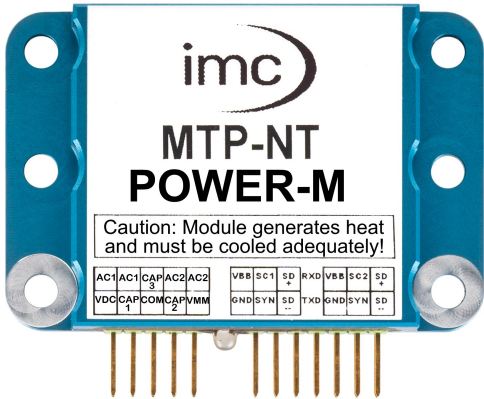


imc MTP-NT-POWER-M module

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

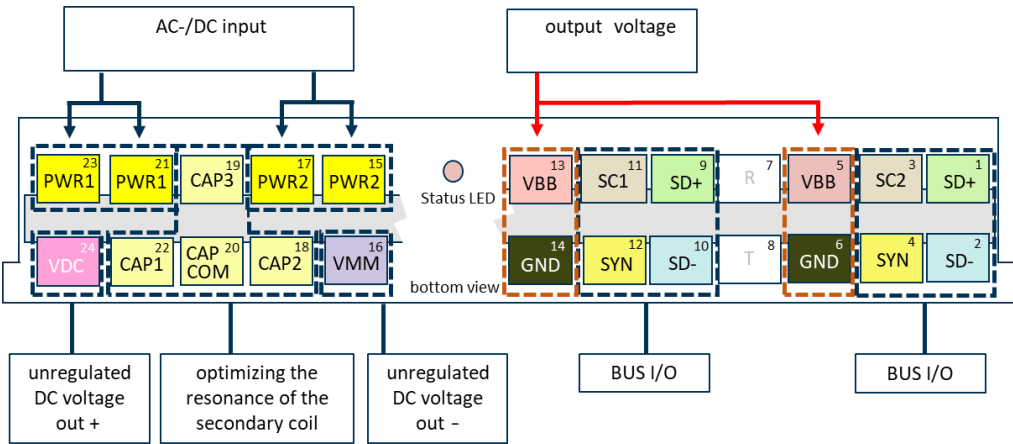
Order Code	properties	article no.
MTP-NT-POWER-M	Software controlled AC/DC module for inductive power & battery	13220210

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.