

MULTIPLE CONNECTORS

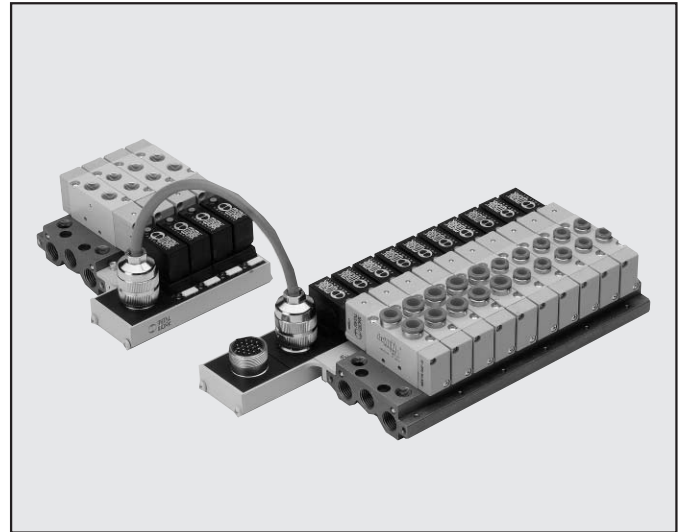
Mach 16 valves can be mounted on bases with pneumatic or electrical connection. The electric contacts of the individual valves are connected by means of a printed circuit board in a sealed conduit to a single connection point suitable for up to 16 controls. The number 16 was chosen because the number of outputs of most PLC output boards is 16 or a multiple of it. The system has numerous alternatives and variants for a wide range of requirements:

- Base for monostable or bistable valves.
- Connection via a multiple connector or wired cable.
- Supply of individual parts or ready prepared bases or complete valve units
- The configuration can be modified at any time to convert bases for monostable valves into bases for bistable valves.
- The return cable can be used to connect two monostable valve units to a single multiple connector.

All versions are certified for electromagnetic compatibility and hence they bear the CE mark. The system is prearranged for mounting a slave for field buses, which can be added at any time.

Valve units with multiple pneumatic/electrical connection are supplied complete with valves and are tested.

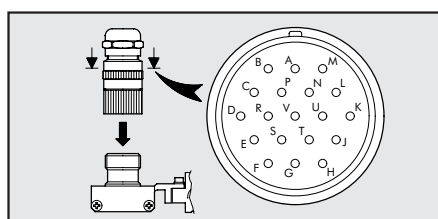
System modularity means that the valve sequence can be ordered to meet your own requirements (see key to codes).



TECHNICAL DATA

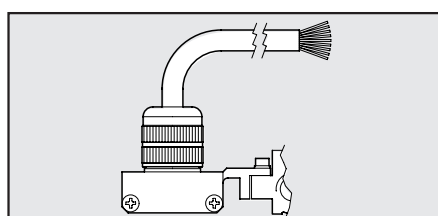
Supply voltage	24VDC 24VAC
Maximum absorption	50 mA for each position
Valve actuation indicator	yellow LED
Protection	Fuse
Operating temperature range	-10° to 60°C
Degree of protection with valves mounted	IP65
Insulation class	in compliance with IEC 664-1 and VDE 0110 Group C
Electromagnetic compatibility	in compliance with EEC 366/89
Maximum number of solenoid valves which can be applied	16
Number of contacts	19, 16 of which for solenoid valves, 2 common and 1 earth
Version with connectors	
Connector insulation class	in compliance with MIL 26485
Section of cables to weld to connector	max. 0.6 mm ²
Number of contacts	19, 16 of which for solenoid valves, 2 common and 1 earth
Pre-wired version	
Cable length	5 m
Number of wires	19, 16 of which for solenoid valves, 2 common and 1 earth
Wire section	0.22 mm ²
Shielding	tin plated – covering 80-90%
Cable	outer oil-proof and flame-proof PVC sheath
Cable outside diameter	8.5 mm

WIRING DIAGRAM FOR PRE-WIRED VERSION

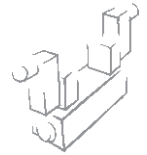


Position of electrical contact	Pin on flying connector	Position of electrical contact	Pin on flying connector	Position of electrical contact	Pin on flying connector
V1	S	V8	J	V15	B
V2	F	V9	A	V16	P
V3	U	V10	N	EARTH	K
V4	H	V11	M	-COM	E
V5	V	V12	L	-COM	R
V6	G	V13	D		
V7	T	V14	C		

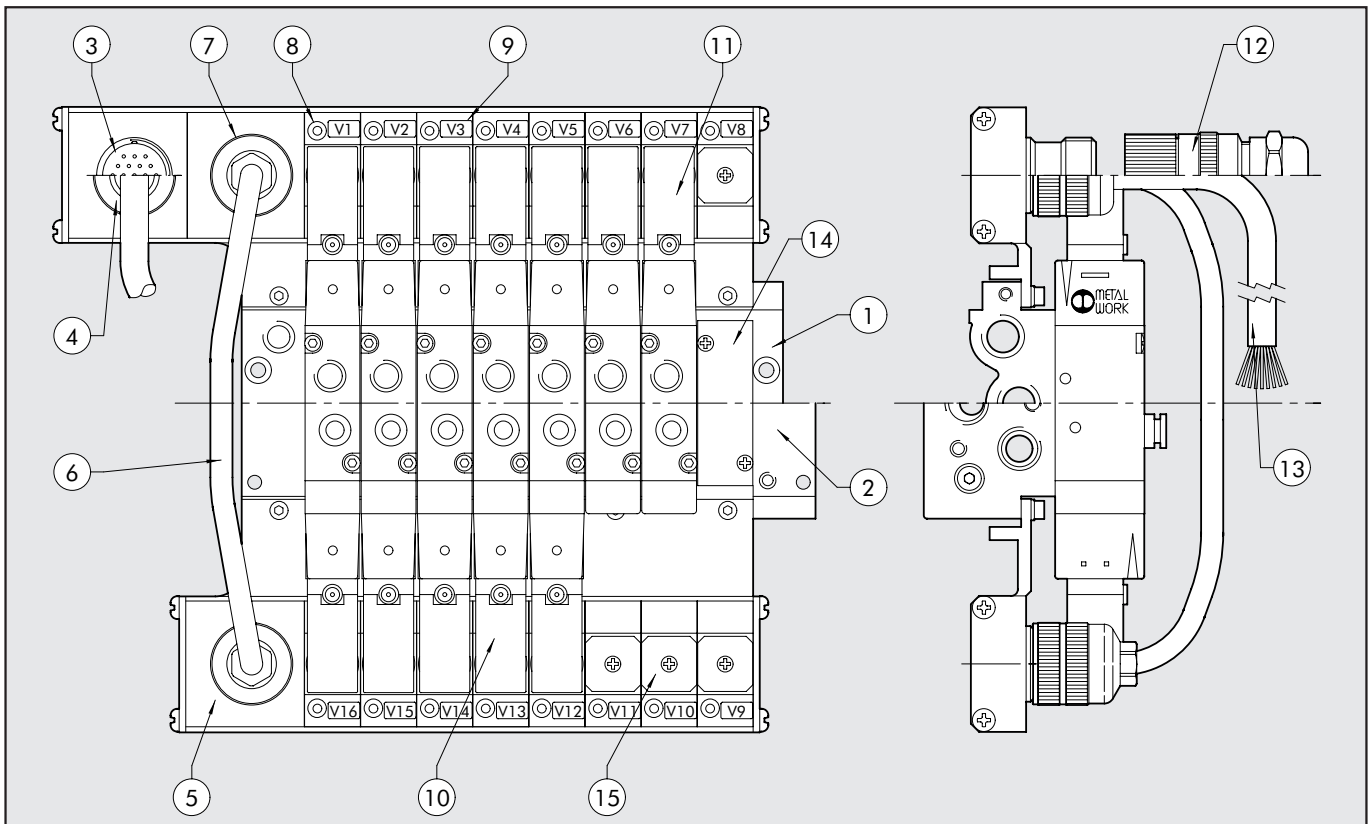
WIRING DIAGRAM FOR VERSION WITH CONNECTOR



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
V1	green /black	V8	brown/red	V15	orange
V2	yellow	V9	red/white	V16	blue/black
V3	white/black	V10	red/black	EARTH	yellow/red
V4	blue	V11	green/red	-COM	brown/black
V5	red	V12	blue/red	-COM	green
V6	yellow/black	V13	brown		
V7	white	V14	orange/black		



