

DVPPF01-S

Instruction Sheet

安裝說明

Profibus/DP Slave Adapter

Profibus/DP 通訊協定模組

Profibus/DP 通訊協議模塊



Communication

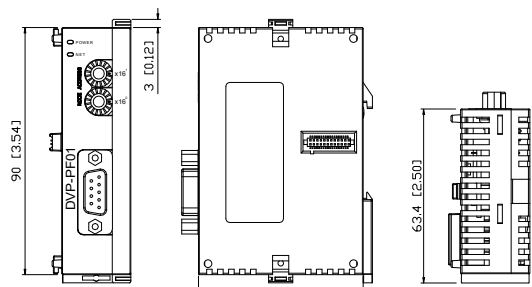
Message types	DPV0, cyclical data exchange process
Device ID	09B9 HEX
GSD file	EATN09B9.GSD
Model name	DVPPF01-S
Baud rates (auto detected)	9.6kbps, 19.2kbps, 93.75kbps, 187.5kbps, 500kbps, 1.5Mbps, 3Mbps, 6Mbps, 12Mbps

Environmental Specification

Noise immunity	ESD (IEC 61131-2, IEC 61000-4-2): 8KV Air Discharge EFT (IEC 61131-2, IEC 61000-4-4): Power Line: 2KV, Digital I/O: 1KV Analog & Communication I/O: 1KV Damped-Oscillatory Wave: Power Line: 1KV, Digital I/O: 1KV RS (IEC 61131-2, IEC 61000-4-3): 26MHz ~ 1GHz, 10V/m
Environment	Operation: 0°C ~ 55°C (temperature), 5 ~ 95% (humidity), Pollution degree 2 Storage: -25°C ~ 70°C (temperature), 5 ~ 95% (humidity)
Vibration/shock resistance	Standard: IEC 61131-2, IEC 68-2-6 (TEST Fc) IEC 61131-2 & IEC 68-2-27 (TEST Ea)
Approvals	CE, cULus

Installation & Configuration

Dimensions



Dimensions are in millimeter and [inch]



Warning

EN DVPPF01-S is an OPEN-TYPE device. It should be installed in a control cabinet free of airborne dust, humidity, electric shock and vibration. To prevent non-maintenance staff from operating DVPPF01-S, or to prevent an accident from damaging DVPPF01-S, the control cabinet in which DVPPF01-S is installed should be equipped with a safeguard. For example, the control cabinet in which DVPPF01-S is installed can be unlocked with a special tool or key.

EN DO NOT connect AC power to any of I/O terminals, otherwise serious damage may occur. Please check all wiring again before DVPPF01-S is powered up. After DVPPF01-S is disconnected, Do NOT touch any terminals in a minute. Make sure that the ground terminal on DVPPF01-S is correctly grounded in order to prevent electromagnetic interference.

FR DVPPF01-S est un module OUVERT. Il doit être installé que dans une enceinte protectrice (boîtier, armoire, etc.) saine, dépourvue de poussière, d'humidité, de vibrations et hors d'atteinte des chocs électriques. La protection doit éviter que les personnes non habilitées à la maintenance puissent accéder à l'appareil (par exemple, une clé ou un outil doivent être nécessaires pour ouvrir a protection).

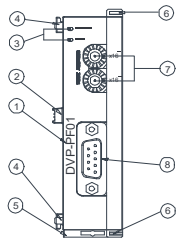
FR Ne pas appliquer la tension secteur sur les bornes d'entrées/Sorties, ou l'appareil DVPPF01-S pourra être endommagé. Merci de vérifier encore une fois le câblage avant la mise sous tension du DVPPF01-S. Lors de la déconnection de l'appareil, ne pas toucher les connecteurs dans la minute suivante. Vérifier que la terre est bien reliée au connecteur de terre afin d'éviter toute interférence électromagnétique.

Introduction

Functions

- Cyclical data exchange process
- Support the SYNC and FREEZE for data synchronization between master and slaves
- Support Auto Baud rate detection
- Support 12MHz baud rate in DP network
- Cyclical data size is fixed to 4 bytes input and 4 bytes output
- Support GSD file configures by using configuration tools

Product Profile



- Model name
- Extension port
- Power/NET LED
- Extension hole for mounting unit or module
- DIN rail clip
- Extension clip
- Address switch
- Profibus connector

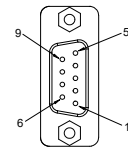
Specifications

DP Connection

Interface	DB9 pin connector
Transfer method	High speed RS-485
Transfer cable	2-wire twisted shielded cable
Electrical isolation	500VDC

PIN Definition of DP Connector

PIN	Definition	Content	PIN	Definition	Content
1	--	N/C	6	VP	Positive voltage
2	--	N/C	7	--	N/C
3	RxD/TxD-P	Data receiving/sending P (B)	8	RxD/TxD-N	Data receiving/sending N (A)
4	--	N/C	9	--	N/C
5	DGND	Data reference potential (C)			

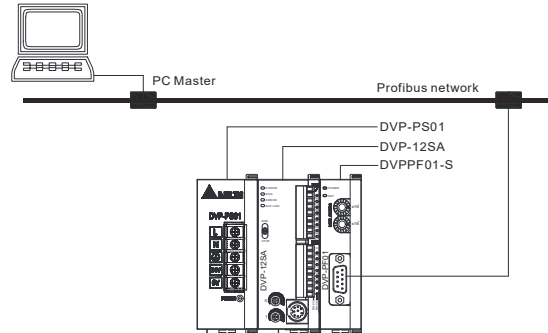


MAC ID Setting

Address	Content
1...0x7D	Valid Profibus address
0 or 0x7E...0xFF	Invalid Profibus address. NET LED will rapidly blink with RED when node address is at 0, 0x7E...0xFF

