

CHARIS+ for Industrial Vehicles*



Overview

- > On-board chargers with nominal power of 1,000 W
- > Robust case against very large mechanical shocks and vibrations
- > Best ratio performance/volume available on the market
- > CANBUS link for communication (optional)
- > Thermal, short circuit, reverse polarity protections
- > Overvoltage protection
- > Compatible with all battery types (Lead, Lithium....)





Vibration

proof

Mechanical Shock resistant



CANBUS communication



All battery types

High level overvoltage Protection

Main applications

- > Forklifts
- > Aerial Platforms
- > Light Electric Vehicles

Main features

With a compact design thanks to its high frequency electronics, the CHARIS+ charger is perfect for integration into industrial vehicle. Resisting Shocks and vibrations, embedding complete electronic protection, they have been designed to resist harsh environment. Programmable thanks to their 4 selection switch or via CANBUS (optional), they can be easily programmed to fit the battery vehicle, whatever their characteristics.



INPUT
Voltage: 190V - 253V AC Single Phase
Mains Frequency: 45 to 65 Hz
Power factor : > 0,65
Efficiency > 85%
OUTPUT
Voltage: 24V
Power: 1,000W at 230V
Maximum current: 35 Amps
COMMUNICATION BUS (in option)
CAN bus
Diagnostics on CAN
Jack plug to PC

ELECTRONIC PROTECTION

Overload and output short-circuit

Over temperature and temperature regulation

Output over voltage / reverse polarity

OPERATING CONDITIONS

Temperature: -15°C to +50°C

Relative Humidity: 10% to 95%

MECHANICAL FEATURES

Dimensions: H 233mm x L 104mm x W 66mm

Weight: 2 kg Index Protection: : IP20

Communication

Vehicle interface:

• Compatible CANBUS in option

Selection & Indicators:

- Charging curve: 4 positions
- Light status indicators in option

Standard compliance

- Safety: EN62368-1
- EMC: EN 61000-6-1 / 6-2 / 6-3 / 6-4
 - CE



Forklifts

Means of transport for persons or goods, excluding electric two-wheel vehicles which are not type-approved

*This product is specifically designed, and is to be installed, as part of this type of equipment:

Non-road mobile machinery made available exclusively for professional use



Aerial Platforms

beyond Charging

www.ies-synergy.com

This product fulfil its function only if it is part of this kind of equipment, and can be replaced only by the same specifically designed product.