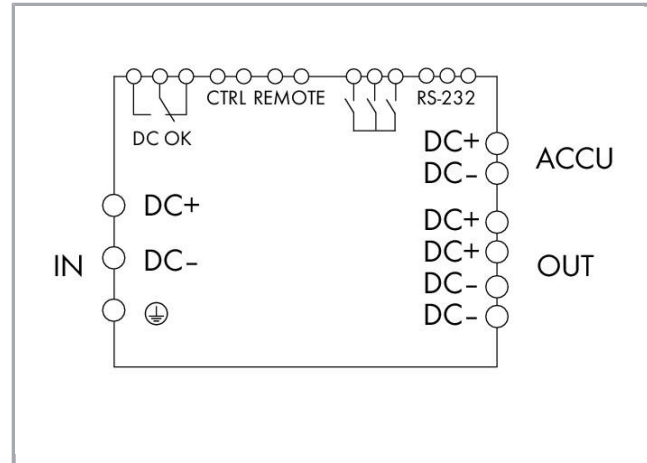


Data sheet | Item number: 787-870

UPS charger and controller; 24 VDC input voltage; 24 VDC output voltage;  
10 A output current; LineMonitor; communication capability; 2,50 mm<sup>2</sup>



[www.wago.com/787-870](http://www.wago.com/787-870)



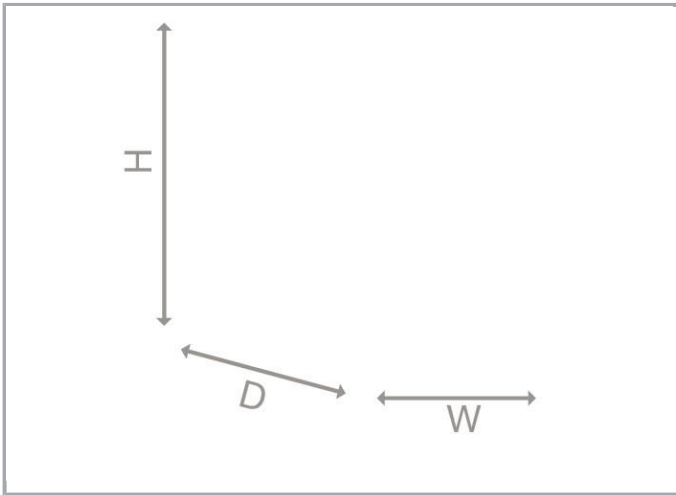
RoHS  Compliant

BOMcheck.net

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

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We are always happy to take your call at +49 (571) 887-44222.



## Item description

### Features:

- Charger and controller for uninterruptible power supply (UPS)
- Current and voltage monitoring, as well as parameter setting via LCD and RS-232 interface
- Active signal outputs for function monitoring
- Remote input for deactivating the buffered output
- Input for temperature control of connected battery
- Battery control (from manufacturing no. 215563 onwards) detects both battery life and battery type

## Data

### Technical Data

#### Input

Nominal input voltage $U_{i \text{ nom}}$	DC 24 V
Input voltage range	DC 22 ... 29 V
Nominal mains frequency range	0 Hz
Input current $I_i$	$\leq 0,1 \text{ A}$ (No load); $\leq 0,8 \text{ A}$ (Charging); $\leq 10,8 \text{ A}$
Inrush current	$\leq 4 \text{ A}$ (no load)

#### Output

Nominal output voltage $U_{o \text{ nom}}$	DC 24 V
Output voltage range	

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



$U_i$  – 1 VDC (rated operation); 20 ... 25.5 VDC (buffer mode)

Nominal output current $I_{o\text{ nom}}$	10 A
Current limitation	1.1 ... 1.4 x $I_{o\text{ nom}}$ (typ.)

