

Test Inverter PWR-100

The test inverter PWR-100 is designed for testing electric motors in the low voltage range, e.g. servomotors in the automotive sector, motors for battery operated tools or motors in medical technology.

The device can be used to carry out long-term and heating tests as well as to record characteristic fields and for end-of-line testing. Among other things, there is the possibility of parameter identification for connected test objects. This includes, for example, the determination of winding resistance, phase inductance and EMF in motors.

The PWR-100 includes a software package for parameterization and commissioning as well as for evaluating the tests.

The PWR-100 enables the testing of various components in a wide parameter field (current, frequency, etc.) and, thanks to its flexibility and its numerous adjustable parameters, is ideally suited for installation in test benches.



Test Inverter PWR-100

| Technical Data | |
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| Supply Voltage | 15 ... 36 VDC |
| Intermediate Circuit Voltage (UZK) | 2 ... 100 VDC, with a maximum of ± 60 V with respect to ground (PE) |
| Output Voltage | to 3 x 65 V eff (depending on the DC link voltage) |
| Output Current | at UZK 24 VDC 150 Aeff (without VL-Option); 100 Aeff (with VL-Option) at UZK 48 VDC 80 Aeff at UZK 100 VDC 50 Aeff |
| Output Frequency | 0 ... 2.000 Hz |
| PWM-Frequency | 1 kHz up to 40 kHz, Space Vector Control |
| Commutation | Sine, Block, Trapez (optional) |
| Operating modes for engines | FOC, sensorless, V / f control |
| Control algorithms | Voltage control, current control, speed control, speed control with subordinate current control, torque control, position control |
| Efficiency | > 90%, at 100V DC, 20 A, 20 kHz PWM Frequency |
| Current Measurement | 3 engine strings + DC, 16 bit resolution, $\pm 1\%$ |
| Voltage Measurement | 3 motor connections + DC, 16 bit resolution, $\pm 1\%$ |
| Monitoring Functions | Short circuit, overcurrent, overvoltage (intermediate circuit, gate driver), Undervoltage (intermediate circuit, gate driver), over temperature |
| Controllable Electric. Machinery | PSM, BLDC, ASM, GM, 1-phase AC machines, 3-phase reluctance motors |
| Position Encoder Interfaces | Absolut und Inkrementell, Resolver, Hall-Sensor, Sin/Cos-Encoder, SSI, EnDat |
| Communication Interfaces | CAN, USB (optional), RS485, CANopen (planned) |
| Additional Interfaces | Supply voltage, DC link voltage Digital IOs for release, reset, status, etc. Analog IOs (± 10 V) |
| Cooling | Forced air cooling, no additional cooling measures required |
| Protection Class | IP20 |
| Ambient conditions | 0 to 40 ° C, rel. Air humidity <90 % without condensation |
| Relative humidity | up to 90 %, without condensation |
| Test Functions | Currents Iq and Id adjustable (parameter or analog input) Parameter identification (resistance, inductance, EMF, etc.) Integrated oscilloscope Generation of harmonic currents and voltages |
| Dimensions (B x H x T) mm, Weight (kg) | PWR-100-C: 212mm x 300mm x 310mm, approx. 15 kg PWR-100-S: 133mm x 300mm x 310mm, approx. 8 kg |

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