# WAGO POWER SUPPLIES

# **PRO 2**

Applications with high output requirements call for professional power supplies capable of reliably handling power peaks. WAGO's Pro 2 Power Supplies are ideally suited to such installations.





## **CLASSIC**

WAGO's robust Classic Power Supplies with integrated TopBoost (optional) feature a wide input voltage range and an extensive list of international approvals, allowing them to be used in a wide variety of applications.

# ECO

Many basic applications only require 24 VDC. This is where WAGO's Eco Power Supplies excel as an economical solution.





## COMPACT

WAGO's high-performance Compact Power Supplies in DIN-rail-mount housings are available with output voltages of 5, 12, 18 and 24 VDC, as well as nominal output currents up to 6.5 A.

# WAGO SYSTEM MODULES



### UPS

Consisting of a 24 V UPS charger and controller with one or more connected battery modules, WAGO's Uninterruptible Power Supply reliably powers an application for several hours.

# CAPACITIVE BUFFER MODULES

In addition to reliably ensuring trouble-free machine and system operation – even through brief power failures – WAGO's Capacitive Buffer Modules offer the power reserves that may be required when starting heavy motors or triggering a fuse.





## **REDUNDANCY MODULES**

WAGO's Redundancy Modules are ideal for reliably increasing power supply availability. These modules decouple two parallel-connected power supplies and are suitable for applications where an electrical load must be reliably supplied – even in the event of a power supply failure.

# ELECTRONIC CIRCUIT BREAKERS

WAGO's compact ECBs provide reliable protection against overload and short circuit. Their slim design offers high channel density, saving valuable control cabinet space.



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# WAGO<br/>POWER<br/>SUPPLIES<br/>PRO 2

# The New Heart of Your Control Cabinet



#### **Class-Leading Product Features of WAGO's Pro 2 Power Supplies:**

- Intelligent power management that supplies 150% power for 5 s, and up to 600% output power for 15 ms in the event of short circuits
- High level of resistance to adverse environmental influences: Heat, cold and elevation have little impact on performance
- Pioneering communication capabilities that keep you informed about all important status information and data - ready for Industry 4.0
- · Easy planning and installation thanks to compact dimensions and 2D/3D data in the most important formats

Power supplies are the heart of a control cabinet's DC power supply. Therefore, they must meet particularly high requirements for reliability, efficiency and installation size. However, increasing networking and digitization also require new features, such as configuration options for adapting to the corresponding application and providing service and operating data, in order to implement digital twin over many years of operation.

Our answer to these stricter requirements is the WAGO Power Supply Pro 2 - the heart of the control cabinet, which takes the challenges of today and tomorrow and turns them into concrete possibilities.



#### 1-Phase; Output: 24 VDC

#### 3-Phase; Output: 24 VDC



2787-2347 20 A

#### 2787-2348 40 A

#### **IO-Link Communication Module**



# Communication

WAGO's pluggable IO-Link Communication Module allows continuous fieldbus communication, provides data such as the actual output current and voltage and can also be configured or put in standby mode remotely.

**Ready for digitization** thanks to modular fieldbus communication

**Continuous overview** of all the data and values of your system's power supply

**Greater system uptime** thanks to early warning and predictive maintenance



# Configuration

WAGO's new Interface Configuration Software offers both local/remote configuration and parameter setting, allowing the power supplies to be quickly and easily tailored to all system requirements. The configuration function can be used to configure the power supply as an ECB. In case of an overcurrent, the output can be reactivated by the digital input – saving space and money for external fuses, while protecting downstream devices.

The power supply can be customized to **virtually** any application via configuration options.

The configurable circuit breaker functionality lowers costs and space requirements while increasing safety.

DC Owheren	DC Output
Overload behavior	The settings are written onto the module when saving. General
Segnalization	Output voltage 24000 C mV
system	
	W Warning overload limit
	Output behavior
	Contrast off / Standard
	Z "active droop" parallel mode
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mpost Expon Tee	New Settings
mpon    topon    Fre	Nery Sentage
mprd    Expon    Fac	They Sentenge   Provide memory of prover ruppings on parallel opportunities

# Load Management

Rapidly switching capacitive loads and high startup currents are no problem, thanks to 150% output power (PowerBoost) for 5 seconds. Output current up to 600% for 15 ms provides reserves for rapid, reliable tripping of miniature circuit breakers. The ability to allow a specified output current to be exceeded for a configurable amount of time allows the Pro 2 Power Supply to work like a single-channel ECB.

