





# Safety Instructions

## MiniModules



### General Safety Instructions

Please observe the following safety instructions and information provided with the MiniModule as well as the safety-specific information in the accompanying technical documentation.

WARNING!	
	<p>MiniModules without <u>high-voltage designation</u> are designed for measurements with on-board power supply systems with 12 V, 24 V and 48 V. Improper use may result in life-threatening electrical shocks.</p> <ul style="list-style-type: none"><li>☞ Make sure that these modules are only handled by qualified and trained personnel.</li><li>☞ Never connect a MiniModule without high-voltage designation directly to a system with higher operating voltages (&gt; 60 V DC), e.g. high-voltage batteries.</li><li>☞ Observe safety instructions.</li></ul>
NOTE!	
	<p>Improper opening of the housing will impair the operational safety and function of a MiniModule.</p> <ul style="list-style-type: none"><li>☞ Do not open the module housing.</li><li>☞ Do not carry out any mechanical or electrical modifications on a MiniModule.</li></ul>

- ▶ Make sure that MiniModules are only handled by qualified and trained personnel.
- ▶ Make sure that MiniModules are only operated within the specified operating temperature range and at a relative humidity between 5 % and 95 % (non-condensing).
- ▶ In wet environments (pollution degree 4) supply voltage must not exceed 35 V DC. In dry environments the maximum permitted supply voltage is 50 V DC (+10 %) <sup>1</sup>.
- ▶ Only use sensor cables and cables for CAN and power supply which meet the corresponding requirements.
- ▶ To ensure the measurement accuracy of a MiniModule, annual calibration is recommended.

### Before Putting MiniModules into Operation

- ▶ Carefully read the entire documentation delivered with a MiniModule before initial operation. Please contact CSM GmbH with any additional questions.

<sup>1</sup> ADMM 8 pro2: 45 V (+10 %)

CSM GmbH Germany is certified.



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2022-12-13

Page 2/2