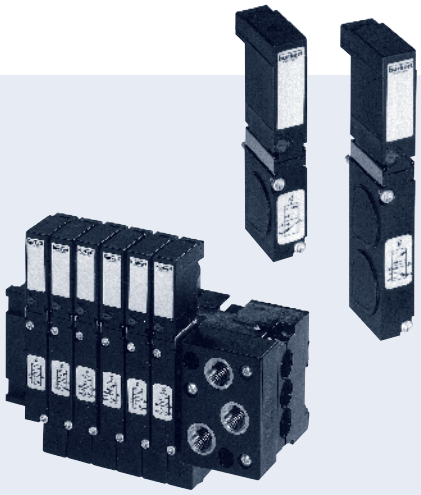
bürkert
FLUID CONTROL SYSTEMS

Multi–Way Valves for Pneumatics Servo–Assisted, Extendable, 10mm Wide



- 3/2 and 5/2–Way Valves
- Optimum system solutions due to high level of modularity
- Maintenance–free and little wear due to high level dry design
- Multiple configurations possible through modular design
- High cycle life
- Quick response times
- Common air exhaust
- CE

Types 6510/6511 are with high switch reliability diaphragm valves in 3/2 and 5/2–way versions. The valve has a reinforced diaphragm in the main valve and a 10mm rocker design solenoid as a pilot. High pressures can be switched with quick response times while requiring only small power levels. The bodies are made of high quality thermoplastic. Electrical connection is made with rectangular plug or optional flying leads.

Types 6510 and 6511 manifold assemblies are easily expandable. Power can be supplied through a fieldbus system having various protocols, multipole or common collecting connections.

The valves with plug connections in front are used for wiring valves individually.

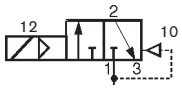
Valve modules are screwed to an integrated lock technology, sub–base assembly.

Technical data	
Fluids	Lubricated and non–lubricated air, neutral gases
Applications Control valve actuation for pneumatic linear and rotary actuators ideal for:	Food and beverage industry General processing industry Packaging machine manufacturers Textile industry Machine tool manufacturers Woodworking machine manufacturers
Pressure range	36 – 100 PSI; 4.6 ft^3/Min; 5/32" O.D. Tubing Connection

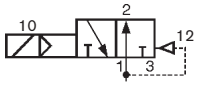
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Circuit functions

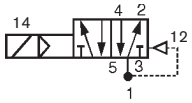
C- 3/2–way valve Type 6510,
in de-energized position
port 2 exhausted



D- 3/2–way valve Type 6510,
in de-energized position
port 2 pressurized



H- 5/2–way valve Type 6511,
in de-energized position
pressure port 1 connected to
port 2, port 4 exhausted



Specifications

Circuit Function	Orifice [mm]	C_v[1)]	Pressure range [PSI]	All Port Connections at the Back of the Valve	Output Ports 2 and 4 in the Pneumatic Sub–base Module	Supply Ports 1/3/5 in the End Connection Modules
C and D (3/2), H (5/2)	2.5	.15	36 –100	sub–base	M5 or push–in coupling for 5/32" O.D. Tubing	1/8" NPT

[1)] Q= 4.6 ft³/min. with 87 PSI upstream and 15 PSI pressure drop across the valve at 68°F

Valve specifications	
Valve body	Polyamide (PA)
Sealing material	FPM and NBR
Media	Lubricated or non–lubricated compressed air, neutral gases
Media temperature	14°F to 122°F
Ambient temperature	14°F to 130°F
Response times[2)] Open (On) Close (Off)	 15 ms 10 ms
Connections Port connections at the valve Supply ports 1/3/5 at the connection module Output ports 2/4 at the pneumatic module 5/32"	 Sub–base Threaded 1/8" NPT Push-in coupling for the O.D. tubing

