Roco

10745

Digital-Lokdecoder (DCC) mit Lastregelung

Digital Locomotive Decoder (DCC) with load regulation

Décodeur numérique «traction» (format «DCC») avec sortie «attelage télécommande»

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Tipps

Auch die digitale ROCO Anlagensteuerung ROCOMOTION (Art.-Nr. 10785) bietet vielfältige Möglichkeiten. Infos über ROCOMOTION erhalten Sie im Fachhandel oder unter „www.roco.cc".

Digital Locomotive Decoder (DCC)

- ✔ Automatic detection of speed steps (14/28/128)
- ✔ Capable of being updated
- ✔ Overload protection of all outputs
- ✔ Automatic detection digital – analog
- ✔ Functions that can be activated:
  F1: Special function (= green wire, i.e. smoke generator)
  F3: Shunting mode (= half speed)
  F4: Deactivate set values for braking or acceleration

Operating Modes

- ➢ Digital multi-train operation with NMRA compatible systems as:
  – Lokmaus 1 (art. no. 10750)
  – Lokmaus 2 / PowerMouse, Lokmaus R3 (art. no. 10760, 10860, 10790 und 10792)
  – *multi***MAUS** (art. no. 10810)
  – ROCOMOTION (art. no. 10785)
- ➢ H0 DC locomotives with a decoder interface according to NMRA S 9.1/9.2 and NEM 650/652

The use of this decoder in other than the previously listed digital systems or in power units which are not factory-equipped with NMRA or NEM (see above) conforming decoder interfaces (installation by e.g. cutting the interface plug and soldering of the decoder into the locomotive) can cause irreparable damage to the decoder or the locomotive. ROCO cannot be held liable in such events for the decoder or the locomotive or any guarantee. Damage caused by any other changes to the decoder (e.g. applying paint) are also excluded from any guaranties.

The use of 12 volt bulbs during digital operation can cause irreparable damage (melting) to the locomotive housing!

Installed 12 volt bulbs must be changed to 16 volt bulbs (already installed in locomotives starting with fabrication year 2000). 16 volt bulbs can be obtained through stockists or our service department. Compare with the installed bulb shown in the locomotive replacement parts listing:

art. no. 108616: bulb with attached leads, white 16 V replaces art.no. 93520 12 V
art. no. 109918: bulb with attached leads, red (only 16 volt version)
art. no. 109088: plug-in bulb, small 16 V, replaces art.no. 93518 12 V
art. no. 93734: tubular bulb 16 V, replaces art.no. 93517 12 V

Installation

All installation work must be done on vehicles removed from the track. The locomotive must be in perfect electrical and mechanical condition. Parts subject to wear e.g. motor brushes, wheel contacts, have to be cleaned or replaced!

Please note the installation instructions provided with all ROCO locomotives having decoder interfaces!

We recommend, in addition to the specific locomotive installation instructions, the following procedure:

1. Remove housing and detach the Bridge connector or the already installed decoder from the interface.
2. Insert the decoder plug into the interface (Fig. 1) so that side of the decoder plug with red/orange wire at the side of the interface marked with + or ★ (polarity according to NMRA/NEM rules, i.e. the locomotive moves with the driver's cab no.1 facing forward).
3. Install the decoder in a suitable location within the locomotive. No part of the decoder must be touching metal parts of the locomotive! If necessary the location of the decoder must be insulated with insulation tape to protect the decoder. The insulation must be attached to the metal parts of the locomotive, but NOT to the decoder (e.g. by winding the insulation tape around the decoder!). This could lead to failure of the decoder due to overheating. Damage claims caused by such failures cannot be acceptet!
   The possible factory used heat shrink tubing around the decoder ensures a sufficient heat dissipation and should not be removed.
4. If necessary the decoder can be secured in the desired location with double-sided tape.

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Locomotive address

The factory-set default address of the decoder is 03. To program a new address please refer to the Lokmaus manuals or the Instruction Sheet of your digital system.

