

FIEPOS

PULS

DECENTRALIZED FIELD POWER SUPPLIES

IP54 / IP65 / IP67



2021 MANUFACTURING
LEADERSHIP AWARDS

WINNER

MANUFACTURING
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FIEPOS

FIELD POWER SUPPLY

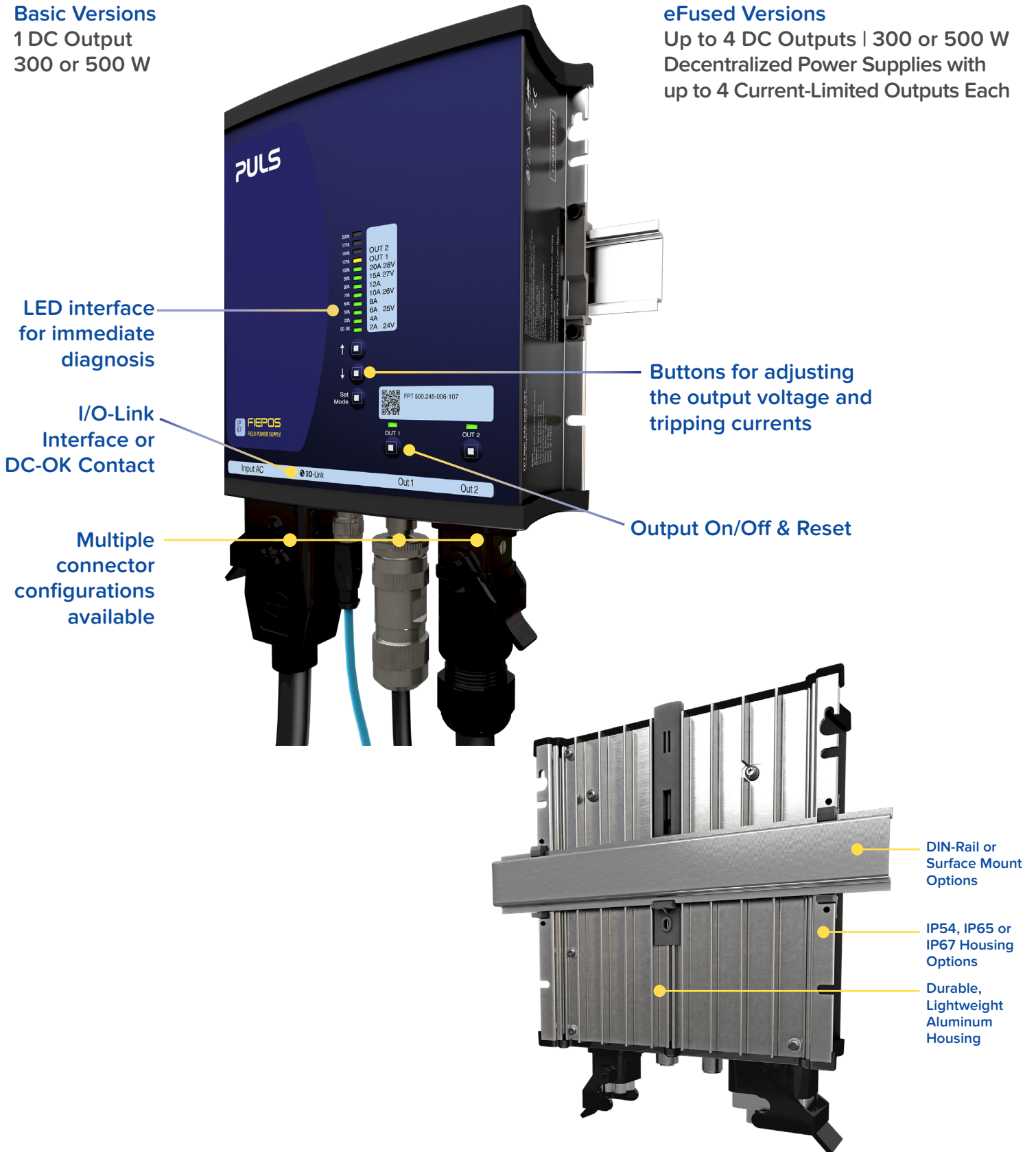
**FLEXIBLE. RELIABLE.
DURABLE. CABINET-FREE.**

Basic Versions

1 DC Output
300 or 500 W

eFused Versions

Up to 4 DC Outputs | 300 or 500 W
Decentralized Power Supplies with
up to 4 Current-Limited Outputs Each



