

## Modicon TSX (1-1 Uni-Telway)

### HMI Factory Setting:

Baud rate: 9600, 8, Odd, 1

Controller Station Number: 1 (no PLC station number in protocol, supports only 1 (HMI) to 1 (PLC) communication)

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

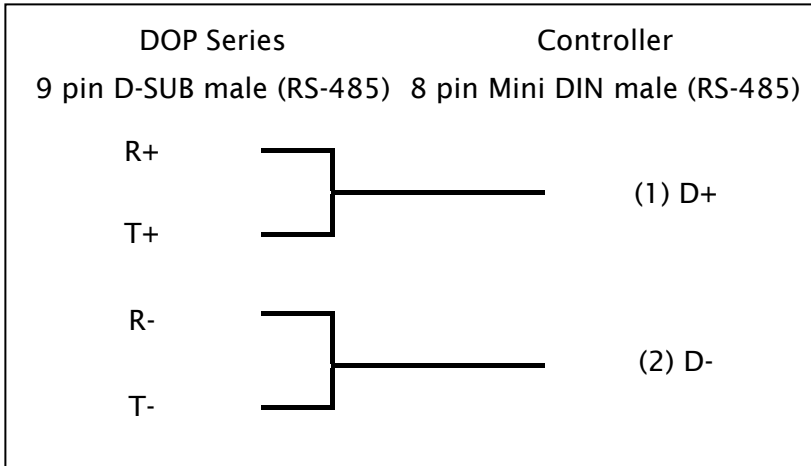
#### b. RS-485 (DOP-A/AE Series)

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

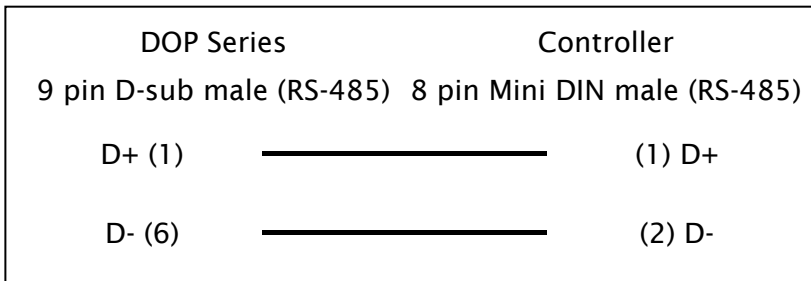
#### c. RS-485 (DOP-AS57 Series)

DOP Series		Controller
9 pin D-SUB male (RS-485)		8 pin Mini DIN male (RS-485)
R+	_____	(1) D+
R-	_____	(2) D-

**d. RS-485 (DOP-AS35/AS38 Series)**



**e. RS-485 (DOP-B Series)**



**Definition of PLC Read/Write Address**

**a. Registers**

Type	Format	Read/Write Range	Data Length	Note
	Word No. (n)			
WORD_DEVICE_ Internal	%MWn	%MW0 - %MW65534	Word	<a href="#">4</a>
WORD_DEVICE_ System	%SWn	%SW0 - %SW127	Word	
WORD_DEVICE_ Input	%KWn	%KW0 - %KW65534	Word	Read only

**b. Contacts**

Type	Format	Read/Write Range	Note
	Word No. (n) Bit No. (b)		
BIT_DEVICE_ Internal	%Mn:b	%M0:0 - %M65534:15	<a href="#">2</a> , <a href="#">4</a>
BIT_DEVICE_ System	%Sb	%S0 - %S127	
BIT_DEVICE_ Internal1	%Mb	%M0 - %M65534	<a href="#">3</a>

 **NOTE**

- 1) 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.
- 2) %Mn:b is the Bit address that corresponds to WORD\_DEVICE\_ Internal (%MWn).
- 3) %Mb is the internal Relay address of PLC.
- 4) The read/write range of WORD\_DEVICE\_ Internal / BIT\_DEVICE\_ Internal depends on the used memory space of PLC.
- 5) The differences between **Modbus Slave** and **Uni-Telway Slave** mode:

When PLC is in <b>Modbus Slave</b> mode	When PLC is in <b>Uni-Telway Slave</b> mode
<p>The following drivers are all available for use.</p> <ol style="list-style-type: none"> <li>1. Modicon / TWIDO</li> <li>2. Modbus / 984 RTU (Master)</li> <li>3. Modbus / 984 RTU (Master, 6 Digits)</li> <li>4. Modbus / RTU Hex Address (Master)</li> </ol>	<p>To increase communication efficiency:</p> <ol style="list-style-type: none"> <li>1. Select <u>TSX NEZA (Uni-Telway)</u> when reading and writing only one word of %MW data for one time communication.</li> <li>2. Select <u>TSX (Uni-Telway)</u> 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.</li> <li>3. Select <u>TSX (1-1 Uni-Telway)</u> when reading and writing up to 30 words of %MW data for one time communication and there are one PLC and one HMI connected.</li> </ol>