

Technical Document

Revision 0.0

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PLC Connection Guide

TN506D

Communication settings between
Hitachi Micro-EH and PanelMaster



Designed to be Outstanding

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Revision	Date	Content	Owner

前言

此技術文件介紹如何將 Hitachi Micro-EH PLC 連接 PanelMaster HMI.

(1) PLC 參數設定:

1. Micro-EH

(1) Port 1

- a. 使用 Port 1 連接 HMI.
通訊格式如下:

19200, 7, Even, 1 (According to the DIP-SW setting)

- b. Port 1 設定

Port 1 是由 DIP switch 與 special register (WRF01A) 的組合來配置。

當纜線沒有被連接(DR 信號為關閉)時,可設定 DIP switch。Switch 表面配置設置於纜線連接(DR 為高)。

書寫標誌 (R7F6) 開啟時,在 WRF01A 的數值被儲存在 FLASH 記憶體內。如果儲存在 FLASH 記憶體內,在下次開機時沒有必要再次設置。

[注意]

如果傳輸程序 2 被配置並保存在 FLASH 記憶體一次,支援程序 1 的外圍設備裝置/應用程序,如 LADDER EDITOR 不能被連接。



Port type		DIP switch				WRF01A	Remarks
		1	2	3	4		
Dedicated port	38.4 kbps	ON	off	ON	off	H0000 : Transmission procedure 1 H8000 : Transmission procedure 2	
	19.2 kbps	ON	off	off	off		
	9600 bps	off	off	ON	off		
	4800 bps	off	off	off	off		Default
Dedicated port via modem	4800 bps	off	ON	off	off	H0000 : Pred. 1 / H8000 : Pred. 2	H0*** : Procedure 1 H8*** : Procedure 2
	9600 bps					H0100 : Pred. 1 / H8100 : Pred. 2	
	19.2 k bps					H0200 : Pred. 1 / H8200 : Pred. 2	
	38.4 k bps					H0300 : Pred. 1 / H8300 : Pred. 2	
	57.6 k bps					H0400 : Pred. 1 / H8400 : Pred. 2	
	2400 bps					H0500 : Pred. 1 / H8500 : Pred. 2	
General purpose port		Port switching by FUN5 command, Baud rate by TRNS/RECV command					

* Due to no DIP switch equipped, 10 points type does not support modem function.
* +12V is supplied from pin 4 if DIP switch is ON.
* General purpose port is supported by software version 0130 (WRF051=H0130) or newer.

c. Port 1 硬體

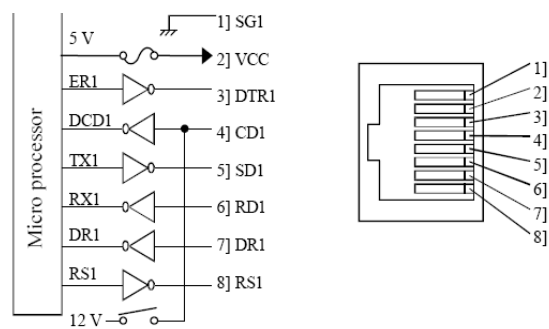
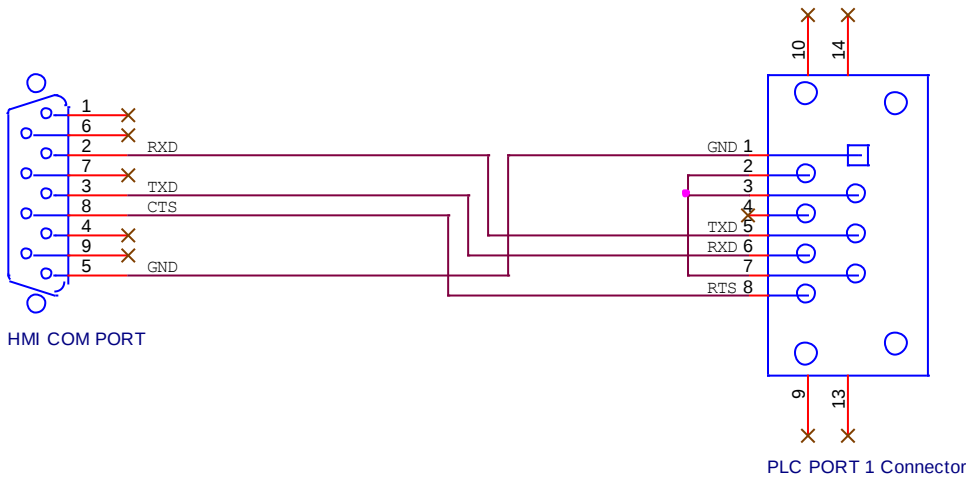


