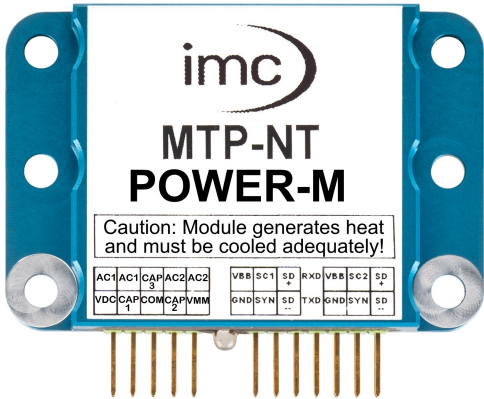


imc MTP-NT-POWER-M module

Key features

- Power supply module for an MTP-NT system
- DC or AC supply input (low voltage)
- Three capacitors are built in to tune the resonance frequency in AC operation with power head and generator
- DC output voltage (adjustable)
- Auto mode: Intelligent control of output voltage (active control of module voltage and adjustment)
- Soft start (high load capacities)
- Unlimited short-circuit and overload protection
- Continuous internal self-test (BITE)
- Real-time status display in the NT configuration software
- Input overvoltage protection
- Programmable self-protection behavior
 - Standard
 - de rating (slow shutdown)
 - Mission Critical (no safety)



MTP-NT-POWER-M (Fig. similar)

Overview of available variables

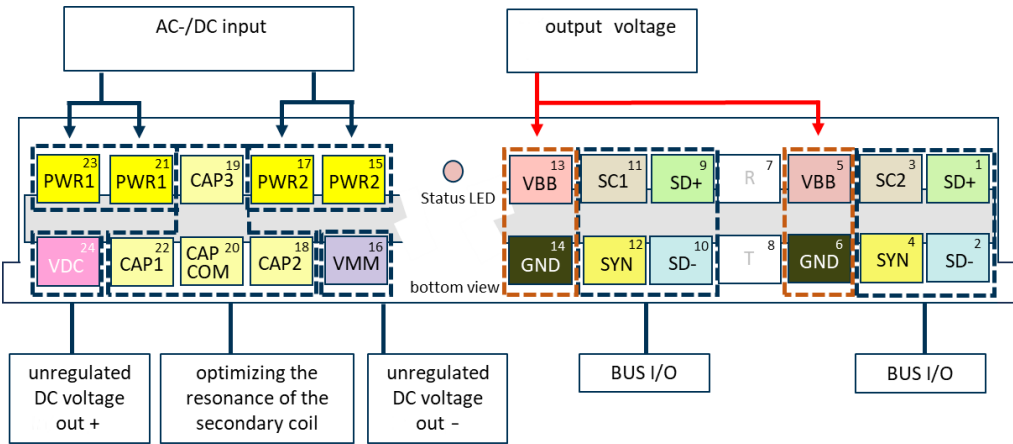
| Order Code | properties | article no. |
|----------------|--|-------------|
| MTP-NT-POWER-M | Software controlled AC/DC module for inductive power & battery | 13220210 |

Technical Specifications

| Parameter | Value | Remarks |
|--|---------------------------------|---|
| Input voltage (AC) | nom. 15 to 35 V _{RMS} | |
| Input frequency (AC) | ≤60 kHz | |
| Input voltage (DC) | nom. 9 to 48 V DC | |
| Output voltage | min. 4.5 V DC max. 15.5 V DC | without Controller Module, otherwise 5 V DC |
| Output current t _{case} ≤ 65°C t _{case} ≤ 55°C | max. 4000 mA max. 5000 mA | (1) |
| Dimensions (l x w x h) | 60 x 40 x 10 mm | |
| Dimensions | 42 g | |
| Operational case temperature | -40 °C to +85 °C | |

(1) The maximum output current applies at the nominal input voltage and with adequate cooling of the module. In case of overheating due to insufficient heat sink or when overvoltage protection is active, the module may enter self-protection mode and shut down the output voltage. In "mission critical" mode, this self-protection can be disabled (at the expense of the module's durability).

Pin configuration - POWER-M



| | POWER-S | | POWER-M |
|-----|-------------|-------------|---------------|
| pin | old config. | new config. | configuration |
| 15 | AC2 | PWR2 | PWR2 |
| 16 | VMM | VMM | VMM |
| 17 | AC2 | PWR2 | PWR2 |
| 18 | 100n | CAP2 | CAP2 |
| 19 | n.c. | TVS | CAP3 |
| 20 | COM | CAP COM | CAP COM |
| 21 | AC1 | PWR1 | PWR1 |
| 22 | 220n | CAP1 | CAP1 |
| 23 | AC1 | PWR1 | PWR1 |
| 24 | VDC | VDC | VDC |

The POWER-M module is the **successor** to the POWER-S module.

Attention!
If the POWER-S is replaced by a POWER-M, **it is essential to remove the bridge to the protection diode!**
This bridge is located on the outside between PWR1 (pin 21) and TVS (pin 19).

Integrated capacities: NT-POWER-S (old and new), NT-POWER-M

| NT-POWER-S (old) | NT-POWER-S (new) manufactured by imc after NOV 2023 | NT-POWER-M (standard) | Note |
|--|--|-----------------------|------------------|
| 150nF | 300nF | 300nF | FIX (CAPfix) |
| 100nF | 300nF | 300nF | variable (CAP1) |
| 220nF | 150nF | 150nF | variable (CAP 2) |
| - | | 150nF | variable (CAP 3) |
| ATTENTION: If the Power-S (new) is replaced by a POWER-M, it is essential to remove the bridge to the protection diode! This bridge is located on the outside between PWR1 (pin 21) and TVS (pin 19). | | | |

Overvoltage protection

The overvoltage protection is primarily intended to protect the module during operating conditions with low load current or temporarily increased input voltage. These scenarios include, for example, the startup phase when the connected modules are initializing, or during system commissioning, where the power head might accidentally or experimentally be placed too close to the secondary coil (see imc MTP-NT manual). Continuous operation under conditions of excessive input voltage is not recommended and must be avoided by monitoring the operating status in the real-time display of the configuration software.



An Axiometrix Solutions Brand

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The safe handling of measurement devices requires a good knowledge of the system. At our training center, experienced specialists are here to share their knowledge.

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