COMPONENTS



- ① Multiple base: extruded anodised aluminium
- ② Modular base: anodised aluminium
- ③ Main assembly, version with connector
- ④ Main assembly, pre-wired version
- ⑤ Secondary unit/additional secondary unit
- ⑥ 10-wire return cable
- ⑦ Socket for 10-wire return cable
- ⑧ LED (LED on= Solenoid valve energised)
- ⑨ Identification label (for writing on)
- ⑩ Bistable solenoid valve MACH 16
- ⑪ Monostable solenoid valve MACH 16
- ⑫ Flying 19-wire connector for version with connector: nickel-plated aluminium, silver-plated contacts
- ⑬ 19-wire cable for pre-wired version
- ⑭ Blanking plate – pneumatic position: anodised aluminium
- ⑮ Small blanking plate – electric connector: painted aluminium

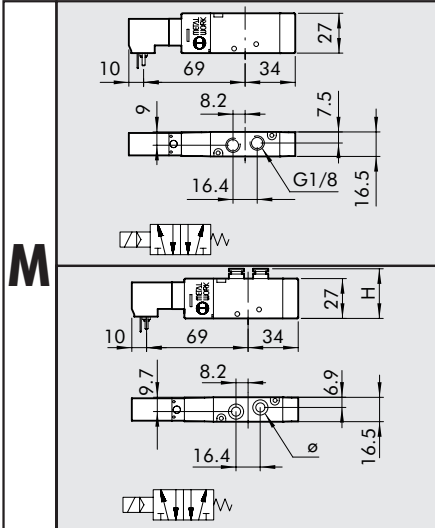
KEY TO CODES

A	0	8	B	W	C	5	0	8	M	M	6	V	L	2	4	V	D	C
FAMILY			NO. OF POSITIONS			SIZE			VOLTAGE									
A	multiple base for solenoid/pneumatic connection Mach 16	04	4 Posn.	M	electrical connection only for monostable valves	MCN	celectrical connector	08	G 1/8"	M	MSV 25 SMS 00							24VDC
		06	6 Posn.							M6	MSV G5 SMS 00							24VAC
		08	8 Posn.							M8	MSV H5 SMS 00							
		10	10 Posn.			WC5	pre-wired cable			V	MSV 25 SCS 00							
		12	12 Posn.							L	MSV 25 SMP 00							
B	manifold base for sol/pneum. connection			B	electrical connection for bistable valves	ACM	additional connection for monostable battery			L6	MSV G5 SMP 00							
										L8	MSV H5 SMP 00							
										J	MSV 25 SMB 00							
										J6	MSV G5 SMB 00							
										J8	MSV H5 SMB 00							
										K	MSV 25 SCB 00							
										G	MSV 26 SMS CC							
										G6	MSV G6 SMS CC							
										G8	MSV H8 SMS CC							
										O	MSV 26 SCS CC							
										E	MSV 26 SMS OC							
										E6	MSV G6 SMS OC							
										E8	MSV H8 SMS OC							
										F	MSV 26 SCS OC							
										B	MSV 26 SMS PC							
										B6	MSV G6 SMS PC							
										B8	MSV H8 SMS PC							
										C	MSV 26 SCS PC							
										A	BLANKING PLATE							
										D	INTERMEDIATE DIAPHRAGM							

N.B. The valve insertion order inside the descriptive key is the following, starting from the connector, from the left towards the right: the first left square corresponds to the first valve close to the connector on the base. There are 12 squares available for the description: if you order a base with less than 12 positions, complete by placing a 0 in the remaining boxes.

MACH 16 VALVES FOR MULTIPLE CONNECTOR

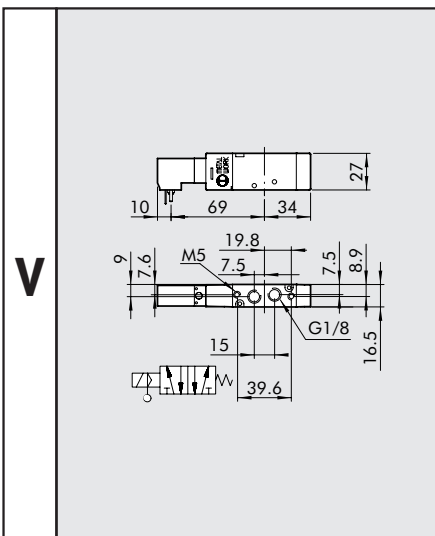
MONOSTABLE 5/2, SOLENOID/PNEUMATIC - MECHANICAL SPRING



Code	Description	Weight [g]
7062040132	MSV 25 SMS 00 24VDC	92
7062040133	MSV 25 SMS 00 24VAC	92

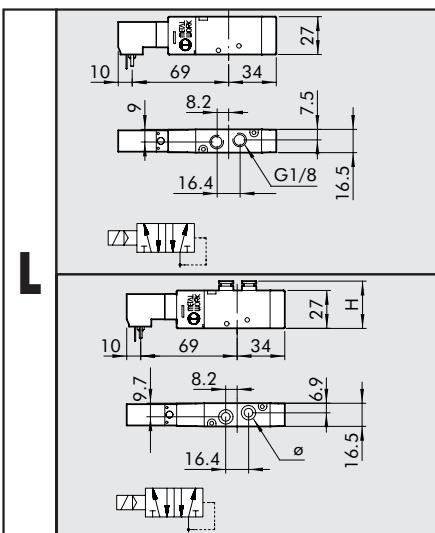
Code	Description	Ø	H	Weight [g]
7066040132	MSV G5 SMS OO 24 VDC	6	32.7	96
7067040132	MSV H5 SMS OO 24 VDC	8	34	98
7066040133	MSV G5 SMS OO 24 VAC	6	32.7	96
7067040133	MSV H5 SMS OO 24 VAC	8	34	98

MONOSTABLE 5/2, SOLENOID/PNEUMATIC, PILOT-ASSISTED – MECHANICAL SPRING



Code	Description	Weight [g]
7062060132	MSV 25 SCS 00 24VDC	93
7062060133	MSV 25 SCS 00 24VAC	93

