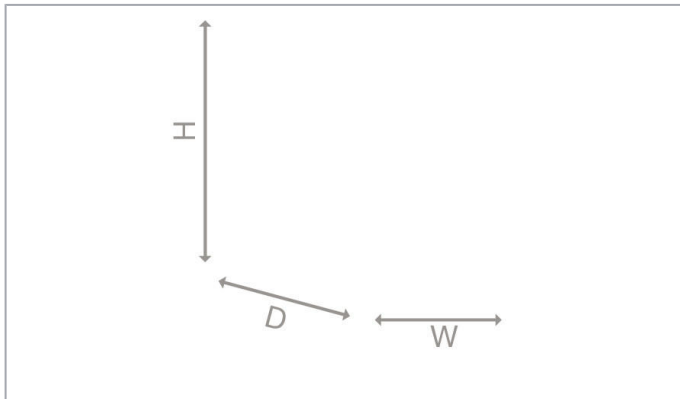
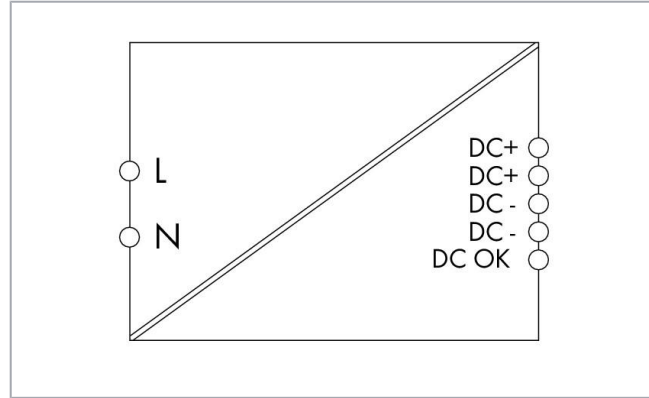


## Data sheet | Item number: 787-1601

Switched-mode power supply; Classic; 1-phase; 12 VDC output voltage; 2 A output current; NEC Class 2; DC OK signal



[www.wago.com/787-1601](http://www.wago.com/787-1601)



### Item description

#### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation

Subject to changes. Please also observe the further product documentation!

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- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204
- GL approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

## Data

### Technical data

#### Input

Phases	1
Nominal input voltage $U_{i\text{ nom}}$	1 x AC 100 ... 240 V
Input voltage range	AC 85 ... 264 V; DC 120 ... 372 V
Input voltage derating	-2.5 %/V (< 95 VAC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 0.29$ A (240 VAC); $\leq 0.5$ A (100 VAC)
Discharge current	$\leq 0.25$ mA
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 120$ ms (230 VAC); $\geq 15$ ms (100 VAC)

#### Output

Nominal output voltage $U_{o\text{ nom}}$	DC 12 V (SELV)
Output voltage range	DC 11.5 ... 14.5 V (adjustable)
Default setting	DC 12 V
Nominal output current $I_{o\text{ nom}}$	2 A (12 VDC); 2.1 A (< 40 °C)
Nominal output power	24 W
Control deviation	$\leq 1$ %
Residual ripple	$\leq 20$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o\text{ nom}}$ (typ.)
Overload behavior	Constant current

#### Signaling and communication

Signaling	1 x LED DC OK (green) 1 x Active signal output DC OK (12 VDC; 40 mA)
Operation status indicator	Green LED ( $U_o$ )

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## Efficiency/power losses

Power loss $P_l$	$\leq 0.7$ W (230 VAC; No load); $\leq 5.3$ W (230 VAC; Nominal load)
Power loss (max.) $P_{l(max)}$	5.7 W (100 VAC / 12 VDC; 2 A)
Efficiency (typ.)	82 %

## Circuit protection

Internal fuse	T 2 A / 250 VAC
Required backup fusing	An external DC fuse is required for the DC input voltage.
Recommended backup fusing	Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C

## Safety and protection

Isolation voltage (Pri.-Sec.)	DC 4.242 kV
Protection class	II
Protection type	IP20 (per EN 60529)
Resistance to reverse feed	$\leq$ DC 25 V
Overvoltage category	II
Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected	Yes
Open-circuit-proof	Yes
Parallel operation	Yes
Series operation	Yes
MTBF	$> 500,000$ h (per IEC 61709)

