Multiple-output power supplies

TOE 8732
TOE 8733
TOE 8735

TOE 8735

The dual-output power supplies of the 8732 series offer two absolutely identical supply units in a single housing. The outputs are electrically isolated from each other and floating. They can be easily connected either in parallel or in series, and are additionally provided with a tracking facility that allows output II to be synchronized by output I. The two power supplies then provide a positive voltage and a negative voltage compared to the common reference point. Current limits for the two outputs can be set independently of each other.

In addition, the power supplies are equipped with three digital displays, and allow external voltage measurement in the ranges 0 to 20 V and 0 to 200 V. The voltages at outputs I and II are measured with autoranging. Up to 19.99 V, the resolution is 10 mV; above 20.0 V, the resolution is 100 mV. The outputs I and II can be optionally adjusted by means of an external control voltage (0 to 10 V) via an analog control input.

The triple-output power supplies of the 8733 series have three independent floating outputs. The 16 V, 32 V and 48 V outputs are mainly intended to supply linear circuits. The output voltage and output current are adjustable using ten-turn potentiometers. A tracking facility is provided. The 0 to 7 V output has a current rating of 3 A or 5 A as standard and is chiefly intended for supplying digital circuits.

The power supplies also have three digital displays as standard. The voltages at outputs I and II are automatically displayed with a resolution of 10 mV up to 19.99 V and a resolution of 100 mV above 20.0 V. The current and voltage of outputs I, II and III can be optionally set by an external control voltage (0 to 10 V) via an analog control input.

The quintuple-output power supplies The TOE 8735 power supplies have five independent floating outputs. The 16 V and 32 V outputs are mainly used to supply linear circuits, the 7 V output chiefly serves to supply digital systems. The symmetrical fixed voltage output* can be used to supply bipolar or CMOS components. The 16 V and 32 V outputs are provided with a tracking facility. The output values are displayed on three selectable 3½-digit LCDs; the max. resolution is 10 mV or 1 mA. The current and voltage of outputs I, II and III can be optionally set by an external control voltage (0 to 10 V) via an analog control input. (Option: TOE 8730/253)

* The fixed voltage output ± 15 V can be switched internally to ± 12 V.

Special features

- Extremely low residual ripple < 50 µV
- Electrically decoupled outputs
- Precise digital displays

Dual-output, triple-output, quintuple-output power supplies up to 150 W

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Special features

- Dual-output, triple-output and quintuple-output power supplies
- Electric decoupled outputs
- Extremely low residual ripple < 50 µV
- Analog remote control
- Resolution up to 1 mA
- Precise digital displays

Overview

	Output 1		Output 2		Output 3		Output 4/5	
Model	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current
Dual-output power supplies								
TOE 8732-1	0 - 16 V	0 - 2 A	0 - 16 V	0 - 2 A				
TOE 8732-2	0 - 32 V	0 - 1 A	0 - 32 V	0 - 1 A				
TOE 8732-3	0 - 48 V	0 - 0.8 A	0 - 48 V	0 - 0.8 A				
Triple-output power supplies								
TOE 8733-1	0 - 16 V	0 - 2 A	0 - 16 V	0 - 2 A	0 - 7 V	0 - 5 A		
TOE 8733-2	0 - 32 V	0 - 1 A	0 - 32 V	0 - 1 A	0 - 7 V	0 - 5 A		
TOE 8733-3	0 - 48 V	0 - 0.8 A	0 - 48 V	0 - 0.8 A	0 - 7 V	0 - 3 A		
TOE 8733-4	0 - 32 V	0 - 2 A	0 - 32 V	0 - 2 A	0 - 7 V	0 - 3 A		
Quintuple-output power supplies								
TOE 8735-1	0 - 16 V	0 - 2 A	0 - 16 V	0 - 2 A	0 -7 V	0 - 5 A	± 15 V	0.5 A
TOE 8735-2	0 - 32 V	0 - 1 A	0 - 32 V	0 - 1 A	0 -7 V	0 - 5 A	± 15 V	0.5 A
TOE 8735-4	0 - 16 V	0 - 2 A	0 - 16 V	0 - 2 A	0 -7 V	0 - 5 A	± 5 V	1.5 A
TOE 8735-5	0 - 32 V	0 - 1 A	0 - 32 V	0 - 1 A	0 -7 V	0 - 5 A	± 5 V	1.5 A

