

ADP485-01

Instruction Sheet 安裝說明 安裝说明

Adapter
轉接器
转接器



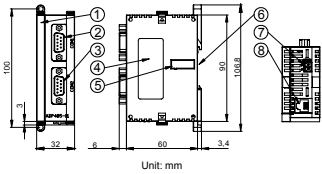
Warning

- ADP485-01 is an OPEN-TYPE. Please place the module in an enclosure away from airborne dust or high humidity and prevent electric shock or sudden shock on ADP485-01. Also, it is equipped with protective method such as some special tool or key to open the enclosure, so as to avoid the hazard to users or any damage to the module. Do NOT touch terminals when power on.
- When many devices are connecting in serial, their Baud rate and communication format setting should be the same. Also, each device must have individual Unit Address.
- I/O terminal screw should be tightened between 1.95kg-cm (1.7 in-lbs). Use copper conductor only, 60/75°C.

Introduction

ADP485-01 is mainly designed to connect Delta product by RS-485 interface. It is equipped with surge absorber and limited current protection to ensure safe connection of different devices. Also, 120Ω terminating resistance selection is available. This module enables Delta products to connect one another by RS-485 interface with much concern of safety and wide application. ADP485-01 offers four different connectors to enable the network connection for Delta's PLC DVP series, HMI DOP series, AC Motor Drive VFD series and Servo drive ASD series.

Product Profile



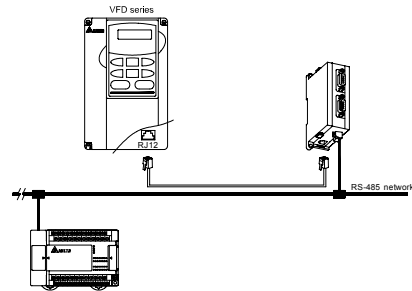
- | | |
|---------------------|---|
| ① Mounting plate | ④ ON/OFF of terminating resistor (default setting: OFF) |
| ② COM1 (DB9 female) | ⑤ DIN rail (35mm) |
| ③ COM2 (DB9 male) | ⑥ RS-485 port |
| ⑦ Nameplate | ⑦ RJ12 |

Optional Connecting Cable

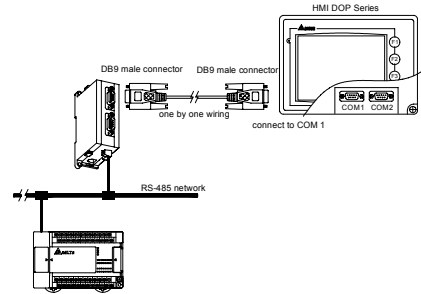
- ADPCAB03A: ADP485-01 ⇔ ASD-A connecting cable/30cm
- ADPCAB03B: ADP485-01 ⇔ ASD-B connecting cable/30cm

RS-485 Network Connection with Delta Products

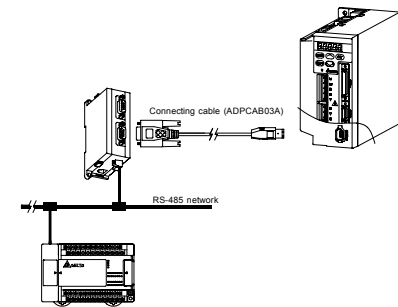
ADP485-01 ⇔ VFD (AC Motor Drive)



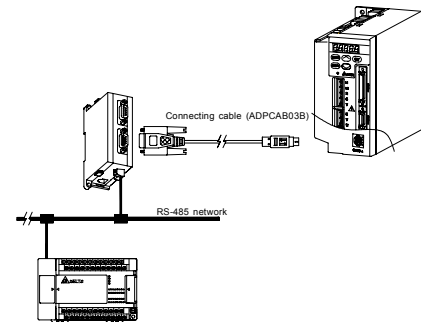
ADP485-01 ⇔ DOP (HMI)



ADP485-01 ⇔ ASD-A (Servo Drive)



