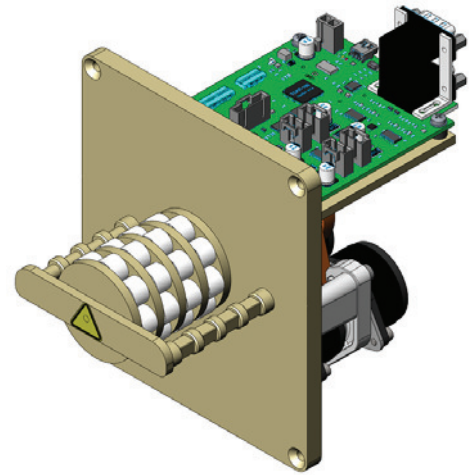


Reglo ICC OEM Pump Module

Ismatec® Independent Channel Control Panel-Mount Pump (Patent Pending)

Pump Specifications

Motor Type:	Stepper Motor (1/channel), 500 mA peak current
Speed Range:	0.1-100 RPM
Speed Setting:	RPM (Resolution = 0.01 RPM)
Flow Rate Range:	0.0002 - 35 mL/min/channel (tubing dependent)
Number of Channels:	2-4
Number of Rollers:	8 Ertalyte® rollers standard; 6 and 12-roller options also available
Cassettes:	MS/CA Click'n'Go (POM-C and PVDF versions available)
Dimensions (HxWxD):	See Back Page
Weight:	6 lbs. (2.7 kg)
Power Consumption:	30 W (Max)
Main Voltage:	24 VDC
Protection Rating:	IP 30
Differential Pressure:	1.0 bar / 14.5 psi (Max)



Flow Rate Range

Channels	4		4		4	
Rollers	6		8		12	
Tubing	3 Color Code		3 Color Code		3 Color Code	
rpm	0.1	100	0.1	100	0.1	100
Tubing I.D. mm	ml/min Flow rates		ml/min Flow rates		ml/min Flow rates	
	min.	max.	min.	max.	min.	max.
0.13	0.0002	0.14	0.0002	0.11	0.0001	0.093
0.51	0.0019	1.9	0.0017	1.7	0.0016	1.6
0.57	0.0024	2.4	0.0021	2.1	0.0019	1.9
0.64	0.0030	3.0	0.0026	2.6	0.0024	2.4
0.95	0.0064	6.4	0.0056	5.6	0.0050	5.0
1.02	0.0073	7.3	0.0063	6.3	0.0056	5.6
1.42	0.013	13	0.011	11	0.0094	9.4
1.75	0.019	19	0.016	16	0.013	13
1.85	0.021	21	0.017	17	0.013	13
2.54	0.033	33	0.027	27	0.019	19
2.79	0.037	37	0.031	31	0.021	21
3.17	0.043	43	0.035	35	0.024	24

(Note: Flow rates assume no differential pressure drop and the use of Tygon® tubing. Other tubing sizes and formulations are available.)

Available Tubing Sizes

Inner Diameter Range: 0.13 - 3.17 mm (tubing material dependent)

Wall Thickness: ~0.8 mm

Please Note: All tubing must have stoppers with correct spacing to be used with MS/CA cassettes

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Environmental Conditions

Temperature Range: Operational
+5 °C to +40 °C (+41 °F to +104 °F)
Relative Humidity: up to 80% (non-condensing)

Storage
-10 °C to +50 °C (+14 °F to +122 °F)
up to 80% (non-condensing)

Harmonized Tariff Schedule (HTS) Code & ECCN

8413.60.0090 / EAR99

Supported Communication Protocol



USB interface or RS-232 interface.

Connections (at rear of printed wire circuit board):

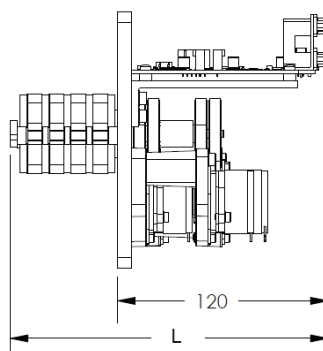
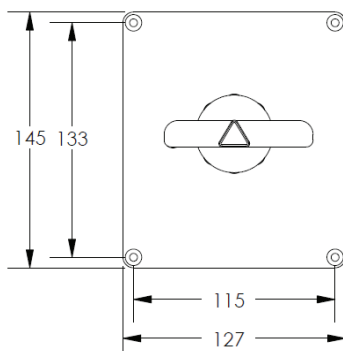
RS-232 In (DB9-female)
RS-232 Out (DB9-male)
USB 2.0, Mini-B

Operating Modes (Each Channel Independent)

Flow Rate: continuous operation at a set rate and direction
Volume Over Time: dispensing a desired volume over a desired time
Volume: dispensing a desired volume at a set flow rate
Time Mode: dispensing for a set time duration with a set flow rate
Volume With Pause: dispensing a set volume over multiple cycles with defined pause time in between
Time With Pause: dispensing for a set time duration over multiple cycles with defined pause time in between
Calibration: allows each channel to be calibrated for dispensed fluid volume accuracy

More complex routines are available through the use of the available software. Additionally, up to eight pumps can be connected to a computer at once, either by a USB hub or daisy chaining the RS-232 in/out connectors on the pump(s). (Note: For full functionality of each channel via RS-232 control, each pump must be directly connected to a serial interface such as Hypercom or PuTTY.) In addition to the standard daisy chain connection, the ICC firmware will support using one module to control a second, "slave" module to expand the number of channels being controlled in an OEM device.

Dimensions



Overall Height: 145 mm (~5.7")
Overall Width: 127 mm (~5.0")
Overall Length: 157 mm (~6.2") - 2-channel
169 mm (~6.7") - 3-channel
182 mm (~7.2") - 4-channel