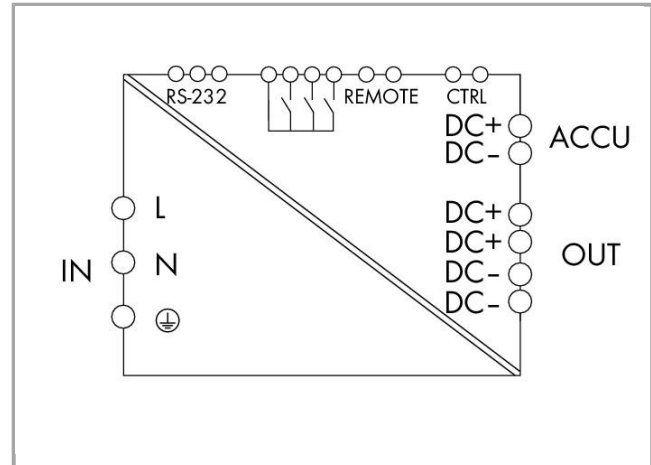


Data sheet | Item number: 787-1675

Switched-mode power supply with integrated charger and controller;  
Classic; 1-phase; 24 VDC output voltage; 5 A output current; communication  
capability

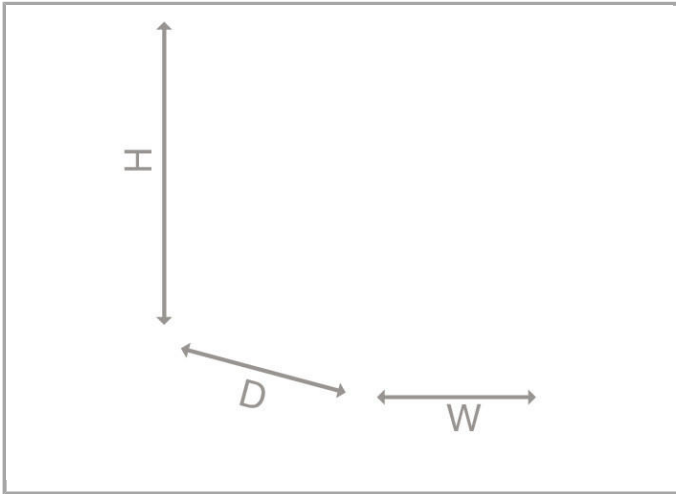


787-1675



RoHS  
Compliant

BOMcheck.net



## Item description

### Features:

- Primary switch mode power supply with integrated charger and controller for uninterruptible power supply (UPS)
- Battery control technology for smooth charging and predictive maintenance applications
- Potential-free contacts provide function monitoring
- Buffer time can be set on site via rotary switch
- Parameter setting and monitoring via RS-232 interface
- Natural convection cooling when horizontally mounted
- Enclosed for use in control cabinets
- Electrically isolated output voltage (SELV) per EN 60950-1/UL 60950-1; PELV per EN 60204

## Data

### Technical Data

#### Input

Nominal input voltage $U_{i\text{nom}}$	AC 100 ... 240 V
Input voltage range	AC 85 ... 264 V; DC 120 ... 372 V
Input voltage derating	-1.5 %/V (< 110 VAC); -1 %/V (< 150 VDC)
Nominal mains frequency range	44 ... 66 Hz; 0 Hz
Input current $I_i$	$\leq 1.1$ A (230 VAC; 5 ADC); $\leq 2.2$ A (110 VAC; DC 5 A)
Discharge current	$\leq 1$ mA
Inrush current	$\leq 30$ A
Power factor correction (PFC)	Passive

#### Output

Nominal output voltage $U_{o\text{nom}}$	DC 24 V (SELV)
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Output voltage range	DC 23 ... 28.5 V (at mains operation); 18.5 ... 27.5 VDC (at buffer operation)
Nominal output current $I_{o\text{ nom}}$	5 A
Nominal output power	120 W
Adjustment accuracy	$\leq 1 \%$
Residual ripple	$\leq 50 \text{ mV}$ (peak-to-peak)
Current limitation	$1.1 \times I_{o\text{ nom}}$ typ.; TopBoost
Overload behavior	Constant current

### Energy storage

Buffer time	1 s ... 20 min (or continuously; PC mode; adjustable via software)
Switch-on threshold (adjustable)	DC 20 ... 25.5 V (configurable via software; pre-configured: 22 VDC)
Charging current	0.3 ... 1 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	1 x LED alarm (red) 1 x LED battery charge (yellow) 1 x LED DC OK (green) 3 x signal output (24 VDC, max. 200 mA in total) 1 x RS-232 interface
Operation status indicator	LED green (DC OK) LED yellow (battery mode) LED red (alarm)
Communication	RS-232 serial interface
Remote input	to switch off buffer operation