Figure 11.2 Circuit diagram and pin numbers for port 1

Table 11.3 List of port 1 signals

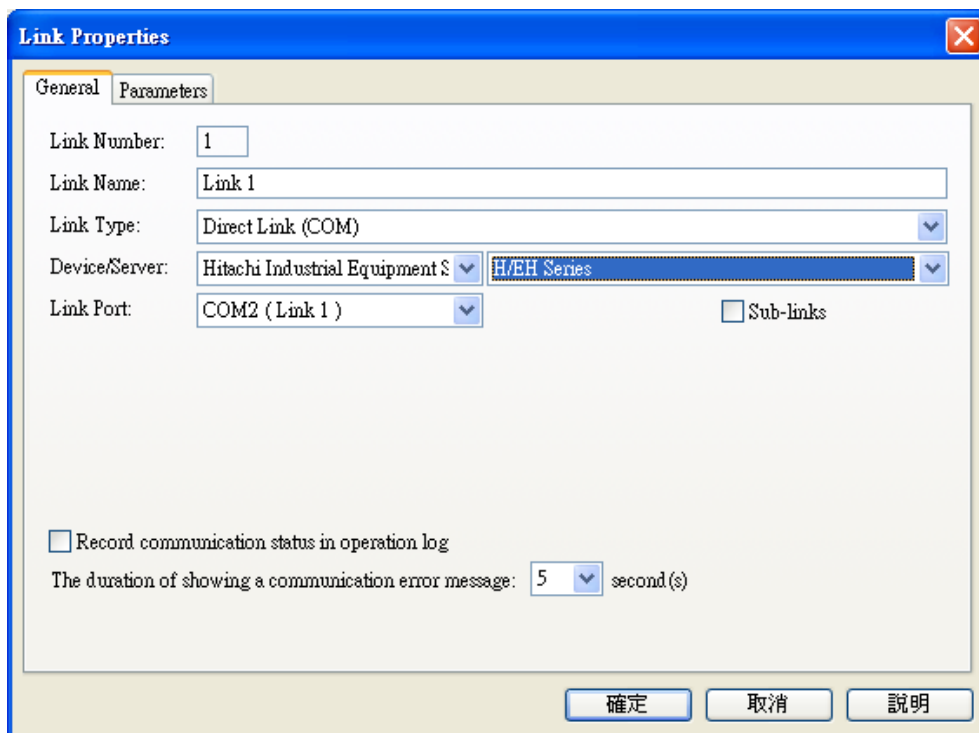
Pin No.	Signal abbreviation	Direction		Meaning
		CPU	Host	
1]	SG1	←→		Signal ground
2]	VCC	→		5 V DC is supplied. (Protective fuse is connected.)
3]	DTR1 (ER)	→		Communication enabled signal. When it is high, communication is possible.
4]	CD1 (DCD)	→		12V is output when DIP switch 1 is on.
5]	SD1 (TXD)	→		Data sent by the CPU
6]	RD1 (RXD)	←		Data received by the CPU
7]	DR1 (DSR)	←		Peripheral units connected signal. When it is high, peripheral device is connected.
8]	RS1 (RTS)	→		Transmission request signal. When it is high, CPU is ready to receive data.

d. 連接纜線圖表 (RS232)



(1) HMI 設定:

