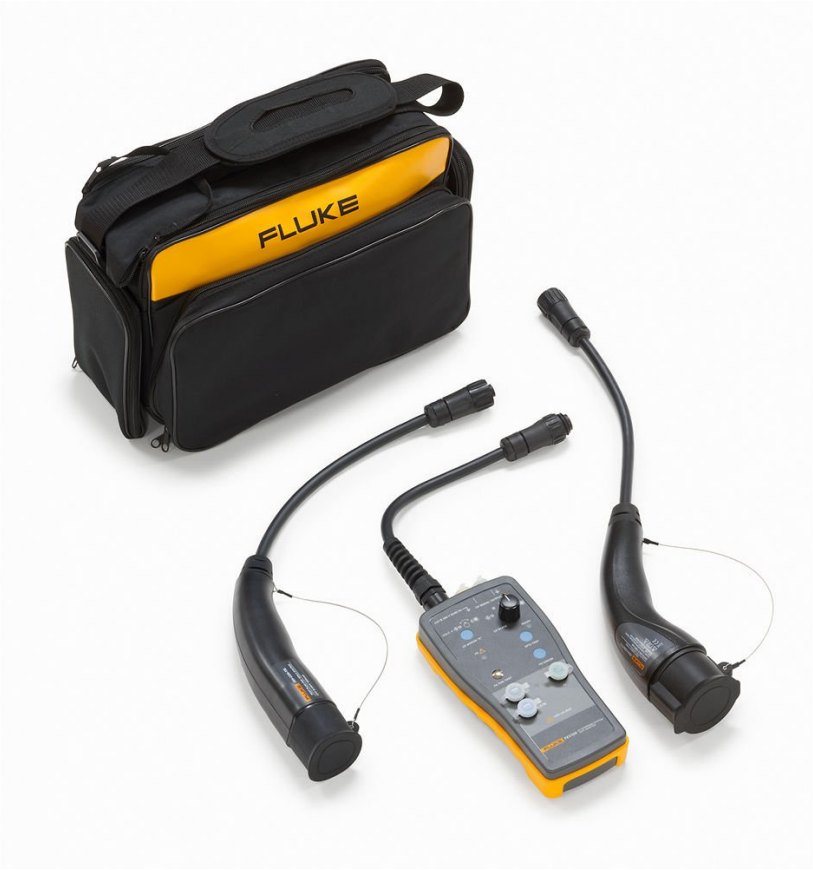
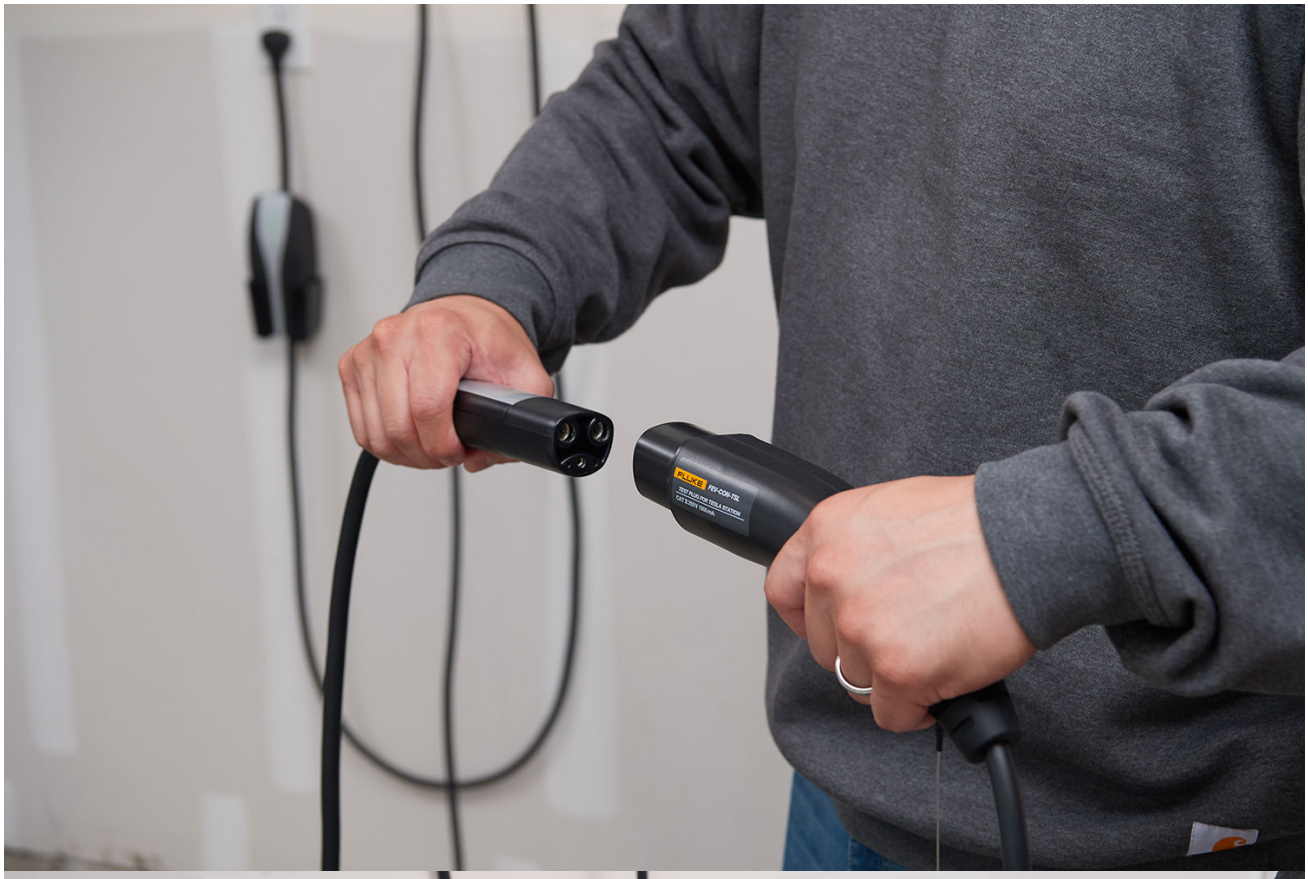
