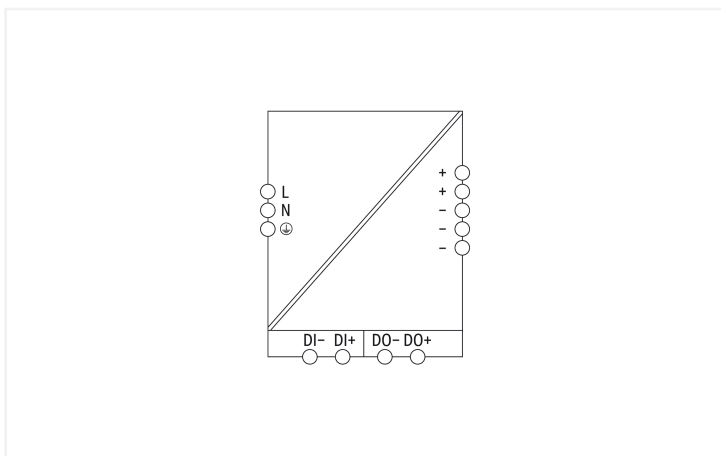


# Data Sheet | Item Number: 2787-2147/000-070

Power supply; Pro 2; 1-phase; 24 VDC output voltage; 20 A output current; Top-Boost + PowerBoost; Protection Coating; communication capability

<https://www.wago.com/2787-2147/000-070>



## 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
- Coated PCBs, resistant to flowing mixed gas per ISA S71.04:1985, G3 Group A
- Marker slot for WAGO marking cards (WMB) and WAGO marking strips

## Technical data

### Input

Phases	1
Nominal input voltage $U_{i,nom}$	1 x 100 ... 240 VAC
Input voltage range	1 x 90 ... 264 VAC
Nominal mains frequency range	50 ... 60 Hz
Input current $I_i$	$\leq 2.2$ A (240 VAC; nominal load); $\leq 5.9$ A (100 VAC; nominal load)
Inrush current	$\leq 12$ A (after 1 ms)
Power factor	$\geq 0.98$ (240 VAC)
Power factor correction (PFC)	Active
Mains failure hold-up time	$\geq 24$ ms (230 VAC)

### Output

Nominal output voltage $U_{o,nom}$	24 VDC (SELV)
Output voltage range	24 ... 28 VDC (adjustable)
Default Setting	24 VDC
Nominal output current $I_{o,nom}$	20 A (24 VDC)
Nominal output power	480 W
Deviation	$\leq 1$ %
Residual ripple	$\leq 70$ mV (peak-to-peak)
Current limitation	$1.1 \times I_{o,nom}$ (typ.)
Overload behavior	TopBoost/PowerBoost/Time-limited constant current mode (other overload behaviors can be set)
PowerBoost	30 ADC (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)
Communications	USB (750-923 Communication Cable) EtherNet/IP™ (2789-9023 Communication Module) IO-Link (2789-9080 Communication Module) Modbus RTU (Communication Module 2789-9015) Modbus TCP (2789-9052 Communication Module)

## Efficiency/Power Losses

Power loss $P_l$	$\leq 1.3$ W (standby); $\leq 2.6$ W (no load); $\leq 24$ W (230 VAC; nominal load)
Efficiency (typ.)	95.4 % (230 VAC; 20 A; 25 °C)

## Circuit Protection

Internal fuse	T 10 A / 250 VAC
Backup fuse (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)	0.5 kVDC
Isolation voltage (sec.-signal)	0.5 kVDC
Protection class	I
Protection type	IP20; per EN 60529
Protective coating	Coated PCBs
Resistance to reverse feed	$\leq 35$ VDC
Overvoltage category	III ( $\leq 2000$ m a.s.l.); II ( $> 2000$ m a.s.l.)
Pollution degree	2
Transient suppression (primary)	Yes
Overvoltage protection; secondary	Internal protective circuit $\leq 35$ VDC (in the event of a fault)
Short-circuit-protected	Yes
Open-circuit-proof	Yes
Parallel operation	Yes
Series operation	Yes
MTBF	$> 800,000$ h (per IEC 61709)

## Connection Data

### Connection 1

Connection type	Input/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
Fine-stranded conductor; with insulated ferrule	0.25 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG
Fine-stranded conductor; with uninsulated ferrule	0.25 ... 2.5 mm <sup>2</sup> / 20 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

### Connection 2

Connection type	Output
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 831 Series
Solid conductor	0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm <sup>2</sup> / 20 ... 8 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 6 mm <sup>2</sup>
Fine-stranded conductor; with uninsulated ferrule	0.5 ... 6 mm <sup>2</sup>
Strip length	13 ... 15 mm / 0.51 ... 0.59 inches

## Physical data

Width	70 mm / 2.756 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
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## Material data

Fire load	0 MJ
Weight	1450 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	-1 %/V (> 40 °C and U <sub>i</sub> < 100 VAC); -3 %/K (> 55 °C and U <sub>i</sub> < 230 VAC); -3 %/K (> 60 °C and U <sub>i</sub> ≥ 230 VAC); -5 %/V (U <sub>o</sub> > 24 VDC)
Climatic category	3K3 (per EN 60721)
Operating altitude (max.)	5000 m

## Standards and Specifications

Conformity marking	CE
Standards/specifications	SEMI F47 EN 61010-1 EN 61010-2-201 EN 61204-3 UL 61010-1 UL 61010-2-201 DNV UL 121201 (HazLoc) ISA S71.04:1985; G3 Group A

### Commercial data

PU (SPU)	1 pcs
Packaging type	Box
Country of origin	CN
GTIN	4066966125955
Customs tariff number	85044083900

### Product Classification

UNSPSC	39121004
ETIM 9.0	EC002540
ETIM 10.0	EC002540
ECCN	NO US CLASSIFICATION

### Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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### Approvals / Certificates

#### General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 004/2011	EAC CoC 03080
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc.	UL 61010-2-201	E255817

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

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

#### Approvals for marine applications



Approval	Standard	Certificate Name
DNV DNV GL SE	DNV-CG-0339, Aug. 2021	TAA00002ZF

#### Approvals for hazardous areas



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

## Downloads

### Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2787-2147/000-070	<a href="#">↓</a>

## Documentation

Manual			
Product Manual Power supply; Pro 2; 1-phase; 24 VDC output voltage; 20 A output current	V 1.2.2 18.02.2022	pdf 8262.81 KB	<a href="#">↓</a>

Instruction Leaflet			
WAGO Stromversorgung Pro 2	V 1.1.0 26.04.2021	pdf 4461.95 KB	<a href="#">↓</a>

## CAD/CAE-Data

CAD data	
2D/3D Models 2787-2147/000-070	<a href="#">↓</a>

CAE data	
EPLAN Data Portal 2787-2147/000-070	<a href="#">↓</a>

## Runtime Software

Firmware			
2787-2147, Stromversorgung; Pro 2	V 010513 12.10.2021	zip 1087.36 KB	<a href="#">↓</a>

## 1 Compatible Products

### 1.1 Product Expansions

#### 1.1.1 Communication Module



**Item No.: 2789-9023**  
Communication module; EtherNet/IP; MQTT Pub/Sub; 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

### 1.2 Optional Accessories

#### 1.2.1 Marking

##### 1.2.1.1 Marker carrier



**Item No.: 2789-1233**  
Marker carrier; for WMB or marking strips; Length: 33 mm

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

Current addresses can be found at: [www.wago.com](http://www.wago.com)