

Power: 110-230 VAC or 110-315 VDC
Output: 24 VDC, 1.5 A

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- Output Voltage: 24 VDC
- Parallel Redundancy Capable
- Output Current: 1.5 ADC

Description

The Z-SUPPLY is single-phase switching power supply with AC input rated voltage from 110 VAC to 230 VAC @ 47 to 63 Hz, 0.7 A and DC input rated voltage from 110 VDC to 315 VDC @ 0.7 A.

The Z-SUPPLY provides a 24 VDC $\pm 2\%$ output voltage. Two Z-SUPPLY units may be connected in parallel for output redundancy, by using the optional IDC10 connector.

The module offers 1.5 A output maximum current and is protected by a 1.25 A, type T (delayed), internal fuse for protection against over-current and over-voltage conditions.

Input Voltage

110 VAC to 230 VAC, 47-63 Hz, 0.7 A, or
 110 VDC to 315 VDC, 0.7 A

Current Consumption

Max 0.7 A @ 100 V, 0.27 A @ 265 V

Internal Fuse

1.25 A, T type (delayed), not user replaceable

External Fuse for Input (Recommended)

2 A, T type (delayed)

Inrush Current Limitation (Plug In)

<25 A

Power Factor

>0.60

Start-Up Voltage With Full Load

~100 VAC (with load: 15 Ω)

Shut-Down Voltage

~90 VAC

Isolation

Up to 3 kV at input

DC Output

24 VDC $\pm 2\%$, 1.5 A max.

Over-Load Limit Current

1.7 A

Load Regulation

< 1%

Rated ripple

< 50 mVpp

Short-Circuit And Over-Load Protection

Over-load limit with auto reset

Max Resistive Load

15 Ω

Max Capacitive Load

3000 μ F

Output Ripple

< 40 mV

Output Regulation

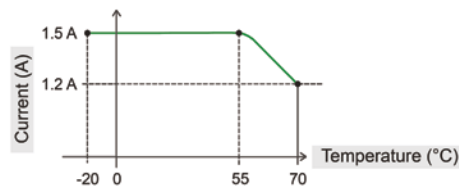
< 1%

Dynamic Regulation

< 1%

Derating curve for output

Starts at 55°C for 0.02 A/K



Turn-off time

15 ms @ 120 VAC, 60 ms @ 230 VAC



- "Power Good" Relay Output
- DIN Rail Mount
- Up to 3 kV Input Isolation

Output Relay

Power good relay

Relay type: N.O., 1 A, 30 VDC (resistive)

Relay activation: output voltage > 23.5 VDC

Redundancy

Parallel connection of two Z-SUPPLY's using the optional IDC10 connector

Indicators

Green LED: output power on indicator

Green LED: power good (>23.5 VDC) indicator

Ambient Operating Range

0 to 50°C operating ambient

Humidity

30-90% RH at 40°C non-condensing

Storage Temperature

-40°C to +85°C

Connectors

IDC with 10 pins for Seneca bus (output redundancy)

Removable screw terminals: pitch 5.08 mm

Housing

Dimensions: 35 mm W x 100 mm H x 111 mm D

Black plastic

IP 20, requires installation in panel or enclosure

Mount on a vertical panel to a horizontal 35 mm DIN rail

Allow 4" (100 mm) above and below housing for air circulation. Allow 1/4" (5 mm) on each side.

Do not block air vents.

To maintain performance, outdoor enclosures must be temperature controlled.

weight controlled.

Weight

215 g

Standards

CE

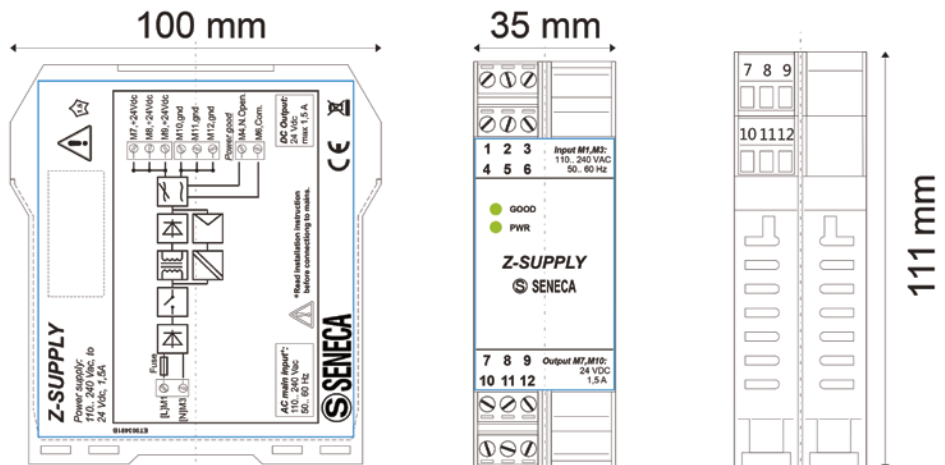
EN 61000-6-4/ 2007 (electromagnetic emission, in industrial environments)

