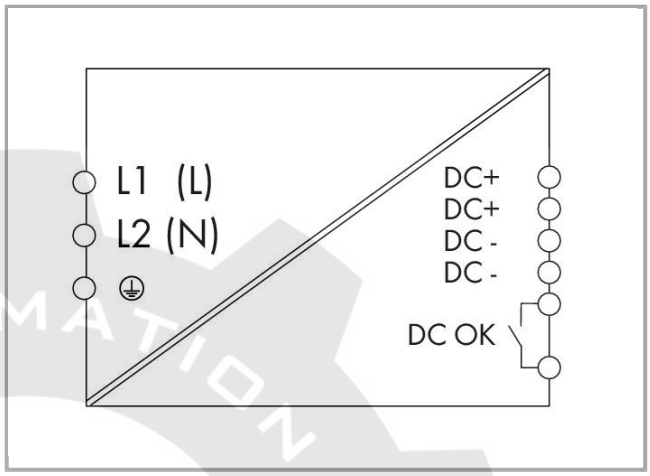
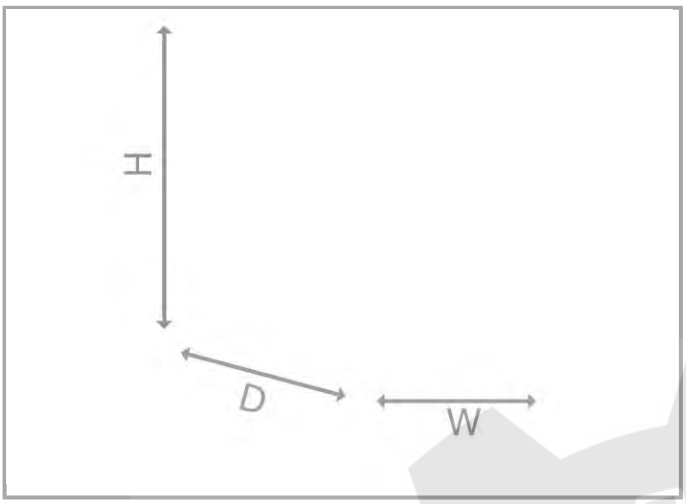
Data sheet | Item number: 787-1638

Switched-mode power supply; Classic; 2-phase; 24 VDC output voltage; 10 A output current; TopBoost; DC OK contact

787-1638





Item description

Features:

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

Data

Technical Data

Input

Phases	1 2
Nominal input voltage $U_{i\,nom}$	(1 / 2) x AC 200 … 500 V
Input voltage range	(1 / 2) x AC 180 … 550 V; DC 254 … 780 V
Input voltage derating	-0.5 %/V (< 200 VAC); -0.4 %/V (< 280 VDC)
Nominal mains frequency range	44 … 66 Hz; 0 Hz
Input current I_i	≤ 1.98 A (230 VAC); ≤ 1.36 A (230 VAC)
Discharge current	≤ 1 mA
Inrush current	≤ 30 A (NTC)
Power factor correction (PFC)	Passive
Mains failure hold-up time	≥ 78 ms (400 VAC); ≥ 20 ms (200 VAC)

Output

Nominal output voltage $U_{o\ nom}$	DC 24 V (SELV)
Output voltage range	DC 23 … 28.5 V (adjustable)
Factory preset	DC 24 V
Nominal output current $I_{o\ nom}$	10 A (24 VDC)
Nominal output power	240 W
Adjustment accuracy	≤ 1 %
Residual ripple	≤ 30 mV (peak-to-peak)
Current limitation	1.1 x $I_{o\ nom}$ typ.
Overload behavior	Constant current

Signaling and communication

Signaling	1 x LED DC OK (green) 1 x DC OK contact (make contact; max. 30 V AC/DC, 1 A)
Operation status indicator	LED green (U_o)

Efficiency/Power losses:

Power loss P_v	≤ 1.3 W (no load); ≤ 27.8 W (230 VAC; nominal load); ≤ 20.3 W (400 VAC; nominal load)
Max. power loss $P_{v\ max.}$	27.8 W (230 VAC / 24 VDC; 10 A)
Efficiency	89 % (230 VAC); 92.5 % (400 VAC)

Fuse protection:

