

FEV100

Electrical Vehicle Charging Station Test Adapter

Safety Information



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

Go to www.fluke.com to find more information.
To register your product, visit <http://register.fluke.com>.
To view, print, or download the manual and the latest manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

A **Warning** identifies 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.

⚠⚠ Warning

To prevent the possibility of electric shock 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.**
- **Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.**
- **Before each use, examine the Product. Look for cracks or missing pieces of the Product and cable assembly insulation. Also look for loose or weakened components. Carefully examine the insulation around the cable assembly connector.**
- **Only connect the Product to the charging stations as indicated in the Specification section.**

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Specifications are subject to change without notice.









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- Use the Product within the operating range only. The operating range is specified in the Specification section.
- Do not touch any part of charging station during the GFCI test. The GFCI test may place hazardous voltage onto conductive parts of the charging station during the test if the charging station is not properly grounded.
- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground.
- Use the correct terminals, function, and range for measurements.
- Do not use the Product if it operates incorrectly.
- Do not operate the Product with covers removed or the case open. Hazardous voltage exposure is possible.
- Use only specified replacement parts.
- Do not use the Product if it is altered or damaged.
- Have an approved technician repair the Product.

Symbols

Symbol	Description
	WARNING. RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	Consult user documentation.
	Double Insulated.
CAT II	Measurement Category II is applicable to test and measuring circuits connected directly to utilization points (socket outlets and similar points) of the low-voltage MAINS installation.
	Earth.
PE	Protective Earth.
CP	Control Pilot.
	Vehicles not requiring ventilation for indoor charging areas.
	Vehicles requiring ventilation for indoor charging areas.
	This product complies with the WEEE Directive marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste.

Specifications

General Features

Input voltage.....	$U_{L1/N} = 120\text{ V}$, $U_{L2/N} = 120\text{ V}$, $U_{L1/L2} = 208\text{ V}$, 60 Hz (three-phase system) or $U_{L1/N} = 120\text{ V}$, $U_{L2/N} = 120\text{ V}$, $U_{L1/L2} = 240\text{ V}$, 60 Hz (single-phase system), $\pm 10\%$ voltage fluctuations from nominal
EV connector (EVC-13)	SAE J1772 socket, 16 A (type 1, 5P single-phase)
Internal power consumption...	2 W max.
Operating temperature.....	-4 °F to 104 °F (-20 °C to 40 °C)
Storage temperature	-4 °F to 122 °F (-20 °C to 50 °C)
Operating humidity range.....	10 % to 85 % relative humidity non-condensing
Storage relative humidity	0 % to 85 % non-condensing
Operating altitude.....	6561 ft (2000 m) max.
Dimensions (H × W × D).....	Approx. 8.66 x 4.33 x 1.77 in (220 x 110 × 45 mm) without cable assembly
Weight	Approx. 4.4 lb (2 kg)
Safety standards	IEC 61010-1, Pollution Degree 2 IEC 61010-2-030
Measurement category	CAT II 250 V
IP protection class.....	IP54

Electromagnetic Compatibility (EMC)

International	EC 61326-1: Basic Electromagnetic Environment; CISPR 11: Group 1, Class A
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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.

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.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

USA (FCC) 47	47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.
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Functions

CP states.....	A, B, C, D
CP Error "E"	On/off
PE Error.....	On/off
GFCI test.....	Yes, test resistor of 2 k Ω connected between L1 and PE, time limitation 40 ms
PE Pre-Test (typical)	Visible indication >30 V on PE conductor

Outputs (for test purpose only)

Measuring terminals

L1, L2/N, PE.....Max. 250 V 50/60 Hz, CAT II 250 V

CP signal output terminals...Approx. ± 12 V (under normal conditions), in case of wrong wiring or error of the charging station these terminals can be hazardous \geq max. 250 V against PE