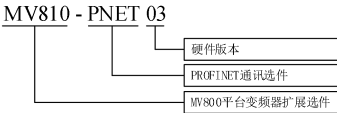


MV800 PROFINET通讯选件用户手册

编码： R33011452
版本： V01

1 产品介绍

1.1 命名规则



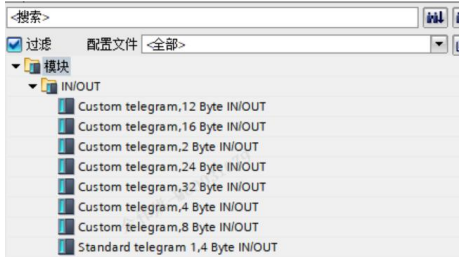
1.2 功能介绍

MV810-PNET03 通讯选件是 MV800 平台变频器的扩展选件，其功能如下：

1.2.1 功能特色

- （1）支持 PZD 控制数据交换
- （2）支持 PKW 访问变频器参数
- （3）支持 100Mbps 全双工
- （4）支持线型网络拓扑和星型网络拓扑
- （5）支持 PZD 数据长度可配置

在博图软件上点击从站设备时，右侧硬件目录会弹出如下对话框，可根据需要选择自己想要的 PZD 长度进行组态，如下图：



1.2.2 功能规格

PROFINET 通讯连接器	接头	两个 RJ45
	传输方式	高速总线
	传输电缆	CAT6 网线
	电气隔离	500VDC
通讯	信息类型	周期性数据交换
	模块名称	MV810-PNET03
	GSDML 文件	GSDML-V2.42-MEGMEET-MV800-PN03-20250102.xml
	总线传输速度	100Mbps
电气规格	电源电压	3.3VDC（由变频器提供）
	绝缘电压	500VDC
	电力消耗	1W
	重量	25g
环境规格	噪声免疫力	ESD(IEC 61800-5-1, IEC 61000-4-2)
		EFT(IEC 61800-5-1, IEC 61000-4-4)
		Surge Test(IEC 61800-5-1, IEC 61000-4-5)
		Conducted Susceptibility Test(IEC 61800-5-1, IEC61000-4-6)
	操作/存储环境	操作：-10~50℃（温度），95%（湿度） 存储：-25~70℃（温度），95%（湿度）
	耐震动/冲击	国际标准规范 IEC61131-2, IEC68-2-6(TEST FC)/IEC61131-2&IEC 68-2-27(TEST Ea)

1.3 端子说明

1.3.1 功能分布

MV810-PNET03 通讯选件的正面、反面视图如下图所示。

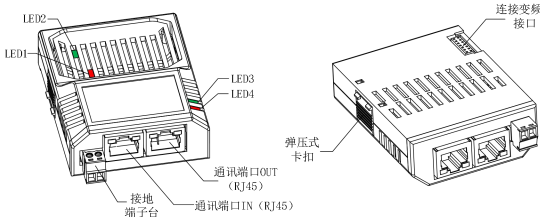
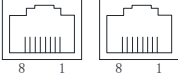


图 1

其端子主要有接地端子、两个 RJ45 接口，以及连接变频器的端口。

1.3.2 管脚定义及信号说明

MV810-PNET03 通讯选件 PROFINET 通讯连接器引脚定义如下所示：



引脚号	名称	描述
1	TX+	Transmit Data+（发信号+）
2	TX-	Transmit Data-（发信号-）

3	RX+	Receive Data+（收信号+）
4	N/C	空脚
5	N/C	空脚
6	RX-	Receive Data-（收信号-）
7	N/C	空脚
8	N/C	空脚

1.3.3 LED 灯指示说明及故障排除

MV810-PNET03 有五处 LED 指示灯（见图 1）：扩展盒 PCBA 上 LED 及通讯网口 LED。扩展盒 PCBA 上 LED 用来显示功能状态以及电源指示；通讯网口 LED 用来显示 MV810-PNET03 的通讯连接状态是否正常。

