

# Cable Solutions for Hydrogen Applications

## BETAflam<sup>®</sup> – Safe and Reliable Measuring and Control Cables



### Benefit for the electrolysis cell

- Reduced risk of damage and downtime
- Consistent and predictable ageing
- Efficient and optimized performance
- Maximum safety and reliability

An electrolyzer produces hydrogen that can be used as storage for future power generation – a central principle for the targeted energy transition. Monitoring of electrolysis cells (Cell Voltage Monitoring, CVM) is essential to ensure the efficiency, stability and safety of the hydrogen electrolysis process. By continuously measuring the individual cell voltages, operators can detect faults at an early stage in order to avoid undesired downtime.

### Robust cables for reliable system monitoring

Our robust, halogen-free and electron beam cross-linked, multi-core **BETAflam<sup>®</sup>** cables feature improved fire performance, high temperature and thermal pressure resistance – even in the event of short circuits. The cables provide enhanced protection against overload and demonstrate resistance to UV radiation, oil and fuels. Thanks to our specially developed cable sheath, they meet the highest safety and performance requirements.

### Trust in Swiss quality and precision

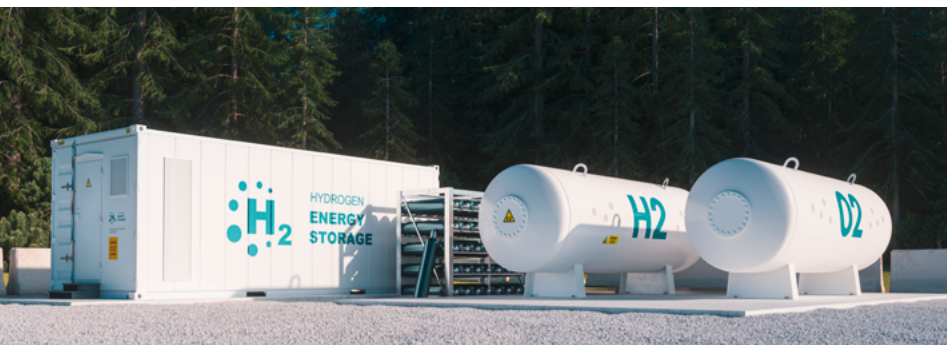
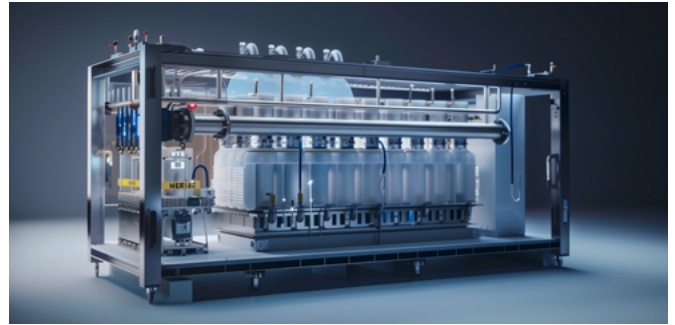
With our high level of in-house production and proven Swiss quality, we realize individual customer requirements and develop customized cable solutions even for the most extreme environments, where plant safety is of fundamental importance and a decisive factor for success. Studer Cables stands for innovation and sustainability – with products that, thanks to their longevity, make a valuable contribution to environmental protection.

## Advantages

- Very high temperature resistance
- Operating temperature -55 °C to +145 °C
- Sustainability due to long service life (220,000 h at 90 °C, 5,000 h at 145 °C)
- Highest fire protection properties
- Short-circuit-proof (resistant to thermal pressure)
- Electron beam cross-linked
- Halogen-free
- Sustainable
- UV, oil, and fuel resistance
- Fire class BauPV / CPR

## Maximum safety and reliability

Our **BETAflam**® cables have been specially developed to meet the increasing requirements for fire protection and operational safety. The cross-linked insulating materials minimize fire risks and ensure high operational reliability even in the event of short circuits. For maximum quality and product safety, we rely on state-of-the-art production facilities and continuous research. Our innovative polymer compounds improve insulating properties, increase temperature tolerances and provide additional safety features.



## Multi-core cables

Further cross-sections and core configurations on request

	Nominal voltage	Temperature range	Cross sections	Certifications
<b>BETAflam</b> ® 145 flex	1000 V	-55 °C to +145 °C	2 × 0.5 mm <sup>2</sup> to 5 × 95 mm <sup>2</sup>	DNV/GL, Lloyd's Register, BUREAU VERITAS, CPR
<b>BETAflam</b> ® 145 C-flex	1000 V	-55 °C to +145 °C	2 × 0.5 mm <sup>2</sup> to 5 × 35 mm <sup>2</sup>	DNV/GL, Lloyd's Register, BUREAU VERITAS, CPR

## Multi-core cables with UL certification

Further cross-sections and core configurations on request

	Nominal voltage	Temperature range	Cross sections	Certifications
<b>BETAflam</b> ® 145 flex UL/cUL 4486	1000 V	-55 °C to +145 °C	2 × 0.5 mm <sup>2</sup> to 5 × 95 mm <sup>2</sup>	UL, cUL
<b>BETAflam</b> ® 145 C-flex UL/cUL 4486	1000 V	-55 °C to +145 °C	2 × 0.5 mm <sup>2</sup> to 5 × 35 mm <sup>2</sup>	UL, cUL



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

In addition to first-class products, Studer Cables offers comprehensive advice, precise calculations and other services. If you have any questions, please do not hesitate to contact us personally.

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