**Fast and reliable** tripping of miniature circuit breakers **thanks to temporary output currents** of up to 600%

**Quick charging** of capacitors and **fast switching** of contactors thanks to output currents of up to 150% for 5 seconds

Use WAGO's Pro 2 Power Supply as an ECB



# Efficiency

Up to 96% efficiency in a wide load range is the key to energy cost savings, reduced power losses and lower demand for control cabinet cooling. The  $CO_2$  footprint is also dramatically reduced. WAGO's Pro 2 Power Supply can be permanently connected to the PLC via the communication module or a digital signal, enabling switch off of the power supply output via a signal and use the standby mode for energy savings.

**Lower CO**<sub>2</sub> emissions/energy costs with up to 96% efficiency

Energy cost savings via standby mode activation



96%

# **Robust Design**

WAGO's Pro 2 Power Supplies can be started and operated from -40°C to +70°C, allowing significant cost savings by reducing the need for control cabinet air conditioning. Featuring low derating capability above 60°C, the Pro 2 units deliver nearly full output power at 70°C. Furthermore, their highly robust design provides reliable operation in high-vibration and shock-prone applications. The power supplies can be operated in altitudes up to 5000 m, requiring no derating below 2000 m ASL.

A wide temperature range opens up many application possibilities.

The Pro 2 units easily withstand **shocks**, vibrations and the harsh conditions of high-altitude operation.

Overvoltage category III up to 2000 m provides greater operational reliability.

# Design

WAGO's Pro 2 Power Supply requires less space in the control cabinet and less distance from other components, which helps minimize cooling costs. 2D/3D data is available for the devices via CADE-NAS PARTcommunity, EPLAN Makros and Smart Designer support. The connectors and clamping units are labeled in accordance with EN 81346-2 for sophisticated marking of individual connection points.

Compact design and high efficiency reduce space requirements and **improve control cabinet cooling**.

The digital twin simplifies E-CAD implementation while **reducing time and costs**.

Device and connection points are labeled in accordance with **EN 81346-2**.



# -40°C ... +70°C





# Reliability

MTBF > 1,000,000 hours and long service lives of the components used mean lower maintenance costs compared to other power supplies. Furthermore, WAGO's Pro 2 Power Supply offers higher output currents at 70°C, so downsizing the power supply saves money and space in high-temperature applications. Because they fulfill the requirements of overvoltage category III, the devices can also withstand transients of 4 kV and above.

The MTBF value and component service lives promise an **extensive service life** for the WAGO Power Supply Pro 2.

Derating is first required for temperatures above 60°C, allowing **high output power capability even in high-temperature applications.** 

Active power factor correction and overvoltage category III

# Installation

WAGO's spring pressure connection technology guarantees highly secure, maintenance-free and fast connections, significantly reducing costs. WAGO's pluggable connectors enable both pre-assembled wiring and fast installation, providing additional cost reductions. The front-panel interface allows fast and easy parameterization, while an LED bar chart intuitively indicates the current load. Marking in accordance with EN 81346-2 for clear connection point identification prevents wiring errors.

Push-in CAGE CLAMP<sup>®</sup> Connectors **save both** wiring and installation time.

Configuration via interface software offers greater flexibility and clarity during installation.

Both LED bar chart and device/connection point labeling **simplify system commissioning**.



# MTBF: 1,000,000 h





# WAGO POWER SUPPLIES CLASSIC

Robust Power Supplies – with Integrated TopBoost (Optional)





#### Communicative

- Green LED indicates output voltage availability
- Remote monitoring via DC OK signal or potential-free DC OK contact
- Easy commissioning and maintenance
- Quickly provides system information or machine status



#### **Device Marking**

- Marking field for fast and securely attached device identification
- Supports WAGO's WMB Multi marking system (5 mm pin spacing)
- Supports WAGO's marking strips (11 mm wide)



#### Slim Design

- Enclosure width has been reduced by up to 45% compared to previous Classic Power Supplies
- Saves valuable cabinet space



#### Integrated TopBoost\*

- Multiplies the nominal current
- Fast and reliable triggering of the secondary-side fusing via circuit breakers or melting fuses in the event of a short circuit and overload