Only local addresses from 1 – 99 can be stored in CV1. The programming of local address from 100 ('long addresses' – CV17 + 18) is possible with the ROCO *multi***MAUS** (Art. No. 10810). However, it will be necessary to switch on Bit 5 in CV29 before you program the address by means of CV17 or 18 to do thi

Operational test

If the locomotive lights do not operate, the decoder was inserted incorrectly into the interface. Reinsert decoder turned by 180° in the interface.

If there is a problem with the headlight, the decoder was used in the 28 speed-step mode. In this case you have to reprogram the CV29 (see table at the other side. By using the Lokmaus®2 proceed as follows: press "P" + "Stop" simultaneously, change the displayed "06" to "04" and confirm with "P".)

Operation on analog layouts

A ROCO locomotive equipped with a decoder can also be run on a conventional layout. To change direction of travel the control knob of the controller must first be set to zero. **Only then can the direction of travel be selected.**

The brightness of the lamps depends on the speed of the train. The lights can not be turned off. Reprogramming of previously set addresses and functions is not possible while in analog operation.

List of important CVs

The following list informs about the most important programming capabilities of the decoder. We recommend to test your locomotive / railcar with regard to starting voltage, acceleration, braking and maximum speed during operations to check if these characteristics are set conforming to your wishes BEFORE changing the factory-set default settings.

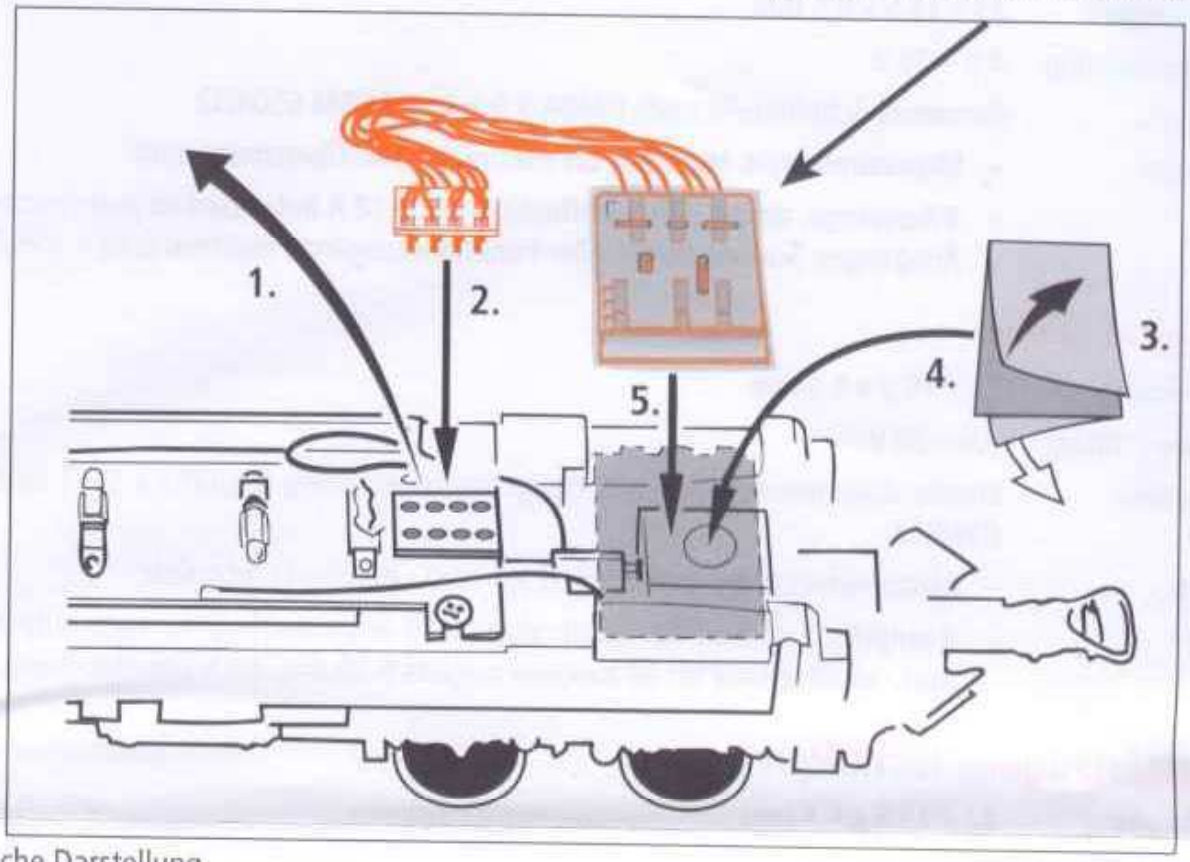
Only program on one of the programming tracks completely separated from the other hardware, in order to avoid an inadvertant programming of other decoders. You will be able to program everything on the hardware, up to the local addresses (CV1 or CV17+18), in the case of a digital control, such as the ROCO *multi***MAUS**, which has command of the 'POM' Mode.

