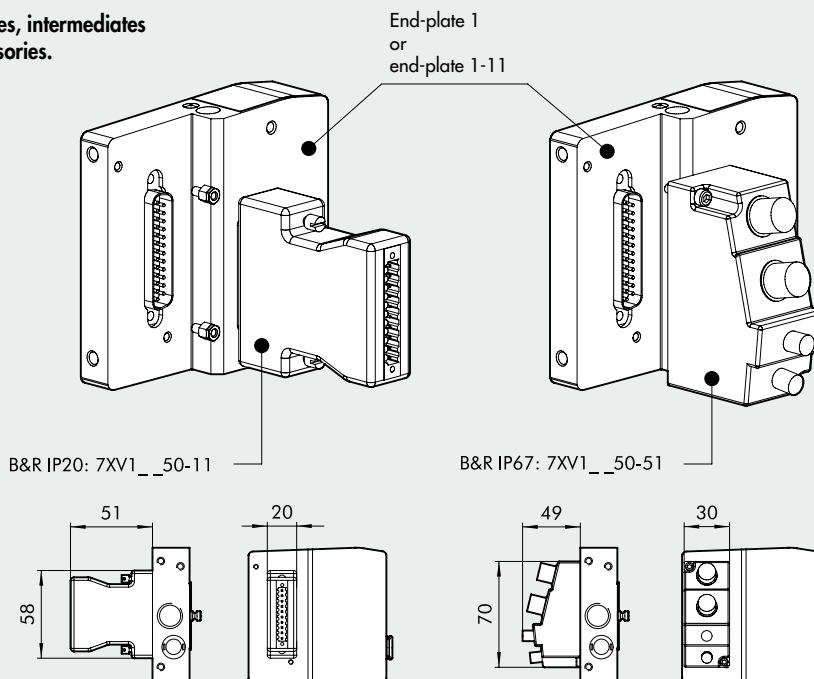
X67 BUS CONTROLLER MODULES

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 0227301206U
(N.B. NOT to be fixed to the HDM end-plate, type 1, code 0227301207U).

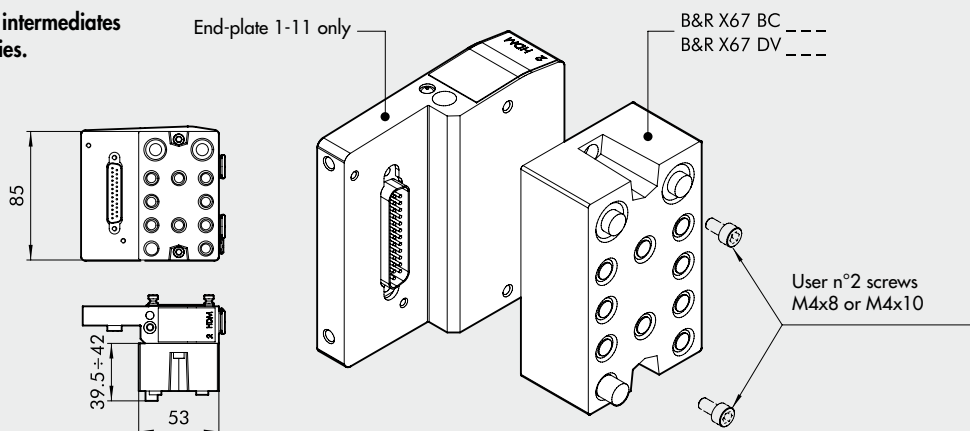


APPLICATIONS OF B&R MODULES TO HDM END-PLATES

Refer to page 1-193 for valves, intermediates elements and common accessories.



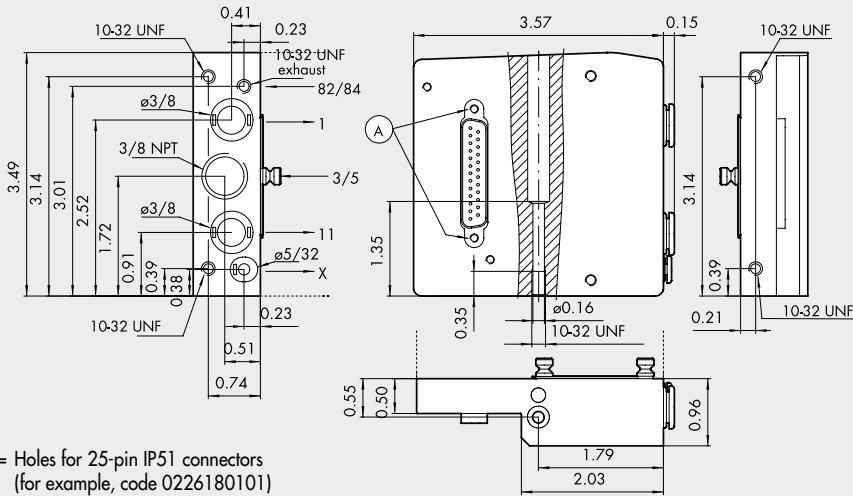
Refer to page 1-193 for valves, intermediates elements and common accessories.


KEY TO CODES

| H D M VALVE | 2 U INPUT END-PLATE | B & R ELECTRICAL BASE | M MANUAL TYPE | 16 U - W 8 - W6 U - O4 - L8 - 5 TYPE OF VALVE | 1 6 FURTHER DETAILS |
|------------------------------|-------------------------------------|--------------------------|--|---|------------------------------|
| Heavy duty Multimach IP65 | 2U End-plate 1-11 3U 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 Ø1/2 5 Blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 5/32 6U Cartridge 1/4 8 Cartridge 5/16-0.55 in 85 Cartridge 5/16-0.9 in 10 Cartridge 3/8 | 16 n° 2 brackets for DIN bar |

