
SCXI-1382 Battery Pack

This guide describes how to install and use the SCXI-1382 battery pack with the SCXI-1000DC chassis. In addition to the SCXI-1382 kit contents, you will need an SCXI-1000DC chassis and a Phillips-head number 2 screwdriver. You will also need the SCXI-1383 power supply/float charger if you want to use the SCXI-1382 in a float-charging application.

Introduction

The SCXI-1382 is a battery pack containing a 12 V sealed lead-acid battery with a capacity of 25 Ah at a 20 hr rate. This battery pack can power the SCXI-1000DC chassis when other power sources are unavailable. The SCXI-1382 battery pack kit also includes a dual-stage, constant voltage, current-limited charger for charging the battery when the battery is not powering the SCXI-1000DC chassis.

What Your Kit Should Contain

There are two versions of the SCXI-1382 battery pack kit. Each version contains a different dual-stage charger—one is for 115 VAC, and the other is for 230 VAC.

The following components are included in all the kits:

Kit Component	Quantity
Dual-stage charger (115 VAC or 230 VAC)	1
Battery pack	1
Screw, 8-32 flathead	2
Screw, 6-32 flathead	1
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If your kit is missing any of the components, contact National Instruments.

When you first get the SCXI-1382 battery pack, charge it by leaving the dual-stage charger connected to the battery pack for 24 hr before use to ensure the battery pack is charged to its full capacity.

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Charging the Battery Pack with the Dual-Stage Charger

