Modicon TSX (Uni-Telway)

HMI Factory Setting:

Baud rate: 9600, 8, Odd, 1

Controller Station Number: 2(Note2)

Control Area / Status Area: %MW0 / %MW10

Connection

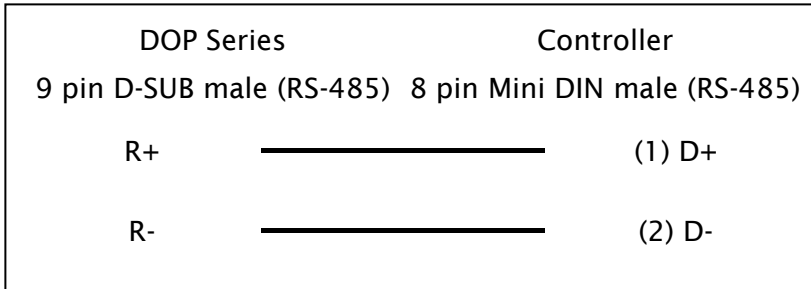### a. RS-232 (DOP-A/AE/AS, DOP-B Series)

It requires specific TSX PCX1031 cable of Modicon Uni-Telway for wiring.

DOP Series	Controller
9 pin D-SUB (RS-232)	9 pin D-SUB male (RS-232)
RXD (2) ————————	(2) SD
TXD (3) ————————	(3) RD
GND (5) ————————	(5)SG

b. RS-485 (DOP-A/AE Series)

DOP Series	Controller
9 pin D-SUB male (RS-485)	8 pin Mini DIN male (RS-485)
RXD+ (2) ┐	
TXD+ (3) ┘————	(1) D+
RXD- (1) ┐	
TXD- (4) ┘————	(2) D-

c. RS-485 (DOP-AS57 Series)

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         DOP Series                    Controller
9 pin D-SUB male (RS-485)   8 pin Mini DIN male (RS-485)

      R+  ─────────────────────  (1) D+

      R-  ─────────────────────  (2) D-
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d. RS-485 (DOP-AS35/AS38 Series)

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         DOP Series                    Controller
9 pin D-SUB male (RS-485)   8 pin Mini DIN male (RS-485)

      R+ ─┐
          ├──────────────────── (1) D+
      T+ ─┘

      R- ─┐
          ├──────────────────── (2) D-
      T- ─┘
```

e. RS-485 (DOP-B Series)

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         DOP Series                    Controller
9 pin D-sub male (RS-485)   8 pin Mini DIN male (RS-485)

   D+ (1) ─────────────────────  (1) D+

   D- (6) ─────────────────────  (2) D-
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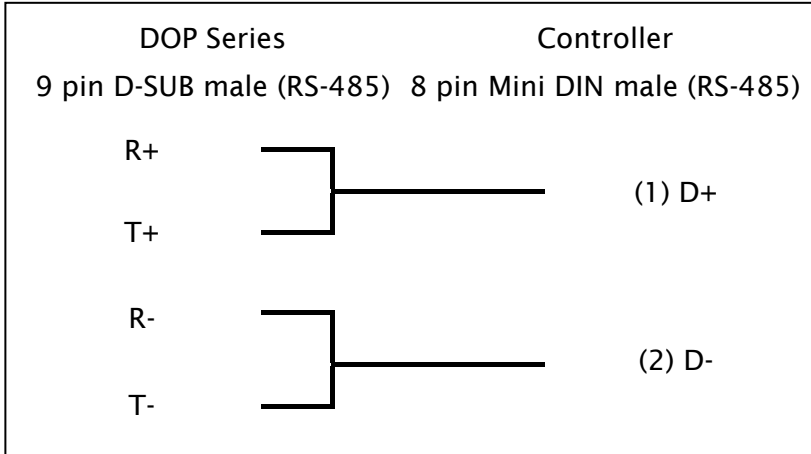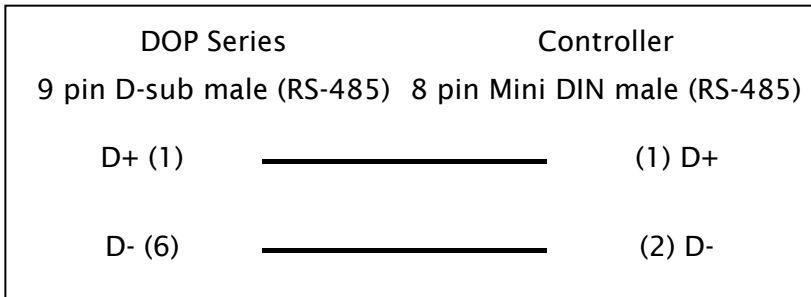
Definition of PLC Read/Write Address

a. Registers

Type	Format Word No. (n)	Read/Write Range	Data Length	Note
WORD_DEVICE_ Internal	%MWn	%MW0 – %MW65534	Word	6
WORD_DEVICE_ System	%SWn	%SW0 – %SW127	Word	
WORD_DEVICE_ Input	%KWn	%KW0 – %KW65534	Word	Read only

b. Contacts

Type	Format Word No. (n) Bit No. (b)	Read/Write Range	Note
BIT_DEVICE_ Internal	%Mn:b	%M0:0 – %M65534:15	4, 6
BIT_DEVICE_ System	%Sb	%S0 – %S127	
BIT_DEVICE_ Internal1	%Mb	%M0 – %M65534	5

NOTE

1) HMI Station needs to be in range of 1 – 8.

2) PLC station number can be the same as HMI station number, but it can not be 0.

3) Internal memory of PLC and other relative parameters must be set up first or only %S will function, others will not be able to communicate.

4) **%M**n:b is the Bit address that corresponds to WORD_DEVICE_ Internal (**%MW**n).

5) **%M**b is the internal Relay address of PLC.

6) The read/write range of WORD_DEVICE_ Internal / BIT_DEVICE_ Internal depends on the used memory space of PLC.

7) The differences between **Modbus Slave** and **Uni-Telway Slave** mode:

When PLC is in **Modbus Slave** mode	When PLC is in **Uni-Telway Slave** mode
The following drivers are all available for use. 1. Modicon / TWIDO 2. Modbus / 984 RTU (Master) 3. Modbus / 984 RTU (Master, 6 Digits) 4. Modbus / RTU Hex Address (Master)	To increase communication efficiency: 1. Select TSX NEZA (Uni-Telway) when reading and writing only one word of %MW data for one time communication. 2. Select TSX (Uni-Telway) when reading and writing up to 30 words of %MW data for one time communication and there are more than two PLCs and HMIs connected. 3. Select TSX (1-1 Uni-Telway) when reading and writing up to 30 words of %MW data for one time communication and there are one PLC and one HMI connected.