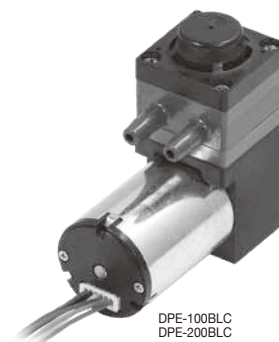


DC 液体泵空 / DC Liquid Pump

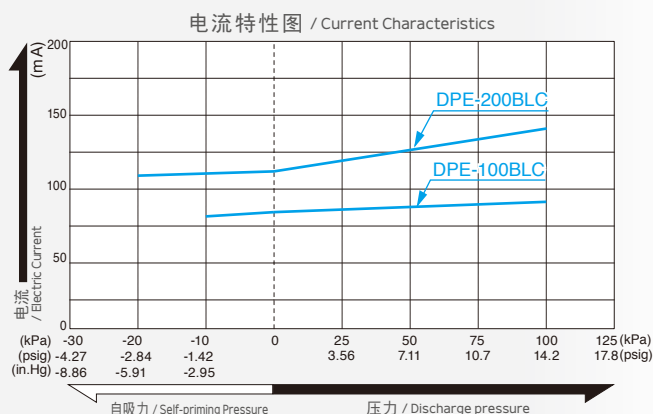
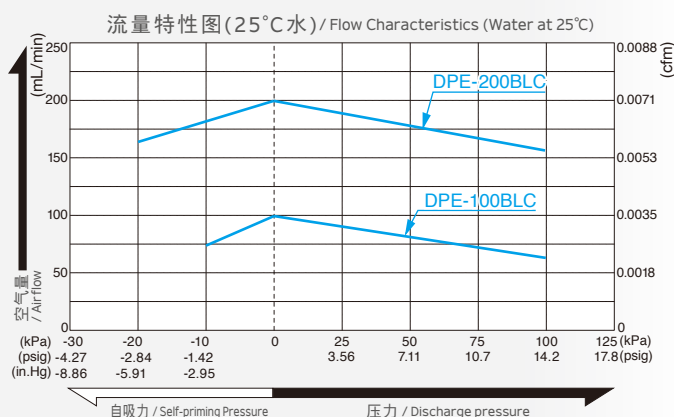
型号 DPE-100BLC / DPE-200BLC



无碳刷马达 / Brushless DC Motor

24 V DC

流量和电流 / Flow & Electric Current



规格 / Specifications

型号 / Model	DPE-100BLC	DPE-200BLC
额定电压 / Rated Voltage	24 V DC	
流量 / Flow Rate *1	100 mL/min 0.0035 cfm	200 mL/min 0.0071 cfm
使用压力范围 / Working Pressure Range	0 ~ 100 kPa (0 ~ 1 kgf/cm ²) 0 ~ 1 bar 0 ~ 14.2 psig	
最高压力 *2 / Maximum Pressure	300 kPa (3 kgf/cm ²) 3 bar 42.7 psig	
最大电流 / Maximum Current	90 mA	140 mA
额定时间 / Duty Cycle	连续 / Continuous	
耐用时间 (MTTF) / Rated Performance (MTTF)	6000 小时 / hours	
自吸力 *1 / Self-priming Pressure	10 kPa (75 mmHg) 0.1 bar 1.42 psig	20 kPa (150 mmHg) 0.2 bar 2.84 psig
吸入口尺寸 / Inlet	φ4.7 mm (外径) 软管接头 / 4.7 mm O.D. hose barb	
吐出口尺寸 / Outlet	φ4.7 mm (外径) 软管接头 / 4.7 mm O.D. hose barb	
线圈绝缘等级 / Coil Insulation Class	相当于 E 类 / Class E equivalent	
安装尺寸 / Mounting Dimensions	9.5(L) x 17(W) mm 3/8"(L) x 43/64"(W)	
本体重量 / Weight	80 g 0.176 Lbs	

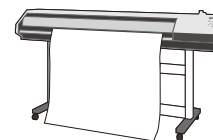
*1. 若止回阀因液体温度低而硬化，自吸性能和流量将降低。
/When the check valve is hardened due to low liquid temperature, self-priming performance and flow rate will go down.
*2. 在关闭压力状态下不可再次启动泵，另外，不可在最高压力下使用。
/The unit cannot be restarted with flow passage closed. It cannot be used at the maximum pressure.

