

**This loco is *DIGITAL 2* - compatible,  
because it is equipped with a  
digital decoder made by**



## **AnDi 75320**

### **Reverser for AC-Operation**

### **Digital Decoder for the Märklin-Motorola Format**

For locos with DC-motors.

#### **Properties**

In digital operation, AnDi is a small low-cost digital decoder whose address can be changed quickly without cumbersome programming. In ac operation, it is a reverser that is ready for conversion to digital mode. Whenever you wish to convert to digital operation, a direction change-over impulse of a little extended duration will set it to its digital mode.

AnDi is of small outline, offers quick installation due to a NEM 652 interface plug, and provides a continuous motor current of 1 amp with appropriate heat sink.

#### **Use as an AC Reverser**

In ac mode the unit works as a full reverser that offers excellent running properties. Headlights change over with direction. Direction setting is stored permanently and is retained while supply voltage is off.

The unit will NOT switch over automatically to digital mode if the loco enters such a section.

#### **Use as a Digital decoder**

After setup of digital mode, the unit can be freely used on layouts that are driven by either Intellibox or Märklin Digital System (Central-Unit, Control-Unit or Delta-Zentrale). It works on both standard and extended Motorola data formats.

The unit features two direction dependent ancillary outputs that are governed by the 'function' and 'off' keys. In Delta operation the lights will stay on after setting an address. Direction and speed settings will be retained while power is off, so that a loco will continue to move as before as soon as the supply is restored. This feature makes it fully suitable for automatic block systems.

The unit will keep its speed settings when entering an analog ac section, provided the voltage is sufficient. Speeding up or reversing are not possible, though.

The factory-preset digital address is 78 (Delta steam loco address).

#### **Technical Data**

Max. motor current:	0.7 amp, 1.0 amp with heatsink
Motor surge current:	2.0 amps
Ancillary outputs:	0.9 amp
Total load:	1.0 amp with heatsink
Size:	19x16x5 mm (3/4"x5/8"x3/16")
Address space:	1-255, accessible by Intellibox only 1-80, if another Central Unit is used
Factory settings:	analog ac mode preset digital address 78 (Märklin Delta steam loco address)

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#### **Warranty Statement**

Every item is fully tested for functioning before shipment. If a defect occurs within two years after purchase, the item will be repaired free of charge against presentation of purchase proof.

Damages caused by overload or improper treatment are not covered by this warranty.

For EU only: Please note that decoders may only be used in models carrying the EC conformance label.

#### **Hotline**

In case of questions, we are ready to answer them for you!

Directly contact our technician: **(49) 2045 858327**

Mo - Fr except Wed 14:00-16:00hrs CET, Wed 16:00 - 18:00hrs CET

#### **www.uhlenbrock.de**

Be it most recent information about Intellibox, a pricelist or a listing of authorized dealers, plus various publications to download, our website warrants your visit in every case.

## Setting the mode of operation

The unit is preset for analog ac operation mode. This can be changed by either a standard Märklin-compatible controller/transformer or a digital central unit.

### Change of operation mode with a standard controller/transformer

A standard analog ac controller is used to change from analog to digital and vice versa as follows:

- Put the loco on a piece of track connected to that controller.
- Keep the control knob in direction-changeover position until one of the headlights will start to flash after approx. 8 secs. Now the unit has changed from analog to digital or from digital to analog.

### Change of operation mode with a digital central unit

A digital central unit can only be used to switch over from analog to digital.

- Put the loco on a piece of track connected to that central unit.
- Select decoder address (preset factory value is 78).
- Switch on the headlights by the 'function' key, failing to do so will make them inaccessible during later digital operation.
- Keep the control knob in direction-changeover position until one of the headlights will start to flash after approx. 8 secs.
- Release knob and shortly push to direction-changeover position again. Now the unit is in digital mode.

Important: Setting back to analog mode is only possible with an analog controller as described in the foregoing paragraph!

## Address setting of AnDi 75 320

In digital mode the unit either can be used as a simple decoder with a preset address or feature the full address range from 1-255.

**You need only a long direction-changeover command of your digital control system.  
You do not necessarily require programs like 'Loktool' nor the Intellibox.**

### Setting the address with the Intellibox *Adresseinstellung über das Fahrpult der Intellibox*

- Select the actual decoder address:  
*Depress [lok#] key and type in address number.  
A new decoder is preset to 78.*
- Set the data format to 'Motorola old':  
*Depress [menu] key  
Select "loco settings" and scroll with keys [↓] and [+] to 'Moto. old'.  
Acknowledge by depressing the [+]-key (An asterisk is displayed at the end of the line).  
Depress [menu] again to return to keyboard mode.*
- Set the basic setting of the control knob to ac style knob in order to issue a long changeover command.  
*Consecutively depress the [menu] and [mode] keys.  
Scroll with [↓]-key to „User interface“. Depress [→]-key.  
Scroll with [↓]-key to „Speed knobs“. Depress [→]-key.  
Scroll with [↓]-key to „AC style knob“.  
Acknowledge with [+]-key.  
Depress [menu] again to return to keyboard mode.*
- Switch the unit to address input mode:  
*Keep the control knob in direction-changeover position until one of the headlights will start to flash after approx. 8 secs.*
- Key in the desired new address on the Intellibox panel.
- Switch on the headlights by the [function]-key, failing to do so will make them inaccessible during later digital operation.
- Complete the input:  
*Release knob and shortly push to direction-changeover position again. Now the new address is set and the unit is in digital mode.*

**You may use either the left-hand or the right-hand knob.  
Make sure that you use the same knob during operations.**

### Setting the address with the Märklin Digital Central Unit

- Select the current decoder address on the Märklin controller (Control 80, Control 80f, Control Unit). Factory preset value is 78.
- Keep the control knob in direction-changeover position until one of the headlights will start to flash after approx. 8 secs.
- Key in the desired new address on the controller's panel.
- Switch on the headlights by the [function]-key, failing to do so will make them inaccessible during later digital operation.
- Release knob and shortly push to direction-changeover position again. Now the new address is set.

### Setting the address with the Märklin Delta Control Unit

- Select the decoder address on the Delta controller. Factory preset value is 78 (steam loco).
- Keep the control knob in direction-changeover position until one of the headlights will start to flash after approx. 8 secs.
- Turn to the desired new address on the Delta panel.
- Release controller knob and shortly push to direction-changeover position again. Now the new address is set.