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

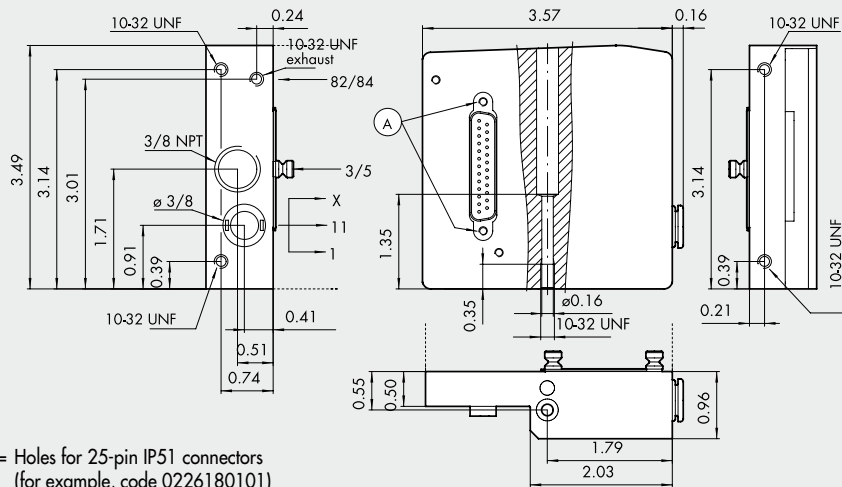
HDM 1-11 END-PLATE FOR B&R



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

| Code | Description | Weight [lb] |
|-------------|--------------------------------|-------------|
| 0227301206U | HDM 1-11 end-plate kit for B&R | 0.749 |

HDM 1 END-PLATE FOR B&R



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

| Code | Description | Weight [lb] |
|-------------|-----------------------------|-------------|
| 0227301207U | HDM 1 end-plate kit for B&R | 0.837 |

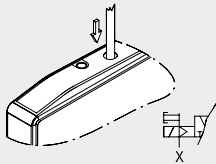
NOTES

HDM valve can be included in islands with any available input terminal.

Note: if you use valves 8S 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 8S or 10 it is necessary to potentiate the pneumatic feeding by inserting end plates having Ø 1/2 pipe and/or through intermediate modules



MANUAL CONTROLS

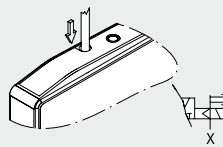
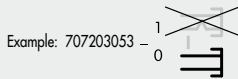


MONOSTABLE OVERRIDE PORT 2
servo-assisted

- 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

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

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

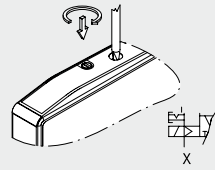


MONOSTABLE OVERRIDE PORT 4
servo-assisted

- 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, F, 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.

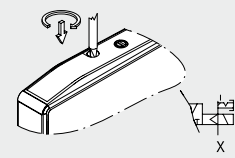
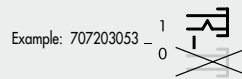


BISTABLE OVERRIDE PORT 2
servo-assisted

- 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

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

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



BISTABLE OVERRIDE PORT 4
servo-assisted

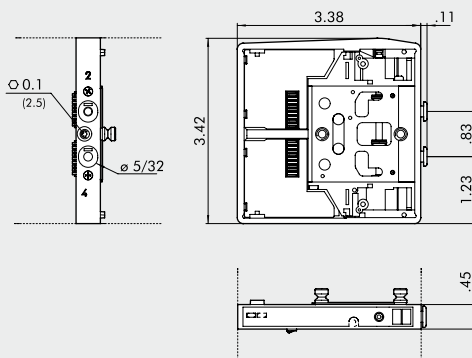
- Press the manual control right in then turn it 90 degrees clockwise and Leave it in position.
- Rotate the manual control 90 degrees anticlockwise, and then release it.
 - The manual control returns to the home position.
 - Valves type I, W, L and O reposition.
 - The type K valve remains switched

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

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

① VALVE DIMENSIONS HDM Ø 4 (Ø 5/32)

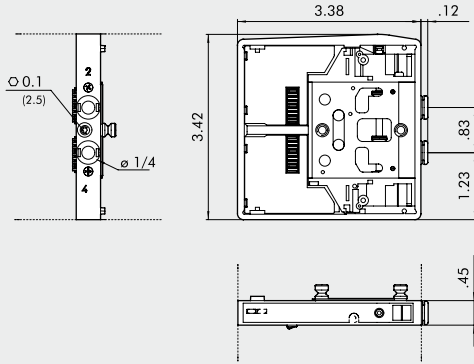
*uses a single PIN (like the V) and occupies 2 signals



| Symbol | Code | Manual control | Weight [lb] |
|---------|--------------------------|------------------------|-------------|
| HDM I4 | 7071030530 7071030531 | monostable bistable | 0.286 |
| HDM W4 | 7071030630 7071030631 | monostable bistable | 0.286 |
| HDM L4 | 7071030730 7071030731 | monostable bistable | 0.286 |
| HDM V4 | 7071030130 7071030131 | monostable bistable | 0.253 |
| HDM *F4 | 7071030132 7071030133 | monostable bistable | 0.253 |
| HDM K4 | 7071030110 7071030111 | monostable bistable | 0.286 |
| HDM O4 | 7071030210 7071030211 | monostable bistable | 0.286 |

① VALVE DIMENSIONS HDM Ø 1/4

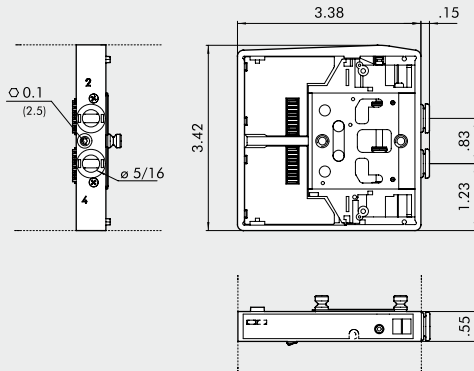
*uses a single PIN (like the V) and occupies 2 signals



| Symbol | | Code | Manual control | Weight [lb] |
|-------------------|--|-------------|----------------|-------------|
| HDM I6 | | 7072030530U | monostable | 0.286 |
| | | 7072030531U | bistable | |
| HDM W6 | | 7072030630U | monostable | 0.286 |
| | | 7072030631U | bistable | |
| HDM L6 | | 7072030730U | monostable | 0.286 |
| | | 7072030731U | bistable | |
| HDM V6 | | 7072030130U | monostable | 0.253 |
| | | 7072030131U | bistable | |
| HDM *F6 | | 7072030132U | monostable | 0.253 |
| | | 7072030133U | bistable | |
| HDM K6 | | 7072030110U | monostable | 0.286 |
| | | 7072030111U | bistable | |
| HDM O6 | | 7072030210U | monostable | 0.286 |
| | | 7072030211U | bistable | |

① VALVE DIMENSIONS HDM Ø 8 (Ø 5/16)

