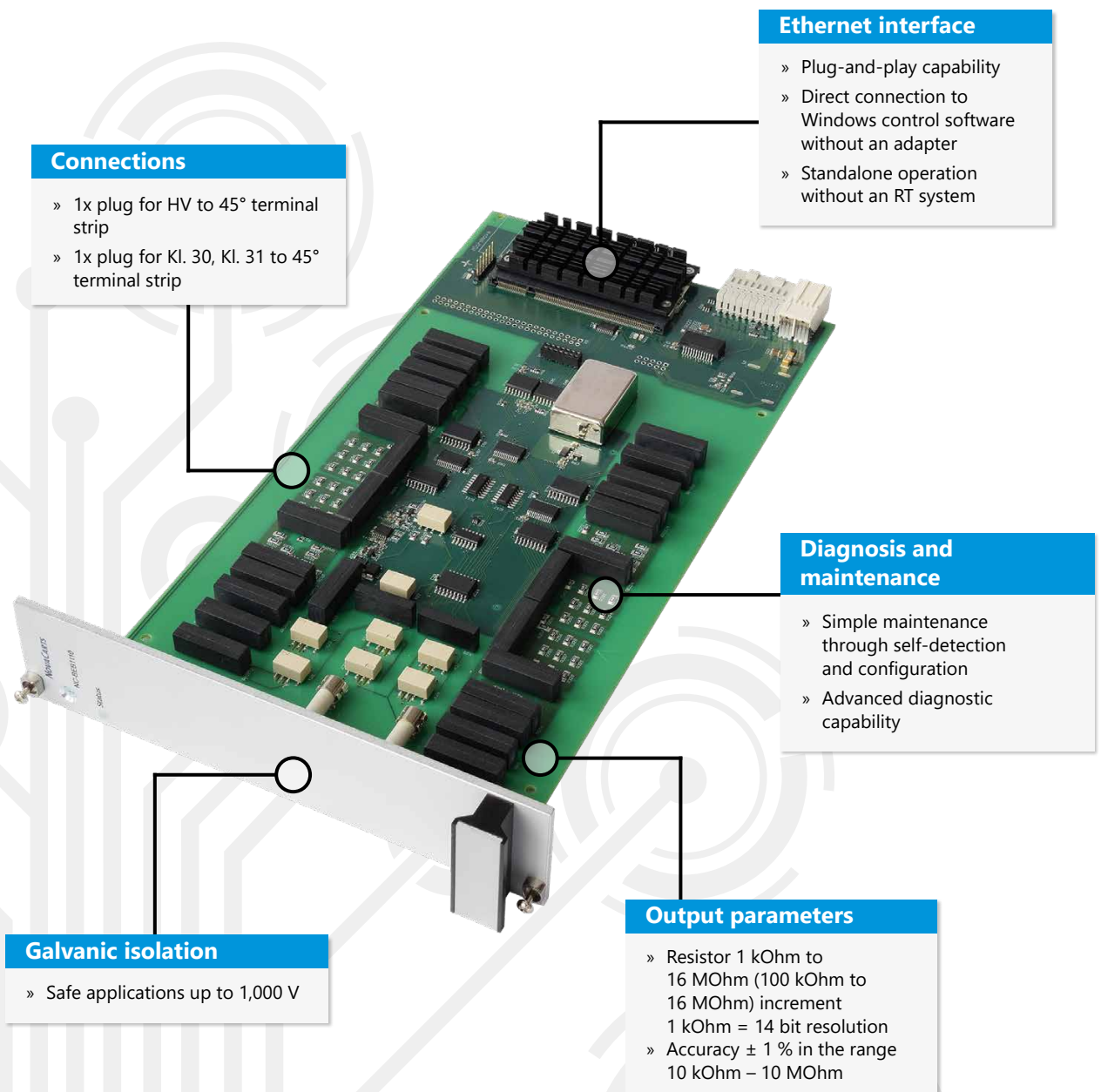


NovaCarts Insulation Error Simulation Board

This board has been developed to test the safety-critical error monitoring in electrical and hybrid vehicles. In order to do this, specific isolation errors between high-voltage and low-voltage circuits must be applied.

The insulation error board allows test engineers to integrate errors with a variable resistance of up to 10 MOhm between the high-voltage wires and the vehicle ground or the vehicle connection respectively. Thus, the insulation monitors used in the high-voltage control devices can be tested. Subsequent users can rely on the frictionless functioning of all these protective devices.



Connections

- » 1x plug for HV to 45° terminal strip
- » 1x plug for Kl. 30, Kl. 31 to 45° terminal strip

Ethernet interface

- » Plug-and-play capability
- » Direct connection to Windows control software without an adapter
- » Standalone operation without an RT system

Diagnosis and maintenance

- » Simple maintenance through self-detection and configuration
- » Advanced diagnostic capability

Output parameters

- » Resistor 1 kOhm to 16 MOhm (100 kOhm to 16 MOhm) increment
1 kOhm = 14 bit resolution
- » Accuracy $\pm 1\%$ in the range 10 kOhm – 10 MOhm

Galvanic isolation

- » Safe applications up to 1,000 V

Data Sheet

Module name: **NC-BEB1110**

Data sheet version: **1V3**

Features

Voltage source	24 V, 550 mA
Operating temperature	0 to +55 °C
Storage temperature	-20 to +70 °C
Humidity	10 to 90 % (no condensation)
Dimension	Height: 4 U, Width: 8 U
Connection to RT system	Ethernet

Spezifikationen

Output impedance	1 kOhm to 16 MOhm (100 kOhm to 16 MOhm), incrementally 1 kOhm
Accuracy	+/- 1 %, ± 200 ppm ($\times 10^{-6}/^{\circ}\text{C}$)
Maximal current	+/- 10 mA
Maximum power	10 W (maximale duration 30 s)
Galvanic isolation	
Resistance channel to resistance channel	1,000 V
Channel to system	1,000 V

Software characteristics

The following options are available:

- » Setting of resistance values for RA and RB
- » Switchover HV+ and HV- for RA and RB
- » Changeover Kl. 31 and Kl. 30 for RA and RB
- » Hardware prepared for diagnostics