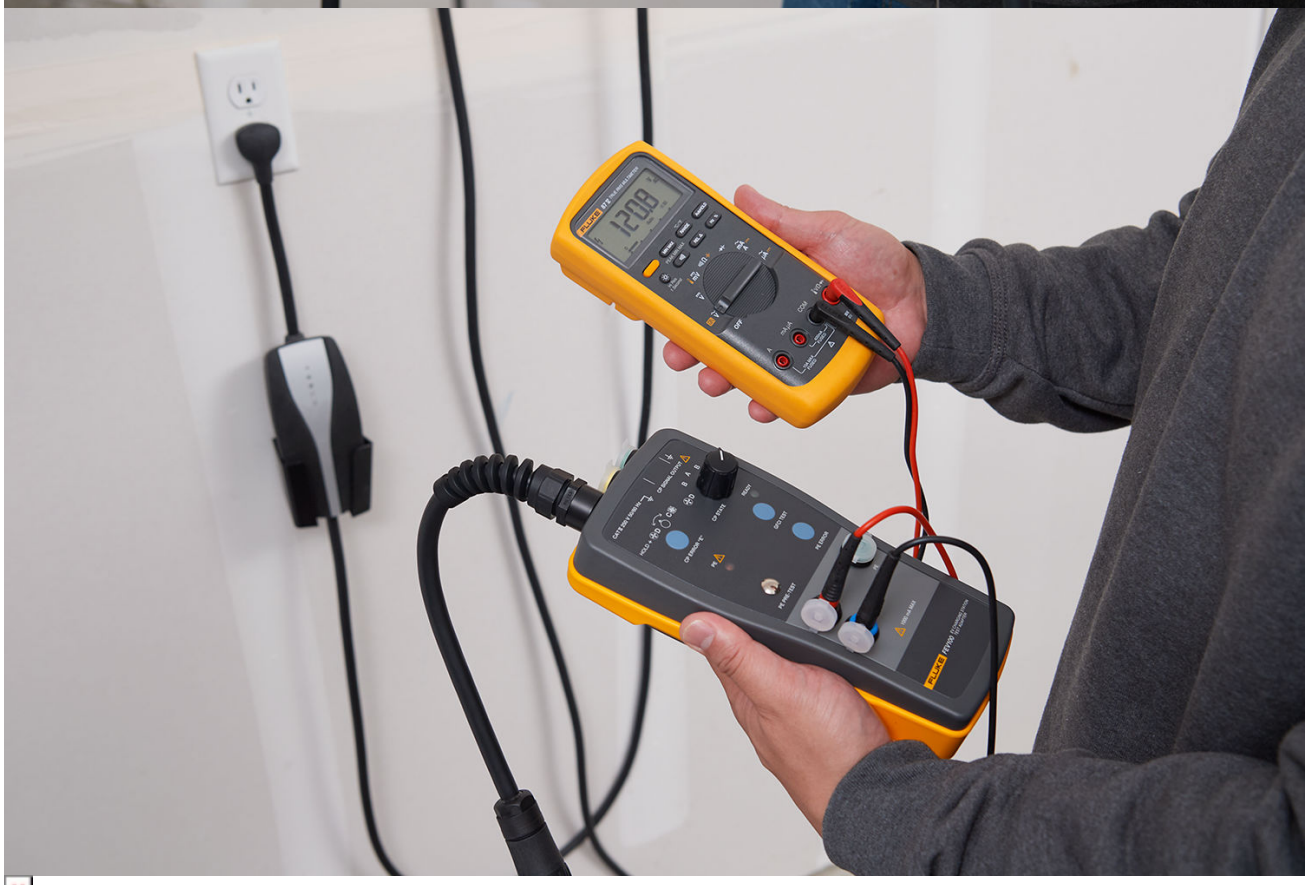
TECHNICAL DATA