MONOSTABLE 5/2, SOLENOID/PNEUMATIC - PNEUMATIC SPRING

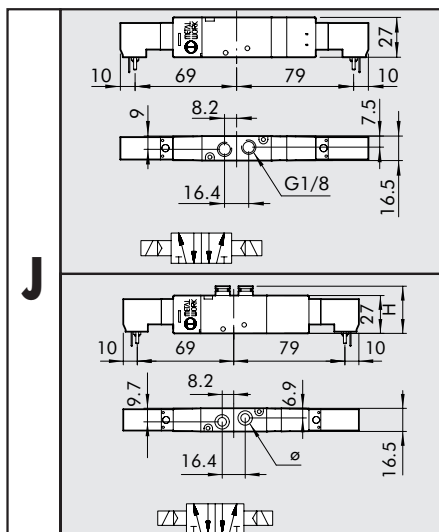


Code	Description	Weight [g]
7062040102	MSV 25 SMP 00 24VDC	93
7062040103	MSV 25 SMP 00 24VAC	93

Code	Description	Ø	H	Weight [g]
7066040102	MSV G5 SMP OO 24 VDC	6	32.7	96
7067040102	MSV H5 SMP OO 24 VDC	8	34	98
7066040103	MSV G5 SMP OO 24 VAC	6	32.7	96
7067040103	MSV H5 SMP OO 24 VAC	8	34	98



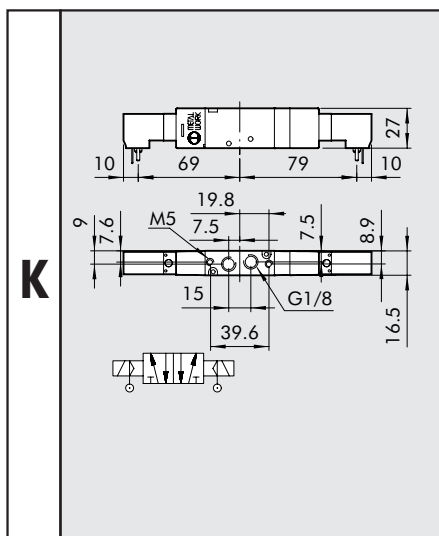
BISTABLE 5/2, SOLENOID/PNEUMATIC



Code	Description	Weight [g]
7062040112	MSV 25 SMB 00 24VDC	139
7062040113	MSV 25 SMB 00 24VAC	139

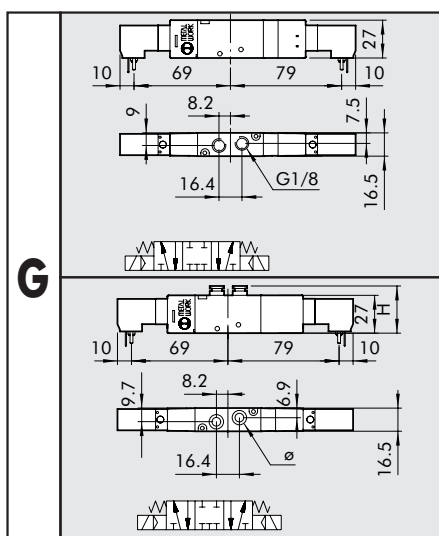
Code	Description	Ø	H	Weight [g]
7066040112	MSV G5 SMB OO 24 VDC	6	32.7	143
7067040112	MSV H5 SMB OO 24 VDC	8	34	146
7066040113	MSV G5 SMB OO 24 VAC	6	32.7	143
7067040113	MSV H5 SMB OO 24 VAC	8	34	146

BISTABLE 5/2, SOLENOID/PNEUMATIC, PILOT-ASSISTED



Code	Description	Weight [g]
7062060112	MSV 25 SCB 00 24VDC	140
7062060113	MSV 25 SCB 00 24VAC	140

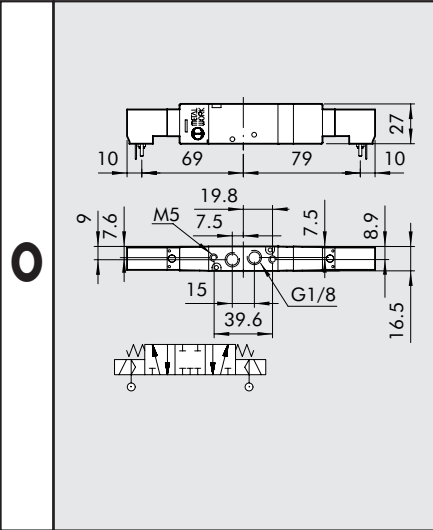
MONOSTABLE 5/3, SOLENOID/PNEUMATIC – CLOSED CENTRES



Code	Description	Weight [g]
7062040212	MSV 26 SMS CC 24VDC	142
7062040213	MSV 26 SMS CC 24VAC	142

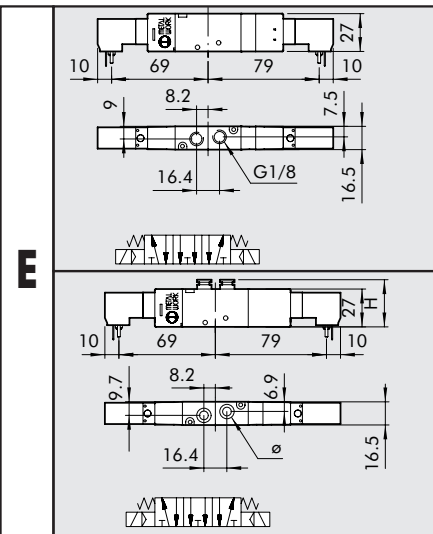
Code	Description	Ø	H	Weight [g]
7066040212	MSV G6 SMS CC 24 VDC	6	32.7	146
7067040212	MSV H6 SMS CC 24 VDC	8	34	146
7066040213	MSV G6 SMS CC 24 VAC	6	32.7	146
7067040213	MSV H6 SMS CC 24 VAC	8	34	146

MONOSTABLE 5/3, SOLENOID/PNEUMATIC, PILOT-ASSISTED – CLOSED CENTRES



Code	Description	Weight [g]
7062060212	MSV 26 SCS CC 24VDC	143
7062060213	MSV 26 SCS CC 24VAC	143

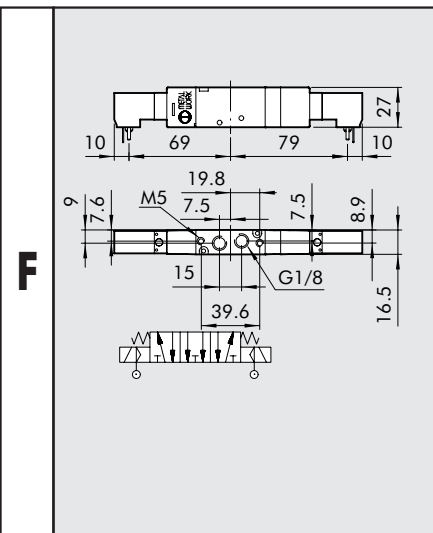
MONOSTABLE 5/3 SOLENOID/PNEUMATIC – OPEN CENTRES



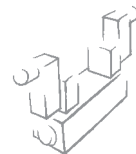
Code	Description	Weight [g]
7062040312	MSV 26 SMS OC 24VDC	142
7062040313	MSV 26 SMS OC 24VAC	142

Code	Description	Ø	H	Weight [g]
7066040312	MSV G6 SMS OC 24 VDC	6	32.7	146
7067040312	MSV H6 SMS OC 24 VDC	8	34	146
7066040313	MSV G6 SMS OC 24 VAC	6	32.7	146
7067040313	MSV H6 SMS OC 24 VAC	8	34	146

