

## ADDENDUM FOR 20, 27, & 28 OPTIONS

### GENERAL

The 20, 27, and 28 option provides for an alarm contact **OR** an AC transfer switch on EXELTECH XP Series inverters. The alarm relay monitors the inverter's AC output and will energize the alarm contact when the inverter fails to produce AC.

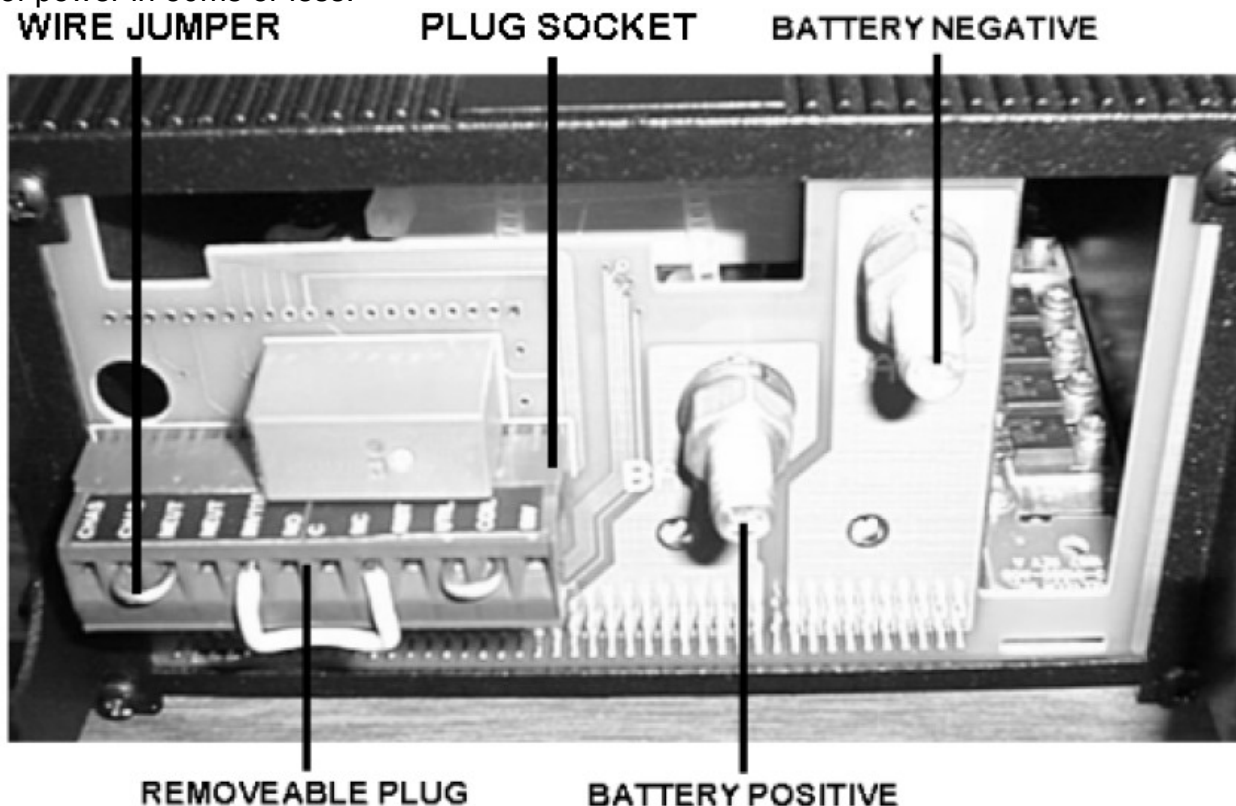
The AC transfer switch can be configured in two ways (via jumpers)

1. Inverter as the primary source of AC power.
2. Utility as primary source of AC power.

**CAUTION: " ANY OPTION THAT USES TRANSFER SWITCH IS NOT AUTHORIZED FOR USE IN LAND MOBILE APPLICATIONS ".**

**NOTE:** All secondary AC power sources other than the inverter will be referred to as utility. A secondary source of AC power includes utility, "shore power", generator, etc.

When the primary source of AC power fails, the transfer switch "switches" to its secondary source of AC power in 50ms or less. When the primary source of power is present again (turns back on), the transfer switch "switches" back to the primary source of power in 50ms or less.



**BAT+ & BAT-**

5/16 in. stud mount for battery input, be careful to observe proper polarity.

**CHAS**

Chassis or earth ground (green wire) should be connected here.

**NEUT**

Neutral or return line (white wire) of the AC output.

