

User Guide

1-Wire Adapter 1

for 1-Wire cable Temperature Sensors

Performance features

- Adapter for 1-Wire cable sensors with RJ12 connectors
- Simple connection via screw terminal
- No need to remove the plug from cable sensors
- Back-up capacitor for stable operation of DS18S20, or DS18B20 sensors



1 Introduction

Before you start to install the adapter and put it into operation, please read this manual carefully until the end, especially the section of the safety instructions.

2 Product description

The 1-Wire cable Temperature Sensors (Art. No. 11106 and 11107) and the 1-Wire Adapter 1 form a coordinated cabling system.

The 1-Wire Adapter 1 is designed to connect the 1-Wire cable sensors to the 1-Wire network.

The adapter is connected to the 1-Wire network via screw terminals and to the temperature sensor via RJ12 modular jack. It is not necessary to remove the existing connectors of the temperature sensor, as the pin assignment of the temperature sensors is matched to the 1-Wire Adapter 1.

As further system components for the 1-Wire network, we recommend the use of a 1-Wire Hub II as power supply and 1-Wire Bus Coupler as connection to the control computer.

3 Auto-E-Connect® Support

The ESERA **Auto-E-Connect®** 1-Wire Plug and Play system will be used for the 1-Wire Bus supported. This enables fully automatic configurations of 1-Wire sensors and actuators on the 1-Wire Bus. It is optimized for industrial applications and enables significant added value beyond the sensor and chip data.

The Auto-E-Connect function automatically recognizes ESERA chips, sensors and actuators, starts suitable libraries and outputs fully formatted data.

The Auto-E-Connect functionality will be available from mid 2020 via 1-Wire Controllers, 1-Wire Gateways and 1-Wire ECO from ESERA available.

Further information on ESERA Auto-E-Connect can be found on the ESERA website, ESERA Config-Tool 3, or in the download area for this article in the ESERA Webshop.



4 Technical data

Connection: - RJ11/12 socket for cable temperature sensors
- Screw terminals for 1-Wire network

Supply voltage: 5VDC

Other: Back-up capacitor 0.1µF between +5V and GND

Temperature, Operation: 0°C to +50°C

Air humidity: 10 - 92% (non condensing)

Dimensions: 40 x 22 x 25 mm

Protection class: III

Protection system: IP00

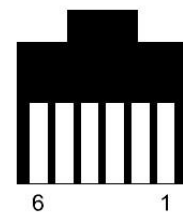
5 Conformity

EN 50090-2-2
EN 61000-4-2, ESD
EN 61000-4-3, HF
EN 61000-4-4, Burst
EN 61000-4-5, Surge
EN 61000-6-1, Fault-free operation
EN 61000-6-3, Stray radiation
RoHS

6 Assignment RJ12 socket (temperature sensor)

The RJ12 modular socket (6-pin, RJ12) is designed for direct connection of the 1-Wire cable temperature sensors 11106 and 11107. The modular socket is assigned as follows (view into the socket, i.e. on the contact surfaces of the socket)

RJ-12 Buchse



Assignment RJ12 socket:

PIN	Function
1 + 2	Ground
3 + 4	1-Wire Data
5 + 6	+5 V

7 Assignment Screw terminal (1-Wire network)

Screw terminals +5V, 1-Wire Data and GND are provided for connection to the 1-Wire network. The assignment is printed on the printed circuit board.

8 Operating conditions

The module may only be operated at the voltages and ambient conditions specified for it. The device can be operated in any position. The device is intended for use in dry and dust-free rooms. If condensation forms, wait up to 2 hours for the device to acclimatise. Assemblies and components must not be handled by children! The modules may only be put into operation under the supervision of a qualified electrician. In commercial facilities, the accident prevention regulations of the Association of Industrial Employers' Liability Insurance Associations for electrical systems and equipment must be observed. Do not operate the module in an environment in which flammable gases, vapours or dust are or may be present.

9 Assembly

The installation site must be protected against moisture. The device may only be used in dry indoor rooms and in protected outdoor areas. The device is intended for mounting inside a switch cabinet as a stationary device. The printed circuit board is open and not electrically insulated, therefore an insulated mounting to metal surfaces and other electrical cables must be provided.

10 Disposal note

Do not dispose of the device within the household waste!
According to the directive concerning old electrical and electronic appliances, electronic devices must be disposed of via the collecting points for old electronic appliances!



11 Safety instructions

When using products that come into contact with electrical voltage, the valid VDE regulations must be observed, especially VDE 0100, VDE 0550/0551, VDE 0700, VDE 0711 and VDE 0860

- All final or wiring work must be carried out with the power turned off.
- Before opening the device, always unplug or make sure that the unit is disconnected from the mains.
- Components, modules or devices may only be put into service if they are mounted in a contact proof housing. During installation they must not have power applied.
- Tools may only be used on devices, components or assemblies when it is certain that the devices are disconnected from the power supply and electrical charges stored in the components inside the device have been discharged.
- Live cables or wires to which the device or an assembly is connected, must always be tested for insulation faults or breaks.
- If an error is detected in the supply line, the device must be immediately taken out of operation until the faulty cable has been replaced.
- When using components or modules it is absolutely necessary to comply with the requirements set out in the accompanying description specifications for electrical quantities.
- If the available description is not clear to the non-commercial end-user what the applicable electrical characteristics for a part or assembly are, how to connect an external circuit, which external components or additional devices can be connected or which values these external components may have, a qualified electrician must be consulted.
- It must be examined generally before the commissioning of a device, whether this device or module is basically suitable for the application in which it is to be used.
- In case of doubt, consultation with experts or the manufacturer of the components used is absolutely necessary.
- For operational and connection errors outside of our control, we assume no liability of any kind for any resulting damage.
- Kits should be returned without their housing when not functional with an exact error description and the accompanying instructions. Without an error description it is not possible to repair. For time-consuming assembly or disassembly of cases charges will be invoiced.
- During installation and handling of components which later have mains potential on their parts, the relevant VDE regulations must be observed.
- Devices that are to be operated at a voltage greater than 35 VDC / 12mA, may only be connected by a qualified electrician and put into operation.
- Commissioning may only be realized if the circuit is built into a contact proof housing.
- If measurements with an open housing are unavoidable, for safety reasons an isolating transformer must be installed upstream or a suitable power supply can be used.
- After installing the required tests according to DGUV / regulation 3 (German statutory accident insurance, https://en.wikipedia.org/wiki/German_Statutory_Accident_Insurance) must be carried out.

12 Warranty

ESERA GmbH guarantees that the goods sold at the time of transfer of risk to be free from material and workmanship defects and have the contractually assured characteristics. The statutory warranty period of two years begins from date of invoice. The warranty does not extend to the normal operational wear and normal wear and tear. Customer claims for damages, for example, for non-performance, fault in contracting, breach of secondary contractual obligations, consequential damages, damages resulting from unauthorized usage and other legal grounds are excluded. Excepting to this, ESERA GmbH accepts liability for the absence of a guaranteed quality resulting from intent or gross negligence. Claims made under the Product Liability Act are not affected.

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