扩展盒 PCBA 上 LED 灯显示说明：

LED4（红色）状态	显示说明	处理对策
常灭	正常	无需处理
常亮	主站和通讯卡通讯超时	检查 PN 选件与变频器连接是否正常

通讯网口 LED 灯显示说明：

LED 状态	显示说明	处理对策
黄灯闪烁	连接正常，有数据传输	无需处理
绿灯常亮	连接正常	无需处理
黄灯常亮	连接正常，无数据交互	检查主从站之间是否有通讯
绿灯常灭	连接失败	检查网线连接

2 安装

2.1 附件说明

附件名称	规格	数量
MV810-PNET03 通讯选件	75*60*24mm	一张
用户手册	A3*1	一份

2.2 安装方法

MV810-PNET03 通讯选件安装方法介绍包括安装位置、接口说明及安装步骤，如下：

2.2.1 PN 通讯选件安装位置

MV810 变频器 PN 通讯选件安装位置如图 2 所示。（以箱体 B 为例，其他箱体类似）。



图 2



图 3

2.2.2 PN 通讯选件接口说明

MV810 变频器 EtherCAT 通讯选件电气接口及对应变频器安装接口如图 3 所示。



图 4a

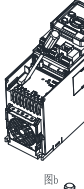


图 4b

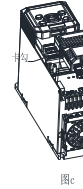


图 4c



图 4d



图 4e



图 4f

图 4 PN 通讯选件安装步骤图

（5）接地安装：MV810-PNET03 在配线时，须做接地安装，接地线材须用户自行准备和压接，如图 5。

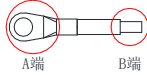


图 5 接线端子示意图

接地方式：接地线 B 端连接至选配件的接地端子台，接地线径及扭力等规格请参考表 1；接地线 A 端连接至变频器（以箱体 B 为例，其他类似）的接地架 PE（接地符号）（如图 6 所指圆圈处），接地螺丝规格及扭力请参考表 2。

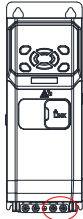


图 6

表 1 接地线径及扭力规格推荐

配件卡	螺丝规格	线径	剥线长度	扭力（±10%）
MV810-PNET03	M2.0	0.5~1.5mm² / (28~16AWG)	5~6mm	2kg·cm/(1.71b.in)/(0.2N·m)

表 2 接地螺丝及扭力规格推荐

箱体	螺丝规格	扭力（±10%）
B	M3	7kg·cm/(6.081b.in)/(0.68Nm)
C	M4	15kg·cm/(13.01b.in)/(1.47Nm)
D		

3 PN 自定义协议

MV810-PNET03 通讯选件 PN 自定义协议如下表所示。

参数识别	字节号	说明
PKW0	Byte0	本机为 PN 从站（插 PN 通讯选件），同时作为 485 主站，向其他 485 从站转发 PN 主站的报文。 Byte0：目标站号（485 从站） Byte1：源站号（本站站号，带 PN 通讯选件，P15.02 设置） 从站应答： Byte0：目标站号（485 主站）； Byte1：源站号（本站站号）
	Byte1	
PKW1	Byte2	读写功能码命令（一次只能读写一个） 0x03：读一个； 0x06：写一个，存 EEPROM 0x07：写一个，不存 EEPROM Byte2：命令字高字节； Byte3：命令字低字节 从机应答： Byte2：0 Byte3：0x03，应答读操作； 0x06 和 0x07，应答写操作 0x80+命令码，错误应答
	Byte3	
PKW2	Byte4	需要读写的功能码地址 Byte4：地址高字节； Byte5：地址低字节 从机应答： Byte4：地址高字节； Byte5：地址低字节
	Byte5	
PKW3	Byte6	写操作时，PKW3 为写的具体值；读操作时，为读的个数（固定值 1） Byte6：参数值高字节； Byte7：参数值低字节 从机应答： Byte6：功能码值高字节（读操作应答），0（写操作应答），错误码高字节（错误应答） Byte7：功能码值低字节（读操作应答），0（写操作应答），错误码低字节（错误应答）
	Byte7	
PZD1	Byte8	主机下发控制命令字： Bit0：正转运行 0：无效 1：有效 Bit1：反转运行 0：无效 1：有效 Bit2：正转点动 0：无效 1：有效 Bit3：反转点动 0：无效 1：有效 Bit4：减速停机 0：无效 1：有效 Bit5：自由停机 0：无效 1：有效 Bit6：故障复位 0：无效 1：有效 Bit7：紧急停机 0：无效 1：有效 Byte8：命令字高字节 Byte9：命令字低字节 从机应答状态字： Bit0：正转运行中 0：无效 1：有效 Bit1：反转运行中 0：无效 1：有效 Bit2：停机 0：无效 1：有效 Bit3：故障 0：无效 1：有效 Bit4：掉电 0：无效 1：有效 Bit5：准备状态 0：无效 1：有效 Bit6：电机号 0：电机 1 1：电机 2 Bit7：电机类型 0：异步 1：同步 Bit8：过载预警 0：无效 1：有效 Bit9~Bit10：控制方式 0：键盘 1：端子 2：通讯 Byte8：状态字高字节 Byte9：状态字低字节
	Byte9	
PZD2	Byte10	PZD2~PZD12 这 11 个字用来读写变频器内部参数，具体参数

