

PSU100D 12 V/3 A  
 PSU100D 12 V/3 A Stabilized power supply input: 100-240 V AC  
 output: 12 V DC/3 A



Input	
Input	1-phase AC
Rated voltage value $V_{in}$ rated	100 ... 240 V
Voltage range AC	85 ... 264 V
Wide-range input	Yes
Mains buffering	at $V_{in} = 115/230$ V
Mains buffering at $I_{out}$ rated, min.	15 ms; at $V_{in} = 115/230$ V
Rated line frequency 1	50 Hz
Rated line frequency 2	60 Hz
Rated line range	47 ... 63 Hz
Input current	
• at rated input voltage 100 V	0.75 A
• at rated input voltage 240 V	0.5 A
Switch-on current limiting (+25 °C), max.	60 A
$I^2t$ , max.	1.2 A <sup>2</sup> ·s
Built-in incoming fuse	internal
Protection in the mains power input (IEC 898)	Recommended miniature circuit breaker: from 10 A characteristic C or from 16 A characteristic B

## Output

Output	Controlled, isolated DC voltage
Rated voltage $V_{out}$ DC	12 V
Total tolerance, static $\pm$	2 %
Static mains compensation, approx.	0.5 %
Static load balancing, approx.	1 %
Residual ripple peak-peak, max.	100 mV
Spikes peak-peak, max. (bandwidth: 20 MHz)	100 mV
Adjustment range	11 ... 14 V
Product function Output voltage adjustable	Yes
Output voltage setting	via potentiometer
Status display	Green LED for 12 V OK
On/off behavior	Overshoot of $V_{out}$ < 2 %
Startup delay, max.	2.5 s
Voltage increase time of the output voltage maximum	30 ms
Rated current value $I_{out}$ rated	3 A
Current range	0 ... 3 A
• Note	+50 ... +70 °C: Derating 2.5%/K
Supplied active power typical	36 W
Parallel switching for enhanced performance	Yes
Numbers of parallel switchable units for enhanced performance	2

#### Efficiency

Efficiency at $V_{out}$ rated, $I_{out}$ rated, approx.	84 %
Power loss at $V_{out}$ rated, $I_{out}$ rated, approx.	6.5 W

#### Closed-loop control

Dynamic mains compensation ( $V_{in}$ rated $\pm 15$ %), max.	0.5 %
Dynamic load smoothing ( $I_{out}$ : 50/100/50 %), $U_{out}$ $\pm$ typ.	5 %

#### Protection and monitoring

Output overvoltage protection	< 17.6 V
Current limitation, typ.	3.6 A
Property of the output Short-circuit proof	Yes
Short-circuit protection	Electronic shutdown, automatic restart
Enduring short circuit current RMS value	
• typical	6 A
Overload/short-circuit indicator	-

#### Safety

Primary/secondary isolation	Yes
Galvanic isolation	Safety extra low output voltage $V_{out}$ according to EN 60950-1
Protection class	Class I
Leakage current	

<ul style="list-style-type: none"> <li>• maximum</li> </ul>	3.5 mA
<ul style="list-style-type: none"> <li>• typical</li> </ul>	1 mA
Degree of protection (EN 60529)	IP20

### Approvals

CE mark	Yes
UL/cUL (CSA) approval	cULus-Listed (UL 508, CSA C22.2 No. 107.1), File E197259; cURus (UL 60950-1, CSA C22.2 No. 60950-1), File E151273
Explosion protection	-
FM approval	-
CB approval	Yes
Marine approval	-

### EMC

Emitted interference	EN 55022 Class B
Supply harmonics limitation	not applicable
Noise immunity	EN 61000-6-2

### environmental conditions

Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-10 ... +70 °C
<ul style="list-style-type: none"> <li>— Note</li> </ul>	with natural convection
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-40 ... +85 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-40 ... +85 °C

### Mechanics

Connection technology	screw-type terminals
Connections	
<ul style="list-style-type: none"> <li>• Supply input</li> </ul>	L, N, PE: 1 screw terminal each for 0.3 ... 1.3 mm <sup>2</sup> single-core/finely stranded
<ul style="list-style-type: none"> <li>• Output</li> </ul>	+, -: 1 screw terminal each for 0.3 ... 1.3 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• Auxiliary</li> </ul>	-
Width of the enclosure	97 mm
Height of the enclosure	98 mm
Depth of the enclosure	38 mm
Required spacing	
<ul style="list-style-type: none"> <li>• top</li> </ul>	20 mm
<ul style="list-style-type: none"> <li>• bottom</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>• left</li> </ul>	20 mm
<ul style="list-style-type: none"> <li>• right</li> </ul>	20 mm
Weight, approx.	0.37 kg
Installation	Wall mounting
Other information	Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified)