KACO new energy.

Data sheet

Single-Phase Charging Rectifier LGP3001N2

A new generation.

The single-phase charging rectifier LGP3001N2.

High frequency converter technology makes the LGP 3001N2 a very modern charging rectifier that is already used in many railway vehicles. It adapts the charging voltage to the respective temperature of the batteries using a digital signal processor and up to three temperature sensors (PT 100). There are also three sensing connections available that measure and regulate the charging voltage directly at the batteries. And: An active power factor correction (PFC) ensures sinusoidal power consumption from the grid.

The galvanically isolated charging rectifier can also be flexibly adapted to customer requirements on request. For example, a different input voltage or a higher charging power that contributes to the stabilisation of the on-board power supply are possible.The adaptation is achieved via the serial interface and this can also be used to read operating parameters for quick fault diagnosis. The optional CAN interface allows for stable and comprehensive communication with central computer units, e.g. a train computer.

- Designded for railway applications (EN 50155)
- Capsuled casing, fan changeable from the outside
- New and efficient control algorithm > 3.3 kW max. power, at optimal grid conditions (230 V_{AC})
- Charging voltage depending on battery temperature Up to three PT100 and Sense elements connectable
- Galvanic isolation between input / output
- Parameter up date via RS-232, optional CAN interface
- Display (four-lines) Master Slave - Operation possible

Technical data

High-Voltage Charging Rectifier LGP3001N2

EN 50004456-01-1200901

Electical data	LGP3001N2
Input variables	
Input voltage; Frequency	230 V; 50 Hz (40 Hz - 66 Hz) different values available on request
Under- / Overvoltage switch off (Option D)	-15 % / +20 % (-30 % / +35 %)
Input Current	<16 A, PFC (Power Factor Correction) integrated
Output variables (at 40 °C [Option D: at 70 °C])	
Nominal Power (40°C)	3000 W
Max. Nominal Power, depending on input voltage	>3300 W
Nominal output voltage	27.0 temperature-controlled, 28.8 V fast charge (30 min) different values available on request
General electrical data	
Rated efficiency	92 %
Galvanic isolation	between input and output
Parallel connection	to increase charging power, up to three LGP3001N2-HV can be connected in parallel on the output side
Radio Interference	EN 50121
Potential-free indications optional	2 indications outputs, configuration according to customerrequest
Datalogging	existing
Design for railway application (EN 50155) (Option D)	shock and vibration proof design / extended temperature range / extended input voltage range -30 % ... +35 %
Interface	- battery: touch-proof high-voltage plug connector, with first-make / last-break contacts for interlock - grid / message outputs: tension-spring terminals - service interface (RS232): 9-pin D-sub socket - CAN / CANopen (optional): 9-pin D-sub socket / plug (CiA, DS-102)
Mechanical data	
Display	LCD, four lines
Connections / bus	RS-232, CAN (optional)
Ambient temperature (Option D)	(0 °C ... +40 °C) -25 °C ... +70 °C
Cooling	temperature controlled fan
Cooling information	keep 5 cm space for cooling, power losses max. 300 W
Noise emission	<45dB (during fan operation, otherwise noiseless)
Protection class	IP20
Casetype	19`` rack 4HE / 340 mm
Wall mounted case	different values available on request
Color	RAL7035
Weight	21 kg

Option D: suitable for use on railway vehicles (EN 50155)

Environmental testing EN 60068-2-1, EN 60068-2-2, EN 60068-2-30 / Vibration and shock EN 61373 / EMC EN 50121-3-2