PZD3	Byte11	可以通过 P43.02~P43.23 来设置：（P43.02~P43.12 用来设置需要写的参数，P43.13~P43.23 用来设置读的参数）
	Byte12	
PZD4	Byte13	P43.02 PZD2 接收
	Byte14	P43.03 PZD3 接收
PZD5	Byte15	P43.04 PZD4 接收
	Byte16	P43.05 PZD5 接收
PZD6	Byte17	P43.06 PZD6 接收
	Byte18	P43.07 PZD7 接收
PZD7	Byte19	P43.08 PZD8 接收
	Byte20	P43.09 PZD9 接收
PZD8	Byte21	P43.10 PZD10 接收
	Byte22	P43.11 PZD11 接收
PZD9	Byte23	P43.12 PZD12 接收
	Byte24	P43.13 PZD2 反馈
PZD10	Byte25	P43.14 PZD3 反馈
	Byte26	P43.15 PZD4 反馈
PZD11	Byte27	P43.16 PZD5 反馈
	Byte28	P43.17 PZD6 反馈
PZD12	Byte29	P43.18 PZD7 反馈
	Byte30	P43.19 PZD8 反馈
PZD13	Byte31	P43.20 PZD9 反馈
	Byte32	P43.21 PZD10 反馈
PZD14	Byte33	P43.22 PZD11 反馈
	Byte34	P43.23 PZD12 反馈
PZD15	Byte35	Byte10：参数高字节； Byte11：参数低字节（其余 Byte 类似）
	Byte36	

4 驱动器 PN 参数设定举例

PN 通讯自定义报文有两种模式：

常规 PN 通讯：

该模式为传统的控制器和 PN 设备的通讯，每台变频器都需要插 PN 选件。自定义协议中前两个字节的地址可以不写。功能码设置方法如下：
P02.02=2（通讯控制） P02.03=3（PN 通讯模式）
P02.05=8（频率给定通道为 PN 给定） P15.00 个位=0（非 PN 转 485 功能）

P40.01=3.0s（可以修改为其他值，扩展卡识别超时时间）
P43.01=1（0 为标准报文 1，1 为自定义报文）
P43.02~P43.12 用来设置控制器可修改的参数
P43.13~P43.23 用来设置控制器可以读的参数
PN 转 485（一张 PN 选件最多控制五台变频器）：

该模式下，只有一台变频器插 PN 选件，负责将控制器的报文通过 485 转发给其他变频器，转发时会去掉帧头和帧尾，即转发报文长度为 33bytes。只能用自定义报文，控制器通过报文前两个字节（485 站号）来分别访问对应变频器。功能码设置又细分为两大类：

（1）485 主机
P02.02=2（通讯控制） P02.03=3（PN 通讯模式）
P02.05=8（频率给定通道为 PN 给定） P15.00 个位=1（使能 PN 转 485 功能）
P15.02 设置自身 485 站号 P40.00=1（使能 PN 转 485 主机功能）
P40.01=3.0s（可以修改为其他值，扩展卡识别超时时间）
P43.01=1（只能用自定义报文）
P43.02~P43.12 用来设置控制器可修改的参数
P43.13~P43.23 用来设置控制器可以读的参数
（2）485 从机
P02.02=2（通讯控制） P02.03=3（PN 通讯模式）
P02.05=8（频率给定通道为 PN 给定） P15.00 个位=1（使能 PN 转 485 功能）
P15.02 设置自身 485 站号 P40.00=0（使能 PN 转 485 从机功能）

