



BK3100 | PROFIBUS Bus Coupler



The BK3100 Bus Coupler connects the PROFIBUS system to the electronic terminal blocks, which can be extended in modular fashion. One unit consists of the Bus Coupler, any number of up to 64 terminals and one end terminal.

The Bus Coupler recognises the connected terminals and automatically generates the affiliations of the inputs/outputs to the bytes of the process image. The first input/output signal is inserted in the first bit of one byte (LSB), beginning from the left. The Bus Coupler inserts further signals in this byte. Inputs and outputs are clearly separated. The Bus Coupler automatically begins a further byte if the number of inputs or outputs exceeds 8 bits.

The Beckhoff GSE and type data files to the Bus Couplers support the Bus Terminal options and can be loaded in the corresponding master configuration software to facilitate planning and design. Various configurations and parameters for the Bus Coupler can be selected via GSE and type data files.

System data	PROFIBUS BK3100				
Number of I/O stations	100 with repeater				
Number of I/O points	approx. 6,000, depending on the master				
Data transfer medium	shielded copper cable, 2 x 0.25 mm ²				
Max. cable length	1,200 m	1,000 m	400 m	200 m	100 m
Data transfer rates	9.6/19.2/ 93.75 kbaud	187.5 kbaud	500 kbaud	1,500 kbaud	...3, 6, 12 Mbaud

Technical data	BK3100
Number of Bus Terminals	64
Max. number of bytes fieldbus	64 byte input and 64 byte output (DP and FMS mode), 128 byte input and 128 byte output (only DP mode)
Digital peripheral signals	512 inputs/outputs
Analog peripheral signals	64 inputs/outputs (only DP mode)
Configuration possibility	via KS2000 or the controller
Data transfer rates	automatic detection up to 12 Mbaud
Bus interface	1 x D-sub 9-pin socket with shielding
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	max. 24 V DC/max. 10 A
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
FC310x	PC Fieldbus Cards with PCI interface

Related products	
BK3010	PROFIBUS Bus Coupler for up to 64 digital Bus Terminals, 1.5 Mbaud
BK3110	PROFIBUS Bus Coupler for up to 64 digital Bus Terminals, 12 Mbaud
BK3120	PROFIBUS "Economy plus" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
BK3150	PROFIBUS "Compact" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
BK3520	PROFIBUS "Economy plus" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
LC3100	PROFIBUS "Low Cost" Bus Coupler for up to 64 digital Bus Terminals, 12 Mbaud
BC3100	PROFIBUS Bus Terminal Controller for up to 64 Bus Terminals, 12 Mbaud
BC3150	PROFIBUS "Compact" Bus Terminal Controller for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
BX3100	PROFIBUS Bus Terminal Controller for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
CX8030	PROFIBUS Embedded PC, master
CX8031	PROFIBUS Embedded PC, slave

System	
PROFIBUS	For further PROFIBUS products please see the system overview