EN 61000-6-2/ 2005 (electromagnetic immunity, in industrial environments)

EN 61010-1/ 2001 (safety)



Model	Voltage	Max. Current	Power
Z-SUPPLY	24 VDC	1.5 A	110-230 VAC 110-315 VDC



Before executing any operation it's mandatory to read all the contents of this user manual. Only electrically-skilled technicians can use the module described in this user manual. It is responsibility of the installer to verify that the installation complies with safety and wiring standards.



Only the manufacturer is authorized to repair the module or to replace damaged components.





No warranty is guaranteed in connection with faults resulting from improper use, from modifications or repairs carried out on the module by unauthorized personnel, or if the content of this manual is not followed.



This module is designed for connection to hazardous electric voltages. Ignoring this warning can result in severe personal injury or mechanical damage.

PREPARATION FOR INSTALLATION AND PRECAUTIONS

The module is must be installed in a vertical position on a horizontal DIN 46277 rail (fig. 1).

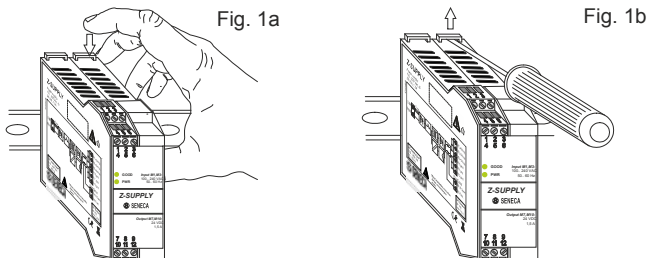
-  No installation or wiring of the module is allowed while it is powered on. **It is forbidden** to install the module near heat-emitting devices.
 -  It is recommended that use and installation are performed by an electrically-skilled technician ensure safe wiring practices, and to avoid improper loads or connections.
- The Z-SUPPLY module can achieve a very high temperature, so it is important to allow proper ventilation and be careful when using it.

INSTALLATION

 **Power off the module before wiring!**

To install/remove the Z-SUPPLY on/from DIN 46277 rail, see Fig.1a and Fig.1b.

Installation / removal from DIN 46277 rail



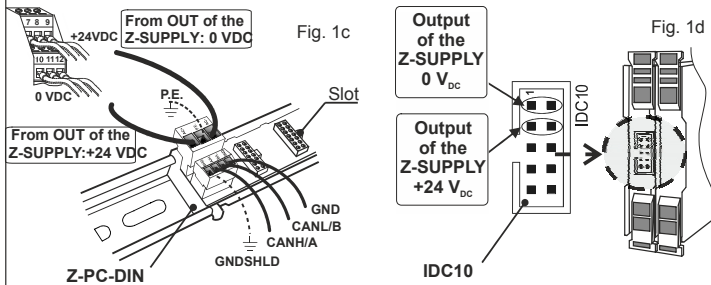
INSTALLATION

- 1) Pull the four latches (placed in the back-side panel) outwards.
- 2) Insert the module on the DIN rail.
- 3) Make sure that the IDC10-connector pins are inserted in the slot correctly.
- 4) Press the four latches inwards.

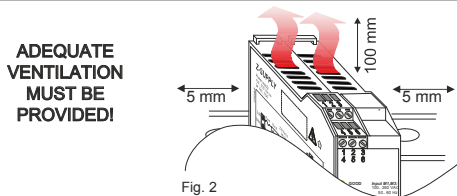
REMOVAL

- 1) Pull the four latches (placed in the back-side panel) outwards, using a screwdriver.
- 2) Pull the module out gently.

It's important to insert the pins in the slot correctly because IDC10 connectors are polarized. This connection is facilitated by use of a female/male insertion between IDC10 connector and the DIN rail slot (Fig 1c and Fig 1d).

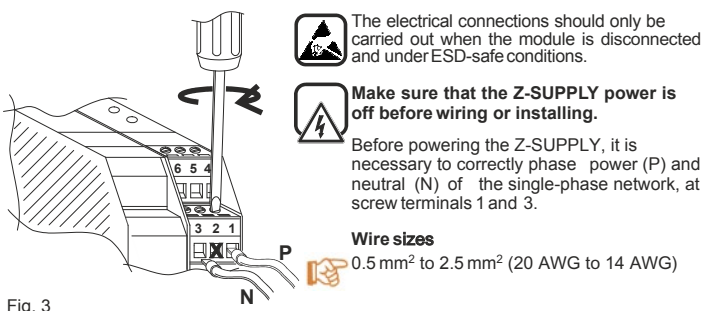




For better performance and long life, **it is forbidden** to obstruct the Z-SUPPLY ventilation openings (Fig. 2).



ELECTRICAL CONNECTIONS

Power Supply



-  The electrical connections should only be carried out when the module is disconnected and under ESD-safe conditions.
 -  **Make sure that the Z-SUPPLY power is off before wiring or installing.**
- Before powering the Z-SUPPLY, it is necessary to correctly phase power (P) and neutral (N) of the single-phase network, at screw terminals 1 and 3.

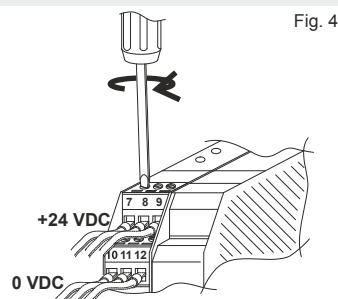
Wire sizes
0.5 mm² to 2.5 mm² (20 AWG to 14 AWG)

24 VDC Output Screw Terminals

The output is available on the screw terminals M7, M8, M9 (+24 VDC) and M10, M11, M12 (0 VDC) as shown in Fig.4.

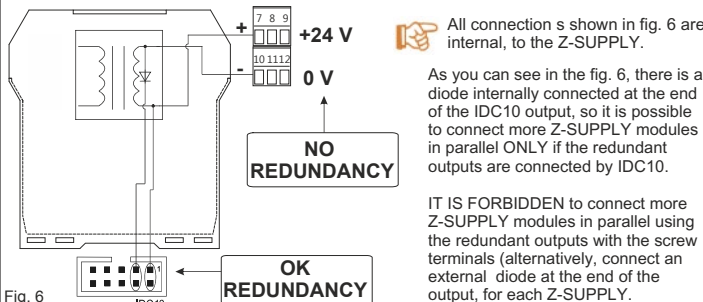
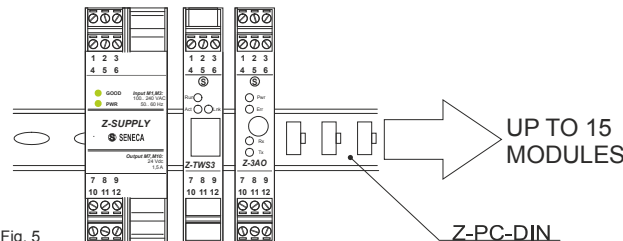
The output is protected against current over-load. If the output is over-loaded, the Z-SUPPLY protection system will be activated automatically and output will not be stable (hiccup).

Protection status is shown through the «good» LED (blinking light). In this case, it is necessary to decrease the output load. When the Z-SUPPLY is restarted, it will be reset automatically.



24 VDC Output With IDC10 Bus for Seneca Modules

Before using 24 VDC output through the IDC10 connector, see Fig.1d and in Fig.1c. Through the IDC10 connector, the Z-SUPPLY can power up to 15 modules.



Output Relay and «Power Good»

The output voltage equal to 24 VDC is monitored by an internal relay, which enables the output voltage only if the voltage between its terminals is greater than 23.5 V. If the output voltage is supplied correctly, the LED «good» will be on; otherwise, if a over-loading occurs, the LED «good» will be blinking. The relay contact connections are at screw terminals M4 (normally open) and M6 (common).

SIGNAL LEDs

LED	STATUS	MEANING
Good	Constant light	24 VDC output is ON and regulated
	Off	24 VDC output is disabled
Pwr	Blinking light	Output over-load
	Constant light	24 VDC output is ON
	Off	24 VDC output is OFF

ACCESSORIES

CODE	DESCRIPTION	
Z-PC-DIN	AL1-35	DIN rail support with screw terminals, width=35 mm
	AL2-17.5	DIN rail support with screw terminals, width=17.5 mm
Z-PC-DIN	1-35	DIN 1 slot support for rear connector, width=35 mm
	2-17.5	DIN 2 slot support for rear connector, width=17.5 mm
	4-35	DIN 4 slot support for rear connector, width=35 mm
	8-17.5	DIN 8 slot support for rear connector, width=17.5 mm

 Disposal of Electrical & Electronic Equipment (Applicable throughout the European Union and other European countries with separate collection programs).

This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources.

For more detailed information about the recycling of this product, please contact your local city office, waste disposal service or the retail store where you purchased this product.