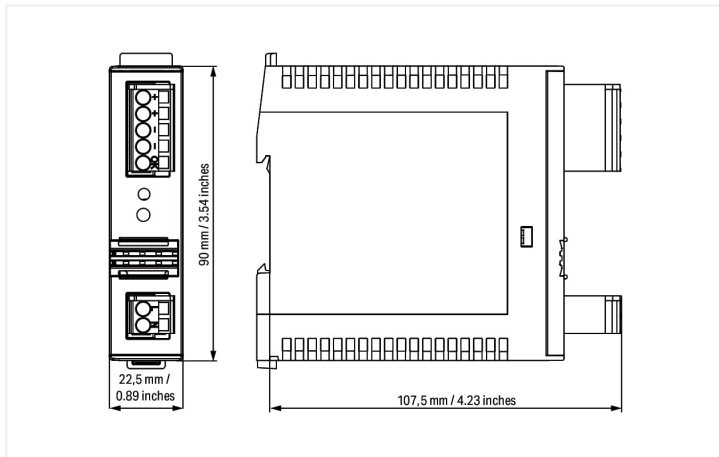
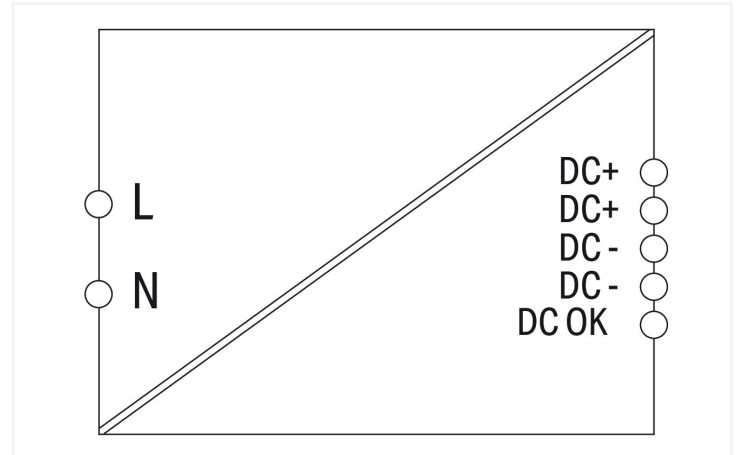


## Data Sheet | Item Number: 787-1602

Switched-mode power supply; Classic; 1-phase; 24 VDC output voltage; 1 A output current; NEC Class 2; DC OK signal

<https://www.wago.com/787-1602>



### Features:

- Switched-mode power supply
- Natural convection cooling when horizontally mounted
- Encapsulated for use in control cabinets
- Limited Power Source (LPS) per NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) per UL 60950-1; PELV per EN 60204
- GL approval, also suitable for EMC 1 in conjunction with 787-980 Filter Module

### Technical data

| Input                                     |                                                                  |
|-------------------------------------------|------------------------------------------------------------------|
| Phases                                    | 1                                                                |
| Nominal input voltage $U_{i, \text{nom}}$ | 1 x AC 100 ... 240 V                                             |
| Input voltage range                       | 1 x AC 85 ... 264 V; DC 120 ... 300 V                            |
| Input voltage derating                    | -2.5 %/V (< 95 VAC)                                              |
| Nominal mains frequency range             | 44 ... 66 Hz; 0 Hz                                               |
| Input current $I_i$                       | $\leq 0.28 \text{ A}$ (240 VAC); $\leq 0.49 \text{ A}$ (100 VAC) |
| Discharge current                         | $\leq 0.25 \text{ mA}$                                           |
| Inrush current                            | $\leq 30 \text{ A}$                                              |
| Power factor correction (PFC)             | Passive                                                          |
| Mains failure hold-up time                | $\geq 120 \text{ ms}$ (230 VAC); $\geq 20 \text{ ms}$ (100 VAC)  |