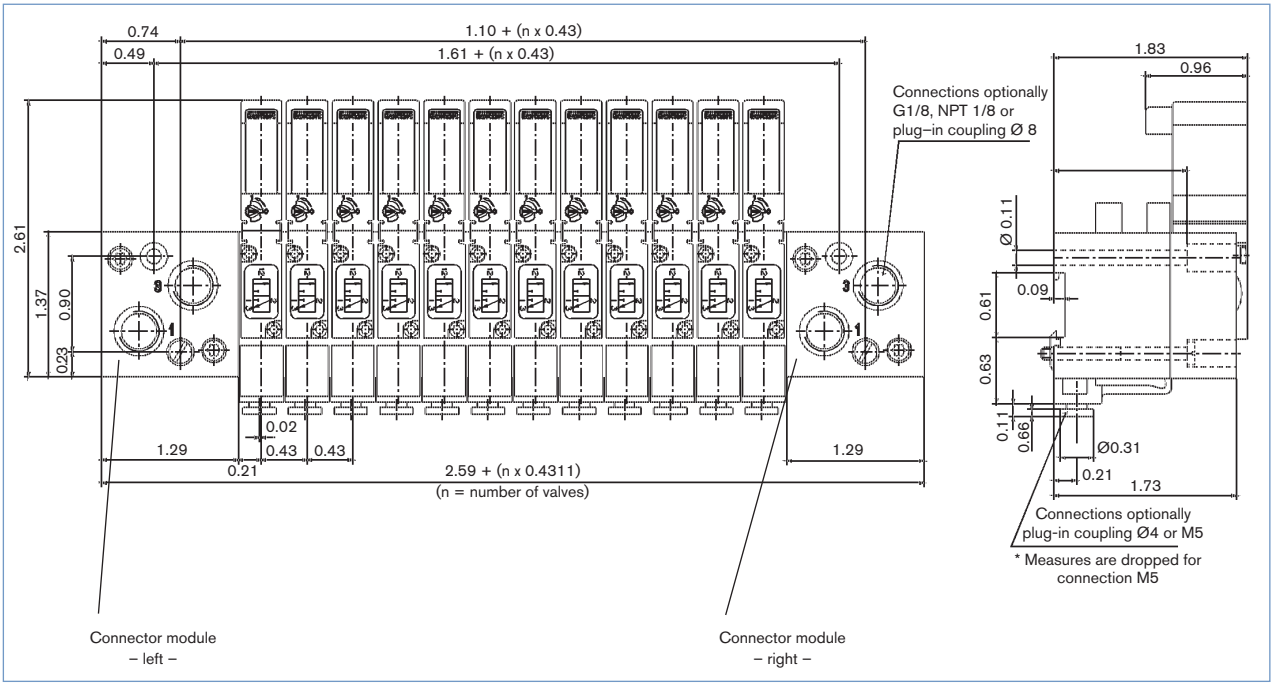
[2)] Measured at connection 2; time from electrical switching to pressure increase to 90% (opening) or pressure drop to 10% (closing) of operational pressure (87 PSI).

Solenoid specifications	
Operating voltage	24 VDC (other voltages on request)
Voltage tolerance	±10 %
Electrical power consumption	1 W
Duty cycle	100% continuously rated
Electrical connection	Rectangular plug Round plug (on request) 12 inch flying lead (on request)
Rating	IP 40 with rectangular plug connection NEMA 6 (IP 67) with round plug NEMA 4 (IP 65) with flying leads
Ex-approval	EEx ia IIC T6 on request (up to 104°F ambient temperature with manifold mounting, see separate datasheet)
Installation (Preferably on multistation module assembly)	
Preferably on multistation module assembly	
Mounting position	Any, preferably solenoid system upright

