

# BK9105 | EtherNet/IP™ Bus Coupler

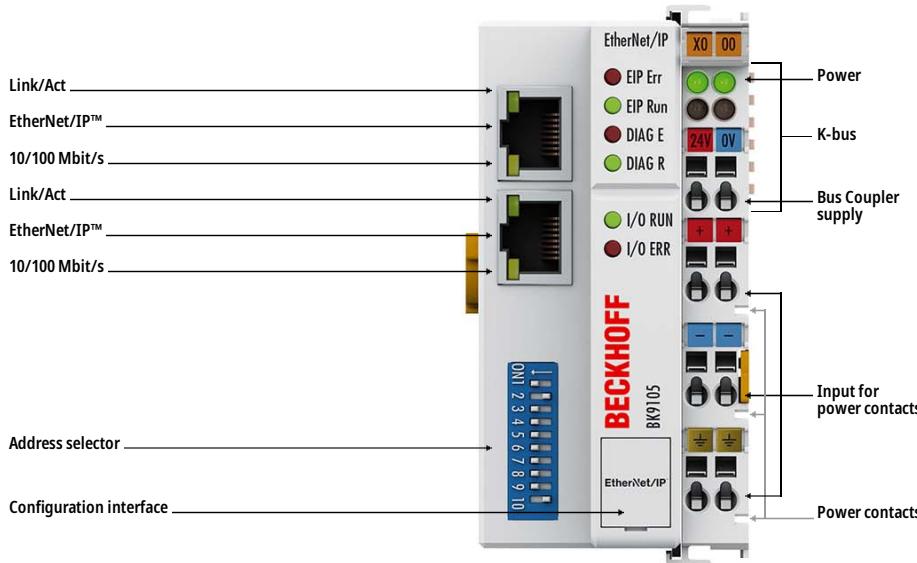


 Image similar, may contain optional accessories

## Product status: regular delivery

The BK9105 Bus Coupler connects EtherNet/IP™ with the modular, extendable electronic terminal blocks. One unit consists of one Bus Coupler, any number from 1 to 64 terminals (255 with K-bus extension) and one end terminal.

The Bus Coupler recognizes 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 BK9105 Bus Coupler supports 10 Mbit/s and 100 Mbit/s Ethernet. Connection is through normal RJ45 connectors. The IP address is set on the DIP switch (offset to a freely selectable start address). In networks with DHCP (a service for the allocation of the logical IP address to the physical node address [MAC-ID]) the Bus Coupler obtains its IP address from the DHCP server.

The BK9105 contains a 3-port switch. Two ports operate external on RJ45 connectors and can be utilized. The I/O stations can thus be configured with a line topology, instead of the classic star topology. In many applications this significantly reduces the wiring effort and the cabling costs. The maximum distance between two couplers is 100 m. Up to 20 BK9105 Bus Couplers are cascadable, so that a maximum line length of 2 km can be achieved.

EtherNet/IP™ is the Industrial Ethernet standard of ODVA (Open DeviceNet Vendor Association). EtherNet/IP™ is based on Ethernet TCP/IP and UDP/IP – IP stands for Industrial Protocol. Essentially, the CIP (Common Industrial Protocol) used in ControlNet® and DeviceNet® was ported to Ethernet TCP/IP and UDP/IP.

## Product information

### Technical data

Technical data	BK9105
<b>Number of Bus Terminals</b>	64 (255 with K-bus extension)
<b>Max. number of bytes fieldbus</b>	492 byte input and 492 byte output
<b>Digital peripheral signals</b>	3,936 inputs/outputs
<b>Analog peripheral signals</b>	122 inputs/outputs
<b>Configuration</b>	via KS2000
<b>Protocol</b>	EtherNet/IP™
<b>Data transfer rates</b>	10/100 Mbit/s, automatic recognition of the transmission rate
<b>Bus interface</b>	2 x RJ45 (2-channel switch)
<b>Data transfer medium</b>	4 x 2 twisted pair copper cable; category 3 (10 Mbit/s), category 5 (100 Mbit/s)
<b>Power supply</b>	24 V DC (-15%/+20%)
<b>Input current</b>	70 mA + (total K-bus current)/4, 500 mA max.
<b>Starting current</b>	2.5 x continuous current
<b>Recommended fuse</b>	≤ 10 A
<b>Current supply K-bus</b>	1750 mA
<b>Power contacts</b>	max. 24 V DC/max. 10 A
<b>Electrical isolation</b>	500 V (power contact/supply voltage/fieldbus)
<b>Topology</b>	line or star wiring
<b>Distance between stations</b>	100 m between hub/switch and bus coupler or between bus coupler and bus coupler
<b>Weight</b>	approx. 170 g
<b>Operating temperature</b>	-25...+60°C
<b>Storage temperature</b>	-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. rating/installation pos.</b>	IP20/variable
<b>Approvals/markings</b>	CE, CCC, UL, ATEX, IECEx, DNV
<b>Ex marking</b>	ATEX: II 3 G Ex ec IIC T4 Gc IECEx: Ex ec IIC T4 Gc

Housing data	BKxxxx, BCxxxx
<b>Design form</b>	compact terminal housing with signal LEDs
<b>Material</b>	polycarbonate
<b>Installation</b>	on 35 mm DIN rail, conforming to EN 60715 with lock
<b>Side by side mounting by means of</b>	double slot and key connection
<b>Marking</b>	labeling of the BZxxxx series

<b>Wiring</b>	solid conductor (s), flexible conductor (st) and ferrule (f): spring actuation by screwdriver
<b>Connection cross-section</b>	s*: 0.08...2.5 mm <sup>2</sup> , st*: 0.08...2.5 mm <sup>2</sup> , f*: 0.14...1.5 mm <sup>2</sup>
<b>Stripping length</b>	8...9 mm
<b>Current load power contacts</b>	I <sub>max</sub> : 10 A
<b>Dimensions (W x H x D)</b>	51 mm x 100 mm x 69 mm

\*s: solid wire; st: stranded wire; f: with ferrule

## Ordering information

Ordering information	Description
<b>BK9105</b>	EtherNet/IP™ Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension)
<b>BK9105-1000</b>	EtherNet/IP™ Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension), default IP address: 192.168.1.xxx