

INTERFACE CONVERTER

K-114

COMMUNICATION USB – RS485

The K-114 interface converter is recommended for use with KELLER products and enables communication between a device and computer via a USB interface.

Description

The interface converter communicates with the connected devices via an RS485 bus. Power is supplied to the connected devices via the computer's USB interface or an external power supply.



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Bias or termination resistors may be activated if necessary in order to improve communication via the RS485. An echo function is also available.

Multimeter/measuring analog signals

The K-114 converter measures the power consumption of the connected devices and an arbitrary voltage signal. These signals can be evaluated and displayed using the supplied software. If only one external device is connected, a functional check can be performed or the analog pressure signal can be displayed.

The K-114 interface converter enables

- ✓ Communication USB – RS485 (half-duplex)
- ✓ Power supply to connected devices (12 VDC)
- ✓ Measurement of applied signal voltage (0...12 VDC)
- ✓ Measurement of the power consumption of end consumers (0...40 mA)
- ✓ Optical status and configuration display (LED)
- ✓ Galvanic isolation between computer and converter
- ✓ Selective activation of echo, bias resistors or a termination resistor
- ✓ Software and drivers included in scope of delivery

Technical specifications

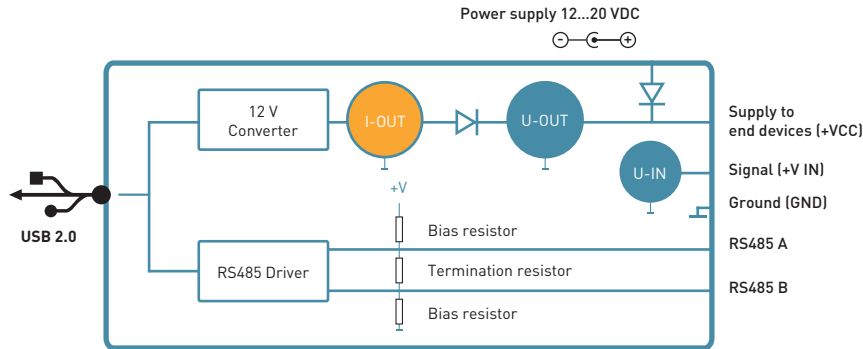
Power supply to end consumer (without power adapter)	12 VDC / max. 40 mA
External power supply (with power adapter)	12...20 VDC / < 150 mA
Voltage input	0...12 VDC / Accuracy 0,3 %FS (RI ≥ 30 kΩ)
Resolution of voltage input	< 0,016 V
Current measurement	0...40 mA / Accuracy 0,3 %FS
Resolution of current measurement	< 0,05 mA
Interface / plug type	USB 2.0 / Mini USB-B
RS485 configuration parameters	ECHO / BIAS (2 x 560 Ω) / Termination (120 Ω)
RS485 transmission rate (slow)	up to 250 kbps
RS485 transmission rate (high)	up to 3 Mbps
RS485 bus devices	up to 128 bus devices (1/4 unit load)
RS485 cable length	0,75 m
Storage/operating temperature	-10...50 °C
H x W x D	56 x 31 x 24 mm
Weight	approx. 90 g
Protection	IP 40





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Functions



The K-114 converter shows the connection status and the selected configuration parameters, which are displayed via status LEDs.

The digital multimeter enables measurement of the supply voltage U-OUT [VDC] and the power consumption of the connected devices I-OUT [mA], as well as measurement of the voltage signal U-IN [VDC] of the connected device.

The K-114 interface converter generates a virtual COM port via which the RS485 interface can be accessed. The converter can be configured via address 253.

Communication can be established with the connected devices via an RS485 (half-duplex mode) bus at 9600 baud (default) or 115200 baud, 8 data bits, 1 stop bit and no parity.

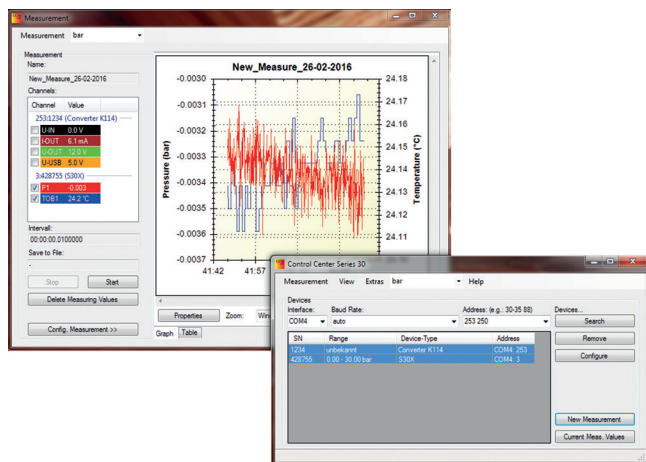
Power is supplied to the connected devices via the USB interface or an external power supply. KELLER products operate with fail-safe drivers, which output a logical high at the receiver outlet in the event of short-circuited, open or non-terminated inputs in order to avoid invalid signal states. The RS485 drivers are also slew-rate limited, which limits the edge steepness of the driver output and thus suppresses reflections, even when the RS485 interface is not complete.

