

TI2007-007

Smart NATO Receptacle Control Box Cable Assembly



Power Anytime, Anywhere

The Tesla™ Smart NATO Receptacle Control Box Cable Assembly is constructed from a rugged combination of advanced composite materials and corrosion-resistant alloys, and features Tesla's Cobra™ NATO receptacle. The result is a weatherproof NATO control box that will withstand the harshest battlefield conditions and other extreme environments. Incorporating state-of-the-art electronic control and monitoring circuitry, the Smart NATO Receptacle Control Box Cable Assembly can provide safe and efficient power transfer of up to 3000 peak amps – no more damage or injury to equipment, plugs and personnel.

Features:

- State-of-the-art electronic control
- Reliable switching up to 3000 peak amps
- Reverse polarity and overvoltage protection
- Clamped cable connections
- UV, fuel, fungus, and oil resistant
- Easy component replacement
- Manufactured by Tesla™
- Exceeds MIL-STD-810F



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The POWER
Of RED™



Features and Benefits

State-of-the-Art Control

The Tesla™ Smart NATO Receptacle Control Box Cable Assembly is equipped with intelligent circuitry to monitor voltage levels and prevent potentially dangerous conditions, such as reverse polarity and overvoltages. A status LED located on each end of the cable indicates under and overvoltages, reverse polarity, and good voltage conditions. Only under a “Power Good” voltage condition can power be transferred, as shown in *Figure 1*.



Figure 1: Status LED showing “ON” power good

Highly Conductive Contacts

The Tesla™ NATO DC Receptacle, shown in *Figure 2*, is manufactured from highly conductive alloys. The center receptacle is specially tapered and has memory to maximize contact surface area and to minimize deformity over time.



Figure 2: Tesla™ NATO DC Receptacle

Weatherproof Construction

Through a series of strategically placed seals and bushings, the Smart NATO Receptacle Control Box Cable Assembly is hermetically sealed to lock out rain, snow, sand or any other form of damaging debris.

Remote Controlled Access

The Tesla™ Smart NATO Receptacle Control Box Cable Assembly is equipped with a Remote Access Pad, shown in *Figure 3*. This allows the user to control the cable assembly from a different location other than on the control box. It can be secured to a vehicle, testing station, etc. using the mounting bracket, and connects to the side of the control box via the standard circular connector.



Figure 3: Remote Control

Mounting Base

The TI2007-007 comes with a mounting base that allows for easy mounting of the unit to any vehicle or other hard surface, as shown in *Figure 4*. Four (4) mounting holes have been placed to properly secure the unit.



Figure 4: Mounting Base

Components - Exploded View

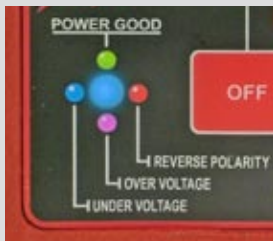
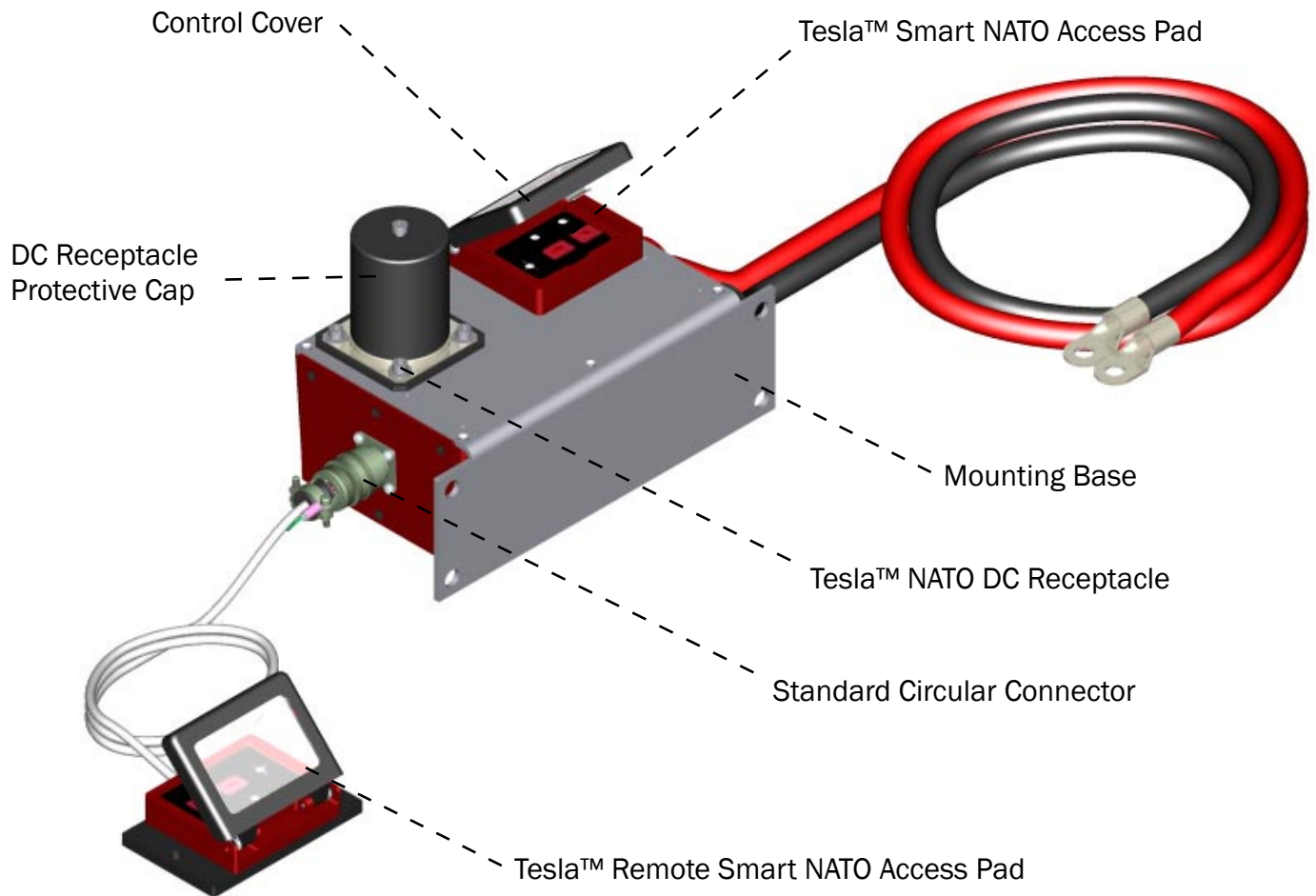