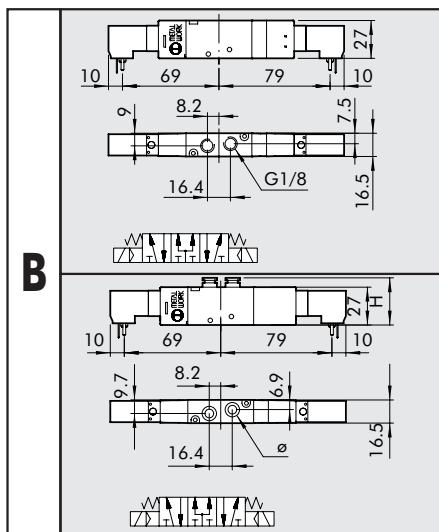
MONOSTABLE 5/3 SOLENOID/PNEUMATIC, PILOT-ASSISTED – OPEN CENTRES



Code	Description	Weight [g]
7062060312	MSV 26 SCS OC 24VDC	143
7062060313	MSV 26 SCS OC 24VAC	143



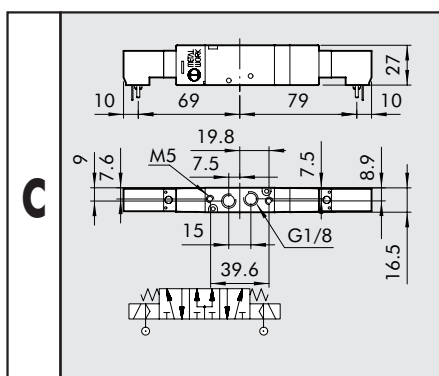
MONOSTABLE 5/3, SOLENOID/PNEUMATIC – PRESSURE CENTRES



Code	Description	Weight [g]
7062040412	MSV 26 SMS PC 24VDC	142
7062040413	MSV 26 SMS PC 24VAC	142

Code	Description	Ø	H	Weight [g]
7066040412	MSV G6 SMS PC 24 VDC	6	32.7	146
7067040412	MSV H6 SMS PC 24 VDC	8	34	146
7066040413	MSV G6 SMS PC 24 VAC	6	32.7	146
7067040413	MSV H6 SMS PC 24 VAC	8	34	146

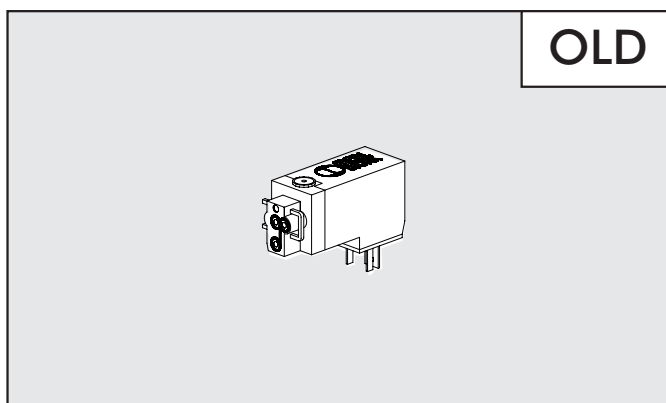
MONOSTABLE 5/3, SOLENOID/PNEUMATIC, PILOT-ASSISTED – PRESSURE CENTRES



Code	Description	Weight [g]
7062060412	MSV 26 SCS PC 24VDC	143
7062060413	MSV 26 SCS PC 24VAC	143

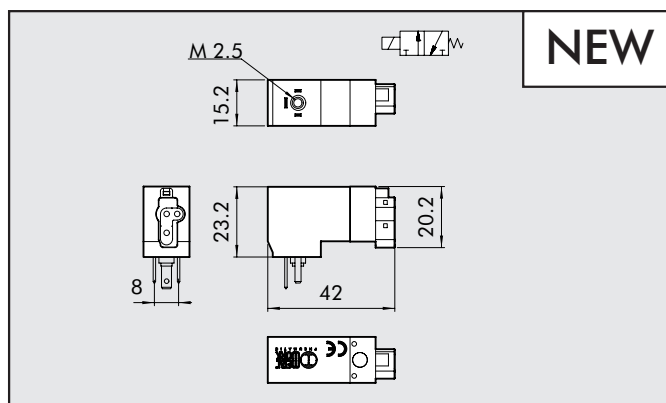
SPARE PARTS

COIL MACH 16



Code	Description
W4015201000	PILOT – MULTIPLE CONNECTION 24 VDC
W4015201010	PILOT – MULTIPLE CONNECTION 24 VAC

COIL MACH 16

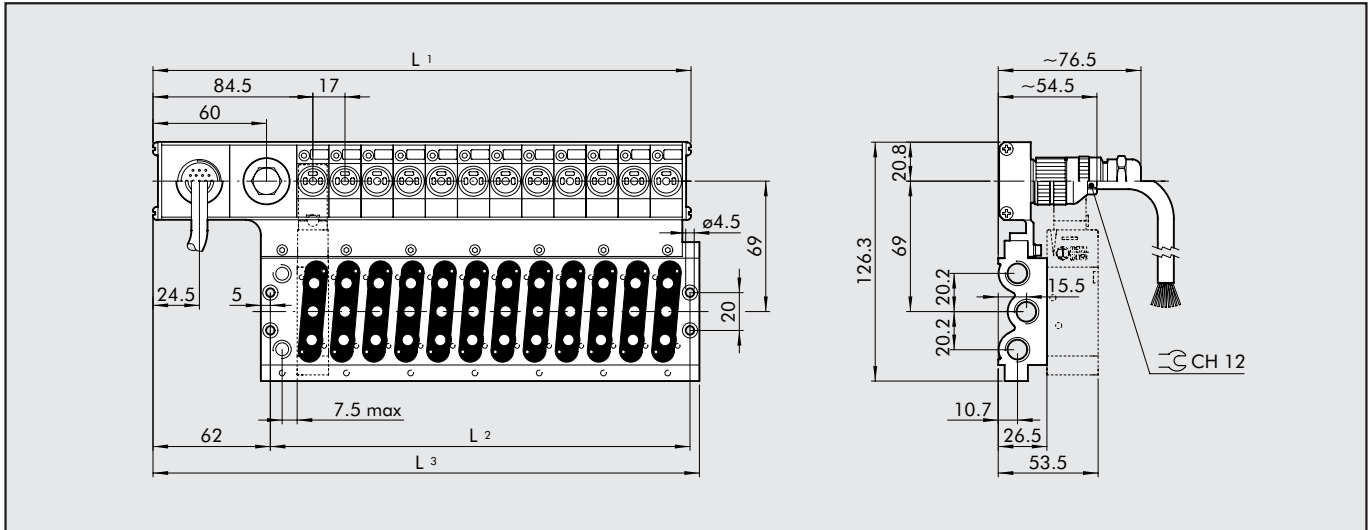


Code	Description
W4015401000	IN-LINE PILOT 24 VDC
W4015401010	IN-LINE PILOT 24 VAC 50/60 Hz

NB: if the pilot to be replaced bears the writing **CE**, you have to order among the NEW pilots, otherwise order among the OLD pilots