使用条件 / Condition of use

使用环境温度 / Operating Ambient Temperature	5 to 40°C
使用环境湿度 / Operating Ambient Humidity	30 to 85%
使用流体温度 / Operating Fluid Temperature	5 to 50°C

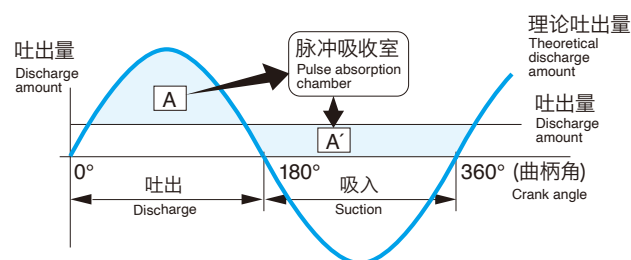
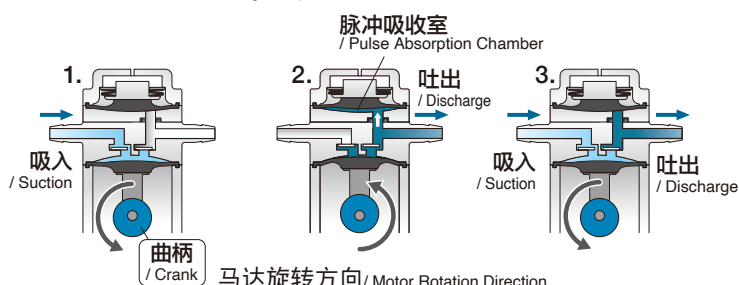
用途例 / Application Examples

1. 用于分析仪器的液体输送，例如医疗、食品、水处理和环境测量。
/Liquid transport for analytical instruments e.g. medical, food, water treatment and environment measurement.
2. 过滤、取样、清洗器和灭菌器内的液体输送。
/Liquid transport within filtration, sampling, washers and sterilizers.
3. 工业喷墨打印机中的墨水输送。
/Ink transport within industrial ink-jet printers.



脉冲吸收机制 / Pulse Absorption Mechanism

1. 吸入。/Suction.
2. 吐出。部分液体被输送至脉冲吸收室，而不是直接强制进入吐出口。
/Discharge. Partial fluid delivery to pulse absorption chamber, not directly forced to outlet port.
3. 进入泵的循环吸入与吐出同步。通过 2 和 3 的处理，脉冲得到衰减。
/Cyclical suction drawn into pump is synchronized with the discharge. Pulses are attenuated through the process of 2 and 3.



- 脉动原因 (A) 进入吸收室并在吸气时被吐出 (A')，实现降低脉动。
/The cause of pulsation (A) is taken into the pulse absorption chamber and discharged at the time of suction (A') to reduce pulse.
- 脉动：压力和流量变化引起的振动。
/Pulsation: Vibration due to change in pressure and flow rate

