

Power supply 24V 45W
RIFLEX M1 Power supply

Type: **RMNT250**
Order #: 0067512.001

The power supply module NT250 contains a 24V 45W DC/DC converter to supply the hardware modules of an M1 controller system with all voltages required. At least one NT 250 power supply module is always needed for controllers with MP-type processor module.



Features



- DC/DC converter for 3 output voltages + 5 V DC, +15 V DC and –15 V DC
- green status LED for POWER ON
- buffer, to cover voltage drops of up to 10 ms
- power fail signal which is activated 3 ms after power down of the external power supply
- one 3 pin connector for external power supply

Power Supply Module	RMNT250
output current	max. 6.0 A @ + 5 V max. 0.5 A @ +15 V max. 0.5 A @ - 15 V
output power	max. 45 W
input voltage, nominal	+ 24 V DC
input voltage, range	+ 18 .. 34 V including ripple
input voltage, peak value	+ 40 V @ t < 1 s / min
input current	max. 7 A @ t ≥ 0.5 ms
ripple (18...34 V)	max. 2.6 V _{pp} , 100 Hz
temperature range	0...60 °C @ 6 A output current
primary fuse	on printed circuit board
efficiency	typ. 75 %
isolation voltage input / bus	yes, up to 500 V
isolation voltage input / ground	yes, up to 100 V
isolation voltage bus / ground	no

Error messages

Error message	Meaning
Internal or external voltage break-down	Message to the CPU module, where the <i>Panic Handler</i> is started, which guarantees a regular shut-down

Pin Assignment

Connector	Pin	Signal	Description
	1	+	external power supply + 24 V DC
	2	-	external power supply ground
	3		functional earthing



remark: Functional earthing and housing are connected inside the module. The secondary ground is also connected to the functional earthing and thus to the housing. As an ordering variant, the module can be delivered without this connection. In that case, the secondary ground is connected to the functional earthing/housing via a 10 MΩ resistor with a 1,5 nF capacitor in parallel. This can be useful, if potentials of the control's ground and of the ground of unisolated interfaces or I/Os are significantly different.



attention: As a protection measure, the secondary ground of the power supply module is connected to the backplane by varistors (60V). Thus the maximum voltage on all unisolated elements is limited in case of a short circuit between I/Os or interfaces with dangerous voltages. In this case, an external fuse or circuit breaker will trip. The user is responsible for installation of this fuse or circuit breaker.



remark: The power supply module must not be placed on the expansion part of the backplane (i.e. the part which is connected to the main backplane via the backplane expansion cable).



remark: If a power supply module NT250 is supplied without load (i.e. without bus rail), for example, for an incoming goods inspection it may happen that the POWER LED does not flash. This does not mean that the module is defect.

Order Codes for Modules

Order Code	Description
RMNT250	Power suppli 24V / 45W
RMKZ51.03	Terminal set with label strips

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