

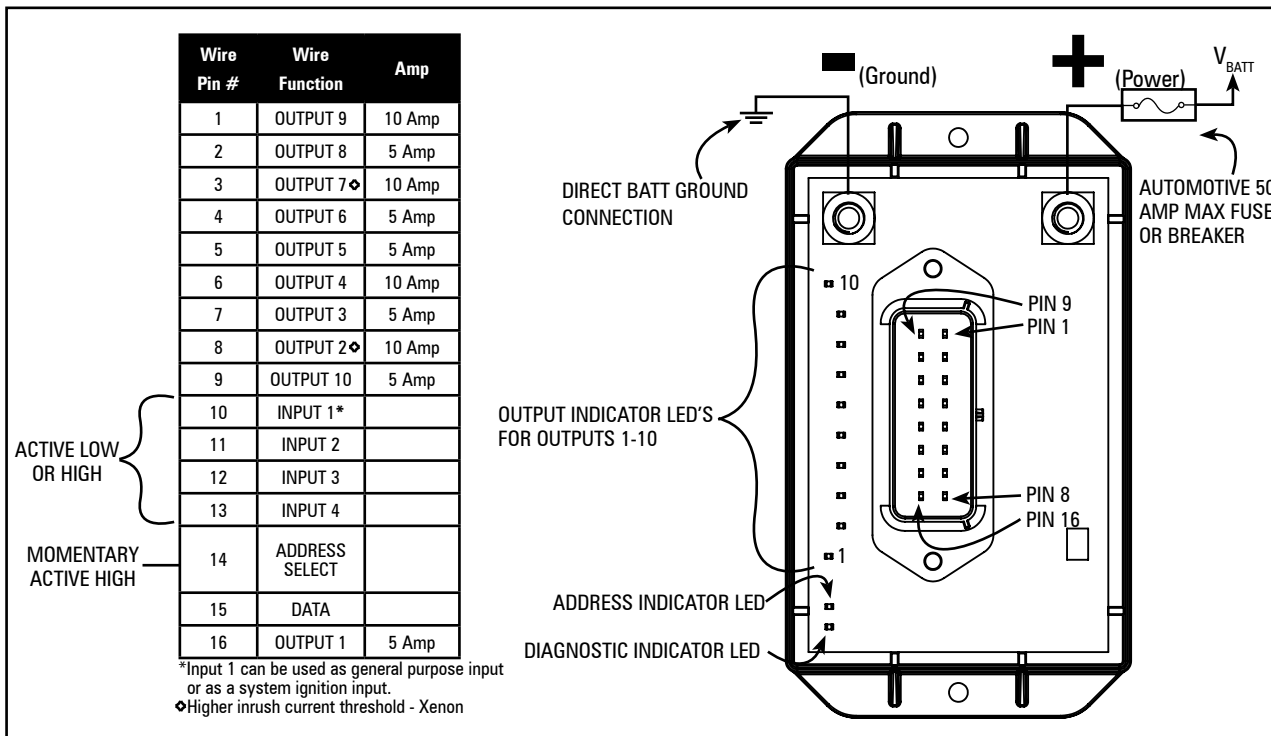
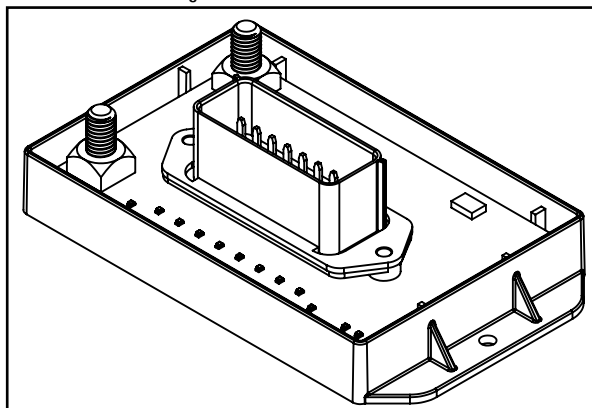
## REMOTE NODE PART NUMBER: ENGND04101

The Remote Node provides 10 outputs for connection to vehicle devices (50 Amps max).

- (4) 10-amp solid state switchable outputs
- (6) 5-amp solid state switchable outputs.

The Remote Node also provides 4 inputs to control systems.

- Active High/Low selectable.



