

Features

- Industrial power supply, 1-phase, input voltage 85...264V AC
- Nominal output voltage 48V DC
- Easy assembly on the DIN-rail or wall
- Maximum energy efficiency thanks to low idling losses
- Quick startup with LED function monitoring
- High operating safety due to long mains buffering under full load and high MTBF (> 1,100,000 h)
- Can be used worldwide in all industrial sectors due to a wide-range input and an international approval package
- Extended operating temperature range: -25 ... 70 °C (> 55° C derating)
- 48 VDC for Power over Ethernet
- 60 watts power output
- Short circuit-/no-load protection
- Overload protection
- High Efficiency
- Parallel connection possible for increased performance and redundancy, with red. modules

Description

The compact iPowerSupply perfectly complements Nexans Industrial Ethernet product portfolio. Due to the design, the wide-range inputs and the global approvals, the iPowerSupply is well suited for use in installations around the globe. The iPowerSupplies comply with high requirements for EMC and environmental conditions which allows its operation in very harsh environments.

The iPowerSupply is not only able to supply active systems, such as switches, with power, but also other Power over Ethernet acc. to IEEE 802.3af enabled devices at the same time. The reliability and efficiency of the iPowerSupply is underlined by a high electrical efficiency, low stand-by losses and high MTBF values.



LANactive

Standards

EN 60204 / Surge voltage category III
EN 61558-2-17
EN 60950/VDE 0805 (SELV)
EN 61558-2-17
EN 50178/VDE 0160 (PELV)
EN 60950 (SELV)
EN 60204 (PELV)
DIN VDE 0100-410
DIN VDE 0106-1010
DIN 57100-410
DIN VDE 0106-101
EN 61000-3-2
EN 61000-6-2
EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-11
EN 61000-6-3
EN 55011

Characteristics

Input data

Input nominal voltage range	100V AC ... 240V AC
AC input voltage range	85V AC ... 264V AC
DC input voltage range	N.A.
AC frequency range	45 ... 65 Hz
Current consumption	Approx. 1.0 A (100V AC) Approx. 0.6 A (240V AC)
Inrush current limitation	< 30 A (typical)
Power failure bypass	> 20 ms (120V AC) > 90 ms (230V AC)
Typical response time	<1 s
Protective circuitry	Transient surge protection varistor
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)
Input fuse, integrated	2 A (slow-blow, internal)

Output data

Nominal output voltage	48V DC \pm 1%
Output current	1.25 A (-25°C ... 55°C)
Derating	Above +55°C...70°C: 2.5% per Kelvin
Control deviation	< 1 % (change in load, static 10% ... 90%) < 2 % (change in load, dynamic 10% ... 90%) < 0.1 % (change in input voltage \pm 10%)
Ascent time	<0.5 s (U _{OUT} (10% ... 90%))
Residual ripple	< 35 mVPP (with nominal values)
Connection in parallel	Yes, with redundancy module
Connection in parallel	Yes, with redundancy module
Connection in series	Yes
Protection against surge voltage on the output	< 60V DC
Resistance to reverse feed	< 60V DC

Signal output DC OK active

Status display	"DC OK" LED green / U _{OUT} > 43.2 V: LED flashing
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Power consumption

Power loss nominal load max.	< 7 W
Maximum power dissipation idling	< 0.4 W
Efficiency	> 90 % (for 230 V AC and nominal values)

Characteristics

General data

Insulation voltage input/output	4 kV AC (type test) 3 kV AC (routine test)
Degree of protection	IP20
Class of protection	II (in closed control cabinet)
MTBF	> 1 138 000 h in acc. with IEC 61709 (SN 29500)
Type of housing	Polycarbonate
Type of foot bolt	Plastic POM
Dimensions W / H / D (state of delivery)	35 / 90 / 84 mm
Weight	0.21 kg

Ambient conditions

Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating)
Ambient temperature (storage/transport)	-40 ... 85 °C
Max. permissible relative humidity (operation)	95 % (at 25°C, no condensation)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm in acc. with IEC 60068-2-6 15 Hz ... 150 Hz, 2.3g, 90 min.
Shock	30 g in all directions in acc. with IEC 60068-2-27
Pollution degree in acc. with EN 50178	2
Climatic class	3K3 (in acc. with EN 60721)
Inflammability class in acc. with UL 94 (housing)	V0

Standards

Electrical Equipment for Machinery	EN 60204-1
Electrical safety (of information technology equipment - Safety - Part 1)	IEC 60950-1/VDE 0805 (SELV)
Electronic equipment for use in electrical power Installations	EN 50178/VDE 0160 (PELV)
SELV	IEC 60950-1 (SELV) and EN 60204 (PELV)
Safe isolation	DIN VDE 0100-410
Protection against electric shock	DIN 57100-410
Limitation of mains harmonic currents	EN 61000-3-2
Network version/undervoltage	EN 61000-4-11
Information technology equipment - Safety (CB Scheme)	CB Scheme

