

■ Features

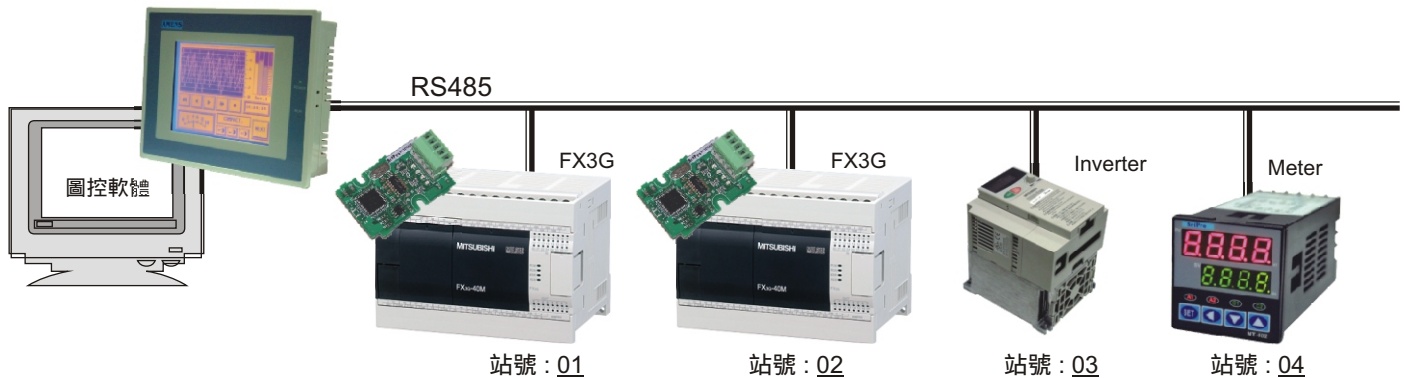
將 FX3G PLC 通訊格式，轉換為 Modbus 通訊格式，以達到多台 PLC 相互連結，及整合所有 Modbus 裝置。

- Support MODBUS slave station protocols.
- Function code 3 to 10 are supported.
- Two transmission modes of RTU.



■ System Configuration

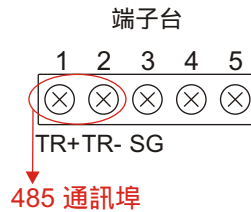
- (1) 直接插入 FX3G 通訊卡座，不需另購 FX3G-CNV-BD。
- (2) FX3G PLC 不須寫入 RS 指令，直接填寫對映表。
- (3) 無法經過 FX3G-M485-BD，再連接 FX3G 的左側特殊模組(ADP)。



■ Specifications

Item	Specifications
Interface	RS-485
Transmission mode	Half-duplex
Protocol	Modbus RTU mode
Transmission speed	300.....115200 bps
Data bits	7 / 8
Parity check	Even / Odd / None
Stop bit	1 / 2
Function code	03 / 04 / 06 / 10
Time out	Character and character 3msec

■ Pin Assignments



FX3G-M485BD 端子腳位定義

- 端子-1: MOD_BUS_MASTER TR+
- 端子-2: MOD_BUS_MASTER TR-
- 端子-3: MOD_BUS_MASTER/PC SG
- 端子-4: PC TX
- 端子-5: PC RX

■ MODBUS functions

Code	Function
03	Read holding register
04	Read input register
06	Preset single register
08	Loopback test
10	Force multiple register

■ FX3G PLC 暫存器設定

D8120 = K0
 D7900 = 1 (工作模式: 只能讀寫D暫存器(FUNCTION CODE=3,4,6,10))
 D7901 = 通訊參數設定
 bit15~bit8 = Modbus 站號(0~255)
 bit7~bit4 = Modbus 通訊速率
 (0=115200, 1=57600, 2=38400, 3=19200, 4=9600, 9=300)
 bit3..bit0 = Modbus 通訊格式
 (2=8n1, 5=8o1, 6=8e1, 7=8n2)
 例如:D7900=H0142 (站號:1) (9600,8,n,1)
 D7902 = 0 (Modbus 有效啟始位置 0~7999)
 D7903 = 7999 (Modbus 有效結束位置 0~7999)
 D7904 = Modbus長度限制
 bit5~bit0 = Modbus 長度限制(1~60)
 bit6 = 1 (啟動: 狀態暫存器D7910,D7911)
 HIGH_BYTE = 通訊逾時(timeout)時間(1~255 x 50msec)
 (超過此時間,沒有任何通訊,LED3會亮起,且D7911的BIT_8會為1)
 例如:D7904=0ABCH (timeout=10x50msec=500msec,長度限制=3ch=60 words)
 D7910_HIGH_BYTE = Modbus 通訊次數.
 D7910_LOW_BYTE = Modbus 通訊異常次數.
 D7911_LOW_BYTE = Modbus FUNCTION CODE (normal = 3,4,5,6,8,10H)
 = Modbus FUNCTION CODE (error= 83h,84h,85h,86h,90H)
 = Modbus FUNCTION CODE (error= 00 ==> timeout)
 D7911_BIT8 = 通訊逾時旗標.

■ Register range

Modbus register	FX3G register
40001	D0000
40002	D0001
.....
.....
.....
48000	D7999