## Connection data

Connection type (1)	Input/Output/Signaling
Connection technology	CAGE CLAMP®
WAGO Connector	WAGO 721 Series
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

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## Physical data

Width	22.5 mm / 0.886 inch
Height	90 mm / 3.543 inch
Depth from upper edge of DIN-rail	107.5 mm / 4.232 inch

## Mechanical data

Mounting type	DIN-35 rail
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## Material data

Weight	128 g
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## Environmental requirements

Surrounding air temperature (operation)	-25 ... 70 °C (Device starts at -40 °C (type-tested))
Surrounding air temperature (storage)	-25 ... 85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-3 %/K (> 50 °C)
Pollution degree	2
Climatic category	3K3 (per EN 60721)

## Standards and specifications

Conformity marking	CE
Standards/Specifications	EN 60950-1; EN 61204-3; EN 60335-1; UL 60950-1; UL 508; GL

## Commercial data

Product Group	6 (Interface Electronics)
Packaging type	BOX
Country of origin	DE
GTIN	4055143060400
Customs tariff number	85044082900

## Approvals / Certificates

### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	GL	-	14788-

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## UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 508	E255817
	UL Underwriters Laboratories Inc.	UL 60950-1	E255815

## Compatible products















## ferrule

	<b>Item no.: 216-201</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-201">www.wago.com/216-201</a>
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-202">www.wago.com/216-202</a>
	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-203">www.wago.com/216-203</a>
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-204">www.wago.com/216-204</a>
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; white	<a href="http://www.wago.com/216-221">www.wago.com/216-221</a>
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; gray	<a href="http://www.wago.com/216-222">www.wago.com/216-222</a>
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; red	<a href="http://www.wago.com/216-223">www.wago.com/216-223</a>
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; black	<a href="http://www.wago.com/216-224">www.wago.com/216-224</a>
	<b>Item no.: 216-241</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	<a href="http://www.wago.com/216-241">www.wago.com/216-241</a>
	<b>Item no.: 216-242</b>	

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	Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-242">www.wago.com/216-242</a>
	<b>Item no.: 216-243</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-243">www.wago.com/216-243</a>
	<b>Item no.: 216-244</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-244">www.wago.com/216-244</a>
	<b>Item no.: 216-262</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	<a href="http://www.wago.com/216-262">www.wago.com/216-262</a>
	<b>Item no.: 216-263</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	<a href="http://www.wago.com/216-263">www.wago.com/216-263</a>
	<b>Item no.: 216-264</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-264">www.wago.com/216-264</a>
	<b>Item no.: 216-284</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	<a href="http://www.wago.com/216-284">www.wago.com/216-284</a>
	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-301">www.wago.com/216-301</a>
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-302">www.wago.com/216-302</a>
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow	<a href="http://www.wago.com/216-321">www.wago.com/216-321</a>
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated; green	<a href="http://www.wago.com/216-322">www.wago.com/216-322</a>
<b>tools</b>		
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>
	<b>Item no.: 210-769</b> SCREWDRIVER; green	<a href="http://www.wago.com/210-769">www.wago.com/210-769</a>
<b>Marking accessories</b>		
	<b>Item no.: 2009-110</b> Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/2009-110">www.wago.com/2009-110</a>
	<b>Item no.: 2009-115</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	<a href="http://www.wago.com/2009-115">www.wago.com/2009-115</a>
	<b>Item no.: 2009-115/000-002</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	<a href="http://www.wago.com/2009-115/000-002">www.wago.com/2009-115/000-002</a>