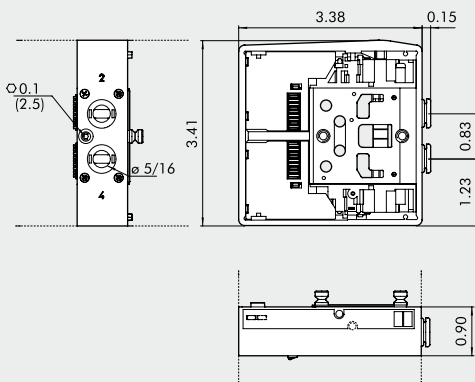
*uses a single PIN (like the V) and occupies 2 signals



| Symbol | | Code | Manual control | Weight [lb] |
|-------------------|--|------------|----------------|-------------|
| HDM I8 | | 7073030530 | monostable | 0.308 |
| | | 7073030531 | bistable | |
| HDM W8 | | 7073030630 | monostable | 0.308 |
| | | 7073030631 | bistable | |
| HDM L8 | | 7073030730 | monostable | 0.308 |
| | | 7073030731 | bistable | |
| HDM V8 | | 7073030130 | monostable | 0.286 |
| | | 7073030131 | bistable | |
| HDM *F8 | | 7073030132 | monostable | 0.286 |
| | | 7073030133 | bistable | |
| HDM K8 | | 7073030110 | monostable | 0.308 |
| | | 7073030111 | bistable | |
| HDM O8 | | 7073030210 | monostable | 0.308 |
| | | 7073030211 | bistable | |

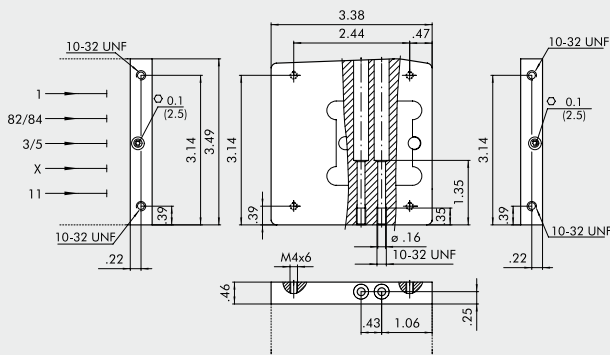
① VALVE DIMENSIONS HDM Ø 8S (Ø 5/16)

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



| Symbol | | Code | Manual control | Weight [lb] |
|--------------------|--|------------|----------------|-------------|
| HDM I8S | | 7077030530 | monostable | 0.573 |
| | | 7077030531 | bistable | |
| HDM W8S | | 7077030630 | monostable | 0.573 |
| | | 7077030631 | bistable | |
| HDM L8S | | 7077030730 | monostable | 0.573 |
| | | 7077030731 | bistable | |
| HDM V8S | | 7077030130 | monostable | 0.531 |
| | | 7077030131 | bistable | |
| HDM *F8S | | 7077030132 | monostable | 0.531 |
| | | 7077030133 | bistable | |
| HDM K8S | | 7077030110 | monostable | 0.557 |
| | | 7077030111 | bistable | |
| HDM O8S | | 7077030210 | monostable | 0.577 |
| | | 7077030211 | bistable | |

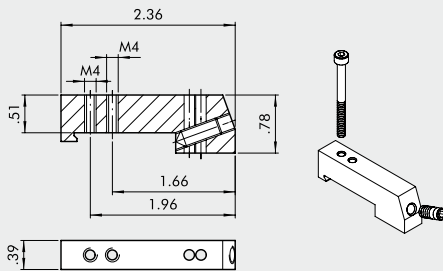
5 BLIND END-PLATE



| Code | Description | Weight [lb] |
|------------|---------------------|-------------|
| 0227301500 | Blind end-plate HDM | 0.507 |

ACCESSORIES

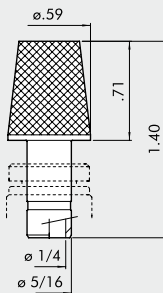
16 CONNECTION BRACKETS ON DIN BAR



| Code | Description | Weight [lb] |
|------------|---------------------------------------|-------------|
| 0227301600 | Connection brackets on din bar HDM/CM | 0.066 |

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

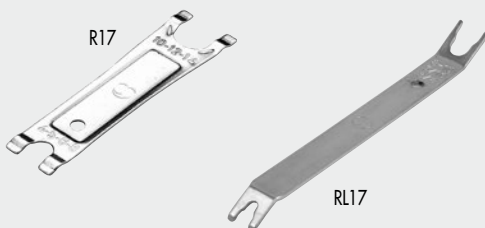
SILENCER FOR FITTING, Ø 5/16



| Code | Description | Weight [lb] |
|-------------|------------------------------|-------------|
| W0970530084 | Silencer for fitting, Ø 5/16 | 0.033 |

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

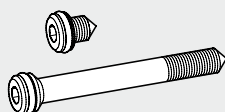
R17 - PIPE RELEASE SPANNER



| Code | Rif. | Length [in] | Ø Tube |
|---------|------|-------------|----------------------|
| 2L17001 | RL17 | 5.51 | from Ø 1/8 to Ø 3/8 |
| 2017001 | R17 | 9.5 | from Ø 5/32 to Ø 1/2 |

SPARES

GRUB SCREW KIT



| Code | Description |
|------------|---------------------------------|
| 0227301800 | Grub screw for Multimach HDM/CM |

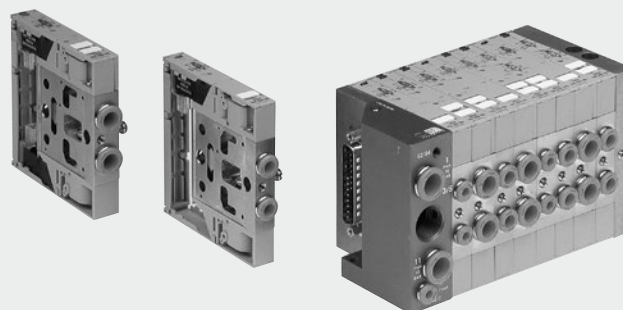
Comes in 1 + 1 pc. packs

Multimach is not a mere valve, it is an electropneumatic distribution "island" - a single block ready for connection to power and air delivery pipes and a multi-pin cable.

All the pneumatic connections are situated on one side with built-in push-in fittings. The user interface is on the other side so that the fitter or serviceman has everything within an easy reach: manual controls, active valve signalling lights, compressed air system diagram, valve identification plates.

The user can count on four different orientations for the electric connector. Multimach provides full flexibility in the application of valves: 1 to 24 valves, power plates and drain for pipes of various sizes, electric 9- or 25-pin plug connector. But the real novelty, is the possibility of mounting valves of different flow rates: three different valves can be mounted at a time and a valve can be replaced with another of a different flow rate. This revolutionary concept enables the user to optimise space and costs and adapt the unit to different performance requirements.

