

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)

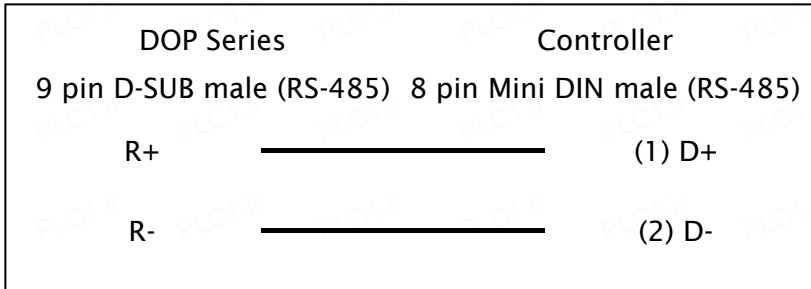
It requires specific TSX PCX1031 cable of Modicon Uni-Telway for wiring.

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

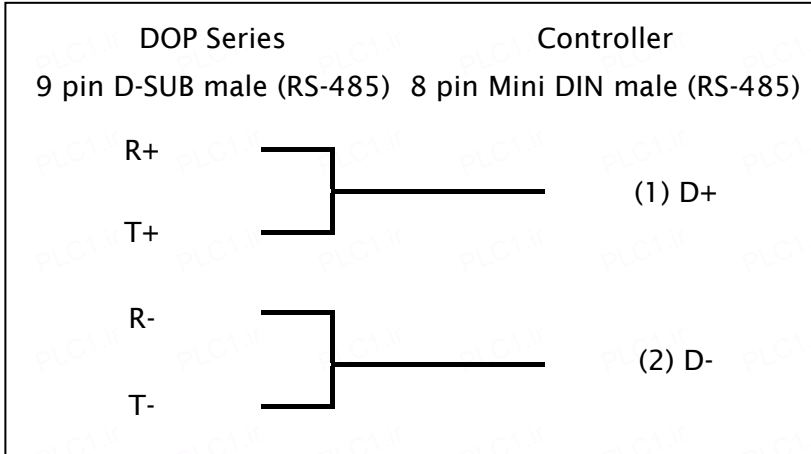
b. RS-485 (DOP-A/AE Series)

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

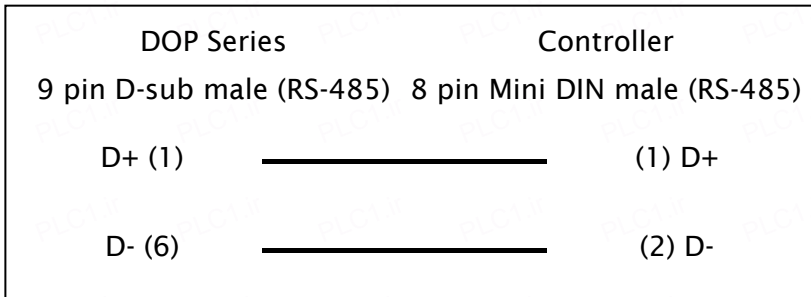
c. RS-485 (DOP-AS57 Series)



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	6
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	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) %Mn:b is the Bit address that corresponds to WORD_DEVICE_ Internal (%MWn).
- 5) %Mb 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. <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 1. Select <u>TSX NEZA (Uni-Telway)</u> when reading and writing only one word of %MW data for one time communication. 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. 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.