LED interface
for immediate
diagnosis

I/O-Link
Interface or
DC-OK Contact

Multiple
connector
configurations
available

Buttons for adjusting
the output voltage and
tripping currents

Output On/Off & Reset

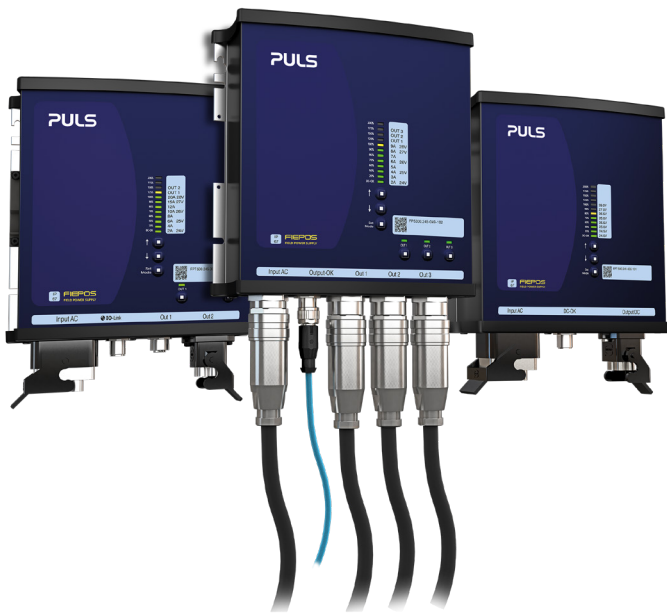
DIN-Rail or
Surface Mount
Options

IP54, IP65 or
IP67 Housing
Options

Durable,
Lightweight
Aluminum
Housing

STRAIGHT FROM THE CABINET TO THE FIELD

With the **FIEPOS Basic Series**, PULS is relocating the power supply from the cabinet directly into the field to offer an all-in-one power supply system for decentralized systems engineering.



Flexibility

The compact housing with a high degree of IP protection (IP54–IP67) and various connection options facilitates flexible positioning directly on the machine.

Cost Savings

FIEPOS makes it possible to use shorter cables and smaller cable cross-sections. This not only saves on the costs of copper, but also on the installation work for the cabling.

Ease of Use

The diagnostics and configuration of the output voltage of the 241 models takes place directly on the front of the device or remotely via IO-Link. The 242 models show simple status LEDs for easy diagnostics.

Environmentally Friendly

The high degree of efficiency of >95% keeps the device cool. This means there is no need for any harmful potting compound and extends the lifetime of the product.

DECENTRALIZED POWER SUPPLY WITH CURRENT-LIMITED OUTPUTS

With the **FIEPOS eFused Series**, it couldn't be easier to establish selective current distribution, protection, and monitoring directly in the field. This gives you a decentralized alternative to power supplies protected by either an external, electronic four-channel protection module, four circuit breakers or four external fuses.

The selective current distribution makes the eFused versions ideal for simultaneously supplying electromechanical loads (e.g., motors) and sensitive consumers such as PLC or sensors using a decentralized, fused power supply unit. In addition, the selective shut-down of faulty outputs makes for a high level of operational reliability. eFused devices continue to impress due to clear benefits they offer over other solutions on the market.

Space Savings

The integrated, current-limited outputs result in no additional protection modules being required. The high degree of protection (IP54–IP67) facilitates decentralized use directly on the machine.

Excellent System Availability

The selective protection means only faulty outputs are switched off, which makes for excellent system availability.

