



EPS - Datasheet

Series EPS/TSDCR

Source - Sink - Battery Charger/Tester/Simulator - Inverter - up to 1300kW/kVA from EPS Stromversorgung

The coordinated test systems EPS/TSDCR from EPS Electronic Power Supplies are for tests accompanying development, such as real time simulation of the on-board grid, simulation of energy storage devices (e.g. Lilon battery simulation), tests of electrical drives as well as fuel cells and their corresponding components such as inverters, batteries (charging and discharging) and switch suitable. The outputs go up to 650kW in a voltage range from 5 to 1000V and a current range up to 1000A.

For battery testing are also following Step Cutoff Conditions – Time, ET, EV, EC, CC Time, CV Time, mAh, Wh, SOC, Cap. (%), Cap. decay, Total mAh, Total Wh, Last mAh, Last SOC, Last Cap. (%), Last Cap. decay, Last Voltage, DV, +dV/dt, dV/dt, +dT/dt, CB ,ET, CB EH, EXT ET, SBS ET, Cell ET, Cell EV

The special feature of these systems is that the electrical energy consumed in generator mode is fed back into the grid with high efficiency. External loads (resistors) are thus superfluous and electrical energy that is otherwise "burned" can be returned profitably. This feedback capability is a decisive factor in most test applications, as unusually high outputs are used here. Either parallel connection (up to 2000A) or a multi-channel system (up to 4000A) is possible to increase performance. In contrast to conventional DC sources, the multi-channel system has two or four independently usable output channels and can work both as a source and as a sink.

All systems have an isolated output and a TFT touch panel for entering or displaying values and alarms.

They can also be controlled via CAN, MOD-Bus, SCPI / TCP-IP, VNC and optionally via RS232 / USB, HighSpeed /Analog, HighSpeed CAN, Profibus, Profinet and Ethercat.

The test system can be freely programmed and has specific algorithms that enable a wide variety of tests such as testing solar systems (inverter option), super capacitors and reactive power compensation.

Comprehensive protective measures, such as an event memory integrated as standard and a safety control (level "d") round off the concept.

The system can be "upgraded" customer-specifically, e.g. with insulation monitoring, DC contactors separation under load, an additional discharge unit in the event of a power failure (simulator operating mode), a power distribution unit (PDU), impedance measurement (tester operating mode) or water cooling (IP54). The systems are CE certified and can optionally be adapted according to UL. Further options on request.

Energy efficiency: New technology, high efficiency regenerative power supply with over 93%

Scope of delivery:
Testsystem
Calibration protocol
Operation manual

EPS/TSDCR 400100001000 Bidirectional Testsystem Power feedback



EPS/TSDCR DC Testsystem

General data

Behavior	Bidirectional
Technology	Switching
Operation modes	CV. CC+- . CP. CR
Mains	400V AC 3ph., PE +-10%
Input frequency	50Hz +-5%
Power factor	>0.99 ind.
Power feed back	Standard
Display	TFT Touch Display
Voltage resolution	16 Bit
Voltage accuracy	0,1% fs
Voltage Stability Load	<3% fs (0-100%)
Response time Voltage	<1,0ms (10-90% In)
Current Resolution	16 Bit
Current Accuracy	0,1% fs
Rise time Current	<1,3ms (10-90%)
Response time Current	3ms (tol.0,5% fs)
Overheat protection	Standard
Isolation In-/Output	5,3kV
Isolation Output/Enclosure	2,8kV (<=600V)/3,1kV (>=600V)
Protection class	IP20
Parallel operation	Option EPS/TSDCR-P
Cooling	Fan
Operation temperature	0-40°C
Storage temperature	0-40°C
Humidity	85% rel.nc

Series EPS/TSDCR

Attitude	1000m NN
Design	Cabinet
Standards	EN13849-1, EN62040-1, EN61000-2-4/6-2/6-4, 2014/35/EU

Interfaces

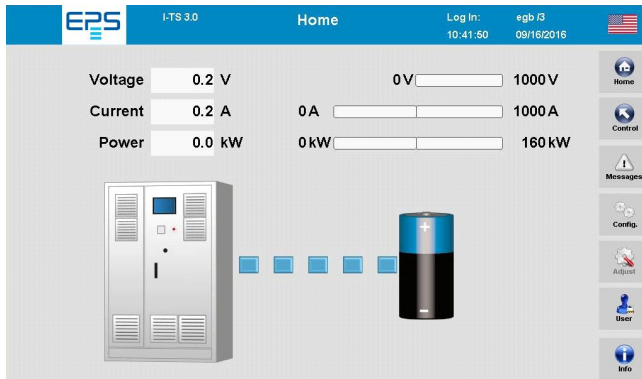
Analog Programming	Opt. EPS/TSDCR-HSANA
Analog Isolation	Option EPS/TSDCR-ANA10
Input Signal	Option (M)TSDCR-E-Stop
USB Interface	Opt. EPS/TSDCR-RS232-USB
RS232 Interface	Opt. EPS/TSDCR-RS232-USB
CAN Interface	Standard, Option: HSCAN
Profibus	Option EPS/TSDCR-PB
Ethernet Interface	Standard
Ethercat Interface	Option EPS/TSDCR-EC

Technical data

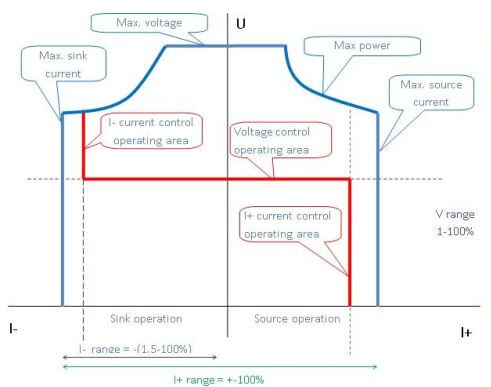
Output Voltage	5-1000 VDC
Output Current	+/- 1000 A
Output Power	400000 W
Input Power	425 kVA
Input Current	614A @400V
Efficiency	95,6/94,6%
Ripple U	<=0,1% fs eff
Ripple I	<=0,1% fs eff
Remote Sensing	Option EPS/TSDCR-S/m
Dimensions in mm (WxHxD)	3600 x 2000 x 800
Weight	3460 kg
Order code	200545

Options

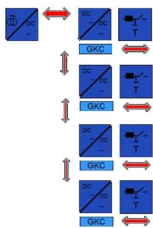
Option 1	Earth contact supervision DC-output EPS/TSDCR-ISO
Option 2	Operation mode Simulator EPS/TSDCR-SIM
Option 3	Switching Simulator/Tester EPS/TSDCR-SW
Option 4	Multi Channel System EPS/TSDCR-MC
Option 5	Protective Diode 1000V/1000A EPS/TSDCR-DIODE
Option 6	DC contactors separation under load EPS/TSDCR-CONT



EPS/TSDCR TFT Touchpanel



EPS/TSDCR Ausgang/Output characteristic



EPS/TSDCR Multi-Channel-System

Subject to modification without notice, errors and omissions excepted

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