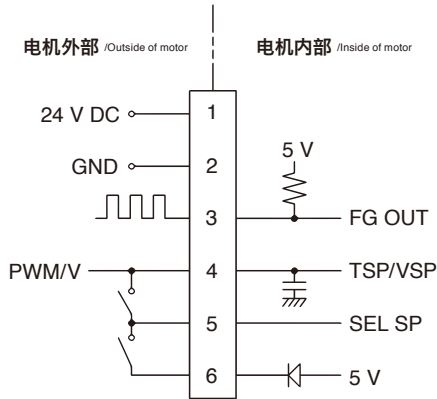
型号/Model	接液部材质/Material of wetted parts					适用化学液体示例* /Example of suitable chemical liquid	不合适的化学液体示例 /Example of unsuitable chemical liquid
	缸盖/Cylinder Head	缸盖罩/Head Cover	隔膜/Diaphragm	阀/Valve	O形环/O-ring		
DPE-100BLC-2E DPE-200BLC-2E	PA 聚酰胺(尼龙) /Polyamide(Nylon)		PTFE 聚四氟乙烯 /Polytetrafluoroethylene	EPDM 乙丙橡胶 /Ethylene-propylene rubber		氨水、柠檬酸、苛性苏灰、乙醇、苛性钾 /Ammonia water, Citric acid, Caustic soda, Ethanol, Caustic potash	矿物油、三氯乙烯、苯甲醛、四氯化碳、甲苯 /Mineral oil, Trichloroethylene, Benzaldehyde, Carbon tetrachloride, Toluene
DPE-100BLC-7G DPE-200BLC-7G	PPS 聚苯硫醚 /Polyphenylene sulfide			FKM 氟橡胶 /Fluoro rubber		乙醇、四氯化碳、三氯乙烯、二甲苯、硅油 /Ethanol, Carbon tetrachloride, Trichloroethylene, Xylene, Silicone oil	丙酮、氯磺酸、甲醛水、氨水、冰醋酸 /Acetone, Chlorosulfonic acid, Formalin, Ammonia water, Glacial acetic acid
DPE-100BLC-7P DPE-200BLC-7P				FFKM 全氟橡胶 /Perfluoroelastomer		乙醇、冰醋酸、甲基乙基酮、三氯甲烷、苯 /Ethanol, Glacial acetic acid, Methyl ethyl ketone, Chloroform, Benzene	氯磺酸、CFC 112、氟油、CFC 113 /Chlorosulfonic acid, CFC 112, Fluorine oil, CFC 113

*适用的化学液体只是参考, 使用时请在使用条件下确认。 / *This chart is for reference only. Please confirm the suitability under the operating conditions before use.

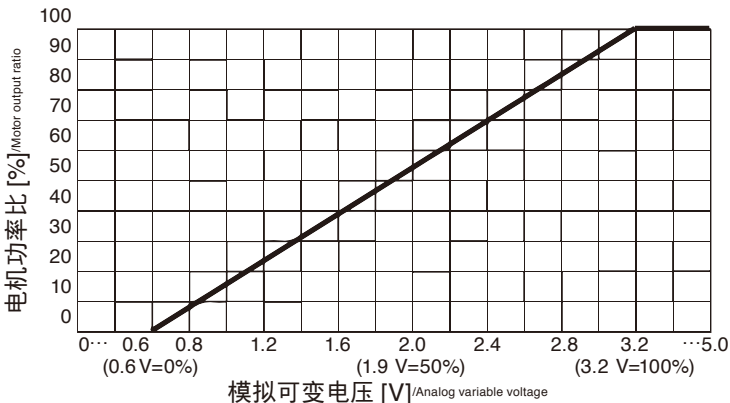
控制机能 / Control Function

型号 / No.	机能 / Function	规格值 / Specifications	条件 / Conditions
1	电源 / Power source	DC 24 V / 24 V DC	
2		GND	
3	FG (旋转) 信号输出 / FG signal output	6 个脉冲 / 转 1 圈 / 6 Pulse / 1 Rotation	开漏输出 / Open-drain output
	上拉电压 / Pull up voltage	DC 5 V / 5 V DC	
4	PWM 控制输入 / PWM control input	0 ~ 100% / 0 to 100%	DC 2 ~ 5 V (最大值 = DC 5 V) 建议频率 15 k ~ 25 kHz / 2 to 5 V DC (max = 5 V DC) Recommended frequency 15 to 25 kHz
	电压控制输入 / Voltage control input	DC 0 ~ 5 V 最大值 = DC 5 V / 0 to 5 V DC max = 5 V DC	可变范围 = DC 0.6 ~ 3.2 V (Duty cycle: 0 ~ 100%) / Variability range = 0.6 to 3.2 V DC (Duty cycle: 0 to 100%)
5	PWM 控制选择 / PWM control selection	ON/OFF	PWM 控制开启 / PWM control ON with open circuit
	电压控制选择 / Voltage control selection	ON/OFF	电压控制输入 DC 2 ~ 5 V / Voltage control ON with 2 to 5 V DC input
6	DC 5 V 输出 / 5 V DC output	ON/OFF	电机启动时始终输出 DC 5 V / 5 V DC output during motor startup

