



PRODUCT SPECIFICATION

Product Line: **EVSE**
 Product No.: **3840** Version No.: **001**

Description: **J1772 Electrician EVSE Tester**

Brief: The Model 3840 Electrician EVSE Tester is a hand-held test unit that emulates an electric vehicle and is used to test the operation and safety features of an installed Electric Vehicle Supply Equipment (EVSE). The tester complies with all of the standards specified by the Society of Automotive Engineers (SAE), J1772 publications. This unit will test any manufacturer / model EVSE that complies with the SAE J1772 standards.

The Model 3840 will measure signal levels, pulse widths and voltage levels generated by the EVSE and will indicate to the operator (Electrician) the results of the measurement using high intensity LEDs. The Model 3840 also allows the operator to test important safety features such as the ground fault protection circuit, equipment grounding and re-closure functionality.



General:

Weight: 1.5 lbs. (0.69 kg)
 Size: 3.34 in (w) x 9.10 in (h) x 5.94 in (d)

Safety Features:

Internal Fuse: Not User Replaceable

Electrical Power:

Voltage (Max): Up to 250 VAC
 Current (Max): Up to 70 A
 Connector: J1772 Compatible
 Ground Fault Test: 20ma, Line 1 to ground

Indicator LEDs

Voltage Status: 0 to 250V, 0.1% accuracy
 Current Indicator: 220V Range: 10A to 70A
 110V Range: 6A to 18A
 Pilot Signal: Frequency: 1kHz, 0.1% accuracy
 Voltage: +15 to -15 VDC, 0.1% accuracy
 Pilot Pulse Width 10 to 90% duty cycle, 0.1% accuracy
 Proximity Signal Voltage: 0 to +5VDC, 0.1% accuracy
 Power

Environmental:

Operating Temperature: 0° to 122° F (-17° C to 50° C) ambient
 Operating Humidity: Up to 95% non-condensing
 NEMA Rating: NEMA 3R
 Material: Bright Yellow, High Impact ABS, Plastic
 Drop Test: 3 foot drop to hard surface

Compliance (In Progress):

Safety: IEC/UL/CSA C22.2 61010-1, NEC Article 625, SAE J1772
 EMC: FCC Part 15 Class A, Canadian ICES-003

Label Description: **J1772 Electrician EVSE Tester**

Project:

Product Code: **3840-001**

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Marketing DS
 Date: 6/16/13

Engineering GC
 Date: 6/16/13

Rev: --

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Sheet: 1 of 5

Control Panel Items:

- Charge on/off toggle switch necessary to activate the EVSE under test
- Ground Fault Circuit Interrupter (GFCI) test switch tests the EVSE's circuit breaker
- LED indicator to denote when the input voltage is between 95 and 125V AC
- LED indicator to denote when the input voltage is between 185 - 250V AC
- LED indicator to denote the presence and accuracy of the incoming pilot signal
- LED indicator to denote the presence and accuracy of the incoming proximity signal
- LED indicator to denote the power is on
- The range of currents that may be supplied to the electric vehicle from the EVSE under test, when powered from a 220VAC source
- The range of currents that may be supplied to the electric vehicle from the EVSE under test when powered from a 110V AC source
- Seven LED indicators to denote the maximum current that the EVSE under test is capable of supplying to the electric vehicle. The value of this current is determined by the pulse width of the pilot signal received from the EVSE under test
- Ground Fault Circuit Interrupter (GFCI) momentary switch, which applies a 20MA leakage path from line 1 to ground. This will test the ground fault safety feature of the EVSE under test