Pay attention to the Tables in Fig 2 on page 11, in order to enter the values correctly when switching defined Bits on or off. CV17+18) alles auf der Anlage programmieren.

CV	use	def.setting	bandwith of possible changes
01	locomotive address	03	01 – 99
02	minimum speed	03	01 – 75
03	time of acceleration	08	00 – 64
04	time of braking	06	00 – 64
05	maximum speed	64	00 – 64
06	median speed	22	00 – 64
07	Version of the decoder	56	only reading!
08	Manufacturer's identification or return to default settings	151	only reading / reset to factory values = 08
29	Setting of speed steps, analogue mode, driving direction: NMRA	04	Bit 0 driving direction: 0 = normal, 1 = reversed Bit 1 speed steps: 0 = 14, 1 = 28/128 Bit 2 analogue mode: 0 = aus, 1 = ein
49	load regulation	01	01 = on / 00 = off
50	Analog mode		00 = AC+DC off 01 = AC-Mode on, 02 = DC-Mode off 03 = AC+DC on
113	Dimming for Front Light (15 = maximum brightness)		00 – 15
114	Dimming for Rear Light (15 = maximum brightness)		00 – 15

Kühlungsbereich – nicht zukleben!
Cooling area – do not tape over!
Zone de ventilation, ne pas obturer par de la bande adhésive ou autre!