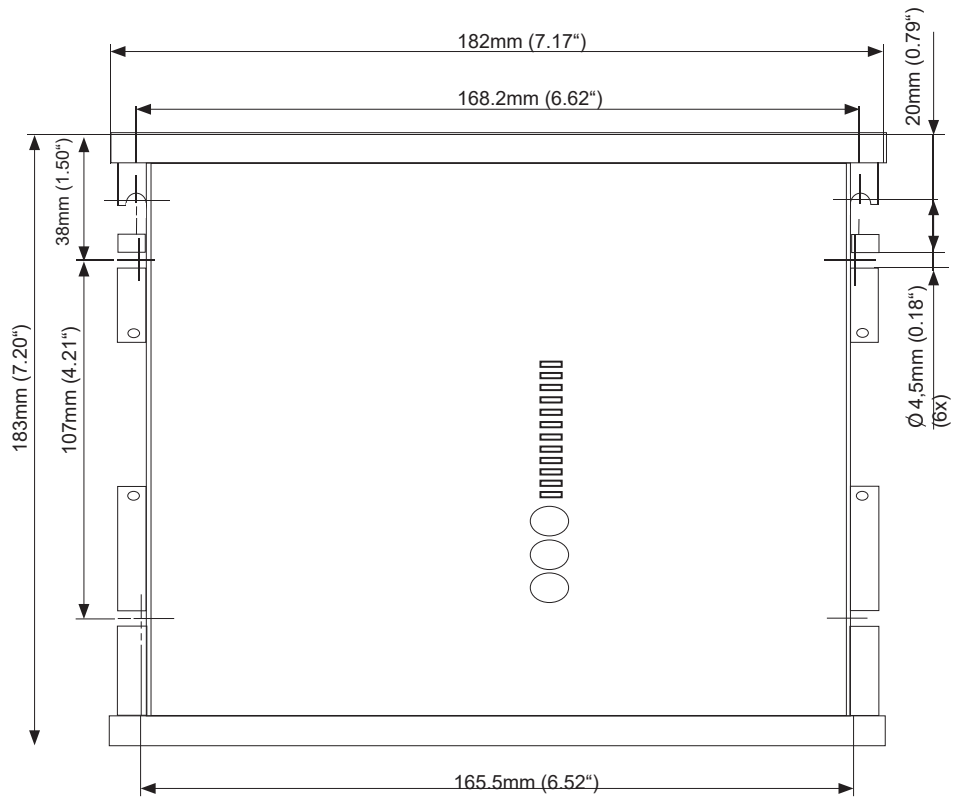
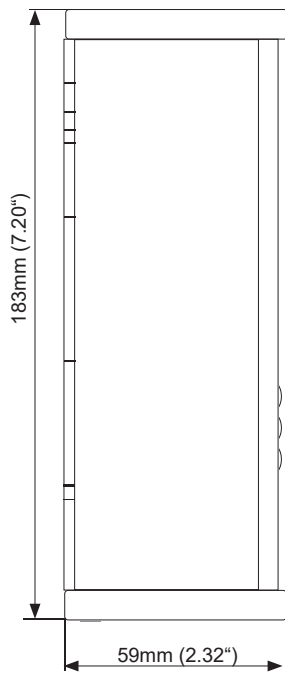
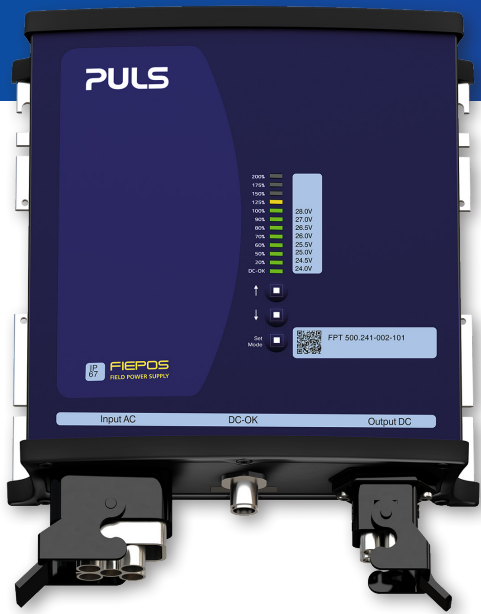
Ease of Operation

Tasks such as setting the tripping currents, resetting faulty electric circuits and monitoring can all be completed via IO-Link or directly on the front of the device.