参考电路图 / Reference circuit diagram



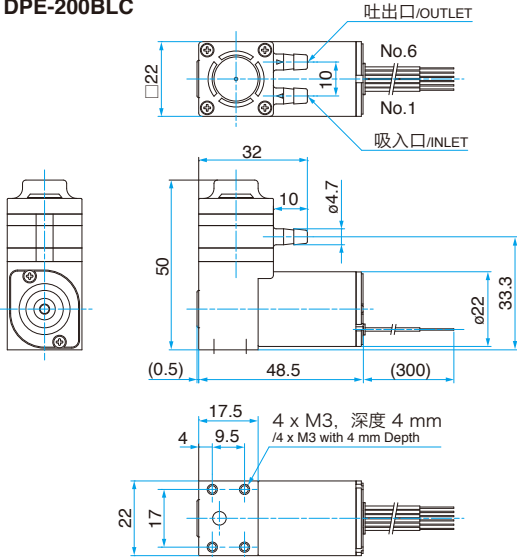
电压控制的标准 / Reference of voltage control



* 实际的电动机输出取决于电源电压和泵负载状态。 / The actual number of rotations of motor depends on the power supply voltage and load conditions of pump.
请在实际使用条件下检查泵输出的可变状态。 / Examine the variable state of pump output under the conditions of actual use.

外形尺寸图 / External Dimensions (单位 / Unit : mm)

DPE-100BLC
DPE-200BLC



连接表 / Connection table

		电源 /Power Source		控制信号 /Control Signal			
线路编号 /Circuit No.		1	2	3	4	5	6
线色 /Cord Color		红色 /RED	黑色 /BLACK	黄色 /YELLOW	蓝色 /BLUE	绿色 /GREEN	褐色 /BROWN
机能 /Function		V+	V-	脉冲 /Pulse	PWM 或电压输入 /PWM or voltage input	电压控制 /Voltage control	DC 5 V 输出 /DC 5 V output
连接选择 / Selection of connection	无控制 /With no control	ON			ON ^{*1}		ON ^{*1}
	PWM 控制 /PWM control	ON			ON ^{*2}		
	电压控制 /Voltage control	ON			ON ^{*3}	ON ^{*3}	ON ^{*3}
线尺寸 /Cord Size		AWG26		AWG28			
UL 线种类 /Cord UL Style		UL1061					

- *1 进行无控制驱动 (Duty cycle 100%) 时, 请连接短接 4 针和 6 针。
/ For non-control (Duty cycle: 100%) drive, short-circuit pins 4 and 6.
- *2 进行 PWM 控制驱动时, 请在 5 针打开的状态下, 向 4 针输入 PWM 信号
/ For PWM control drive, keep pin 5 in an open state and input PWM signal
(Duty cycle 0 ~ 100%, 2 ~ 5 V DC, 推荐频率数 15 k ~ 25 kHz)
/ (Duty cycle: 0 to 100%, 2 to 5 V DC, and recommended frequency 15 to 25 kHz) to pin 4.
- *3 进行模拟电压控制驱动时, 短接 5 针和 6 针, 向 4 针施加电压 (0 ~ 5 V DC、可变范围 0.6 ~ 3.2 V DC)
/ For analog voltage control drive, short-circuit pins 5 and 6 and apply the voltage (0 to 5 V DC and variable range 0.6 to 3.2 V DC) to pin 4.
- 请根据需要对信号线实施噪音对策。 / Take noise countermeasures for the signal wire if necessary.
• 请剪断不必要的导线, 以免设备操作出现问题。 / Please cut the unnecessary lead wires so that there is no trouble in operating the unit.