選擇【Device/Server: Hitachi Industrial Equipment Systems Co., Ltd. → H/EH Series】

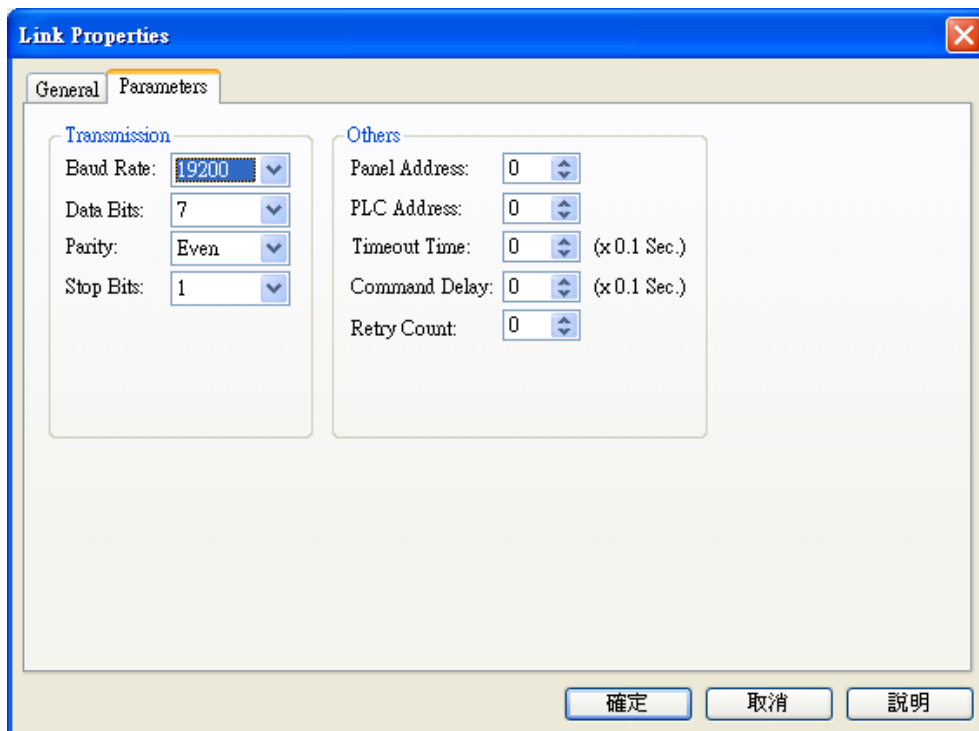


The 'Link Properties' dialog box is shown with the 'General' tab selected. It contains the following fields and options:

- Link Number: 1
- Link Name: Link 1
- Link Type: Direct Link (COM)
- Device/Server: Hitachi Industrial Equipment Systems Co., Ltd. → H/EH Series
- Link Port: COM2 (Link 1)
- ☐ Sub-links
- ☐ Record communication status in operation log
- The duration of showing a communication error message: 5 second(s)

Buttons at the bottom: 確定 (OK), 取消 (Cancel), 說明 (Help).

將 HMI link port 參數與 PLC communication 參數設定為相同。



The 'Link Properties' dialog box is shown with the 'Parameters' tab selected. It contains the following fields and options:

- Transmission:**
 - Baud Rate: 19200
 - Data Bits: 7
 - Parity: Even
 - Stop Bits: 1
- Others:**
 - Panel Address: 0
 - PLC Address: 0
 - Timeout Time: 0 (x 0.1 Sec.)
 - Command Delay: 0 (x 0.1 Sec.)
 - Retry Count: 0

Buttons at the bottom: 確定 (OK), 取消 (Cancel), 說明 (Help).

(3) PLC 記憶體位址

Bit Devices:

Bit Device (H/EH Series)			
Bit Device	Address Range	Block Addr...	Comment
Xmn	m=0~4,n=0x0~0xff95	m=0~4	
Ymn	m=0~4,n=0x0~0xff95	m=0~4	
Rn	n=0x0~0x7ff	Any	
Mn	n=0x0~0x3fff	Any	
Ln	n=0x0~0x3fff	Any	
Ln	n=0x10000~0x13fff	Any	
TDn	n=0~255	Any	
SSn	n=0~255	Any	
CUn	n=0~511	Any	
CTUn	n=0~511	Any	
CTDn	n=0~511	Any	
CTn	n=0~511	Any	
CLn	n=0~511	Any	
DIFn	n=0~511	Any	
DFNn	n=0~511	Any	

Word Devices:

字元件/位置 (H/EH Series)			
字元件/位置	地址範圍	大小	說明
WXn	n:0x0~0x4ff7	Word	
WYn	n:0x0~0x4ff7	Word	
WRn	n:0x0~0xc3ff	Word	
WRn	n:0xd000~0xf1ff	Word	
WMn	n:0x0~0x3ff	Word	
WLn	n:0x0~0x3ff	Word	
WLn	n:0x1000~0x13ff	Word	
TCn	n:0~511	Word	
DXn	n:0x0~0x4ff8	D Word	
DYn	n:0x0~0x4ff8	D Word	
DRn	n:0x0~0xc3fe	D Word	
DRn	n:0xd000~0xf1fe	D Word	
DMn	n:0x0~0x3fe	D Word	
DLn	n:0x0~0x3fe	D Word	
DLn	n:0x1000~0x13fe	D Word	
WNn	n:0x0~0x7fff	Word	
DNn	n:0x0~0x7ffe	D Word	

~Thank You~



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