ADP485-01 ⇔ ASD-B (Servo Drive)



Environmental Specification

Environment	
Operation	0°C ~ 55°C (temperature), 5 ~ 95% (humidity), pollutant degree 2
Storage	-25°C ~ 70°C (temperature), 5 ~ 95% (humidity)
Vibration/Shock resistance	International Standard: IEC 61131-2, IEC 68-2-6 (TEST Fc)/IEC 61131-2 & IEC 68-2-27 (TEST Ea)

COM1, COM2, and RJ12 PIN Explanation

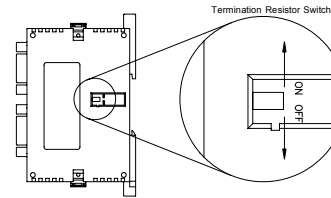
COM1-DB9 female		RJ12-VFD	
PIN	Definition	PIN	Definition
1	RS485-	1	+15V
2	RS485+	2	GND
3	RS485+	3	SG-
4	RS485-	4	SG+
5, 6, 7, 8, 9: NC		5, 6: Reserved	

COM2-DB9 male		RJ12-ADP485-01	
PIN	Definition	PIN	Definition
3, 6	RS485-	3	RS-485+
8	RS485+	4	RS-485-
5, 9	GND	5	GND
1, 2, 4, 7: NC		1, 2, 6: NC	

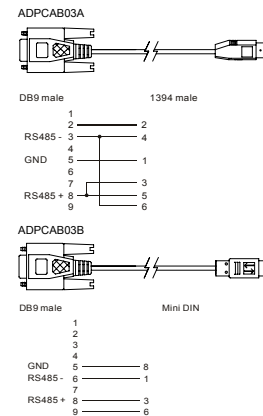
Use of Terminating Resistance

In all RS-485 installations, the cable must be correctly terminated with two sets of resistors, one set at each end of the network (4,000 feet maximum total cable length). This applies even if you are only using one slave node connected to one master device. The terminating resistors prevent reflection problems that can interfere with data transmission. The resistance value of the terminating resistors should match the characteristic impedance of the cable. A typical value is 120 ohms. The terminating resistors must be placed at the two farthest ends of the RS-485 network, regardless of where the

master device is. In some cases master device RS-485 ports have built in or optional terminating resistors. Beware of your network (whether it has one node or 32 nodes) having only two sets of terminating resistors.



Cable Connection



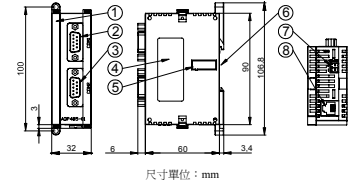
注意事項

- 本機為開放型 (Open Type) 機殼，因此使用者使用本機時，必須將其安裝於其防塵、防潮及免於電擊或衝擊意外之外殼配線箱內，另必須具備保護措施 (如：特殊之工具或鑰匙才可打開) 防止非維護人員操作或意外衝擊本體，造成危險及損壞，請勿在上電時期擔任任何端子。
- 在串聯通訊各個節點所連接之裝置，其通訊速率 (Baud rate) 及通訊格式 (Format) 必須設定相同以及每個節點必須有獨立之站址位址 (Unit address)。
- 出/入配線端子螺絲扭力為 1.95kg-cm (1.7 in-lbs)，只能使用 60°C/75°C 之銅導線。

產品簡介

本產品為一轉接器，主要用於台達機電產品，RS-485串聯通訊連接之用，本轉接器內建有突波吸收及限流保護裝置，對於連接於ADP485-01的裝置，供了更好的保護。另外並提供終端電阻 (120Ω) 選擇開關，不需外加。因此本產品提供台達機電產品在RS-485連線、保護及應用非常方便的介面轉接器。ADP485-01提供四種不同型式之插座以搭配台達機電產品 PLC DVP系列、人機介面 DOP系列、變頻器 VFD系列、伺服驅動器ASD系列使用，提供相互間 RS485通訊連線使用。

