

DC/DC Converter

full rugged

ROD04

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

Input X1 PT02E8-3P

Output X2 PT02E8-3SW

Grounding bolt M 8 x 30

Input voltage

- $16 V_{DC}$ 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

$12 \pm 0.5 V_{DC}$ or $14 \pm 0.5 V_D$ operation indication by green LED on top
internal EMI filter
short-circuit proof

Current output

up to 4.5 A (65 W) at $40^\circ C$

Housing

- Material: AlMgSi1
- Dimensions: (L x W x H)
 - 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		



ROD04 vehicle installation

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