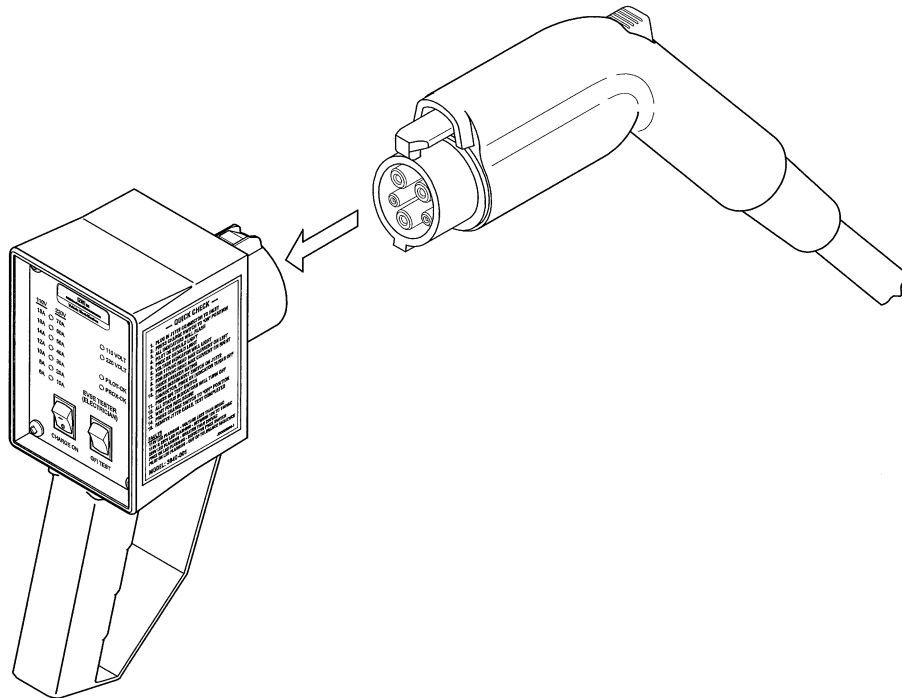
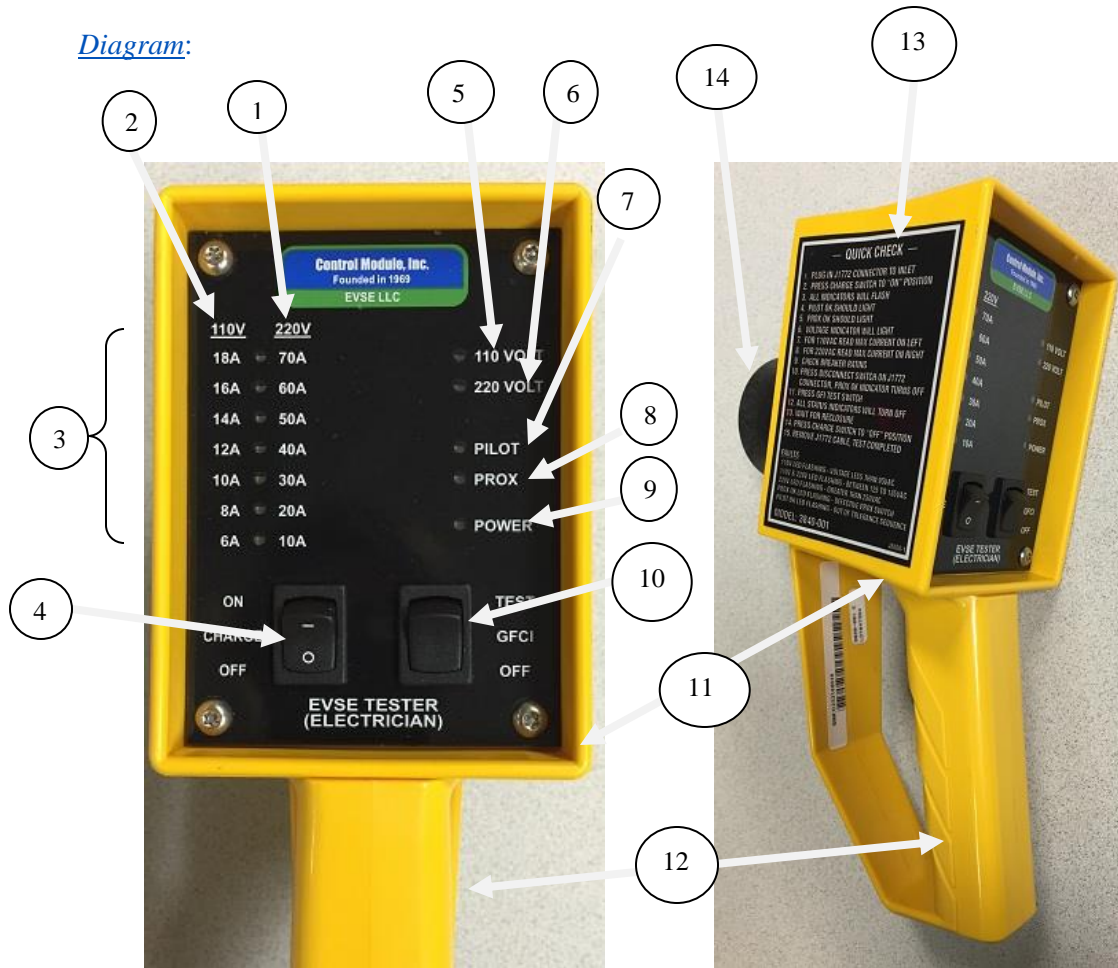
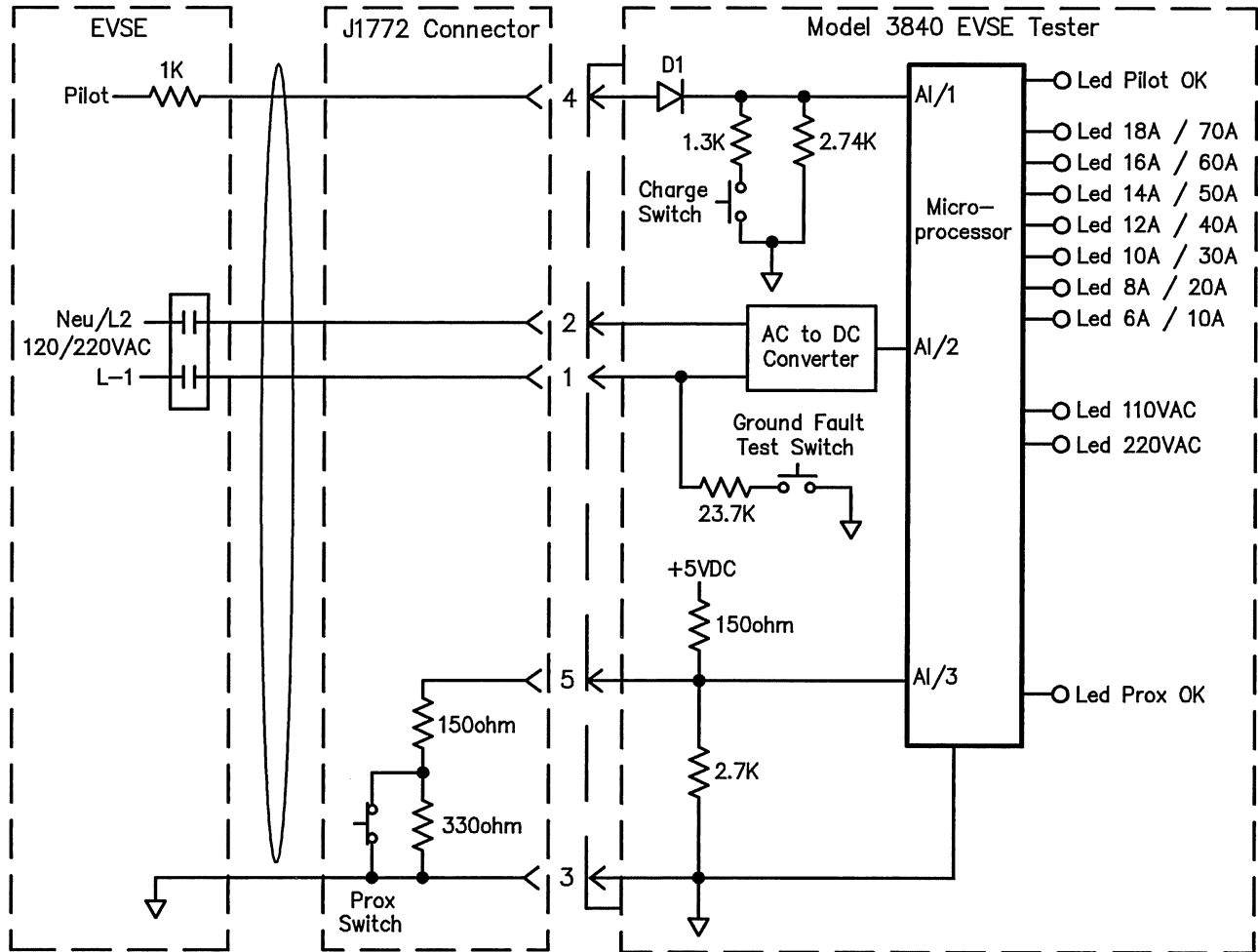


