5011621900
200407-14
DUE0

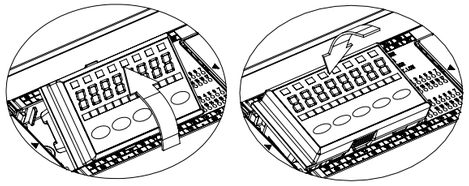
http://www.delta.com.tw

DVPDU-01 Digital Setup Display

Instruction Sheet

1 WARNING

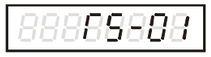
⚠ Please shut down the MPU of the PLC while installing the DU-01. The DU-01 is connected via a high-density connector. Therefore, please see the figures on the right for proper operation, so as to avoid damage.

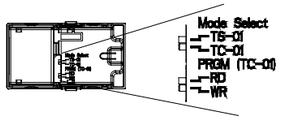


2 INTRODUCTION

DU-01 Digital Setup Display has two operation modes, TS-01 and TC-01. The switch for mode selection is at the back of the DU-01. Factory setting is TS-01 mode. The current operation mode shows at every time of power up.

TS-01 TC-01

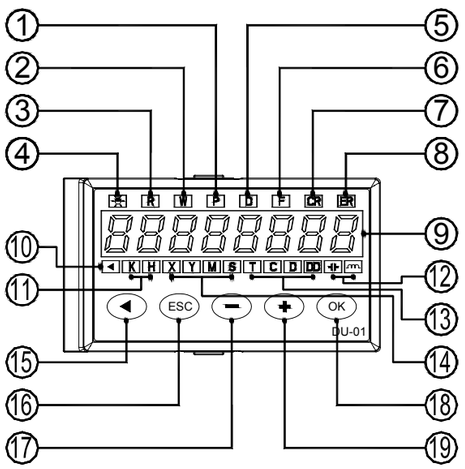




Back of the DU-01

1. In **TS-01** mode, DU-01 (specified as TS-01 hereof) has the following functions:
   - Read/Write of both internal devices of PLC (eg. perpetual calendar, bit devices (X, Y, M, S) and word devices (T, C, D)) and the Control Register (CR) inside of the expansion units.
   - Supports the read/write of 32-bit data register.
   - Sets Start-up display and power save mode.
   - Monitors the devices.
   - If connected with accessory cable to ES-series without perpetual calendar, the Time Display will start from 00-00-00 calculated by the microprocessor of DU-01 (timing error may occur).
   - Gives RUN-STOP command to the PLC.
2. In **TC-01** mode, DU-01 (specified as TC-01 hereof) has the following functions for DVP all series:
   - Read/write the program P, data register D and file register F from PLC.
   - Copies program and data.
   - Supports the password protection of the PLC.

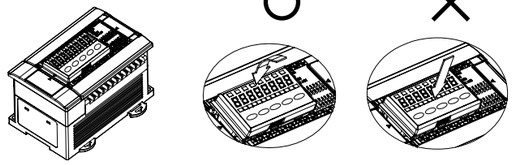
■ **Overview of the Product - Names of Parts**



1	P: program area indication (TC-01)
2	W: write (WR) indication (TC-01)
3	R: read (RD) indication (TC-01)
4	“In communication” indication
5	D: Data Register indication (TC-01)
6	F: File Register indication (TC-01)
7	CR: Control Register indication (Expansion Module)
8	ER: Error message indication
9	Display Area
10	Enter button ◀ indication
11	K (Decimal), H (Hexadecimal) indication
12	Contacts & coils of timer / counter indications
13	Word devices T, C, D, DD (32-bit) indication
14	Bit devices X, Y, M, S indication
15	Digit backspace / Run (TC-01)
16	Back to previous status
17	Enter a number or select a device
18	Confirm
19	Enter a number or select a device

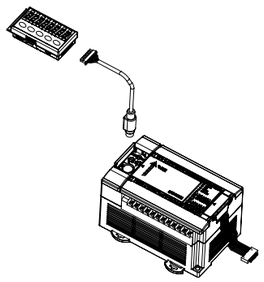
3 INSTALLATION & WIRING

1. Direct mounting to the expansion slot in the MPU of the EP/EH series



⚠ Please shut down the MPU of the PLC while installing the DU-01. The DU-01 is connected via a high-density connector. Therefore, please see the above figures for proper operation. Put the face-up DU-01 slantly in the expansion slot, than push it down in arrow direction. DO NOT push it down vertically, so as to avoid damage.

