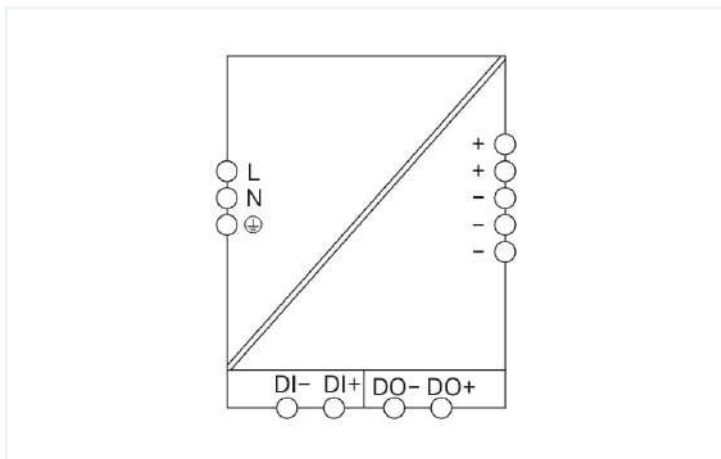


Data Sheet | Item Number: 2787-2448

Power supply; Pro 2; 1-phase; 24 VDC output voltage; 40 A output current; Top-Boost + PowerBoost; communication capability; Input voltage range: 200 ... 240 VAC

<https://www.wago.com/2787-2448>



Features:

- Power supply with TopBoost, PowerBoost and configurable overload behavior
- Configurable digital signal input and output, optical status indication, function keys
- Communication interface for configuration and monitoring
- Optional connection to IO-Link, EtherNet/IP™, Modbus TCP or Modbus RTU
- Suitable for both parallel and series operation
- Natural convection cooling when horizontally mounted
- Pluggable connection technology
- Electrically isolated output voltage (SELV/PELV) per EN 61010-2-201/UL 61010-2-201
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

Technical data

Input

| | |
|---|--|
| Phases | 1 |
| Nominal input voltage $U_{i, \text{nom}}$ | 1 x AC 200 ... 240 V |
| Input voltage range | 1 x AC 180 ... 264 V |
| Nominal mains frequency range | 50 ... 60 Hz |
| Input current I_i | $\leq 4.3 \text{ A}$ (240 VAC; nominal load); $\leq 5.1 \text{ A}$ (200 VAC; nominal load) |
| Inrush current | $\leq 10 \text{ A}$ (after 1 ms) |
| Power factor | ≥ 0.98 (240 VAC) |
| Power factor correction (PFC) | active |
| Mains failure hold-up time | $\geq 25 \text{ ms}$ (230 VAC) |

Output

| | |
|--|---------------------------------------|
| Nominal output voltage $U_{o, \text{nom}}$ | DC 24 V (SELV) |
| Output voltage range | DC 24 ... 28 V (adjustable) |
| Default setting | DC 24 V |
| Nominal output current $I_{o, \text{nom}}$ | 40 A (24 VDC) |
| Nominal output power | 960 W |
| Deviation | $\leq 1 \%$ |
| Residual ripple | $\leq 70 \text{ mV}$ (peak-to-peak) |
| Current limitation | $1.1 \times I_{o, \text{nom}}$ (typ.) |

Output

| | |
|-------------------|--|
| Overload behavior | TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set) |
| PowerBoost | DC 60 A (5 s) |
| TopBoost | Up to 600 % |

Signaling and communication

| | |
|---------------|---|
| Signaling | Optical status indication (DC OK; load; warning and error states) Digital signal input and output (DI/DO) |
| Communication | USB (Communication Cable 750-923) Ethernet/IP (Communication Module 2789-9023) IO-Link (Communication Module 2789-9080) Modbus RTU (Communication Module 2789-9015) Modbus TCP (Communication Module 2789-9052) |

Efficiency/power losses

| | |
|-------------------|---|
| Power loss P_1 | ≤ 1.5 W (standby); ≤ 2.4 W (no load); ≤ 40 W (230 VAC; nominal load) |
| Efficiency (typ.) | 96 % (230 VAC; 40 A; 25 °C); 96.3 % (230 VAC; 30 A; 25 °C) |

Circuit protection

| | |
|-----------------------------|---|
| Internal fuse | T 10 A / 250 VAC |
| Backup fusing (required) | An external DC fuse is required for the DC input voltage. |
| Backup fusing (recommended) | 16 A (for USA/Canada: 15 A) |

Safety and protection

| | |
|-----------------------------------|--|
| Isolation voltage (pri.-sec., AC) | 3510 V |
| Isolation voltage (pri.-PE, AC) | 2200 V |
| Isolation voltage (sec.-PE) | DC 0.5 kV |
| Isolation voltage (sec.-signal) | DC 0.5 kV |
| Protection class | I |
| Protection type | IP20; per EN 60529 |
| Resistance to reverse feed | \leq DC 35 V |
| Overvoltage category | III (≤ 2000 m a.s.l.); II (> 2000 m a.s.l.) |
| Pollution degree | 2 |
| Transient suppression (primary) | Yes |
| Overvoltage protection; secondary | Internal protective circuit ≤ 35 VDC (in the event of a fault) |
| Short-circuit-protected | Yes |
| Open-circuit-proof | Yes |
| Parallel operation | Yes |
| Series operation | Yes |
| MTBF | $> 900,000$ 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 |
| Fine-stranded conductor; with insulated ferrule | 0.25 ... 1.5 mm ² / 20 ... 16 AWG |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm ² / 20 ... 14 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 |
| Fine-stranded conductor; with insulated ferrule 2 | 0.5 ... 6 mm ² |
| Fine-stranded conductor; with uninsulated ferrule 2 | 0.5 ... 6 mm ² |
| Strip length 2 | 13 ... 15 mm / 0.51 ... 0.59 inches |

