BETAflam® **FE05B2-FLEX**

Optimized EMC and very high fire safety

Advantages

- Very high fire protection level
- Halogen-free
- Compact conductor stranding
- Suitable for standard or DIN cable lugs
- Flame-retardant insulation material
- Complies with EMC standard according to NISV
- More cost-effective than many competitor products

The tried-and-tested **BETA**flam® FE05B2-FLEX low-voltage power cable is also available as a helically stranded single-core cable. This combines its very high level of fire protection with the requirements for optimised EMC. It is ideal for applications where safety is paramount, such as hospitals, data centres, high-end office and commercial buildings, as well as research facilities (pharmaceuticals, chemicals, microelectronics, etc.).

Very high fire protection certified to BauPV

Studer Cables' **BETA**flam® FE05B2-FLEX is certified in accordance with the Construction Products Regulation (CPR) and meets the high fire protection class B2ca-s1a, d1, a1. Suitable for installation in escape routes.

The corresponding Declaration of Performance can be downloaded at: https://studercables.com/en/products/

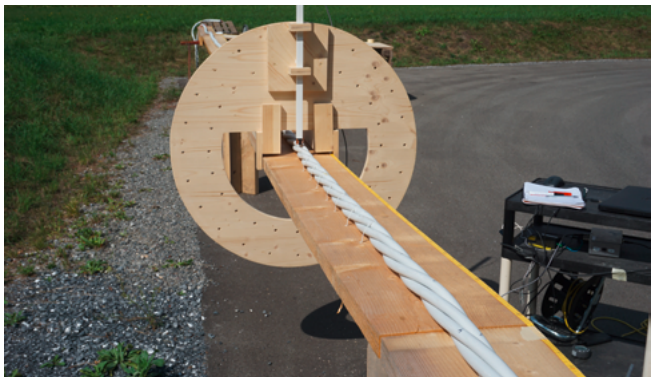
Optimised EMC proven by simulations and measurements

In many sensitive medical or scientific applications, compliance with SUVA and NIST limit values is not sufficient. Stray magnetic fields and the resulting induced currents and signal interference must be reduced to extremely low levels. A proper layout of the cable installation, with tightly helically twisted current-carrying conductors, is a key element in this. In addition, the tight twisting effectively absorbs hazardous forces in the event of a short circuit.

EMC tested and passed

The Institute of Electronics, Sensors and Actuators (ESA) of the University of Applied Sciences Buchs NTB has tested the **BETA**flam® TRAFO-FLEX for electromagnetic compatibility (EMC). For **BETA**flam® FE05B2-FLEX we can guarantee identical magnetic flux densities.

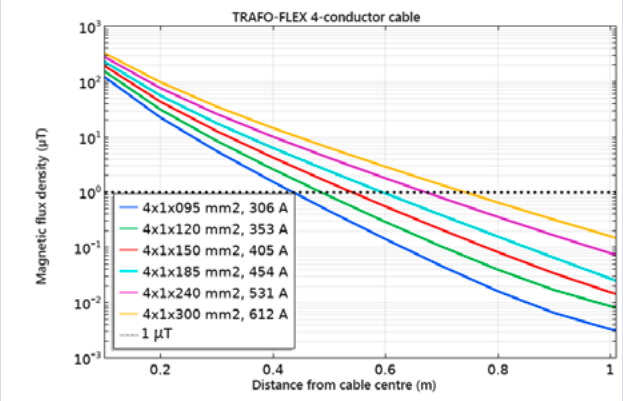
NTB
INTERSTAATLICHE HOCHSCHULE
FÜR TECHNIK BUCHS

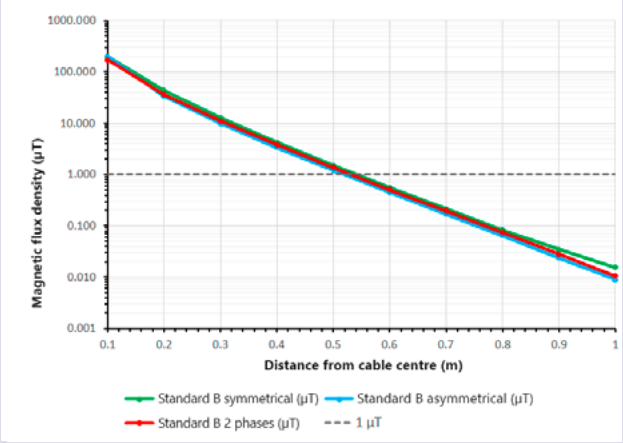


20-meter measuring bench with division apparatus for measuring magnetic fields in the near and far range.

Sensor in the division apparatus. The results are validated by an independent simulation.

Simulation for BETAflam® FE05B2-FLEX





Various current configurations
for the 150 mm² TRAFO-FLEX cable: Equally suitable for symmetrical and asymmetrical loads.

Cable structure	Magnetic flux density at 1 m distance (µT)	Current load (A)
4x1x 50 mm²	< 0.001	195
4x1x 70 mm²	< 0.002	245
4x1x 95 mm²	0.003	306
4x1x 120 mm²	0.009	353
4x1x 150 mm²	0.016	405
4x1x 185 mm²	0.028	454
4x1x 240 mm²	0.079	531
4x1x 300 mm²	0.161	612

With **BETA**flam® FE05B2-FLEX, EMC requirements according to NISV can be fulfilled and even exceeded, ensuring full compliance with EMC standards.

The halogen-free, flame-retardant cable design is suitable for tight bending radii and allows for ideal installation even in limited space. Its attractive pricing makes FE05B2-FLEX the cable of choice.

Further information is available in the data sheets on our website:
https://studercables.com/en/products/

In addition to top-quality products, Studer Cables offers comprehensive consultation, precise calculations, and additional services. Please feel free to contact us personally with any questions.

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