



Data sheet
Bidirectional
Charging Rectifier
LGI2001

A Workhorse in IP65 Housing.

The bidirectional charging rectifier LGI2001.

KACO new energy charging rectifiers have been used in railway vehicles for years. Their task: optimum charging of the on-board grid and starter battery (when plugged-in power is being supplied externally, for example). Depending on the system concept, the charging rectifier may not be active during vehicle operation. The new bidirectional charging rectifier LGI2001 allows the charging rectifier to also be operated in the reverse direction upon command – as a sine inverter. With a positive result: Compared to a solution with two components, you can substantially reduce the necessary installation space and system costs.

The LGI2001 makes available a charging power of 2 kW. Active power factor

correction (PFC) provides for sinusoidal power consumption. A temperature-controlled charging characteristic facilitates optimum and safe charging of your battery set. A serial interface can be used to set parameters for the characteristics and charging powers. With the optional CAN interface, it is possible to communicate extensively (status information, warnings and error messages) with a central processing unit (the train computer, for example).

With the sealed IP65 housing, the LG2001 is designed for outdoor use. An optional 19" rack-mount version is also available.

Suitable for use on railway vehicles (EN 50155)

IP65 housing

Bidirectional operation as a charging rectifier or as an inverter

Temperature-controlled charging characteristic, sense connection

Galvanic isolation between input and output

Parameters can be set via RS232, optional CAN interface

Technical data

Bidirectional Charging Rectifier LGI2001

EN 5000460-01-120807

Electrical Data		LGI2001
Charging Operation		
Input levels		
Input voltage	230V; 50Hz (40Hz - 70Hz)	
Undervoltage / overvoltage shutdown	-15% / +10% according to EN 50160	
Input current	<16 A, integrated PFC (Power Factor Correction)	
Input current limit	parameters can be set separately for each operating state	
Output levels		
Rated output power	2 000 W	
Output voltage	28.0 V IU charge (temperature-controlled)	
Inverter Operation		
Input levels		
Input voltage	24 V	
Undervoltage / overvoltage shutdown	-30 % directly / +25 % after 100ms / +40% directly	
Output levels		
Rated output power	2 000 VA	
Output voltage	230V, 50Hz (-5% / +5%)	
General electrical data		
Efficiency at rating	>90 %	
Galvanic isolation	between interfaces, input and output	
Radio interference suppression level	EN 50121-3-2	
Potential-free message	3 message outputs (changeover contact max. 30V, 0.5A)	
Control inputs	3 control inputs (24V)	
Communication	CAN-bus, RS232 (service interface)	
Fault memory	present	
Interface	- 24V on-board grid and starter battery: Pfisterer PLUG system - service interface: M23 circular plug-in connector - all other interfaces: Harting HAN M system	
Mechanical data		
Display	4 status LEDs	
Ambient temperature	-40°C to +70°C (EN 50155 Tx interior housing temperature)	
Cooling	convection	
Note regarding cooling	do not cover the heat sink; it must be possible for natural convection to occur	
Noise emission	noiseless	
Protection rating	IP65	
Housing form	steel sheet housing for installation in the battery box	
Colour	RAL7035	
Weight	45kg	

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