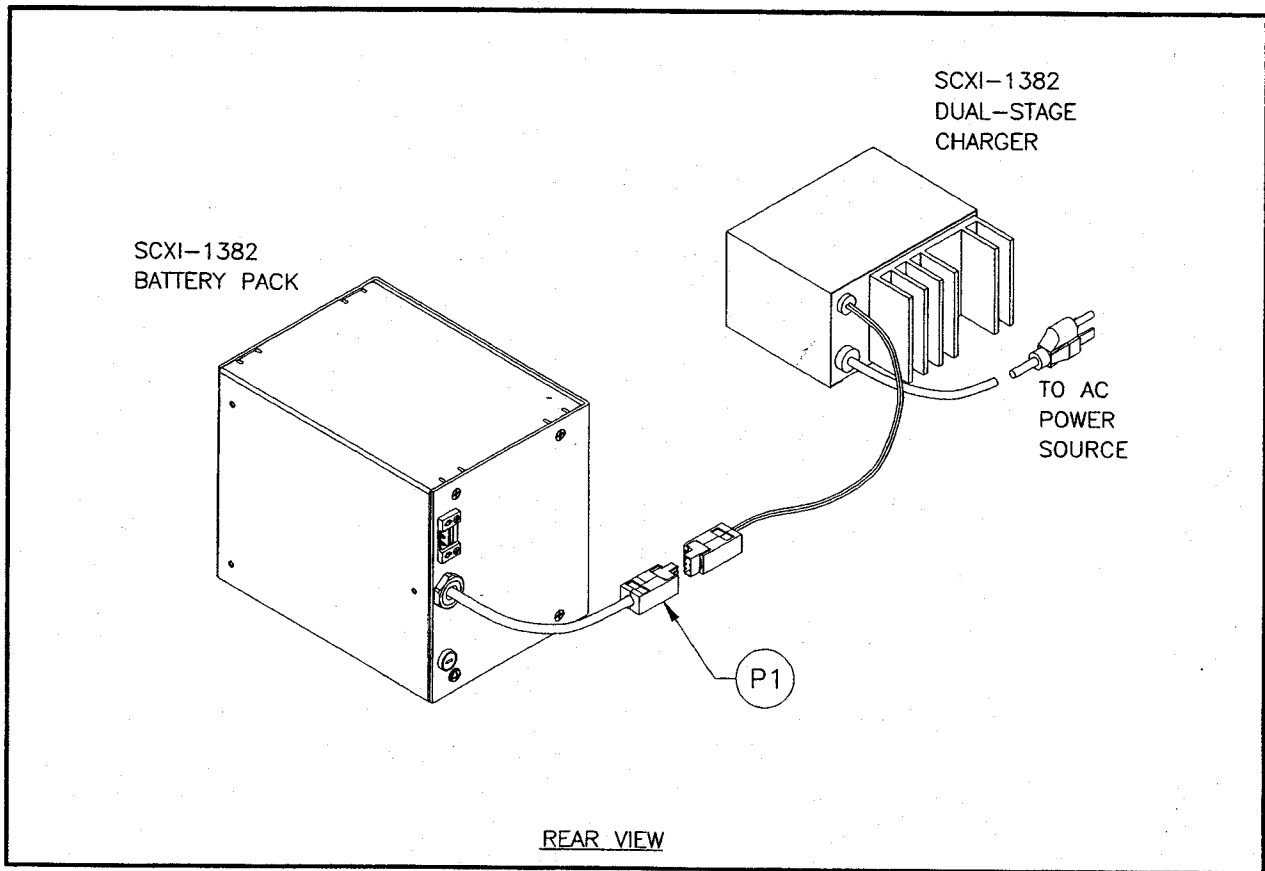


Figure 1. Charging the SCXI-1382 Battery Pack with the Dual-Stage Charger

To charge the battery pack with the dual-stage charger, refer to Figure 1 and perform the following steps:

1. Connect the green DC power connector (P1) at the end of the cord on the SCXI-1382 battery pack to the green mating power connector on the dual-stage charger.
2. The SCXI-1382 battery pack is now ready for charging. Plug the AC power plug of the dual-stage charger into an appropriate power source and switch on the AC power to the dual-stage charger.

Operation

When AC power is applied to the dual-stage charger, the POWER ON indicator light should come on. If not, check the AC input fuse and replace it with the indicated type of fuse.

When the battery is hooked up, the FAST CHARGE indicator should also come on, unless the battery is already fully charged.


The FAST CHARGE indicator remains on (indicating that the high-voltage charging stage is in effect) until the battery is approximately 94% recharged. The light will then flicker until the battery is about 98% recharged. When the FAST CHARGE light goes off, the charger is in the float (low rate) voltage mode. When the charger is in the float stage, only the POWER ON indicator lights up.

Leave the charger connected to the battery for an additional 3 hr to ensure that the battery is 100% recharged. The battery can be connected to the charger indefinitely while in this low-voltage charging stage without any danger of overcharging.

Note: *If no indicators illuminate when the charger is connected to AC power, the battery pack or the charger may need servicing.*

Charge the battery pack as soon as possible after use. If the battery is fully charged, it can power the SCXI-1000DC chassis for more than 5 hr. However, we recommend that you charge the battery after every 3 hr of use to lengthen the life of the battery pack.

The dual-stage charger will take approximately 12 to 14 hr to fully charge the battery pack.

 **Warning:** *Replace the fuse with the same size and rating for fire protection. Do NOT charge the SCXI-1382 with the rear side (with the warning labels) facing down.*

Warning: *The dual-stage charger is intended to charge the battery pack only. Use of the charger in a power supply application can damage the charger permanently. Do not use the dual-stage charger to power the SCXI-1000DC directly.*

Caution: *The battery pack contains a sealed lead-acid battery that contains toxic material (lead) and corrosive fluid (sulfuric acid). Charging can produce explosive gases. Do not charge the battery in gas-tight enclosures. Charge the battery in a well ventilated area away from sparks, flames, or smoke. Do not short the battery pack terminals, as this can cause an explosion or fire. Do not store the battery pack in a discharged state. Do not puncture, disassemble, mutilate, or incinerate the battery pack. Recycle the battery or dispose of the battery pack with automotive battery scrap. The battery charger dissipates heat. Use the charger in an area with ample air circulation.*

