

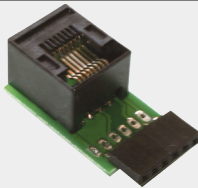
# S88-A | s88-N Adapter

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For the connection of 6-pole connectors  
of s88-devices with Ethernet patch cables (RJ-45)

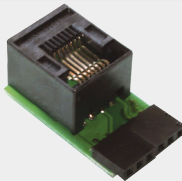
## Manual

**s88-N**



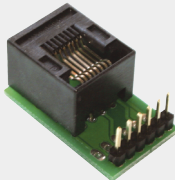
**Version S88-A-BL**

Item no. 44-09100-01



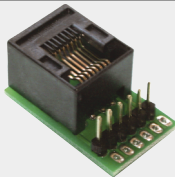
**Version S88-A-BR**

Item no. 44-09110-01



**Version S88-A-SL**

Item no. 44-09200-01



**Version S88-A-SR**

Item no. 44-09210-01

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### Printing the manual

The formatting is optimised for double-sided printing. The standard page size is DIN A5. If you prefer a larger display, printing on DIN A4 is recommended.

## 1. Getting started

The instructions will help you step by step with the safe and proper installation and use of your adapter. Before you put the adapter into operation, read this manual completely, especially the safety instructions and the section on possible errors and their elimination. You will then know what you have to pay attention to and thus avoid errors that sometimes can only be rectified with a lot of effort.

Keep the instructions in a safe place so that you can restore functionality later in the event of any malfunctions. If you pass the adapter on to another person, also give the instructions with it.

### 1.1. Contents of the package

- 1 adapter

Patch cables and/or 6-core (flat ribbon) cables for connection to s88 feedback modules or digital devices (interface, memory or central unit) are not included in the scope of delivery.

### 1.2. Intended use

The adapter is intended for use in model railway layouts as specified in the instructions. Any other use is not in accordance with the intended use and will result in the loss of the warranty claim. Intended use also includes reading, understanding and following all parts of the instructions. The adapter is not intended to be used by children under the age of 14.

### 1.3. Safety instructions

Improper use and non-observance of the instructions can lead to incalculable hazards. Prevent these dangers by carrying out the following measures:

- Only use the adapter in closed, clean and dry rooms. Avoid moisture and splash water in the environment. After condensation has formed, wait two hours for acclimatisation before use.
- Disconnect devices that are connected to the adapter from the power supply before carrying out wiring work.
- Only supply devices that you connect to the adapter with extra-low voltage as specified in the technical data. Only use tested and approved transformers for this purpose.
- Only plug the mains plugs of transformers into properly installed and fused earthed sockets.
- Do not expose the adapter to high ambient temperatures or direct sunlight. Observe the information on the maximum operating temperature in the technical data.
- Regularly check the operational safety of the adapter and the connected devices, e.g. for damage to the connection cables.
- If you notice damage or if malfunctions occur, disconnect the connection to the power supply immediately. Send the adapter in for inspection.

## 2. Operation overview

### **s88-N** Info: **Standard s88-N**

The standard s88-N regulates the assignment of commercial Ethernet patch-cables for use in s88 feedback systems. Unlike the 6-conductor connecting cables frequently used, the patch-cables used in computer networks are screened against outside electric signals. Thus using patch-cables reduces the liability to interference considerably.

### 2.1. Adapters S88-A

The adapters S88-A have connections for both an Ethernet patch-cable (RJ-45) according to the standard s88-N and a 6-conductor s88-connecting cable. They allow

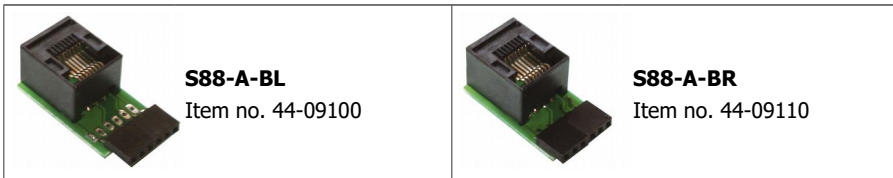
- to connect devices for the s88 bus with customary 6-pin connections via patch cables (RJ-45) to each other;
- to connect an device for the s88 bus with customary 6-pin connections to a s88-device with RJ-45 connections according to s88-N.