產品外觀



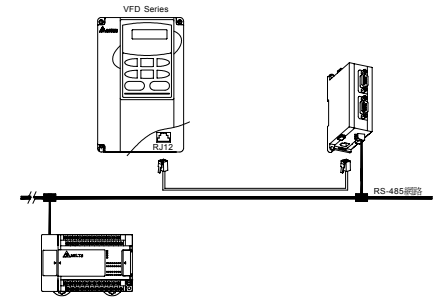
- | | |
|-----------------|-------------------------|
| ① 固定板 | ④ 終端電阻選擇開關 (出廠設定值為 OFF) |
| ② COM1 (DB9 母座) | ⑤ DIN 軌槽 (35mm) |
| ③ COM2 (DB9 公座) | ⑥ RS-485 連接口 |
| ⑦ 銘牌 | ⑧ RJ12 連接口 (連接變頻器) |

選購連接線

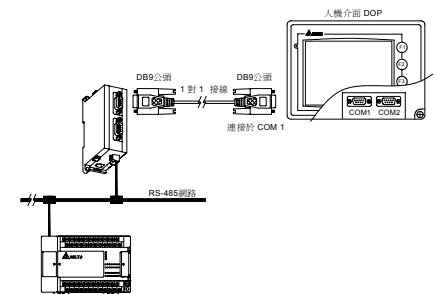
- ADPCAB03A: ADP485-01 ⇔ 台達伺服驅動器 ASD-A 連接線/30公分
- ADPCAB03B: ADP485-01 ⇔ 台達伺服驅動器 ASD-B 連接線/30公分

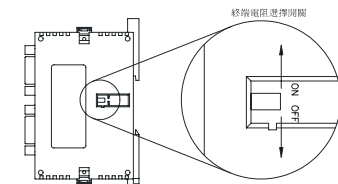
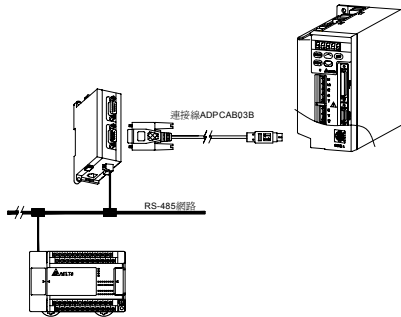
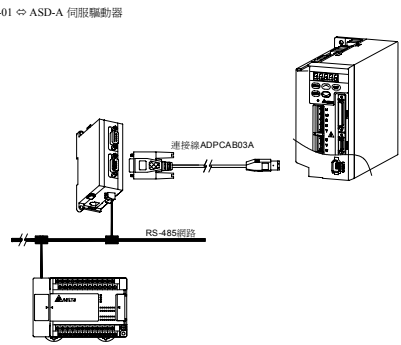
台達機電產品 RS-485 網路連接圖

ADP485-01 ⇔ VFD 變頻器

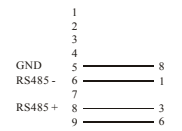
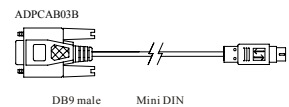
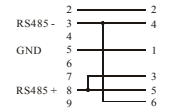
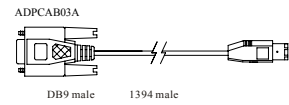


ADP485-01 ⇔ DOP 人機介面





■ 連接線接線圖



■ 環境規格

環境規格	
操作/儲存環境	1. 操作：0°C ~ 55°C (溫度)，5 ~ 95% (濕度)，污染等級 2 2. 儲存：-25°C ~ 70°C (溫度)，5 ~ 95% (濕度)
耐振動/衝擊	國際標準規範 IEC 61131-2, IEC 68-2-6 (TEST Fc)/IEC 61131-2 & IEC 68-2-27 (TEST Ea)