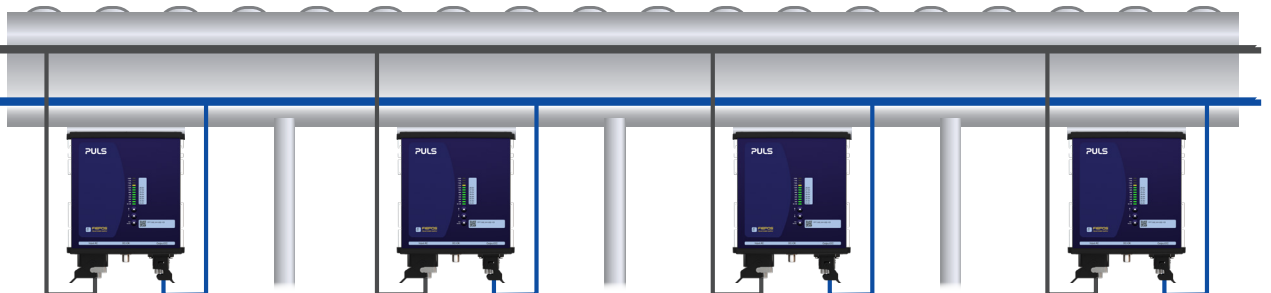
Straightforward Administration & Logistics

An all-in-one solution is used rather than several different components. This means less work when it comes to managing part numbers and less space in the warehouse.