### 2.2. Versions of the adapters S88-A

#### **S88 adapters with socket**

can be plugged directly onto the 6-pin connector of an S88 back module. If space allows and the adapter can be plugged into the 6-pin connector of an s88 device in such a way that it has a secure hold, it makes sense to use adapters with a socket.

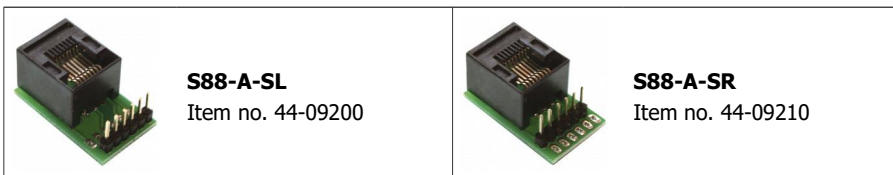
Recommended use: Modules with connectors coming out from the side



#### **S88-adapter with plug**

are connected via a 6-core cable that is as short as possible (e.g. S88-15, item no. 44-09250-01). They are intended for connection to s88 devices where an adapter with socket cannot be plugged on in such a way that it sits firmly and securely. They should always be used for the connection to the digital central unit in order to avoid mechanical damage to the S88 interface of the central unit.

Recommended use: digital devices, modules with connectors leading out upwards



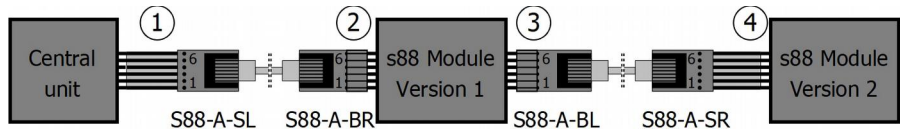
## Mounting directions of the adapters S88-A

Depending on the installation direction, the "R" or "L" versions of the adapter are used.

Versions	Direction of the 6-pole connection*
S88-A-SL and S88-A-BL	Central unit
S88-A-SR and S88-A-BR	Feedback module

\* Explanation: The specification refers to the direction in which the 6-pin connector of the adapter points.

## 2.3. Application examples



s88 module version 1: with connectors coming out from the side

s88 module version 2: with plugs protruding upwards

### Explanation of the examples:

1	<p>At the central unit, the connection of an adapter with socket is generally not recommended. With this version of the adapter, the pins of the s88 interface of the command station could be bent accidentally. Therefore, the connection is made using a short 6-core ribbon cable and an adapter with a plug.</p> <p>The 6-pin connector of the adapter points in the direction of the "control centre", therefore a version "L" is required.</p> <p>Der 6-polige Anschluss des Adapters weist in Richtung "Zentrale", daher ist eine Version "L" erforderlich.</p>
2	<p>With this version of an s88 module with plugs leading out from the side, adapters with socket can be plugged on directly.</p> <p>The 6-pole connection of the adapter points in the direction of the "feedback unit", therefore a version "R" is required.</p>
3	<p>With this version of an s88 module with connectors leading out from the side, adapters with a socket can be plugged on directly.</p> <p>The 6-pole connection of the adapter points in the direction of "central", therefore a version "L" is required.</p>
4	<p>With this version of an s88 module with connectors leading out upwards, an adapter with socket cannot be fixed securely. Therefore, the connection is made via a short 6-core ribbon cable and an adapter with plug.</p> <p>The 6-pole connection of the adapter points in the direction of the "feedback unit", therefore a version "R" is required.</p>

### 3. Mounting the adapter

Connect the adapter to the patch cable and the s88 feedback module or device. For this purpose use an adapter with socket or an adapter with plug and a short 6-connector connecting cable.

#### **Caution:**

Avoid constructions which allow the adapter to be moved after having been connected. Due to (involuntary) movements of the adapter the connections of the s88 module or the digital device and their mounting can be damaged.

### 4. Checklist for troubleshooting and error correction

The central unit, the memory or the interface do not show the proper status.

Possible causes:

- The connection(s) between the adapter and the connected device and / or the patch cable have been interrupted. → Check the connection(s).
- You have mounted an adapter not corresponding to the set mounting direction. → Check if mounting direction and the chosen adapter correspond to each other and, if necessary, exchange the adapter.

