

ADPT-3SM-FI | SENTERA POM TO INVERTEK ADAPTER

Mounting and operating instructions



Table of contents

SAFETY AND PRECAUTIONS	3
PRODUCT DESCRIPTION	4
ARTICLE CODE	4
INTENDED AREA OF USE	4
TECHNICAL DATA	4
STANDARDS	4
WIRING AND CONNECTIONS	5
MOUNTING INSTRUCTIONS IN STEPS	5
VERIFICATION OF INSTALLATION INSTRUCTIONS	6
TRANSPORT AND STORAGE	6
WARRANTY AND RESTRICTIONS	6
MAINTENANCE	6

SAFETY AND PRECAUTIONS



Read all the information, the datasheet, Modbus map, mounting and operating instructions and study the wiring and connection diagram before working with the product. For personal and equipment safety, and for optimum product performance, make sure you entirely understand the contents before installing, using, or maintaining this product.



For safety and licensing (CE) reasons, unauthorised conversion and /or modifications of the product are inadmissible.



The product should not be exposed to abnormal conditions, such as extreme temperatures, direct sunlight or vibrations. Long-term exposure to chemical vapours in high concentration can affect the product performance. Make sure the work environment is as dry as possible; avoid condensation.



All installations shall comply with local health and safety regulations and local electrical standards and approved codes. This product can only be installed by an engineer or a technician who has expert knowledge of the product and safety precautions.



Avoid contacts with energised electrical parts. Always disconnect the power supply before connecting, servicing or repairing the product.



Always verify that you apply appropriate power supply to the product and use appropriate wire size and characteristics. Make sure that all the screws and nuts are well tightened and fuses (if any) are fitted well.



Recycling of equipment and packaging should be taken into consideration and these should be disposed of in accordance with local and national legislation / regulations.



In case there are any questions that are not answered, please contact your technical support or consult a professional.

PRODUCT DESCRIPTION

ADPT-3SM-FI is an RJ45 cable adapter for connecting FI series of frequency inverters to any Sentera Modbus RTU network.

ARTICLE CODE

Article code	Supply voltage
ADPT-3SM-FI	24 VDC (PoM)

INTENDED AREA OF USE

- Sentera Modbus networks
- For indoor use only!

TECHNICAL DATA

- Two RJ45 connectors:
 - ▶ One RJ45 connector for connection with the Sentera Modbus network
 - ▶ One RJ45 connector for connection with the INVERTEK frequency inverter
- Left LED of RJ45 connector on the INVERTEK side as indication for correct direction of the adapter.
- Left LED of RJ45 connector on the PoM network side as indication for 24 VDC availability on the PoM network.
- Protection class: IP 30 (EN 60529)
- Operating temperature: -20 °C to 70 °C
- Storage temperature: -35 °C to 70 °C
- Operating humidity range: 5 – 85 % rH, non-condensing
- Box material: ABS
- Box color: black

STANDARDS

- Low Voltage Directive 2014/35/EC: CE
 - ▶ EN 60529:1991 Degrees of protection provided by enclosures (IP Code). Amendment AC:1993 to EN 60529
 - ▶ EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
- EMC Directive 2014/30/EC:
 - ▶ EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
 - ▶ EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
 - ▶ EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light industrial environments Amendments A1:2011 and AC:2012 to EN 61000-6-3
 - ▶ EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
 - ▶ EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
- WEEE 2012/19/EC
- RoHs Directive 2011/65/EC

WIRING AND CONNECTIONS

RJ45 Sentera Modbus network		
Pin 1	24 VDC PoM	Supply voltage, 24 VDC
Pin 2		
Pin 3	NC	Not connected
Pin 4	A	Modbus RTU communication, signal A
Pin 5	/B	Modbus RTU communication, signal /B
Pin 6	NC	Not connected
Pin 7	GND PoM	Supply voltage, ground
Pin 8		
RJ45 socket Sentera 3SModbus	RJ45 socket FI - INVERTEK	
RJ45 - FI frequency inverters		
Pin 1	NC	Not connected
Pin 2		
Pin 3	0 VDC FI	Connected to 0 VDC of FI
Pin 4	NC	Not connected
Pin 5		
Pin 6	24 VDC FI	Connected to 24 VDC of FI
Pin 7		-RS485 (Modbus RTU)
Pin 8		+RS485 (Modbus RTU)
Connections		Screened, foil-shielded, twisted-pair (S/FTP) cable

ATTENTION

There is no connection both between 24 VDC PoM and 24 VDC FI and between GND PoM and 0 VDC FI. Please, be careful with the direction of the connectors!

MOUNTING INSTRUCTIONS IN STEPS

1. First connect the INVERTEK drive to the INVERTEK side of the adapter with a standard network cable.
2. Make sure that the left LED on the INVERTEK side of the adapter is ON. If this is not the case, the adapter is in the wrong direction.
3. Then connect the Sentera 3SModbus side of the adapter to the network.
4. If 24 VDC is available on the network (PoM), the left LED on the Sentera 3SModbus side of the adapter will be ON.

ATTENTION

24 VDC is not needed for data communication only between your Sentera application and the FI drive. The LED is only useful if your application uses Power over Modbus (PoM). PoM is the Sentera standard for distribution of Modbus RTU communication and 24 VDC supply voltage via a single RJ45 connector.

VERIFICATION OF INSTALLATION INSTRUCTIONS

Please be careful with the direction of the connectors!!

TRANSPORT AND STORAGE

Avoid shocks and extreme conditions; stock in original packing.

WARRANTY AND RESTRICTIONS

This warranty runs for two years from the delivery date for manufacturing defect. Any modification or alteration to the product releases the manufacturer from all responsibility. The manufacturer bears no responsibility for any misprint or mistake in this data, and modification or improvement to the product can be made at any time after date of publication.

MAINTENANCE

In normal conditions this product is maintenance-free. If soiled, clean with a dry or damp cloth. In case of heavy pollution, clean with a non-aggressive product. In these circumstances the unit should be disconnected from the supply. Pay attention that no fluids enter the unit. Only reconnect it to the supply when it is completely dry.