



BK7300 | Modbus Bus Coupler

Modbus

The BK7300 Bus Coupler connects the Modbus bus system to the modular, extendable electronic terminal blocks. One unit consists of one Bus Coupler, any number from 1 to 64 terminals and one end terminal.

The Bus Coupler recognises the terminals to which it is connected, and performs the assignment of the inputs and outputs to the words of the process image automatically. The first input/output signal will be added to the first bit of a word (LSB), beginning from the left. The Bus Coupler adds further signals to the word. A clear separation is maintained between inputs and outputs. If the number of inputs or outputs is greater than 16 bits, the Bus Coupler automatically begins a new word.

Modbus has a line topology based on the RS485 interface. The Modbus protocol is published. The BK7300 supports the RTU and ASCII protocols. The baud rate is variable and can be set directly via the rotary selection switch on the Bus Coupler, i.e. without configuration software.

The Modbus Bus Coupler supports various Modbus functions that enable direct access to digital and analog signals. The BK7300 also supports the diagnostic Modbus function that enables faults to be detected and counted. In addition, the Bus Coupler diagnoses faulty or erroneous telegrams and respond to the controller with an error. The BK7300 enables broadcast access, which means that several Bus Couplers can be addressed simultaneously with a single telegram.

System data	Modbus BK7300
Number of I/O stations	99
Number of I/O points	depending on controller
Data transfer medium	screened, twisted copper cable 2 x 0.25 mm ² (RS485)
Max. cable length	1,200 m
Data transfer rates	150 baud...38,400 baud
I/O communication types	read/write access, optionally bit oriented or word oriented

Technical data	BK7300
Number of Bus Terminals	64
Max. number of bytes fieldbus	512 byte input and 512 byte output
Digital peripheral signals	512 inputs/outputs
Analog peripheral signals	256 inputs/outputs
Protocol	RTU/ASCII (default: RTU)
Configuration possibility	by rotary switch or KS2000
Bus interface	D-sub 9-pin, RS485
Power supply	24 V DC (-15 %/+20 %)
Input current	70 mA + (total K-bus current)/4, 500 mA max.
Starting current	2.5 x continuous current
Recommended fuse	≤ 10 A
Current supply K-bus	1750 mA
Power contacts	24 V DC max./10 A max.
Electrical isolation	500 V (power contact/supply voltage/fieldbus)
Weight	approx. 170 g
Operating/storage temperature	0...+55 °C/-25...+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	CE, UL, Ex, GL

Accessories	
KS2000	configuration software for extended parameterisation
Cordsets	cordsets and connectors

Related products	
BK7350	Modbus "Compact" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension)

System	
Modbus	For further Modbus products please see the system overview