P40.01=3.0s（可以修改为其他值，扩展卡识别超时时间）
P43.01=1（只能用自定义报文） P43.02~P43.12 用来设置控制器可修改的参数
P43.13~P43.23 用来设置控制器可以读的参数
注：目前 PN-485 的波特率设置为 200k，主机下发到收到从机应答耗时小于 5ms，主机每 50ms（这个周期需要保证大于一次下发和应答的时间总和）转发一次 PN 报文，而控制器下发的频率较高，因此会存在控制器读写几拍才能收到对应的数据和响应的情况，只能用在对实时性要求不高的场合。

5 保修及服务

一、保修期：

产品保修期为自购买之日起的 18 个月内，但不能超过铭牌记载的制造日期后的 24 个月。

二、保修范围

在保修期内，因本公司责任而产生的异常，异常部分可以在本公司得到免费修理或更换，如发生以下情况，即使在保修期内也将收取一定的维修费用。

- （1）水灾、火灾、强烈雷击等原因导致损坏。
- （2）自行改造造成的人为损坏。
- （3）购买后摔落损坏或运输中损坏。
- （4）超过标准规范要求使用而导致的损坏。
- （5）不按照使用手册操作和使用而导致的损坏。

三、售后服务

（1）在驱动器安装、调试方面若有特殊要求，或驱动器工作状态不理想（如性能、功能发挥不理想），请与产品代理商或麦格米特电气股份有限公司联系。

（2）出现异常时，及时与产品供货商或麦格米特电气股份有限公司联系寻求帮助。

（3）在保修期内，由于产品制造和设计上的原因造成的异常，本公司将做无偿修理。
（4）超过保修期，公司根据客户要求做有偿修理。
（5）服务费用按实际费用计算，如有协议，以协议优先。

想了解关于产品的任何信息均可联系我们，在咨询时请提供产品型号。您也可以通过以下方式获取相关信息和服务：

- （1）拨打我司全国统一服务热线：400-666-2163
- （2）浏览官网：https://www.megmeet.com/
- （3）扫描麦米小程序二维码，进入小程序，点击底部“资料”，选择相关业务板块，选择相应产品，获取更多资料信息。



麦米小程序



官方网站



官方微信

深圳麦格米特电气股份有限公司

地址：深圳市南山区科技园北区朗山路紫光信息港 5 楼
邮编：518057
网址：https://www.megmeet.com/
电话：(0755) 8660 0500
服务邮箱：driveservice@megmeet.com
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MEGMEET

通讯选件保修单

用户单位：	
详细地址：	
联系人：	电话：
通讯选件型号：	
通讯选件编号：	
购买日期：	
服务单位：	
联系人：	电话：
维修日期：	

MEGMEET

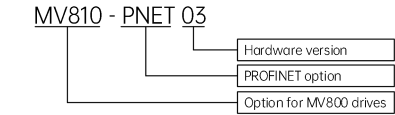
深圳麦格米特 电气股份有限公司	检验员：_____ 生产日期：_____
合格证	本产品已经我司质量部门检验，其性能参数符合设计标准，准许出厂。

MV800 PROFINET Communication Option

User Manual

1 Product Information

1.1 Designation rule



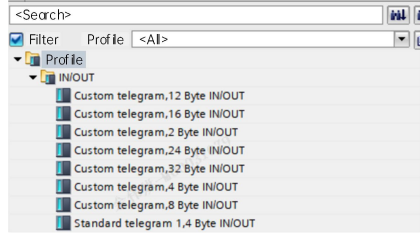
1.2 Functions and specifications

MV810-PNET03 is an option for MV800 series drives, whose functions are detailed below:

1.2.1 Function features

- (1) Supports control data exchange through PZD
- (2) Supports access of drive parameters through PKW
- (3) Supports 100 Mbps full duplex
- (4) Supports linear network topology and star network topology
- (5) Supports configurable PZD data length