Installation

Connecting the SCXI-1382 to the SCXI-1000DC Chassis

Caution: *Only qualified personnel should install the SCXI-1382 battery pack.*

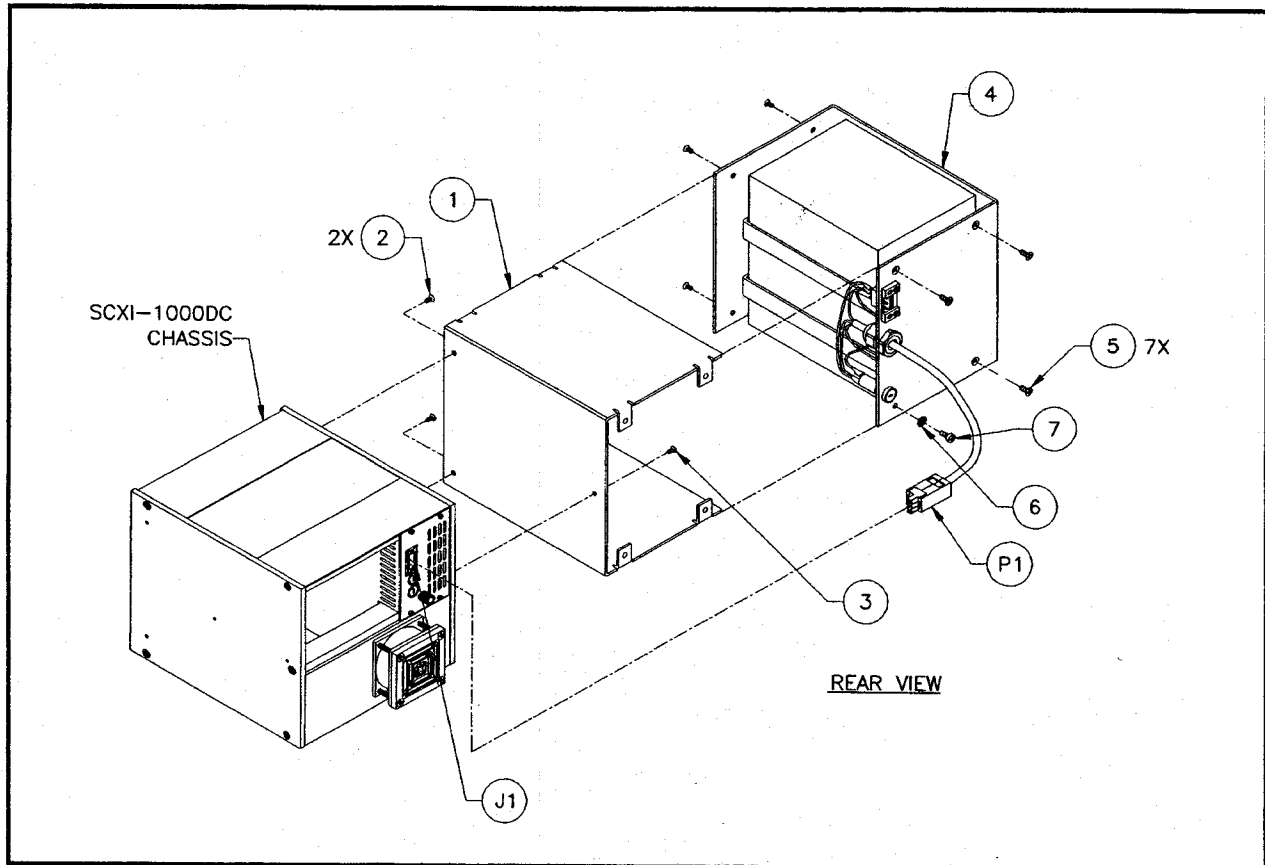


Figure 2. Connecting the SCXI-1382 to the SCXI-1000DC Chassis

To connect the SCXI-1382 battery pack to the SCXI-1000DC, refer to Figure 2 and perform the following steps:

1. Turn off the SCXI-1000DC chassis by switching the power switch on the SCXI-1000DC front panel to the O position.
2. Remove the eight screws that hold the battery pack together (items 5 and 7 in Figure 2).
3. Using the screws supplied in this kit (items 2 and 3 in Figure 2), attach the battery pack base (item 1) to your SCXI-1000DC chassis.
4. Slide the battery pack cover assembly (item 4 in Figure 2) onto the battery pack base and reinsert the screws from step 2.

