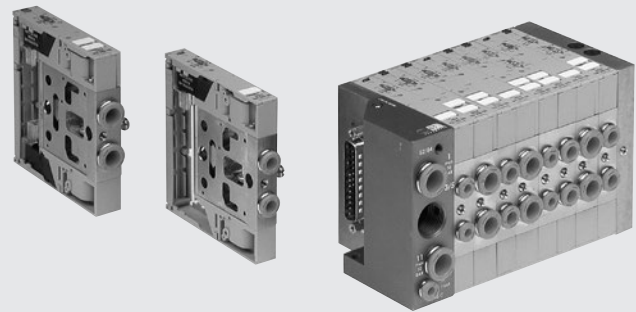


Multimach is not a mere valve, it is an electropneumatic distribution "island" - a single block ready for connection to power and air delivery pipes and a multi-pin cable.

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.

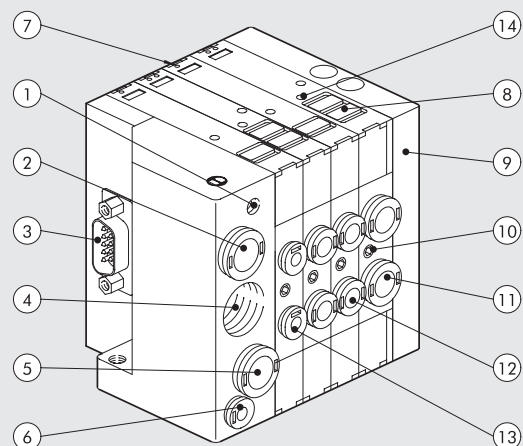
The ratio between the flow rate of the Multimach system and sizes is incomparable: the top in terms of miniaturisation and efficiency.



TECHNICAL DATA				
Valve port connections		Ø 4,6,8 mm automatic fitting for ports 2 and 4 / power supply port for Ø8 or Ø10 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		
Operating temperature range	°C	-10 to +60		
Fluid		Filtered air without lubrication; lubrication, if used, must be continuous		
Screw for valve - wall-mounting		According to the end-plate used: see page B2.172		
Flow rate at 6 bar ΔP 1bar	Nl/min	11 mm Ø 4: 200	11 mm Ø 6: 500	14 mm Ø 8: 700
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	3 to 7 max	vacuum at 10 bar	
	Terminal 1		3 to 7	
	Terminal 1 reduced		3 to 7	
TRA/TRR 2x3/2 monostable at 6 bar	ms		8 / 45	
TRA/TRR 5/2 monostable at 6 bar	ms		8 / 33	
TRA/TRR 5/2 bistable at 6 bar	ms		20 / 20	
TRA/TRR 5/3 cc monostable at 6 bar	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. See chapter Z1		
Compatibility with oils				

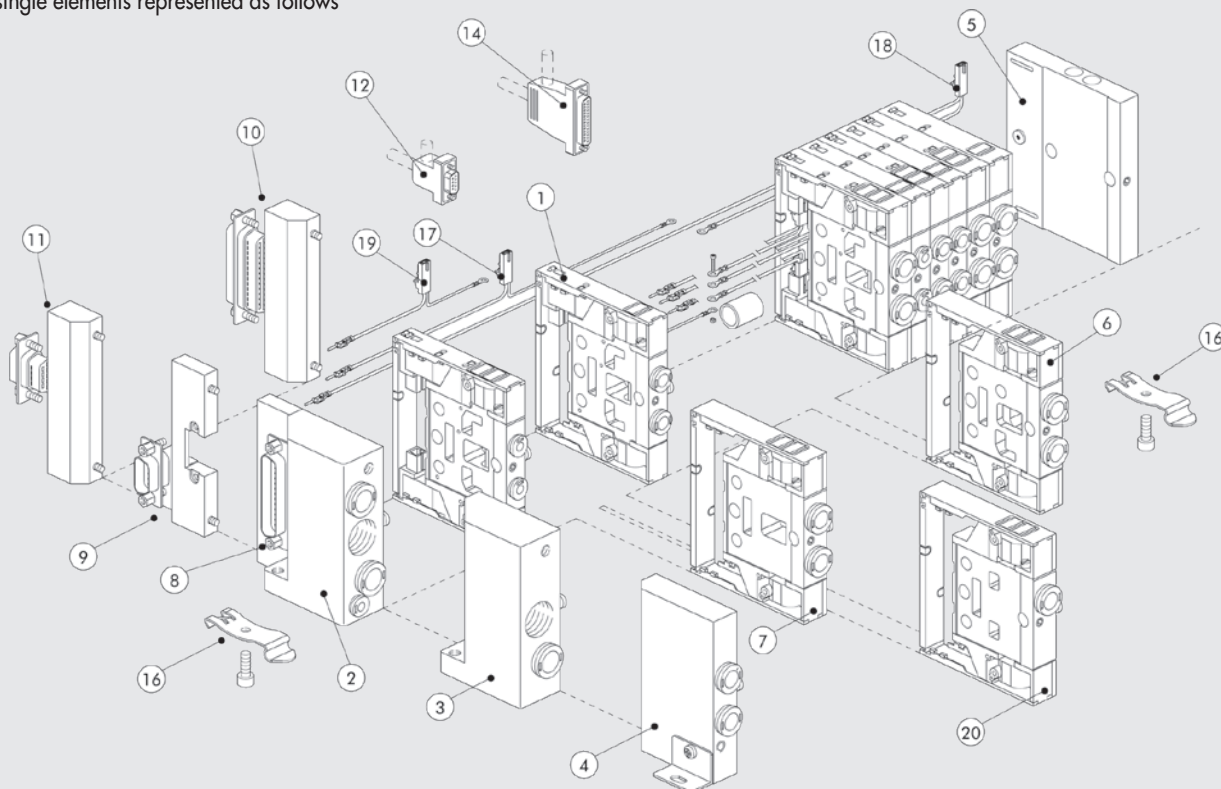
## COMPONENTS

- 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 8 mm
- ⑫ Utility port for pipe Ø 6 mm
- ⑬ Utility port for pipe Ø 4 mm
- ⑭ Manual control

