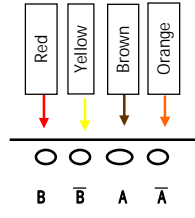


RE-C700 Controller Specifications for Ring Pump series RP-H & M Bi-polar Stepper Motors

Product Name	Low voltage bi-polar stepper motor controller
Model Number	RE-C700 : controller unit
Applicable Pumps	Ring Pump RP-H/M series
Drive Voltage	RP-H /M Series: VM=5.2V
Input Voltage	RE-C700 : DC5V, 3.0 A (AC-DC adaptor of AC100-240V 50/60Hz is included as accessory)
Control Method	Voltage drive method for bi-polar coil
Excitation Method	1/4 microstep drive method
Motor Speed	1 - 1,000 pps (4 - 4,000 Hz) Digital frequency division
Functions	Various controls using PC software SINGL-MODE Program-Mode

Pump Wiring to motor connection terminal



Connection Terminals: RE-C700 (Size: 100 x 100 x 34 mm)



- USB Connection Terminal (USB A-microB: Included as accessory)
- Pump Connection Terminals-1
- Pump Connection Terminals-2
- DC-IN Connection Terminal (AC Adaptor: Included as accessory)
- Start Switch
- Start-LED (BLUE)
- Pause-Switch
- Pause-LED (GREEN)
- Power-LED (RED)

- Accessories Included:** RE-C700 :
- Type A-micro B USB Cable
 - USB Memory Stick (PC Software)
 - AC-DC Adapter

Motor Speed (PPS) and Motor Rotation for Each Series

RP-H (240Step/ 1 rotation motor specification)

PPS	1	5	10	50	100	200	300	400	500	-	-	-	-
r p m	0.25	1.25	2.50	12.50	25.0	50.0	75.0	100.0	125.0	-	-	-	-

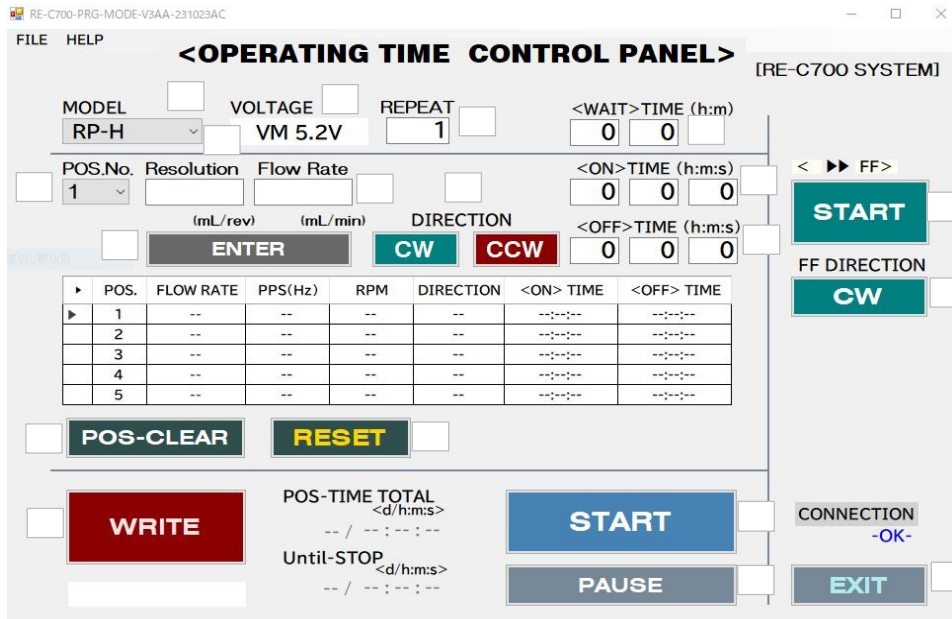
RP-M (480Step/ 1 rotation motor specification)

PPS	1	5	10	50	100	200	300	400	-	-	-	-	-
r p m	0.13	0.63	1.25	6.25	12.50	25.00	37.50	50.00	-	-	-	-	-

Special Notes:

- a) Discharge Rate: Please input "Discharge Rate per Rotation (mL/rev)".
(Refer to data included with the pumps)
- b) Control the motors within the range to prevent motor stepping-out (or motor stopping or vibrating).
* RP-H: Limit/500PPS
* RP-M: Limit/400PPS

PROGRAM



<Initial Settings>

- Pump Selection Click the "v" (drop down) and select the pump:RP-H/M
- VOLTAGE Operating Voltage: VM value is selected automatically.
RP-H/M VM = 5.2V (fixed)
- Fast Forward Operation - 1 Click the "v" (drop down) and rotating direction. (Clockwise CW or Counter-Clockwise CCW)
- Fast Forward Operation - 2 START/STOP the optimal high speed pump operation to supply the media (solution).
* Click START to supply media (solution) for each pump on each channel. Once the media (solution) flows to the tip of the discharge tube, click STOP.

<PROGRAM Settings>

- Input Resolution "mL/rev" Input the value from "Discharge Volume per Rotation (mL/rev)" that comes attached with the pump.
- Specify Flow Rate "mL/min" Input desired flow rate (mL/min).
- ENTER Click ENTER to fix the "Resolution" and "Flow Rate" settings. The optimal "PPS" and "RPM" values will be automatically displayed.
- Select DIRECTION Select between Clockwise (CW) or Counter-Clockwise (CCW)
- Operation Time Set operation (ON) time
* Setting range between 00h 00m 01s to 99h 59m 59s
- Stop Time Set stop (OFF) time
* Setting range between 00h 00m 01s to 99h 59m 59s
- POS-CLEAR Select between POS 1 to POS 5 () and click POS-CLEAR to clear setting for that POS. (To reset settings)
- RESET RESET all settings in POS 1 to POS 5.
- Specify POS Click the "v" (drop down) and select POS.
Allows up to 5 different program condition settings in POS 1 to POS 5.
Program is reflected on the POS by repeating to .
(Flow Rate, ENTER, DIRECTION, Operation Time, Stop Time)
- REPEAT Input number of repeat operation for specified program table (POS 1 to POS 5).
Initial setting is "1". Can input value between 1 to 99.
- WAIT TIME (h:m) If needed, specify the wait time before the START time for each channel. (Input h:m)

<WRITE Settings>

- WRITE Click WRITE to input the PROGRAM settings to controller's ROM (memory) (During WRITE, it will be in WAIT mode)

<Operation Settings>

"Controller Switch - START"

Use the controller's switch to START / STOP / PAUSE without the PC.

"PC-START"

START

START / STOP button while connected to the PC (computer) with USB.

* Each click will change between START STOP.

PAUSE

PAUSE button while connected to the PC (computer) with USB.

* Each click will change between PAUSE RESTART PAUSE.

EXIT

Disconnect from PC (computer).

NB. When controlling from PC side, "START" and "Pause" of main unit SW must be set to <OFF> position to prevent possible unstable operation.

SAVE-FILE / OPEN FILE

SAVE-FILE

Click on SAVE-FILE to save the PROGRAM setting (Type in file name)

OPEN-FILE

Click on OPEN-FILE to open saved PROGRAM setting.

* Once the PROGRAM setting is opened, click WRITE to save it in the computer ROM.