Warning: *Make sure that you do not damage the cabling inside the battery pack cover assembly while you join the battery pack cover assembly to the battery pack base. Any damage to the cabling harness can result in shock or fire, resulting in injury or death. National Instruments is NOT liable for such events as a result of improper installation.*

5. The chassis and the battery pack are ready for electrical connections. Connect the green DC power connector (P1) at the end of the cord on the SCXI-1382 battery pack to the mating connector (J1) on the rear panel of the SCXI-1000DC chassis.

Caution: *Mating connector J2 is an input-only connector for the SCXI-1383 power supply/float charger. Do NOT connect the SCXI chassis to this connector.*

6. You can turn on the SCXI-1000DC chassis by switching the power switch on the front panel to the | position.

Connecting the SCXI-1382 in Float-Charging Mode to the SCXI-1000DC Chassis and SCXI-1383 Power Supply/Float Charger

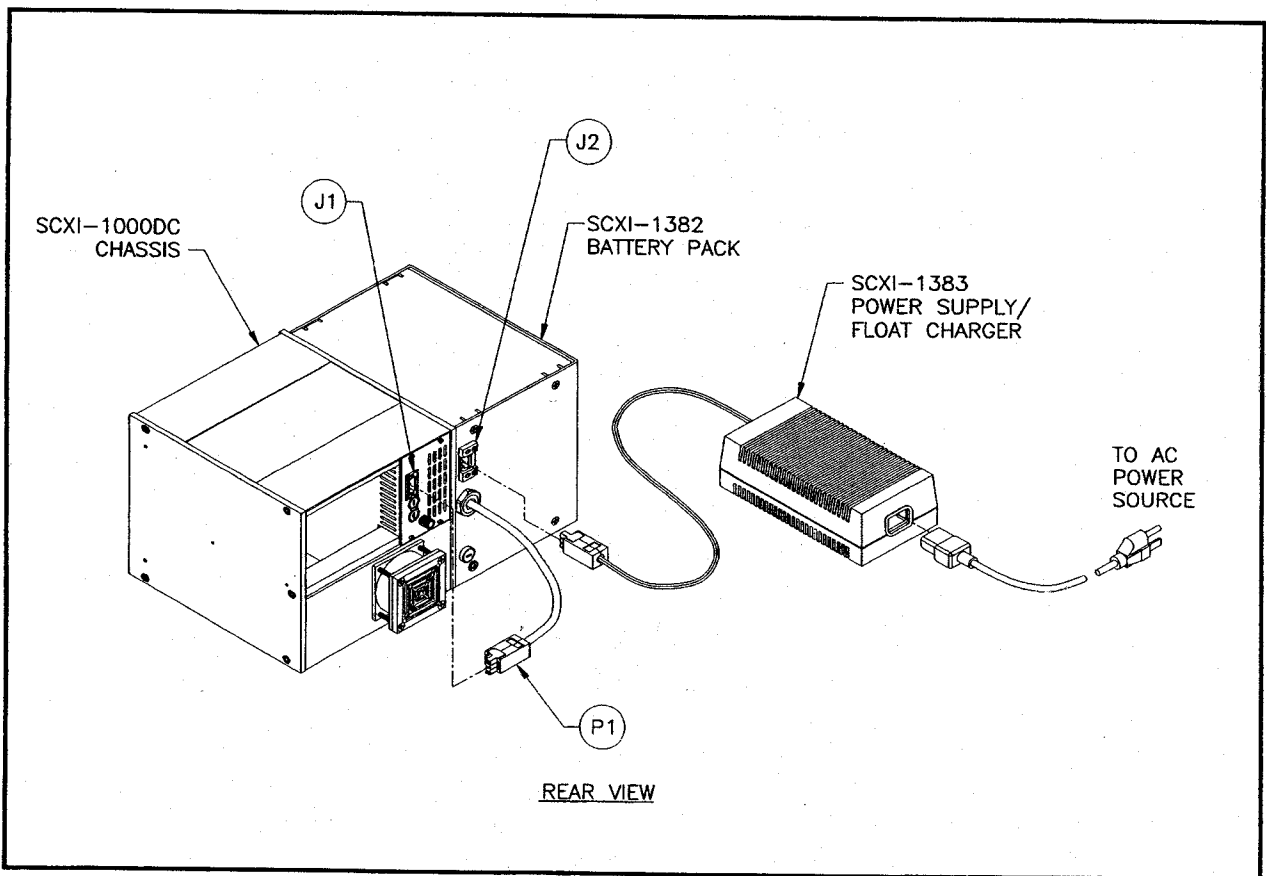


Figure 3. Connecting the SCXI-1382 in the Float-Charging Mode to the SCXI-1000DC Chassis and the SCXI-1383 Power Supply/Float Charger

Caution: *Always power off the SCXI-1000DC and the SCXI-1383 before connecting or disconnecting to each other or to the SCXI-1382.*

To connect the SCXI-1383 power supply/float charger to the SCXI-1000DC and the SCXI-1382 battery pack in float-charging mode, refer to Figures 2 and 3 and perform the following steps:

1. Follow steps 1 to 6 in the *Connecting the SCXI-1382 to the SCXI-1000DC Chassis* section earlier in this guide.
2. Connect the green DC power connector of the SCXI-1383 power supply/float charger to its mating connector (J2) on the rear panel of the SCXI-1382 battery pack.