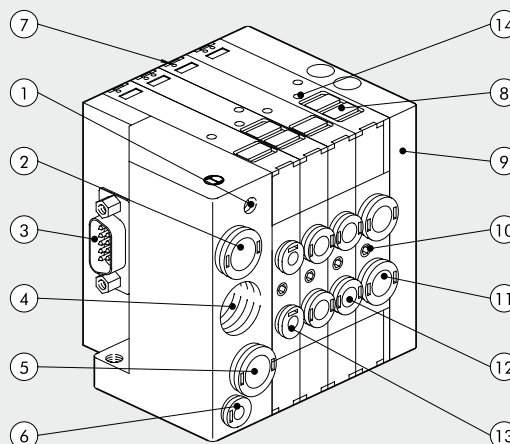
The ratio between the flow rate of the Multimach system and sizes is incomparable: the top in terms of miniaturisation and efficiency.



| TECHNICAL DATA | | | | |
|--|--------------------|---|--------------------|---------------------|
| Valve port connections | | Ø 5/32", 1/4", 5/16" automatic fitting for ports 2 and 4 / power supply port for Ø 5/16" or Ø 3/8" 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 5/32" | | |
| Operating temperature range | °F | 14 to + 140 | | |
| Fluid | | Filtered air without lubrication; lubrication, if used, must be continuous | | |
| Screw for valve - wall-mounting | | According to the end-plate used: see page 1-198 | | |
| Flow rate at 87 psi ΔP 14.5 psi | scfm | Ø 5/32: 7, Cv .15 | Ø 1/4: 17,6, Cv .4 | Ø 5/16: 28, Cv .8 |
| Voltage range | | 24 VDC ±10% | | |
| Power | W | 1.2 | | |
| Insulation class | | F155 | | |
| Degree of protection | | IP51 | | |
| Solenoid rating | | 100% ED | | |
| Pressure range | | X (pilot supply) | | 1-11 (valve supply) |
| | Terminal 1-11 | psi | | vacuum at 145 psi |
| | Terminal 1 | psi | 43.5 to 101.5 | |
| | Terminal 1 reduced | psi | 43.5 to 101.5 | |
| TRA/TRR 2x3/2 monostable at 87 psi | ms | | 8 / 45 | |
| TRA/TRR 5/2 monostable at 87 psi | ms | | 8 / 33 | |
| TRA/TRR 5/2 bistable at 87 psi | ms | | 20 / 20 | |
| TRA/TRR 5/3 cc monostable at 87 psi | ms | | 20 / 20 | |
| 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. Please refer to page 5-4 of the technical documentation | | |
| Compatibility with oils | | | | |

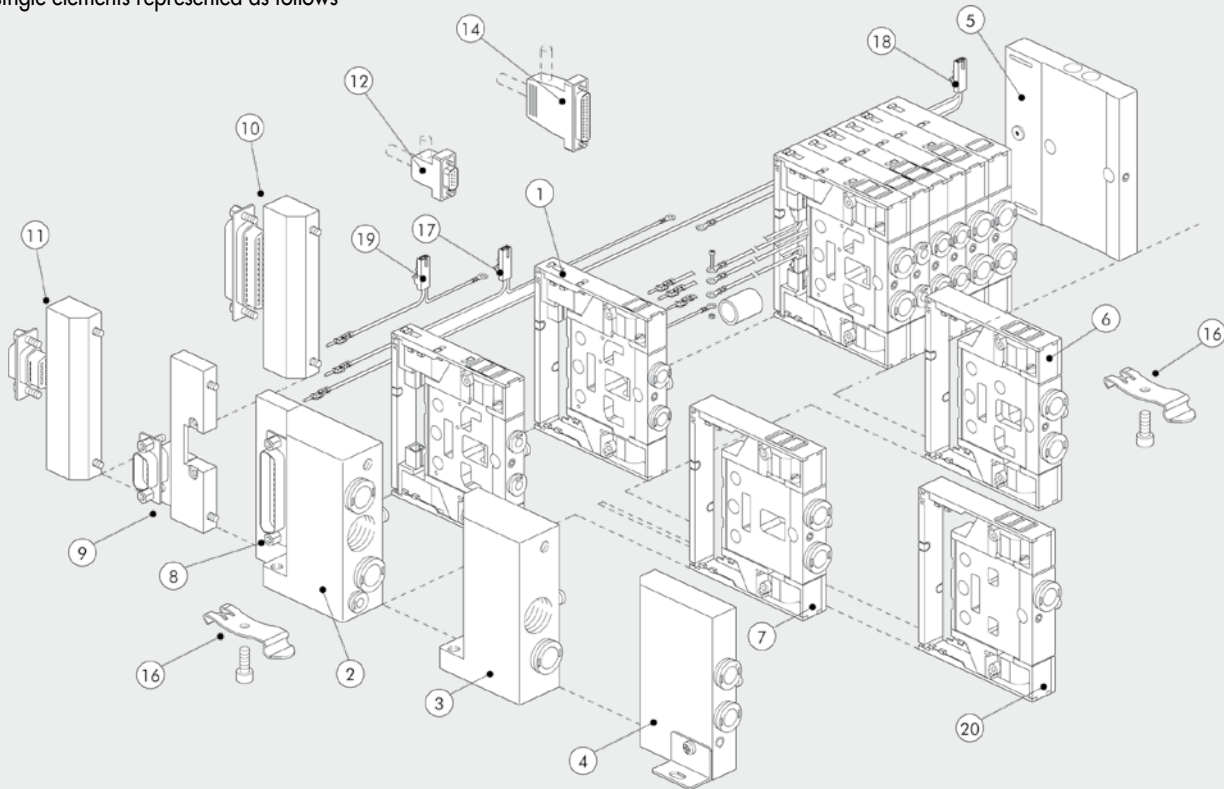
COMPONENTS

- ① Exhaust – Solenoid pilot
- ② Valve supply - port 1
- ③ Electrical multiple connection with 9 or 25 pins
- ④ Threaded connection of exhausts 3/5
- ⑤ Valve supply
- ⑥ Electrical control supply
- ⑦ LED (LED on, solenoid valve energised)
- ⑧ Removable identification labels
- ⑨ Blind end-plate
- ⑩ Screw for valve wall-mounting
- ⑪ Utility port for pipe Ø 5/16
- ⑫ Utility port for pipe Ø 1/4
- ⑬ Utility port for pipe Ø 5/32
- ⑭ Manual control