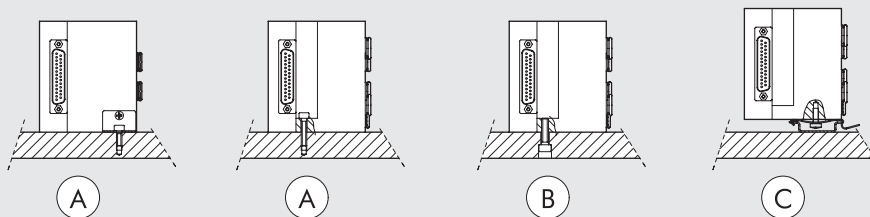


**THE MULTIMACH WORLD: FLEXIBILITY**

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



**FIXING THE BASE**

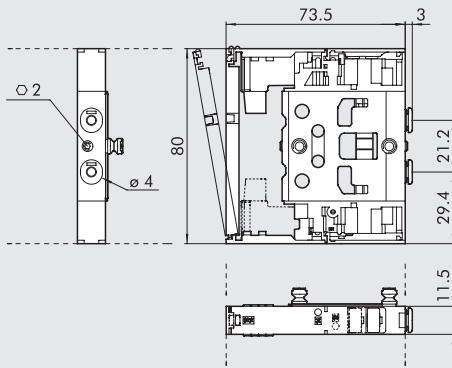


- Ⓐ Fixing with reduced end-plate 1, CODE 0227300300, supplied complete with bracket
  - Ⓑ Fixing with end-plate 1-11 CODE 0227300200 or with end-plate CODE 0227300201
  - Ⓒ Fixing with end-plate 1-11 CODE 0227300200 or with end-plate 1 CODE 0227300201 using the M4-thread found on the M5 end-plate
  - Ⓓ 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.

**SYNOPTIC, SIZES AND VERSIONS**

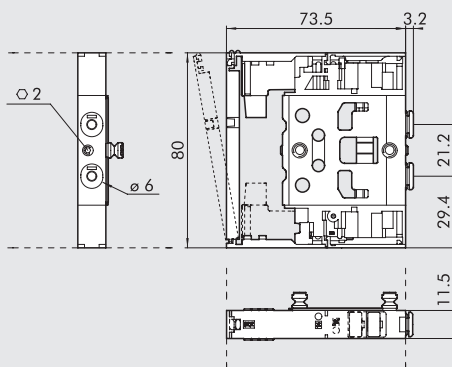
M 5 1 VALVE	2 INPUT END-PLATE	8 ELECTRICAL BASE	16 - W 8 - W 6 - O 4 - L 8 - 5 TYPE OF VALVE	1 4 FURTHER DETAILS
Multimach IP51	2 End-plate 1-11 3 End-plate 1 4 Reduced End-plate 1	8 Axial 25-wire connector base 9 Axial 9-wire connector base 10 25-wire rear connector base 11 9-wire rear connector base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

1 VALVE DIMENSIONS Ø 4



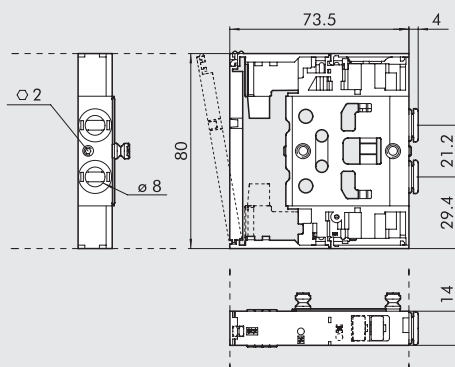
Symbol	Code	Manual control	Weight [g]
<b>I4</b>	7068030532	monostable	118
<b>W4</b>	7068030632	monostable	118
<b>L4</b>	7068030732	monostable	118
<b>V4</b>	7068030132	monostable	100
<b>K4</b>	7068030112	monostable	114
<b>O4</b>	7068030212	monostable	115

1 VALVE DIMENSIONS Ø 6



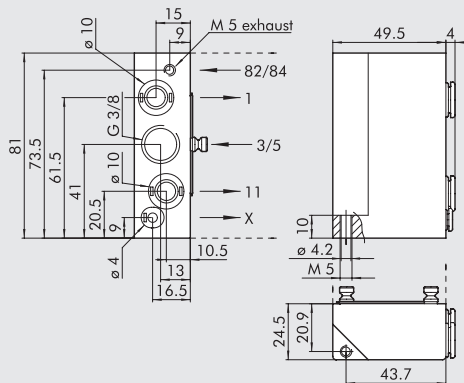
Symbol	Code	Manual control	Weight [g]
<b>I6</b>	7069030532	monostable	110
<b>W6</b>	7069030632	monostable	110
<b>L6</b>	7069030732	monostable	110
<b>V6</b>	7069030132	monostable	90
<b>K6</b>	7069030112	monostable	107
<b>O6</b>	7069030212	monostable	108

1 VALVE DIMENSIONS Ø 8



Symbol	Code	Manual control	Weight [g]
<b>I8</b>	7070030532	monostable	124
<b>W8</b>	7070030632	monostable	124
<b>L8</b>	7070030732	monostable	124
<b>V8</b>	7070030132	monostable	105
<b>K8</b>	7070030112	monostable	120
<b>O8</b>	7070030212	monostable	121

