- Measurement range 0–60VDC
- Load current 0,5–200A
- Power up to 2800W peak, continuous 2300W
- Dynamic functions
- Comprehensive protection functions against overload, over-voltage and over temperature

DEL2800

Electronic Load

Scope of Functions

The functional scope of the electronic loads from the DBL series includes five different operating modes: constant current (I Mode), constant resistance (R Mode), pulse current, dynamic load and short-circuit. These operating modes are normally used as defined loads for SDC sources such as power supplies, batteries, etc.

Operation

The unit is setup using the operating and display elements provided on the front panel. The main display element is the large LCD display. Here the measured values for current and voltage, time and ampere-hours, set values for current and resistance R as well as the respective operational mode are displayed. Adjustment of the set values is carried out using a rotary knob (under the display) or via the buttons – equally the navigation within the selection menus. Using the button-function of the rotary knob (ENTER function) in the parameter menu, the required line is activated. In the active line the respective parameter (e.g. preset value or operational mode) can be preset.
Using the "Stand-by" button or the corresponding menu point the unit can be turned off or turned on (in "Stand-by" mode parameters for an upcoming load condition can be preset).
While pressing the short-circuit button, the electronic load is switched to short-circuit current (for as long as the button is pressed). Using the BNC sockets, a voltage proportional to the load current can be applied for optional external applications.

Protective Circuit

Overload Protection

Analogue power-limit switching – on reaching the maximum power dissipation, the load current is reduced so that a constant power operation is achieved.

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Overvoltage Protection:
Digital monitoring – switches off the load current during overvoltage.

Over Temperature Protection:
With the aid of analogue temperature sensors, the heat sink temperature is monitored by the micro controller. The fan speed is adjusted accordingly. During over temperature the load current is reduced until eventual switch-off. This operational state is accompanied by an over temperature message in the display (however, the cooling airflow is maintained)..

DEL2800			
Input Voltage a) Range b) Load range Measurement accuracy	0...80VDC 3,5...60VDC ± 0,3%		
Load Current	0,5...200A		
Measurement accuracy	± 0,3%		
Control accuracy	± 1% max. ± 1,0A		
Drift	< 0,5% of set value		
Resolution (measurement range)	10mA		
Resolution (set value)	50mA		
Resistance Range (Range switching occurs automatically)	When using the sense connections for U_{IN}: 0,05...0,5 Ω	0,51...5,0 Ω	5,1...50 Ω
Resolution	1mΩ	10mΩ	100mΩ
Accuracy for loads with U_{IN} = 10...100% and I_{Last} >1A	± 3%	± 5%	± 10%
Display	Set values for resistance or current, display of the load current and applied load voltage (actual values)		
Dynamic Functions	Two selectable load levels in I and R Mode Pulse/pause ration 1:1 Selective slew rate 0,1...10 A/µs ± 10% Minimum rise and decay times 10µs Frequency 8...1000Hz ± 10%		
Protective Functions	Power limiting, over voltage, over temperature (no reverse polarity protection)		
Short Circuit Resistance	1,3mΩ		
Analogue Measurement Outputs	Current: 0...5VDC ≙ 0-200A		
Conversion factor	25 mV/A		
Accuracy	± 2%		
Cooling	Fan (5 step cooling)		
Interfaces	Optional: a) RS232 interface b) PC-Tool		
Dimensions WxHxD Weight	218x323x455 mm 25 kg		
Mains supply	115-230VAC 50Hz-60Hz		

Technical modifications and errors excepted

Deutronicstraße 5 | D-84166 Adlkofen/Germany
Tel.: +49 (0)8707 920-0 | Fax +49 (0)8707 1004
E-Mail: sales@deutronic.com | www.deutronic.com