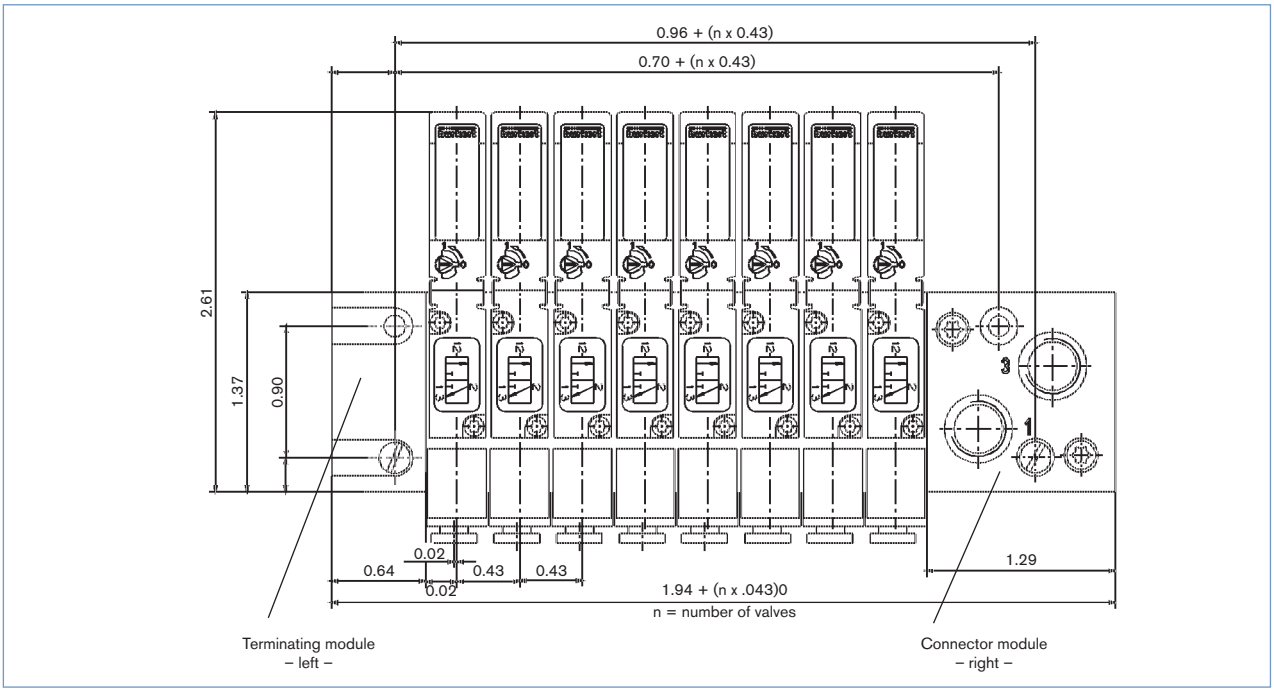
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Dimensions [inch] Block and Wall Mounting Valves Type 6510 with Pneumatic Modules Type MP01

Manifold design with connector module on the right and left (2 supply ports); manifold assembly with rectangular plug at the back (Version 1) and in front (Version 2) possible: Rectangular plug connector necessary (see accessories).



Manifold design with connector module on the right (1 supply port) and terminating module on the left; Manifold assembly with rectangular plug at the back (Version 1) and in front (Version 2) possible: Rectangular plug connector necessary (see accessories).



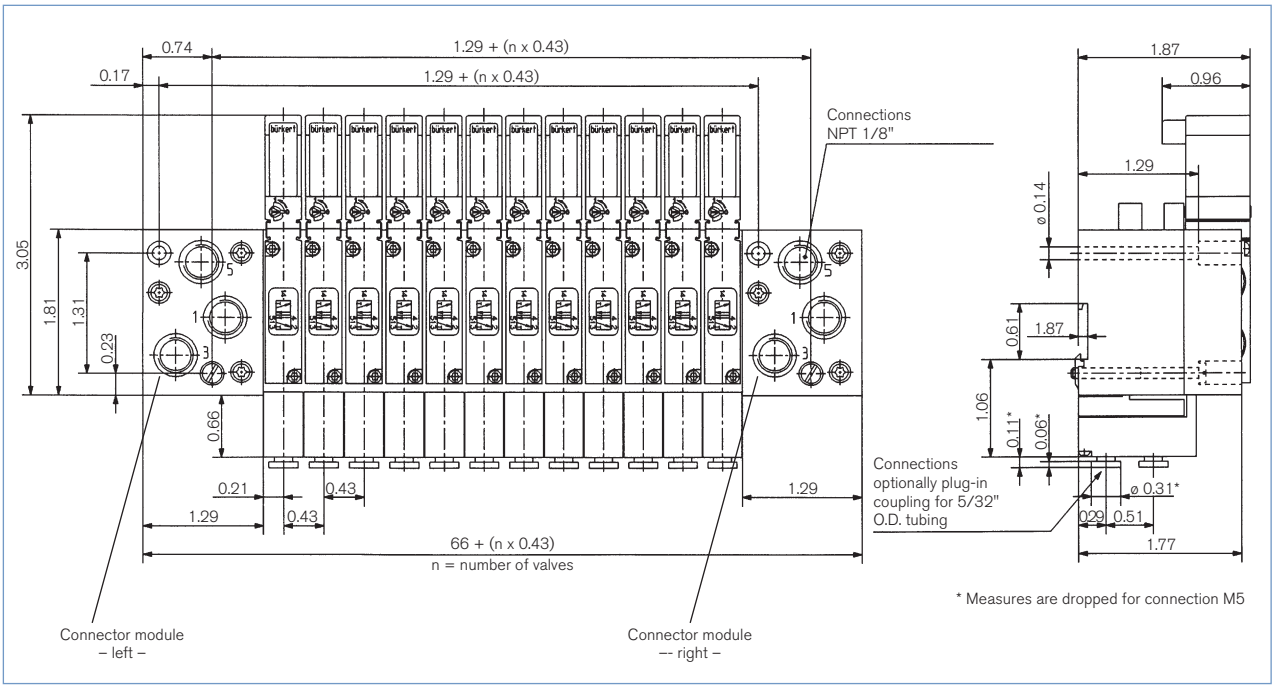
For design specifications of a modular valve manifold, please see datasheet Customized Pneumatic Systems Solutions