In the TIA Portal software, when clicking on the slave device, the following dialog box will pop up at the right hardware catalog. You can select the desired PZD length for configuration as needed, as shown in the figure below:



1.2.2 Basic specifications

PROFINET connector	Interface	Two RJ45 ports
	Transmission mode	High-speed bus
	Transmission media	CAT6 Ethernet cable
Communication	Galvanic isolation	500 V DC
	Information type	Cyclic data exchange
	Module name	MV810-PNET03
Electrical specifications	GSDML file	GSDML-V2.42-MEGMEET-MV800-PN03-2 0250102.xml
	Bus transmission speed	100 Mbps
	Power voltage	3.3 V DC (provided by the drive)
Environment	Insulation voltage	500 V DC
	Power consumption	1 W
	Weight	25 g
Noise immunity	ESD (IEC 61800-5-1, IEC 61000-4-2)	
	EFT (IEC 61800-5-1, IEC 61000-4-4)	
	Surge Test (IEC 61800-5-1, IEC 61000-4-5)	
Operating/Storage environment	Conducted Susceptibility Test (IEC 61800-5-1, IEC 61000-4-6)	
	Operating: -10 to 50 °C (temperature), 95% (humidity)	
	Storage: -25 to 70°C (temperature), 95% (humidity)	
Vibration/Shock resistance	International standards	
	IEC 61131-2, IEC 68-2-6 (TEST FC)/ IEC 61131-2 & IEC 68-2-27 (TEST Ea)	

1.3 Terminal description

1.3.1 Layout

The following figure shows the front and back views of MV810-PNET03.

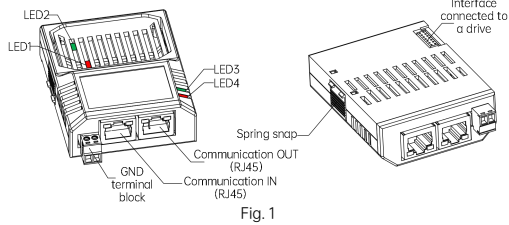
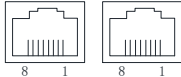


Fig. 1

The option has GND, two RJ45 ports and the interface connected to a drive.

1.3.2 Pin definitions

The pin definitions of MV810-PNET03 are list below:



Pin	Name	Description
1	TX+	Transmit Data+
2	TX-	Transmit Data-
3	RX+	Receive Data+
4	N/C	NOT CONNECTED
5	N/C	NOT CONNECTED
6	RX-	Receive Data-
7	N/C	NOT CONNECTED
8	N/C	NOT CONNECTED

1.3.3 LED indicator description and fault diagnosis

MV810-PNET03 has five LED indicators (see Fig. 1): LEDs on the PCBA of expansion box and LEDs on the communication ports. The LEDs on the PCBA of expansion box indicate function status and power supply, while the LEDs on the communication ports indicate whether the communication status of MV810-PNET03 is normal.

LED description of expansion box PCBA:

LED4 (Red)	Description	Action
Off	Normal	No need for actions
Steady on	Communication timeout between the master station and the communication card	Check whether the PN option is properly connected to the drive

LED description of communication ports:

LED status	Description	Action
Yellow light flashing	Normal connection with data transmission	No need for actions
Green light steady on	Normal connection	No need for actions
Yellow light steady on	Normal connection without data transmission	Check if there is communication between the master station and the slave station
Green light off	Connection failed	Check the Ethernet cable connection

2 Installation

2.1 Accessory list

Accessory	Specifications	Quantity
MV810-PNET03	75*60*24 mm	1
User Manual	A3*1	1

2.2 Installation method

The installation position, interface and steps of MV810-PNET03 are described below:

2.2.1 Installation position

The installation position for the MV810 PN option is shown in Fig.2 (taking enclosure B as the example, similar for other enclosures).

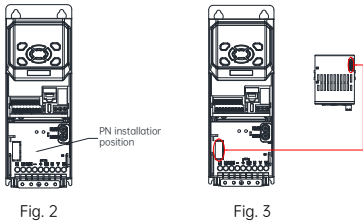


Fig. 2

Fig. 3

2.2.2 Installation interface

The electrical interface of the MV810 PN option is connected to the drive as shown in Fig.3.