Physical data

| | |
|-----------------------------------|---|
| Width | 120 mm / 4.724 inches |
| Height | 130 mm / 5.118 inches |
| Depth from upper-edge of DIN-rail | 130 mm / 5.118 inches |
| Note (dimensions) | Height without connector Height with connector: 169 mm |

Mechanical data

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

Material data

| | |
|-----------|----------|
| Fire load | 0.797 MJ |
| Weight | 1900 g |

Environmental requirements

| | |
|---------------------------------|--|
| Ambient temperature (operation) | -25 ... +70 °C (Device starts at -40 °C (type-tested)) |
| Ambient temperature (storage) | -40 ... +85 °C |
| Relative humidity | 5 ... 96 % (no condensation permissible) |
| Derating | -3 %/K (> +55 °C) |
| Operating altitude (max.) | 5000 m |

Standards and specifications

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

Commercial data

| | |
|-----------------------|---------------|
| ETIM 8.0 | EC002540 |
| ETIM 7.0 | EC002540 |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | CN |
| GTIN | 4055143878296 |
| Customs tariff number | 85044083900 |

Environmental Product Compliance

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

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|--------------------------------------|----------------|------------------|
| UL Underwriters Laboratories Inc. | UL 61010-2-201 | E255817 |

Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|--|----------|------------------|
| EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for hazardous areas



| Approval | Standard | Certificate Name |
|--|-----------|------------------|
| UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | A-E198726 |

Downloads

Environmental Product Compliance

| Compliance Search |
|--|
| Environmental Product Compliance 2787-2448 ↓ |

Documentation

| Manual | | | |
|---|-----------------------|-------------------|-------------------|
| Product Manual Power supply; Pro 2; 1-phase; 24 VDC output voltage; 40 A output current | V 1.2.2 18.02.2022 | pdf 8514.86 KB | ↓ |

| Additional Information | | | |
|--|--------------------------|-------------------|-------------------|
| Application Note STEP 7 Power supply Pro 2 2787-2xxx with IO-Link Interface (a2019011) | 2020-04-07 07.04.2020 | zip 6128.55 KB | ↓ |

| Bid Text | | | |
|----------------|------------|------------------|-------------------|
| 2787-2448_EUSA | 04.07.2019 | docx 23.16 KB | ↓ |
| 2787-2448_EUSA | 04.07.2019 | xml 7.95 KB | ↓ |

| Instruction Leaflet | | | |
|----------------------------|-----------------------|-------------------|-------------------|
| WAGO Stromversorgung Pro 2 | V 1.1.0 21.04.2021 | pdf 4500.37 KB | ↓ |

Application Notes

| Application Note e!COCKPIT | | | |
|---|---------------------|------------------|-------------------|
| e!COCKPIT Application Note WagoAppPower-Supply (a2019012) | 1.1.1 06.12.2021 | pdf 707.04 KB | ↓ |

| Application note SIEMENS | | | |
|--|--------------------------|--------------------|-------------------|
| Application Note TIA Portal Power supply Pro 2 with IO-Link Interface (a2019010) | 2020-04-07 07.04.2020 | zip 11946.49 KB | ↓ |

CAD/CAE-Data

| CAD data | |
|---------------------------|---|
| 2D/3D Models 2787-2448 | ↓ |

| CAE data | |
|--------------------------------|---|
| EPLAN Data Portal 2787-2448 | ↓ |
| ZUKEN Portal 2787-2448 | ↓ |

Engineering-Software

| Configuration and Commissioning Software | | | | |
|--|--------------------------|-----|--------------|---|
| WAGO Interface Configuration Software G2 FULL | 1.00.10.01 20.01.2022 | exe | 112213.07 KB | ↓ |
| WAGO Interface Configuration Software G2 SMALL | 1.00.10.01 20.01.2022 | exe | 30238.22 KB | ↓ |

Runtime Software

| Firmware | | | | |
|-----------------------------------|------------------------|-----|------------|---|
| 2787-2448, Stromversorgung; Pro 2 | V 010513 12.10.2021 | zip | 1187.52 KB | ↓ |

1 Compatible Products

1.1 Optional Accessories

1.1.1 Cables and connectors

1.1.1.1 Communication cable



Item No.: 750-923/000-001
Configuration cable; USB connector;
Length: 5 m

1.1.2 Communication

1.1.2.1 Communication cable



Item No.: 750-923
Configuration cable; USB connector;
Length: 2.5 m

1.1.2.2 Communication module



Item No.: 2789-9023

Communication module; EtherNet/IP; communication capability

Item No.: 2789-9080

Communication module; IO-Link; communication capability

Item No.: 2789-9015

Communication module; Modbus RTU; RJ45; communication capability

Item No.: 2789-9052

Communication module; Modbus TCP; communication capability

1.1.3 Marking

1.1.3.1 Marker



Item No.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.3.2 Marker carrier



Item No.: 2789-1233

Marker carrier; for WMB or marking strips; Length: 33 mm

1.1.3.3 Marking strip



Item No.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.4 Tool

1.1.4.1 Operating tool



Item No.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Item No.: 210-721

Operating tool; Blade: 5.5 x 0.8 mm; with a partially insulated shaft; multicoloured