501VDL/RL variable speed brushless DC pump

The 501VDL/RL is our highest quality pump combined with a brushless DC motor, that provides precise speed regulation, and low electrical and audible noise. Brushless DC motors have an extremely long service life as they have internal wear parts. The 501VDL/RL OEM pump is made up of a single channel 501RL pumphead, a powerful 24V brushless DC gearmotor with built in controller, and an aluminum faceplate. The spring loaded rotor assembly provides long tube life, and accurate flows. When fitted with 8.0 mm bore tubing these pumps provide flow rates of up to 3500 ml/min. The built in controller allows control of speed, stop start, direction, and a frequency tacho output.

Ordering information

	24V DC Brushless
100rpm	050.0521.000
350rpm	050.0561.000

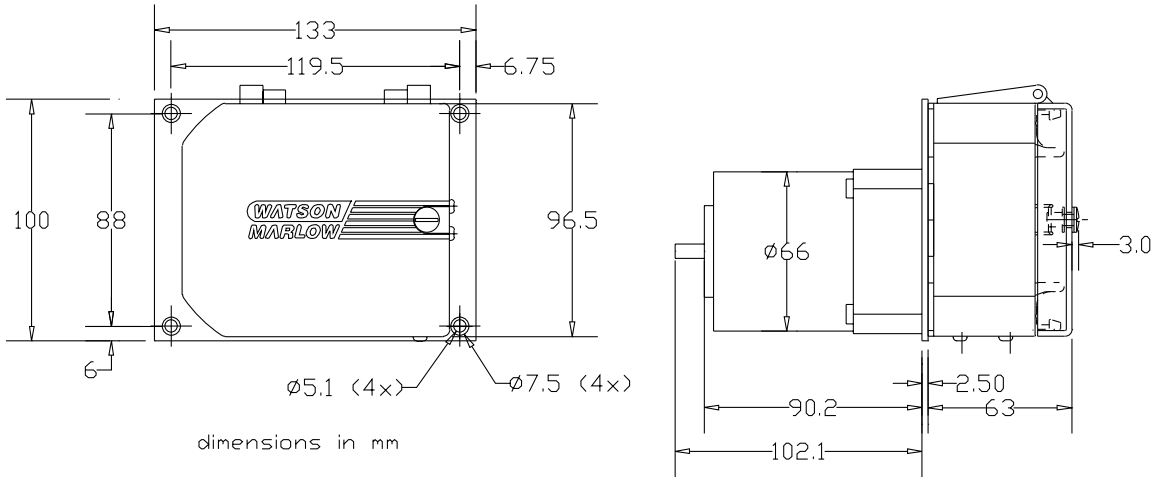
Specifications

Motor type	*12 or 24 Volt Direct Current*
Motor torque output	*100rpm 7.3kg/cm* *350rpm 21.0kg/cm*
Power consumption	*35 VA*
Weight	*3kg*

Motor/controller connections

Lead no.	Lead Color	Function	Descriptions
1	brown	FW/RV	*Direction control input: 'High' CW, 'Low' CC (shaft side)*
2	white	Vin	*Input voltage (set-point) for speed loop.* *Resulting speed approx. 1000 rpm/V* *Vin < 4V: motor at full speed, speed loop off (open loop)*
3	green	FG	*Frequency generator output, 36 ppr; Rout = 4kOhm (approx.)*
4	black	GND	*Motor return, ground (0v)*
5	red	Vp	*Motor supply voltage +24V (min 14V – Max 30V)*
6	bare	shield	*Shield for cable and connection to motor housing*

Flow rates

	1.6mm (1/16") wall tubing						
Bore mm	0.5mm	0.8mm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
Bore "	1/5"	1/32"	1/16"	1/32"	3/16"	1/16"	5/16"
100rpm	*4.00*	*12.0*	*43.0*	*186*	*405*	*635*	*1000*
350rpm	*14.0*	*42.0*	*151*	*651*	*1418*	*2223*	*3500*

For tube selections, see Tables A and B on page 48.