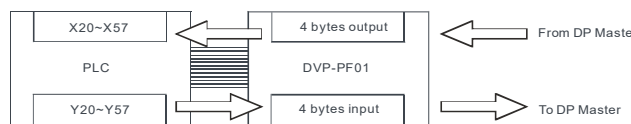
Setting of DVPPF01-S Connect to Profibus-DP

Connection example:

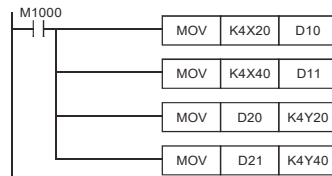


DVPPF01-S provides fixed 4 bytes input data and 4 bytes output data to user in Profibus-DP system. 4 bytes input data are transmitted from DVPPF01-S module to Profibus-DP Master, it are mapping to Y20-Y57 in PLC controller when DVPPF01-S is the first extension unit of PLC. 4 bytes output data are transmitted from Profibus-DP Master, and it are also mapping to X20-X57 in PLC controller.

Data Mapping



Following is a ladder program example:



This program example copies the 4 bytes data from X20-X57 that transmitted by DP master to D10 and D11 registers in PLC controller. And, PLC controller will write 4 bytes data in D20 and D21 registers to Y20-Y57, these 4 bytes data will send to DVPPF01-S, and DVPPF01-S will send these data to DP master.

Troubleshooting

NET LED

LED status	Indication	Corrective actions
OFF	No power supply	Verify DVPPF01-S is powered on
Red blinking (rapidly)	Invalid Profibus address setting via switch	Check whether the switch setting is valid Setting range of slave: 1-125 Set the valid value and re-power
Red blinking	Communication link to PROFIBUS, and no cyclical data exchanged	--
Red ON	No connection to Profibus	Verify that DP network installation is OK Verify that PLC is working Verify that switch address setting match with configuration in DP master
Green blinking	Reserved	--
Green ON	Cyclic data exchange in progress and OK	--

Power LED

LED status	Indication	Corrective actions
Green ON	Power on	--
OFF	No power	Verify that PLC controller is powered on

注意事項

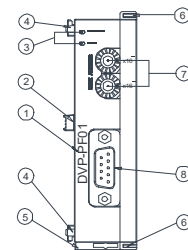
- 此安裝手冊只提供電氣規格、一般規格、安裝及配線等。
- 本機為開放型 (Open Type) 機殼，因此使用者使用本機時，必須將之安裝於具防塵、防潮及免於電擊/衝擊意外之外殼配線箱內。另必須具備保護措施 (如：特殊之工具或鑰匙才可打開) 防止非維護人員操作或意外衝擊本體，造成危險及損壞。請勿在上電時觸摸任何端子。

產品簡介

功能說明

- 循環資料處理
- 支援 SYNC 及 FREEZE 主站和從站間資料同步化
- 支援自動偵測速率
- 在 DP 網路中可使用 12MHz 速率
- 循環資料處理固定為 4 bytes 和 4 bytes 輸出
- 可使用設定工具設定 GSD file

各部介紹



- 機種名稱
- 擴充機/擴充模組連接口
- 電源、NET 指示燈
- 擴充機/擴充模組定位孔
- DIN 軌固定扣
- 擴充機/擴充模組固定扣
- 位址旋鈕
- Profibus 連接口

規格

DP 連線

介面	DB9 接頭
傳輸方式	高速的 RS-485
傳輸線	2 絞線式隔離線
電氣隔離	500VDC

通訊

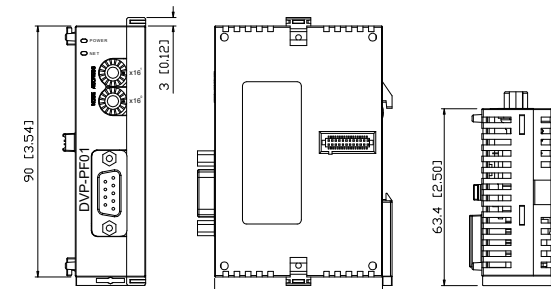
訊息類型	DPV0, 循環式處理資料交換
裝置 ID	09B9 HEX
GSD 檔案	DELT09B9.GSD
模組名稱	DVPPF01-S
速率 (自動偵測)	9.6kbps, 19.2kbps, 93.75kbps, 187.5kbps, 500kbps, 1.5Mbps, 3Mbps, 6Mbps, 12Mbps

環境規格

雜訊免疫力	ESD (IEC 61131-2, IEC 61000-4-2): 8KV Air Discharge EFT (IEC 61131-2, IEC 61000-4-4): Power Line: 2KV, Digital I/O: 1KV Analog & Communication I/O: 1KV Damped-Oscillatory Wave: Power Line: 1KV, Digital I/O: 1KV RS (IEC 61131-2, IEC 61000-4-3): 26MHz ~ 1GHz, 10V/m
操作/儲存環境	操作: 0°C ~ 55°C (溫度), 5 ~ 95% (濕度), 污染等級 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)
標準	CE, cULus

安裝與設定

外觀圖



單位: mm [inches]

PLC 主機與 DVPPF01-S 結合