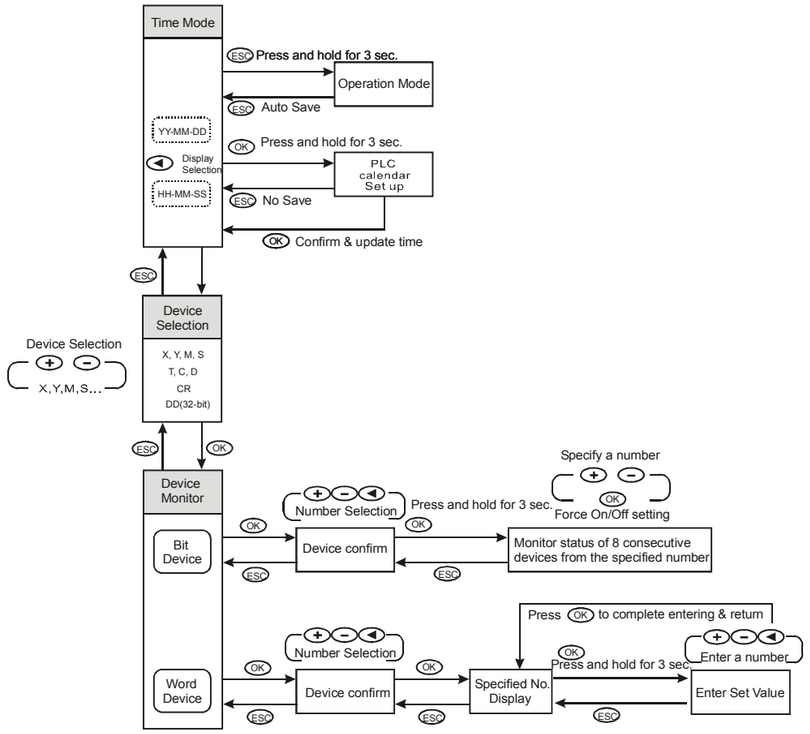
2. Connecting to DVP series PLC via accessory cable



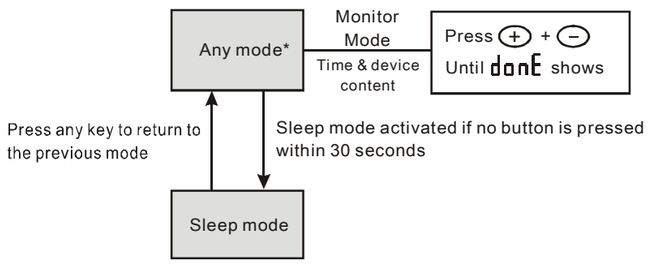
(No need to shut down the MPU)

4 TS-01 OPERATION

1. Switch DU-01 to TS-01 mode. (Please see the back of the DU-01)
2. Main Process



3. Start-up display mode setting (press ⊕+⊖ buttons simultaneously)

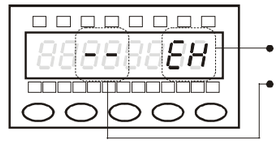


*Note: not include system operation mode setting

4. Please see the back page for detail information about the process of each mode.

5 TC-01 OPERATION

1. Switch the DU-01 to TC-01 mode (please see the back of the DU-01), and select RD (to read P, D and F in the MPU of PLC) or WR (to write the data in P, D, F of DU-01 to the MPU of PLC).



