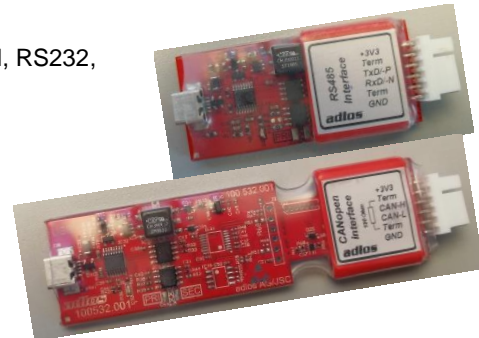


KannMOTION USB-Conversion modules

KannMOTION accessory

Product description

- USB powered conversion modules for RS485, CANOPEN, RS232, and UART (RS232) TTL-Level
- Included USB isolator, to provide protection against harmful noise, ground loops, surges, and spikes
- Popular FTDI chip based, FTDI - VCP driver or D2XX driver refer to FTDI page
- To program you custom solution with KMM₁), or just update your KannMOTION drive firmware
- Easy to use with KannMOTION drives
- Additional cable harness available
- Plug and play



1) KannMOTION Manager for windows

Benefits

These USB converters, with included electrical USB isolator, helps your setup to provide protection against harmful noise, ground loops, surges, and spikes. All converter modules consists of a very popular FTDI-USB-Chip followed by an electically isolation barrier and a very small DCDC Power converter on board. On most modern windows, the FTDI driver is allready available, usually a Virtual-Comport (VCP) driver is used to communicate with the device. We recommend to use these conversion modules combined with dedicated cable harness to program, update, test, troubleshoot and learn functions and benefits of our KannMOTION drives.

Ordering information

| Part number | RS232 TTL Level | RS232 | RS485 | CANOPEN | Description |
|-------------|--------------------|-------|-------|---------|--|
| 100 730.000 | X | | | | USB – UART (RS232) TTL3V3 Konverter isoliert, komplett mit Gehäuse |
| 100 731.000 | | | X | | USB - RS485 Konverter isoliert, komplett mit Gehäuse |
| 100 732.000 | | | | X | USB - CAN Konverter isoliert, komplett mit Gehäuse |
| 100 734.000 | | x | | | USB - RS232 Standard Konverter isoliert, komplett mit Gehäuse |
| 100 692.000 | X | | | | Verbindungskabel Konvertermodule K11a & K11b |
| 100 693.000 | | | X | | Verbindungskabel Konvertermodule K17e |
| 100 742.000 | | | | X | Verbindungskabel Konvertermodule K17c |
| 200 983.000 | X | X | X | X | Netzteil / SGA60E24-P1J 24V 60W |
| 201 035.000 | X | X | X | X | USB Kabel Typ: USB-Kabel A auf Mini B 5pol 1,8m schwarz |

Note:

- for regular RS232 refer to part nr. 100 546 (Eval – Board)
- 100734 is not available yet, ask our sales department

Technical data

| | |
|--|---|
| Functional electrical isolation up to <i>USB <> Output</i> | 400 V rms 2500 V rms 1min (dielectric) |
| USB Interface | 1 - Mini USB-B Connector |
| data rate max | 25 Mbps (isolation barrier limit) |
| USB power consumption | max. 500 mA (depending on Interface and Load) |

100 730.xxx USB <> UART - RS232 TTL Level

| | | | |
|-------------------|--|-------------------|--|
| Dimensions | 70mm x 30mm x 10mm | | |
| Speed | up to 115 kBaud | | |
| Extra Out | 3V3 output, max. 0.1A for external use | | |
| Outputs | Logic High min. | 2.9 V @ Load 20uA | |
| TxD/RTS | Logic Low max. | 0.2 V @ Load 20uA | |
| Inputs | Logic High Threshold | >= 2.35 V | |
| RxD | Logic Low Threshold | <= 0.95 V | |

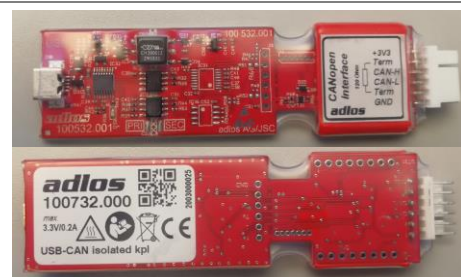

100 731.xxx USB<>RS485

| | | | |
|----------------------|--|--|--|
| Dimensions | 70mm x 30mm x 10mm | | |
| Speed | up to 115 kBaud | | |
| Termination | 120R included, must be connected separately if needed at Pins 'Term' | | |
| RS485 special | Current limiting and thermal shutdown for driver overload protection Half duplex, No echo | | |
| Extra Out | 3V3 output, max. 0.1A for external use | | |


100 732.xxx USB <> CAN

This device is essential for firmware upgrades at adlos CANopen devices, KMM₁ support will be available in future