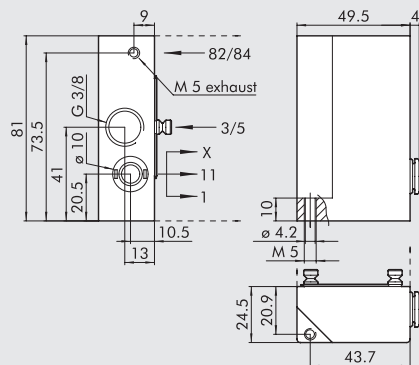
② END-PLATE 1-11



Code	Description	Weight [g]
0227300200	End-plate kit 1-11	223

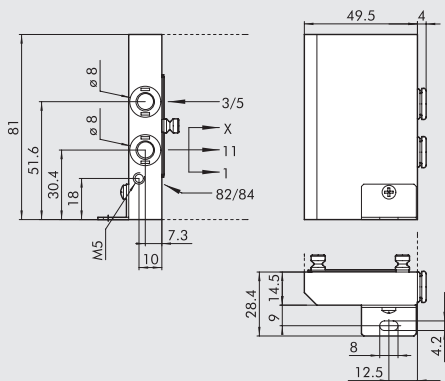
This end-plate allows for supplies to be differentiated: port 2, port 4 and pilot supply

③ END-PLATE 1



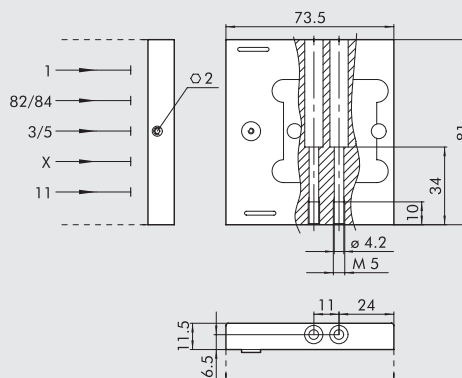
Code	Description	Weight [g]
0227300201	End-plate kit 1	224

④ REDUCED END-PLATE 1



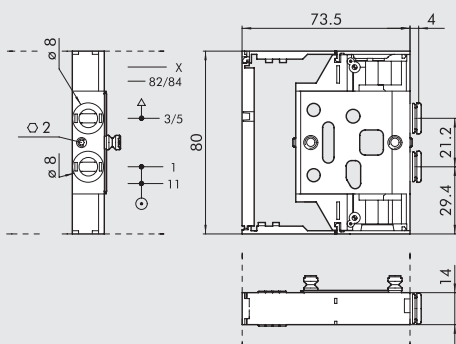
Code	Description	Weight [g]
0227300300	Reduced end-plate kit 1	148

⑤ BLIND END-PLATE



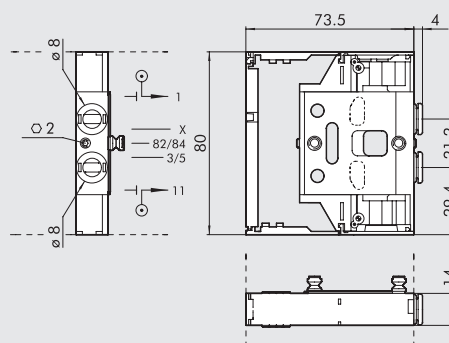
Code	Description	Weight [g]
0227300500	Blind end-plate	168

⑥ INTERMEDIATE THROUGH



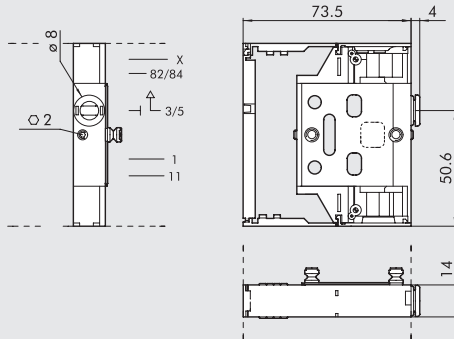
Code	Description	Weight [g]
0227300301	Intermediate through	92

⑦ INTERMEDIATE BLIND



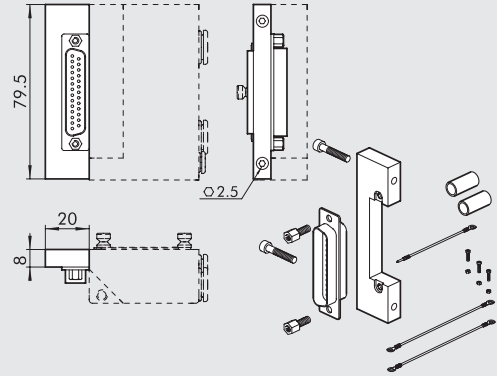
Code	Description	Weight [g]
0227300302	Intermediate blind	89

**20** INTERMEDIATE EXHAUST SWITCH



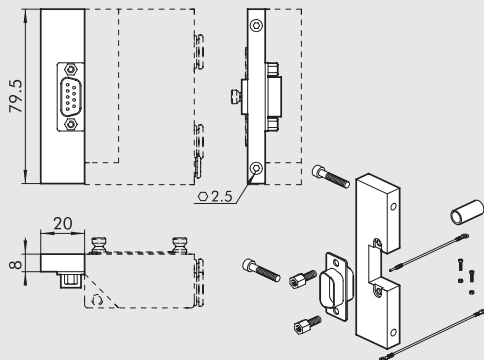
Code	Description	Weight [g]
0227300303	Intermediate exhaust switch	95

**8** AXIAL CONNECTOR BASE, 25 WIRES



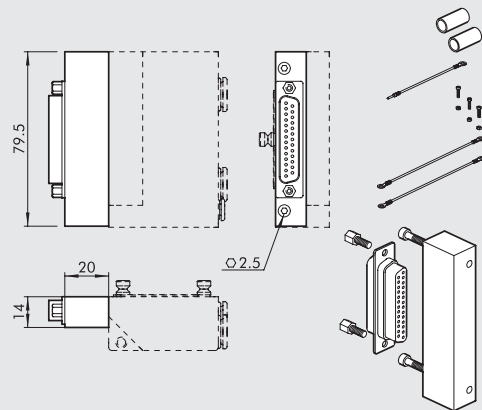
Code	Description	Weight [g]
0226180001	Axial connector base kit, 25 wires	54