■ COM1, COM2 及 RJ12 接線定義

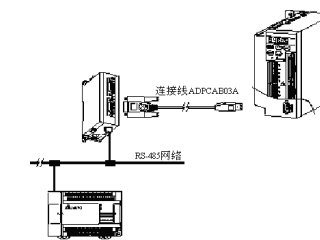
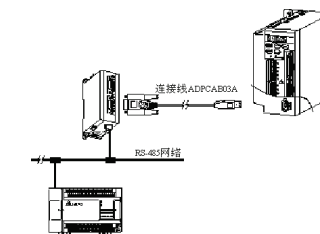
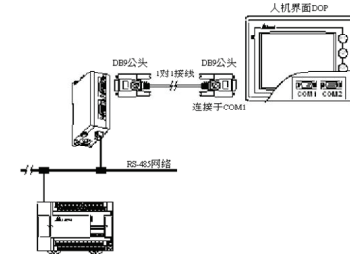
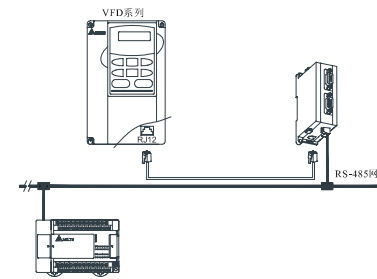
COM1-DB9 母座		RJ12-VFD 端	
PIN	定義	PIN	定義
1	RS485-	1	+15V
2	RS485+	2	GND
3	RS485+	3	SG-
4	RS485-	4	SG+
5, 6, 7, 8, 9 無連接		5, 6 不可使用	

COM2-DB9 公座		RJ12-ADP485-01 端	
PIN	定義	PIN	定義
3, 6	RS485-	3	RS-485+
8	RS485+	4	RS-485-
5, 9	GND	5	GND
1, 2, 4, 7 無連接		1, 2, 6 無連接	

■ 終端電阻使用時機

當RS485長距離通訊傳輸時，一般為了避免信號的反射和回波，需要在接收端接入終端匹配電阻。在實際配置時，在電纜的兩個終端節點上，即最近端和最遠端，各接入一個終端電阻，而處於中間部分的節點則不能接入終端電阻，否則易導致通訊錯誤，也就是說第一台ADP485-01及最後一台ADP485-01需將終端電阻選擇開關置於ON，中間串接的ADP485-01終端電阻選擇開關置於OFF(出廠設定值)。

● 台達機電產品 RS-485 網絡連接圖



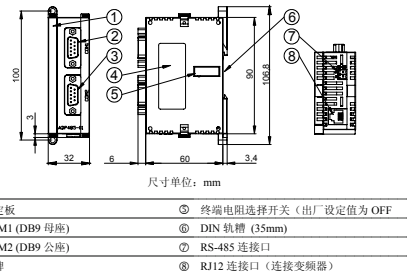
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- ✓ 出/入配線端子螺絲扭力為 1.95kg-cm (1.7 in-lbs)，只能使用 60°C/75°C 之鋼導線。

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■ 产品外观



■ 選購連接線

- ADPCAB03A: ADP485-01 ⇨ 台達伺服驅動器 ASD-A 連接線/30 公分
- ADPCAB03B: ADP485-01 ⇨ 台達伺服驅動器 ASD-B 連接線/30 公分

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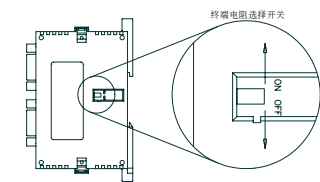
■ COM1, COM2 及 RJ12 接線定義

COM1-DB9 母座		RJ12-VFD 端	
PIN	定義	PIN	定義
1	RS485-	1	+15V
2	RS485+	2	GND
3	RS485+	3	SG-
4	RS485-	4	SG+
5, 6, 7, 8, 9 無連接		5, 6 不可使用	

COM2-DB9 公座		RJ12-ADP485-01 端	
PIN	定義	PIN	定義
3, 6	RS485-	3	RS-485+
8	RS485+	4	RS-485-
5, 9	GND	5	GND
1, 2, 4, 7 無連接		1, 2, 6 無連接	

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■ 連接線接線圖