- (1) When the drive is powered off, press the granulated part on the middle-upper of the lower cover, slide it down firmly to take down the cover, as shown in Fig. 4-a.
- (2) Use a straight screwdriver to pry open the dustproof cap or rubber plug, as shown in Fig. 4-b.
- (3) Install the PN option: hold the expansion box (a bus card inside) upwards (indicators up), then align the expansion box with the electrical bus interface of the installation position, and press down horizontally to buckle the spring snap of the expansion box into the groove at the lower part of the drive, as shown in Fig. 4-c and d, Then, use the included retaining plate to secure the option and tighten it with screws (for enclosure B only), as shown in Fig. 4-e.
- (4) The bus card is successfully installed, as shown in Fig. 4-f.

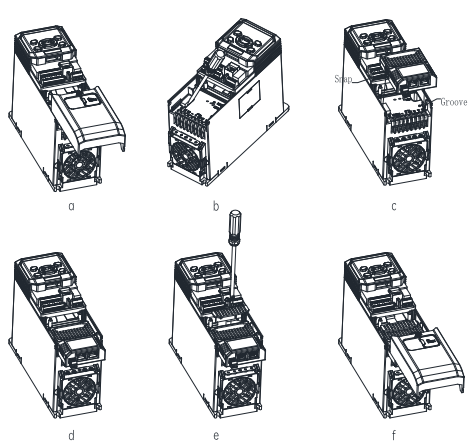


Fig. 4 PN card installation steps

- (5) Grounding: MV810-PNET03 must be grounded during wiring as shown in Fig. 5. You need to prepare and crimp the cable by yourself.

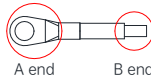


Fig. 5 Grounding terminal connection

Grounding method:
connect the B end of the grounding cable to the option's grounding terminal block, and you can check the grounding cable diameter and torque by referring to Table 1; then connect the A end of the grounding cable to the grounding rack PE (the mark for grounding, circled in Fig. 6) of the drive (taking enclosure B as an example, similar for others), and you can check the grounding screw specifications and torque by referring to Table 2.

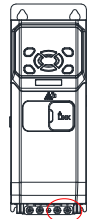


Fig.6

Table 1 Recommended diameter and torque for the grounding cable

Option	Screw	Diameter	Stripped part	Torque (±10%)
MV810-PNET03	M2.0	0.5 to 1.5 mm²/ (28 to 16 AWG)	5 to 6 mm	2 kg·cm/(1.7 lb.in)/ (0.2 N·m)

Table 2 Recommended grounding screw and torque

Enclosure	Screw	Torque (±10%)
B	M3	7kg·cm/(6.08lb-in)/(0.68Nm)
C	M4	15kg·cm/(13.0lb-in)/(1.47Nm)
D		

3 PN Customized Protocol

The customized protocol for MV810-PNET03 is described as below.

Param eter	Byte	Description
PKW0	Byte0	The local device is the PN slave station (PN card installed) and also the 485 master station, which transmits messages of the PN master station to other 485 slave stations. Byte0: Target station number (485 slave station)
	Byte1	Slave station response: Byte0: Target station number (485 master station) Byte1: Source station number (the local station, with PN option, set by P15.02)
PKW1	Byte2	Read/Write of the function code parameter (one for each time) 0x03: Read one 0x06: Write one, saved to EEPROM 0x07: Write one, not saved to EEPROM Byte2: High byte of the control word Byte3: Low byte of the control word Slave station response: Byte2: 0 Byte3: 0x03, response to read 0x06 and 0x07, response to write 0x08+command code, error response
	Byte3	Byte3: 0x03, response to read 0x06 and 0x07, response to write 0x08+command code, error response
PKW2	Byte4	Function code address to be read and written Byte4: High byte of the address Byte5: Low byte of the address Slave station response: Byte4: High byte of the address Byte5: Low byte of the address
	Byte5	Byte4: High byte of the address Byte5: Low byte of the address
PKW3	Byte6	For write operation, PKW3 is the specific written value; For read operation, PKW3 is the number of read (fixed to 1) Byte6: High byte of the parameter value Byte7: Low byte of the parameter value Slave station response: Byte6: High byte of function code value (response to read), 0 (response to write), high byte of error code (error response) Byte7: Low byte of function code value (response to read), 0 (response to write), low byte of error code (error response)
	Byte7	Byte6: High byte of function code value (response to read), 0 (response to write), high byte of error code (error response) Byte7: Low byte of function code value (response to read), 0 (response to write), low byte of error code (error response)

