



## BK5200, BK5210, BK5220 | DeviceNet Bus Couplers

**DeviceNet** The BK5200, BK5210 and BK5220 Bus Couplers connect the DeviceNet bus system to the electronic terminal blocks, which can be extended in modular fashion. One unit consists of one Bus Coupler, any number of up to 64 terminals and one end terminal. The BK5210 "Economy" variant permits particularly economical creation of peripheral interfacing connections. Up to 64 digital input/output terminals can be connected.

With the K-bus extension technology, the "Economy plus" Bus Coupler BK5220 allows the connection of up to 255 spatially distributed Bus Terminals to one Bus Coupler. The "Economy plus" series supports all Beckhoff system Bus Terminals and it can process in its full configuration 1,020 digital signals and a maximum of 256 analog input and output channels per slave.

The Bus Coupler operates on the basis of the CAN protocol. The DeviceNet standard on which the BK52x0 Bus Coupler is based allows the operation of diverse DeviceNet devices in one network. DeviceNet is based on a definition of communication objects for the exchange of data from the sensor/actuator area that is especially oriented to automation technology.

The Bus Couplers and Bus Terminals can be parameterised on a PC using the KS2000 configuration set. Commissioning is also possible without the KS2000.

### Complex signal processing for analog I/Os, position measurement, ...

The BK5200 and BK5220 Bus Couplers support the operation of all Bus Terminals. As far as the user is concerned, handling of the analog inputs/outputs is not different to other series. The information is available in the process image of the controller for processing in the form of a byte array.

The analog and multi-functional Bus Terminals can be adapted to each specific application using the KS2000 configuration set. Depending on the type, the analog Bus Terminals' registers contain temperature ranges, gain values and linearisation characteristics. With the KS2000, the required parameters can be set on a PC. The Bus Terminals store settings permanently and in a fail-safe manner.

Optionally, the Bus Terminals can also be controlled by the control system. Via function blocks (FBs), the programmable logic controller (PLC) or the Industrial PC (IPC) handles configuration of the complete periphery during the start-up phase. If required, the controller can upload the decentrally created configuration data in order to centrally manage and store this data. Therefore, new adjustments are not necessary in the event of replacement of a Bus Terminal.

Corresponding EDS data files are available for DeviceNet configuration tools.

System data	DeviceNet   BK5200, BK5210, BK5220		
Number of I/O stations	64		
Data transfer medium	screened, twisted copper wire with power supply, 5-pin		
Max. cable length	500 m	250 m	100 m
Data transfer rates	125 kbaud	250 kbaud	500 kbaud
Operating modes	bit strobe, polling, cyclic, change of state (COS)		
DeviceNet type	communications adapter		

Technical data	BK5200	BK5210	BK5220
<b>Number of Bus Terminals</b>	64	64	64 (255 with K-bus extension)
<b>Max. number of bytes fieldbus</b>	512 byte input and 512 byte output	32 byte input and 32 byte output	512 byte input and 512 byte output
<b>Digital peripheral signals</b>	512 inputs/outputs	256 inputs/outputs	1,020 inputs/outputs
<b>Analog peripheral signals</b>	256 inputs/outputs	–	256 inputs/outputs
<b>Configuration possibility</b>	via KS2000 or the controller		
<b>Data transfer rates</b>	via Dip switch	via Dip switch	automatic detection
<b>Bus interface</b>	1 x open pluggable connector, 5-pin, included		
<b>Power supply</b>	24 V DC (-15 %/+20 %), through bus cable 11...25 V (conforms to DeviceNet specification)		
<b>Input current</b>	70 mA + (total K-bus current)/4, 500 mA max.		
<b>Starting current</b>	approx. 2.5 x continuous current		
<b>Recommended fuse</b>	≤ 10 A		
<b>Current supply K-bus</b>	1,750 mA	500 mA	1,750 mA
<b>Power contacts</b>	24 V DC max./10 A max.		
<b>Electrical isolation</b>	500 V (power contact/supply voltage Bus Coupler)		
<b>Weight</b>	approx. 150 g	approx. 130 g	approx. 130 g
<b>Operating/storage temperature</b>	0...+55 °C/-25...+85 °C	0...+55 °C/-25...+85 °C	-25...+60 °C/-40...+85 °C
<b>Relative humidity</b>	95 %, no condensation		
<b>Vibration/shock resistance</b>	conforms to EN 60068-2-6/EN 60068-2-27		
<b>EMC immunity/emission</b>	conforms to EN 61000-6-2/EN 61000-6-4		
<b>Protect. class/installation pos.</b>	IP 20/variable		
<b>Approvals</b>	CE, UL, Ex	CE, UL, Ex, GL	CE, UL, Ex, GL

Accessories	
<b>KS2000</b>	configuration software for extended parameterisation
<b>Cordsets</b>	cordsets and connectors
<b>FC520x</b>	PC Fieldbus Cards with PCI interface

Ordering information	Description
<b>BK5200</b>	DeviceNet Bus Coupler for up to 64 Bus Terminals
<b>BK5210</b>	DeviceNet Bus Coupler for up to 64 digital Bus Terminals
<b>BK5220</b>	DeviceNet "Economy plus" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension)
<b>BK5250</b>	DeviceNet "Compact" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension)
<b>LC5200</b>	DeviceNet "Low Cost" Bus Coupler for up to 64 digital Bus Terminals (255 with K-bus extension)
<b>BC5250, BX5200</b>	DeviceNet Bus Terminal Controller

System	
<b>DeviceNet</b>	For further DeviceNet products please see the <a href="#">system overview</a>