\*only for 787-1622 ... -1628, -1631 ... -1638, -1640 ... -1644



#### **High Load-Carrying Capacity**

- Constant current characteristic under overload conditions
- 110% output current with a lowered output voltage even during a short circuit
- Even high capacitive loads can be reliably started



# WAGO POWER SUPPLIES CLASSIC

Robust Power Supplies – with Integrated TopBoost (Optional)

1-Phase; Input: 85 ... 264 VAC 24 VDC



1-Phase; Input: 85 ... 264 VAC 24 VDC



#### 1-Phase; Input: 85 ... 264 VAC 12 VDC



\*.../0000-0070 is available with optional protective coating





# 2-Phase; Input: 180 ... 550 VAC 24 VDC



# 3-Phase; Input: 320 ... 575 VAC 24 VDC



# WAGO POWER SUPPLIES ECO

Economical Power Supplies for Standard Applications









#### **High Load-Carrying Capacity**

- Overload warning from 1.15 times the nominal output current\*
- Overload of up to 1.4 times the nominal current with a lowered output voltage (constant power)\*
- Output shutdown in case of a low-resistance short circuit; also includes automatic restart

#### **Status Monitoring**

- Potential-isolated NO contact signal, via bounce-free optocoupler\* or PhotoMOS\*\*
- Indicates whether an output voltage or an overload is present
- Ideal for remote monitoring

\*only for 787-734 ... -740 \*\*only for 787-2742, -2744



#### **Fast Wiring**

\*except for 787-17xx

- · Comfortable, tool-free wiring thanks to lever-actuated terminal strips\*
- Integrated test slot simplifies testing by eliminating conductor removal



#### **Highly Economical**

\*only for 787-734 ... -740, -2742, -2744

- Triple the savings thanks to low purchase costs, easy installation and maintenancefree operation
- Budget-friendly for basic applications





#### **Versatile Mounting Options**

- Flexible mounting via DIN-rail adapter\*
- Flexible installation via screw-mount clips\*

\*only for 787-17xx



# WAGO POWER SUPPLIES ECO

**Economical Power Supplies for Standard Applications** 

1-Phase; Input: 85 ... 264 VAC 24 VDC



1-Phase; Input: 85 ... 264 VAC 24 VDC



1-Phase; Input: 85 ... 264 VAC 12 VDC



#### 3-Phase; Input: 360 ... 460 VAC 24 VDC



24 VDC

3-Phase; Input 340 ... 575 VAC

# WAGO POWER SUPPLIES COMPACT

# Compact, High-Performance Power Supplies









#### Easy to Connect

- CAGE CLAMP<sup>®</sup> Connection Technology vibration-proof, fast, maintenance-free
- Pre-assembly via pluggable picoMAX<sup>®</sup>
  Connection Technology\*

\*only for 787-11xx, 787-12xx



#### Versatile Mounting Options

#### • Easy mounting on DIN-rail

• Flexible installation via screw-mount clips also possible\*

#### **DIN-Rail Built-In Installation**

• Housing design per EN 43880, for installation in small distribution boards or meter panels



#### **Overhead Mounting**

- Any type of mounting position is possible at reduced output power
- Units can even be mounted overhead (e.g., in ceiling-mounted distribution boxes)
- Improved cooling due to removable front plate\*

\*only for 787-1202, -1212



\*only for 787-12xx



#### **Highly Economical**

- Triple the savings thanks to low purchase costs, easy installation and maintenance-free operation
- Budget-friendly for basic applications



# WAGO POWER SUPPLIES COMPACT

Compact, High-Performance Power Supplies

1-Phase; Input: 85 ... 264 VAC 24 VDC (with *picoMAX®*)



#### 1-Phase; Input: 85 ... 264 VAC 24 VDC



#### 1-Phase; Input: 90 ... 264 VAC 24 VDC with *picoMAX*®



#### 1-Phase; Input: 85 ... 264 VAC 12 VDC



1-Phase; Input: 85 ... 264 VAC 18 VDC

> 68 55

72

787-1017 2.5 A

1-Phase; Input: 85 ... 264 VAC 5 VDC



787-1020 5.5 A

1-Phase; Input: 90 ... 264 VAC 24 VDC with *picoMAX*®



787-1226 6 A