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	<b>Item no.: 2009-115/000-006</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue	<a href="http://www.wago.com/2009-115/000-006">www.wago.com/2009-115/000-006</a>
	<b>Item no.: 2009-115/000-007</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	<a href="http://www.wago.com/2009-115/000-007">www.wago.com/2009-115/000-007</a>
	<b>Item no.: 2009-115/000-012</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange	<a href="http://www.wago.com/2009-115/000-012">www.wago.com/2009-115/000-012</a>
	<b>Item no.: 2009-115/000-017</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green	<a href="http://www.wago.com/2009-115/000-017">www.wago.com/2009-115/000-017</a>
	<b>Item no.: 2009-115/000-023</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	<a href="http://www.wago.com/2009-115/000-023">www.wago.com/2009-115/000-023</a>
	<b>Item no.: 2009-115/000-024</b> WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet	<a href="http://www.wago.com/2009-115/000-024">www.wago.com/2009-115/000-024</a>
	<b>Item no.: 210-831</b> Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-831">www.wago.com/210-831</a>
	<b>Item no.: 210-832</b> Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white	<a href="http://www.wago.com/210-832">www.wago.com/210-832</a>
	<b>Item no.: 793-501</b> WMB marking card; as card; not stretchable; plain; snap-on type; white	<a href="http://www.wago.com/793-501">www.wago.com/793-501</a>
	<b>Item no.: 793-501/000-002</b> WMB marking card; as card; not stretchable; plain; snap-on type; yellow	<a href="http://www.wago.com/793-501/000-002">www.wago.com/793-501/000-002</a>
	<b>Item no.: 793-501/000-005</b> WMB marking card; as card; not stretchable; plain; snap-on type; red	<a href="http://www.wago.com/793-501/000-005">www.wago.com/793-501/000-005</a>
	<b>Item no.: 793-501/000-006</b> WMB marking card; as card; not stretchable; plain; snap-on type; blue	<a href="http://www.wago.com/793-501/000-006">www.wago.com/793-501/000-006</a>
	<b>Item no.: 793-501/000-007</b> WMB marking card; as card; not stretchable; plain; snap-on type; gray	<a href="http://www.wago.com/793-501/000-007">www.wago.com/793-501/000-007</a>
	<b>Item no.: 793-501/000-012</b> WMB marking card; as card; not stretchable; plain; snap-on type; orange	<a href="http://www.wago.com/793-501/000-012">www.wago.com/793-501/000-012</a>

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**Item no.: 793-501/000-017**

WMB marking card; as card; not stretchable; plain; snap-on type; light green

[www.wago.com/793-501/000-017](http://www.wago.com/793-501/000-017)



**Item no.: 793-501/000-023**

WMB marking card; as card; not stretchable; plain; snap-on type; green

[www.wago.com/793-501/000-023](http://www.wago.com/793-501/000-023)



**Item no.: 793-501/000-024**

WMB marking card; as card; not stretchable; plain; snap-on type; violet

[www.wago.com/793-501/000-024](http://www.wago.com/793-501/000-024)



**Item no.: 793-5501**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

[www.wago.com/793-5501](http://www.wago.com/793-5501)



**Item no.: 793-5501/000-002**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

[www.wago.com/793-5501/000-002](http://www.wago.com/793-5501/000-002)



**Item no.: 793-5501/000-005**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red

[www.wago.com/793-5501/000-005](http://www.wago.com/793-5501/000-005)



**Item no.: 793-5501/000-006**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

[www.wago.com/793-5501/000-006](http://www.wago.com/793-5501/000-006)



**Item no.: 793-5501/000-007**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray

[www.wago.com/793-5501/000-007](http://www.wago.com/793-5501/000-007)



**Item no.: 793-5501/000-012**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange

[www.wago.com/793-5501/000-012](http://www.wago.com/793-5501/000-012)



**Item no.: 793-5501/000-014**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; brown

[www.wago.com/793-5501/000-014](http://www.wago.com/793-5501/000-014)



**Item no.: 793-5501/000-017**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green

[www.wago.com/793-5501/000-017](http://www.wago.com/793-5501/000-017)



**Item no.: 793-5501/000-023**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green

[www.wago.com/793-5501/000-023](http://www.wago.com/793-5501/000-023)



**Item no.: 793-5501/000-024**

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

[www.wago.com/793-5501/000-024](http://www.wago.com/793-5501/000-024)

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## Downloads

### Documentation

#### Bid Text

787-1601 X81 - Datei	Jul 4, 2019	xml 7.1 kB	Download
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787-1601 docx - Datei	May 31, 2019	docx 20.3 kB	Download
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#### Instruction Leaflet

Primär getaktete Stromversorgungen EPSITRON® CLASSIC Power DC 12 V, 2 A		pdf 321.7 kB	Download
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#### Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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## CAD/CAE-Data

### CAD data

2D/3D Models 787-1601		URL	Download
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### CAE data

EPLAN Data Portal 787-1601		URL	Download
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WSCAD Universe 787-1601		URL	Download
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ZUKEN Portal 787-1601		URL	Download
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## Installation Notes

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## Product family

### EPSITRON CLASSIC Power

EPSITRON® CLASSIC POWER: The Robust Power Supply – with Integrated TopBoost (Optional)

[Show all products from the family](#)

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