

São Paulo, May 25<sup>th</sup>, 2026

## B05 Energy Meter Information

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Dear teams,

The Energy Meter described below will be the model used for the 2025 season. Teams must provide the necessary space and electrical connections to integrate the device into the tractive system's electrical circuit. This allows for accurate measurement of the vehicle's energy consumption and monitoring of any violations of the electric vehicle category rules, such as voltage and power limits.

Energy consumption is calculated by measuring the instantaneous power of the tractive system over time at a high sampling rate. To accomplish this, the device includes a shunt installed in series with the electrical system on the TS- line to measure current, along with a reference connection to TS+ for voltage measurement. The Energy Meter will be delivered to the team after the successful completion of the electrical inspection and must be returned at the end of the competition.

The device consists of an enclosure with four connectors:

- **Two M10 bolt connectors at the top:** These will be connected in series between the accumulator's TS- terminal and the rest of the tractive system. The team must provide compatible, properly crimped connectors capable of handling the current levels specific to the high-voltage system design, as the entire accumulator current will flow through this connection. To facilitate the inspection process, these connectors must be short-circuited during the electrical technical inspection. After the inspection, the short circuit must be removed, and the connectors must then be attached to the Energy Meter.
- **The third connector (specifications below):** also located on the top of the device, must be connected to the accumulator's HV+ terminal.
- **The fourth connector (specifications below):** located on the side of the device, must be connected to the vehicle's Low Voltage (GLV) system. This means that when the GLV Master Switch (GLVMS) is enabled, a supply voltage between 7V and 30V must be present at this connector's terminals.

If the vehicle's GLV system operates at a voltage above 30V, the team must install a voltage regulator between the GLVMS and the Energy Meter to provide a supply voltage within the specified operating range.

The maximum power consumption of the Energy Meter can reach up to 2W, so the GLV supply line must include appropriate overcurrent protection.

**Important:** Pay close attention to the color coding of the cables used for the Energy Meter and any required fuses. All must comply with the applicable rules set forth in the competition regulations.

The Energy Meter must be securely mounted and protected against water ingress. To help with proper sizing and placement within the vehicle, the device's physical dimensions are provided below.

The minimum bending radius of the cables, when connected to the Energy Meter in its final installed position, must be properly calculated to avoid mechanical stress in the cables.



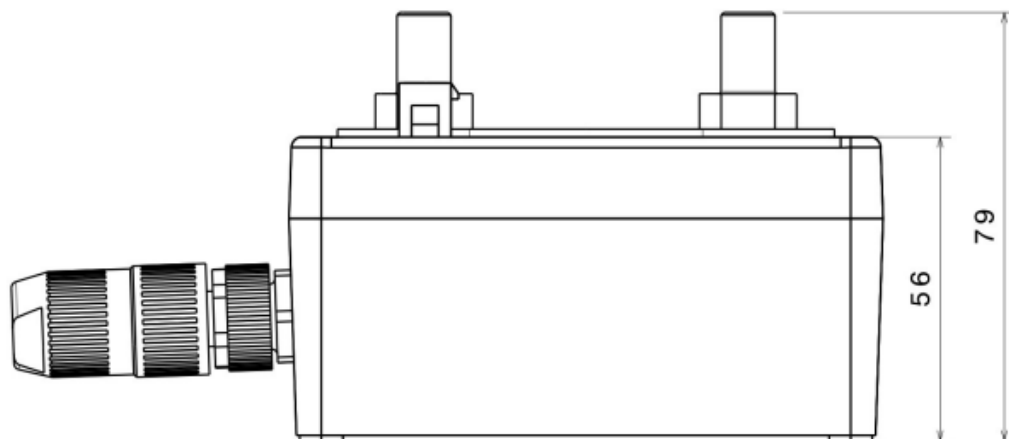


Figure 2 – Side view dimensions (mm).

Best regards,  
Technical Committee FSAEB 2026

<b>Version</b>	<b>Date</b>	<b>Comments</b>
1	25/May/2026	New document