

# BETAtrans® GKW-ENX FM (flexible mobile)

Uniquely flexible and reliably secure



Our specially designed FM cables are suitable for continuous bending and torsional stresses both inside and outside of rail vehicles, electric buses, and other vehicles. The weight- and space-optimized solutions allow for use in confined spaces, such as in traction motors, converters, switchgear, and auxiliary systems.

Thanks to specially developed strands, we achieve optimal flexibility for various applications, while the dual-layer insulation ensures short-circuit and ground-fault safe installation.

In our in-house testing laboratory, we use state-of-the-art equipment to test requirements according to current standards and regulations and to simulate movement profiles together with our partners.

Our FM cables meet the two-roll alternating bending test according to DIN EN 50396 (>1,000,000 cycles) as well as the JRIS J 1000 torsion test. Our cables, specifically developed for this application, demonstrably achieve these requirements.

Thanks to our specially developed compounds and cross-linking through electron beams, our hybrid combinations

meet the highest fire and smoke standard EN 45545 HL3 (Hazard Level). This ensures maximum protection in the event of a fire. Avoid costly failures by choosing durable, reliable, and sustainable products from Studer Cables AG.

Our FM cables already meet the targeted requirements of the pre-version EN 50343-2024 regarding resistance to ozone and UV.

The safe, halogen-free supply cable with 'flexible mobile' properties minimizes the risk of failure. The durable products also contribute to environmental protection and reduce operating and maintenance costs.

## Advantages

- Maximum safety in dynamic applications
- Halogen-free
- Long service life
- Electron beam crosslinked
- Weight and volume optimized
- Extremely high flexibility
- Good media resistance
- Excellent cold resistance
- Complies with EN 45545-3 HL 3
- Very low fire load
- High voltage resistance

Rely on our expertise, experience, and products for the railway industry and related fields. Thanks to our extensive in-house production in Swiss quality, we can flexibly respond to individual customer needs. **Studer Cables stands for customized cable solutions and innovative products.**

Choose our products to ensure a safe, forward-looking, and sustainable connection for your rail vehicles, electric buses, and other vehicles.

For maximum product safety and quality, we rely on state-of-the-art production facilities and continuously develop innovative polymer plastics in our laboratories. This allows us to achieve superior insulation properties, higher temperature tolerances, longer lifespan, easy handling, and additional safety features.

Studer Cables is your partner for customized, sustainable, durable, and reliable hybrid cable solutions. Our engineering provides quality in consulting, calculations, design, concepts, simulation, and testing.



Example: BETAtrans® 4 GKW-ENX FM

## Single-core and multi-core cables

	Nominal Voltage	Temperature range (fixed application)	Temperature range (dynamic application)
BETAtrans® 4 GKW-ENX FM	1.8 / 3 kV AC	-40 °C bis +105 °C	-25 °C bis +90 °C
BETAtrans® 4 GKW-ENX C-flex FM	1.8 / 3 kV AC	-40 °C bis +105 °C	-25 °C bis +90 °C
BETAtrans® 9 GKW-ENX FM	3.6 / 6 kV AC	-40 °C bis +105 °C	-25 °C bis +90 °C
BETAtrans® 9 GKW-ENX C-flex FM	3.6 / 6 kV AC	-40 °C bis +105 °C	-25 °C bis +90 °C



Further information can be found in our datasheets on our website:  
<https://studercables.com/en/products/>