

XP² EXTERNAL POWER SUPPLY KIT

Operation Manual

Introduction



Although the *XP²* was designed to operate for 1500 hours on a set of 3 AA size batteries, there are times when even this may not be sufficient. For example, if your *XP²* is mounted in a test stand, bench or panel, the battery access cover may be inconvenient, or even difficult to reach.

To address these situations, Crystal Engineering has designed an external power supply that can be operated from virtually any available standard AC line supply.

This External Power Supply kit is rated for AC line voltages from 90 to 264 VAC, and 47 to 63 Hz. The kit includes 4 interchangeable AC line plugs that snap onto the power supply. With this assortment you should find a plug compatible with the AC line receptacles used in your country, so you can put this kit to immediate use.

To minimize penetrations into the *XP²*, which could increase the chances of water intrusion, there is only one external (fully sealed) electrical connection on the exterior of the gauge: The DB-9 serial connector. The ground return and one of the (unused) RS-232 pins is used to power the gauge. This is not a direct connection to the battery: Circuitry isolates the battery, and when sufficient voltage is applied (9VDC), the externally applied voltage forces the *XP²* to switch from battery power to external power. The external supply will not charge the batteries. Instead, the batteries become an uninterruptible power supply, and should the AC line power fail, the circuitry will automatically revert to operation from the batteries.

The connection to the XP2 is a double DB-9 pass through design, which permits you to use the RS-232 interface even when using the external power supply.

The *XP²* is manufactured and serviced by a company that only makes pressure measuring instruments. It's the only thing we do and that's why we say:

Pressure is Our Business!

Installation & Operating Instructions

Remove the (red) protective cover from DB9 connector on the back of the *XP2*. (Save the cover - if you don't need to use the RS-232 interface, you can use the cover to protect the DB9 connector on the computer side of the adapter). Connect the side of the DB9 pass-through connector with the captive screws to the *XP2*. If the *XP2* is to be permanently installed, screw the captive screws into the DB9 connector.



The wall mounted power supply is provided with four types of AC input adapters. Choose the one appropriate for your location:

USA



Australia



Europe



UK



Then slide the adapter into the body of the power supply. Make sure it locks into place.



Plug the DC power connector (2.1mm x 5.5mm Coaxial Plug) into the matching receptacle on the side of the pass through housing. Connect the power supply to the AC line.

CAUTION:

Do not exceed the maximum supply voltage of 264 VAC.

The *XP²* can be operated from the adapter without batteries installed, although we recommend that batteries remain in the *XP²*. (Always use alkaline batteries.) The batteries will act as an automatic backup supply in case of power failure.

To protect the *XP²* from power supply failures, or connection of non-approved DC power supplies, the pass-through connector includes a non-serviceable fuse.

Specifications

AC Input Voltage: 90 to 264 VAC

AC Input Frequency: 47 to 63Hz

AC Input Current: 0.5Arms (120VAC)

0.25Arms (240VAC)

AC Inrush Current (Cold): 30A max. (120VAC), 60A max. (240VAC)

AC Surge Immunity: IEC 61000-4-5, Level 3

ENVIRONMENTAL

Operation Temperature: 0 to 35°C

Storage Temperature: -25 to +85°C

Humidity: 10 to 90% RH (Non-condensing)

Emissions: FCC Class B, EN 55022 B

Immunity, EN 50082-1: 61000-4-2, Level 3

61000-4-3, Level 2

61000-4-4, Level 2

GENERAL

Power On Indicator: Green LED

DC Output Cord/Connector: 1.8 meter (70.8 inches)

2.1mm x 5.5mm Coaxial Plug, Center Positive

Warranty

Crystal Engineering Corporation warrants the *XP²* External Power Supply kit to be free from defects in material and workmanship under normal use and service for one (1) year from date of purchase to the original purchaser. It does not apply to batteries or when the product has been misused, altered or damaged by accident or abnormal conditions of operation.

For warranty or repair service, we can be reached at:

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If you call, please have ready the date of purchase and the reason for return. You will receive instructions for returning the device to Crystal Engineering.

Crystal Engineering will, at our option, repair or replace the defective device free of charge and the device will be returned, transportation prepaid. However, if we determine the failure was caused by misuse, alteration, accident or abnormal condition of operation, you will be billed for the repair.

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