Approvals

UL approvals	UL/C-UL listed UL 508 UL/C-UL Recognized UL 60950-1
CSA	CAN/CSA-C22.2 No. 60950-1-07 CSA-C22.2 No. 107.1-01

Characteristics

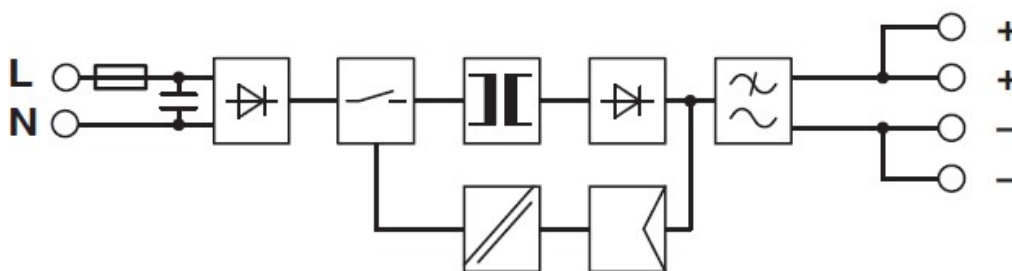
Conformance with EMC directive 2004/108/EC Noise immunity according to EN 61000-6-2

Electrostatic discharge	EN 61000-4-2 Contact discharge: 6 kV Discharge in air: 8 kV Comments: Criterion B
Electromagnetic HF field	EN 61000-4-3 Frequency range: 80... 3000 MHz Field intensity: 10 V/m Comments: Criterion A
Fast transients (burst)	EN 61000-4-4 Input: 4 kV (level 4 - asymmetrical) Output: 2 kV (level 3 - asymmetrical) Comments: Criterion B
Surge current loads (surge)	EN 61000-4-5 Input: 4 kV (Test intensity 4 - asymmetrical) 2 kV (Test intensity 3 - symmetrical) Output: 2 kV (Test intensity 3 - asymmetrical) 1 kV (Test intensity 2 - symmetrical) Comments: Criterion B
Conducted interference	EN 61000-4-6 Frequency range: 10 kHz ... 80 MHz Voltage: 10 V 10 V (Test intensity 3) Comments: Criterion A

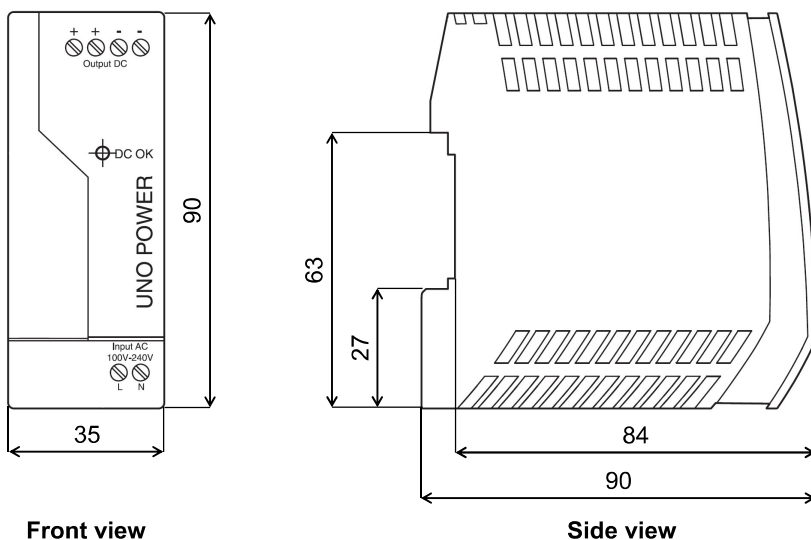
Emitted interference in acc. with EN 61000-6-3

Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

Block diagram



Dimensions



Details

Attention

In order to guarantee sufficient convection, we recommend observing the following minimum distance to other modules: 30 mm in a vertical direction.

Info

The power supply unit can be snapped onto all DIN rails in acc. with EN 60715 and must be mounted horizontally (connecting terminals on top).

Installation

The power supply unit can be installed on all 35 mm DIN rails according to EN 60175. Position the module with the DIN rail guide on the upper edge of the DIN rail, and snap it in with a downward motion.

Removing

Pull the snap lever open with the aid of a screwdriver and slide the module out at the lower edge of the DIN rail.

Ordering information

Article number	Description
1330188	iPowerSupply S 110-230VAC/48VDC 60W