BASES WITH MULTIPLE CONNECTION

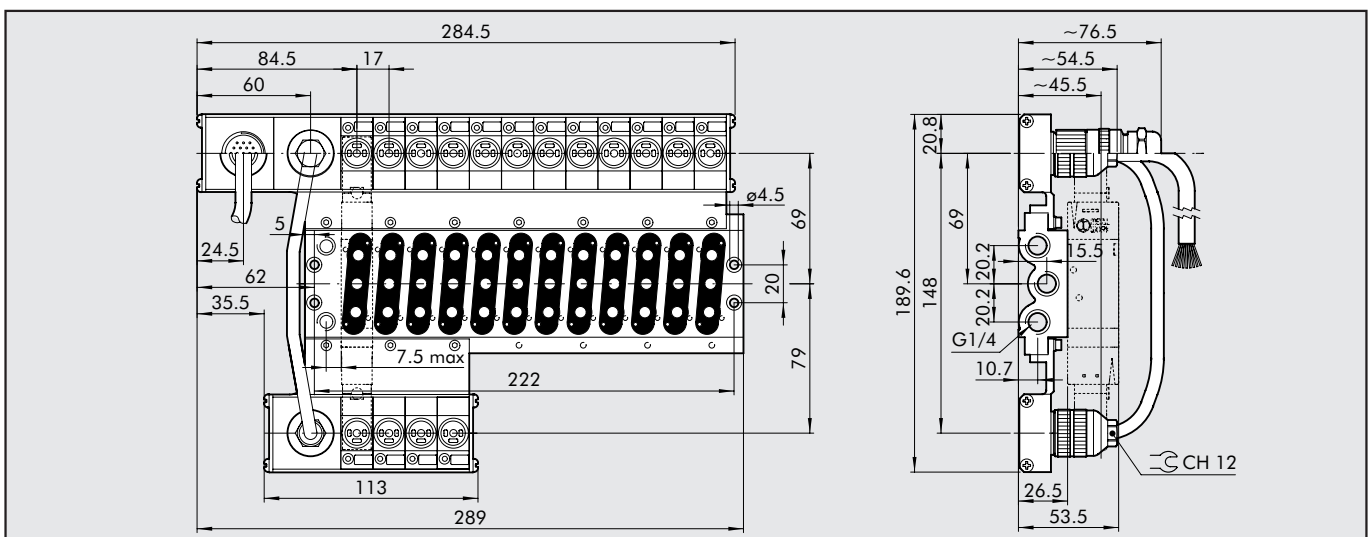
MONOSTABLE SOLENOID/PNEUMATIC BASE WITH 4, 6, 8, 10, 12 POSITIONS



Pos.-Nr.	L1	L2	L3	Description	Code 24 VDC	Code VAC		Weight [g]
4	148.5	86	153	CVM EP 08 04 M MCN	0225100401	0225110401		504
6	182.5	120	187	CVM EP 08 06 M MCN	0225100601	0225110601		644
8	216.5	154	221	CVM EP 08 08 M MCN	0225100801	0225110801	with connector	784
10	250.5	188	255	CVM EP 08 10 M MCN	0225101001	0225111001		924
12	284.5	222	289	CVM EP 08 12 M MCN	0225101201	0225111201		1264
4	148.5	86	153	CVM EP 08 04 M WC5	0225400401	0225410401		3642
6	182.5	120	187	CVM EP 08 06 M WC5	0225400601	0225410601		3781
8	216.5	154	221	CVM EP 08 08 M WC5	0225400801	0225410801	with pre-wired cable	3923
10	250.5	188	255	CVM EP 08 10 M WC5	0225401001	0225411001		4070
12	284.5	222	289	CVM EP 08 12 M WC5	0225401201	0225411201		4195

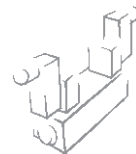
. : • 24VDC = direct current
 • 24VAC = alternating current

BISTABLE SOLENOID/PNEUMATIC BASE WITH 12 POSITIONS

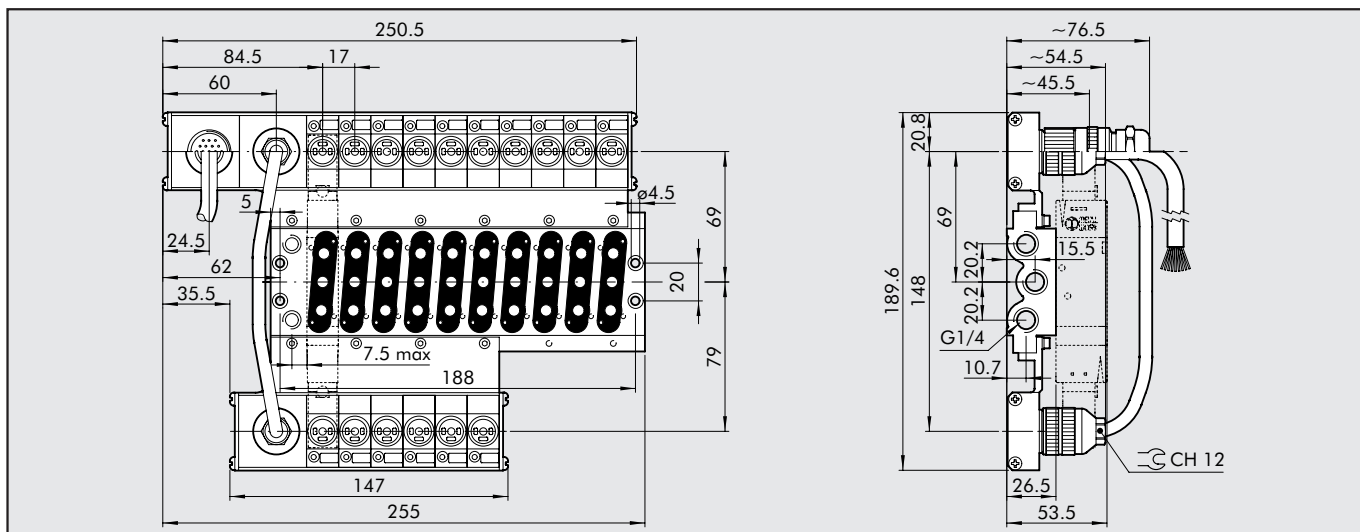


Pos.-Nr.	Description	Code 24 VDC	Code VAC		Weight [g]
12	CVM EP 08 12 B MCN	0225201201	0225211201	with multiple connector	1315
12	CVM EP 08 12 B WC5	0225501201	0225511201	with pre-wired cable	4700