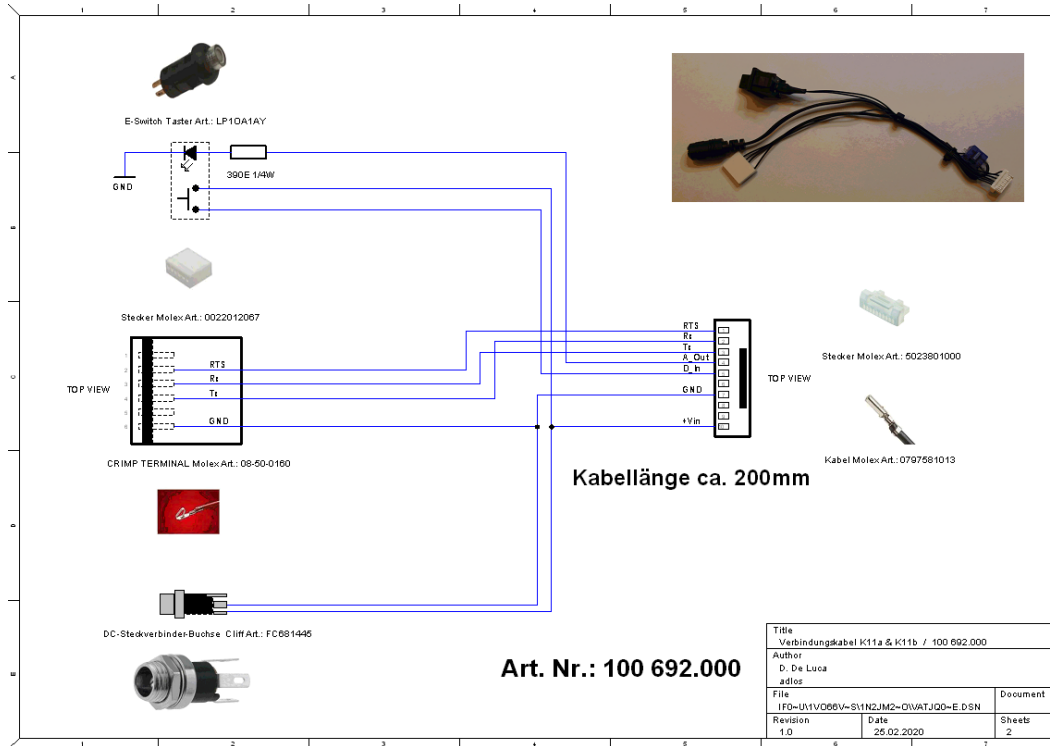
| | | | |
|-----------------------|--|--|--|
| Dimensions | 105mm x 30mm x 10mm | | |
| Speed | Up to 1 Mbps, depending on Software | | |
| Termination | 120R included, must be connected separately if needed at Pins 'Term' | | |
| Node Filtering | Yes, by Firmware | | |



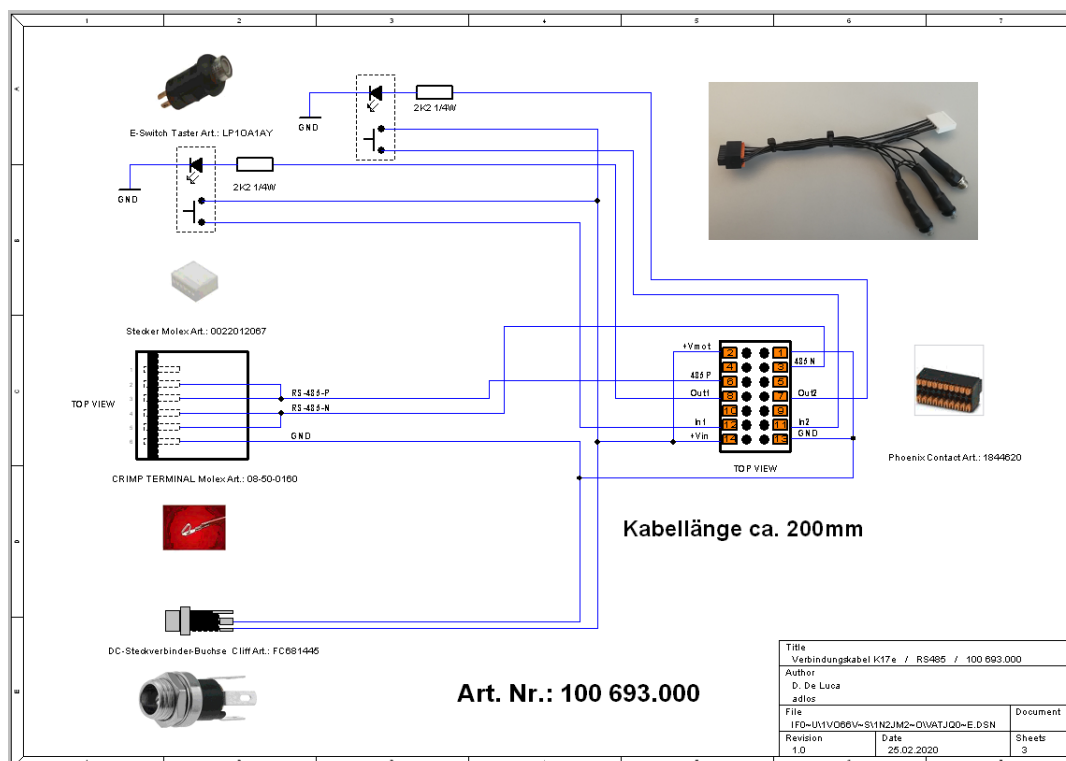
| | | <i>min</i> | <i>typ</i> | <i>max</i> | |
|--------------------------------|--|------------|------------|------------|----|
| dominant output voltage | pin CANH: RL=50Ω to 65Ω | 2.75 | 3.5 | 4.5 | V |
| | pin CANL: RL=50Ω to 65Ω | 0.5 | 1.5 | 2.25 | V |
| | symmetry: VCC-VCANH-VCANL | -0.4 | | +0.4 | V |
| V_{th(Rx)dif} | differential receiver threshold voltage | 0.5 | 0.7 | 0.9 | V |
| | differential receiver hysteresis voltage | 50 | 120 | 200 | mV |
| I_{O(sc)dom} | dominant short-circuit output current | -100 | -70 | -40 | mA |