Internal fuse	T 6.3 A / 500 VAC
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)
Feedback voltage	≤ DC 35 V
Overvoltage category	II
Transient protection, primary	Varistor
Overvoltage protection, secondary	Internal protectiVDCe circuit

	≤ 40 VDC (in case of an error)
Short circuit protection	Yes
No-load proof	Yes
Parallel operation	Yes
Series connection	Yes
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 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inch

Geometrical Data

Width	55 mm / 2.165 inch
Height	127 mm / 5 inch
Length from upper-edge of DIN-35 rail	146.5 mm / 5.768 inch

Mechanical data

Type of mounting	DIN-35 rail (EN 60715)

Material Data

Weight	830 g

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	−2.5 %/K (> 55 °C)
Pollution degree	2
Climatic category	3K3 (per EN 60721)

Standards and specifications

Conformity marking	1
Standards/specifications	EN 60950-1; EN 61204-3; UL 60950-1; UL 508; DNV GL

Commercial data

Country of origin	DE
GTIN	4055143521420
Customs Tariff No.	85043180888

Approvals / Certificates

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA00000KT

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

Marking accessories

	Item no.: 2009-110 Marking strips; on reel; not stretchable; plain; snap-on type	2009-110
	Item no.: 2009-115 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115
	Item no.: 2009-115/000-002 WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115
	Item no.: 2009-115/000-006 WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115

	**Item no.: 2009-115/000-007** WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-007
	**Item no.: 2009-115/000-012** WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-012
	**Item no.: 2009-115/000-017** WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-017
	**Item no.: 2009-115/000-023** WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-023
	**Item no.: 2009-115/000-024** WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-115 /000-024
	**Item no.: 210-831** Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive	210-831
	**Item no.: 210-832** Marking strips; on reel; 3 mm wide; plain; Self-adhesive	210-832
	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type	793-501
	**Item no.: 793-501/000-002** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-002
	**Item no.: 793-501/000-005** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-005
	**Item no.: 793-501/000-006** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-006
	**Item no.: 793-501/000-007** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-007
	**Item no.: 793-501/000-012** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-012
	**Item no.: 793-501/000-017** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-017
	**Item no.: 793-501/000-023** WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-023

	**Item no.: 793-501/000-024** WMB marking card; as card; not stretchable; plain; snap-on type	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	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	793-5501
	**Item no.: 793-5501/000-005** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-006** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-007** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-012** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-014** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-017** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-023** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501
	**Item no.: 793-5501/000-024** WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type	793-5501

ferrule

	**Item no.: 216-201** Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated	216-201
	**Item no.: 216-202** Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated	216-202
	**Item no.: 216-203** Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated	216-203
	**Item no.: 216-204** Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated	216-204
	**Item no.: 216-221** Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated	216-221

	**Item no.: 216-222** Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated	216-222
	**Item no.: 216-223** Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated	216-223
	**Item no.: 216-224** Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated	216-224
	**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	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	216-242
	**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	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	216-244
	**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	216-262
	**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	216-263
	**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	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	216-284
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated	216-301
	**Item no.: 216-302** Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated	216-302
	Item no.: 216-321 Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated	216-321
	**Item no.: 216-322** Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated	216-322
tools		
	**Item no.: 210-720** Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm	210-720
	**Item no.: 210-769** SCREWDRIVER	210-769

Downloads

Documentation

Bid Text

787-1638		doc 37.4 kB	Download

Instruction Leaflet

Primär getaktete Stromversorgungen EPSITRON® CLASSIC Power DC 24 V, 10 A, TopBoost		pdf 163.3 kB	Download

Additional Information

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

Engineering-Software

Configuration and Commissioning Software

Used for line length calculation The conductor length calculation assists in planning the secondary fuse protection for conductors to power supply devices from the EPSITRON® PRO power family (787-8xx) as well as EPSITRON(R) CLASSIC Power family (787-16xx). After choosing a 787-8xx and 787-16xx power supply unit, the desired conductor size and associated fuse can be selected. The software tool then calculates the maximum conductor length at which the fuse functions correctly, while also considering the conductor and transfer resistances. The user can select a base load.	1.3.4 Mar 20, 2017	zip 125.5 kB	Download

Product family

EPSITRON CLASSIC Power

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

Show all products from the family

Subject to changes.