#### 4.1. Technical Hotline

If you have any questions about the use of your adapter, our technical hotline will help you (telephone number and e-mail address on the last page).

#### 4.2. Repairs

You can send us a defective adapter for repair (address on the last page). In the event of a warranty or guarantee claim, the repair is free of charge for you. As proof of any warranty or guarantee claim, please enclose the proof of purchase with your return.

If there is no warranty or guarantee claim, we are entitled to charge you the costs of the repair and the costs of the return shipment. We charge a maximum of 50% of the new price for the repair according to our valid price list. We reserve the right to refuse the repair if it is technically impossible or uneconomical.

If you want to clarify whether a repair is possible or economical before sending it in, please contact our Technical Hotline (telephone number and email address on the last page).

Please do not send us repair shipments freight collect. In the event of a warranty or guarantee claim, we will reimburse you for the regular shipping costs.

## 5. Technical data


### Data protocols and interfaces

Data protocols	s88
Interfaces for s88 bus	1 x RJ-45 socket according to S88-N 1 x 6-pole connector

### Protection

Protection class	IP 00 Meaning: No protection against foreign bodies, contact and water.
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### Environment

	For use in closed rooms
Ambient temperature during operation	0 ~ + 30 °C
Permissible relative humidity during operation	10 ~ 85% (non-condensing)
Ambient temperature during storage	- 10 ~ + 40 °C
Permissible relative humidity during storage	10 ~ 85% (non-condensing)

### Other features

Dimensions (approx.)	S88-A-BL: 37 x 17,5 x 15 mm
	S88-A-BR: 34 x 17,5 x 15 mm
	S88-A-SL: 29 x 27,5 x 15 mm
	S88-A-SR: 29 x 27,5 x 15 mm
Weight (approx.)	S88-A-BL and S88-A-BR: 4,8 g
	S88-A-SL and S88-A-SR: 4,5 g

## 6. Warranty, EU conformity & WEEE

### 6.1. Guarantee bond

For this product we issue voluntarily a guarantee of 2 years from the date of purchase by the first customer, but in maximum 3 years after the end of series production. The first customer is the consumer first purchasing the product from us, a dealer or another natural or juristic person reselling or mounting the product on the basis of self-employment. The guarantee exists supplementary to the legal warranty of merchantability due to the consumer by the seller.

The warranty includes the free correction of faults which can be proved to be due to material failure or factory flaw. With kits we guarantee the completeness and quality of the components as well as the function of the parts according to the parameters in not mounted state. We guarantee the adherence to the technical specifications when the kit has been assembled and the ready-built circuit connected according to the manual and when start and mode of operation follow the instructions.


We retain the right to repair, make improvements, to deliver spares or to return the purchase price. Other claims are excluded. Claims for secondary damages or product liability consist only according to legal requirements.

Condition for this guarantee to be valid, is the adherence to the manual. In addition, the guarantee claim is excluded in the following cases:

- if arbitrary changes in the circuit are made,
- if repair attempts have failed with a ready-made module or device,
- if damaged by other persons,
- if damaged by faulty operation or by careless use or abuse.



## 6.2. EU Declaration of Conformity

 This product fulfils the requirements of the following EU directives and therefore bears the CE marking.

2001/95/EU Product Safety Directive

2015/863/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

## 6.3. Declarations on the WEEE Directive

This product is subject to the requirements of the EU Directive 2012/19/EC on Waste Electrical and Electronic Equipment (WEEE), i.e. the manufacturer, distributor or seller of the product must contribute to the proper disposal and treatment of waste equipment in accordance with EU and national law. This obligation includes

- registration with the registering authorities ("registers") in the country where WEEE is distributed or sold
- the regular reporting of the amount of EEE sold
- the organisation or financing of collection, treatment, recycling and recovery of the products
- for distributors, the establishment of a take-back service where customers can return WEEE free of charge
- for producers, compliance with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive.



The "crossed-out wheeled bin" symbol means that you are legally obliged to recycle the marked equipment at the end of its life. The appliances must not be disposed of with (unsorted) household waste or packaging waste. Dispose of the appliances at special collection and return points, e.g. at recycling centres or at dealers who offer a corresponding take-back service.





Further Information and Tips:

<http://www.tams-online.de>

Warranty and Service:

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