Technical specifications of the outputs

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Outputs

Voltage	0 - 16 V	0 - 32 V	0 - 32 V	0 - 48 V	0 - 7 V	0 - 7 V	± 5 V	± 15 V
Current	0 - 2 A	0 - 1 A	0 - 2 A	0 - 0.8 A	0 - 3 A	0 - 5 A	1.5 A	0.5 A
Digital display, 3½ digits	0	0	0	0	0	0	–	–
Externally programmable 0 to 10 V (option)	0	0	0	0	0	0	–	–
Constant voltage mode Setting using ten-turn potentiometer; resolution	0.02 %	0.02 %	0.02 %	0.02 %	0.02 %	0.02 %	–	–
Voltage stabilization with change in load 0 to 100 %	0.01 %	0.01 %	0.01 %	0.01 %	0.1 %	0.1 %	0.05 %	0.05 %
With change in line voltage ± 10 %	10^{-5}	10^{-5}	10^{-5}	10^{-5}	10^{-5}	10^{-5}	10^{-5}	10^{-5}
With change in temperature	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K
Residual ripple V_{pp}	50 µV	50 µV	50 µV	80 µV	50 µV	80 µV	100 µV	100 µV
Drift within 8 hours	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %
Regulation time with change in load from 20 % to 100 % and setting to within 0.1 % V_{rated}	10 µs	10 µs	20 µs	20 µs	50 µs	50 µs	50 µs	50 µs
Constant current mode Setting using ten-turn potentiometer; resolution	0.04 %	0.04 %	0.04 %	0.04 %	0.04 %	0.04 %	–	–
Current stabilization								
With change in load 0 to 100 %	0.02 %	0.02 %	0.02 %	0.02 %	0.05 %	0.05 %	–	–
With change in line voltage ± 10 %	10^{-4}	10^{-4}	10^{-4}	10^{-4}	10^{-4}	10^{-4}	–	–
With change in temperature	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	10^{-4}/K	–	–
Residual ripple I_{rms}	50 µA	50 µA	50 µA	50 µA	80 µA	80 µA	–	–
Drift within 8 hours	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	–	–

TOE 8735

General data/accessories Ordering data/options

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Supplied accessories

– 1 power cord
– 1 instruction manual

General data

Output Insulation	Floating and electrically isolated ± 250 V against ground
Line voltage	115 V/230 V ± 10 % 47 Hz to 63 Hz
Power consumption	Approx. 230 VA
Protective measures	Protection class 1 in accordance with DIN 57411/VDE 0411 Part 1/IEC 348
Operating temperature	0 °C to 40 °C
Storage temperature	-20 °C to 70 °C
Reference temperature	23 °C
Dimensions	265 x 147 x 330 mm
Weight	Approx. 8.5 kg
Housing	Aluminium

Ordering data

Dual-output power supplies

TOE 8732-1	Power supply	2 x 16 V / 2 x 2.0 A
TOE 8732-2	Power supply	2 x 32 V / 2 x 1.0 A
TOE 8732-3	Power supply	2 x 48 V / 2 x 0.8 A

Triple-output power supplies

TOE 8733-1	Power supply	2 x 16 V / 2 x 2.0 A	7 V / 5 A
TOE 8733-2	Power supply	2 x 32 V / 2 x 1.0 A	7 V / 5 A
TOE 8733-3	Power supply	2 x 48 V / 2 x 0.8 A	7 V / 3 A
TOE 8733-4	Power supply	2 x 32 V / 2 x 2.0 A	7 V / 3 A

Quintuple-output power supplies

TOE 8735-1	Power supply	2 x 16 V / 2 x 2.0 A	7 V / 5 A	± 15 V / 0.5 A
TOE 8735-2	Power supply	2 x 32 V / 2 x 1.0 A	7 V / 5 A	± 15 V / 0.5 A
TOE 8735-4	Power supply	2 x 16 V / 2 x 2.0 A	7 V / 5 A	± 5 V / 1.5 A
TOE 8735-5	Power supply	2 x 32 V / 2 x 1.0 A	7 V / 5 A	± 5 V / 1.5 A

Options

TOE 8730/252	External control 2 x U / 2 x I
TOE 8730/253	External control 3 x U / 3 x I
TOE 9008	Carrying handle
TOE 9501	19" adapter, 3 HU

Factory calibration certificate on request
Factory calibration certificate + test report