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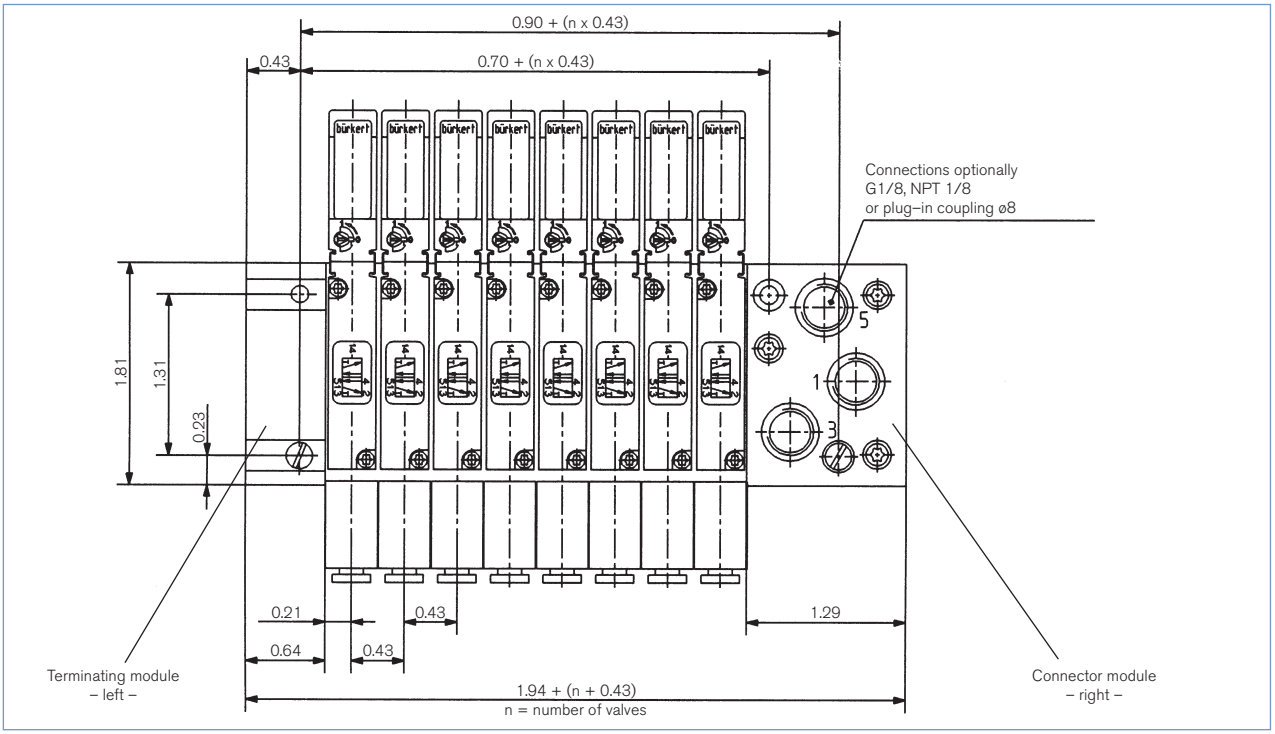
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Dimensions [inch] Block and Wall Mounting Valves Type 6511 with Pneumatic Modules Type MP02

Manifold design with connector modules on the right and left (2 supply ports); manifold assembly with rectangular plug at the back (Version 1) and in front (Version 2) possible: Rectangular plug connector necessary (see accesories).



Manifold design with connector module on the right (1 supply port) and terminating module on the left; Manifold assembly with rectangular plug at the back (Version 1) and in front (Version 2) possible: Rectangular plug connector necessary (see accessories).