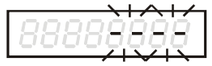
Note: P: Program, D: Data register, F: File register

2. TC-01 Password Key Setting

Password key setting of TC-01 can be set via WPLSoft. The purpose is to read/write to the key-locked PLC as long as the password setting is identical to the one in the PLC. To unlock the password key setting, please use WPLSoft as well.

a) Password Key Setting

- In RD or WR mode, press ESC button and hold for 3 seconds or more to enter password setting. See the right figure:

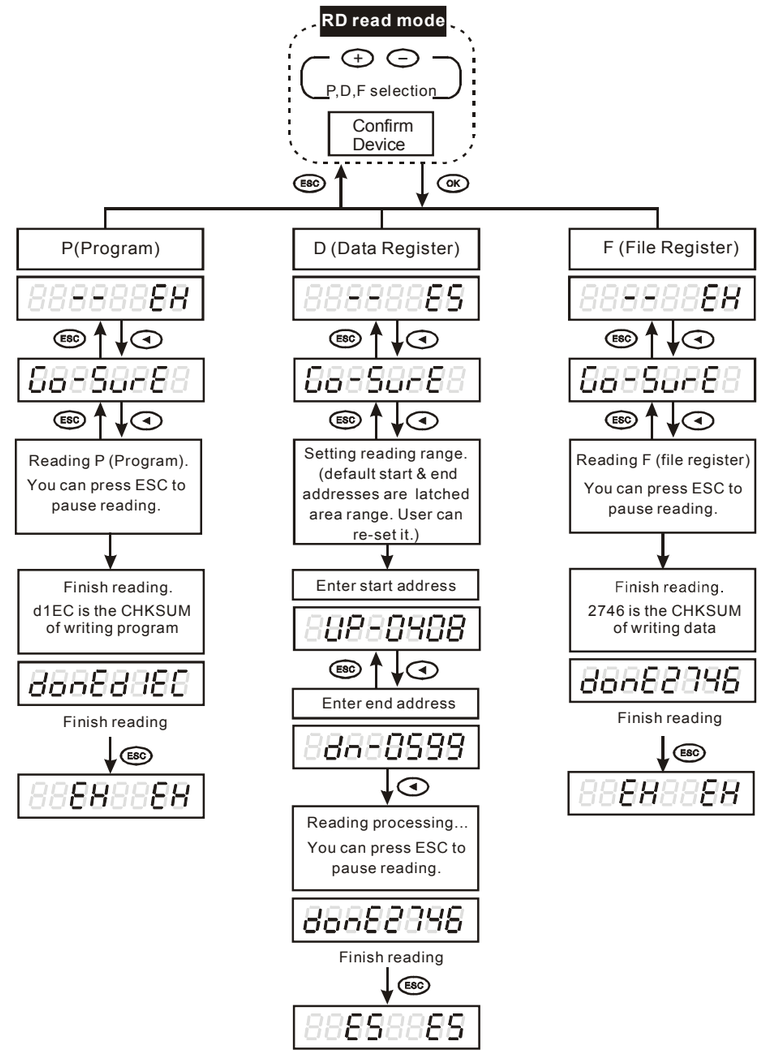


- Open WPLSoft ⇨ [Setting] ⇨ [TC-01 password key setting]. Select [Enter TC-01 password key], and operate as instructed.
- After setting, the display is shown as right figure. (KEY SET), then press ESC to exit.