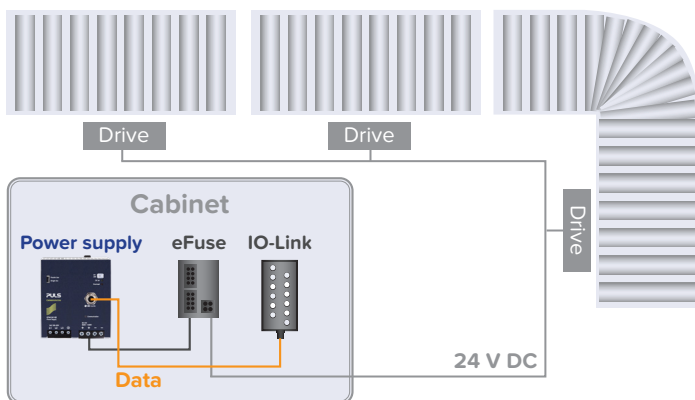


AC bus
DC bus



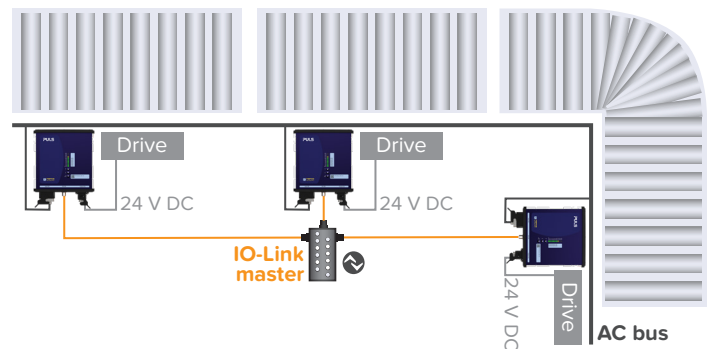
| | 3PH 300W | 3PH 500W | 1PH 300W | 1PH 500W |
|---------------------------|-------------------------------|-------------------------------|---------------------------|---------------------------|
| OUTPUT | | | | |
| Output voltage nominal | 24V | 24V | 24V | 24V |
| Adjustment range | Fixed | 24 – 28V | 24 – 28V | 24 – 28V |
| Output Power nominal | 300W | 500W | 300W | 500W |
| Output BonusPower® | 600W (1s) | 1000W (5s) | 600W (1s) | 1000W (5s) |
| Output Power Boost® | 450W (60s) | 600W max. 45°C | 360W max. 40°C | 600W max. 40°C |
| Output Peak current | 45A (12ms) | 45A (12ms) | 30A (12ms) | 30A (12ms) |
| INPUT | | | | |
| AC input voltage nominal | 380-480VAC | 380-480VAC | 100-240VAC | 200-240VAC |
| AC inrush current typical | < 2A at 400/480VAC cold start | < 2A at 400/480VAC cold start | < 6A at 230VAC cold start | < 6A at 230VAC cold start |
| GENERAL | | | | |
| Efficiency | >95% | >95% | >95% | >95% |
| Lifetime expectancy | 100 000h at 40°C ambient | 74 000h at 40°C ambient | >50 000h at 40°C ambient | >50 000h at 40°C ambient |
| Operating temperature | -25°C to 70°C | -25°C to 70°C | -25°C to 70°C | -25°C to 70°C |
| Dimensions WxHxD | 182 x 183 x 57mm | 182 x 183 x 57mm | 182 x 183 x 57mm | 182 x 183 x 57mm |
| Weight | < 1200g | < 1200g | < 1200g | < 1200g |

Without FIEPOS – centralized



When relying on a centralized supply for the peripheral devices in the field, long cable harnesses with a large cross-section have to be taken into account. The power supply has to be oversized due to the associated loss of performance.

With FIEPOS – decentralized



There are many applications that can be supplied on a decentralized basis and in an energy-efficient and flexible manner. Individual system parts can be put together on a modular basis, allowing them to be extended, maintained and converted more effectively.

| Catalog Number | Input Voltage (VAC) | Output Voltage (VDC) | Output Power | Outputs | Input Conn. | Status M12-A 5pin | Output 1 Connector | Output 2 Connector | Output 3 Connector | Output 4 Connector | IP Rating | Features |
|--------------------|---|----------------------|---------------|---------|-------------|-------------------|--------------------|--------------------|--------------------|--------------------|-----------|----------------------------------|
| Basic | | | | | | | | | | | | |
| FPS300.241-002-101 | 100-240 | 24-28 | 300W | 1 | HAN Q4/2 | DC-OK | HAN Q4/0 | - | - | - | 65/67 | LED Control Panel |
| FPT300.242-002-101 | 380-480 | 24 | | | | | Quick On | - | - | - | | 54 |
| FPT500.241-002-101 | | 24-28 | | | | | 500W | HAN Q4/0 | - | - | - | 65/67 |
| FPT500.241-006-104 | | | 1m AS-I Cable | - | - | - | | | | | | |
| FPT500.241-010-108 | | | HAN Q2/0 | - | - | - | | | | | | |
| eFUSED | | | | | | | | | | | | |
| FPS300.245-016-101 | 100-240 | 24-28 | 300W | 2 | 7/8" 3pin | I/O-Link | 7/8" 5pin | - | - | - | 65/67 | LED Control Panel |
| FPS300.245-034-105 | | | | 4 | M12-5 4pin | | M12-L 5-pin | M12-L 5-pin | - | - | | |
| FPS300.245-047-103 | | | | | | | | 7/8" 3pin | DC-OK | 7/8" 4pin | 7/8" 4pin | 7/8" 4pin |
| FPS300.245-049-102 | | | | | 7/8" 3pin | I/O-Link | 7/8" 4pin | 7/8" 4pin | | 7/8" 4pin | - | |
| FPS300.246-049-102 | 380-480 | 24-28 | 500W | 4 | HAN Q5/0 | DC-OK | M12-A 5pin | M12-A 5pin | M12-A 5pin | M12-A 5pin | 54 | LED Control Panel NEC Class 2 |
| FPT300.246-042-101 | | | | | 7/8" d 4pin | | M12-A 5pin | M12-A 5pin | M12-A 5pin | M12-A 5pin | | NEC Class 2 |
| FPT300.246-065-103 | | | | | | | | | M12-5 4pin | I/O-Link | 7/8" 4pin | 7/8" 4pin |
| FPT500.245-018-103 | | | | | 7/8" 4pin | DC-OK | 7/8" 5pin | 7/8" 5pin | - | | | |
| FPT500.245-034-105 | | | | | 7/8" d 4pin | I/O-Link | 7/8" 4pin | M12-A 5pin | 7/8" 5pin | 7/8" 5pin | - | LED Control Panel NEC Class 2 |
| FPT500.245-053-113 | | | | | | | | | | | | |
| FPT500.247-064-102 | | | | 3 | 7/8" d 4pin | I/O-Link | 7/8" 4pin | M12-A 5pin | 7/8" 5pin | 7/8" 5pin | - | LED Control Panel NEC Class 2 |
| Accessories | | | | | | | | | | | | |
| ZM.FPMBA-10 | Qty=1 L-Shaped Metal Mounting Bracket with Input Power Lockout/Tagout Capability | | | | | | | | | | | |
| ZM.FPMBA-11 | Qty=50 L-Shaped Metal Mounting Bracket with Input Power Lockout/Tagout Capability | | | | | | | | | | | |
| ZM.FPDRA-10 | Qty=1 DIN-Rail Mounting Bracket | | | | | | | | | | | |
| ZM.FPDRA-11 | Qty=10 DIN-Rail Mounting Brackets | | | | | | | | | | | |

