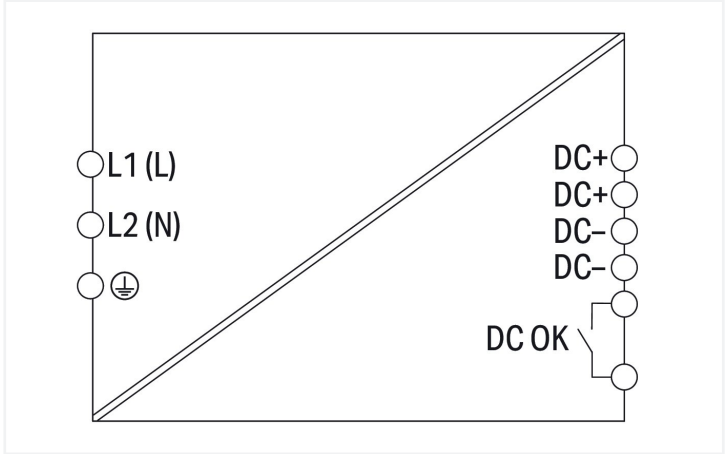


Data Sheet | Item Number: 787-1628

Switched-mode power supply; Classic; 2-phase; 24 VDC output voltage; 5 A output current; TopBoost; DC OK contact

<https://www.wago.com/787-1628>



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 EN 60950-1/UL 60950-1; PELV per EN 60204

Technical data

| Input                              |                                                  | Output                              |                                |
|------------------------------------|--------------------------------------------------|-------------------------------------|--------------------------------|
| Phases                             | 1 / 2                                            | Nominal output voltage $U_{o\ nom}$ | 24 VDC (SELV)                  |
| Nominal input voltage $U_{i\ nom}$ | (1 / 2) x 200 ... 500 VAC                        | Output voltage range                | 23 ... 28.5 VDC (adjustable)   |
| Input voltage range                | (1 / 2) x 180 ... 550 VAC; 254 ... 780 VDC       | Default Setting                     | DC 24 V                        |
| Input voltage derating             | -0.5 %/V (< 200 VAC); -0.4 %/V (< 280 VDC)       | Nominal output current $I_{o\ nom}$ | 5 A (24 VDC)                   |
| Nominal mains frequency range      | 44 ... 66 Hz; 0 Hz                               | Nominal output power                | 120 W                          |
| Input current $I_i$                | $\leq 1.25$ A (200 VAC); $\leq 0.67$ A (500 VAC) | Deviation                           | $\leq 1$ %                     |
| Discharge current                  | $\leq 1$ mA                                      | Residual ripple                     | $\leq 30$ mV (peak-to-peak)    |
| Inrush current                     | $\leq 30$ A (NTC)                                | Current limitation                  | $1.1 \times I_{o\ nom}$ (typ.) |
| Power factor                       | $\geq 0.52$                                      | Overload behavior                   | Constant current               |
| Power factor correction (PFC)      | Passive                                          |                                     |                                |
| Mains failure hold-up time         | $\geq 126$ ms (500 VAC); $\geq 15$ ms (200 VAC)  |                                     |                                |

| Signaling and communication |                                                                                |
|-----------------------------|--------------------------------------------------------------------------------|
| Signaling                   | 1 x LED DC OK (green)<br>1 x DC OK contact (make contact; max. 30 VAC/DC; 1 A) |
| Operation status indicator  | Green LED ( $U_o$ )                                                            |

| Efficiency/power losses           |                                                                                               |
|-----------------------------------|-----------------------------------------------------------------------------------------------|
| Power loss $P_i$                  | $\leq 0.94$ W; $\leq 16.36$ W (230 VAC; nominal load); $\leq 14.55$ W (400 VAC; nominal load) |
| Power loss (max.) $P_{i\ (max.)}$ | 18.2 W (200 VAC / 24 VDC; 5 A)                                                                |
| Efficiency (typ.)                 | 89 %                                                                                          |

| Circuit protection          |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| Internal fuse               | T 3.15 A / 500 VAC                                                |
| Backup fusing (required)    | An external DC fuse is required for the DC input voltage.         |
| Backup fusing (recommended) | Circuit breaker: 6 A, 10 A, 16 A; Tripping characteristic: B or C |



| Safety and protection             |  |                                                                   |
|-----------------------------------|--|-------------------------------------------------------------------|
| Isolation voltage (pri.-sec.)     |  | DC 4.242 kV                                                       |
| Isolation voltage (pri.-PE)       |  | DC 2.2 kV                                                         |
| Isolation voltage (sec.-PE)       |  | 0.7 kVDC                                                          |
| Protection class                  |  | I                                                                 |
| Protection type                   |  | IP20; per EN 60529                                                |
| Resistance to reverse feed        |  | ≤ 35 VDC                                                          |
| Overvoltage category              |  | II                                                                |
| Pollution degree                  |  | 2                                                                 |
| Transient suppression (primary)   |  | Varistor                                                          |
| Overvoltage protection; secondary |  | Internal protective circuit<br>≤ 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/output/signaling            |
| Connection technology   |  | CAGE CLAMP®                       |
| WAGO connector          |  | 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 inches |

| Physical data                     |  |                        |
|-----------------------------------|--|------------------------|
| Width                             |  | 42 mm / 1.654 inches   |
| Height                            |  | 127 mm / 5 inches      |
| Depth from upper-edge of DIN-rail |  | 143.5 mm / 5.65 inches |

| Mechanical data |  |             |
|-----------------|--|-------------|
| Mounting type   |  | DIN-35 rail |

| Material data |  |          |
|---------------|--|----------|
| Fire load     |  | 0.614 MJ |
| Weight        |  | 600 g    |

| 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)                                     |
| Climatic category               |  | 3K3 (per EN 60721)                                     |