### ⚠ WARNING

- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow crimp connector manufacturer instructions.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner's Manual for deployment zones.
- Do NOT use system to disconnect headlights, brake lights or other safety equipment.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system.
- Use proper wire gauge. All power wires connecting to positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of max. current and properly fused at power source.
- Install protective grommets when routing wire through firewall or metal.

*Please see next page for  
Technical Specifications*

**See attached Install Template to aid in connections and programming**

### NOTICE:

Installers and users must comply with all applicable federal, state and local laws regarding use and installation of warning devices.

*Improper use or installation may void warranty coverage. To review our Limited Warranty Statement & Return Policy for this or any SoundOff Signal product, visit our website at [www.soundoffsignal.com/sales-support](http://www.soundoffsignal.com/sales-support). If you have questions regarding this product, contact **Technical Services**, Monday - Friday, 8 a.m. to 5 p.m. at 1.800.338.7337 (press #4 to skip the automated message). Questions or comments that do not require immediate attention may be emailed to [techservices@soundoffsignal.com](mailto:techservices@soundoffsignal.com).*

## ⚠ WARNING

- Install fuse or breaker (50Amps max.) on main power supply.
- Do NOT connect product to strobe power supply. Product is self-contained; no external power supply needed.
- Follow attached Wiring and Interconnect requirements.
- Torque the provided M8 nuts with lock washer to a maximum of 7ft-lbs.  
-Verify that the lockwasher is fully seated when assembled-

## SETTING NODE ADDRESS

To set the node addresses:

1. Momentarily connect power to PIN 14.
2. Address indicator LED will wink the address (1-5).

## NOTE:

- Default address is 1.
- After address 1 is set it will cycle through the addresses until it gets back to 1.

## DIAGNOSTIC LED

- The diagnostic LED is steady on when the device is powered up and running with no errors.
- The diagnostic LED is off when the device is off or in sleep mode.
- The diagnostic LED winks when there is a system fault of the device is in firmware upgrade mode.
  - Fault condition is read by counting the number of times the LED "winks" on. Each fault condition will generate a pattern where each "wink" is 250ms off/250ms on. The pattern is terminated by the LED being off for 2.5 seconds.
  - The LED will wink multiple patterns when more than one fault condition is active.

## FAULT CONDITION PATTERNS:

- 1 Wink - RPSU output(s) are faulted
- 2 Winks - Communication fault
- 3 Winks - Source voltage level is <9 VDC
- 4 Winks - Source voltage level is > 16 VDC
- 5 Winks - Over temperature condition

By default even outputs flash alternating with odd outputs.

Tech Specs	nERGY Control System Remote Node
<b>Input Voltage:</b>	10-16Vdc (Negative Ground)
<b>Maximum Input Current:</b>	50 Amps (30Amps at 85°C)
<b>Outputs (Sum of ALL used Outputs Shall Not Exceed 50Amps)</b>	4x 10Amp Solid State, Switched 6x 5Amp Solid State, Switched
<b>IGN ON: Standby Current:</b>	60mA
<b>IGN OFF: Sleep Current:</b>	0.34mA
<b>Inputs:</b>	4x Total 3x Active High/Low Inputs *1x Active high/Low Input w/ System Wake up
<b>Reverse Polarity Protection:</b>	Not Protected (Reverse Polarity will Destroy the Devices)
<b>Transient Protection:</b>	Protected
<b>High Voltage Protection:</b>	> 16V; High Voltage Error Code Set
<b>Low Voltage Protection:</b>	< 9V; Low Voltage Error Code Set
<b>Operating Temp:</b>	-40°C to + 65°C (85°C max current = 30Amps)
<b>Dimensions:</b>	6.0" x 3.4" x .8"
<b>Weight, Boxed:</b>	13.2 oz.
<b>Weight, Device Only:</b>	10.7 oz.
<b>Valid Input Threshold High:</b>	> 8.0V
<b>Valid Input Threshold Low:</b>	< 1.5V
Hermetically sealed providing protection in wet areas.	

\*Input 1 can be used to sense ignition status for overall system operation

Multi-color lights should be driven by outputs within the same output group (Group 1: 1-5, Group 2: 6-10) to align timing.

By default even outputs flash alternating with odd outputs.