**INVOUT**

Hot or AC output of the inverter (black wire).

**NO**

Normally open contact of the relay. When the "COIL" terminal is energized, this contact is connected to "C" (common terminal). When the "COIL" terminal is not energized, this contact is not connected to "C" (common terminal).

**C**

The common terminal of the relay.

**NC**

Normally closed contact of the relay. When the "COIL" terminal is energized, this contact is not connected to "C" (common terminal). When the "COIL" terminal is not energized, this contact is connected to "C" (common terminal).

**RMT**

Remote terminal. Applying battery negative to this terminal will turn the inverter ON. Use a switch connected to battery negative and the remote terminal to turn on the unit remotely. This terminal has no significant current demand.

**UTIL**

When utility AC power is connected to the "NO" terminal, this terminal can be used with a jumper to energize the "COIL" when utility is on.

**COIL**

The coil contact of the relay. This must be connected to the INV terminal to function as an alarm and can have either UTIL or INV jumpered to it to function in a transfer switch.

**INV**

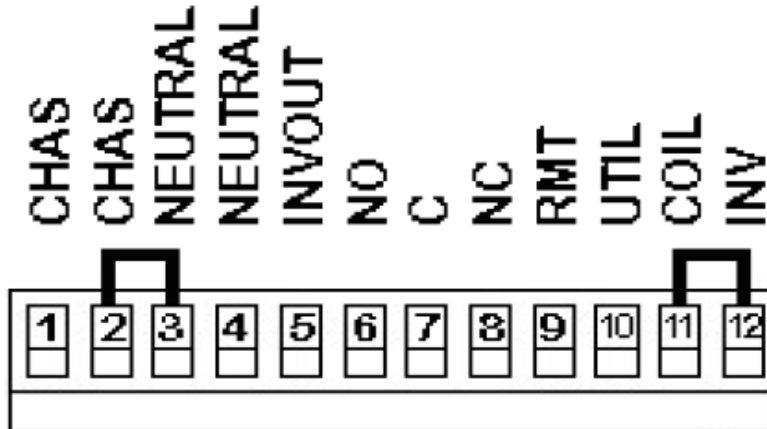
A low current output of the inverter voltage to drive the relay.

## INSTALLATION

**CAUTION:** Be sure to disconnect all DC power to the installation wiring. Be sure to disconnect both the batteries and the chargers which may be connected. Make all connections to the inverter BEFORE connecting DC power to the battery.

### ALARM CONTACT CONFIGURATION

-27 OPTION



The alarm contact is configured via jumpers on a removable terminal plug on the back of the inverter

1. Remove the terminal plug from the inverter by hand or with needle-nose pliers. On the underside of the plug are screw terminals to set connections. (The terminal plug can take up to 12GA wire.)
2. Insert a jumper between COIL and INV. (see drawing) When the inverter is on, the alarm relay will energize.

If it is desired to sense the AC voltage elsewhere in the system such as after a circuit breaker, remove the jumper between COIL and INV and connect the AC hot from the point you want to sense to the COIL contact.

3. Connect alarm signal input wire (supplied by operator) to "C" (common) contact. Connect alarm signal output wire to either NO (normally open) or NC (normally close) contacts.

**OPERATION:** When Battery voltage is available to the inverter, the inverter will turn

“on” when the front panel switch is turned “on” **OR** when the RMT (remote) terminal is connected to battery negative. When the inverter comes “on” the alarm relay will energize and there will be continuity between the NC (normally open) and “C” (common) contacts of the relay terminals.

Inverter AC output will be available from the NEMA 15 terminals in the front (plug) and at the output terminals in the rear of the inverter (terminals marked INVOUT for AC hot, NEUTRAL for AC return, and CHASSIS for ground). To shut “off” the inverter the front switch must be turned “off” **AND** the remote switch must be in the “off” position.

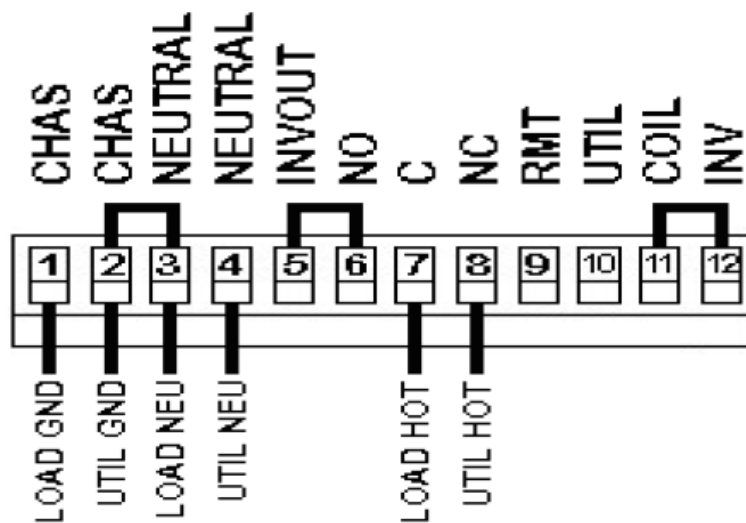
## TRANSFER SWITCH CONFIGURATION

The AC transfer switch is configured via jumpers on a removable terminal plug on the back of the inverter.

