Nissan Leaf PTC heater

Connections



LV:

1: batt pos. (+12V)  
 2: nc  
 3: batt neg.(GND)  
 4: LIN bus  
 5: nc

HV:

The HV connector uses an interlock detention. So the two small pins need to be shorted together.

The LNK304GN is used as a buck converter to generate 16V.

Using a multimeter on the diode setting, the HV input will show open in the correct polarity and 1.5V is the wrong polarity.

LIN bus:

The heater problely uses mlx80031/51 LIN bus transceiver.

Data master to heater:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0x3B | 0x00 | 0x00 | 0x64 | 0xC0 | 0xFF | 0x00 | 0x00 | 0x00 | 0xDE |
| adres | byte 1 | byte 2 | byte 3 | byte 4 | byte 5 | byte 6 | byte 7 | byte 8 | CRC |

byte 3: The precentage of power 0-100.

Data reading from the heater.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 0x24 | 0x00 | 0x48 | 0xFE | 0xFF | 0x54 |
| adres | byte 1 | byte 2 | byte 3 | byte 4 | CRC |

byte 2: HV Current (0,2A/bit)

PCB



1: batt neg.(GND)  
2: LIN bus  
3: batt pos. (+12V)

A & B: HV interlock

+ & -: High voltage



Red : 2 ptc’s 700W (1)  
Yellow : 2 ptc’s 700W (2)  
Bleu : 4 ptc’s 1400W (3)  
Purple : 7 ptc’s 2450W (4)

Black : common connection (+350V)