**9** AXIAL CONNECTOR BASE, 9 WIRES



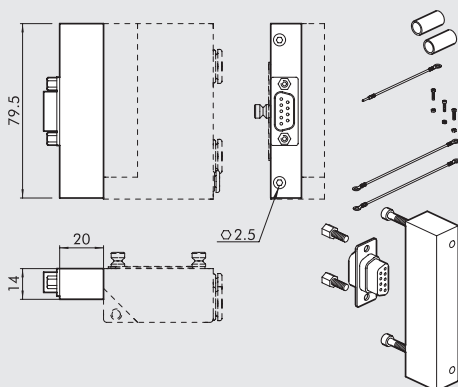
Code	Description	Weight [g]
0226180002	Axial connector base kit, 9 wires	51

**10** REAR CONNECTOR BASE, 25 WIRES



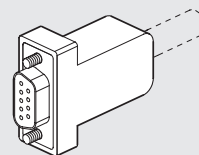
Code	Description	Weight [g]
0226180003	Rear connector base kit, 25 wires	73

**11** REAR CONNECTOR BASE, 9 WIRES



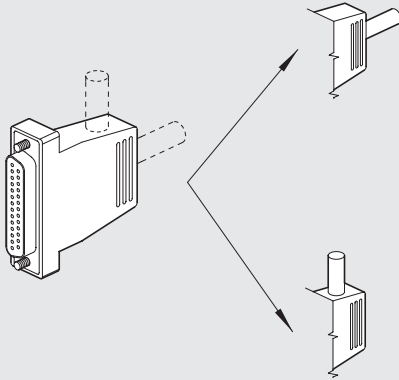
Code	Description	Weight [g]
0226180004	Rear connector base kit, 9 wires	77

**12** STRAIGHT CONNECTOR KIT, 9 WIRES



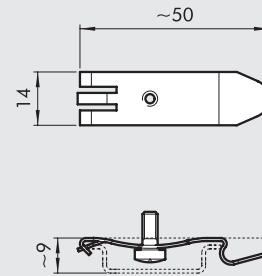
Code	Description	Weight [g]
0226180102	Straight connector kit, 9 wires	20

14 STRAIGHT AND 90° CONNECTOR KIT, 25 WIRES



Code	Description	Weight [g]
0226180101	Straight and 90° connector kit, 25 wires	48

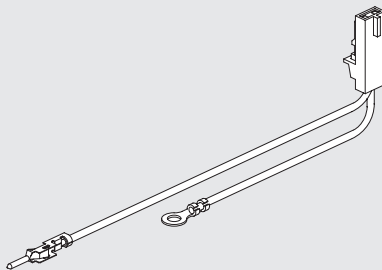
16 CONNECTION BRACKETS ON THE BAR OMEGA (DIN EN 50022)



Code	Description	Weight [g]
0227300600	Connection brackets on din bar	8

Individually packed

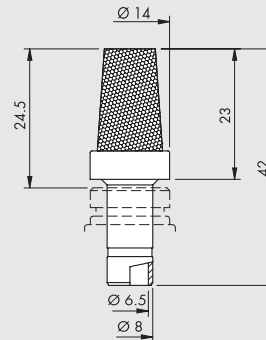
17 18 19 CONNECTOR KIT + WIRE



Code	Description	Weight [g]
0226180399	Connector kit + wire 1-6*	3
0226180400	Connector kit + wire 7-12**	4
0226180401	Connector kit + wire 13-30***	5

- \* 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 8



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

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

CABLES

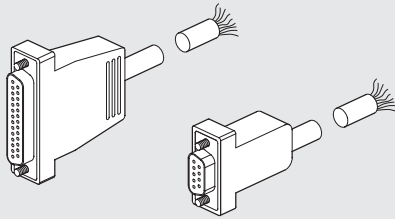


Code	Description	Weight [g/m]
0226107201	10-wire cable	60
0226107101	19-wire cable	122
0226107102	25-wire cable	130

Specify the number of metres desired

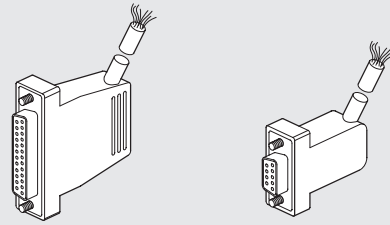
NOTES

**STRAIGHT PRE-WIRED CONNECTOR KIT**



Code	Description	Weight [g]
0226900100	Straight D-Sub 9-PIN connector + cable L = 1 m	80
0226900250	Straight D-Sub 9-PIN connector + cable L = 2.5 m	170
0226900500	Straight D-Sub 9-PIN connector + cable L = 5 m	320
0226900750	Straight D-Sub 9-PIN connector + cable L = 7.5 m	470
0226901000	Straight D-Sub 9-PIN connector + cable L = 10 m	620
0226901500	Straight D-Sub 9-PIN connector + cable L = 15 m	920
0226902000	Straight D-Sub 9-PIN connector + cable L = 20 m	1220
0226905000	Straight D-Sub 9-PIN connector + cable L = 50 m	3020
0226920100	Straight D-Sub 25-PIN connector + cable L = 1 m	132
0226920250	Straight D-Sub 25-PIN connector + cable L = 2.5 m	320
0226920500	Straight D-Sub 25-PIN connector + cable L = 5 m	636