Param eter	Byte	Description
PZD1	Byte8	Control word sent by the master station: Bit0: Forward running 0: Disabled 1: Enabled Bit1: Reverse running 0: Disabled 1: Enabled Bit2: Forward jogging 0: Disabled 1: Enabled Bit3: Reverse jogging 0: Disabled 1: Enabled Bit4: Decelerate to stop 0: Disabled 1: Enabled Bit5: Coast to stop 0: Disabled 1: Enabled Bit6: Fault reset 0: Disabled 1: Enabled Bit7: Emergency stop 0: Disabled 1: Enabled Byte8: High byte of the control word Byte9: Low byte of the control word Status word responded by the slave station: Bit0: Forward running 0: Invalid 1: Valid Bit1: Reverse running 0: Invalid 1: Valid Bit2: Stop 0: Invalid 1: Valid Bit3: Fault 0: Invalid 1: Valid Bit4: Power-down 0: Invalid 1: Valid Bit5: Ready state 0: Invalid 1: Valid Bit6: Motor number 0: Invalid 1: Valid Bit7: Motor type 0: Motor 1 1: Motor 2
	Byte9	0: Asynchronous 1: Synchronous Bit8: Overload pre-warning 0: Invalid 1: Valid Bit9-Bit10: Command channel 0: Keypad 1: Terminal 2: Communication Byte8: High byte of the status word Byte9: Low byte of the status word
PZD2	Byte10 Byte11	The eleven words from PZD2 to PZD12 are used to read and write internal parameters of the drive. P43.02 to P43.12 are used to set parameters to be written, and P43.13 to P43.23 are used to set parameters to be read.
PZD3	Byte12 Byte13	P43.02 PZD2 receive 0: Disabled 1: Frequency reference (0.00 to P02.10)
PZD4	Byte14 Byte15	P43.03 PZD3 receive 2: Drive torque upper limit reference (0.0 to 300% of the motor rated current)
PZD5	Byte16 Byte17	P43.04 PZD4 receive 3: Braking torque upper limit reference (0.0 to 300% of the motor rated current)
PZD6	Byte18 Byte19	P43.05 PZD5 receive 4: Torque reference (-300.0 to 300.0% of the motor rated current)
PZD7	Byte20 Byte21	P43.06 PZD6 receive 5: FWD frequency upper limit reference (0.00 to P02.10)
PZD8	Byte22 Byte23	P43.07 PZD7 receive 6: REV frequency upper limit reference (0.0 to P02.10)
PZD9	Byte24 Byte25	P43.08 PZD8 receive 7: Voltage reference (VF separation) (0 to 1000)
PZD10	Byte26 Byte27	P43.09 PZD9 receive 8: Virtual input terminal command (0 to 0xFF corresponding to DI8 to DI1)
PZD11	Byte28 Byte29	P43.10 PZD10 receive 9: Output terminal bus command (set the output terminal function to No.39, 0 to 0xFF corresponding to RO, DO3, DO2 and DO1)
PZD12	Byte30	P43.11 PZD11 receive 10: AO1 output reference (0 to 100.0%) 11: HD01 output reference (0 to 100.0%) 12: HD02 output reference (0 to 100.0%) 13: PID reference (0.0 to 100.0%) 14: PID feedback (0.0 to 100.0%) 15 to 30: Reserved
	Byte31	P43.12 PZD12 receive 0: Disabled 1: Frequency reference (0.01 Hz) 2: Ramp reference (0.01 Hz) 3: Output frequency (0.01 Hz) 4: Output voltage (1 V) 5: Output current (0.1 A) 6: Bus voltage (0.1 V) 7: Motor power (0.1%) 8: Output torque (0.1%) 9: Exciting current (0.1 A) 10: Torque current (0.1 A) 11: Status word (0 to 0xFFFF) 12: Fault code (0 to 46) 13: DI1 to DI4 status (0 to 0xFFFF) 14: DI5 to DI8 status (0 to 0xFFFF) 15: Digital output status (0 to 0xFF) 16: AI1 input voltage (0 to 10.00 V) 17: AI2 input voltage (-10.00 V to 10.00 V) 18: HD1 input frequency (0 to 50.000 kHz) 19: AO output value (0 to 100.0%) 20: HD01 output value (0 to 50.000 kHz) 21: HD02 output value (0 to 50.000 kHz) 22: PID reference value (-100.0% to 100.0%) 23: PID feedback value (-100.0% to 100.0%) 24: PID deviation (-100.0% to 100.0%) 25: PID output (-100.0% to 100.0%) 26 to 30: Reserved
PZD12	Byte30	Byte10: High byte of the parameter Byte11: Low byte of the parameter (similar for other Bytes)
	Byte31	Byte10: High byte of the parameter Byte11: Low byte of the parameter (similar for other Bytes)