### Efficiency/Power losses:

Power loss $P_v$	$\leq 5.2 \text{ W}$ (buffer operation; 24 VDC; 5 A); $\leq 17 \text{ W}$ (mains operation; AC 230 V; DC 24 V; 5 A); $\leq 22 \text{ W}$
Max. power loss $P_{v\text{ max.}}$	30 W (90 VAC; charging)
Efficiency	88 %

### Fuse protection:

Internal fuse	T 4 A / 250 VAC (input side)
External fuse (required)	an external DC fuse required for DC input voltage
External fuse (recommended)	Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C

**Safety and protection:**

Insulation voltage (PRI-SEC)	4.242 kV DC
Isolation voltage (PRI-GND)	2.2 kV DC
Insulation voltage (SEC-GND)	0.7 kV DC
Protection class	I
Protection class	IP20 (per EN 60529)
Reverse voltage protection	yes
Feedback voltage	≤ DC 35 V
Overvoltage category	II
Transient protection, primary	Varistor
Overvoltage protection, secondary	Internal protective VDCe circuit ≤ 38 VDC (in case of an error)
Parallel operation	Yes, max. 3 battery modules for buffer time extension
Series connection	No
MTBF	> 500,000 h (per IEC 61709)

**Connection data**

Connection type (1)	Input/Output/Signaling
Connection technology	CAGE CLAMP®
WAGO terminal	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
Connection type (2)	Interface
Connection technology 2	CAGE CLAMP®
WAGO terminal 2	WAGO 734 Series
Solid conductor (2)	0.08 ... 1.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length (2)	6 ... 7 mm / 0.24 ... 0.28 inch
Max. line length	3 m (Output, Battery Control)

**Geometrical Data**

Width	60 mm / 2.362 inch
Height	127 mm / 5 inch
Length from upper-edge of DIN-35 rail	135.5 mm / 5.335 inch

**Mechanical data**

Type of mounting	DIN-35 rail (EN 60715)
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## Material Data

Weight	885 g
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## Environmental Requirements

Surrounding air (operating) temperature	-25 ... 70 °C (Device start at -40 °C type-tested)
Surrounding air (storage) temperature	-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	1
Standards/specifications	EN 60950; EN 61204-3; EN 61558-2-16; UL 60950; UL 508; GL

## Commercial data



Product Group	6 (Interface Electronics)
Country of origin	DE
GTIN	4050821502616
Customs Tariff No.	85044082900

## Approvals / Certificates

### Ship Approvals

















Logo	Approval	Additional Approval Text	Certificate name
	GL Germanischer Lloyd	-	14788-15HH















### 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	216-201
	<b>Item no.: 216-202</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated	216-202
	<b>Item no.: 216-203</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated	216-203
	<b>Item no.: 216-204</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated	216-204
	<b>Item no.: 216-221</b> Ferrule; Sleeve for 0.5 mm <sup>2</sup> / 20 AWG; insulated; electro-tin plated	216-221
	<b>Item no.: 216-222</b> Ferrule; Sleeve for 0.75 mm <sup>2</sup> / 18 AWG; insulated; electro-tin plated	216-222
	<b>Item no.: 216-223</b> Ferrule; Sleeve for 1 mm <sup>2</sup> / AWG 18; insulated; electro-tin plated	216-223
	<b>Item no.: 216-224</b> Ferrule; Sleeve for 1.5 mm <sup>2</sup> / AWG 16; insulated; electro-tin plated	216-224
	<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	216-241
	<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	216-242
	<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	216-243
	<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	216-244
	<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	216-262
	<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	216-263
	<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	216-264
	<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	216-284

	<b>Item no.: 216-301</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated	216-301
	<b>Item no.: 216-302</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated	216-302
	<b>Item no.: 216-321</b> Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated	216-321
	<b>Item no.: 216-322</b> Ferrule; Sleeve for 0.34 mm <sup>2</sup> / 22 AWG; insulated; electro-tin plated	216-322
<b>tools</b>		
	<b>Item no.: 210-719</b> Operating tool with partially insulated shaft; Type 1, blade (2.5 x 0.4) mm	210-719
	<b>Item no.: 210-720</b> Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm	210-720
	<b>Item no.: 210-769</b> SCREWDRIVER	210-769
<b>General accessories</b>		
	<b>Item no.: 761-9005</b> USB adapter; with 1m connection cable	761-9005
	<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	787-1671
	<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	787-871
	<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	787-872
	<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	787-873
	<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	787-876
	<b>Item no.: 787-892</b> RS-232 communication cable; Length 1.8 m; for 0787-1675	787-892
<b>Marking accessories</b>		
	<b>Item no.: 210-831</b> Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive	210-831
	<b>Item no.: 210-832</b> Marking strips; on reel; 3 mm wide; plain; Self-adhesive	210-832

**Downloads****Documentation****Manual**



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**Quick-Start Guide**

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

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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 - Smart Data****CAD data**

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Subject to changes.