. : • 24VDC = direct current
 • 24VAC = alternating current



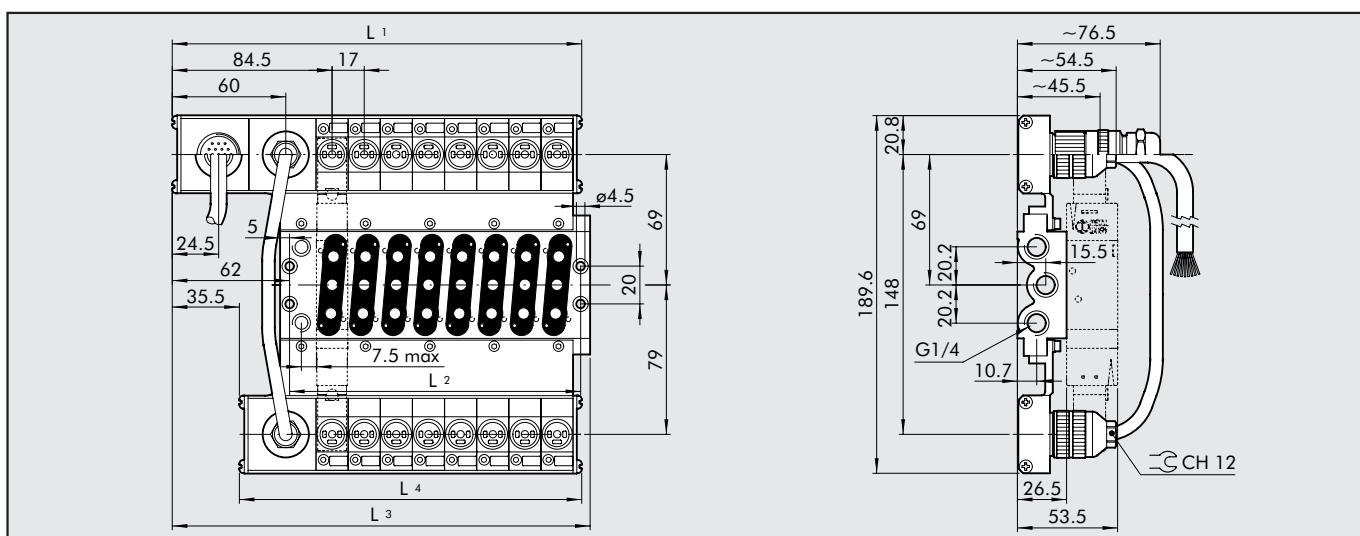
BISTABLE SOLENOID/PNEUMATIC BASE WITH 10 POSITIONS



Pos.-Nr.	Description	Code 24 VDC	Code VAC		Weight [g]
10	CVM EP 08 10 B MCN	0225201001	0225211001	with multiple connector	1245
10	CVM EP 08 10 B WC5	0225501001	0225511001	with pre-wired cable	4600

. : • 24 VDC = direct current
 • 24 VAC = alternating current

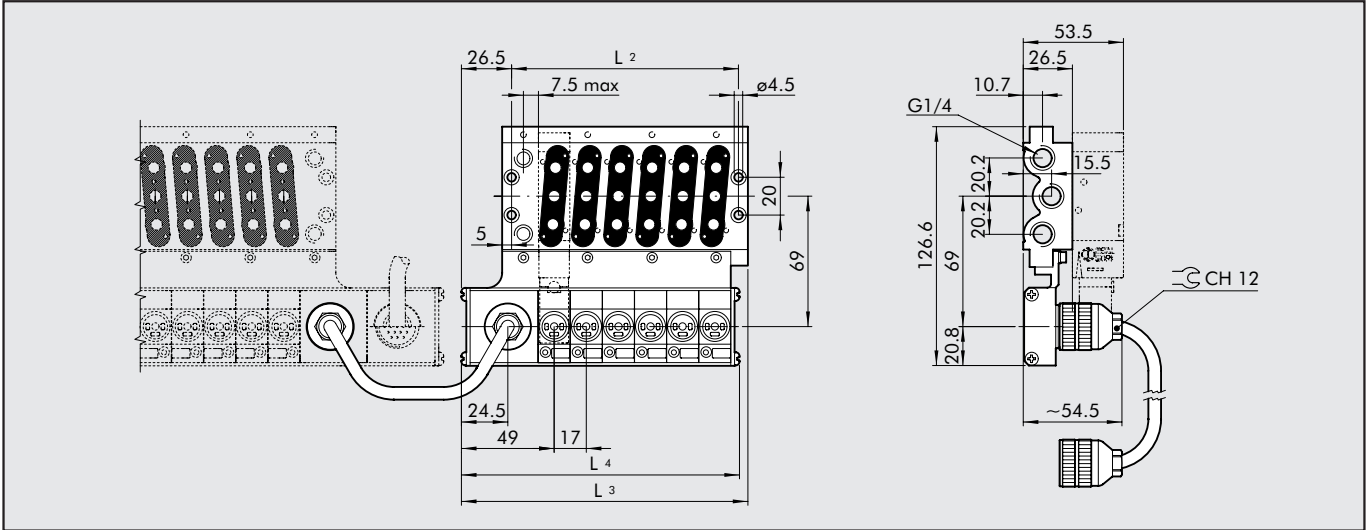
BISTABLE SOLENOID/PNEUMATIC BASE WITH 4, 6, 8 POSITIONS



Pos.-Nr.	L1	L2	L3	L4	Description	Code 24 VDC	Code VAC		Weight [g]
4	148.5	86	153	113	CVM EP 08 04 B MCN	0225200401	0225210401	with multiple connector	770
6	182.5	120	187	147	CVM EP 08 06 B MCN	0225200601	0225210601		965
8	216.5	154	221	181	CVM EP 08 08 B MCN	0225200801	0225210801		1200
4	148.5	86	153	113	CVM EP 08 04 B WC5	0225500401	0225510401	with pre-wired cable	3910
6	182.5	120	187	147	CVM EP 08 06 B WC5	0225500601	0225510601		4086
8	216.5	154	221	181	CVM EP 08 08 B WC5	0225500801	0225510801		4264

. : • 24 VDC = direct current
 • 24 VAC = alternating current

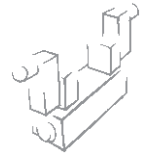
ADDITIONAL MONOSTABLE SOLENOID/PNEUMATIC BASE WITH 4, 6, 8 POSITIONS



Pos.-Nr.	L2	L3	L4	Description	Code 24 VDC	Code VAC	Weight [g]
4	86	117.5	113	CVM EP 08 04 M ACM	0225300401	0225310401	500
6	120	151.5	147	CVM EP 08 06 M ACM	0225300601	0225310601	640
8	154	185.5	181	CVM EP 08 08 M ACM	0225300801	0225310801	780

. : • 24 VDC = direct current
 • 24 VAC = alternating current

NOTES



MODULAR MULTIPLE CONNECTOR KIT

It is possible to buy the various assembly kits separately, to obtain a wide range of customised applications.

The main units of the version with connector ① or the pre-wired version ② can easily be assembled with the multiple base ⑫ or the modular manifold base ⑬. The manifold base allows particular circuits on the individual valves (feed from exhaust outlets, pressure differentiation, etc.)

Likewise, on the other side it is also simple to mount the secondary unit ③. This possibility is very interesting because it allows you to convert a base for monostable valves into a base for bistable valves. If you fit an additional secondary unit ④ on a base, you obtain an additional solenoid base that can be connected by means of return cables to a main base for monostable valves. The only thing to remember is that in all cases the total number of positions (connection to solenoid valve coil) must not exceed sixteen.

