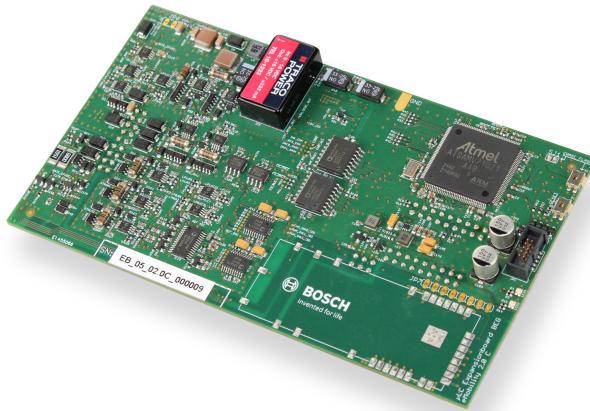


Expansion Board E-Mobility



The Expansion Board E-Mobility extends the functions of the μ LC Test System with typical sensor signals from the e-mobility sector. This includes resolver signals, strand current signals, incremental encoder signals, and a 30 V-DAC. All inputs and outputs are short-circuit protected against ground and supply voltage.

Technical Specifications

Resolver Signals

Properties	Specifications
Output signals	Sine, inverted sine; Cosine, inverted cosine; Internal excitation signal
Excitation signal	Switchable between internally generated signal or externally supplied signal; Frequency range: 100 Hz to 10 kHz; Accuracy: $< \pm 5\%$
Amplitudes	Voltage: 1 to 2,5 V; Accuracy: $< \pm 250$ mV
Phases	Phase shift between envelopes adjustable between 0° and 359°; Accuracy: $< \pm 10^\circ$
Offset	Voltage: 0 to 10 V, signal can be shifted in 100 mV steps; Accuracy: $< \pm 250$ mV
Rotational speeds	Speed range: 60 to 15,000 rpm simulatable; Accuracy: $< \pm 5\%$

- ▶ Expansion by sensor signal simulation of resolver signals, strand current signals, incremental encoder signals, and DAC
- ▶ High signal precision
- ▶ 16-bit resolution
- ▶ Galvanic isolation & protective circuits

Strand Current Signals

Properties	Specifications
Amplitudes	Amplitudes of signals: adjustable 0.1 to 2.5 V; Accuracy: $< \pm 25$ mV
Phases	Phase shift to speed signals adjustable between 0° and 359°; Accuracy: $< \pm 10^\circ$
Offset	Voltage: strand current signal shiftable between 0 and 2.5 V in 25 mV steps; Accuracy: $< \pm 25$ mV
Rotational speeds	Speed range: 60 to 15,000 rpm simulatable; Accuracy: $< \pm 5\%$

Incremental Encoder Signals

Properties	Specifications
Amplitudes	Amplitudes of signals: adjustable 2.5 to 12 V; Accuracy: $< \pm 250$ mV
Phases	Phase shift between signals adjustable between 0° and 359°; Accuracy: $< \pm 10^\circ$
Offset	Signals between 0 and 2.5 V shiftable in 100 mV steps; Accuracy: $< \pm 250$ mV
Rotational speeds	Frequency range: 1 Hz to 10 kHz; Accuracy: $< \pm 5\%$
Pulse Width	Pulse width: 50 %; Accuracy: $< \pm 5\%$

DAC

Properties	Specifications
Voltage	Voltage range: 0 to 30 V; Accuracy: < 500 mV
Current	Output current without voltage drop; Voltage remains constant at 2.5 mA

Legal Restrictions

Generally blocked are direct and indirect business involving high risk destinations, including Russia, Belarus, Cuba, Iran, North Korea, Syria, Libya, Afghanistan, and certain non-governmental controlled Ukrainian regions. This list may change as geopolitics evolve.

Ordering Information

Expansion Board E-Mobility
Order number **F02U.V03.531-01**

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