



BK3120 | PROFIBUS “Economy plus” Bus Coupler



The “Economy plus” version extends the existing PROFIBUS Bus Coupler series BK3xx0. The K-bus extension technology allows the connection of up to 255 spatially distributed Bus Terminals to one Bus Coupler. The BK3120 has been designed to accommodate automation requirements. The PROFIBUS protocols omit FMS operation in order to be able to transfer more user data in DP mode, which for this Bus Coupler type can be 128 byte inputs and 128 byte outputs. The BK3120 incorporates the PROFIBUS DP V1 services. These services allow direct access to the Bus Coupler register and the complex Bus Terminals in order, for example, to change the parameterisation or to set/correct limit values for analog Bus Terminals.

Baud rates of up to 12 Mbaud are automatically recognised by the Bus Coupler, allowing the transmission speed to be adapted to meet the needs of the particular technical process.

System data	PROFIBUS BK3120					
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	
Data transfer time	approx. 3 ms (10 stations for 32 bit input and output each)				approx. 0.5 ms	

Technical data	BK3120
Number of Bus Terminals	64 (255 with K-bus extension)
Max. number of bytes fieldbus	128 byte input and 128 byte output
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.
Current supply K-bus	1,750 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	-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, GL

Accessories	
KS2000	configuration software for extended parameterisation
Cordsets	cordsets and connectors
FC310x	PC Fieldbus Cards with PCI interface

Ordering information	Description
BK3120	PROFIBUS "Economy plus" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
BK3010	PROFIBUS Bus Coupler for up to 64 digital Bus Terminals, 1.5 Mbaud
BK3100	PROFIBUS DP/FMS Bus Coupler for up to 64 Bus Terminals, 12 Mbaud
BK3110	PROFIBUS Bus Coupler for up to 64 digital Bus Terminals, 12 Mbaud
BK3150	PROFIBUS "Compact" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension), 12 Mbaud
BK3500	PROFIBUS Bus Coupler with fibre optic connection for up to 64 Bus Terminals, 1.5 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
CX8031	PROFIBUS Embedded PC

System	
PROFIBUS	For further PROFIBUS products please see the system overview