Additional cable set's:

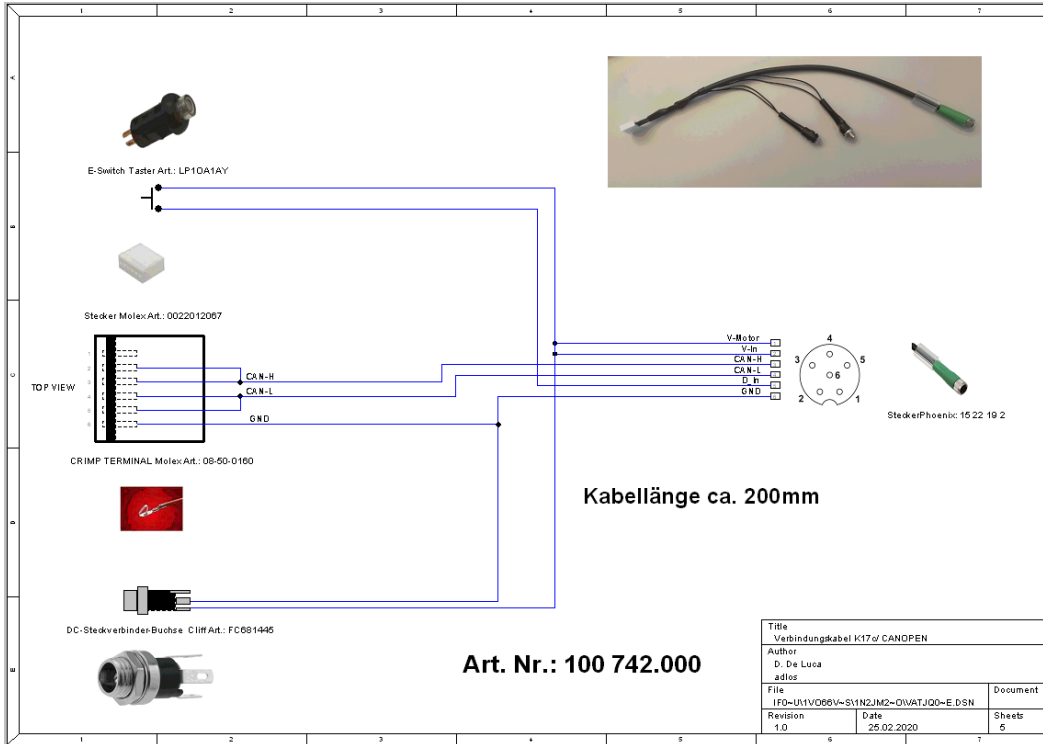
- 100 692.000: K11a / K11b Eval connection set



- 100 693.000: K17e Eval connection set



- 100 742.000: K17c Eval connection set



KannMotion Manager tool (190081), manage your drives

KannMOTION Manager is the general tool for our generation 2 (GEN2) drives. This tool comes with an integrated C-coder and a visual drag and drop user interface for customizing your drive.

<https://kannmotion.adlos.com/download/kannmotionmanager/application/SetupKannMOTIONManager.zip>

Additional Documentation and important information

The document **Security Manual** (http://www.kannmotion.de/man_doc.php) specifies the intended use of the KannMOTION. It also has useful information related to all KannMOTION products and defines the laws and standard the KannMOTION is designed for and with. Please read this document carefully and comply with the information given in this document.

Proper use**Do not connect or disconnect motor during operation!**

Motor cable and motor inductivity might lead to voltage spikes when the motor is disconnected / connected while energized. These voltage spikes might exceed voltage limits of the driver MOSFETs and might permanently damage them. Therefore, always disconnect power supply before connecting / disconnecting the motor

**Keep the power supply voltage below the upper limit!**

Otherwise the driver electronics will seriously be damaged! Especially, when the selected operating voltage is near the upper limit a regulated power supply is highly recommended.

**Check your mechanical system, is it able to drive the motor, avoid motor being used as generator**

Every motor could be operated as an voltage generator, so take care about generated voltage, this might damage your electronics by overvoltage. Add some voltage limiter units to keep supply voltage in range.

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