

DC/DC Converter ROD01.2

full rugged power supply



WATER SAND

FROST HEAT

SHOCK DROP

FORM
FACTOR

Technical specification

| | |
|---------------------|--|
| Operating principle | DC / DC converter, isolated |
| Effectiveness | ->86 % typ at $U_{ON} = 24 V_{DC}$ |
| Interfaces | Standard version (TKZ: 146782) Input X1 PT02E8-3P Output X2 PT02E8-3SW Grounding bolt M 8 x 30 |
| Input voltage | <ul style="list-style-type: none">• $16 V_{DC}$ to $34 V_{DC}$ (according VG 96916 T5)• Internal EMI filter for spike suppression• Reverse polarity protection• Surge- and spike protection for $28 V_{DC}$ systems according to MIL-STD-1275• ISO 16750-2:2010 for test with „centralized load dump suppression“ for 12 and $24 V_{DC}$ systems |
| Current consumption | < 20 mA indle to max. 4.5 A apply to UEN |
| Max. inrush current | <20 A by UEN |
| Output voltage | $19 \pm 0.5 V_{DC}$ operation indication by green LED on top internal EMI filter short-circuit proof |
| Current output | up to 4.2 A (80 W) at $40^{\circ} C$ |
| Housing | <ul style="list-style-type: none">• Material: AlMgSi1• Dimensions: (L x W x H)<ul style="list-style-type: none">- 175 mm x 80 mm x 53.5 mm (without mounting tabs and ground screw)- 175 mm x 113 mm x 55.5 mm (with mounting tabs)• colourless passivated and green painted RAL 6031HR• screen printing lemon RAL 1012 |
| Weight | ca. 1.0 kg |

| MIL-STD-810F | operating | storage |
|--|---|--|
| Altitude Method 500.4, (Procedure I, II) | 4572 m (15000 ft) | 4572 m (15000 ft) |
| Temperature Method 501.4 & 502.4, (Procedure I, II) | -40°C to +85°C (designed to meet -46°C) | -40°C to +90°C |
| Temperature shock Method 503.4, (Procedure I) | -40°C to +70°C in < 1 min | -40°C to +70°C in < 1 min |
| Humidity Method 507.4, (Procedure I) | N/A | 95 % |
| Salt fog* Method 509.4, (Procedure I) | N/A | 5 %, 35°C |
| Vibration Method 514.5, Category 1 Method 514.5, Category 14 (Procedure I) Method 514.5, Category 20 (Procedure I) | 10 – 57 HZ ±0,075 mm, 57 – 500 Hz 2 g, Sin., 10kt/min | 10 – 57 HZ ±0,075 mm, 57 – 500 Hz 2 g, Sin., 10 kt/min |
| Shock / drop Method 516.5, (Procedure I) | 15 g, 11 ms | 25 g, 6 ms |
| *with connected or covered interfaces | | |



Environmental ratings

| | |
|--|---|
| Protection class | IP65 according to EN 60529 (with connected or covered interfaces) |
| Designed to meet MIL-STD-810G | advanced temperature range for operating at -46°C |
| Resistant to | ice and snow according to MIL-STD-810F Method 521.2 (with connected or covered interfaces) sand and dust according to VG 95332, Bl. 20 (with connected or covered interfaces) solar radiation according MIL-STD-810F Method 505.4 (Procedure I) mold infestation according MIL-STD-810F Method 508.5 |

EMI & safety

| | |
|---------------|--|
| Safety | EN 60950-1 used materials incombustible according UL 94V-0 |
| MTBF | 75.000 h /25°C according MIL-HDBK 217F |
| EMI | VG 95373 and MIL-STD-461E |

Note: using the same form factor, different input and output voltages
(e.g.: $V_{OUT} = 12 V_{DC}$ or $14 V_{DC}$) be realized project-related.

