High-speed, Multi-function, Multiple Peripherals PLC Instruction Sheet

INTRODUCTION

2.1 Model Name Explanation and Peripherals

Model: DVP-EH

Input power supply type: AC Input (100VAC ~ 240VAC)

Output power supply type: DC 24V

Bar Code & Serial number: 32EH00R0T5160018

2.2 Product Profile and Outline

2.2.1 Communication Port Cover

2.2.2 I/O terminal cover

2.2.3 Function Card/Memory Card Cover

2.2.4 I/O terminal numbers

2.2.5 DIN rail clip

3. INSTALLATION & WIRING

3.1 Dimensions & Weight

3.2 Wiring Terminal

4.2 Power Input Wiring

The power for DVP-EH as an AC input, please be aware of the following cautions:

1. Connect the AC input (100VAC ~ 240VAC) to terminals L and N. Any AC110V or AC220V connected to the +24V terminal or input points will permanently damage the PLC.

2. The AC power inputs for the MPU and the I/O Extension Unit should be On or Off at the same time.

3. Please use wires of 1.0mm² or above for the MPU ground.

4. If the power-cut time is less than 10ms, it will not affect PLC operation. If the power-cut time is too long or the power voltage drops, the PLC will stop operation and all the outputs will be Off. Once the power is restored, the PLC will resume operation automatically. (There are latched auxiliary relays and transistors inside the PLC, please be aware when programming.)
The +24V supply output is rated at 0.5A from MPU. DO NOT connect external power supply to give the RUN command, and the RUN indicator will then be on. If the "RUN" LED is not on, it indicates that there is no program inside the PLC.

HPP could be utilized to monitor the settings and the registered values of the timer (T), the counter (C) and the data register (D) during operation, and moreover, to force the output contacts to conduct the On/Off action. If the ERROR LED is on (but not blinking), it means that the setting of the user’s program has exceeded the preset time-out limit, thus users have to double check the program and perform the OnOff function again. (The PLC is at this moment back to STOP automatically).

PLC Input/Output Reaction Time

The total reaction time from the input signal to the output operation is calculated as follows:

Reaction Time = input delay time + program scan time + output delay time

Input delay time

Response time of the sensor to the input signal

20ms (default), 5-80 ms adjustable. Please refer to the usage of special registers

Program scan time

Please refer to the usage of special register D1010

Output delay time

Relay module: 10ms, Transistor module: 20-30us.

TRROUBLESHOOTING

Judge the errors by the indicators on the front panel. When errors occurred on DVP PLC, please check:

8. POWER LED

The "POWER" LED at the front of the MPU will be lit (in green) if the power is on. If the indicator is not on when the MPU is powered up, please remove the wiring on terminals +24V. Once the indicator lights up, it means that the 24V DC power supply of the PLC is overloaded. Please do not use the DC power supply from the +24V terminals, but use a DC24V power supply instead. If the ERROR LED is blinking swiftly, it suggests that the +24V power supply of the PLC is insufficient. If the indicator is not on when the MPU is powered up and with the input power normal, it is an indication that the PLC is out of order. Please have this machine replaced or directly contact the dealer for repair.

9. PLC "RUN" LED

Identify the status of the PLC. When the PLC is in operation, this light will be on, and users could thus use powerp-r or the extension function of the ladder diagram to give commands to make the PLC "STOP" or "RUN/STOP" switch to make the PLC "STOP".

10. ERROR LED

If incorrect programs are loaded to the MPU, or that the commands and the components exceed the allowable range, the indicator will blink. At this moment, the user should check both the error codes saved in the MPU data register D1004 and the Error Code Table below to correct the programs. The address that the error occurs will be stored in data register D1137. After the error is found and the program is revised, send the revised version to the MPU. It is not being able to be connected with the PLC, and the LED is blinking swiftly, it is an indication that the 24VDC power supply is not enough. Please check whether the power supply of 24VDC is normal or not. When the ERROR LED is on (not blinking), users should make a judgment from the special relay M1008 of the MPU. If it is on, it indicates that the execution time of the program loop has exceeded the time-out setting (set by D1100). Please turn the PLC RUN/STOP switch to STOP, and find out the address of the time-out program by special data register D1101. "WDT" command can be used to solve the problem.

11. "BAT LOW" LED

When the battery voltage is low, the "BAT LOW" LED will be on, and the battery should be replaced as soon as possible; otherwise the user program and the data in latched area will be lost. (For the unplugged PLC, please charge battery within 3 minutes to retain the PLC’s internal user programs and data). Choose lithium battery TOTREL-2150/S. Please refer to the following table for battery life information.

<table>
<thead>
<tr>
<th>Battery Life</th>
<th>Temperature</th>
<th>Charge Time</th>
<th>Battery Life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>25°C/77°F</td>
<td>50</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>At 0°C/32°F</td>
<td>50</td>
<td>90</td>
</tr>
</tbody>
</table>

12. "Input" LED

The OnOff signals of the input point could be displayed through the "Input" LED, or the status of the input point could be monitored through the sensor monitoring function of HPP. As long as the movement of the input point is valid, the LED is on. Therefore, if errors are detected, use HPP, the LED and the input signal circuits to check whether the status is normal.

13. "Output" LED

Output LED indicates if the output signals are On or Off. Please check the following items when the LED OnOff indication does not correspond to the commands: 1. Output contacts may be misformed and stuck together due to a short circuit or current overload. 2. Check wiring and verify if the screws are tight.