

operating instruction

Bluetooth wireless modules

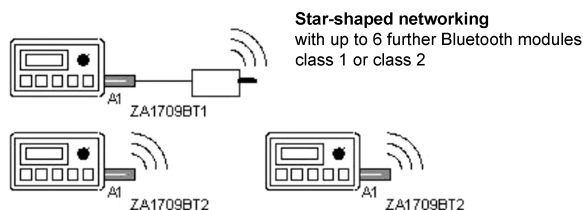
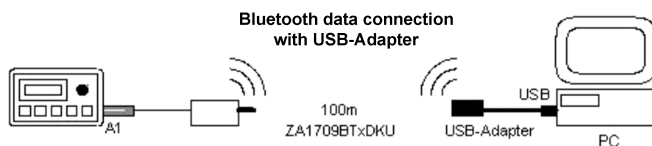
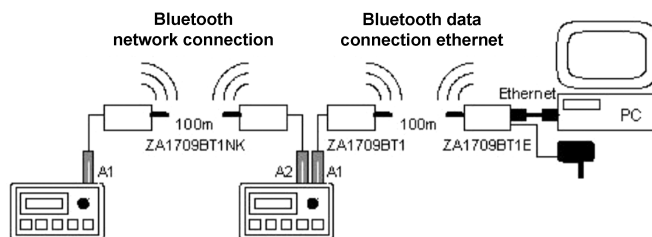
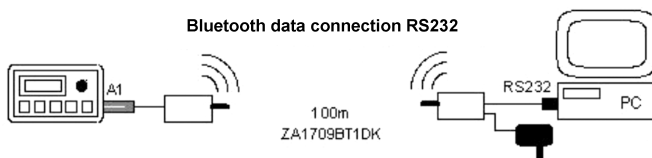
ZA1709-BT1x

ZA1709-BT2x

V1.0
04.04.2005

Data transmission via Bluetooth technology

Data transmission between ALMEMO® devices and the computer or within a network can also be performed on a wireless basis by means of Bluetooth wireless modules ZA1709BTx. To cover all possible signal paths there are different variants with different operating ranges available (class 1 and class 2, 10 to 200 meters). The number of wireless links that can be operated at the same time is infinite; they cause no mutual interference. Up to 7 wireless modules can be connected to the PC via a Bluetooth - USB adapter; these can be operated via 7 virtual COM ports. All these ports can be evaluated together using our Win-Control data acquisition software with the AMR2ips add-on.



Description

All wireless modules working in pairs as cable substitutes can be simply plugged in and used immediately without needing to be configured. All wireless modules without an ALMEMO® connector (RS232, Ethernet, etc.) are provided with mains unit ZA2290-NA; this must be connected as power supply. If the power supply is functioning properly, the green LEDs on the end of the modules light up. If the wireless connection is functioning properly, the yellow LEDs light up for class 1 and the blue LEDs for class 2. If these LEDs do not light up or go out, this indicates that the operating range has been exceeded; (see technical data); (please note that inside buildings the operating range may be significantly curtailed by walls or other such obstacles). As soon as two modules affected in this way are brought closer together again, the wireless connection should be restored automatically.

The operating range of class 1 modules can be approximately doubled by using a better antenna, e.g. ZB1709BT1A.

To run wireless links via a Bluetooth - USB adapter the USB adapter must be configured on the PC using the software provided and the two modules must be paired by entering the pin code of the ALMEMO® wireless module; (see the sticker on the USB adapter and the instructions). If at this juncture the connection fails or if the devices are switched off, all that is needed is to reselect the appropriate port using the application software. Whatever else happens the configuration is retained.

The operating range of the USB adapter can be improved by connecting the USB extension cable provided, thus allowing the adapter to operate in a more favorable position; (this connection should as far as possible be kept in view).

The AHLBORN Bluetooth - USB adapter ZA1709BT1U can be used to generate 7 virtual COM ports for a total of 7 wireless modules ZA1709-BT1 or -BT2. All these ports can be evaluated together using our Win-Control data acquisition software with the AMR2ips add-on.

For a detailed description of how to use the Ethernet interface on wireless module ZB1709BT1E please refer to the description of the ALMEMO® Ethernet data cable; (see Manual, Section 5.2.7).

Technical data

Protocol	SPP (sequence packet protocol) (128-bit encryption)
ALMEMO® data rate	9600 baud (can be changed at the factory)
PC data rate	9600 baud to 115 kbaud (irrespective of the ALMEMO® baud rate)
Security	6-character pin needed to enable the connection
Power supply	ZA1709BT2/BT1 via the ALMEMO® device, USB stick via the PC, otherwise via 12-volt mains connector unit

Bluetooth, class 2

Approval	For all countries worldwide
Operating range	up to 20 meters free field
Bluetooth device names	"Almemo xxx"
Current consumption	approx. 15 mA at 9 to 12 volts, 30 mA at 7 volts
Operative range	-10 to +55 °C
Housing	ALMEMO® connector

Bluetooth, class 1

Approval	For all countries worldwide - except France
Operating range	up to 100 meters free field (up to 200 meters free field using ZB1709BTx) (with antenna ZB1709BT1A in each case)
Bluetooth device names	"ALMEMO xxx"
Current consumption	approx. 25 mA at 9 to 12 volts, 40 mA at 7 volts
Operative range	-10 to +60 °C
Housing	(LxWxH) 108 x 60 x 29 mm, PS

Bluetooth USB stick, class 1

Approval	For all countries worldwide - except France
Operating range	up to 100 meters free field (USB extension cable recommended)
Driver software	included on CD-ROM
Interfaces	1 virtual COM port (standard installation) up to 6 other COM ports possible (extended installation) grouped together using the AMR2ips software SW5500C22

Variants

	Order number
Wireless data connection: 1 Bluetooth module, class 1, RS232, and 1ALMEMO® Bluetooth module	ZA 1709-BT1DK
Wireless network connection:2 ALMEMO® Bluetooth modules, class 1	ZA 1709-BT1NK
Wireless data connection:Bluetooth USB stick and ALMEMO® Bluetooth module, class 1	ZA1709-BT1DKU
Wireless data connection:Bluetooth USB stick and ALMEMO® Bluetooth module, class 2	ZA1709-BT2DKU
ALMEMO® Bluetooth connector, class 2	ZA 1709-BT2
ALMEMO® Bluetooth connector, class 2, for Bluetooth printer	ZA 1709-BT2D
Bluetooth module, class 1, with ALMEMO® adapter cable, cable length 1 meter	ZA 1709-BT1
Bluetooth module, class 1, with RS232 - DSUB9 adapter cable, cable length 1 meter	ZB 1709-BT1V
Bluetooth module, class 1, with RS422 adapter cable for ALMEMO® networks, cable length 1 meter	ZB 1709-BT1N
Bluetooth module, class 1, with Ethernet socket RJ45, mains unit 12 volts, 0.2 A	ZB 1709-BT1E
Special antenna for Bluetooth module, class 1 (doubles the operating range)	ZB 1709-BT1A