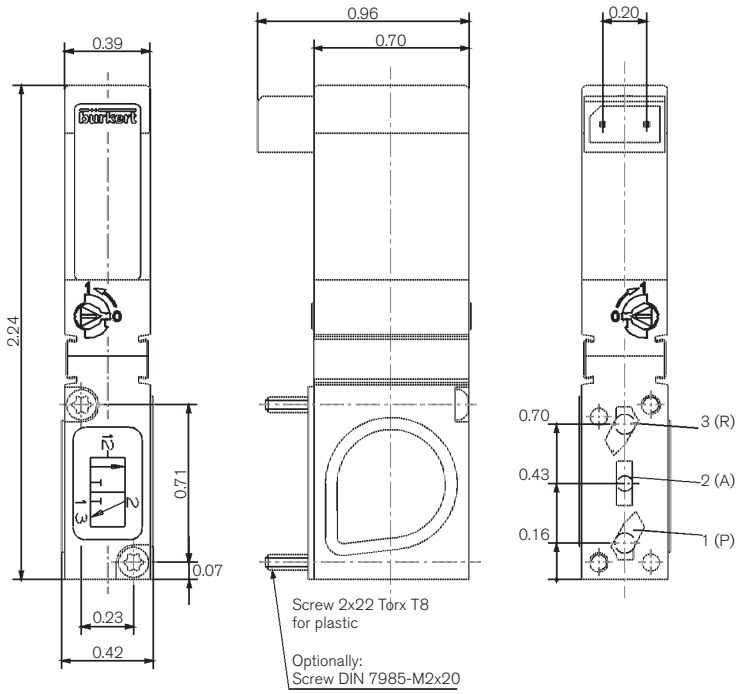


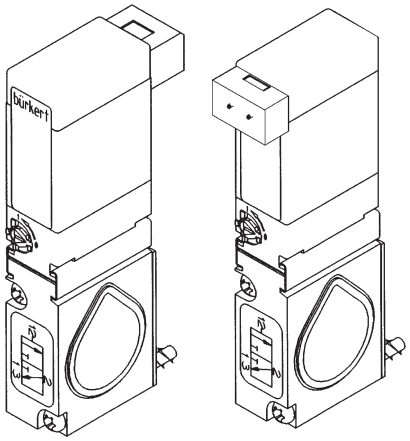
For design specifications of a modular valve manifold, please see datasheet Customized Pneumatic Systems Solutions

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Dimensions Single Valve [inch]

