**DC - DC Converters**

**Standard Features**
- Overvoltage Protection
- External Sense
- MTBF > 50,000 h
- Parallel Operation with additional Sync.-PCB

**Application**
- Weapon systems
- Military Vehicles

**Support Service**
- Complete Integrated Logistic Support (ILS)

This series of small but powerful solid-state DC to DC Converters are designed especially for harsh environmental conditions.

Originally applied in high quantity for German and Norwegian torpedoes, the Converters are very well suitable for extreme military requirements in mobile systems, naval ships and submarines.

The DC/DC Converters are overload capable, short circuit protected and the housing is hermetically sealed. The output is isolated from the input and these units are capable to withstand a wide input voltage range and are prepared for mounting on Printed Circuit Boards. An optional Synchronization-PCB allows parallel operation of up to 16 Converters.
**Model 5023**

**Electrical Specifications:**

**Input:**
- Voltage Range: 17 to 42 VDC
- Spikes: 50 V / 100 µs
- Inrush Current: < 4.5 A (limited)

**Output:**
- Rated Voltage: 5 VDC
- Static Voltage
- Ripple: typ. 50 mV pp
- Rated Power: 32.5 W
- Current Limitation: > 6.5 A
- Max load capacity: 2200 µF
- Efficiency: > 82%

**Physical Characteristics:**
- Dimensions: D = 94 mm, W = 66 mm, H = 42 mm
- Weight: 550 g ± 10%
- Protective System: IP65
- Painting: jet black, RAL9005

**Model 5022**

**Electrical Specifications:**

**Input:**
- Voltage Range: 17 to 42 VDC
- Spikes: 50 V / 100 µs
- Inrush Current: < 3.5 A (limited)

**Output:**
- Rated Voltage: ± 15 VDC
- Static Voltage
- Ripple: typ. 20 mV pp
- Rated Power: 30 W
- Current Limitation: > 1 A
- Max load capacity: 1000 µF
- Efficiency: typ. 83%

**Physical Characteristics:**
- Dimensions: D = 94 mm, W = 66 mm, H = 42 mm
- Weight: 580 g ± 10%
- Protective System: IP65
- Painting: jet black, RAL9005

**Model 5014**

**Electrical Specifications:**

**Input:**
- Voltage Range: 17 to 32 VDC
- Spikes: 50 V / 100 µs
- Inrush Current: < 1.3 A, < 200 µs

**Output:**
- Rated Voltage: ± 15 VDC
- Static Voltage
- Ripple: typ. 20 mV pp
- Rated Power: 3 W
- Current Limitation: > 0.3 A
- Max load capacity: 1000 µF
- Efficiency: typ. 70%

**Physical Characteristics:**
- Dimensions: D = 53 mm, W = 53 mm, H = 31 mm
- Weight: 170 g
- Protective System: IP65
- Painting: jet black, RAL9005

**Common Environmental Specifications:**
- Operating Temperature: -25° C to +80° C
- Storage Temperature: -55° C to +85° C
- Rel. Air Humidity: < 95%
- Low Pressure: > 0.12 bar
- Shock: acc. BV043, 94 g / 4.5 ms, 35 g / 14 ms
- Vibration: according to MIL-STD 810C/514.2
- EMC: according to MIL-STD 461A, CE01, CS01, MI-STD 461B, RS01, VG 95373, T.20LAA01G, T.22SA01G, T.24LF01G, LF02G, LF03G, BV3012, SA 1

*Specification subject to change without notice*