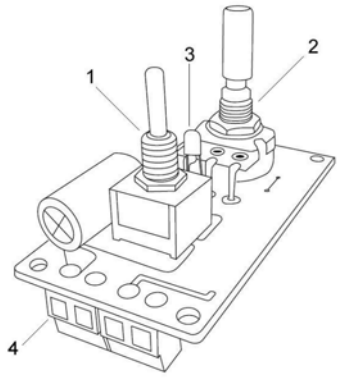
AN-1/C Panel-mounted analog speed controller
(for Z, N, TT, H0 scale)

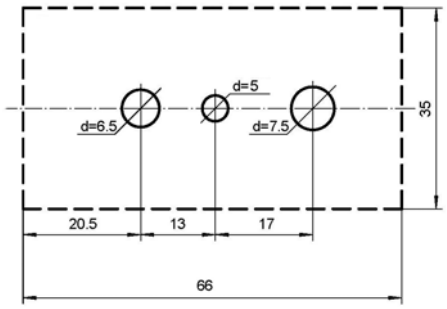


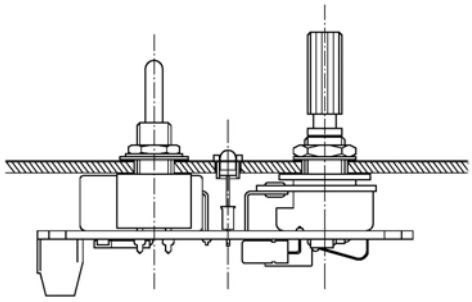
Easy to mount in any mounting box or on your layout's control panel. Especially suitable for layouts where several controllers are needed. By mounting these units side by side, you will have a clean and professional looking control panel. Various support documents (drill templates, front panel drawing examples, etc.) can be downloaded from our website. Easy to install using screw clamp terminal blocks. The AN-1/C speed controller provides for smooth acceleration and braking, providing large torque even at very low speeds. The package contains everything you need to mount the unit: nuts and washers, LED and LED holder, knob for potentiometer.

1. Mounting

IMPORTANT NOTICE:
Please note that the unit must be properly mounted for correct operation. Contact between the electronic parts of the unit and other metal objects may cause malfunctions or may damage the controller! If the panel is not installed and you want to remove the knob from the potentiometer shaft, be careful to avoid breaking the potentiometer terminals: instead of the panel, hold the potentiometer itself.

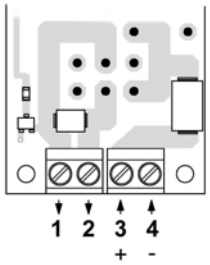
The figure below shows how to mount the unit in the simplest way. Drill holes in the front panel according to the template provided. Clip the terminal pins of the LED (3) as necessary (based on the thickness of the panel); then connect them, paying attention to correct polarity. Finally, mount the unit from behind the front panel, and attach with the nuts provided.





For additional help, please visit our website. (drill template for downloading and more)

2. Connecting the wires:

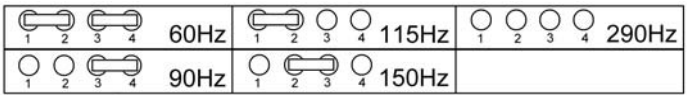


<u>Important: make sure the power supply is off when connecting the wires. Incorrect wiring (e.g. switching the input and output wires) may damage the unit.</u>

Connect the input voltage wires to terminal 3 and terminal 4. Terminal 3 is the positive pole, and terminal 4 is the negative pole. Connect the output wires (terminal 1 and 2) to the track. Tighten the clamps with the screws. If you have several sections on your layout and are using several controllers, make sure the output wires are connected with the same polarity (e.g. terminal 1 is connected to the right side rail, and terminal 2 is connected to the left side rail); this ensures that the positions of the switch correspond to the same direction of travel for the trains. There are many solutions for avoiding short circuits between track sections, but this manual cannot cover those.

3. Jumpers:

The PWM frequency can be changed by setting jumpers. The default setup is 60Hz, which is optimal in most cases.



4. How to run the locomotives

Switch the direction switch (1) to the center position; turn the speed control knob (2) all the way counter-clockwise. Place the locomotive on your layout. Select the desired direction with the direction switch (1). The LED (3) green light is lit. Turn the knob clockwise to start and accelerate, then counter-clockwise to decelerate and stop.

5. Troubleshooting

A common problem with all analog and DCC systems is the locomotive's pickup. Keep the wheels and track surfaces clean. Intermittent and jerky operation is often caused by an oxide coating forming on the track or the wheels. If you have problems, always check the track and wheels first and make sure they are clean.

The locomotive does not move and …

a, the LED (3) is not lit

- no input power – check adapter or adapter plug

b, the LED (3) is lit with green light

- contact fault on the track or at the locomotive's pickup.

c, the LED (3) is lit with red light

- there is a continuous overload. After the overload is resolved and the device has cooled off, the unit will switch on again.

6. Technical features

Analog control: Pulse width modulation (PWM)

Input voltage: must be 6-24V DC. Terminal 3 is the positive pole and terminal 4 is the negative pole (see drawing). For smoother operation of locomotives, use a filtered or regulated power supply (especially if the load of the unit is greater than 2-3A).

Maximum output load: 5A . Note: above 18V input voltage, the maximum output load is gradually reduced until 3A.

The device is protected against thermal overload.

http://www.medvend.hu