

NORDIC TRANSDUCER

LDU 179.1

Load Cell Digitizing Unit CAN Open + RS232 High Speed

Features

- **CAN Interface with CAN Open protocol**
- **RS232 Interface for direct connection to a computer**
- **Up to 1200 Samples per second**
- High efficiency power converter for reduced self heating
- Can drive up to eight 350 Ohm load cells
- Standard LDU format
- Two logical inputs
- Two logical outputs
- Free Windows PC based analysis tool available – DOP4



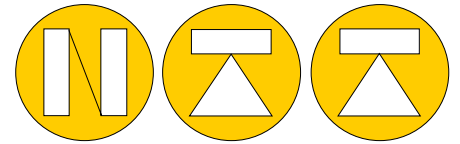
UA 73.202 PCB for DIN Rail mounting with screw terminals and female sockets for LDU



Introduction and Specifications

The model LDU 179.1 is a very precise high-speed digital amplifier for weighing and force measurements with strain gauge (SG) sensors. The LDU 179.1 can be used in legal for trade as well as for industrial applications. The device features a CAN interface with support for the CANopen protocol as well as a full duplex RS232 interface using a straightforward ASCII command set. The LDU 179.1 and the well known LDU 78.1, both use nearly the same command set. The LDU 179.1 with its accurate A/D converter and a sample rate of up to 1200 measurement values per second, is particularly suitable for static or dynamic measurements and control purposes.

| | | |
|---|--------------------|---|
| Accuracy class | | III or IIII |
| Test certificate according to OIML R76 | | 10 000 intervals or n x 10 000 (n= 1, 2, 3) |
| Minimum input voltage per VSI | μV | 0.2 |
| Measuring range (FS) | mV/V | ± 3.3 |
| Maximum resolution at FS (approx.) | incr | ± 880000 |
| Measuring rate | Hz | 9.4 to 1200 |
| Digital filter cut-off frequency (-3dB) | Hz | 0.25 to 18 |
| Bridge excitation voltage | V_{DC} | 5 |
| Maximum bridge excitation current | mA | 115 |
| Load cell cable length (for n = 10000) | m/mm ² | 726 |
| Maximum resistance per wire (for n = 10000) | Ohm | 12.3 |
| Linearity error (relative to full scale) | % | ± 0.0005 (Typical) ± 0.0015 (Max) |
| Temperature effect on zero (relative to full scale) | %/10 K | ± 0.0003 (Typical) |
| Temperature effect on span | %/10 K | ± 0.001 (Typical) |
| Interface 1 | | CAN |
| Bit rate | kbits/s | 10 to 1000 |
| Protocol | | CAN Open |
| Interface 2 | | RS-232 |
| Baud rate | bits/s | 9600 to 460800 |
| Frame format | | 8 data bits, 1 stop bit, no parity bits |
| Protocol | | Readable ASCII or Modbus RTU |
| Logical inputs | | 2 |
| Maximum input voltage | V_{DC} | 30 |
| Threshold voltage (approx.) | V_{DC} | 6 |
| Input resistance (approx.) | kOhm | 8 |
| Logical outputs | | 2 |
| Maximum voltage | V_{DC} | 30 |
| Maximum current | A | 0.5 |
| Supply voltage | V_{DC} | 12 to 24 |
| Power consumption (without load cells) | mW | <250 |
| Operating temperature range | $^{\circ}\text{C}$ | -15 to +55 |
| Storage temperature range | $^{\circ}\text{C}$ | -30 to +70 |
| Dimensions (LxWxH) excluding pins | mm | 81.3 x 30.7 x 6.5 |
| Weight | g | 28 |
| Protection | | IP00 |



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