

ERM 48/60-300

Rectifier module for EPOS Mini



GENERAL DESCRIPTION

The ERM rectifier modules are designed and optimised for demanding telecom and industry applications.

The convection cooled ERM 48/60-300 rectifier is a building block of the EPOS Mini power systems. The rectifier provides 300 W output power at 48 VDC or 60 VDC, with a single phase, semi-wide input voltage range.

The rectifier may be operated either with a system controller or as stand-alone modules, with or without parallel-connected batteries.

Through the system bus connection settings and data on input and output voltage and current, unit status, inventory information and operational parameters is provided.

FEATURES

- Convection cooled
- Selectable 48 VDC or 60 VDC output
- 300 W output power
- Nominal 230 VAC input, range 175-300 VAC
- EN 55022 class B
- Digital system comms interface
- Active load current share
- Internal overtemperature protection

SPECIFICATIONS

Electrical and Signals

Input	ERM 48/60-300 set for 48VDC output	ERM 48/60-300 set for 60VDC output
Input range, full specification	180 VAC – 275 VAC	
Low input voltage, start	180 VAC	
Low input voltage, shut off	175 VAC	
High input voltage, shut off	290 VAC	
High input voltage, start	280 VAC	
Input Frequency (min)	45 Hz	
Input Frequency (max)	65 Hz	
Input current (max)	2 A @ 180 VAC	
Inrush current (max)	9 A	
Power factor (typ. @ 180-275 VAC, full load)	0.95	
Internal input fuse	4AT	
Output	ERM 48/60-300 set for 48VDC output	ERM 48/60-300 set for 60VDC output
Output voltage (min/nominal/max)	42 / 48 / 57.6 VDC	52.5 / 60 / 72 VDC
Output current (min/max)	0 / 7.1 A	0 / 5.7 A
Short circuit current (max)	10 A	
Output power characteristic	Constant Power	
Output power limit @ min voltage	300 W @ 42VDC	300 W @ 52.5 VDC
Over-voltage protection, delayed shut down	58.2 VDC	72.8 VDC
Over-voltage protection, immediate shut down	60 VDC	75 VDC
Efficiency (@ 230 VAC)	90% typ.	90% typ.
Internal output fuse	10AT	
Signals and Settings	ERM 48/60-300 set for 48VDC output	ERM 48/60-300 set for 60VDC output
Settings (over system bus interface)	Output voltage level Current share trimming Output current limit LED test Cost save mode enable/disable Unit shutdown	
Settings (on unit)	Nominal output voltage 48VDC // 60VDC (dip switch)	
Data output (over system bus interface)	Actual AC input voltage Actual DC output voltage Actual output current Actual internal temperature Serial number Unit type SW version	
Alarms (over system bus interface)	Output fuse fault DC overvoltage Overtemperature	
Load current share	Automatic	
LED on front	GREEN: ok RED: Communication failure GREEN BLINKING: Input failure (ac overvoltage, mains fault, ac input fuse fault) RED BLINKING: Rectifier fault (DC overvoltage, Output fuse fault)	

Physical and Environmental

Physical	ERM 48/60-300 set for 48VDC output	ERM 48/60-300 set for 60VDC output
Dimensions (HxWxD)	150 x 52 x 230 mm	
Weight	1.4 kg	
Enclosure	IP 20 / IEC 529	
Connector, AC, DC, Signal	32-pin Euro H7+24 connector	
Environmental	ERM 48/60-300 set for 48VDC output	ERM 48/60-300 set for 60VDC output
Cooling	Natural convection	
Audible noise	< 45 dB(A)	
Operating temp, full specification (min/max)	-5 / +50 °C	
Operating temp, derated (min/max)	+50 / +70 °C	
Storage/Transport temperature (min/max)	-45 / +70 °C	
Humidity (max)	93% (relative humidity, non condensing)	
Standards	ERM 48/60-300 set for 48VDC output	ERM 48/60-300 set for 60VDC output
EMC emission, immunity, current harmonics Interface, Mains and DC	EN 300386:2005 class B ETS 300 132-1 ETS 300 132-2	
Environmental	ETS 300 019-2-3 cl T3.2 ETS 300 019-2-1 cl T1.2 ETS 300 019-2-2 cl T2.3	
Safety	EN 60950-1(2001)	
Approvals	CE, CB	
RoHS, WEEE	2002/95/EC 2002/96/EC	
Quality	Manufacture and design under control of ISO 9001, ISO 14001	

PRODUCT SELECTION GUIDE

Rectifier

Description	Part no.	Fits in
ERM 48/60-300 (48 or 60 VDC, 300 W)	92M018-*	EPOS Mini -RU

* Note, "-" to be replaced with revision letter (A,B,C,...) for a complete, valid product code.