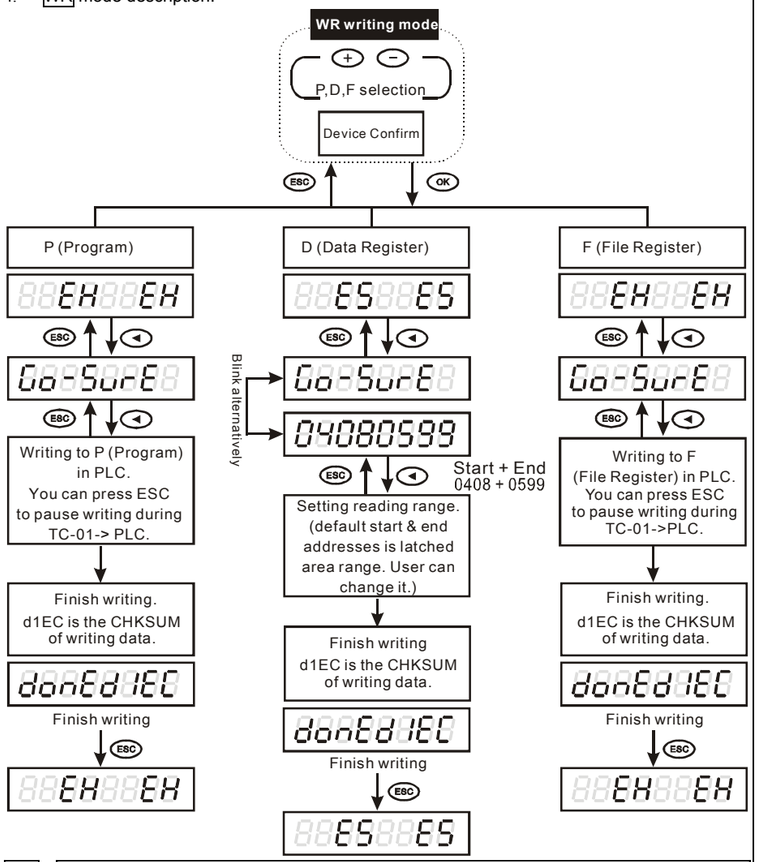
b) TC-01 has password key setting, therefore, only if the PLC has no password protection or with the same password with TC-01 can the writing proceeds. It also writes the password to the PLC for added protection.

c) Password key clear (KEY CLR): Same with the above operation. Open WPLSoft, select [TC-01 password key clear], and operate as instructed.

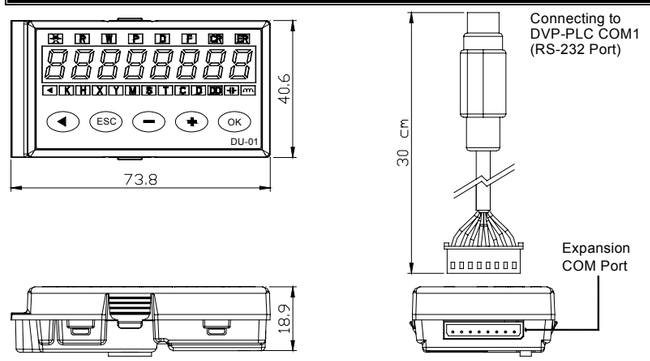
3. Clear P, D, F of TC-01: select the device (P, D or F) to be cleared, press ⊕+⊖ simultaneously, then press ESC.
4. RD mode description:



