

Acceleration-Brake Module

with partial speed



ABBS 41 300

Function

When a train approaching a red signal enters the first of two isolated track sections, the module reduces the speed to a slower speed. This partial speed is adjusted with the rotary knob. The braking and eventual stop only takes place in the second section.

Since the speed of the train is rather slow even relatively fast and heavy trains come to a stop at the same location.

Protection

The module is fully electronically constructed and equipped with short circuit and overload protection. The track power is limited to 1.4A in the stop section so that during a short circuit there is no danger of damage to the module, wiring or track.

With high load, as for example during a long and constant short circuit, the module will reduce the output capacity. It warms up and lastly switches the track power off.

When the overload is removed and the module has cooled down again it will resume normal operation.

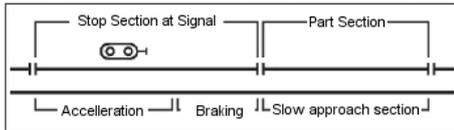
Faulhaber Motors

Our start/brake modules are also suitable, with restrictions, for vehicles with Faulhaber motors. A mixer operation with conventional motors is not recommended, since there is no setting of the component with which all vehicles will have approximately the same stopping distance. Small vehicles with Faulhaber motors may possibly not come to a stop.

An exception is vehicles that are fitted with electronics that take into account the sensitivity of the motor against minimal current.

Length of the Stop section

Two isolated sections need to be installed: the slow speed section, in which the trains are set to a low speed, and a stop section, in which the vehicles brake and come to a stop. The signal is located in the stop section approximately one locomotive length behind the second isolation point.

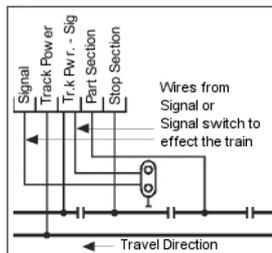


Before installation of the module you can determine the length of the track sections by setting up a test track on

your workbench to your satisfaction. You should allow for sufficient braking and acceleration distances for normal heavy and fast vehicles. As a good measure use 1 m for H0 scale and 0.5 m for N scale. The characteristics of the module are better the longer the isolated sections are.

Connection

After installing the isolation points, connect the module to the track power isolated sections and the cables from the signal as shown in the accompanying diagram. The isolated sections must be inserted with the driving direction right rail as shown. The section is passable in the reverse direction.



In a Construction Zone

If only the first isolation section is connected one has a variable speed zone, for example a construction zone or downgrade.

Entrance signal with Hp2

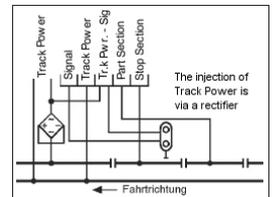
With exclusive connection of the slow section you achieve prototypical behaviour of your trains. When driving through the station or passing track the signal is switched to states Hp0, Hp1 or Hp2.

With exclusive use in the second isolation section the component behaves like the ABBS 412.

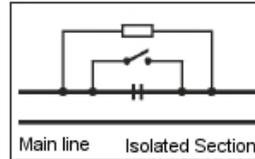
Driving Voltage reduction with the ABBS

Since the component receives its supply from the track, running voltage will be slightly reduced within the isolated section. A train therefore drives a little slower in that section even when the signal is green.

This effect can be eliminated by supplying the device from a separate higher set transformer, or by reducing the driving voltage in the other sections or with an accordingly switched diode by about 1.4 V.



Switch off Track in Stop section

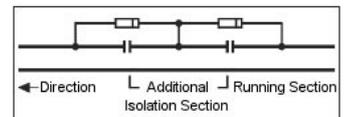


If a stop section is to have a section switched off in it, then a switch contact must be installed and bridged with a coupling resistor to interrupt the track power. That way you ensure that the device registers a train located in the switched off section.

Illuminated Coaches

Illuminated coaches with a pickup on a Märklin track, or with bogie on which power is picked up on both axels, bridge the isolation point for a short time while crossing it. During this time the locomotive gets a short burst of full power and does a little leap.

To eliminate this effect you can add a further short isolated section in front of the slow section which is slightly longer than the distance across the bogies. Like the other isolated section it must be cut on the right - as seen from the travel direction, and as shown in the diagram, bridged with two diodes 1N4001.



Technical Data

Track Power: 0-16 V
Track current max: 1.4 A

Additional Components

Part No. 01201 10 Diodes 1N4001
Part No. 01221 10 Coupling resistors 4,7K
Part No. 01251 1 Rectifiers B40C1500

02045 8583-27 If you have any questions call us:
Mon - Tue - Thu - Fri, 14:00-16:00 and
Wednesdays 16:00-18:00 are Hotline times

Our products are covered by a two year warranty.

If it is defective send decoder along with the receipt of purchase to the following address:

Uhlenbrock Elektronik GmbH • Mercatorstr. 6 • 46244 Bottrop • Tel: 02045-8583-0 • Fax: 02045-8684-0