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

| Commercial data       |               |
|-----------------------|---------------|
| eCl@ss 10.0           | 27-04-07-01   |
| eCl@ss 9.0            | 27-04-07-01   |
| ETIM 9.0              | EC002540      |
| ETIM 8.0              | EC002540      |
| PU (SPU)              | 1 pcs         |
| Packaging type        | Box           |
| Country of origin     | DE            |
| GTIN                  | 4055143259156 |
| Customs tariff number | 85044083900   |

| Environmental Product Compliance |                         |
|----------------------------------|-------------------------|
| RoHS Compliance Status           | Compliant, No Exemption |

| Approvals / Certificates                                                                                                                                                                                                                                   |                |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------|
| General approvals                                                                                                                                                                                                                                          |                | Declarations of conformity and manufacturer's declarations |
|    |                |                                                            |
| Approval                                                                                                                                                                                                                                                   | Standard       | Certificate Name                                           |
| EAC<br>GZO Almaty Standart                                                                                                                                                                                                                                 | TP TC 004/2011 | EAC CoC 03078                                              |
| EAC<br>GZO Almaty Standart                                                                                                                                                                                                                                 | TP TC 020/2011 | EAC CoC 03081                                              |
| UL<br>Underwriters Laboratories Inc.                                                                                                                                                                                                                       | UL 508         | E255817                                                    |
| UR<br>Underwriters Laboratories Inc.                                                                                                                                                                                                                       | UL 60950-1     | E255815                                                    |
| Approval                                                                                                                                                                                                                                                   | Standard       | Certificate Name                                           |
| EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG                                                                                                                                                                                                    | -              | -                                                          |
| MFD for SEMI F47<br>WAGO GmbH & Co. KG                                                                                                                                                                                                                     | -              | -                                                          |
| UK-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG                                                                                                                                                                                                    | -              | -                                                          |

| Approvals for marine applications                                                  |                        |                  |
|------------------------------------------------------------------------------------|------------------------|------------------|
|  |                        |                  |
| Approval                                                                           | Standard               | Certificate Name |
| DNV<br>DNV Germany GmbH                                                            | DNV-CG-0339, Aug. 2021 | TAA00000KT       |



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 787-1628

Download icon

Documentation

Bid Text

|          |            |                  |               |
|----------|------------|------------------|---------------|
| 787-1628 | 04.07.2019 | xml<br>7.20 KB   | Download icon |
| 787-1628 | 04.06.2019 | docx<br>21.23 KB | Download icon |

Instruction Leaflet

|                                            |                  |               |
|--------------------------------------------|------------------|---------------|
| Primär getaktete Stromversorgungen CLASSIC | pdf<br>159.50 KB | Download icon |
|--------------------------------------------|------------------|---------------|

CAD/CAE-Data

CAD data

|                       |               |
|-----------------------|---------------|
| 2D/3D Models 787-1628 | Download icon |
|-----------------------|---------------|

CAE data

|                            |               |
|----------------------------|---------------|
| EPLAN Data Portal 787-1628 | Download icon |
| WSCAD Universe 787-1628    | Download icon |
| ZUKEN Portal 787-1628      | Download icon |

Engineering-Software

Configuration and Commissioning Software

|                              |                     |                  |               |
|------------------------------|---------------------|------------------|---------------|
| WAGO Line Length Calculation | 1.3.5<br>09.12.2019 | exe<br>329.50 KB | Download icon |
|------------------------------|---------------------|------------------|---------------|

1 Compatible Products

1.1 Optional Accessories

1.1.1 Marking

1.1.1.1 Marker

**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

**Item No.: 793-501**  
WMB marking card; as card; not stretchable; plain; snap-on type; white

**Item No.: 2009-115**  
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



1.1.1.2 Marking strip



Item No.: 2009-110  
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white



Item No.: 210-831  
Marking strips; on reel; 2.3 mm wide; plain; Self-adhesive; white



Item No.: 210-832  
Marking strips; on reel; 3 mm wide; plain; Self-adhesive; white

1.1.2 Mounting adapter

1.1.2.1 DIN-rail adapter



Item No.: 787-897/000-010  
Carrier rail adapter made of zinc die-cast; horizontal mounting of 787-16xx (TS35)

1.1.3 Tool

1.1.3.1 Operating tool



Item No.: 210-720  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



Item No.: 210-769  
SCREWDRIVER; green