- Signal input EtherCAT
- Link/Act In
- Signal output EtherCAT
- Link/Act Out
- Configuration and programming interface
- Power LEDs
- K-bus (Bus Terminal)
- Bus Coupler supply
- Input for power contacts
- Power contacts

+60 °C
−25 °C

25 g

BK1120 | EtherCAT Bus Coupler

The BK1120 Bus Coupler connects EtherCAT, the real-time Ethernet system, with the modular, extendable electronic terminal blocks. A unit consists of a Bus Coupler, any number (between 1 and 64) of terminals (255 with K-bus extension) and one end terminal.

The Bus Coupler recognises the connected Bus Terminals and automatically allocates them into the EtherCAT process image. The Bus Coupler is connected to the network via the upper Ethernet interface. The lower RJ45 socket may be used to connect further EtherCAT devices in the same strand.

In the EtherCAT network, the BK1120 Bus Coupler can be installed anywhere in the Ethernet signal transfer section (100BASE-TX) – except directly at the switch. The Bus Coupler BK9000 (for K-bus components) is suitable for installation at the switch.

EtherCAT (Ethernet Control Automation Technology) is the Ethernet solution for industrial automation, characterised by outstanding performance and particularly simple handling. EtherCAT enables the Ethernet star topology to be replaced with a simple line structure. Optionally, EtherCAT may also be wired in the "classic" way using switches, in order to integrate further Ethernet devices. The master requires no special plug-in card and can be implemented on any existing Ethernet controller using a very simple interface. EtherCAT is therefore also well suited to small and medium control applications, where it will also open up new areas of application for distributed I/Os.

For EtherCAT a separate I/O system in protection class IP 20 is available in the form of EtherCAT Terminals. In contrast to Bus Terminals, where the fieldbus signal is implemented within the Bus Coupler on the internal, fieldbus-independent terminal bus, the EtherCAT protocol remains fully intact down to the individual terminal. The ELxxxx EtherCAT Terminals are connected via associated EKxxxx-type EtherCAT Couplers (see EtherCAT section).

System data	EtherCAT	BK1120
Number of I/O stations	65,535
Number of I/O points	depending on controller
Data transfer medium	Ethernet/EtherCAT Cat.5 cable
Max. cable length	100 m (100BASE-TX)
Data transfer rates	100 Mbaud
Data transfer time	0.01 ms in the case of 10 modules for 32 bit inputs and outputs each (without K-bus run-time)

Technical data	BK1120
Number of Bus Terminals	64 (255 with K-bus extension)
Max. number of bytes fieldbus	1024 byte input and 1024 byte output
Configuration possibility	via KS2000 or EtherCAT (ADS)
Bus interface	2 x RJ45
Power supply	24 V DC (-15 %/+20 %)
Input current	70 mA + (total K-bus current)/4, 500 mA max.
Starting current	approx. 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/Ethernet)
Distance between stations	100 m (100BASE-TX)
Weight	approx. 150 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	CE, UL, Ex

Accessories	
KS2000	configuration software for extended parameterisation
Cordsets	cordsets and connectors
FC9001-0010 | FC9011	Ethernet PCI fieldbus cards

Related products	
BK1150	EtherCAT "Compact" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension)
BK1250	EtherCAT "Compact" Coupler between EtherCAT Terminals (E-bus) and Bus Terminals (K-bus), adapter terminal
CX8010	EtherCAT Embedded PC

System	
EtherCAT	For further EtherCAT products please see the system overview