



INTERFACE CONVERTER

COMMUNICATION BLUETOOTH / USB – RS485

The K-114 BT interface converter is used with KELLER products and enables communication between a device and computer via a Bluetooth interface.

Description

The K-114 BT converter converts serial signals from an RS485 interface into either Bluetooth or USB format. It can be supplied with power and charged autonomously, via the integrated battery or via a USB interface. In this way, the K-114 BT also supplies power to the connected end consumers.

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

Multimeter/measuring analog signals

The K-114 BT converter measures the power consumption of the connected devices and an discretionary 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 on it or the analog pressure signal can be displayed.

The K-114 BT interface converter enables:

- ✓ Communication Bluetooth – RS485 / USB – RS485 (half-duplex)
- ✓ Power supply to connected devices (15 VDC)
- ✓ Measurement of applied signal voltage (0...12 VDC)
- ✓ Measurement of the power consumption of connected devices (0...150 mA)
- ✓ Optical status and configuration display (LED)
- ✓ Galvanic isolation between computer and converter (only when using Bluetooth)
- ✓ Selective activation of echo, bias resistors, or a termination resistor
- ✓ Software and drivers included in scope of delivery
- ✓ Charging of the battery via the USB interface



K-114 BT

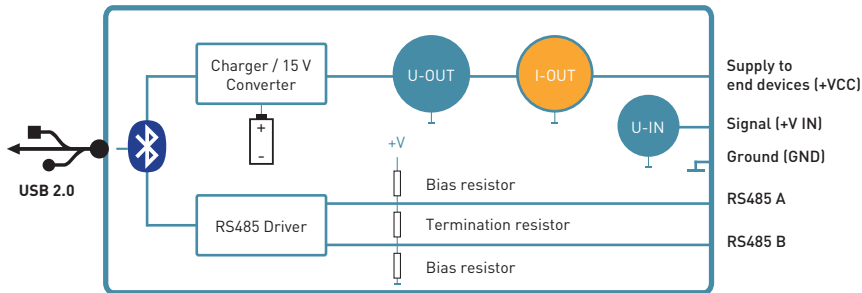
Technical specifications

Battery	Lithium-Polymer 3,7 V / > 2,3 Ah
Run time	approx. 18 h @ 20 mA consumers
Charging time	approx. 2.5 h @ 1 A
Bluetooth	3.0 Classic (class 2) up to range of 10 m
Power supply to end consumers	15 VDC \pm 5% / \geq 100 mA (1,5 W)
Voltage input	0...12 VDC / Accuracy 0,3 %FS (RI \geq 100 k Ω)
Resolution of voltage input	< 0,004 V
Current measurement	0...150 mA / Accuracy 0,3 %FS
Resolution of current measurement	< 0,04 mA
Interface / plug type	USB 2.0 / Mini USB-B
RS485 configuration parameters	ECHO / BIAS (2 x 560 Ω) / Termination (120 Ω)
RS485 interface parameters	8 Data bits, 1 start bit, 1 stop bit, no parity, half-duplex
RS485 transmission rate	9600 baud (default) / 115200 baud
RS485 bus devices	up to 128 bus devices (1/4 unit load)
RS485 cable length	0,75 m
Storage/operating temperature	-10...50 $^{\circ}$ C
H x W x D	95 x 28 x 65 mm
Weight	approx. 150 g
Protection	IP 40





Functions



The K-114 BT converter is activated via the ON/OFF button. The connection status and the selected configuration parameters are displayed via status LEDs.

The K-114 BT interface converter has a Bluetooth Classic 3.0 interface and a range of up to 10 m. The RS485 interface can be accessed via Bluetooth (or USB) through a virtual COM port.

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.

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.

