

## Documentation Connectors and Sockets for 1-Wire Bus system

Basics and tips for the 1-Wire Bus system can be found in our eBook, Art. No. 11901  
Further information about 1-Wire Bus and notes on operation can also be found [here](#)  
Important: Please note that the different pin assignments are not compatible

### 1 Assignment 1-Wire for RJ45, Ethernet cable (1-Wire.org, ESERA GmbH and IPS)

The standard for the RJ45 pin assignment is based on a standardization proposal from "1.Wire.org" which can be found [here](#).  
The following definition is an extension of the mentioned standard and does not contradict it.

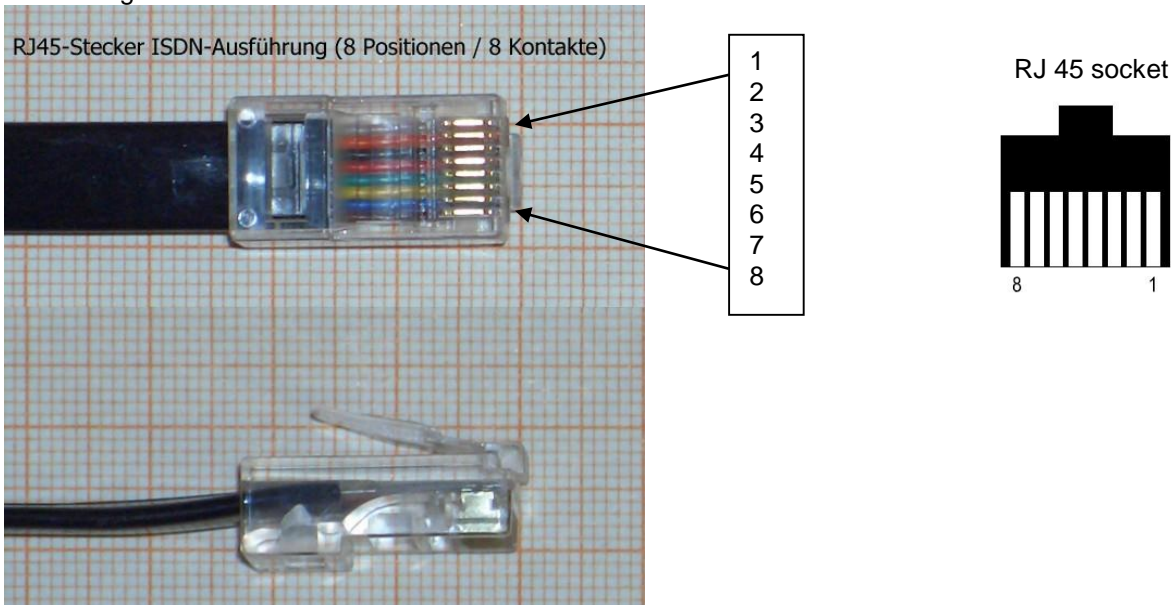
	1	2	3	4	5	6	7	8
<b>1-Wire Bus</b>	<b>GND</b>	<b>5V, max. 50mA</b>	<b>GND</b>	<b>1-Wire Data primary</b>	<b>GND</b>	<b>1-Wire Data secondary</b>	<b>+12V, max. 200mA</b>	<b>GND</b>

#### 1.1 RJ45 socket

Numbering of the socket side. View into the socket from outside (from the connector side)

#### 1.2 RJ45 connector

Numbering seen on the connectors



### 1.3 RJ45 Assignment for Ethernet cable

Colour specifications for Ethernet cable according to EIA/TIA 568A or EIA/TIA 568B:

EIA/TIA 568A		Assignment Ethernet cable	EIA/TIA 568B	
1	Green/White	GND (Main supply)	Orange/White	
2	Green	Main supply + (preferably +5V/50mA for 1-Wire Devices)	Orange	
3	Orange/White	GND (Secondary 1-Wire Bus)	Green/White	
4	Blue	Primary 1-Wire Bus	Blue	
5	Blue/White	GND (Primary 1-Wire Bus GND)	Blue/White	
6	Orange	Secondary 1-Wire Bus	Green	
7	Brown/White	+12V/200mA (Auxiliary supply)	Brown/White	
8	Brown	GND (Auxiliary supply)	Brown	

The only difference between the two colour versions is the interchange of the wire pairs green/green/white and orange/orange/white. The decisive factor is compliance with the pin numbers.

## 2 USB-Adapter DS9490 (1-Wire Busmaster) + Adapter cable with open cable ends

The standard for the RJ12 pin assignment is based on the "DALLAS ONE-WIRE RJ11/12/14 CONNECTOR STANDARD".

To adapt the DS9490 USB adapter, please use the "adapter cable with open cable ends" from our ESERA- Automation shop.