**PRE-WIRED 90° CONNECTOR**



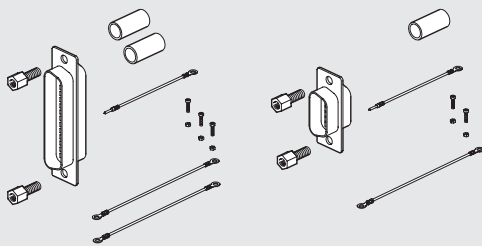
Code	Description	Weight [g]
0226910100	90° D-Sub 9-PIN connector + cable L = 1 m	80
0226910250	90° D-Sub 9-PIN connector + cable L = 2.5 m	170
0226910500	90° D-Sub 9-PIN connector + cable L = 5 m	320
0226910750	90° D-Sub 9-PIN connector + cable L = 7.5 m	470
0226911000	90° D-Sub 9-PIN connector + cable L = 10 m	620
0226911500	90° D-Sub 9-PIN connector + cable L = 15 m	920
0226930100	90° D-Sub 25-PIN connector + cable L = 1 m	132
0226930250	90° D-Sub 25-PIN connector + cable L = 2.5 m	320
0226930500	90° D-Sub 25-PIN connector + cable L = 5 m	636

VALVES  
MULTIMACH

**WIRING DIAGRAM FOR PRE-WIRED PLUG CONNECTORS**

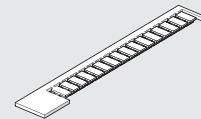
25 PIN				9 PIN			
Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire	Position of electrical contact	Colour of the corresponding wire
1	blue/black	10	brown/white	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**



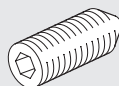
Code	Description
0226180201	Male connector kit - 25 pins
0226180202	Male connector kit - 9 pins

**IDENTIFICATION PLATE KIT**



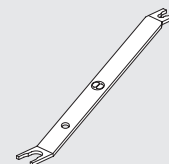
Code	Description
0226107000	Identification plate kit
Comes in 16-pc. packs	