MBA = Mounting Bracket / DRA = DIN-Rail Assembly



Q&A

Where can the FIEPOS devices be used?

The potential applications of FIEPOS are virtually limitless. Modular applications in conveyor systems, storage technology, robotics, control technology, regulation technology and material handling all benefit from this technology.

What degree of protection is available for FIEPOS products?

FIEPOS is available with IP54 (dust-protected, splash-proof), IP65 (dust-tight, jet-proof) or IP67 (dust-tight, temporarily immersible) protection, making them well protected against water, dust and other contaminants.

Do FIEPOS devices have power reserves?

Yes, all devices provide generous power reserves. For example, the FPT500 units provide 200% for 5s and 120% continuously (at an ambient temperature of up to +45°C). Check the datasheet and latest documentation online for the corresponding unit for details.

What temperature range can the devices be used in?

FIEPOS products can be operated in ambient temperatures ranging from -25°C to +55°C without any loss of performance. With linear derating, temperatures of up to +70°C are allowed.

Which plug connectors are available?

FIEPOS devices are available with the following plug types: 7/8", M12-L/-T/-A, HAN Q Series and Quicon. Other plug configurations are available on request.

Can the device also be installed on the DIN-Rail?

Yes, all FIEPOS devices can be installed in three different ways: by attaching it to a DIN-Rail, by hanging and fixing it in place via the integrated keyholes or by screw mounting. No matter which option you choose, no additional accessories are required.

What happens in the event of a fault?

The device selectively switches off only the faulty outputs and reports this via IO-Link or output OK signal and the intuitive LED interface on the front of the device. Active current limitation means all other outputs continue to be supplied with voltage without restrictions. This is particularly important for sensitive and safety-critical loads such as PLCs or sensors.

Can the faulty electric circuits be reset remotely?

Yes, the electric circuits can be reset by IO-Link or even directly on the device.

How do you adjust the tripping circuits?

You can set your preferred tripping currents easily using the buttons on the device or remotely via IO-Link.

Is it also possible to create NEC Class 2 compliant circuits?