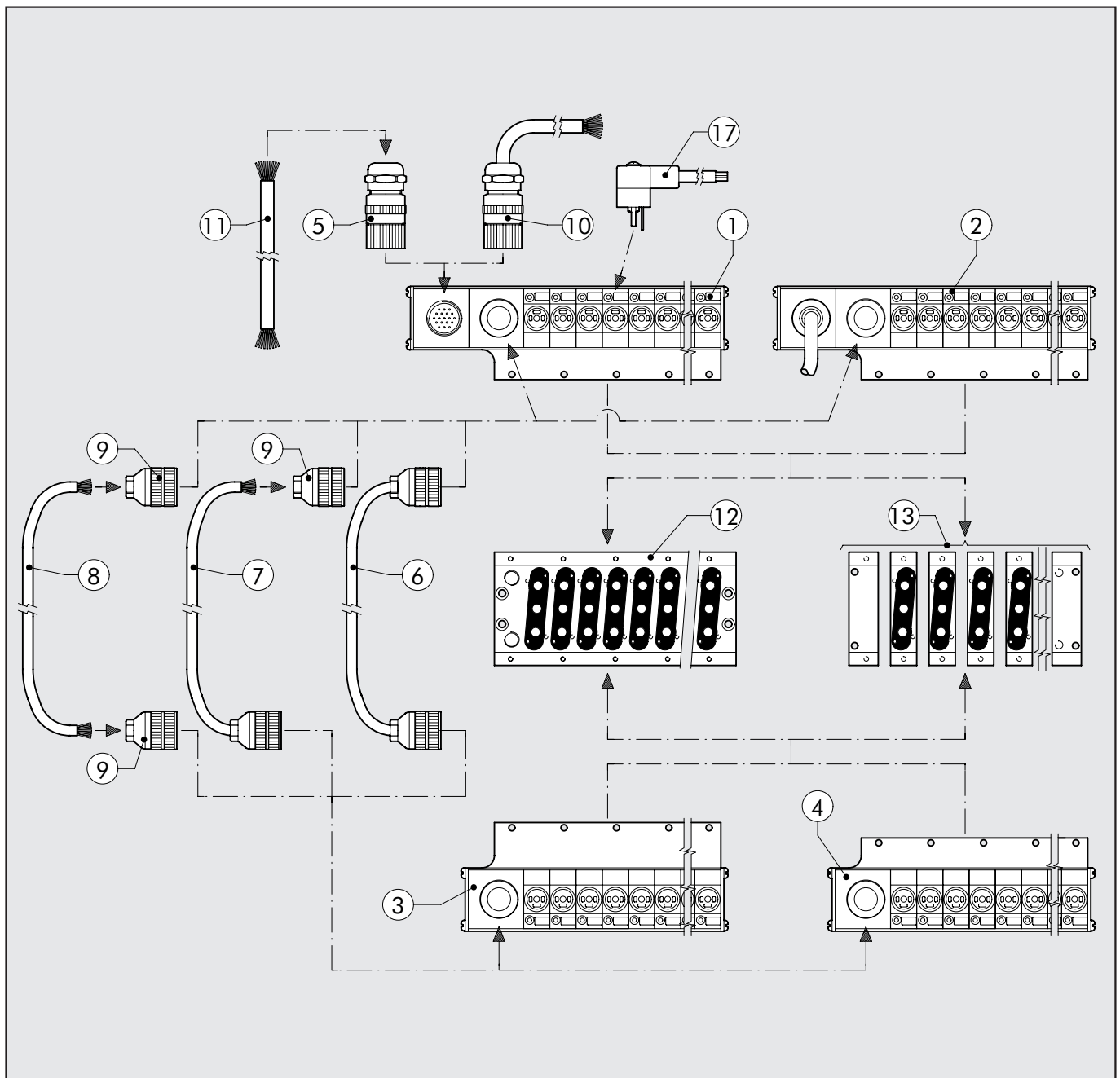
The 10 pin return cable ⑥ is used when a main unit and a

secondary unit, or only one additional secondary unit, are mounted together on the multiple (or manifold) base. It has to be connected to the sockets shown in the diagram.

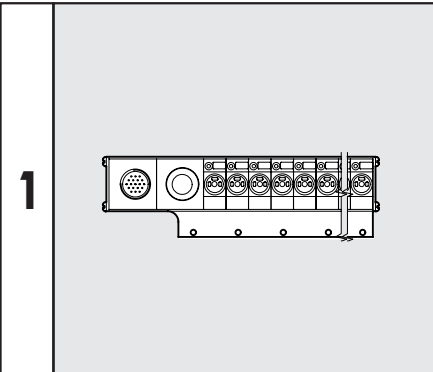
For different requirements, it is also possible to have return cables with a connector at one end only ⑦, or just the 10-wire cable ⑧. These types are available in different lengths. A 10-wire connector kit ⑨ is also available if you need to complete the wiring.

In the version with a connector, the 19-wire flying connector ⑤ pilots the entire assembled base. This connector must be welded onto the 19-wire cable ⑪, which is available in different lengths. The 19-wire connector complete with cable ⑩ is available in various lengths.

The male connector ⑰ allows the free electrical connection of the multiple connector to be used, in order to control the valves placed in the system or to control the bistable valves by a monostable multiple electrical connection base.

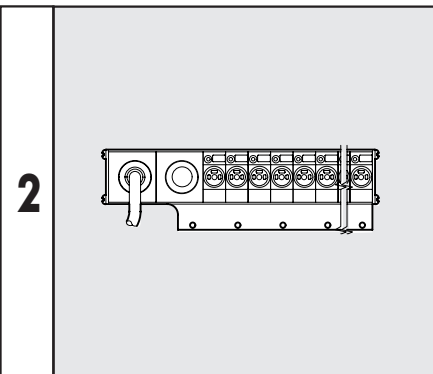


MAIN KIT – VERSION WITH CONNECTOR



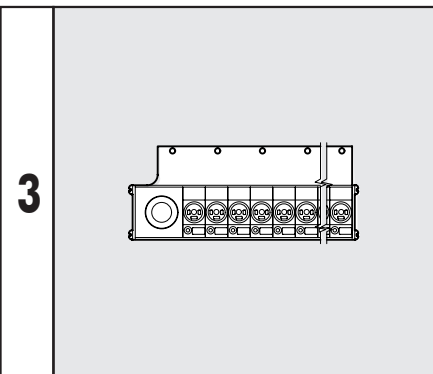
Code	Description	Weight [g]
0226500401	MAIN MULTIPLE CONNECTION KIT, 4 POSITIONS VDC	245
0226510401	MAIN MULTIPLE CONNECTION KIT, 4 POSITIONS VAC	245
0226500601	MAIN MULTIPLE CONNECTION KIT, 6 POSITIONS VDC	280
0226510601	MAIN MULTIPLE CONNECTION KIT, 6 POSITIONS VAC	280
0226500801	MAIN MULTIPLE CONNECTION KIT, 8 POSITIONS VDC	308
0226510801	MAIN MULTIPLE CONNECTION KIT, 8 POSITIONS VAC	308
0226501001	MAIN MULTIPLE CONNECTION KIT, 10 POSITIONS VDC	344
0226511001	MAIN MULTIPLE CONNECTION KIT, 10 POSITIONS VAC	344
0226501201	MAIN MULTIPLE CONNECTION KIT, 12 POSITIONS VDC	396
0226511201	MAIN MULTIPLE CONNECTION KIT, 12 POSITIONS VAC	396

MAIN MULTIPLE PRE-WIRED CONNECTION KIT



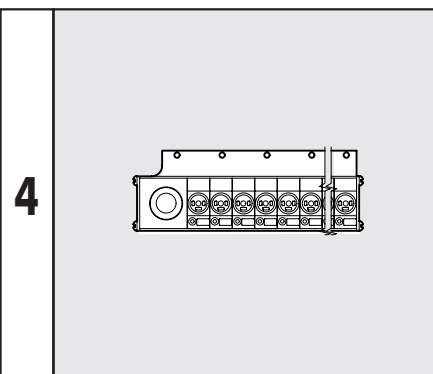
Code	Description	Weight [g]
0226400401	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 4 POSITIONS VDC	3350
0226410401	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 4 POSITIONS VAC	3350
0226400601	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 6 POSITIONS VDC	3400
0226410601	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 6 POSITIONS VAC	3400
0226400801	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 8 POSITIONS VDC	3423
0226410801	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 8 POSITIONS VAC	3423
0226401001	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 10 POSITIONS VDC	3460
0226411001	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 10 POSITIONS VAC	3460
0226401201	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 12 POSITIONS VDC	3490
0226411201	PRE-WIRED MULTIPLE MAIN CONNECTOR KIT, 12 POSITIONS VAC	3490

