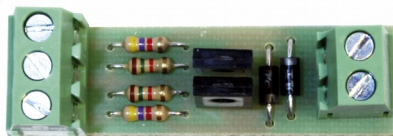


Manual

# AMW-1 | AMW-2

Item no. 72-00076 | 72-00086



# AMW plus

Item no. 72-00176



Adapters for  
motor-run points

tams elektronik



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Subject to technical modification.

# 1. Getting started

## How to use this manual

This manual gives step-by-step instructions for fitting and connecting of the adapter, and operation. Before you start, we advise you to read the whole manual, particularly the chapter on safety instructions and the checklist for trouble shooting. You will then know where to take care and how to prevent mistakes which take a lot of effort to correct.

Keep this manual safely so that you can solve problems in the future. If you pass the adapter on to another person, please pass on the manual with it.

## Intended use

The adapters AMW-1, AMW-2 and AMW plus are designed to be operated according to the instructions in this manual in model building, especially with model railways. Any other use is inappropriate and invalidates any guarantees.

The adapters should not be mounted by children under the age of 14.

Reading, understanding and following the instructions in this manual are mandatory for the user.

## Checking the package contents

Please make sure that your package contains:

- one adapter
- a CD (containing the manual and further information)

## Required materials

In order to connect the adapter you need wire. Recommended diameters:  $\geq 0.25 \text{ mm}^2$  for all connections.

## 2. Safety instructions

### **Electrical hazards**

- Touching powered, live components,
  - touching conducting components which are live due to malfunction,
  - short circuits and connecting the circuit to another voltage than specified,
  - impermissibly high humidity and condensation build up
- can cause serious injury due to electrical shock. Take the following precautions to prevent this danger:
- Never perform wiring on a powered module.
  - Assembling and mounting the kit should only be done in closed, clean, dry rooms. Beware of humidity.
  - Only use low power for this module as described in this manual and only use certified transformers.
  - Connect transformers and soldering irons only in approved mains sockets installed by an authorised electrician.
  - Observe cable diameter requirements.
  - After condensation build up, allow a minimum of 2 hours for dispersion.
  - Use only original spare parts if you have to repair the kit or the ready-built module.

### 3. Operation overview

Many electronic circuits controlling points (e.g. standard turnout decoders, shuttle train controls, shadow station controls) are designed to connect points with twin coil drive. It is impossible to connect motor driven points (with or without automatic tape shut off) directly to those circuits.

The adapters AMW-1, AMW-2 and AMW plus are designed to be connected to those electronic circuits and the points motor. They interconnect the three connectors of points with twin coil drive to the two motor connections of motor driven points.

Corresponding to the two common types of electronic circuits controlling points differing with regard to the internal circuit design, two different types are available: AMW-1 and AMW plus (positively switched) and AMW-2 (negatively switched).

#### Examples of use\*

	For combination with	Manufacturer
AMW-1 <i>or</i> AMW plus	Turnout decoders WD-1, WD-34.2 and WD-34.BiDiB Shadow station controls SBS and HADES Shuttle train controls PZS-2, PZS-3 and HADES Loop module KSM-3	Tams Elektronik
AMW-2	Turnout decoders WD-5 and WD-34 Multi-Decoders MD-2 and MD-2.BiDiB	Tams Elektronik
	Turnout decoders	Märklin and Viessmann

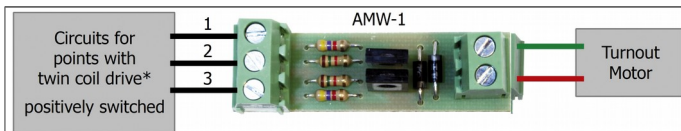
Without any claim to be complete. Further combinations on demand.