**GRUB SCREW**



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

**R17 - PIPE RELEASE SPANNER**

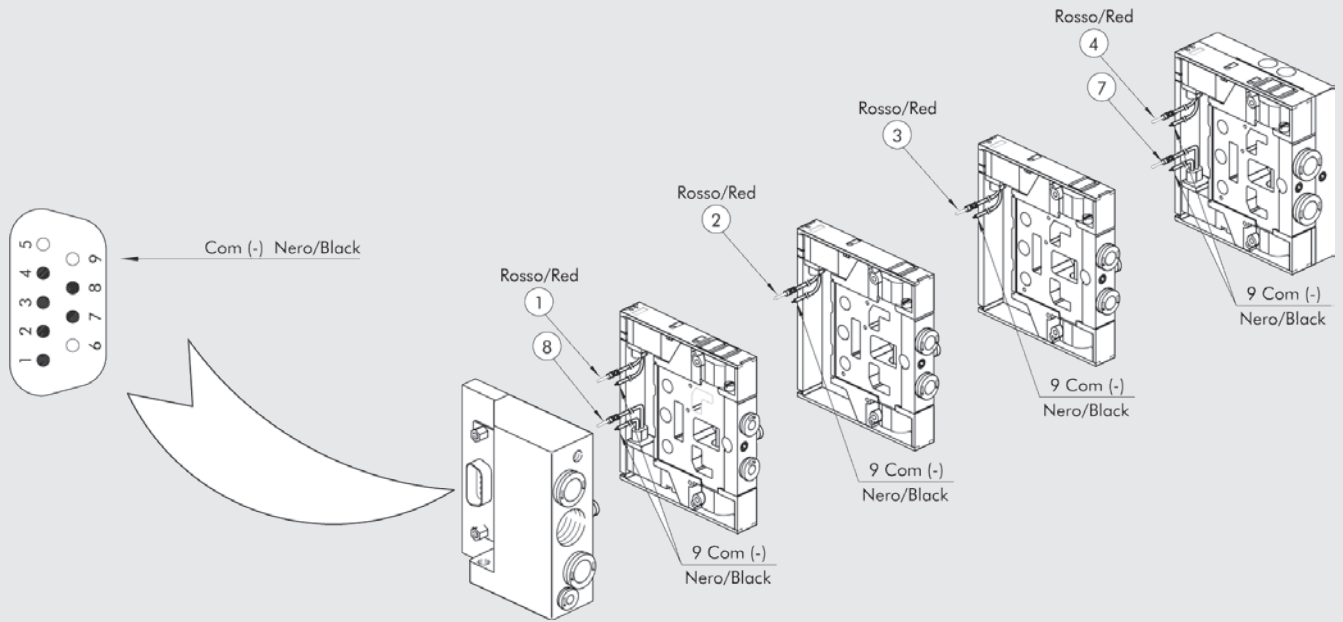


Lenght = 140 mm

Code	Description	Ø Tube
2L17001	RL17	from Ø 3 to Ø 10

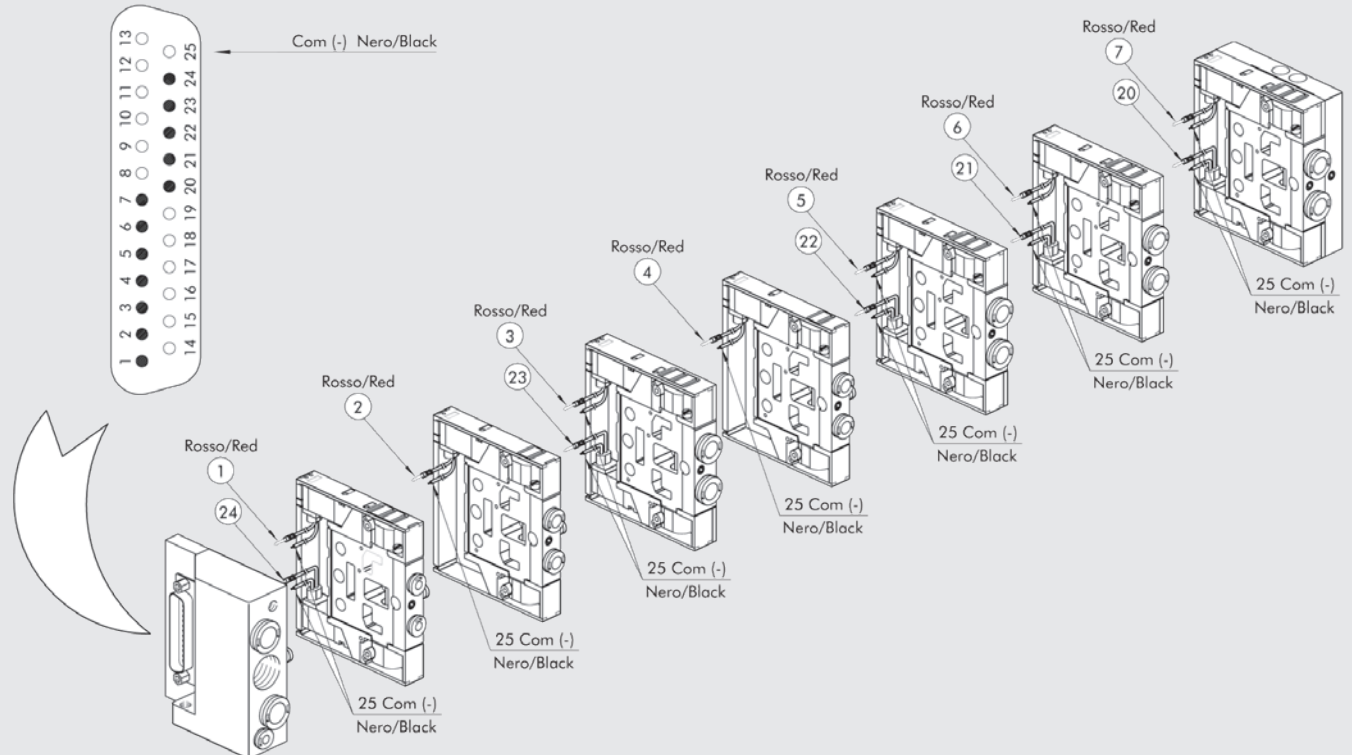
**WIRING DIAGRAM OF THE 9-PIN CONNECTOR**

Note: available with positive common wire on request.



**WIRING DIAGRAM OF THE 25-PIN CONNECTOR**

Note: available with positive common wire on request.

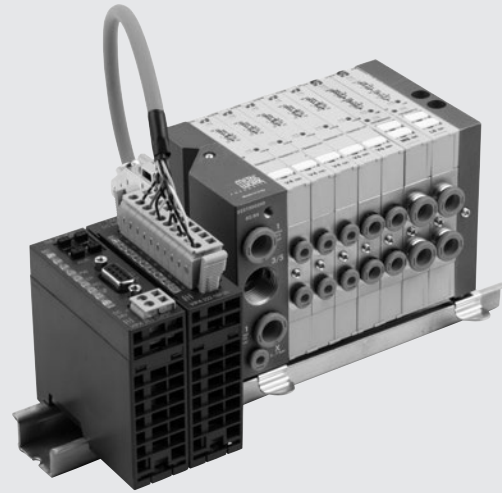


# PROFIBUS-DP FOR MULTIMACH AND BASES FOR PLT-10 MULTIPLE CONNECTION



The expandable modular slaves for Multimach and bases for PLT-10 multiple connection follow the same application philosophy of total modularity common to the Multimach system. With full freedom, the slave can be configured by fitting the various modules offered:

- The slave is mounted on a 35 mm DIN bar, next to the Multimach unit.
- The slave is connected to the island via the multiple spring connector of the digital 8-output modules with the 9-pin or 25-pin valve island plug connector, using multi-pin cables.
- Using 1, 2 or 3 digital 8-output modules, it is possible to manage 8, 16 or 24 controls of either one or different valve islands
- Up to 32 additional modules can be fitted alongside the digital 8-output modules to manage other inputs and outputs. These modules are electrically connected together, using a small plate-connector (housed under the modules, inside the DIN bar).
- There are 4 other types of modules available: for 8 digital inputs; for 8 digital outputs; for 4 analogue inputs and for 4 analogue outputs.
- With this system, a maximum of total 256 Inputs/Outputs can be managed with just one slave!