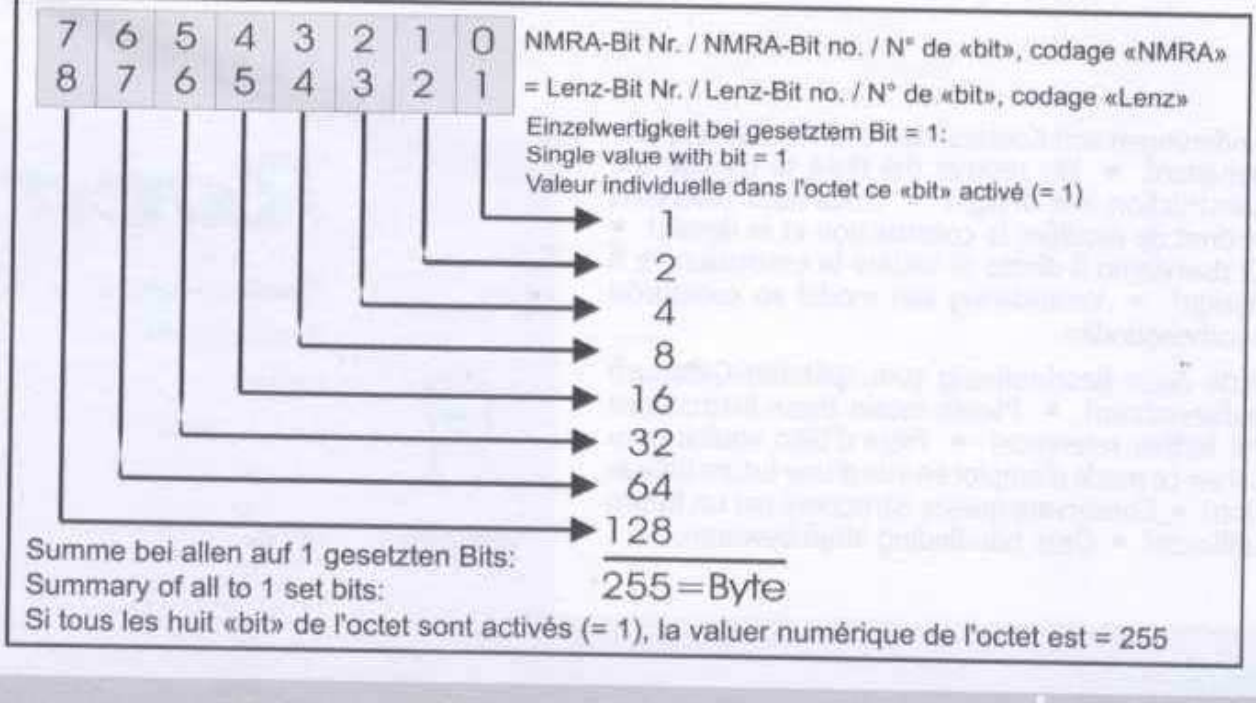
Fig. 1



Symbolische Darstellung
Symbolic illustration
Illustration figurative

Bitsetzung- /Bytewertumrechnung
Bit set/byte value conversion
Conversion numérique des «bits» et de l'octet résultant

Fig. 2



Technische Daten

Abmessungen: 23 x 15,5 x 6,5 mm

Betriebsspannung: 4,0 – 20 V

Anschluss: Genormte Schnittstelle nach NMRA S 9.1.1 und NEM 650/652

Ausgänge:
- Motorstromkreis, belastbar bis maximal 1,1 A. Überstromschutz
- 4 Ausgänge, davon 2 für Lichtfunktionen. 0,18 A Belastbarkeit jedes einzelnen Ausganges. Summenstrom aller Funktionsausgänge maximal 0,35 A gleichzeitig.

Technical Data

Dimensions: 23 x 15.5 x 6.5 mm

Operation voltage: 4.0 – 20 V

Connection: standardised interface; polarity designations according to NMRA S 9.1.1 and NEM 650/652.

Outputs:
- Motor circuit, max. current load 1,1 amp., overload protection;
- 4 outputs, 2 of them for illumination, 0.18 amp max. load for each output, max. additive load for all function outputs 0.35 amp each simultaneously.

Caractéristiques techniques

Dimensions: 23 x 15,5 x 6,5 mm

Plage de tension de régime: 4,0 – 20 V

Raccordement: Exclusivement par interface normalisée NMRA S 9.1.1 ou NEM 650/652.

Sorties:
- Sortie «traction» (moteur), intensité maximale admise en permanence: 1,1 A;
- 4 sorties auxiliaires dont 2 sorties »feux«; intensité maximale par sortie: 0,18 A; courant maximal, toutes les sorties auxiliaires de fonction confondues: 0,35 A.

Änderungen von Konstruktion und Ausführung vorbehalten! • We reserve the right to change the construction and design! • Nous nous réservons le droit de modifier la construction et le dessin! • Ci riserviamo il diritto di variare la costruzione e il design! • Verandering van model en construcie voorbehounden.

Bitte diese Beschreibung zum späteren Gebrauch aufbewahren! • Please retain these instructions for further reference! • Pière d'bien vouloir conserver ce mode d'emploi en vue d'une future utilisation! • Conservate queste istruczioni per un futuro utiliozzo! • Deze handleding altijd bewaren.

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