**NOTE:** When using the transfer switch option, you must utilize the AC output contacts on the back of the inverter. The transfer switch will not work if used with the NEMA 15 connectors (plug) on the front of the inverter.

## INVERTER AS PRIMARY SOURCE OF AC POWER

-28 OPTION



### CAUTION: " 28 OPTION IS NOT AUTHORIZED FOR USE IN LAND MOBILE APPLICATIONS ".

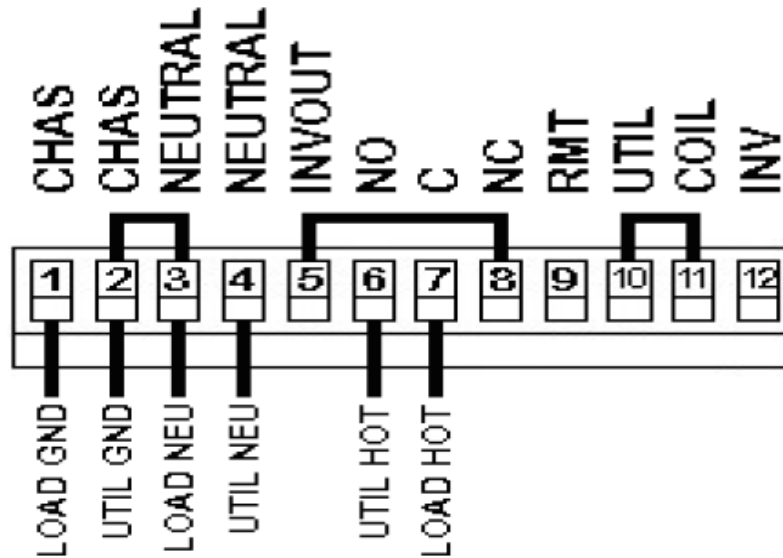
1. Remove the terminal plug from the inverter by hand or with needle-nose pliers. On the underside of the plug are screw terminals to set connections. (The terminal plug can take up to 12GA wire.)
2. Insert a jumper between INVOUT and NO, then insert a jumper between COIL and INV. (see drawing)
3. Connect your load to the LOAD (AC hot) contact, NEUTRAL (AC return), and CHASSIS (AC ground) contacts.
4. Connect utility power to the NC (Utility hot), NEUTRAL (Utility return), and CHASSIS (Utility ground) contacts.

**OPERATIONS:** When Battery voltage is available to the inverter and the front panel switch is turned “on” **OR** when the remote terminal is connected to battery negative, the inverter will turn “on”.

When the inverter AC power fails, the transfer switch “switches” to utility AC power in 50ms or less. When the inverter AC power is present again (turns back on), the transfer switch “switches” back to the inverter AC power in 50ms or less.

## UTILITY AS PRIMARY SOURCE OF AC POWER

-20 OPTION



### CAUTION: " 20 OPTION IS NOT AUTHORIZED FOR USE IN LAND MOBILE APPLICATIONS ".

1. Remove the terminal plug from the inverter by hand or with needle-nose pliers. On the underside of the plug are screw terminals to set connections. (The terminal plug can take up to 12GA wire.)
2. Insert a jumper between INVOUT and NC, then insert a jumper between COIL and UTIL. (see drawing)
3. Connect your load to the LOAD (AC hot) contact, NEUTRAL (AC return), and CHASSIS (AC ground) contacts.
4. Connect utility to the NO (Utility hot), NEUTRAL (Utility return), and CHASSIS (Utility ground) contacts.

**OPERATIONS:** When Battery voltage is available to the inverter and the front panel switch is turned “on” **OR** when the remote lead is connected to battery negative, the inverter will turn “on”.

When the utility AC power fails, the transfer switch “switches” to inverter AC power in 50ms or less. When the utility AC power is present again (turns back on), the transfer switch “switches” back to the utility AC power in 50ms or less.