

ELECTRIC VEHICLE TEST SYSTEMS



THE EASTERN SPECIALTY COMPANY

TESCO has more than 110 years of experience in designing and building devices to test the accuracy of electrical measurement devices for the utility industry. From that knowledge and expertise, TESCO has developed a means to check the accuracy and calibration of Electric Vehicle Chargers.

TESCO's family of Electric Vehicle Service Equipment (EVSE) Testers provide complete test capabilities for EVSE systems conforming to J1772_201602. Fully compliant with Handbook 44 provisions, they test the accuracy of energy delivered using a transactional model. Full communication signal analysis and safety checking of the EVSE connection is provided. TESCO currently offers the following testers:

- T100: Tests AC Level 1 and Level 2 test systems up to 32 amps maximum current
- T200: Tests AC Level 1 and Level 2 systems up to 64 amps maximum current
- T400: Tests AC Level 1 and AC Level 2 systems up to 64 amps maximum

EVSE TESTER

Catalog No. T200

FUNCTIONALITY

Tests energy delivery accuracy using a transactional model compatible with Handbook 44. For complete freedom and test automation use a PL100, PL200 or PL400 Load Emulator. Any J1772 compatible EV can also be used as the test load by using an optional cable. The Proximity and Pilot Control signal exchanges are fully verified for compliance with J1772. The EVSE's GFCI can also be tested.



SPECIFICATIONS and FEATURES

EVSE TESTER PRODUCT SPECIFICATIONS

AC CAPABILITY:

- Voltage: 90 to 264 VAC
- Current: 0 to 75 Amps

DC CAPABILITY:

- Voltage: 90-500 VAC
- Current: 0-75 Amps

ACCURACY:

- Voltage: 0.04% of reading
- Current: 0.04% of reading \pm 0.005 Amp
- Active Energy: 0.08% of reading \pm 0.002 Wh
- Apparent Energy: 0.08% of reading \pm 0.002 Vah
- PC Signal: Freq \pm 1Hz, Duty Cycle \pm 0.5%, Wave form amplitude \pm 0.3%

EVSE TESTER STANDARD FEATURES:

- **Ethernet:** 100 BaseT with support for Web Services, Remote Control, Database Access.
- **USB:** 2x USB A with support for Device, External Memory Storage, WiFi, Keyboard, Mouse.
- **GPS:** Integrated GPS system provides location information for automatic determination of test site and database access.
- **GFCI:** Provision is provided to test the GFCI functionality of the EVSE.
- **RS 232:** Legacy port for specialized test configurations.

- **Prog Load Interface:** Provides communications and power to any of our EV Load Emulators.
- 4800 mAh Lilon battery pack provides power at system startup and during fault testing. The device automatically recharges during testing operations. Unit can also be plugged directly into a standard AC outlet for recharging. Under normal use, system can operate for a full shift, starting at full charge.

Contact TESCO today for more information on EVSE Testers and Load Emulators.

Call 215-785-2338.

EVSE LOAD EMULATOR



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PL200 LOAD EMULATOR

The PL family of load emulators provide fully programmable loading devices for use with the EVSE Test devices described on the opposite page. The PL100 and PL200 are for AC chargers, and the PL400 is for the DC fast chargers.

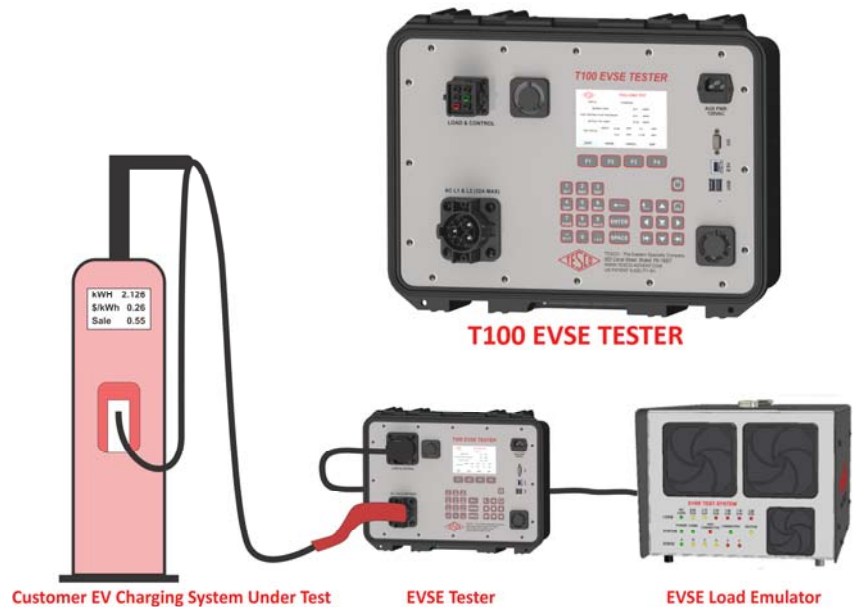
SPECIFICATIONS	PL100	PL200	PL400
Maximum Current	32A	64A	15.8kW AC/DC
Circuit Protection	32A	80A	80A
	Double Breaker	Double Breaker	Double Breaker
Voltage Range	90 to 264 VAC	90 to 264 VAC	208-240 VAC
			50-500 VDC
Load Range	0 or 0.25 to 32A	0 or 0.25 to 75A	0 or 0.4A to
			19.2 kW
Load Setting Error	<2%	<2%	<2%

CHOOSING A LOAD: The PL100, PL200, and PL400 are electronically generated loads with nearly unity power factor and no high frequency harmonics. Any load can be programmed from 0.25A to 32A on PL100/PL200, and PL400 with better than $\pm 0.1A$ resolution. The PL200 can accept an external load of up to 43A in addition to the internal 32A load.

The load controller will not allow the current drawn to exceed the maximum load rating for the device, even if the connected load is capable of drawing more current.

Setting up the T100/T200 and PL100/PL200 for testing an EVSE is simple:

- Computer controlled software package included
- Connect the cable from the T100 or T200 EVSE Tester to either the PL100 or PL200 Load Emulator
- Power on the T100 or T200
- Select a site to be tested: choose from the onboard database, use the GPS function to speed selection, or enter the site information directly
- Select a test protocol to be used
- Run the test. The system will perform all of the tests in the test protocol sequence, prompting the user for any actions they must perform
- View results as they are generated
- Results can be saved to system database



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