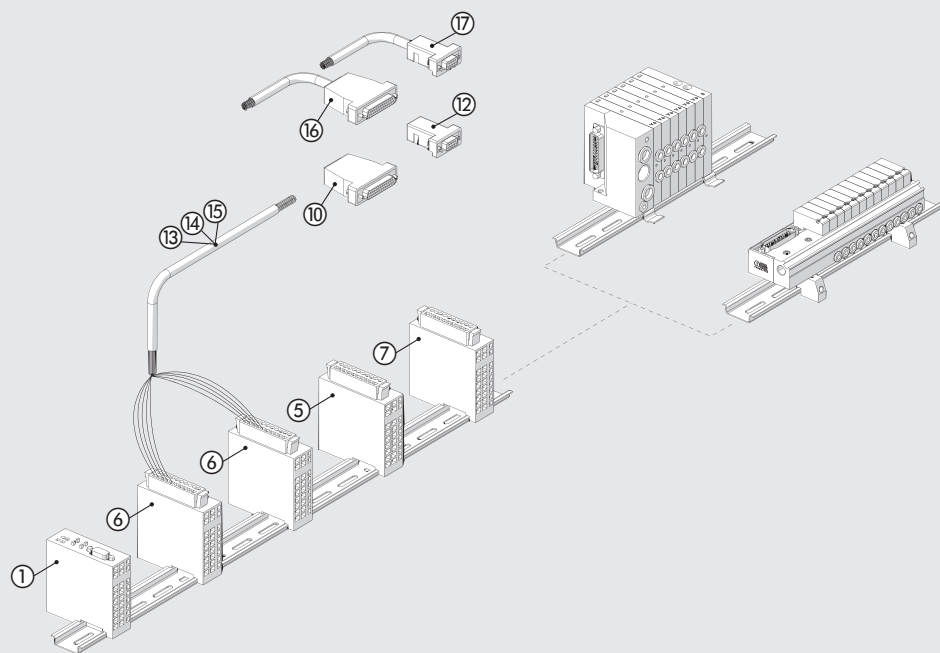
VALVES

PROFIBUS-DP FOR MULTIMACH AND BASES FOR PLT-10 MULTIPLE CONNECTION

## TECHNICAL DATA

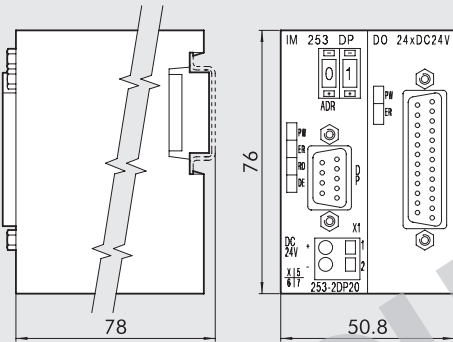
Supply voltage	24 VDC + 20% - 15%
EMC and ESD test	in compliance with IEC 801-2/IEC 801/4 (up to level 3: 8kV/2kV)
Resistance to vibration and impacts test	according to IEC68-2-6/IEC 68-2-27 (1g/12g)
Operating temperature range	0 to 60 °C
Storage temperature	-40 to + 85 °C
Admitted relative humidity	95%
Assembly	On Omega bar (DIN EN 50022) size 35 x 7 or 35 x 15

## THE MULTIMACH WORLD: SLAVES, INPUTS AND OUTPUTS



For the connection of the solenoid valve island to the Profibus ① system, the cables ⑬, ⑭, ⑮ must be electrically connected to the digital 8-output modules ⑥. If the number of valve controls is less than or equal to 8, use the 10-pin cable and one module ⑥. If it is less than or equal to 16, use the 19-pin cable and two modules ⑥. With up to 24 valve controls, use 25-pin plug connectors ⑪, the 9-pin plug connector ⑫ or pre-wired connectors ⑯ or ⑰. You can connect each DIGITAL 8-OUTPUT module ⑥ to a solenoid valve island.

① SLAVE PROFIBUS-DP 24 OUTPUT



BUS 9 Sub-D socket

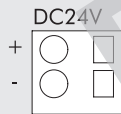
1=n.c.  
2=n.c.  
3=RxD/TxD-P  
4=CNTR-P  
5=GND  
6=n.c.  
7=n.c.  
8=RxD/TxD-N  
9=GND

OUTPUTS 25 Sub-D socket

Common (-)

25  
24  
23  
22  
21  
20  
19  
18  
17  
16  
15  
14

13  
12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1



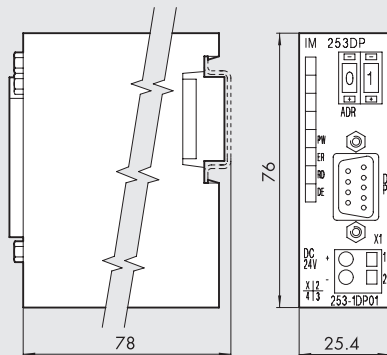
Code  
0240004002

Slave kit  
Slave PROFIBUS+DO24xDC24V

Technical data

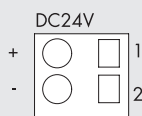
PROFIBUS-Interface	RS485: 9 pins D-Sub
Transmission speed	9.6 kBaud up to 12 Mbaud
Max number of modules which can be connected	31 (depending on the maximum current)
Output interface	25 pins D-Sub
Number of outputs	24
Output data	4 Byte (3used +1)
Nominal supply voltage	24 VDC
Maximum current for each output	1A, max total 4A
Absorption 24V (out excluded)	800 mA

① SLAVE PROFIBUS-DP



BUS 9 Sub-D socket

1=n.c.  
2=n.c.  
3=RxD/TxD-P  
4=CNTR-P  
5=GND  
6=n.c.  
7=n.c.  
8=RxD/TxD-N  
9=GND



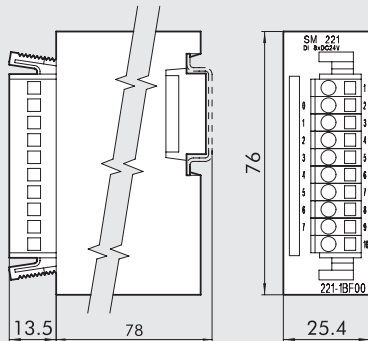
Code  
0240004003

Description  
Slave PROFIBUS-DP

Technical data

PROFIBUS-DP Interface	RS485: 9 pins D-Sub
Transmission speed	9.6 kBaud up to 12 Mbaud
Max number of modules which can be connected	32 (depending on the maximum current)
Nominal supply voltage	24 VDC
Absorption 24V	70 mA

⑤ 8-DIGITAL INPUT MODULE



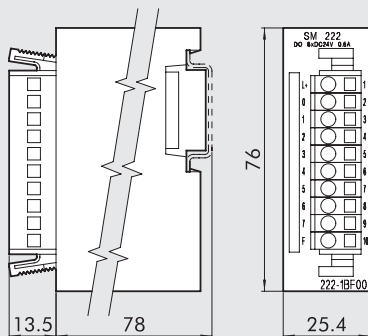
**Code**  
0240004053

**Description**  
DI 8XDC24V unit

**Technical data**

Nominal input voltage	24 VDC
Number of inputs	8
Input data	1 Byte
Input voltage at "1"	15...28.8V
Output voltage at "0"	0...5V
Response time	3 ms
Internal Bus voltage	5V
Absorption 5V BUS	20 mA

⑥ 8-DIGITAL OUTPUT MODULE



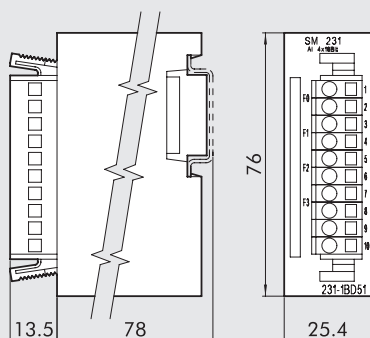
**Code**  
0240004051

**Description**  
DO 8XDC24V 0.5A unit

**Technical data**

Nominal voltage	24 VDC
Number of outputs	8
Output data	1 Byte
Absorption for each channel	1A (max 8A)
Internal Bus voltage	5V
Absorption 5V BUS	70 mA

