



BK7500 | SERCOS II Bus Coupler

sercos
the automation bus

The BK7500 Bus Coupler connects the SERCOS bus system with the electronic terminal blocks, which can be extended in modular fashion. One unit consists of one Bus Coupler, any number from 1 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.

SERCOS is a fibre optic bus that was developed for use in drive technology as a digital drive interface for drives. SERCOS is an open fieldbus system, which since 1995 has been subject to the international standard IEC 61491 for numerically controlled machines. It is widely used in the drive technology sector.

The bus consists of a master and of a number of slaves. In SERCOS, most of the slaves are drive amplifiers. The bus topology is a ring system, in which it is possible to operate up to 254 stations. The transmission speed is 2 and 4 Mbaud. There are basically three types of telegrams. The master SYNC telegram is received by all the slaves at the same time, and is used for synchronisation. The master data telegram is also received by all the slaves, and contains the cyclic data and the service data. The slaves send their data in what is known as a drive telegram.

Parameterisation can also be carried out via the SERCOS interface.

| System data | SERCOS BK7500 |
|---------------------------|------------------------------|
| Number of I/O stations | 254 |
| Number of I/O points | depending on controller |
| Data transfer medium | 1,000 µm plastic fibre optic |
| Distance between stations | 40 m plastic fibre optic |
| Data transfer rates | 2/4 Mbaud |

| Technical data | BK7500 |
|-------------------------------|---------------------------------------------------------------------------------|
| Number of Bus Terminals | 64 |
| Max. number of bytes fieldbus | 32 byte input/32 byte output for the cyclic interface (depending on the master) |
| Digital peripheral signals | 256 inputs/outputs |
| Analog peripheral signals | 128 inputs/outputs |
| Configuration possibility | via KS2000 |
| Data transfer rates | 2/4 Mbaud, adjustable by means of configuration switch |
| Bus interface | F-SMA standard, IEC 872-2 |
| 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 | 24 V DC max./10 A max. |
| 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 |

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| Protect. class/installation pos. | IP 20/variable |
| Approvals | CE, UL, Ex |

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| Accessories | |
| KS2000 | configuration software for extended parameterisation |
| Cordsets | cordsets and connectors |
| FC7501 FC7502 | SERCOS PCI fieldbus cards |

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| Related products | |
| BK7520 | SERCOS interface "Economy plus" Bus Coupler for up to 64 Bus Terminals (255 with K-bus extension) |

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| System | |
| SERCOS | For further SERCOS products please see the system overview |