

## Data Sheet

### MS700876 - 19" 1U DC Power Supply 3200 W



## Description

Active network equipment that is supporting the Power-over-Ethernet function typically requires a strong power supply. For this particular demanding application, MICROSENS offers special power supplies.

Main feature of these power supplies is the immunity against electromagnetic interference, which is important for sensitive applications like VoIP telephony. Further important features are high efficiency and the easy installation against the wall, effectively saving space.

The power supply is available with two 1600 W rectifier modules, which can be used for redundancy or an increased total power out of 3200 W. The output voltage of 42 V can be increased up to 58 VDC in order to compensate voltage losses on the power supply lines. All devices provide an excellent over voltage and overload protection mechanism.

## Features

- Highest safety and reliability
- High efficiency
- Comprehensive battery management
- Wide range input 90...290 VAC
- Output voltage range: 42...58 VDC
- Power ratings 2x 1600 W
- Complete fault protection and fault alarm functions.
- Comprehensive lightning protection design for both AC and DC sides.
- Flexible networking: capable of limited local and remote monitoring

## Technical Specifications

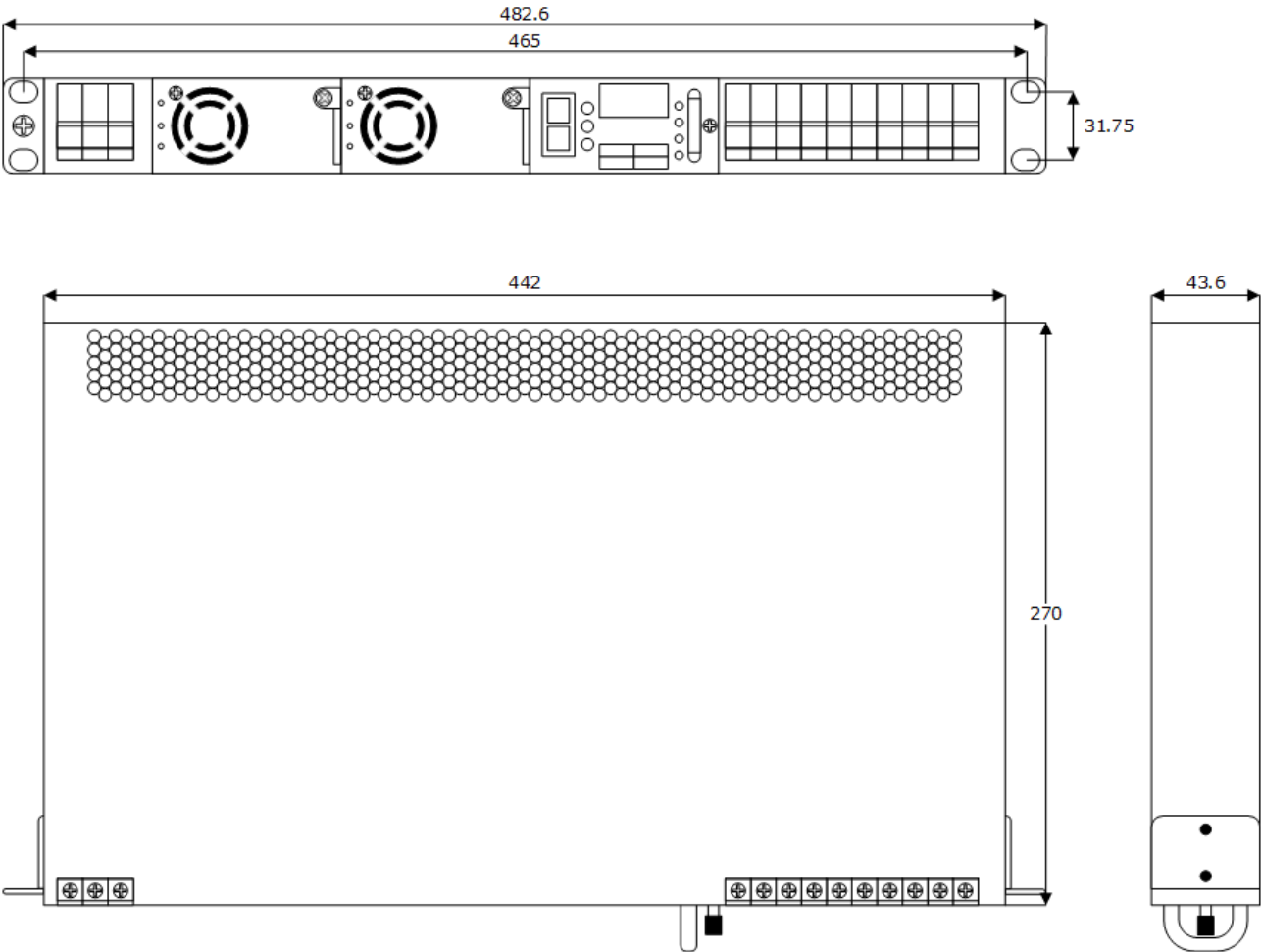
|                     |                                                              |                                                                              |
|---------------------|--------------------------------------------------------------|------------------------------------------------------------------------------|
| <b>Type</b>         | Power Supply for Industrial Use                              |                                                                              |
| <b>Input</b>        | Rated input voltage                                          | 90..280 VAC                                                                  |
|                     | Input frequency (AC)                                         | 45..65 Hz                                                                    |
|                     | Input current                                                | 20 A                                                                         |
|                     | Max. input current corresponding to output power (Rectifier) | 1600 W: 10 A                                                                 |
|                     | DC input voltage range                                       | 42..58 VDC                                                                   |
|                     | Power Factor Correction                                      | 0.98 according to EN61000-3-2                                                |
|                     | In Overvoltage protection                                    | 300..315 VAC (Recovery 10 ±5V)                                               |
|                     | In Overvoltage protection (Rectifier)                        | ≥280 VAC                                                                     |
| <b>Output</b>       | Rated output voltage                                         | 54 VDC                                                                       |
|                     | Adjustment range                                             | 42..58 VDC                                                                   |
|                     | Rated output current                                         | 60 A (176..290 VAC)<br>22 A (90..175 VAC)                                    |
|                     | Rated output power and corresponding current (Rectifier)     | 1600 W @ 30 A                                                                |
|                     | Out Overvoltage protection                                   | 58..60 VDC                                                                   |
|                     | Out Overvoltage protection (Rectifier)                       | 58.5..61.5 VDC                                                               |
|                     | Rated Overload protection (typ.)                             | 110%, 33 A / module, recovers automatically after fault condition is removed |
|                     | Ripple (max)                                                 | 200 mV                                                                       |
| <b>Efficiency</b>   | 220 VAC                                                      | ≥ 95 %                                                                       |
|                     | 110 VAC                                                      | ≥ 92 %                                                                       |
| <b>Hold-up Time</b> | < 10 ms                                                      |                                                                              |
| <b>Connectors</b>   | Ethernet                                                     | RJ-45                                                                        |
|                     | <u>RS 485</u>                                                | <u>RJ-45</u>                                                                 |
|                     | PIN 2                                                        | A+                                                                           |
|                     | PIN 3                                                        | B-                                                                           |
| <b>Alarm Relays</b> | Relay 1 (PIN1 / PIN2)                                        | WATER / DOOR / DO01 / DO04                                                   |
|                     | Relay 2 (PIN3 / PIN4)                                        | VCC / BAT-TEM2 / DO02 / DO05                                                 |
|                     | Relay 3 (PIN5 / PIN6)                                        | SMOKE / LJ-TEM1 / DO03 / DO06                                                |