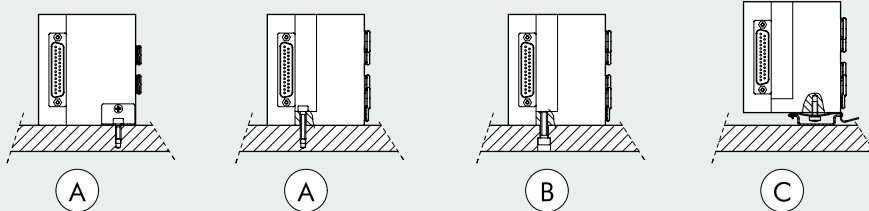


THE MULTIMACH WORLD: FLEXIBILITY

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



FIXING THE BASE

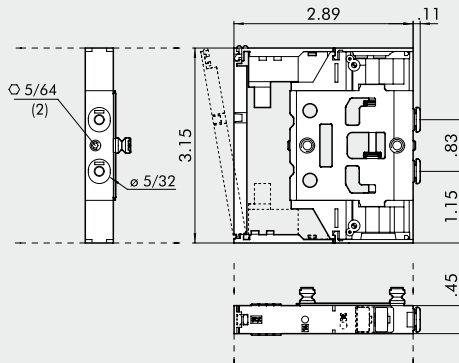


- Ⓐ Fixing with reduced end-plate 1, CODE 0227300300, supplied complete with bracket
 Ⓑ Fixing with end-plate 1-11 CODE 0227300200 or with end-plate CODE 0227300201
 Ⓒ Fixing with end-plate 1-11 CODE 0227300200 or with end-plate 1 CODE 0227300201 using the M4-thread found on the 10-32 UNF end-plate
 Ⓓ Fixing on the DIN bar with end-plate 1-11 CODE 0227300 using the reduced end-plate 1 CODE 0227300300 or end-plate CODE 0227300201 using the push-in bracket CODE 0227300600.

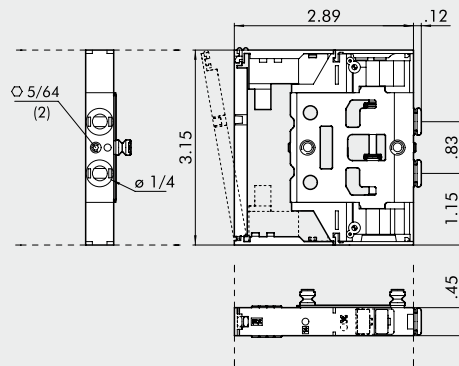
If you have to remove the base from the bar, this is rapid and can be performed without using any tools.

KEY TO CODES

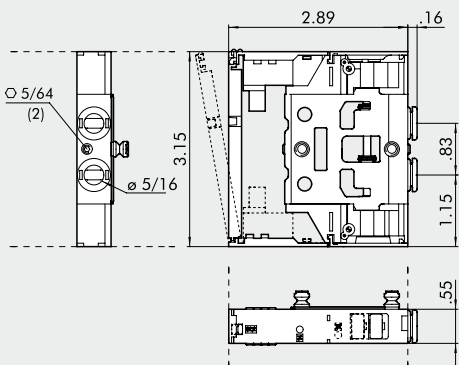
| M 5 1 VALVE | 2 INPUT END-PLATE | 8 ELECTRICAL BASE | 16U - W 8 - W 6U - O 4 - L 8 - 5U TYPE OF VALVE | 1 2 - 1 4 FURTHER DETAILS |
|----------------|---|--|---|--|
| Multimach IP51 | 2U End-plate 1-11 3U End-plate 1 4U Reduced End-plate 1 | 8 Axial 25-wire connector base 9 Axial 9-wire connector base 10 25-wire rear connector base 11 9-wire rear connector base | 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 5U Blind end-plate 6 Passing-intermediate 7 Blind intermediate 20 Exhaust section 4 Cartridge 5/32 6U Cartridge 1/4 8 Cartridge 5/16 | 12 9-wire connector 14 25-wire connector 16 Brackets for DIN bar |

① VALVE DIMENSIONS Ø 5/32


| Symbol | Code | Manual control | Weight [lb] |
|-----------|------------|----------------|-------------|
| I4 | 7068030532 | monostable | 0.260 |
| W4 | 7068030632 | monostable | 0.260 |
| L4 | 7068030732 | monostable | 0.260 |
| V4 | 7068030132 | monostable | 0.220 |
| K4 | 7068030112 | monostable | 0.251 |
| O4 | 7068030212 | monostable | 0.253 |

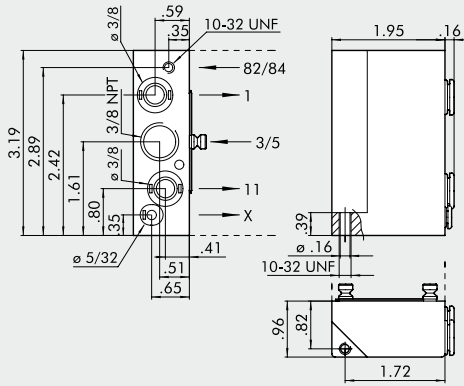
① VALVE DIMENSIONS Ø 1/4


| Symbol | Code | Manual control | Weight [lb] |
|------------|-------------|----------------|-------------|
| I6U | 7069030532U | monostable | 0.243 |
| W6U | 7069030632U | monostable | 0.243 |
| L6U | 7069030732U | monostable | 0.243 |
| V6U | 7069030132U | monostable | 0.200 |
| K6U | 7069030112U | monostable | 0.236 |
| O6U | 7069030212U | monostable | 0.238 |

① VALVE DIMENSIONS Ø 5/16


| Symbol | Code | Manual control | Weight [lb] |
|-----------|------------|----------------|-------------|
| I8 | 7070030532 | monostable | 0.273 |
| W8 | 7070030632 | monostable | 0.273 |
| L8 | 7070030732 | monostable | 0.273 |
| V8 | 7070030132 | monostable | 0.232 |
| K8 | 7070030112 | monostable | 0.265 |
| O8 | 7070030212 | monostable | 0.267 |

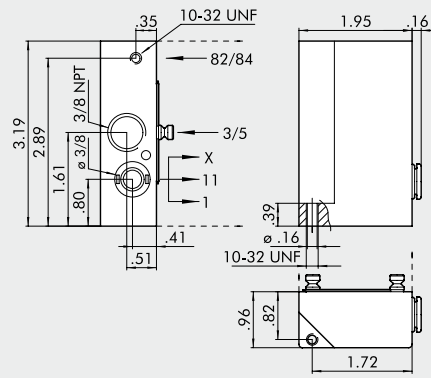
2U END-PLATE 1-11



| Code | Description | Weight [lb] |
|-------------|--------------------|-------------|
| 0227300200U | End-plate kit 1-11 | 0.492 |