The internal battery supplies the connected devices with 15 VDC of power. 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

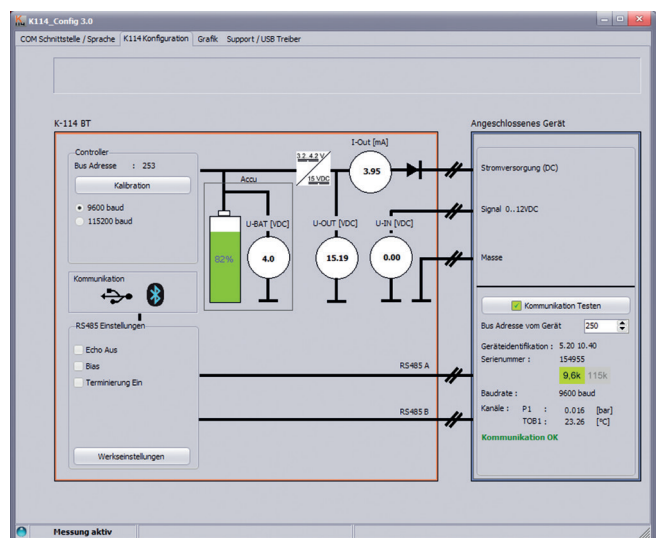
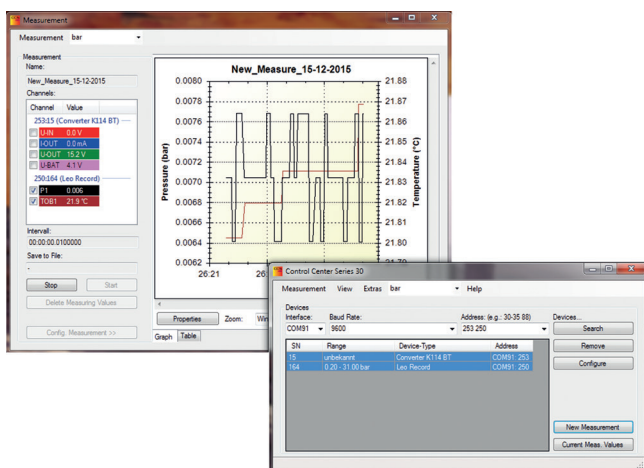
ControlCenterSeries30

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

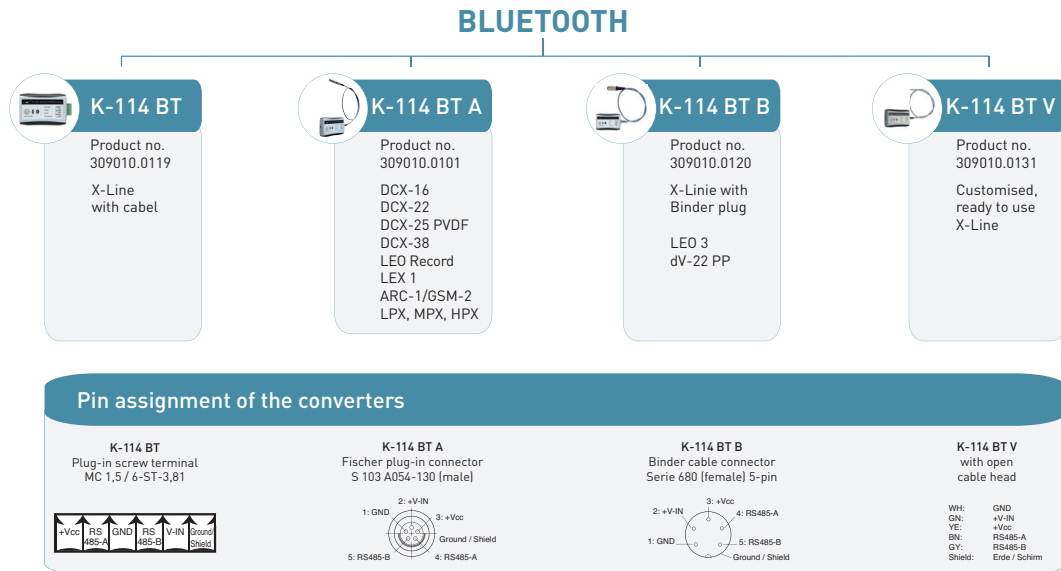
A configuration and diagnostic tool and the status display for the interface converter simplify handling.





Product overview

The various versions of the K-114 BT 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.



Scope of delivery

The product is supplied in a box, and includes:

- K-114 BT Manual
- K-114 BT Converter (in accordance with product no. 309010.01XX)
- Software CD
- USB cable 1 m (A Mini / B)

Accessories

Compatible adapter cables available e.g to K-114 BT B:

Cable option 1



Binder plug to
strand clips

Cable option 3



Binder plug to
6-pin Molex socket