4. WR mode description:

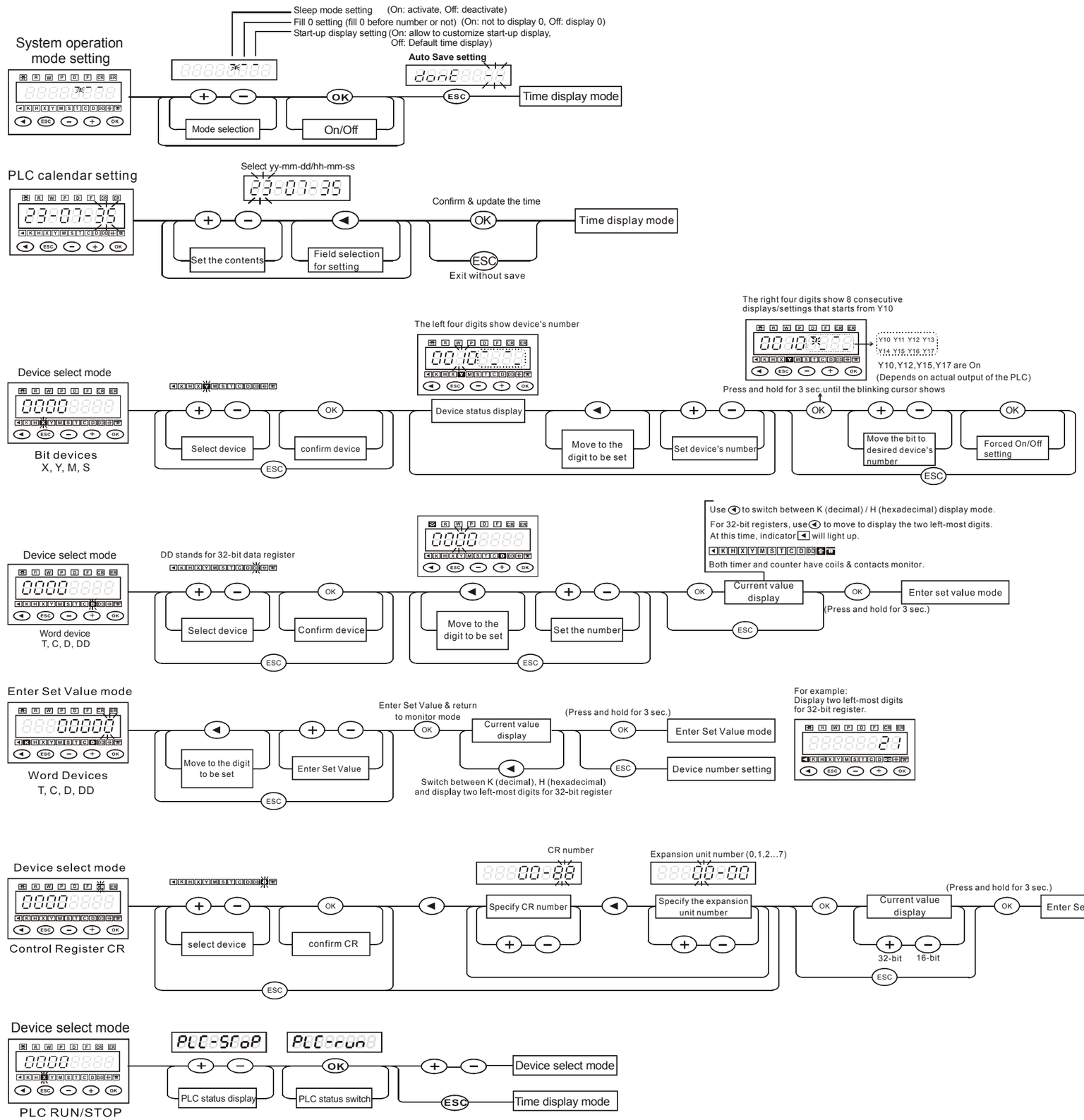


6 DIMENSIONS & ACCESSORY



The accessory cable is for connecting DU-01 (the expansion COM port in above fig.) and DVP-series PLC COM1 (RS-232) port. Therefore, the DU-01 can be connected to ES/SS/EX and SA/SX models via the cable as well as directing installed in the expansion slot of EP/EH models.

7 ERROR CODE TABLE

Code	Code Explanation & Troubleshooting
Error-00	P-read error. PLC is password-locked while the TC01 is with wrong or no password key. Please unlock the password setting on PLC or set password in TC-01 via WPL.
Error-01	P-write error. PLC is password-locked while the TC01 is with wrong or no password key; or the source model differs from the destination model.
Error-02	D-read error. Illegitimate read range (read range only available for the general data registers of each models, not including special D)
Error-03	D-write error. The source model differs from the destination model.
Error-04	F-read error. ES series does not have file registers.
Error-05	F-write error. The source model differs from the destination model.
Error-06	PLC is running. Writing to P is forbidden.

■ Various process for operation modes under TS-01 mode