Type 6510 (3/2–way valve) with Sub-Base Connection





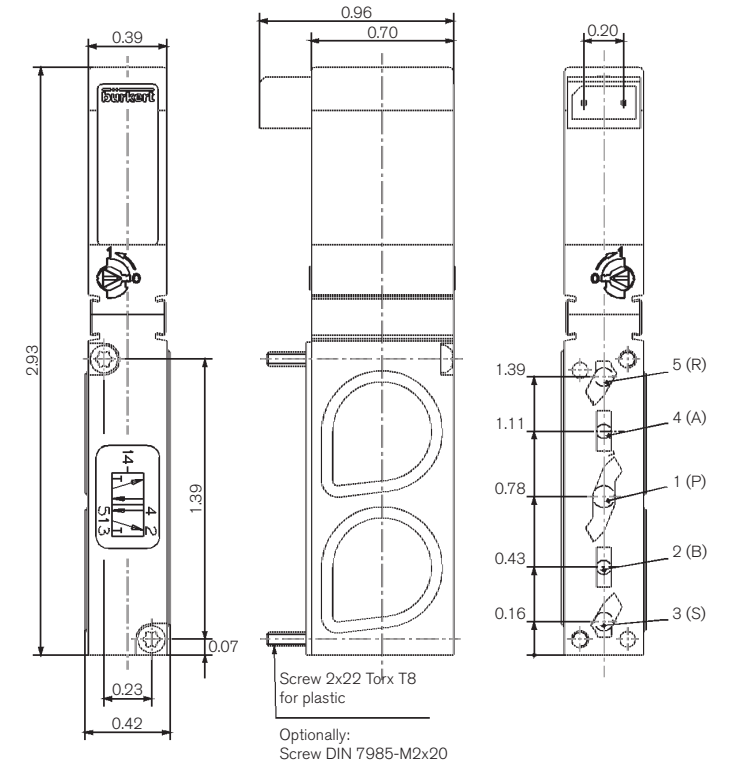
Version 1

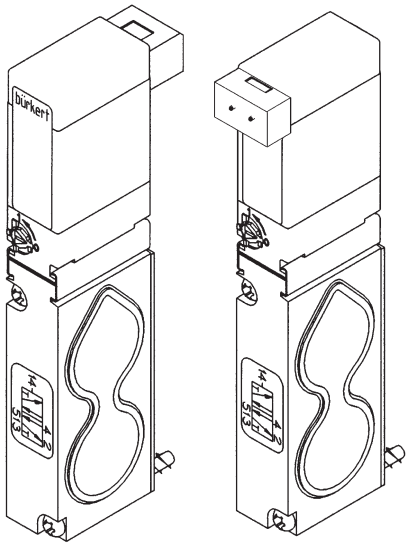
Rectangular plug at the back; compatible with the multiple manifold assembly for multipole and fieldbus wiring.

Version 2

Rectangular plug in front; for simple wiring with cable plugs.

Type 6511 (5/2–way valve) with Sub–Base Connection





Version 1

Rectangular plug at the back; compatible with the multiple manifold assembly for multipole and fieldbus wiring.

Version 2

Rectangular plug in front; for simple wiring with cable plugs.

Ordering chart Type 6510/6511 (other versions on request)

Standard delivery: All valves with NBR and FKM seal material; sub-base version with mounting screws and sub-base seal; with rectangular plug at the back[1] or in front[2]; without electrical plug (see accessories)

Electr. connection:
- Valve module assembly with Version 1: integrated plug connector on the electrical connector modules of the multistation module
- Manifold assembly with Version 2: rectangular plug connector necessary (see accessories)

Circuit Function/ Type	Orifice [mm]	C_v	Pressure range [PSI]	Voltage/ frequency [V/Hz]	Electrical Power Consumption [W]	Item no. Version 1	Item no. Version 2
Valves with manual override							
C/Type 6510	2.5	.15	36 –100	24/DC	1	133 120	134 281
D/Type 6510	2.5	.15	36 –100	24/DC	1	133 121	134 282
H/Type 6511	2.5	.15	36 –100	24/DC	1	133 122	134 283
Valves without manual override							
C/Type 6510	2.5	.15	36 –100	24/DC	1	132 395	135 152
D/Type 6510	2.5	.15	36 –100	24/DC	1	132 398	135 153
H/Type 6511	2.5	.15	36 –100	24/DC	1	132 402	135 154

[1] At the back: Rectangular plug on sub–base side.
[2] In front: Rectangular plug turned 180° to the sub-base.

Ordering Chart Pneumatic Modules Type MP01 (for Type 6510) and MP02 (for Type 6511)

Module Type MP01, 3/2–way (Type 6510)	Item no.	Module Type MP01, 3/2–way (Type 6510)	Item no.
Connector module left, NPT 1/8"	133 464	2 valve sub-base module, M5	132 413
Connector module left, push-in coupling for 5/32" O.D.	132 411	2 valve sub-base module, push-in coupling for 5/32" O.D.	132 414
Terminating module without supply port, left	132 405	3 valve sub-base module, M5	132 415
Connector module right, NPT 1/8"	133 465	12 valve sub-base module, M5	132 417
Connector module right, push-in coupling for 5/32" O.D.	132 412	12 valve sub-base module, push-in coupling for 5/32" O.D.	132 418

Module Type MP02, 5/2–way (Type 6511)	Item no.	Module Type MP02, 5/2–way (Type 6511)	Item no.
Connector module left, NPT 1/8"	134 742	2 valve sub-base module, M5	135 010
Connector module left, push-in coupling for 5/32" O.D.	135 006	2 valve sub-base module, push-in coupling for 5/32" O.D.	135 011
Terminating module without supply port, left	135 007	3 valve sub-base module, M5	135 012
Connector module right, NPT 1/8"	135 008	3 valve sub-base module, push-in coupling	134 744
Connector module right, plug-in coupling for 5/32" O.D.	135 009	12 valve sub-base module, M5	135 013
		12 valve sub-base module, push-in coupling for 5/32" O.D.	135 014

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Ordering Chart for Accessories

Component	Description	Item no.
Blanking plug	for push-in coupling for 5/32" O.D.	781 664
Blanking screw	1/8" NPT	US 1032
Silencer	G 1/8"	780 779
Covering plate, complete	for left-free valve spaces on MP01	642 148
Covering plate, complete	for left-free valve spaces on MP02	642 156
Rectangular plug connector, straight, with 10 ft. cable	for electrical single connection of valves	133 486
Rectangular plug connector, with flying leads, 12-inch length	for individual single wiring	644 068

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