| Output                                     |                                       |
|--------------------------------------------|---------------------------------------|
| Nominal output voltage $U_{o, \text{nom}}$ | DC 24 V (SELV)                        |
| Output voltage range                       | DC 23 ... 28.5 V (adjustable)         |
| Default Setting                            | DC 24 V                               |
| Nominal output current $I_{o, \text{nom}}$ | 1 A (24 VDC); 1.2 A (                 |
| Nominal output power                       | 24 W                                  |
| Deviation                                  | $\leq 1 \%$                           |
| Residual ripple                            | $\leq 20 \text{ mV}$ (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)<br>1 x Active signal output DC OK (24 VDC; 20 mA) |
| Operation status indicator | Green LED (U <sub>o</sub> )                                             |

### Efficiency/power losses

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Power loss P <sub>I</sub>             | ≤ 1 W; ≤ 4 W (230 VAC; nominal load) |
| Power loss (max.) P <sub>I(max)</sub> | 5 W (100 VAC / 24 VDC; 1 A)          |
| Efficiency (typ.)                     | 86 %                                 |

### Circuit protection

|                             |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| Internal fuse               | T 2 A / 250 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                                                       |
| Protection class                   | II                                                                |
| Protection type                    | IP20; per EN 60529                                                |
| Resistance to reverse feed         | ≤ DC 35 V                                                         |
| Oversvoltage category              | II                                                                |
| Pollution degree                   | 2                                                                 |
| Transient suppression (primary)    | Varistor                                                          |
| Oversvoltage protection; secondary | Internal protective circuit<br>≤ 39 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 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 inches            |

### Physical data

|                                   |                         |
|-----------------------------------|-------------------------|
| Width                             | 22.5 mm / 0.886 inches  |
| Height                            | 90 mm / 3.543 inches    |
| Depth from upper-edge of DIN-rail | 107.5 mm / 4.232 inches |

### Mechanical data

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

### Material data

|           |       |
|-----------|-------|
| Fire load | 0 MJ  |
| Weight    | 128 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                        | -3 %/K (> 50 °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>EN 60335-1<br>UL 60950-1<br>UL 508<br>DNV<br>SEMI F47 |

### Commercial data

|                       |                          |
|-----------------------|--------------------------|
| Product Group         | 6 (INTERFACE ELECTRONIC) |
| 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                  | 4055143060417            |
| Customs tariff number | 85044083900              |

### Environmental Product Compliance

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

### Approvals / Certificates

#### General approvals



| 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<br>Inc. | UL 508         | E255817          |
| UR<br>Underwriters Laboratories<br>Inc. | UL 60950-1     | E255815          |

#### Declarations of conformity and manufacturer's declarations

| Approval                                                | Standard | Certificate Name |
|---------------------------------------------------------|----------|------------------|
| EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                |
| MFD for SEMI F47<br>WAGO GmbH & Co. KG                  | -        | -                |

Approvals for marine applications



| Approval                | Standard              | Certificate Name |
|-------------------------|-----------------------|------------------|
| DNV<br>DNV Germany GmbH | DNVGL-CG-339,Dec.2019 | TAA00002YC       |

Downloads

Environmental Product Compliance

| Compliance Search                         |
|-------------------------------------------|
| Environmental Product Compliance 787-1602 |

Documentation

| Bid Text |            |                  |  |
|----------|------------|------------------|--|
| 787-1602 | 04.07.2019 | xml<br>6.92 KB   |  |
| 787-1602 | 03.06.2019 | docx<br>20.54 KB |  |

| Instruction Leaflet                        |            |                   |  |
|--------------------------------------------|------------|-------------------|--|
| Primär getaktete Stromversorgungen CLASSIC | 17.05.2021 | pdf<br>1620.11 KB |  |

CAD/CAE-Data

| CAD data              |
|-----------------------|
| 2D/3D Models 787-1602 |

| CAE data                   |  |
|----------------------------|--|
| EPLAN Data Portal 787-1602 |  |
| WSCAD Universe 787-1602    |  |
| ZUKEN Portal 787-1602      |  |

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 Tool

#### 1.1.2.1 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