### Energy storage

Buffer time	10 s ... 10 min (or constant; adjustable)
Switch-on threshold (adjustable)	DC 20 ... 25,5 V
Charging current	$\leq 0,6$ A
End-of-charge voltage	DC 26 ... 29,5 V (temperature-controlled; optional fixed setting)
Recommended battery module	787-871, 787-872, 787-873, 787-876, 787-1671

### Signaling and communication

Signaling	<ul style="list-style-type: none"> <li>1 x LED DC OK (green)</li> <li>1 x Warning LED (yellow)</li> <li>1 x Error LED (red)</li> <li>LCD</li> <li>3 x Signal output (24 VDC; max. 25 mA)</li> <li>1 x Isolated relay contact (max. 30 VDC; 1 A)</li> <li>1 x RS-232 interface</li> <li>Battery control (C+; C-)</li> </ul>
Operation status indicator	<ul style="list-style-type: none"> <li>Green LED (<math>U_o</math>)</li> <li>Yellow LED (warning)</li> <li>Red LED (error)</li> </ul>
Communication	RS-232 serial interface
Remote input	Switching buffer mode off

### Efficiency/Power losses:

Power loss $P_l$	$\leq 15$ W (no load); $\leq 20$ W (nominal load)
Efficiency (typ.)	95 %

### Fuse protection:

Internal fuse	T 15 A
---------------	--------

### Safety and protection:

Insulation voltage (connectors-housing)	DC 0,5 kV
Protection class	III

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



Protection class	IP20 (per EN 60529)
Reverse voltage protection	yes
Feedback voltage	≤ DC 35 V
Parallel operation	Yes, max. 3 battery modules for buffer time extension (temperature measurement evaluation is only possible via one battery module)
Series connection	No
MTBF	> 500,000 h (per IEC 61709)

### Connection data

Connection type (1)	Input/Output
Connection technology	CAGE CLAMP®
WAGO terminal	WAGO 231 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
Connection type (2)	Signaling
Connection technology 2	CAGE CLAMP®
WAGO terminal 2	WAGO 733 Series
Solid conductor (2)	0,08 ... 0,5 mm <sup>2</sup> / 28 ... 20 AWG
Fine-stranded conductor (2)	0,08 ... 0,5 mm <sup>2</sup> / 28 ... 20 AWG
Strip length (2)	5 ... 6 mm / 0.2 ... 0.24 inch
Max. line length	3 m (Input, Output, Battery Control)

### Geometrical Data

Width	40 mm / 1.575 inch
Height	163 mm / 6.417 inch
Length from upper-edge of DIN-35 rail	163 mm / 6.417 inch
Note on dimensions	Height with connector

### Mechanical data

Type of mounting	DIN-35 rail (EN 60715) in 2 positions
------------------	---------------------------------------

### Material Data

Weight	800 g
--------	-------

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

## Environmental Requirements

Surrounding air (operating) temperature	-10 ... 60 °C
Surrounding air (storage) temperature	-25 ... 85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Pollution degree	2

## Standards and specifications



Conformity marking	CE
Standards/specifications	EN 60950; UL 60950; UL 508; EN 61000-6-2; EN 61000-6-3

## Commercial data

Product Group	6 (Interface Electronics)
Packaging type	BOX
Country of origin	DE
GTIN	4045454909857
Customs Tariff No.	85044055900

## Approvals / Certificates

### UL-Approvals

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

## Counterpart


## Compatible products

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

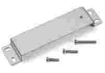


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### Marking accessories

	<b>Item no.: 2009-110</b> Marking strips; 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.: 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>



### Mounting adapter

	<b>Item no.: 787-895</b> EPSITRON® wall mount adapter; for screw fixing of 787-8xx devices on mounting plate or wall without DIN 35 rail	<a href="http://www.wago.com/787-895">www.wago.com/787-895</a>
	<b>Item no.: 787-896</b> Carrier rail adapter; for mounting 787-8xx devices to a DIN 35 rail	<a href="http://www.wago.com/787-896">www.wago.com/787-896</a>
	<b>Item no.: 787-897</b> Carrier rail adapter made of zinc die-cast; for mounting 787-8xx devices to a DIN 35 rail	<a href="http://www.wago.com/787-897">www.wago.com/787-897</a>

