

# OPTIONAL AC HARDWIRE INSTALLATION OF S4K2U UPS

## ELECTRICAL INSTALLATION CONSIDERATIONS



**This UPS must be installed by competent electrical personnel and wired in accordance with local/national electrical codes.**

The following information is provided for your guidance. Read over the entire installation sheet before starting this installation.

On start-up, the UPS will take a half cycle inrush current of up to 3 times the rated current. This must be taken into account when selecting the overload protection device at the Input Utility supply distribution point. To avoid random tripping on start-up, we recommend that Input Utility supply be protected with a MCB (Mechanical Circuit Breaker) capable of withstanding this initial inrush.

The utility input supply cable must be connected to the UPS via a wall mounted double pole circuit breaker. The UPS output port must also be protected with a double pole circuit breaker connected to the load, rated to carry the input current, and be capable of breaking the maximum prospective short circuit current of this branch circuit. The breakers are to be mounted within six feet of the UPS and be readily accessible to the operator. Please refer to TABLE 1 for breaker specification.

**Table 1**

Model VA – Volt Rating	Input Current Rating *	Recommended External Overcurrent Protection	Recommended Wire (Including Ground Wire) (75°C copper wire)	Maximum Wire Accepted By Terminal Block	Terminal Tightening Torque
700VA – 120V	5.8A	15A	14 AWG	14 AWG	8 in-lb
1000VA – 120V	8.3A	15A	14 AWG	14 AWG	8 in-lb
1500VA – 120V	12A	15A	14 AWG	14 AWG	8 in-lb
2000VA – 120V	16.0A	20A	12 AWG	10 AWG	20 in-lb
3000VA – 120V	24.0A	30A	10 AWG	10 AWG	20 in-lb
1000VA – 230V	4.3A	10A	14 AWG	14 AWG	8 in-lb
2000VA – 230V	8.7A	10A	14 AWG	10 AWG	8 in-lb
3000VA – 230V	13A	16A	12 AWG	10 AWG	20 in-lb

\* See Rating Plate for Alternate Output Voltages

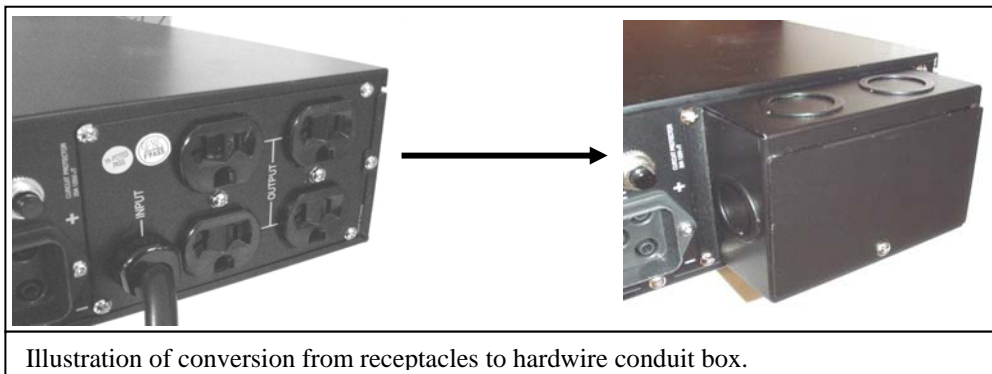


Illustration of conversion from receptacles to hardwire conduit box.

## ELECTRICAL CONNECTIONS

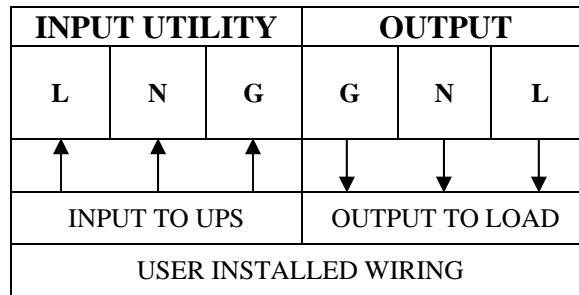
The UPS is supplied with an input/output terminal block assembly on the rear of the UPS and a cable box (see Figure 1). The cable box (gland plate) can be removed to enable knockouts to be removed, or new holes drilled, to secure the cables.

Make sure UPS is off and unplugged before removing original cord/receptacle plate. To install the cable box, the original cord/receptacle plate must be removed and disconnected from the terminal block. Install the cable box using the four screws removed from the cord/receptacle plate.

Install cable box such that the input and output cables do not interfere with the position the UPS or external battery connector will be used in.

**Figure 1**

Terminal block configuration



Typical terminal layout order shown. If UPS differs, follow UPS label.

The cable sizes and distribution methods used during installation are subject to local/national electrical codes of practice, and therefore are not detailed here. Table 1 details the standard current ratings. The UPS rating plate gives details of the current ratings for alternative output voltages.

### Connecting the UPS Power cables

Power cables connect to screw terminals on a terminal block that is located behind the rear mounted cable box (see figure). Permanent wiring must be routed to the cable box using appropriate materials as required by local codes.

### Connection of optional remote battery cabinets

The UPS users manual describes the connection of optional external batteries. DC battery connections may not be hardwired. Safety/EMC certification requires that the supplied battery cable be used.

### Properly grounded (earthed) equipment provides multiple benefits

High quality ground (earth) connections are required for the equipment ground conductors (protective earth) and grounding electrode conductor (power system earth connection) to reduce electrical noise and provide for safe operation of the UPS and connected loads. Conduit used alone without a grounding conductor wire is not an acceptable connection. Size ground (protective earth) conductors equal to circuit conductors.

For wiring information, please refer to TABLE 1.