SECONDARY KIT



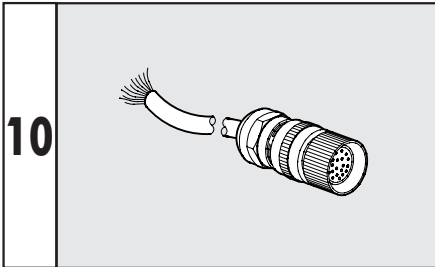
Code	Description	Weight [g]
0226200401	MULTIPLE SECONDARY CONNECTOR KIT, 4 POSITIONS VDC	166
0226210401	MULTIPLE SECONDARY CONNECTOR KIT, 4 POSITIONS VAC	166
0226200601	MULTIPLE SECONDARY CONNECTOR KIT, 6 POSITIONS VDC	210
0226210601	MULTIPLE SECONDARY CONNECTOR KIT, 6 POSITIONS VAC	210
0226200801	MULTIPLE SECONDARY CONNECTOR KIT, 8 POSITIONS VDC	257
0226210801	MULTIPLE SECONDARY CONNECTOR KIT, 8 POSITIONS VAC	257

ADDITIONAL SECONDARY KIT



Code	Description	Weight [g]
0226300401	MULTIPLE SECONDARY CONNECTOR KIT, 4 POSITIONS VDC	158
0226310401	MULTIPLE SECONDARY CONNECTOR KIT, 4 POSITIONS VAC	158
0226300601	MULTIPLE SECONDARY CONNECTOR KIT, 6 POSITIONS VDC	199
0226310601	MULTIPLE SECONDARY CONNECTOR KIT, 6 POSITIONS VAC	199
0226300801	MULTIPLE SECONDARY CONNECTOR KIT, 8 POSITIONS VDC	243
0226310801	MULTIPLE SECONDARY CONNECTOR KIT, 8 POSITIONS VAC	243

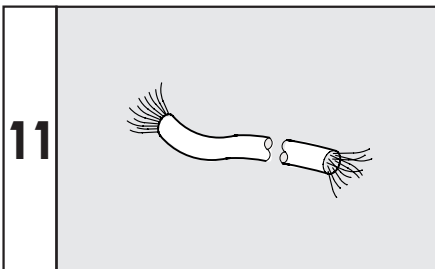
19-WIRE CABLE, ONE END WITH CONNECTOR



10

Code	Description
0226140250	19-WIRE CABLE, ONE END WITH CONNECTOR L = 2.5 m
0226140500	19-WIRE CABLE, ONE END WITH CONNECTOR L = 5 m
0226141000	19-WIRE CABLE, ONE END WITH CONNECTOR L = 10 m
0226141500	19-WIRE CABLE, ONE END WITH CONNECTOR L = 15 m
0226142000	19-WIRE CABLE, ONE END WITH CONNECTOR L = 20 m
0226143000	19-WIRE CABLE, ONE END WITH CONNECTOR L = 30 m

19-WIRE CABLE

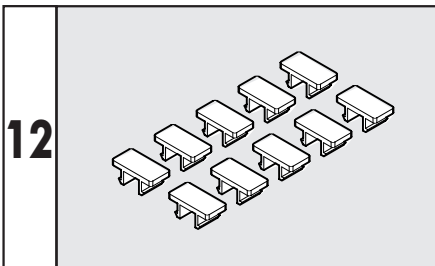


11

Code	Description
0226107101	19-WIRE CABLE

Indicate the desired length in metres

SET OF IDENTIFICATION PLATES

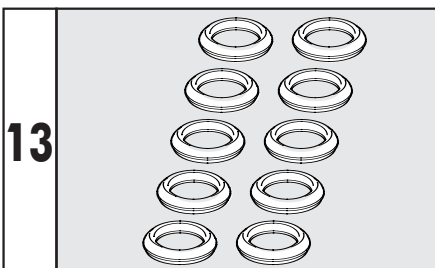


12

Code	Description
0226107000	SET OF IDENTIFICATION PLATES

Package: 10 pieces

ELECTRIC CONTACT GASKETS

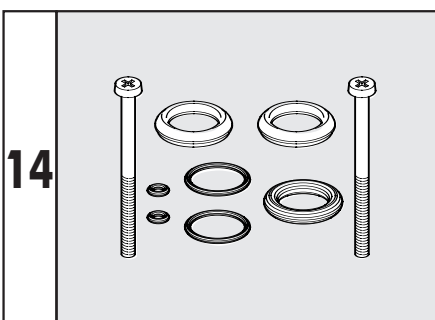


13

Code	Description
0226107001	SET OF ELECTRIC CONTACT GASKETS

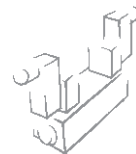
Package: 10 pieces

SET OF MULTIPLE BASE GASKETS

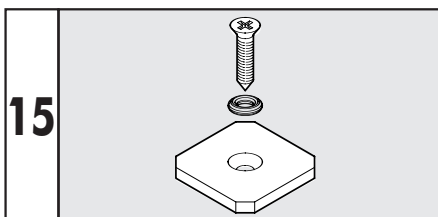


14

Code	Description
0226007001	SET OF M16 MULTIPLE BASE GASKETS

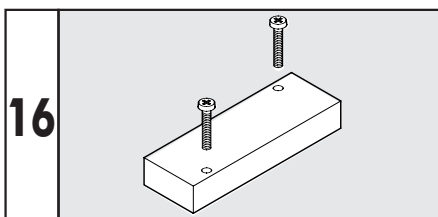


ELECTRIC CONNECTION BLANKING PLATE



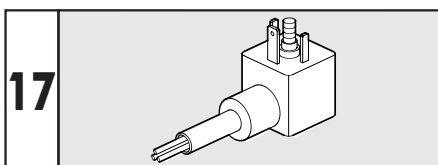
Code	Description
0225004502	ACCESSORIES:- MACH 16 ELECTRIC CONNECTION BLANKING PLATE

BASE BLANKING PLATE



Code	Description
0225004500	ACCESSORIES: MACH 16 BASE BLANKING PLATE

MALE CONNECTOR



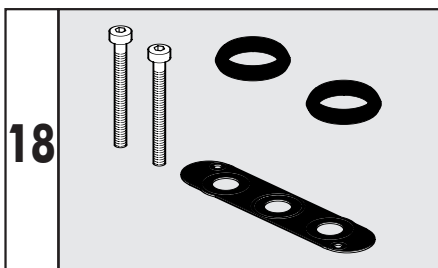
Code	Description
W0970504021	MALE CONNECTOR 2mm

Max power for each position = 5W
Max total power of multiple connector = 36W

EXAMPLE OF A MALE CONNECTOR

- SOV 1/8"
- SOV 1/4"
- SOV 1/2"
- SOV on base
- MACH 16
- MACH 18
- ISO 1 – ISO 2
- PIV valves
- APR: progressive starter
- V3V: circuit switching valve

KIT OF MULTIPLE BASE GASKETS



Code	Description
0226007003	KIT OF M16 MULTIPLE BASE INTEGRATE GASKETS