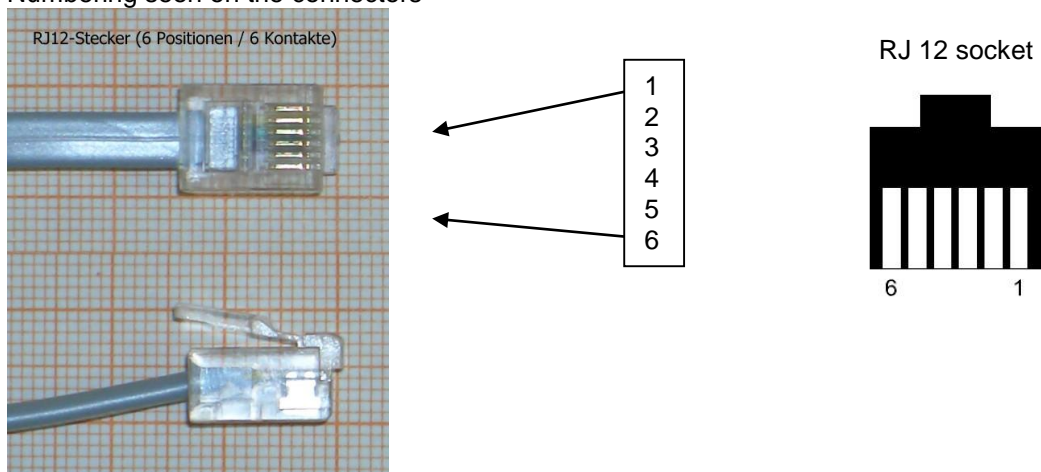
PIN	1	2	3	4	5	6
DS9490 USB-Adapter Art. No. 11304	5V	GND	1-Wire Data	GND	USB-Suspend	n.c.
Adapter cable with open cable ends Art. No. 11310	White	Pink	Green	Yellow	Grey	Red

### 2.1 RJ12 socket

Numbering of the socket side. View into the socket from outside (from the connector side)

### 2.2 RJ12 connector

Numbering seen on the connectors



### 3 Temperature sensor Pro waterproof

For further details of the cable sensors, please refer to the operating instructions of the article.

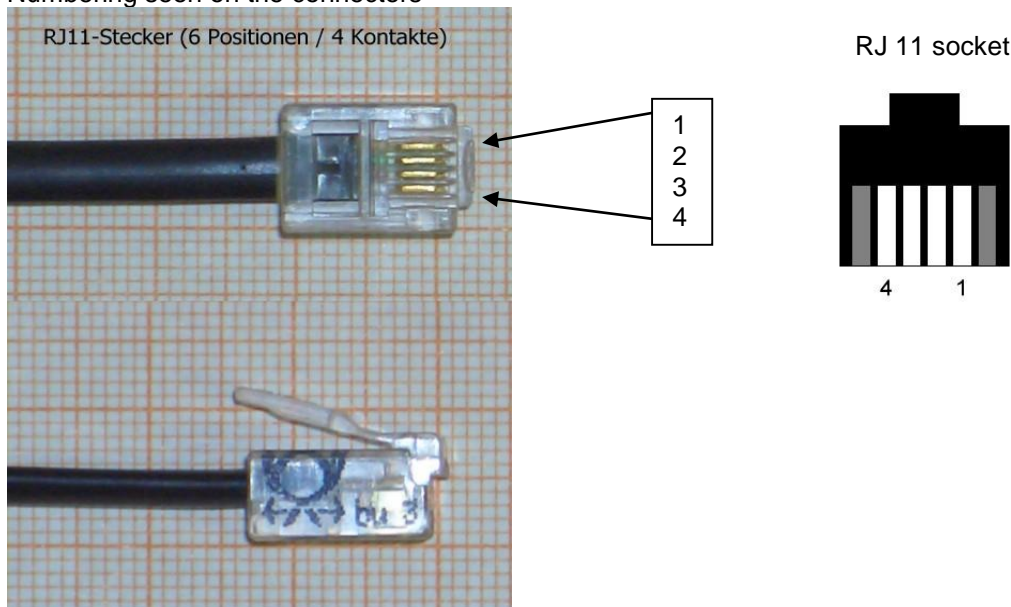
PIN	1	2	3	4
1-Wire	5V	1-Wire	1-Wire	GND
Temperature sensor Art. No. 11105	White	Brown	Green	Yellow
Temperature sensor Art. No. 11106	Green	n.c.	Brown	White

#### 3.1 RJ11 socket

Numbering of the socket side, View into the socket from outside (from the connector side)

#### 3.2 RJ11 connector

Numbering seen on the connectors



### 4 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!



### 5 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](https://en.wikipedia.org/wiki/German_Statutory_Accident_Insurance)) must be carried out.

## 6 Warranty

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