⑦ 4-ANALOG INPUT MODULE



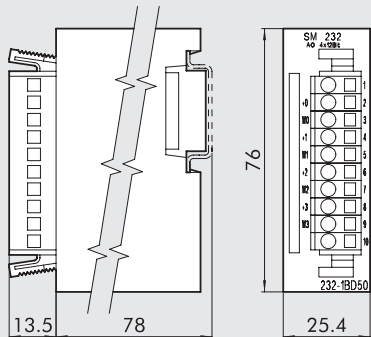
**Code**  
0240004054

**Description**  
AL 4X16 BIT unit

**Technical data**

Number of Inputs	4
Input data	8 Byte
Input range	Voltage 0 to 50 mV, 0...10V, ± 4 mV, ± 4V, ± 10V, Current 0/4...20 mA, +/-20 mA
	Temperature Pt100, Pt1000, Ni100, Ni1000
	Resistance 60 Ω, 600 Ω, 3000 Ω, 16000 Ω
	Thermoelements J, K, N, R, T, S
Resolution	12/16 Bit
Input resistance	20M Ω voltage, 85 Ω current
Time	5...70 ms
Internal Bus voltage	5 V
Absorption 5V BUS	280 mA

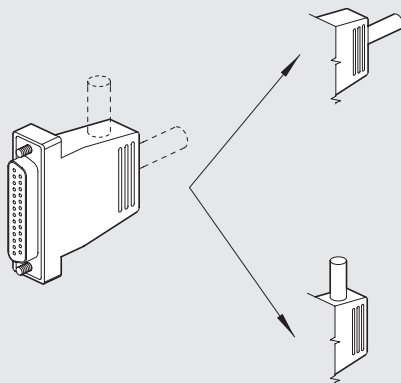
⑧ 4-ANALOG OUTPUT MODULE



Code	Description
0240004055	AO 4X12 BIT unit

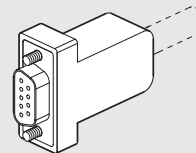
Technical data	
Number of outputs	4
Output data	8 Byte
Output range	Voltage 0...10V, ±10V, 1...5V Current 0...20 mA, 4...20 mA, ±20 mA
Resolution	12 BIT
Output resistance	Minimum voltage 1 kΩ, Maximum current 500 Ω
Conversion time	0.45 ms
Internal Bus voltage	5 V
Absorption 5V BUS	75 mA

⑪ 25-PIN PLUG CONNECTOR KIT



Code	Description	Weight [g]
0226180101	25-pin plug connector	48

⑫ 9-PIN PLUG CONNECTOR, STRAIGHT



Code	Description	Weight [g]
0226180102	9-pin plug connector	20

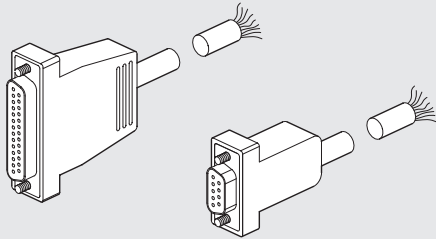
⑬ ⑭ ⑮ CABLES



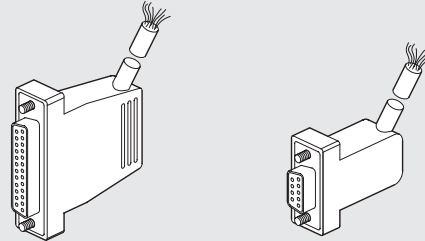
Code	Description	Weight [g/m]
0226107201	10-wire cable	60
0226107101	19-wire cable	122
0226107102	25-wire cable	130

Indicate the desired length in metres

NOTES

**16 17 STRAIGHT PRE-WIRED CONNECTOR KIT**


Code	Description	Weight [g]
0226900100	Straight D-Sub 9-PIN connector + cable L = 1 m	80
0226900250	Straight D-Sub 9-PIN connector + cable L = 2.5 m	170
0226900500	Straight D-Sub 9-PIN connector + cable L = 5 m	320
0226900750	Straight D-Sub 9-PIN connector + cable L = 7.5 m	470
0226901000	Straight D-Sub 9-PIN connector + cable L = 10 m	620
0226901500	Straight D-Sub 9-PIN connector + cable L = 15 m	920
0226902000	Straight D-Sub 9-PIN connector + cable L = 20 m	1220
0226905000	Straight D-Sub 9-PIN connector + cable L = 50 m	3020
0226920100	Straight D-Sub 25-PIN connector + cable L = 1 m	132
0226920250	Straight D-Sub 25-PIN connector + cable L = 2.5 m	320
0226920500	Straight D-Sub 25-PIN connector + cable L = 5 m	636

**16 17 PRE-WIRED 90° CONNECTOR**


Code	Description	Weight [g]
0226910100	90° D-Sub 9-PIN connector + cable L = 1 m	80
0226910250	90° D-Sub 9-PIN connector + cable L = 2.5 m	170
0226910500	90° D-Sub 9-PIN connector + cable L = 5 m	320
0226910750	90° D-Sub 9-PIN connector + cable L = 7.5 m	470
0226911000	90° D-Sub 9-PIN connector + cable L = 10 m	620
0226911500	90° D-Sub 9-PIN connector + cable L = 15 m	920
0226930100	90° D-Sub 25-PIN connector + cable L = 1 m	132
0226930250	90° D-Sub 25-PIN connector + cable L = 2.5 m	320
0226930500	90° D-Sub 25-PIN connector + cable L = 5 m	636

**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

**NOTES**