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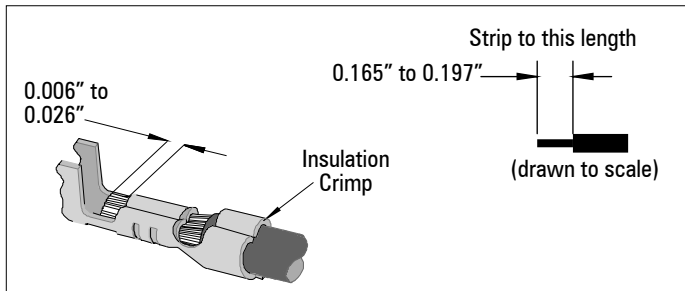
SUPERIOR CUSTOMER RELATIONSHIPS. SMARTLY DESIGNED LIGHTING & ELECTRONIC SOLUTIONS.




## Wiring and Interconnect Requirements for ENGND04101 Remote Node

# ⚠ WARNING

- High current interconnects require careful termination with the proper equipment. **WARNING! Poor crimp quality can cause significant heat build-up and fire.** Follow connector manufacturer instructions to terminate properly.
- Remote Node can switch up to a **total maximum of 50Amps**. User must configure outputs to not exceed this total current. Individual output switches are rated up to 10Amps each for higher current loads, **but the total device current must not exceed 50Amps**. The software warns when these limits are exceeded and user must ensure that individual output limits and total device current limits are not exceeded in normal use.
- **Do not gang or parallel multiple outputs to drive a high current load.** Multiple 5Amp and 10Amp outputs must not be combined to achieve a higher current limit.

TERMINATION OPTION 1	
Purchase accessory mating harness from SoundOff Signal	
SoundOff P/N: ENGHNK02 (16pin Mating Harness)	
	
⚠	• Typically a water tight butt-splice with glue is used to protect this termination and is required for exterior use.
Pros:	<ul style="list-style-type: none"> <li>• No need to terminate at the connector pins</li> <li>• No need to purchase Molex crimper</li> </ul>
Cons:	<ul style="list-style-type: none"> <li>• Requires butt-splice or alternate connector</li> <li>• Requires heat shrink tubing with glue for exterior</li> </ul>



TERMINATION OPTION 2		
Purchase individual connector components to terminate the wires at the connector.		
Molex P/N: 19418-0030	Molex P/N: 19420-0001	Molex P/N: 19417-0119
		
MX150L™ 16 Circuit Sealed Receptacle for 14-16 AWG Wire	MX150L™ Female Terminal for 14-16 AWG Wire, Tin Plated	MX150L™ Socket Plug/Key (One plug required for each unused pin location to seal)
<ul style="list-style-type: none"> <li>• MX150L Assembly Instructions: <a href="http://www.molex.com/pdm_docs/as/AS-19417-001.pdf">http://www.molex.com/pdm_docs/as/AS-19417-001.pdf</a></li> <li>• Application Tooling Specification Sheet: <a href="http://www.molex.com/pdm_docs/ats/ATS-6381144HM.pdf">http://www.molex.com/pdm_docs/ats/ATS-6381144HM.pdf</a></li> <li>• Quality Crimping Handbook: <a href="http://www.molex.com/pdm_docs/ats/TM-638000029.pdf">http://www.molex.com/pdm_docs/ats/TM-638000029.pdf</a></li> <li>• Actual terminal and housings may be different depending on application, wire type, etc.</li> </ul>		
<ul style="list-style-type: none"> <li>• Hand Crimp Tool: <b>Molex P/N:</b> 63811-4400</li> <li>• Manual Extraction Tool: <b>Molex P/N:</b> 63813-1500</li> </ul>		
⚠	<ul style="list-style-type: none"> <li>• <b>WARNING! Wire diameter with insulation must be 0.113in to 0.139in (2.87mm-3.53mm) to properly seal (such as SXL 16AWG)</b></li> </ul>	
Pros:	<ul style="list-style-type: none"> <li>• Consistent wire colors, clean install without butt-splices</li> </ul>	
Cons:	<ul style="list-style-type: none"> <li>• Need to purchase crimper and train personnel</li> </ul>	



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# nERGY® bluePRINT®

REMOTE NODE  
INSTALL TEMPLATE

Department: \_\_\_\_\_  
 Vehicle: \_\_\_\_\_  
 Installer / Date: \_\_\_\_\_  
 Mounting Location: \_\_\_\_\_