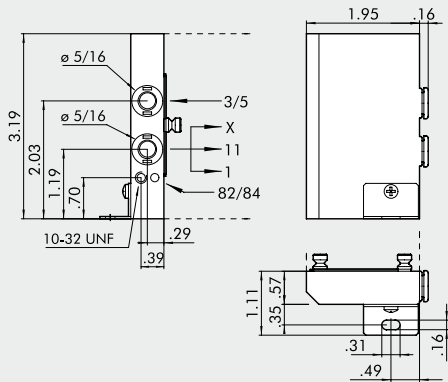
This end-plate allows for supplies to be differentiated: port 2, port 4 and pilot supply

3U END-PLATE 1



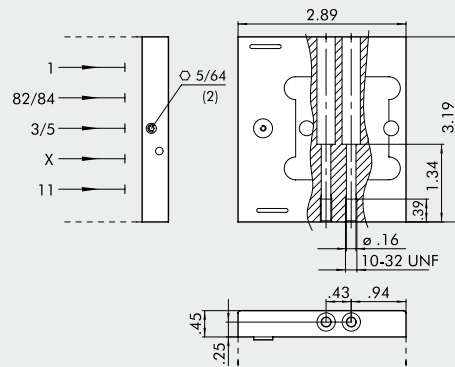
| Code | Description | Weight [lb] |
|-------------|-----------------|-------------|
| 0227300201U | End-plate kit 1 | 0.494 |

4U REDUCED END-PLATE 1



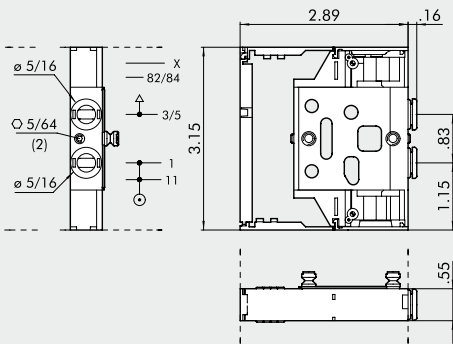
| Code | Description | Weight [lb] |
|-------------|-------------------------|-------------|
| 0227300300U | Reduced end-plate kit 1 | 0.326 |

5U BLIND END-PLATE



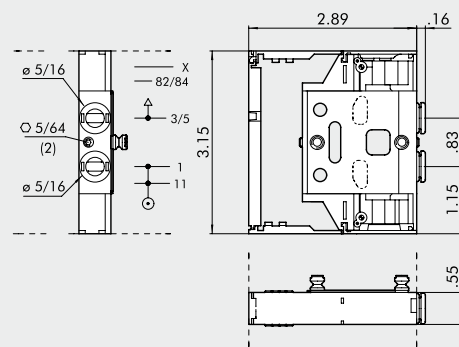
| Code | Description | Weight [lb] |
|-------------|-----------------|-------------|
| 0227300500U | Blind end-plate | 0.370 |

6 INTERMEDIATE THROUGH

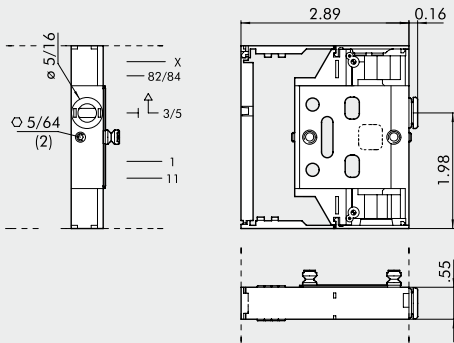


| Code | Description | Weight [lb] |
|------------|----------------------|-------------|
| 0227300301 | Intermediate through | 0.203 |

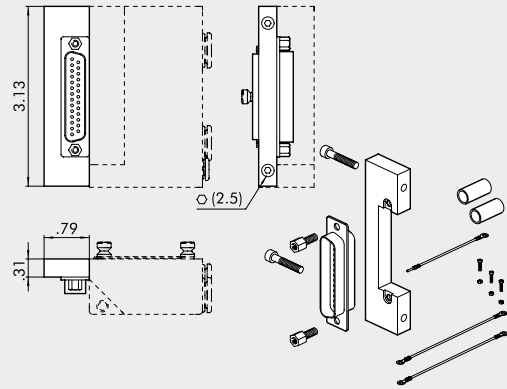
7 INTERMEDIATE BLIND



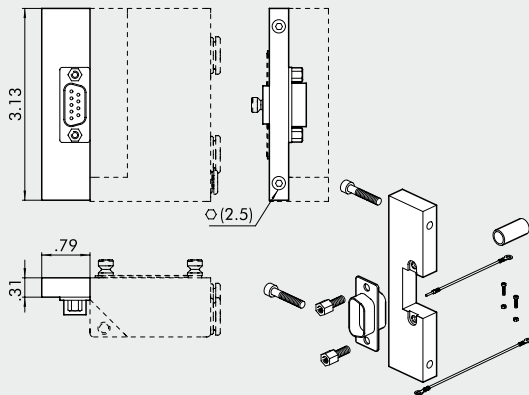
| Code | Description | Weight [lb] |
|------------|--------------------|-------------|
| 0227300302 | Intermediate blind | 0.196 |

20 INTERMEDIATE EXHAUST SWITCH


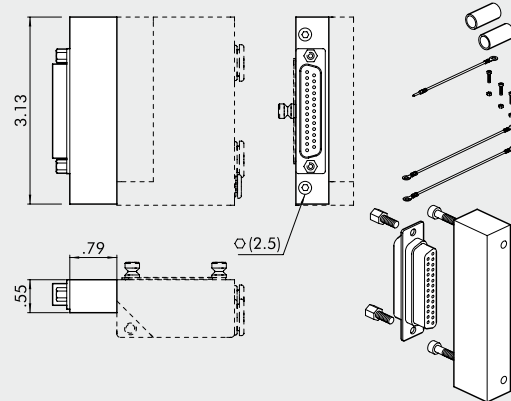
| Code | Description | Weight [lb] |
|------------|-----------------------------|-------------|
| 0227300303 | Intermediate exhaust switch | 0.209 |

