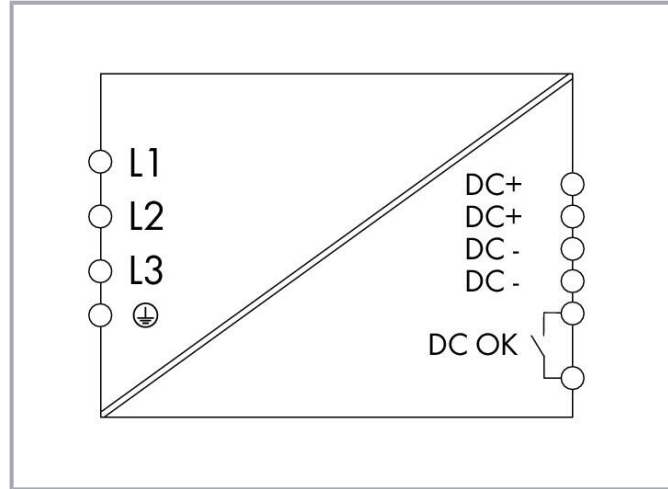


Data sheet | Item number: 787-1644

Switched-mode power supply; Classic; 3-phase; 24 VDC output voltage; 40 A output current; TopBoost; DC OK contact



www.wago.com/787-1644



Item description

Features:

- Switched-mode power supply with TopBoost, enabling secondary-side protection via circuit breakers
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204

Data

Technical data

Input

Phases	2 / 3
Nominal input voltage $U_{i \text{ nom}}$	(2 / 3) x AC 400 ... 500 V
Input voltage range	(2 / 3) x AC 320 ... 575 V; DC 450 ... 800 V
Nominal mains frequency range	47 ... 63 Hz; 0 Hz

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

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Input current I_i	$\leq 3 \times 2.15 \text{ A (400 VAC)}$; $\leq 3 \times 1.82 \text{ A (500 VAC)}$
Inrush current	$\leq 30 \text{ A (NTC)}$
Power factor correction (PFC)	Passive
Mains failure hold-up time	$\geq 25 \text{ ms (500 VAC)}$; $\geq 15 \text{ ms (400 VAC)}$

Output

Nominal output voltage $U_{o \text{ nom}}$	DC 24 V (SELV)
Output voltage range	DC 23 ... 28.5 V (adjustable)
Nominal output current $I_{o \text{ nom}}$	40 A (24 VDC)
Nominal output power	960 W
Residual ripple	$\leq 30 \text{ mV (peak-to-peak)}$
Current limitation	$1.1 \times I_{o \text{ nom}}$ (typ.)
Overload behavior	Constant current

Signaling and Communication

Signaling	1 x LED DC OK (green)
Operation status indicator	Green LED (U_o)

Efficiency/power losses

Power loss P_l	$\leq 4.2 \text{ W}$; $\leq 83.9 \text{ W (400 VAC; nominal load)}$
Power loss (max.) $P_{l \text{ (max.)}}$	83.9 W (500 VAC / 24 VDC; 40 A)
Efficiency (typ.)	92 %

Circuit protection

Internal fuse	No
Backup fusing (required)	Alternative: motor circuit breaker An external DC fuse is required for the DC input voltage.

Safety and protection

Isolation voltage (sec.-PE)	DC 0.7 kV
Protection class	I
Protection type	IP20; per EN 60529
Overvoltage category	II
Pollution degree	2

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



Transient suppression (primary)	Varistor
Overvoltage protection; secondary	Internal protective circuit ≤ 40 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/Signaling
Connection technology	CAGE CLAMP®
WAGO connector	WAGO 721 Series
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Connection type 2	Output
Connection technology 2	Push-in CAGE CLAMP®
WAGO connector 2	WAGO 831 Series
Solid conductor 2	0.5 ... 10 mm ² / 20 ... 8 AWG
Fine-stranded conductor 2	0.5 ... 10 mm ² / 20 ... 8 AWG
Strip length 2	13 ... 15 mm / 0.51 ... 0.59 inches

Physical data

Width	126 mm / 4.96 inches
Height	127 mm / 5 inches
Depth from upper-edge of DIN-rail	198 mm / 7.795 inches

Mechanical Data

Mounting type	DIN-35 rail
---------------	-------------

Material Data

Fire load	0.914 MJ
Weight	2800 g

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

Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C (Device starts at -40 °C (type-tested))
Ambient temperature (storage)	-25 ... +85 °C
Relative humidity	5 ... 96 % (no condensation permissible)
Derating	-2.5 %/K (> 55 °C)

Standards and specifications

Conformity marking	CE
Standards/specifications	EN 61010-1 EN 61010-2-201 EN 61204-3 UL 60950-1 UL 508 DNV SEMI F47

Commercial data


eCl@ss 10.0	27-04-07-01
eCl@ss 9.0	27-04-07-01
ETIM 8.0	EC002540
ETIM 7.0	EC002540
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4055143259187
Customs tariff number	85044083900

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals


Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 004/2011, TP TC 020/2011	EAC RU C-DE.AM02. B.