|                             |                                                                   |                                                                                                                                                                                                                           |
|-----------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LED Indicators</b>       | Monitoring Module                                                 | <u>Green (Running)</u><br>Light on / off: Faulty or without input<br>Blink: OK<br><br><u>Yellow (Alarm)</u><br>Light on: Alarm<br>Light off: No Alarm<br><br><u>Red (Fault)</u><br>Light on: Fault<br>Light off: No Fault |
|                             | Rectifier Module                                                  | <u>Green (Running)</u><br>Light on: Normal<br>Light off: Abnormal<br><br><u>Yellow (Protection)</u><br>Light on: Abnormal<br>Light off: Normal<br><br><u>Red (Fault)</u><br>Light on: Abnormal<br>Light off: Normal       |
|                             |                                                                   |                                                                                                                                                                                                                           |
|                             |                                                                   |                                                                                                                                                                                                                           |
|                             |                                                                   |                                                                                                                                                                                                                           |
|                             |                                                                   |                                                                                                                                                                                                                           |
| <b>CE</b>                   | Low Voltage Directive<br>EMC                                      | EN IEC 62368-1:2020+A11:2020<br><br>EN 55032:2015+A1:2020<br>EN IEC 61000-3-2:2019+A1:2021<br>EN 61000-3-3:2013+A2:2021<br>EN 55035:2017+A11:2020                                                                         |
| <b>Isolation Resistance</b> | Isolation resistance (@ 500 VDC, 25 °C and 90% relative humidity) | > 10 MΩ                                                                                                                                                                                                                   |
| <b>Temperature</b>          | Operating                                                         | -25°C..+55°C                                                                                                                                                                                                              |
|                             | Storage                                                           | -40°C..+80°C                                                                                                                                                                                                              |
| <b>Derating</b>             | 55°C..65°C                                                        | 2 % / °C                                                                                                                                                                                                                  |
| <b>Rel. Humidity</b>        | Non-condensing                                                    | 10..90 %                                                                                                                                                                                                                  |
| <b>Cooling</b>              | Forced air cooling                                                | Forward and rear air outlet                                                                                                                                                                                               |
|                             | Fan at front panel                                                | Temperature control and speed regulation function                                                                                                                                                                         |
| <b>Reliability (MTBF)</b>   | MIL-HDBK-217F, GF 25°C                                            | 180,000 h                                                                                                                                                                                                                 |
| <b>Dimensions (mm)</b>      | (W x D x H)                                                       | 482.6 x 270 x 43.6                                                                                                                                                                                                        |
| <b>Weight</b>               | With modules                                                      | ≤ 8 Kg                                                                                                                                                                                                                    |
|                             | Without modules                                                   | ≤ 4 Kg                                                                                                                                                                                                                    |
| <b>Enclosure Material</b>   | Metal                                                             |                                                                                                                                                                                                                           |
| <b>Mounting</b>             | 19" rack mounting 1U                                              |                                                                                                                                                                                                                           |

## Redundancy

For redundancy it is possible to operate up to 2 rectifier modules in parallel for an improved total power output of 3200W. Ensure that all connecting wires used are the same type, gauge and length.

## Dimensions and Connections



## Ordering Information

|  | Description                                                                              | Art.-No. |
|--|------------------------------------------------------------------------------------------|----------|
|  | Power Supply for Industrial Use                                                          |          |
|  | 19" 1U DC Power Supply, 3200W, 54VDC<br>(2x1600W rectifier module),<br>Output: 42..58VDC | MS700876 |

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