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# CON-900W

# DC Converter

## Description

This wall mounting DC/DC converter operates from a 110VDC input and provides an isolated and floating output, at a nominal 30V. The unit has been designed to recharge and maintain 24VDC batteries used in critical applications, where uncontrolled loss of output is not an option. The integrated battery management system ensures that the battery is maintained at its optimum levels thus providing the best life span possible. The unit monitors the converter temperature, DCout UVP, DCout OVP, Battery temperature sensor and system output. If any of theses parameters are outside of the set values it will be signalled via the volt free relay contact provided. The units are protected to IP 54 and can operate in ambient temperatures of -40 °C to + 70 °C. The converters can be further ruggerdized with the addition of conformal coating and the securing of the larger components. The units are suitable for many applications including Rail, Industrial and Telecom.

- Extended operating temperature range
- Built in battery management system
- Wide DC input voltage range
- Volt free alarm contacts
- Rugged construction
- Convection cooled
- Stainless steel case

## Technical Data

### General

| | |
|---|---|
| Electrical Safety | EN 60950, VDE 0805 (Overload & Shortcircuit protected) |

### Input DC

| | |
|---|---|
| Nominal Voltage | 110 (77 - 143) VDC |

### Output (Battery Charging)

| | |
|---|---|
| Nominal Voltage 30VDC | Actual value dependant on temperature and charging characteristics (programmable) |
| Stability | ±1% |
| Efficiency | >85% |
| Maximum Output Power | 900W |
| Output Current | 30A |
| Current Limitation | Constant current, without disconnection, but temperature limited |
| Overvoltage Protection | Two stage, redundant and diverse $DC_{OUT}$ OVP 31.8V (software) $DC_{OUT}$ OVP 31.6V (hardware) |

### Environmental Conditions

| | |
|---|---|
| Ambient Temperature | -40 °C to +70 °C, according to EN 50155 |
| Relative Humidity | <75% average per year |
| Shock & Vibration | According to EN 50155 |

### Isolation

| | |
|---|---|
| Input | 1500V |
| Output | 500V |
| Input to Output | 1500V |

made for experts

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# CON-900W

# DC Converter

## Technical Data (continued)

### Signals

| | |
|---|---|
| Temperature Sensor | Pt100, for battery temperature |
| Alarm Contact | Potential free |
| Remote ON/OFF | Bridge between pins 4 & 5 (external relay) |
| Interface | RS232 |

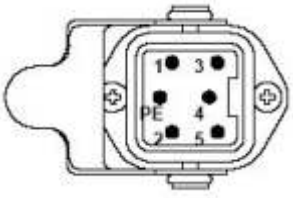
### Mechanical Data

| | |
|---|---|
| Case Material | Stainless steel |
| Dimensions | 270 x 115 x 254mm (W x H x D) |
| Weight | Approx. 6.5kg |
| Classification | IP54 |
| Cooling | Convection via heat sink on wall side (cooling fins must run vertically for optimal air flow) |
| Connector Height | The extent of the connector plugs is 90mm + bending radius of the connecting cables |
| Grounding | M6 x 25 on case side (min 4mm$^2$ cable recommended) |

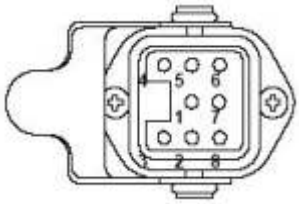
### Other

| | |
|---|---|
| EMC | According to EN 50121-3-2 |
| Warranty | 24 Months |

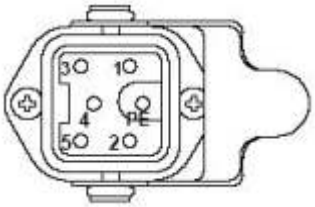
## Connection Data



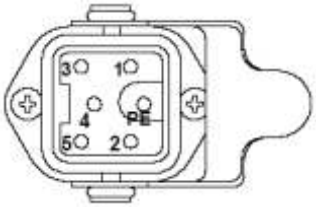

Input
-X1
Harting HANQ5, male




Signal
-X2
Harting HAN8U, female




Output
-X3
HANQ5, female




RS232
-X4
Female SUBD-9Pin

### Input -X1

| | |
|---|---|
| 1 | Input voltage reference 0V |
| 2 | Input voltage reference 0V |
| 3 | Input voltage positive + $V_{IN}$ |
| 4 | N.C. |
| 5 | Input voltage positive + $V_{IN}$ |
| PE | Protective earth |

### Signal -X2

| | |
|---|---|
| 1 | Alarm common (C) |
| 2 | Temperature sensor |
| 3 | Temperature sensor |
| 4 | Remote ON/OFF pull up (for external relay:5V/0.5mA) |
| 5 | Remote ON/OFF reference |
| 6 | Alarm normal open (NO) |
| 7 | Alarm normal close (NC) |
| 8 | N.C. |

### Output -X3

| | |
|---|---|
| 1 | Output voltage reference 0V |
| 2 | Output voltage reference 0V |
| 3 | Output voltage positive +24V |
| 4 | N.C. |
| 5 | Output voltage positive +24V |
| PE | Protective earth |