3. Connect the IEC 320-style connector of the power cord to its mating connector on the SCXI-1383 power supply/float charger.
4. Connect the AC power plug of the power cord to 115/230 VAC, 50/60 Hz power source. Switch on the AC power source.
5. The SCXI-1383 power supply/float charger is now powered up and is float charging the SCXI-1382 battery pack. You can turn on the SCXI-1000DC chassis now by switching the power switch on the chassis front panel to the | position.

Specifications

Battery Pack

Battery type	Sealed lead-acid
Voltage	12 V
Capacity at 20 hr rate	25 Ah
Dimensions.....	6 in. (15.2 cm) by 7 in. (17.8 cm) by 8.3 in. (21.1 cm)
Weight.....	22 lb (10 kg)

Dual-Stage Charger

Input voltage.....	115 VAC, 60 Hz 230 VAC, 50 Hz
Maximum current output.....	4 A (115 VAC unit) 3.2 A (230 VAC unit)
High rate voltage	14.75 \pm 0.15 VDC
High rate current	533 mA to 4 A (\pm 10%) (115 VAC unit) 533 mA to 3.2 A (\pm 10%) (230 VAC unit)
Float rate voltage.....	13.68 V \pm 0.07 VDC
Float rate current	0 to 532 mA
Protection	Short circuit and reverse battery polarity
Operating temperature.....	0 to 50 C standard compensation
Storage temperature	-40 to 80 C

Dimensions.....	3.3 in. (8.4 cm) by 5.7 in. (14.5 cm) by 5.8 in. (14.7 cm)
Connectors.....	Output—18 AWG wire with Phoenix Contact Combicon power connector Input—U.S.-style three-prong power plug
Indicators.....	POWER ON—lights up when AC power is present, extinguishes if the unit is short-circuited, reversed, or if AC power is removed FAST CHARGE—indicates that the high voltage charging stage is in effect
Weight.....	6.0 lb (2.7 kg)