

Media Contact:
Shane Novacek
Beckhoff Automation
Phone: 952-808-6515
s.novacek@beckhoff.com
[LinkedIn](#) | Twitter: [@BeckhoffUSA](#)

Note to editors: Link to high-res photo and picture caption follow news release text.

Beckhoff I/O Terminal Supports High-voltage Measurement for Renewable Energy and EV Technologies

Designed for batteries, generators and motor applications up to 1,000 V, the new ELM3002-0205 EtherCAT Terminal enables extremely precise and reliable measurement

SAVAGE, Minnesota, May 5, 2022 – The new ELM3002-0205 EtherCAT measurement terminal from Beckhoff delivers high-voltage measurement functionality for batteries, generators and motors. This feature-filled I/O terminal supports the four measurement ranges of ± 60 , ± 120 , ± 500 and $\pm 1,000$ V, respectively, and is particularly suitable for applications in the fields of electric vehicles (EVs) and renewable energy.

In the renewable energy market, the ELM3002-0205 supports, for example, efficiency increases for wind turbines via direct converter control. A prerequisite for this is voltage measurement in the 1,000 V range directly on the generator. The EV segment has similar requirements in the rapidly increasing, large-scale production of high-quality EV batteries and accumulators globally.

With powerful oversampling functionality, the dual-channel measurement terminal achieves a maximum sampling rate of 50 ksps per channel. This high sampling rate in high-voltage applications enables deeper data insights in energy applications. In generator control, for example, faster response times are possible as a result. Moreover, high measurement accuracy enables more accurate frequency detection, which in turn improves frequency stabilization in power grids. In battery testing applications, load and quality tests can be reliably performed due to the high sampling rates.

Specialized in extra-high voltages, the ELM3002-0205 is the newest member of the ELM3xxx measurement device family, which now comprises more than 30 high-precision and industrial-grade EtherCAT Terminals with robust metal housings. Integrated into the large EtherCAT Terminal portfolio from Beckhoff, these I/O terminals are a foundation for system-integrated measurement technology in automation.

[ELM3002 EtherCAT measurement terminals](#)

Link to high-res image:

https://download.beckhoff.com/download/press/2022/NorthAmerica/Beckhoff_ELM3002-0205_images.zip

Press picture:



Picture caption:

The ELM3002-0205 EtherCAT Terminal enables high-voltage measurements with high accuracy and sampling rates for car batteries, generators and motors.

Beckhoff Automation is a provider of advanced and open automation solutions based upon proven technologies for customers to implement high performance control systems faster and at a lower overall cost than traditional PLC and motion control systems. Beckhoff's "New Automation Technology" product range includes PC-based control, Industrial PCs, automation controllers, operator interfaces, I/O, servo drives and motors. With representation in more than 75 countries, Beckhoff is well positioned to provide global sales and service to its customers. Beckhoff sales and service are handled directly, with no intermediaries involved for exceptional customer service and consultation.

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Send questions regarding “ELM3002 EtherCAT Terminal” to:

Beckhoff Automation LLC
13130 Dakota Ave
Savage, MN 55378
Toll-free: 1-877-TwinCAT
Local: 952-890-0000
Fax: 952-890-2888
Email: beckhoff.usa@beckhoff.com
www.beckhoff.com
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