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


00089_19

	UL Underwriters Laboratories Inc.	UL 508	E255817
	UL Underwriters Laboratories Inc.	UL 60950-1	E255815





Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00000KT

Optional accessories

Ferrule			
Logo	Item no.:	Description	www.wago.com/
	216-203	Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	216-203
	216-206	Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; blue	216-206
	216-207	Ferrule; Sleeve for 4 mm ² / AWG 12; insulated; electro-tin plated; gray	216-207
	216-202	Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	216-202
	216-204	Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	216-204
	216-205		

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

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Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellow

www.wago.com/216-205



Item no.: 216-208

Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow

www.wago.com/216-208



Item no.: 216-201

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

www.wago.com/216-201



Item no.: 216-223

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red

www.wago.com/216-223



Item no.: 216-241

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white

www.wago.com/216-241



Item no.: 216-242

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

www.wago.com/216-242



Item no.: 216-222

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

www.wago.com/216-222



Item no.: 216-221

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

www.wago.com/216-221



Item no.: 216-224

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

www.wago.com/216-224



Item no.: 216-243

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

www.wago.com/216-243



Item no.: 216-244

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

www.wago.com/216-244



Item no.: 216-263

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

www.wago.com/216-263



Item no.: 216-246

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

www.wago.com/216-246



Item no.: 216-266

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

www.wago.com/216-266



Item no.: 216-264

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

www.wago.com/216-264



Item no.: 216-284

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black

www.wago.com/216-284



Item no.: 216-286

Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight

www.wago.com/216-286

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

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crimped; acc. to DIN 46228, Part 4/09.90; blue

**Item no.: 216-287**

Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray www.wago.com/216-287

**Item no.: 216-262**

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray www.wago.com/216-262

**Item no.: 216-288**

Ferrule; Sleeve for 6 mm² / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow www.wago.com/216-288

**Item no.: 216-301**

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow www.wago.com/216-301

**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow www.wago.com/216-321

**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise www.wago.com/216-322

**Item no.: 216-267**

Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray www.wago.com/216-267

**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise www.wago.com/216-302

Tool

Operating tool

**Item no.: 210-721**

Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured www.wago.com/210-721

**Item no.: 210-769**

SCREWDRIVER; green www.wago.com/210-769

**Item no.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured www.wago.com/210-720

Mounting adapter

DIN-rail adapter

**Item no.: 787-897/000-010**

Carrier rail adapter made of zinc die-cast; horizontal mounting of 787-16xx (TS35) www.wago.com/787-897/000-010

Marking accessories

Marking strip

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

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	Item no.: 2009-110 Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white	www.wago.com/2009-110
	Item no.: 210-831 Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white	www.wago.com/210-831
	Item no.: 210-832 Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white	www.wago.com/210-832
Marker		
	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-145
	Item no.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-115
	Item no.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/248-501
	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/793-501
	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

Downloads

Documentation

Bid Text

787-1644 X81 - Datei	2019 Jul 4	xml 7.5 kB	Download
787-1644 docx - Datei	2019 Jun 13	docx 22.2 kB	Download

Instruction Leaflet

Primär getaktete Stromversorgungen CLASSIC DC 24 V, 40 A		pdf 170.2 kB	Download
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Additional Information

Disposal and Recycling	V 1.1.0	pdf	Download
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Engineering-Software

Configuration and Commissioning Software

WAGO Line Length Calculation	1.3.5	exe	Download
Die WAGO Leitungslaengenrechnung hilft bei der Planung der sekundärseitigen Absicherung von Leitungen an WAGO Stromversorgungen Pro (787-8xx) und Classic (787-16xx). Nach Auswahl eines Netzgerätes kann der gewünschte Leitungsquerschnitt und der zugehörige Leitungsschutzschalter ausgewählt werden. Das Software-Werkzeug berechnet dann die maximale Leitungslänge, bei der die Absicherung unter Berücksichtigung der Leitungs- und Übergangswiderstände ordnungsgemäß funktioniert. Die Auswahl einer Grundlast kann vom Anwender vorgenommen werden.	2019 Dec 9	337.4 kB	

CAD/CAE-Data

CAD data

2D/3D Models 787-1644	URL	Download
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CAE data

EPLAN Data Portal 787-1644	URL	Download
WSCAD Universe 787-1644	URL	Download
ZUKEN Portal 787-1644	URL	Download

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 787-1644	URL	Download
Switched-mode power supply; Classic; 3-phase; 24 VDC output voltage; 40 A output current; TopBoost; DC OK contact		

Installation Notes

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



Product family

Classic

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

[Show all products from the family](#)

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