Diagram:



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|-----------------------------|--------------------------------------|----------------------------------|
| 1. 220V current range | 5. 110V AC indicator | 9. Power indicator |
| 2. 110V current range | 6. 220V AC indicator | 10. Ground fault test switch |
| 3. Current range indicators | 7. Pilot status indicator | 11. High impact case |
| 4. Charge on/off switch | 8. Proximity switch status indicator | 12. High impact handle |
| | | 13. Quick operating instructions |
| | | 14. J1772 inlet |

Block Diagram:



Fault Conditions:

Action	Response	Problem
Press Charge Switch "On"	No status LED	<ul style="list-style-type: none"> • Check EVSE breaker • Check EVSE power • Check EVSE ground • Check Pin 4 to ground Pin 3. Should be between +11 to +13VDC
	110V status LED flashes	<ul style="list-style-type: none"> • Line voltage less than 95VAC
	220V and 110V LED flash	<ul style="list-style-type: none"> • Line voltage between 125 to 185VAC
	220V status LED flashes	<ul style="list-style-type: none"> • Line voltage above 250VAC
	Pilot status LED OFF	<ul style="list-style-type: none"> • Pilot frequency outside specification
	Pilot status LED flashes (Note 1)	<ul style="list-style-type: none"> • Pilot voltage outside specification • Check Pin 4 to ground Pin 3. Should be between +11 to +13VDC
Press proximity locking latch on J1772 Connector	Proximity status LED flashes	<ul style="list-style-type: none"> • Locking latch not fully engaged • Measure resistance between Pin 5 and ground Pin 3. Should be 150 ohms and change to 480 ohms when lock latch is pressed

Quick Check



Connector Pin Outs

