

# FEV500

## Fast DC EV Charging Station Analyzer

### Safety Information



**2-Year Limited Warranty.**  
See the Users Manual for the full warranty.

To register your product, or to view, print, or download the latest manual or manual supplement, go to our website:

<http://www.fluke.com/productinfo>.

## Safety Information

A **Warning** identifies hazardous conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.



**To prevent possible electrical shock, fire, or personal injury:**

- **Read all safety information before you use the Product.**
- **Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.**
- **Carefully read all instructions.**
- **Examine the case before you use the Product. Look for cracks or missing plastic. Carefully look at the insulation around the terminals.**
- **Do not use the Product if it is altered or damaged.**
- **Do not use the Product if it operates incorrectly.**



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- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.
- Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Use the correct terminals, function, and range for measurements.
- Use only current probes, test leads, and adapters supplied with the Product.
- Do not use test leads if they are damaged. Examine the test leads for damaged insulation.
- Remove all probes, test leads, and accessories that are not necessary for the measurement.
- Keep fingers behind the finger guards on the probes.
- Do not use a shrouded banana jack accessory such as an alligator clip with an unshrouded 4 mm banana probe tip terminal in a hazardous electrical installation. Due to the lack of a shroud, the probe tip connector does not provide suitable insulation to accessible parts with this type of assembly for prevention of electric shock or fire.
- Do not operate the Product with covers removed or the case open. Hazardous voltage exposure is possible.
- Do not short the battery terminals together.
- Do not disassemble or crush battery cells and battery packs.
- Disconnect the battery charger and move the Product or battery to a cool, non-flammable location if the rechargeable battery becomes hot (>50 °C / 122 °F) during the charge period.
- Do not keep cells or batteries in a container where the terminals can be shorted.
- Remove the input signals before you clean the Product.
- Have an approved technician repair the Product.
- Use only specified replacement parts.
- Validate earth ground connection of installation with appropriate earth ground tester prior to using Product.
- Use caution around the exhaust vents. Air temperatures and surface temperatures around the vents can be hot.
- Do not put battery cells and battery packs near heat or fire. Do not store in sunlight.
- Do not touch ungrounded parts of EVSE until safety is validated by Product.
- Do not close the lid while the cooling fans are still operating. Closing the lid during fan operation may cause overheating or damage to internal components.

## Symbols

The table below lists the symbols that can be used on the Product or in this document.

Symbol	Description
	WARNING RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	Consult user documentation.
	DC (Direct Current)
	WARNING. HOT SURFACE. Risk of burns.
	Use proper lifting techniques. Product has a mass of 26 kg.
	This product contains a Lithium-ion battery. Do not mix with solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler per local regulations. Contact your authorized Fluke Service Center for recycling information.
	Conforms to European Union directives.
	Conforms to the Appliance Efficiency Regulation (California Code of Regulations, Title 20, Sections 1601 through 1608), for small battery charging systems.)
	This product complies with the WEEE Directive and its marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Do not dispose of this product as unsorted municipal waste. For information about take-back and recycling programs available in your country, see the Fluke website.

## Specifications

<b>Input ratings</b>	300 V CAT II, 1000 V dc MAX (EVSE DC+ to DC-), 7 A dc
<b>Battery</b>	Li-ion, 10.8 V, 6.8 Ah, 73.4 Wh
<b>Temperature</b>	
Operating	-20 °C to 50 °C (-4 °F to 122 °F)
Storage	-20 °C to 60 °C (-4 °F to 140 °F)
Battery Charging	0 °C to 45 °C (32 °F to 113 °F)

<b>Humidity</b>	
Operating	IEC 60721-3-3 ≤100 % @ -25 °C to 30 °C / (-13 °F to 86 °F) 55 % @ 40 °C (104 °F) 35 % @ 50 °C (122 °F)
<b>Altitude</b>	
Operating	3000 m
Storage	12 000 m
<b>Safety</b>	IEC 61010-1: Pollution Degree 2 IEC 61010-2-034
<b>Ingress Protection</b>	IEC 60529
Lid closed and latched	IP54 (protected against dust and splashing water)
Lid opened	Electrical compartment: IP40 (protected against objects ≥1 mm) Air-cooling plenum: IP20 (protected against objects ≥12.5 mm) No protection against water ingress.
<b>Electromagnetic Compatibility (EMC)</b>	
International	IEC 61326-1: Basic Electromagnetic Environment
<p><i>Group 1: Equipment has intentionally generated and/or uses conductively coupled radio frequency energy that is necessary for the internal function of the equipment itself.</i></p> <p><i>Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low-voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.</i></p> <p><i>Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.</i></p> <p><i>Emissions that exceed the levels required by CISPR 11 can occur when the equipment is connected to a test object.</i></p> <p><i>The equipment may not meet the immunity requirements of this standard when test leads and/or test probes are connected.</i></p>	
USA (FCC)	47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103