4 Example of PN parameter settings

The PN customized messages can be used in two modes:

Mode 1: Common PN communication

This mode is the traditional communication between the controller and the PN device, with each drive installed with a PN option. It is not necessary to write the first two bytes (address) of the customized protocol. The function codes are set as below:

- P02.02=2 (communication control)
- P02.03=3 (PN communication)
- P02.05=8 (frequency reference channel set to PN)
- Ones place of P15.00=0 (non PN to 485)
- P40.01=3.0 s (detection for expansion card identification timeout, can be modified to other values)
- P43.01=1 (0 is the standard message 1, and 1 is the customized message)
- P43.02 to P43.12 are used to set the parameters for the controller to write
- P43.13 to P43.23 are used to set the parameters for the controller to read

Mode 2: PN to 485 (one PN option can control up to 5 drives)

In this mode, only one drive is installed with the PN option which transmits the controller's messages to other drives through 485, with the frame header and tail deleted, the length being 33 bytes. Only the customized message is allowed. The controller uses the first two bytes (485 station number) to visit the corresponding drive. The function code setting can be divided into two types:

- (1) 485 master station
- P02.02=2 (communication control)
- P02.03=3 (PN communication)
- P02.05=8 (frequency reference channel set to PN)
- Ones place of P15.00=1 (PN to 485)
- Set the local 485 station number through P15.02
- P40.00=1 (PN to 485 function of the master station enabled)
- P40.01=3.0 s (detection for expansion card identification timeout, can be modified to other values)
- P43.01=1 (only the customized message allowed)
- P43.02 to P43.12 are used to set the parameters for the controller to write
- P43.13 to P43.23 are used to set the parameters for the controller to read
- (2) 485 slave station
- P02.02=2 (communication control)
- P02.03=3 (PN communication)
- P02.05=8 (frequency reference channel set to PN)
- Ones place of P15.00=1 (PN to 485)
- Set the local 485 station number through P15.02
- P40.00=0 (PN to 485 function of the slave station enabled)
- P40.01=3.0 s (detection for expansion card identification timeout, can be modified to other values)
- P43.01=1 (only the customized message allowed)
- P43.02 to P43.12 are used to set the parameters for the controller to write
- P43.13 to P43.23 are used to set the parameters for the controller to read

Note: Currently, the baud rate of PN-485 is set to 200 k, and it takes less than 5 ms for the master to receive response from the slave after sending the message. The master forwards a PN message every 50 ms (this period must be greater than the total time of one sending and response), while the controller forwards at a higher frequency. Therefore, there may be kind of delay for the controller to receive the corresponding data and response status. The mode can only be used in scenarios not requiring high real-time performance.

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MEGMEET

Warranty Bill of Communication Option

Customer company:	
Detailed address:	
Contact:	Tel:
Option model:	
Option number:	
Purchase date:	
Service unit:	
Contact:	Tel:
Maintenance date:	:

MEGMEET

Certificate

Checker: _____
Manufacturing date: _____

The product has been tested in line with design standards and approved for leaving the factory.