Figure 5: Under Voltage

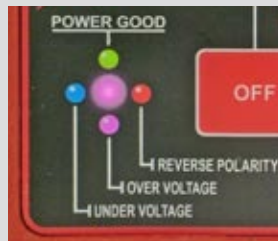


Figure 6: Over Voltage

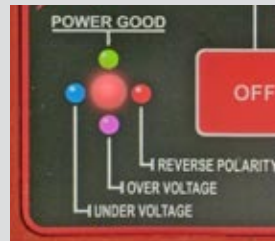


Figure 7: Reverse Polarity

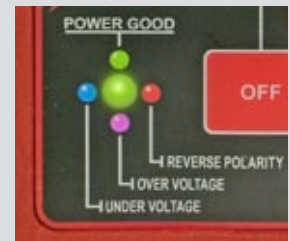


Figure 8: Power Good

Figure 5: When the status indicator is flashing blue, the input voltage is below 23.7 V. This will not disengage the contactor if it is already engaged.

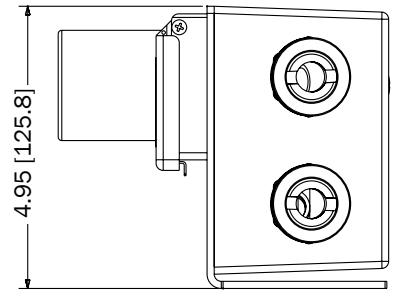
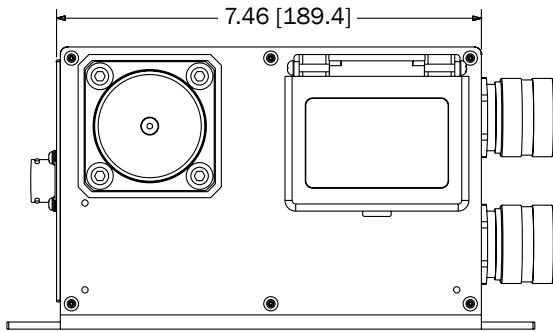
Figure 6: When the status indicator is flashing violet, the input voltage has exceeded 31.5 V. This will disengage the contactor after 1 second.

Figure 7: A flashing red status indicator means a reverse polarity condition. This will disengage the contactor instantaneously.

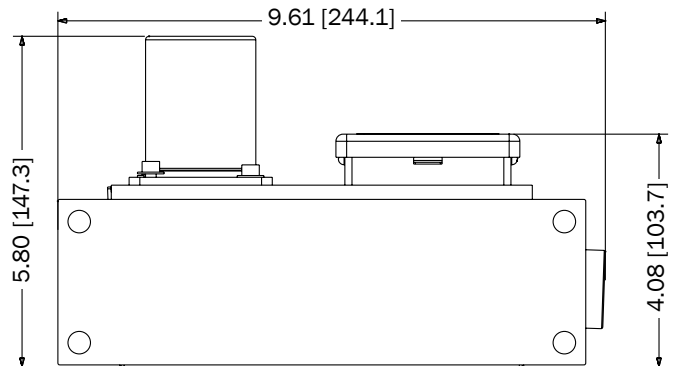
Figure 8: A green status indicator means the power is good. Power can now be transferred.

NOTE: LEDs may remain illuminated for up to two hours after being disconnected from power.

Dimensions and Technical Specifications



* All dimensions are in inches [millimeters]



Technical Specifications:

Input Voltage Range	12 - 32 Vdc
Peak Current	3000 A
Rated Current	1500 A
Power Consumption (Disengaged)	170 mA
Power Consumption (Engaged)	500 mA
Inrush Current (@ 28 Vdc)	3.8 A @ 130 mS
Air Gap-leakage Path	0.355" (9 mm)
Protection Class	IP28C
Optional Overcurrent Protection Range Overcurrent Protection Delay	1 - 2000 A 10 mS - 1.0 second
Status Indicator LED	Red = reverse polarity Blue = undervoltage (< 23.7 V) Violet = overvoltage (> 31.5 V) Green = power okay (24.0 V - 31.6 V)
Operating Temperature	-25° to 60° C (-32° to 140° F)
Storage Temperature	-40° to 85° C (-40° to 185° F)
Weight (25 ft cable)	16.5 lbs. (7.48 kg)
Warranty	2 years (3 years optional)