

Laboratory Power Supplies

ZPS Series Single Output



- Output power up to 10 kW
- Voltage and current regulated
- Primary switched mode
- Master - slave - operation possible
- Programming current - voltage
- 19" rack mounting
- extremely compact and ruggedly designed

Option: Installed Interface Euro Card IEEE 488.2 (GPIB)/RS232 with Lab View Driver INT2E series
Integrated USB1.1 interface with driver software
External CAN Open Interface (on request)



Units for Laboratory and Test

Input:

Input voltage	ZPS3: 230 V \pm 10% 1 phase 50 / 60 Hz ZPS6/ZPS10: 400 V \pm 10% 3 phase 50 / 60 Hz
Inrush current	< 5 A
Power factor	ZPS3: 0,99

Output:

Output voltage (DC)	see table
Output current	see table
Efficiency	\geq 80 %

Regulation:

Line regulation	voltage 0,1 % U_{out}
(AC line change 10%)	current 0,1 % I_{out}
Load regulation	voltage 0,1 % U_{out}
(99 % load change)	current 0,1 % I_{out}
Stability	0,1 %
after 8 h working time and const. ambient temp.	
Dynamic response	< 2 ms at
set in U-const. Mode	load change 1 % – 100%, nominal value change 1%–100%, neg. nominal value change 100% – 80% (at $I > 100$ A)
Absolute accuracy	0,5% $I_{max} \cdot U_{max}$
Reproducibility	0,1%
Ripple and noise	< 0,5% U_{max}
Temperature coefficient	voltage: 0,05% / K current: 0,1%/K

AC-line undervoltage protection	shut down
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Protection:

Overload protection	short circuit protection
Thermal protection	shut down, auto recover
Undervoltage protection	shut down

Environmental Conditions:

Operating temperature	0 – + 40°C
Derating	3,3 % / °K
from + 40 – + 70°C	
Cooling	int. fans, temperature controlled

Safety:

Safety standard	EN60950-1
Isolation	
input - output:	$U_{out} \leq 200$ V: 3,7 kV _{rms}
input - ground:	2,2 kV _{rms}
output - ground:	$U_{out} \leq 60$ V: 500 V _{rms} $U_{out} > 60$ V: 1,35 kV _{rms}

EMC:

Input EMI filter	EN61000-6-4
Input immunity	EN61000-6-2

Operating and Control:

Programming analog	voltage and current: 0 – 10 V \pm 0 – 100 % U_{out} , I_{out}
Programming digital only with Option INT2	Contol: U und I nominal value presetting U and I Monitor signals, Power ON/OFF, isolated Bus - signals and analog signals; isolation between digital signals; SCPI-programmable (IEC625-2); programming of analog value with absolute values max. three same units 3 units with same U_{out} same units (total voltage ≤ 150 V) standard voltage and current, LED, 3½ digits voltage and current 10 - turn potentiometer
Master - slave - mode	
Parallel operation	
Series operation	
Remote sense	
Instruments	
Adjustment	

Connectors:

Input	Cable (6m) with CEE- Connector 16A or 32A
Output	ZPS 3: Cable (6m) with schuko connector Copper bars rear side

Physical Specifications:

Dimensions	ZPS3/ZPS6: 19", 3 U, depth 400 mm with connections 450 mm ZPS10: 19", 6 U, depth 420 mm with connections 470 mm
Weight	ZPS3 19 kg ZPS6 21 kg ZPS10 32 kg