8 AXIAL CONNECTOR BASE, 25 WIRES


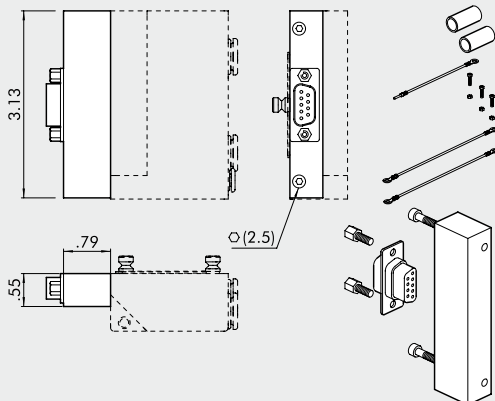
| Code | Description | Weight [lb] |
|------------|------------------------------------|-------------|
| 0226180001 | Axial connector base kit, 25 wires | 0.119 |

9 AXIAL CONNECTOR BASE, 9 WIRES


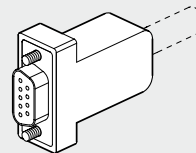
| Code | Description | Weight [lb] |
|------------|-----------------------------------|-------------|
| 0226180002 | Axial connector base kit, 9 wires | 0.112 |

10 REAR CONNECTOR BASE, 25 WIRES


| Code | Description | Weight [lb] |
|------------|-----------------------------------|-------------|
| 0226180003 | Rear connector base kit, 25 wires | 0.161 |

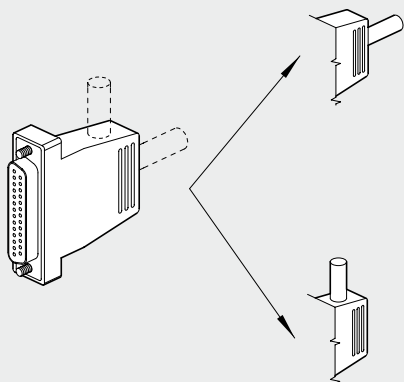
11 REAR CONNECTOR BASE, 9 WIRES


| Code | Description | Weight [lb] |
|------------|----------------------------------|-------------|
| 0226180004 | Rear connector base kit, 9 wires | 0.170 |

12 STRAIGHT CONNECTOR KIT, 9 WIRES


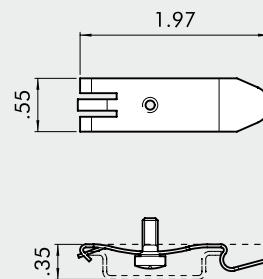
| Code | Description | Weight [lb] |
|------------|---------------------------------|-------------|
| 0226180102 | Straight connector kit, 9 wires | 0.044 |

14 STRAIGHT AND 90° CONNECTOR KIT, 25 WIRES



| Code | Description | Weight [lb] |
|------------|--|-------------|
| 0226180101 | Straight and 90° connector kit, 25 wires | 0.106 |

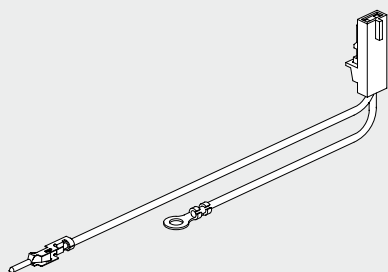
16 CONNECTION BRACKETS ON THE BAR OMEGA (DIN EN 50022)



| Code | Description | Weight [lb] |
|------------|--------------------------------|-------------|
| 0227300600 | Connection brackets on din bar | 0.017 |

Individually packed

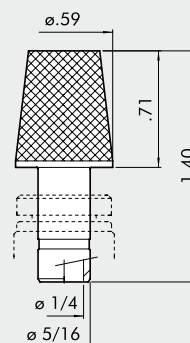
17 18 19 CONNECTOR KIT + WIRE



| Code | Description | Weight [lb] |
|------------|-------------------------------|-------------|
| 0226180399 | Connector kit + wire 1-6* | 0.007 |
| 0226180400 | Connector kit + wire 7-12** | 0.009 |
| 0226180401 | Connector kit + wire 13-30*** | 0.011 |

- * For valve connection from 1st to 6th position counting from the connector
- ** For valve connection from 7th to 12th position, counting from the connector
- *** For valve connection from 13th to 30th position, counting from the connector

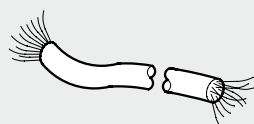
SILENCER FOR FITTING, Ø 5/16



| Code | Description | Weight [lb] |
|-------------|------------------------------|-------------|
| W0970530084 | Silencer for fitting, Ø 5/16 | 0.033 |

At the 3/5-exhaust part of the reduced end-plate 1 ref. 4
and of the intermediate through of the exhaust switch ref. 20

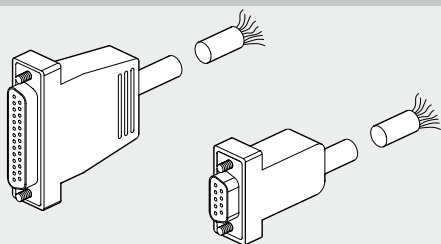
CABLES



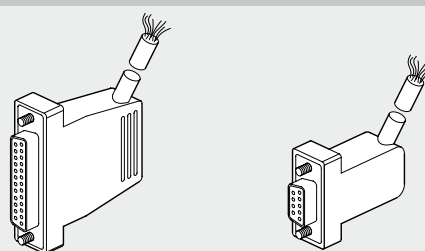
| Cod. | Description | Weight [lb] |
|------------|---------------|-------------|
| 0226107201 | 10-wire cable | 0.190 |
| 0226107101 | 19-wire cable | 0.269 |
| 0226107102 | 25-wire cable | 0.287 |

Specify the number of metres desired

NOTES

STRAIGHT PRE-WIRED CONNECTOR KIT


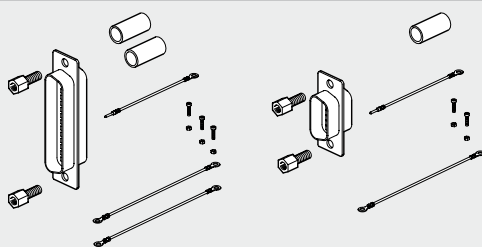
| Code | Description | Weight [lb] |
|------------|--|-------------|
| 0226900100 | Straight D-Sub 9-PIN connector + cable L = 35 inch | 0.17 |
| 0226900250 | Straight D-Sub 9-PIN connector + cable L = 99 inch | 0.37 |
| 0226900500 | Straight D-Sub 9-PIN connector + cable L = 197 inch | 0.70 |
| 0226900750 | Straight D-Sub 9-PIN connector + cable L = 295 inch | 1.03 |
| 0226901000 | Straight D-Sub 9-PIN connector + cable L = 394 inch | 1.36 |
| 0226901500 | Straight D-Sub 9-PIN connector + cable L = 590 inch | 2.02 |
| 0226902000 | Straight D-Sub 9-PIN connector + cable L = 788 inch | 2.70 |
| 0226905000 | Straight D-Sub 9-PIN connector + cable L = 1968 inch | 6.65 |
| 0226920100 | Straight D-Sub 25-PIN connector + cable L = 35 inch | 0.30 |
| 0226920250 | Straight D-Sub 25-PIN connector + cable L = 99 inch | 0.70 |
| 0226920500 | Straight D-Sub 25-PIN connector + cable L = 197 inch | 1.40 |