#### 4. Technical specifications

Supply voltage	---
Current consumption (without connected devices) approx.	1 mA
Max. total current	1 500 mA
Protected to	IP 00
Ambient temperature in use	0 ... +60 °C
Ambient temperature in storage	-10 ... +80 °C
Comparative humidity allowed	max. 85 %
Dimensions of the PCB (approx.)	AMW-1 and AMW-2: 52 x 15 mm AMW plus: 31 x 15 mm
Weight of the assembled board (approx.)	AMW-1 and AMW-2: 11 g AMW plus: 5 g

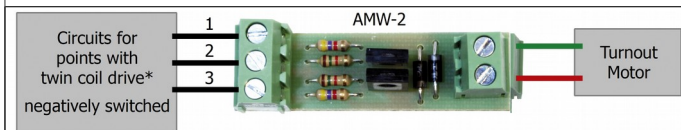
## 5. Connecting the AMW

Connect the adapter AMW to the outputs of the circuit intended to control the points and to the turnout motor.



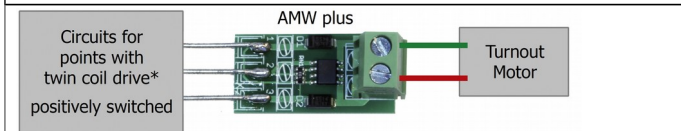
\* Examples:

Turnout decoders WD-1, WD-34.2 and WD-34.BiDiB, Shadow station controls SBS and HADES, Shuttle train controls PZS-2, PZS-3 and HADES, Loop module KSM-3



\* Examples:

Turnout decoders WD-5 and WD-34, Turnout decoders of Märklin and Viessmann



\* Examples:

Turnout decoders WD-1, WD-34.2 and WD-34.BiDiB, Shadow station controls SBS and HADES, Shuttle train controls PZS-2, PZS-3 and HADES, Loop module KSM-3

1	Points connection "branching"	Hint: In case the points switch the wrong way (to "branching" when using the switching command "straight on" or converse), exchange the motor connections or the module's points connections for "branching" and "straight on".
2	Return conductor	
3	Points connection "straight on"	

## 6. Check list for troubleshooting

- Parts are getting too hot and/or start to smoke.



Disconnect the system from the mains immediately!

Possible cause: The module is defective. → Send in the module for repair.

- When switching the points to "branching" the points switch to "stright on" (or converse). → Exchange the motor connections or the module 's points connections for "branching" and "straight on".

### Hotline

If problems with your module occur, our hotline is pleased to help you (mail address on the last page).

### Repairs

You can send in a defective module for repair (address on the last page). In case of guarantee the repair is free of charge for you. With damages not covered by guarantee, the maximum fee for the repair is the difference between the price for the ready-built module and the kit according to our valid price list. We reserve the right to reject the repairing of a module when the repair is impossible for technical or economic reasons.

Please do not send in modules for repair charged to us. In case of warranty we will reimburse the forwarding expenses up to the flat rate we charge according to our valid price list for the delivery of the product. With repairs not covered by guarantee you have to bear the expenses for sending back and forth.



## 7. 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-built module or device,
- if damaged by other persons,
- if damaged by faulty operation or by careless use or abuse.

## 8. EU declaration of conformity

 This product conforms with the EC-directives mentioned below and is therefore CE certified.

2004/108/EG on electromagnetic. Underlying standards: EN 55014-1 and EN 61000-6-3. To guarantee the electromagnetic tolerance in operation you must take the following precautions:

- Connect the transformer only to an approved mains socket installed by an authorised electrician.
- Make no changes to the original parts and accurately follow the instructions, connection diagrams and PCB layout included with this manual.
- Use only original spare parts for repairs.

2011/65/EG on the restriction of the use of certain hazardous substances in electrical and electronic equipment (ROHS). Underlying standard: EN 50581.

## 9. Declarations conforming to the WEEE directive



This product conforms with the EC-directive 2012/19/EG on waste electrical and electronic equipment (WEEE).

Don't dispose of this product in the house refuse, bring it to the next recycling bay.



Information and tips:

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

Warranty and service:

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