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# CON-300W

# DC - DC Converter

## Description

This range of wall mounting DC/DC converters is available with either 110VDC or 60VDC input and provides isolated and floating outputs of 24V, 48V, and 60V. The series have been designed for convection cooling for applications that demand high reliability and low maintenance. The units are protected to IP 30 and can operate in ambient temperatures of -25° C to + 60° C. The converters can be further ruggedized 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
- Small footprint (140 x 85 x180mm)
- Wide DC input voltage range
- Volt free alarm contacts
- Rugged construction
- Convection cooled
- Parallel operation

## Selection Table

| Part Number     | Maximum Power | Input Voltage  | Output Voltage   |
|-----------------|---------------|--|------------------|
| CON-300W 110-48 | 300W          | 110VDC (77 - 150VDC)<br><small>(165VDC peak 1 sec)</small> | 48VDC (adj. ±2V) |
| CON-300W 110-24 | 300W          | 110VDC (77 - 150VDC)<br><small>(165VDC peak 1 sec)</small> | 24VDC (adj. ±2V) |
| CON-300W 60-60  | 300W          | 60VDC (38 - 72VDC)   | 60VDC (adj. ±2V) |
| CON-300W 60-48  | 300W          | 60VDC (38 - 72VDC)   | 48VDC (adj. ±2V) |
| CON-300W 60-24  | 300W          | 60VDC (38 - 72VDC)   | 24VDC (adj. ±2V) |



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## Technical Data

| General                             | 110-48  | 110-24                             | 60-60                     | 60-48      | 60-24      |
|-------------------------------------|---|------------------------------------|---------------------------|------------|------------|
| Electrical Safety                   | DIN EN 60950, VDE 0805 Overload and short circuit protected   |                                    |                           |            |            |
| <b>Input</b>                        |   |                                    |                           |            |            |
| Input Voltage Nominal               | 110VDC  | 110VDC                             | 48/60VDC                  | 48/60VDC   | 48/60VDC   |
| Input Voltage Range                 | 77 - 150VDC<br>(165VDC peak 1 sec)  | 77 - 150VDC<br>(165VDC peak 1 sec) | 38 - 72VDC                | 38 - 72VDC | 38 - 72VDC |
| <b>Output</b>                       |   |                                    |                           |            |            |
| Output Voltage                      | 48VDC   | 24VDC                              | 60VDC                     | 48VDC      | 24VDC      |
| Adjustable                          | 46 - 50VDC  | 22 - 26VDC                         | 58 - 62VDC                | 46 - 50VDC | 22 - 26VDC |
| Stability                           | ±0.5%   |                                    |                           |            |            |
| Efficiency                          | >85%  |                                    |                           |            |            |
| Output Power                        | 300W  |                                    |                           |            |            |
| Parallel Operation                  | Via passive load current sharing, falling curve   |                                    |                           |            |            |
| <b>Ambient Characteristics</b>      |   |                                    |                           |            |            |
| Ambient Temperature                 | -25° C to +45° C (non-condensing)   |                                    |                           |            |            |
| At Installation Point               | -25° C to +60° C (non-condensing)   |                                    |                           |            |            |
| Relative Humidity                   | <75% average per year   |                                    |                           |            |            |
| Shock & Vibration (with option /O1) | According to EN 50155 (mounted in the frame), frequency range: 5 - 150Hz transfer frequency: 8.2Hz                                |                                    |                           |            |            |
| Amplitude                           | Below transit frequency: 7.5mm  |                                    |                           |            |            |
| Amplitude Acceleration              | Above tranist frequency: 20m/s <sup>2</sup>   |                                    |                           |            |            |
| <b>EMC</b>                          |   |                                    |                           |            |            |
| Burst                               | According to EN 50121-3-2, 2kV criteria A, direct coupled   |                                    |                           |            |            |
| Surge                               | 1.8kV/source 100  | 1.0kV/source 2                     | (for alarm contact 1.5kV) |            |            |
| Conductive HF                       | 3Vrms 1kHz AM, 80% AM, 150kHz - 80MHz   |                                    |                           |            |            |
| ESD                                 | 8kV air, 6kV contact  |                                    |                           |            |            |
| Emitted Disturbance Immunity        | 10 V/m 80MHz - 1GHz, 80% AM, 900MHz pulse modulated   |                                    |                           |            |            |
| Conductive Disturbance Emitted      | 99dBµV QP 150kHz - 500kHz, 93dBµV 500kHz - 30MHz<br>30 - 230MHz 47 dBµV/m QP, 230MHz - 1GHz 40 dBµV/m QP (10m measuring distance) |                                    |                           |            |            |
| Test Voltage                        | According to EN 50155 with 1.5kVAC (primary -> secondary /PE)<br>500VAC (sec > primary/PE)  |                                    |                           |            |            |
| <b>Signal</b>                       |   |                                    |                           |            |            |
| Alarm Output                        | Potential free alarm contact, contact 60VDC, 100mA  |                                    |                           |            |            |
| Indicator                           | LED, yellow = converter ok  |                                    |                           |            |            |
| <b>Mechanical Data</b>              |   |                                    |                           |            |            |
| Dimensions                          | 140 x 85 x 180mm (W x H x D)  |                                    |                           |            |            |
| Weight                              | Approx. 1.7kg   |                                    |                           |            |            |
| Protection Class                    | IP30  |                                    |                           |            |            |
| Cooling                             | Natural via heat sink, free convection  |                                    |                           |            |            |
| <b>Connection</b>                   |   |                                    |                           |            |            |
| Input                               | Cage spring clamp, 2.5mm <sup>2</sup>   |                                    |                           |            |            |
| Output                              | Cage spring clamp, 2.5mm <sup>2</sup>   |                                    |                           |            |            |
| Signal                              | Cage spring clamp, 2.5mm <sup>2</sup>   |                                    |                           |            |            |

## Options Table

| Code     | Description   |
|----------|---|
| /CC..... | Conformal coating and additional fixing of components |

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ET must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ET specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. The photograph illustrates a modified EAC with timer functions. Your chosen unit may differ from that shown.



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