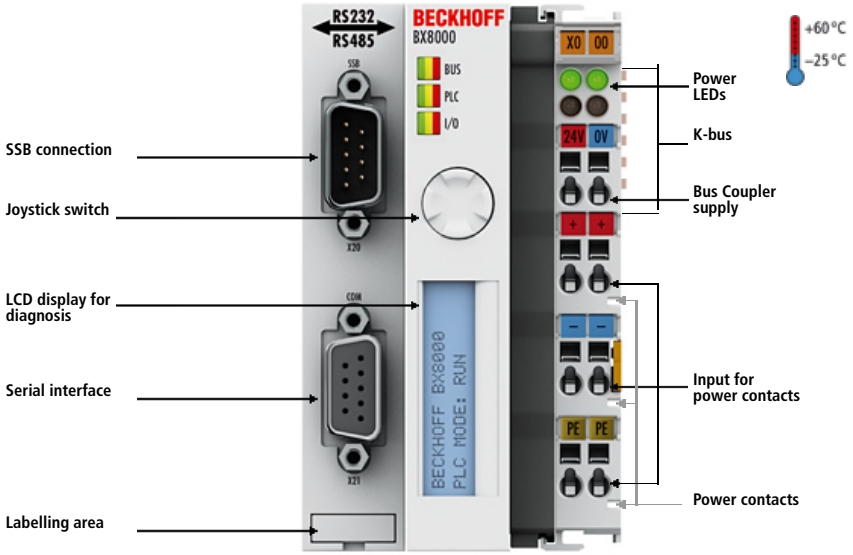

BX8000 | RS232/RS485 Bus Terminal Controller

The BX8000 Bus Terminal Controller is a stand-alone PLC. One unit consists of the BX8000 Bus Terminal Controller with up to 64 Bus Terminals and a bus end terminal. With the terminal bus extension system, the connection of up to 255 Bus Terminals is possible.

The controller is programmed via the COM1 interface. In addition, the BX8000 has a second COM port, optionally RS232 or RS485. This can be used for connecting serial devices, such as displays. In terms of their equipment and performance, the BX series Bus Terminal Controllers are positioned between the BC series Bus Terminal Controllers and the CX series Embedded PCs. The main features distinguishing BC and BX are the larger memory and the expanded interfaces of the BX. Additionally, two serial interfaces are integrated for programming and for the connection of further serial devices. The device itself comprises an illuminated LC display with two lines of 16 characters each, a joystick switch and a real-time clock. Further peripheral devices, e.g. displays, can be connected via the integrated Beckhoff Smart System Bus (SSB).

The real-time clock enables decentralized applications, for which the day of the week or the time play an important role. The areas of application for this series are similar to that for the BC series, but due to the larger memory the BX can process significantly more complex and larger programs and can manage more data locally.

Controller for stand-alone applications

Like for all other Beckhoff controllers, the TwinCAT automation software is the basis for parameterization and programming. The BX devices are programmed according to the powerful IEC 61131-3 standard in the programming languages IL, FBD, LD, SFC or ST. Users therefore have the familiar TwinCAT tools available, e.g. the PLC programming interface, the System Manager and TwinCAT Scope. Data are exchanged via the serial port (COM1).

The configuration is also carried out using TwinCAT. The fieldbus interface, the SSB bus and the real-time clock can be configured and parameterized via the System Manager. The System Manager can read all connected devices and Bus Terminals. After the parameterization, the configuration is saved on the BX via the serial interface and can be accessed again later.

PLC data	RS232/RS485 | BX8000
Programming	TwinCAT (via programming interface or fieldbus)
Program memory	256 kbytes
Data memory	256 kbytes
Remanent data	2 kbytes
Persistent data	1 kbyte
Runtime system	1 PLC task
PLC cycle time	approx. 1 ms for 1,000 instructions (without I/O cycle, K-bus)
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Online change	yes
Up/down load code	yes/yes

Technical data	BX8000
Number of Bus Terminals	64 (255 with K-bus extension)
Max. number of bytes fieldbus	512 byte input and 512 byte output
Max. number of bytes process image	2048 byte input and 2048 byte output
Digital peripheral signals	2,040 inputs/outputs
Analog peripheral signals	512 inputs/outputs
Data transfer rates	300 baud…115 kbaud
Bus interface	–
Serial interface	COM1: 1 x RS232, COM2: 1 x RS232 or RS485
SSB	CANopen-based subsidiary bus system for the connection of further peripheral devices
Diagnostics LED	2 x power supply, 2 x K-bus
Display	FSTN display with 2 x 16 characters for diagnosis or own texts, illuminated
Switch	joystick switch for parameterisation and diagnosis
Clock	battery-powered real-time clock for time and date
Power supply	24 V (-15 %/+20 %)
Input current	140 mA + (total K-bus current)/4, 500 mA max.
Starting current	2.5 x continuous current
Current supply K-bus	1450 mA
Power contacts	max. 24 V DC/max. 10 A
Electrical isolation	500 V (power contact/supply voltage)
Weight	approx. 250 g
Operating/storage temperature	-25…+60 °C/-40…+85 °C
Relative humidity	95 %, no condensation
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Protect. class/installation pos.	IP 20/variable
Approvals/markings	CE, UL

Accessories/related products	
TX1200	programming system conforms to IEC 61131-3
Cordsets	cordsets and connectors
BC8050	RS485 "Compact" Bus Terminal Controller for up to 64 Bus Terminals (255 with K-bus extension)
BC8150	RS232 "Compact" Bus Terminal Controller for up to 64 Bus Terminals (255 with K-bus extension)
BK8000	RS485 Bus Coupler for up to 64 Bus Terminals
BK8100	RS232 Bus Coupler for up to 64 Bus Terminals

System	
RS485	For further RS485 products please see the system overview