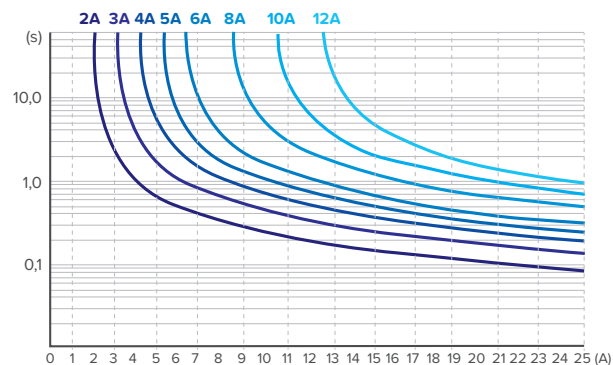
Yes, that's possible. We have built a series in the FIEPOS family for this reason. The following units are designed for applications which require NEC Class 2 compliance: FPS300.246, FPH500.246, FPT300.246 & FPT500.246. The current limitation then intervenes to ensure that the maximum power of 100 VA defined for NEC Class 2 is not exceeded.

What has to be taken into consideration in terms of the order of the outputs?

The devices have a selectivity function that enables prioritized protection of sensitive loads. Output 1 has the highest priority, Output 4 has the lowest. If the current budget is exceeded, the device switches off the outputs with the lowest priority first.

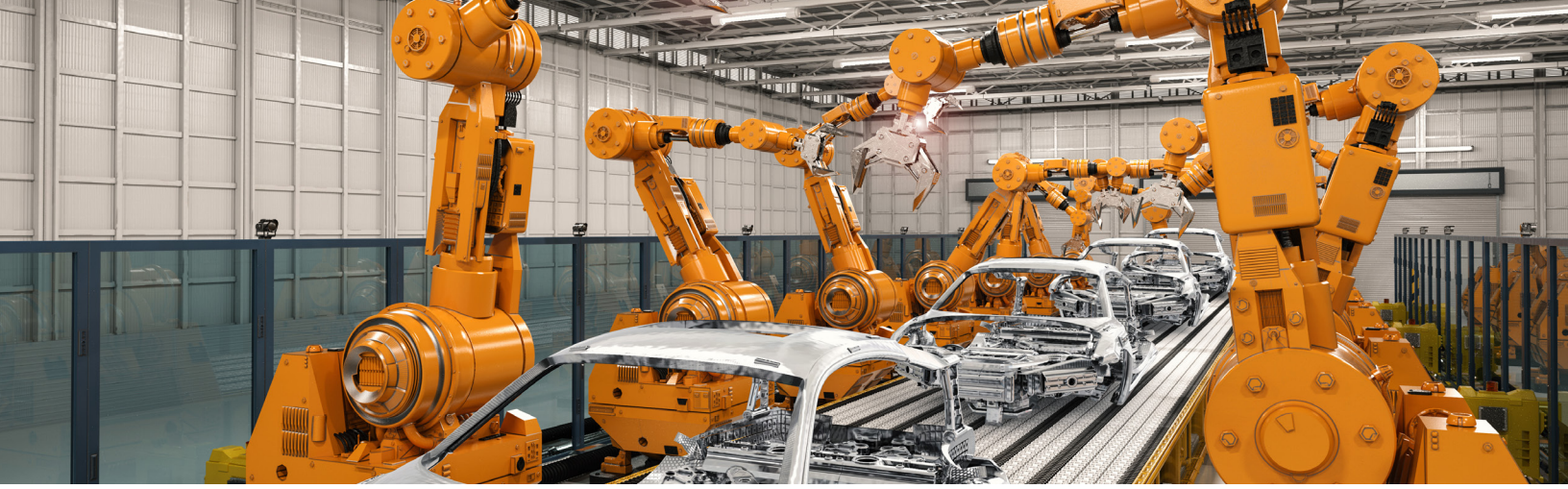
Which tripping characteristics are the devices based on?

A different characteristic curve applies in each case depending on the set tripping current. For example: if the tripping current is set to 4 A, the output allows 5 A for 5 seconds and then switches off.



The graphic shows the characteristic curves that form the basis for shutting down the outputs. A different characteristic curve applies in each case depending on the set tripping current.





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with Product or Application Questions



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