

MOTORIZED VALVES FOR PLC



Instruction manual

Labio a.s. 2005

1. Description

Labio made motorised valves are used for mobile phase handling in preparative liquid chromatography. General view on the valve unit is on Fig. 1. Valve is sitting in a stainless steel box, valve head is on front side of the box. There is a motor with gearbox inside the box and control electrical circuits (see Fig. 2). Valves have no direct switching possibility and can be switched either from computer (via interface) or using a simple control modul (see Fig 3) with manual switches.

Different configuration of inputs and outputs can be used in the system. Standard six port valves as well as 1→4 and other types are offered. All valves are designed with front stainless steel part with side holes (equipped with M10 internal threads and ferrules for 1/4" O.D. tubes) and PTFE rotor. Rotor is pressed to stator by a plate spring and moved by a DC motor with gearbox.



Fig. 1 Valve

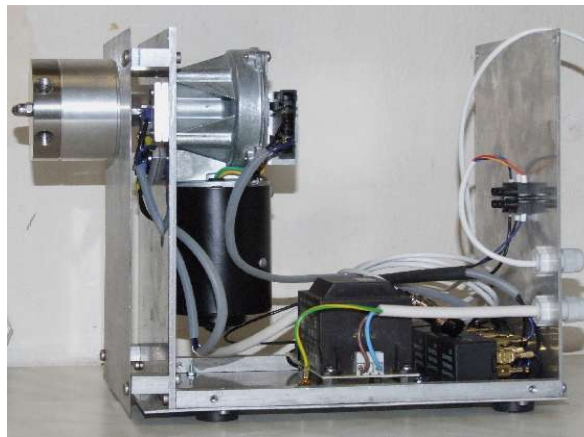
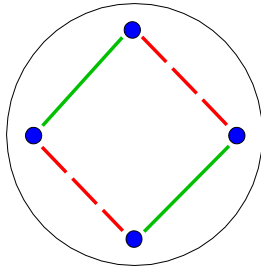


Fig. 2 View on internal valve part

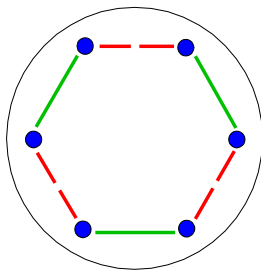


Fig. 3 Control modul for valves

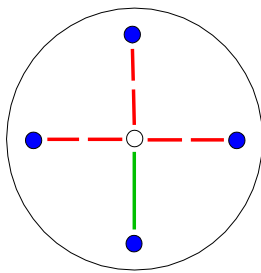
2. Different valves



**4 port switching valve CI 03ML or
1 port to 2 ports switching valve**



Six port loop valve CI 02ML



1 port to 4 ports switching valve CI 4+1M+

3. Control modul

Control moduls are used for all valve types. There are two position switches for six port and four port (+ 1→2 valve) and four position switches for 1→4 valves. On back side of control modul (Fig 4) are connectors for valves control and 2 sockets for connecting of valves to 230V voltage (splitting cables have to be used in case more valves are worked together).



Fig. 4 Back panel of control modul

4. Technical parameters

Voltage:	230 V / 50 Hz (control modul)
	12 V DC (motors)
Input:	20 VA/valve
Weight:	4 kg/valve
Max. pressure:	1 bar

5. Manufacturing, distribution and service

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