

Let's talk!

AC-DC Converter REC15k-400-110-K1

Battery Charger for Rail Applications

- 3 rectifier modules, each providing 5 kW
- Active load sharing
- Intelligent battery management system with temperature-controlled charging curve
- Adjustment and monitoring via web interface
- Internal CAN bus control
- Efficiency > 93 % at full load
- Overload and short circuit proof



Picture may differ from actual device

Technical Data

General information

Isolation	according to EN 50124
Electrical safety	overload and short circuit proof
Efficiency	> 93 % at full load
Galvanic isolation (primary/secondary)	3.75 kV _{AC}
Protection class	1
EMC	EN 50121-3-2:2007
Redundant decoupling of the modules	by means of active diode function
Decoupling of the load output	by means of active diode function

Input AC

Input voltage	$U_N = 400 \text{ V}_{AC}$, 3-phase without N
Voltage range	340 – 440 V _{AC}
Frequency	50 Hz
Power factor	0.8 at 50 % - 100 % load
Number of AC inputs	3 inputs (1 three-phase input per rectifier module)

Output DC

Output voltage	$U_N = 110 \text{ V}_{DC}$
Voltage range	88 – 135 V _{DC}
Voltage tolerance	+/-1 %
Voltage ripple	< 200 mV _{pp}
Output current	max. 100 A (max. 35 A per module)
Battery current tolerance	+/-2 %
OVP	< 137.5 V _{DC} within 100 ms
Load range	0 – 100 %
Short circuit current	35 A per module
Number of DC connections	1 output for load supply, 1 connection for battery charging

Redundant auxiliary voltage input

Input voltage	$U_N = 110 \text{ V}_{DC}$
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Environmental conditions

Operation temperature	-10° to +60°C (to +70°C for max. 10 min.)
Relative humidity	15 % – 100 % (with coating)
Max. operation altitude	2000 meters
Shock and vibration	acc. to EN 61373:2011 Category 1B

Signalling

Electrical	3 x potential-free relay contacts for „system o.k.“, „battery charging“ and „battery high temperature“, 2-pole led out (C-NO)
Optical	each rectifier module: - LED green for „AC o.k.“ - LED green for „DC o.k.“ connection module: - LED green for „Power Good“ - LED red for „Alarm“
TCP/IP interface	display of device status and error messages; parameter setting
IP-Train interface	communication with train control

Mechanical data

Construction	for mounting in 19" racks
Housing material	galvanized sheet steel
Dimensions (sub-rack)	19", 6 U, 465 mm (from flanges to back side), (W x H x D)
Weight	rack (fully equipped): approx. 70 kg rectifier module: approx. 15 kg
Protection class	IP 20

Cabling

Cooling	front side two temperature-controlled fans per each rectifier module (forced ventilation)
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Operation

Control	via web interface
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Connection technique

Input AC: X1 – X3	3 x Harting HAN Q8/0 (plug)
Output DC (load): X4	Harting HAN Modular 100 A (socket)
Connection DC (battery): X5	Harting HAN Modular 100 A (socket)
Connection battery temperature sensors: X6	Harting HAN Q5/0 (socket)
Signal outputs and DC auxiliary voltage input: X7	Harting HAN Q8/0 (plug)
Service port: X8	RJ45 (LAN)
Communication interface: X9	Harting Han-Brid Quintax 3 A
Grounding bolt	M8

Warranty

24 months

Order code

REC15k-400-110-K1