### General accessories

	<b>Item no.: 761-9005</b> USB adapter; with 1m connection cable	<a href="http://www.wago.com/761-9005">www.wago.com/761-9005</a>
	<b>Item no.: 787-1671</b> Lead-acid AGM battery module; 24 VDC input voltage; 5 A output current; Capacity: 0.8 Ah; with battery control	<a href="http://www.wago.com/787-1671">www.wago.com/787-1671</a>
	<b>Item no.: 787-871</b> Lead-acid AGM battery module; 24 VDC input voltage; 20 A output current; 3.2 Ah capacity; with battery control; 2,50 mm <sup>2</sup>	<a href="http://www.wago.com/787-871">www.wago.com/787-871</a>
	<b>Item no.: 787-872</b> Lead-acid AGM battery module; 24 VDC input voltage; 40 A output current; 7 Ah capacity; with battery control; 10,00 mm <sup>2</sup>	<a href="http://www.wago.com/787-872">www.wago.com/787-872</a>
	<b>Item no.: 787-873</b> Lead-acid AGM battery module; 24 VDC input voltage; 40 A output current; 12 Ah capacity; with battery control; 10,00 mm <sup>2</sup>	<a href="http://www.wago.com/787-873">www.wago.com/787-873</a>
	<b>Item no.: 787-876</b> Lead-acid AGM battery module; 24 VDC input voltage; 7.5 A output current; 1.2 Ah capacity; with battery control	<a href="http://www.wago.com/787-876">www.wago.com/787-876</a>
	<b>Item no.: 787-890</b> RS-232 communication cable; Length 1.8 m	<a href="http://www.wago.com/787-890">www.wago.com/787-890</a>

### tools

	<b>Item no.: 210-719</b> Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft	<a href="http://www.wago.com/210-719">www.wago.com/210-719</a>
	<b>Item no.: 210-720</b> Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft	<a href="http://www.wago.com/210-720">www.wago.com/210-720</a>

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

## 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> 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>	

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

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

[www.wago.com/216-301](http://www.wago.com/216-301)



**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; green

[www.wago.com/216-302](http://www.wago.com/216-302)

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm<sup>2</sup> / AWG 24; insulated; electro-tin plated; yellow

[www.wago.com/216-321](http://www.wago.com/216-321)



**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm<sup>2</sup> / 22 AWG; insulated; electro-tin plated; green

[www.wago.com/216-322](http://www.wago.com/216-322)

## Downloads

### Documentation

#### Quick-Start Guide

Quickstart for Software 759-870	V 1.0.0	pdf	Download
Configuration of the USV Control Units 787-870, 787-875 and 787-1675		3.1 MB	

#### Instruction Leaflet

EPSITRON-USV-Lade- und Kontrolleinheit DC 24 V, 10 A		pdf	Download
		875.9 kB	

#### Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf	Download
		265.8 kB	

## Libraries

### Library

Anbindung Stromversorgungen Serie 787	V1.3.0	zip	Download
Die Bibliothek "WagoLib787_01.lib" stellt Funktionsbausteine und Visualisierungen zur Verfügung, mit deren Hilfe die Informationen der WAGO Stromversorgungsmodule der Serie 787 angezeigt werden können.	May 14, 2014	562.7 kB	

## Engineering-Software

### Configuration and Commissioning Software

WAGO UPS Shutdown Tool	1.0.2	zip	Download
UPS Shutdown Tool, for automatic shutdown of Windows PCs via UPS	Jun 1, 2010	853.7 kB	

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





#### Software for Interface-Products

WAGO Software 759-870	2.5.3.1	zip	Download
Software 759-870 V2, for configuration and visualization of UPS control units 787-870, 787-875 and combined UPS unit 787-1675	Jun 26, 2019	6.5 MB	

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#### CAD/CAE-Data

##### CAD data

2D/3D Models 787-870	URL	Download
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##### CAE data

EPLAN Data Portal 787-870	URL	Download
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WSCAD Universe 787-870	URL	Download
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#### Installation Notes

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