Output Voltage / Current (V) / (A)	Power (kW)	Input Voltage (V) / Phase	Model Number
0 - 20 / 0 - 150	3	230 / 1	ZPS3/20/150
0 - 25 / 0 - 400	10	400 / 3	ZPS10/25/400
0 - 36 / 0 - 85	3	230 / 1	ZPS3/36/85
0 - 36 / 0 - 160	6	400 / 3	ZPS6/36/160
0 - 36 / 0 - 280	10	400 / 3	ZPS10/36/280
0 - 48 / 0 - 65	3	230 / 1	ZPS3/48/65
0 - 48 / 0 - 120	6	400 / 3	ZPS6/48/120
0 - 48 / 0 - 210	10	400 / 3	ZPS10/48/210
0 - 52 / 0 - 115	6	400 / 3	ZPS6/52/115
0 - 52 / 0 - 190	10	400 / 3	ZPS10/52/190
0 - 72 / 0 - 45	3	230 / 1	ZPS3/72/45
0 - 72 / 0 - 80	6	400 / 3	ZPS6/72/80
0 - 72 / 0 - 140	10	400 / 3	ZPS10/72/140
0 - 96 / 0 - 35	3	230 / 1	ZPS3/96/35
0 - 96 / 0 - 60	6	400 / 3	ZPS6/96/60
0 - 96 / 0 - 105	10	400 / 3	ZPS10/96/105
0 - 120 / 0 - 50	6	400 / 3	ZPS6/120/50
0 - 140 / 0 - 25	3	230 / 1	ZPS3/140/25
0 - 140 / 0 - 42	6	400 / 3	ZPS6/140/42
0 - 140 / 0 - 72	10	400 / 3	ZPS10/140/72
0 - 150 / 0 - 50	7,5	400 / 3	ZPS10/150/50
0 - 300 / 0 - 10	3	230 / 1	ZPS3/300/10
0 - 400 / 0 - 25	10	400 / 3	ZPS10/400/25

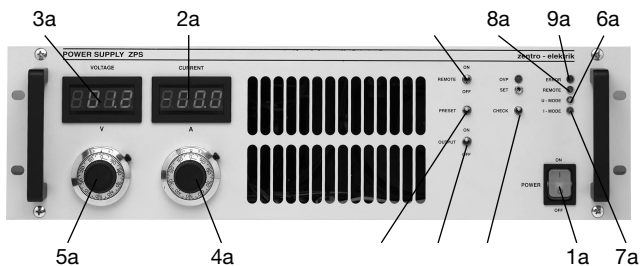
Options:

Installed IEEE 488.2 Interface Euro - Card
INT2E with Lab View Driver

Power 4 KW contact factory

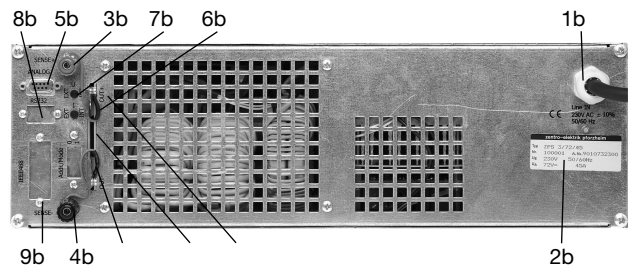
For more technical data concerning digital programming see datasheet INT2/INT2E

Unit front view:



- 1a Mains switch with lamp "ON"
- 2a Ampermeter (3 1/2 digits, LED display)
- 3a Voltmeter (3 1/2 digits, LED display)
- 4a Setpoint adjustment "Current"
- 5a Setpoint adjustment "Voltage"
- 6a LED-display "U-MODE"
- 7a LED-display "I-MODE"
- 8a LED-display "REMOTE"
- 9a LED-display "ERROR"
- 10a Output ON/OFF
- 11a Preset
- 12a OVP "Overvoltage Protection"
- 13a Remote ON/OFF

Unit rear view:



- 1b Power cord (6m-cable)
- 2b Nameplate
- 3b Sense jack (Sense +)
- 4b Sense jack (Sense -)
- 5b Analog interface (Sub-D-connector 9 pol.)
- 6b Toggle switch „Current adjustment internal/external“
- 7b Toggle switch „Voltage adjustment internal/external“
- 8b RS232 – interface (Option)
- 9b IEEE488.2 – interface (Option)
- 10b „Addr. / Mode“-switch (Option)
- 11b Output terminal „OUT-“, (screw terminal M8)
- 12b Output terminal „OUT+“, (screw terminal M8)