eMobility Tools Kit: FEV100 Test Adapter and Connector for Tesla™ Station







Key features

- Check protective earth for correct wiring and functioning with the PE pre-test feature.
- Perform GFCI troubleshooting of EVSE and verify operation within safety standards.
- Verify charging voltage and maximum available current using a multimeter.
- SAE J1772 compliant to North American standards.

Product overview: eMobility Tools Kit: FEV100 Test Adapter and Connector for Tesla™ Station

Test the safety and performance of a type 1, level 1 or level 2 electric vehicle ac charging stations (EVSEs) including Tesla™ AC wall connectors for residential or commercial destination charging locations with the Fluke FEV100 kit connector for Tesla™ stations. With over 35,000 Tesla™ Wall connectors at destination sites there is a growing need for a Tesla™ type connector in addition to the standard Type 1 connector. With this kit, it's easy to verify an EV charging station is working properly after install and during periodic maintenance, or troubleshoot an EVSE if it is not delivering the appropriate charge.

Perform EV charging station electrical safety tests

- PE PRE-TEST: Grounding system pre-test verifies that there is no presence of dangerous voltage at the ground terminal.
- GFCI TEST: Ground fault circuit interrupter test verifies the breaker of the EVSE is connected by detecting ground faults.
- PE ERROR: Ground fault simulation indicates an interruption of the ground conductor; the pending charging process is aborted, and new charging processes are prevented.
- CP ERROR “E”: The standard J1772 defines Error “E” as a state when charging station is disconnected from vehicle, disconnected from utility, there is a loss of utility power or control pilot is short to control pilot reference (ground).

Note: The Fluke connector for Tesla™ stations does not work with the Tesla Superchargers or any other DC fast charging stations. Do not attempt to use this adapter with DC fast chargers.

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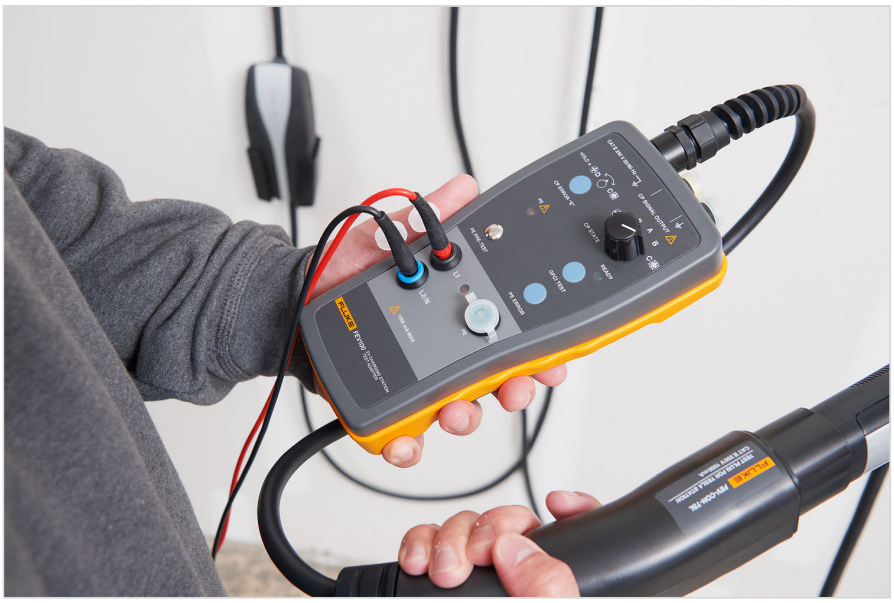
Take a virtual demo

Specifications: eMobility Tools Kit: FEV100 Test Adapter and Connector for Tesla™ Station

General specifications	
Input voltage	UL1/N = 120 V, UL2/N = 120 V, UL1/L2 = 208 V, 60 Hz (three-phase system) or UL1/N = 120 V, UL2/N = 120 V, UL1/L2 = 240 V, 60 Hz (single-phase system), ±10% voltage fluctuations from nominal
EV connector	SAE J1772 socket (type 1, 5P single-phase) Connector for Tesla™ station

Inteal 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)	
Inteational	IEC 61326-1: Basic Electromagnetic Environment
	CISPR 11: Group 1, Class A
	Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the inteal 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 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.
Functions	
CP States	A, B, C, D
CP Error "E"	On/off
PE Error	On/off
GFCI Test	Yes, test resistor of 2 kΩ 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	Max. 250 V 50/60 Hz, CAT II 250 V
L1, L2/N, PE	
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 max. 250 V against PE

Ordering information



FLK-FEV100/TY1 & TSL

Includes:

- **FEV100**
- Fluke FEV100/BASIC Test Adapter
- Fluke FEV-CON/TY1 Type 1 Connector & Cable
- Fluke FEV-CON-TSL Tesla™ Type Connector & Cable
- Soft Carrying Case
- User Manual
- 3-year warranty

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