Software

ControlCenterSeries30

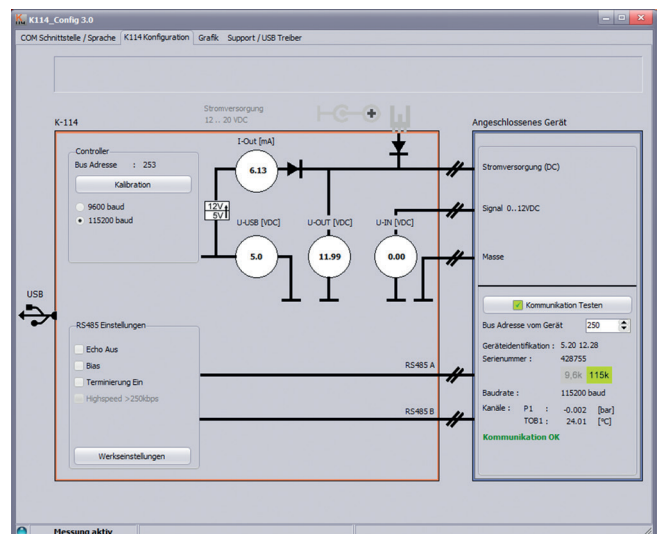
ControlCenterSeries30 makes it easy to record and visualise pressure and temperature data, as well as the power consumption or the voltage signal pattern.

- ✓ Visualise measurement data for several devices via RS485
- ✓ Analog output signal for 1 device (4...20 mA or 0...10 V)



K-114_Config

A configuration and diagnostic tool and the status display for the interface converter simplify handling.



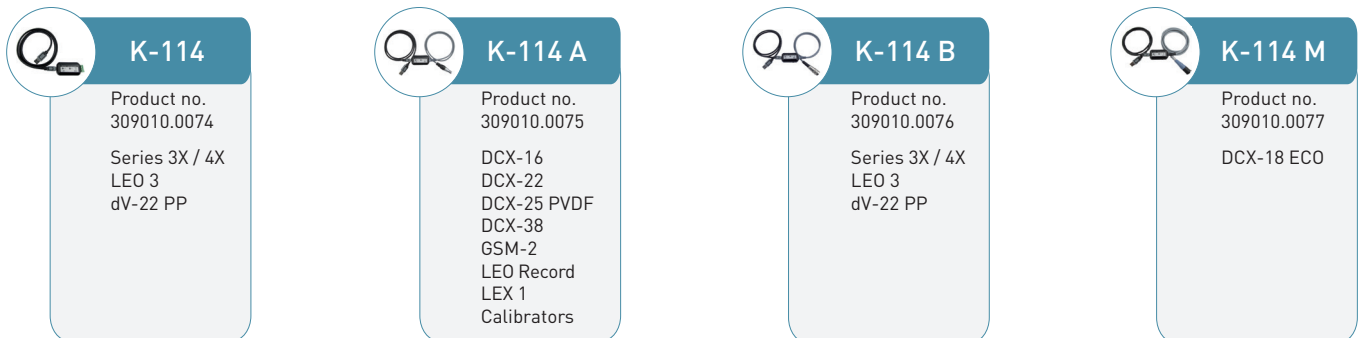


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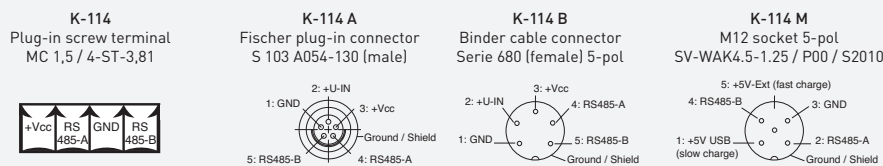
Product overview

The various versions of the K-114 interface converter use different, product-specific interface plugs. The product overview shows the compatibility between the product and the interface converters. The converter can also be expanded using additional cable options. For a complete product overview and a detailed technical description of the interface converter and operating instructions, visit www.keller-druck.com.

USB



Pin assignment of the converters



Scope of delivery



K-114 B (product no. 309010.0076)

The product is supplied in a plastic box, and includes:

- Manual K-114
- Converter K-114 (in accordance with product no. 309010.00XX)
- Software CD
- USB cable 1 m (A Mini / B)
- Optional: Plug-in adapter 15 VDC / 360 mA (1,8 m cable)



Product no. (Europe): 309010.0025
 (UK): 309010.0087
 (USA): 309010.0086