

SEPS8-24/40

24 VDC power supply module



Description

SEPS8-24/40 is a 24 VDC / 40 W switched-mode power supply. It is housed in an enclosure with an IP65 rating, providing protection against dust and water ingress. The device supports Power over Modbus (PoM), allowing both power and data to be transmitted through a single cable connection.

Through PoM, devices, such as sensors, fan speed controllers, power supply modules, frequency inverters, etc., can be interconnected via a single UTP cable, which distributes both Modbus data communication and 24 Volt supply voltage. Depending on the type of the connected devices, the Modbus data can include diagnostics, configuration settings and sensor readings.

With its Modbus RTU compatibility, SEPS8 provides users with the opportunity of connecting devices in a reliable and robust system.

Some of the main benefits of SEPS8 include:

- Consistent and reliable power supply
- Wide input voltage range, making the device suitable for use in variety of regions
- Robust enclosure providing excellent protection
- Simplified connection due to PoM compatibility
- Overload and overvoltage protection of the connected devices

Designed to withstand harsh weather conditions, SEPS8 is a reliable solution for various HVAC applications.

Key Features

- Multiple Connection Options:
 - Supports terminal block connection for direct wiring.
 - Equipped with RJ45 (Power over Modbus) for combined power and data transmission.
- Comprehensive Protection Features:
 - Overvoltage protection safeguards connected devices from voltage spikes.
 - Overload protection (hiccup mode) ensures automatic recovery from excessive load conditions.
- Versatile Input Compatibility:
 - Operates within a wide input voltage range, allowing use in various electrical systems.
- Clear Power Status Indication:
 - Green LED indicator on the front panel provides visual confirmation of power output.
- Built for Challenging Environments:
 - Resistant to dust and water for reliable operation in tough conditions.
 - Performs well across a wide temperature and humidity range.
 - Constructed from robust materials for long-lasting performance.

Technical Specifications

Input voltage	85—264 VAC / 50—60 Hz	
Output voltage	24 VDC	
Output current rating	Imax 1,67 A	
Operating conditions	Temperature	-30—40 °C
	Relative humidity	20—90 % rH, non-condensing
Enclosure	ABS (Acrylonitrile Butadiene Styrene) plastic, colour: grey (RAL7035)	
Protection standard	IP65	

Attention: The terminal block for the output voltage connection (+24 V, GND) duplicates the RJ45 connector (parallel circuit). To calculate the total load, add both charges.

Area of Use

- Supply module for 24 VDC articles used in harsh conditions



Wiring and Connections

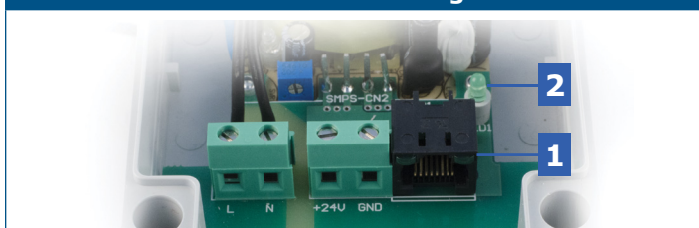
L	Supply voltage, line: 85—264 VAC / 50—60 Hz
N	Supply voltage, neutral: 85—264 VAC / 50—60 Hz
+24 V	Output voltage connection (24 VDC)
GND	Ground for output voltage connection



RJ45 Socket

Pin 1	24 VDC	Supply voltage
Pin 2		
Pin 3	A	Modbus RTU communication, signal A
Pin 4		
Pin 5	/B	Modbus RTU communication, signal /B
Pin 6		
Pin 7	GND	Ground, supply voltage
Pin 8		



Settings and Indications



1- RJ45 connector		Plug the communication and power cable into the socket. Blinking green LEDs indicate active Modbus RTU communication
2 - Power ON LED indication		Power OK

SEPS8-24/40

24 VDC power supply module



Standards



- Low Voltage Directive 2014/35/EU
- EMC Directive 2014/30/EU
 - EN 55022:2010/AC:2011 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
 - EN IEC 61000-3-2:2018 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase)
 - EN 61000-3-3:2013/A1:2017 Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection
 - EN 61000-4-2:2009 Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test
 - EN 61000-4-3:2006/A2:2010 Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test
 - EN 61000-4-4:2012 Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
 - EN 61000-4-5:2014 Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
 - EN 61000-4-6:2013 Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
 - EN 61000-4-8:2009 Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
 - EN 61000-4-11:2004/A1:2017 Electromagnetic compatibility (EMC) Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests
 - EN 55024:2010 Information technology equipment - Immunity characteristics - Limits and methods of measurement

Global Trade Item Numbers 14 (GTIN 14)

Packaging	SEPS8
Unit	5401003014424
Box	5401003502891

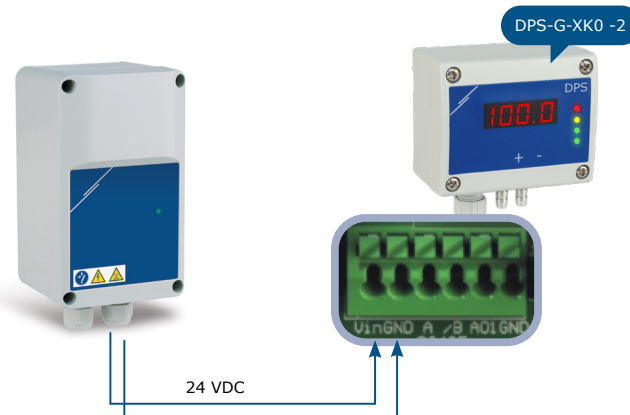
Application Examples

Example 1: Power Over Modbus



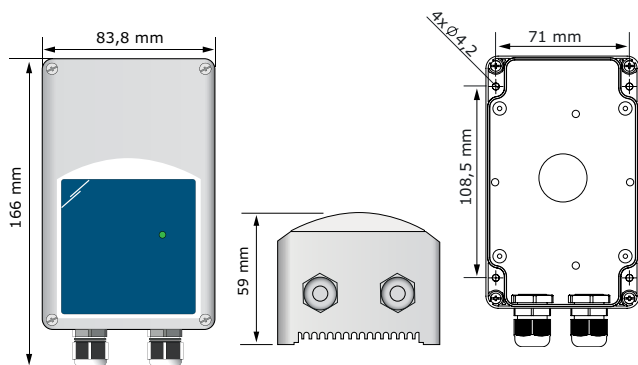
In this example, SEPS8 is connected to a differential pressure transmitter from the DPS-M-XK0 -2 series via a cable with RJ45 connectors, which ensures both 24 VDC power supply and Modbus communication.

Example 2: Terminal Block Supply Connection

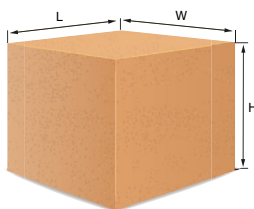


In this example, SEPS8 is connected to a differential pressure transmitter from the DPS-G-XK0 -2 series through terminal block supply connection, which provides 24 VDC power supply.

Fixing and Dimensions



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
SEPS8	Unit (1 pc.)	170	95	93	355 g	425 g
	Box (50 pcs.)	580	370	270	8,53 kg	11,13 kg