PRE-WIRED 90° CONNECTOR


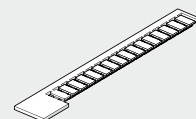
| Code | Description | Weight [lb] |
|------------|---|-------------|
| 0226910100 | 90° D-Sub 9-PIN connector + cable L = 35 inch | 0.17 |
| 0226910250 | 90° D-Sub 9-PIN connector + cable L = 99 inch | 0.37 |
| 0226910500 | 90° D-Sub 9-PIN connector + cable L = 197 inch | 0.70 |
| 0226910750 | 90° D-Sub 9-PIN connector + cable L = 295 inch | 1.03 |
| 0226911000 | 90° D-Sub 9-PIN connector + cable L = 394 inch | 1.36 |
| 0226911500 | 90° D-Sub 9-PIN connector + cable L = 590 inch | 2.02 |
| 0226930100 | 90° D-Sub 25-PIN connector + cable L = 35 inch | 0.30 |
| 0226930250 | 90° D-Sub 25-PIN connector + cable L = 99 inch | 0.70 |
| 0226930500 | 90° D-Sub 25-PIN connector + cable L = 197 inch | 1.40 |

WIRING DIAGRAM FOR PRE-WIRED PLUG CONNECTORS

| 25 PIN | | | | 9 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 | 10 | brown/white | 19 | yellow/black | 1 | green/black |
| 2 | red/brown | 11 | red/orange | 20 | white | 2 | white |
| 3 | white/black | 12 | light blue | 21 | blue/white | 3 | blue/black |
| 4 | red/blue | 13 | yellow/white | 22 | brown | 4 | blue |
| 5 | black/orange | 14 | yellow | 23 | green/white | 5 | yellow/black |
| 6 | yellow/red | 15 | red/green | 24 | red | 6 | yellow |
| 7 | black/brown | 16 | orange | 25 | green/black | 7 | red/black |
| 8 | white/red | 17 | orange/white | | | 8 | green |
| 9 | red/black | 18 | green | | | 9 | white/black |

MALE CONNECTOR KIT + CONTACTS + COMMON TERMINAL


| Code | Description |
|------------|------------------------------|
| 0226180201 | Male connector kit - 25 pins |
| 0226180202 | Male connector kit - 9 pins |

IDENTIFICATION PLATE KIT


| Code | Description |
|-----------------------|--------------------------|
| 0226107000 | Identification plate kit |
| Comes in 16-pc. packs | |

GRUB SCREW

| Code | Description |
|----------------------|--------------------------|
| 0227300800 | Grub screw for Multimach |
| Comes in 10-pc. pack | |

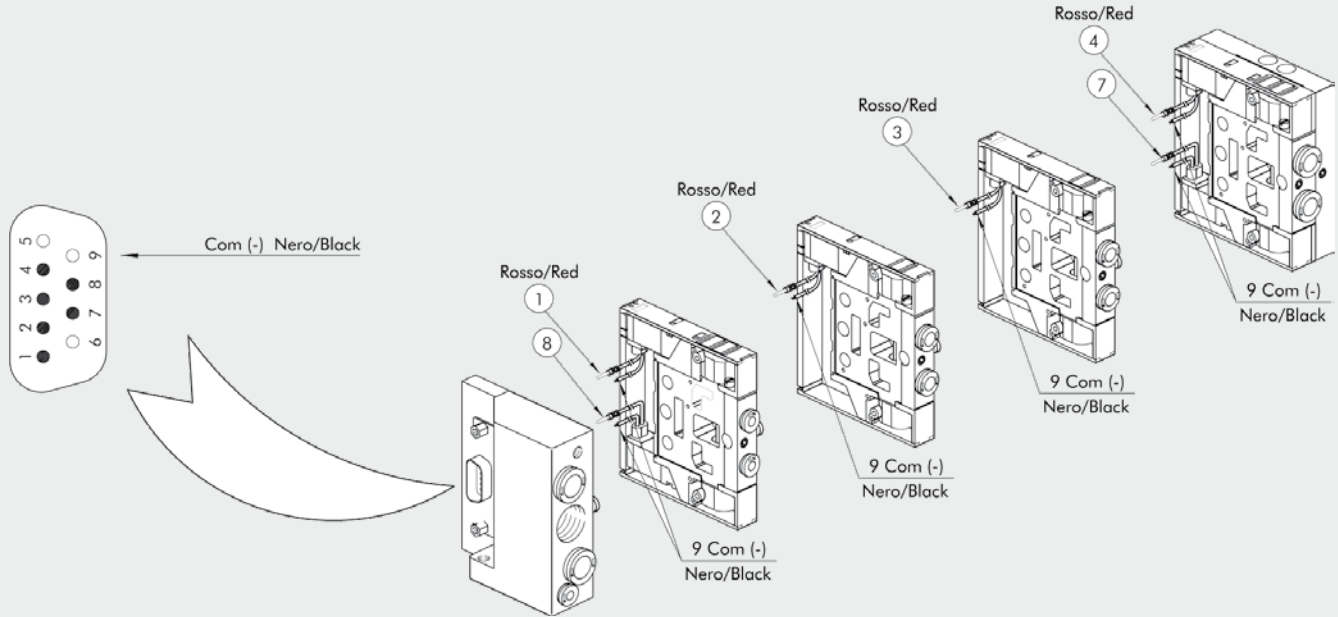
R17 - PIPE RELEASE SPANNER

Length = 5.51 in

| Code | Description | Ø Tube |
|---------|-------------|---------------------|
| 2L17001 | RL17 | from Ø 1/8 to Ø 3/8 |

WIRING DIAGRAM OF THE 9-PIN CONNECTOR

Note: available with positive common wire on request.



WIRING DIAGRAM OF THE 25-PIN CONNECTOR

Note: available with positive common wire on request.

