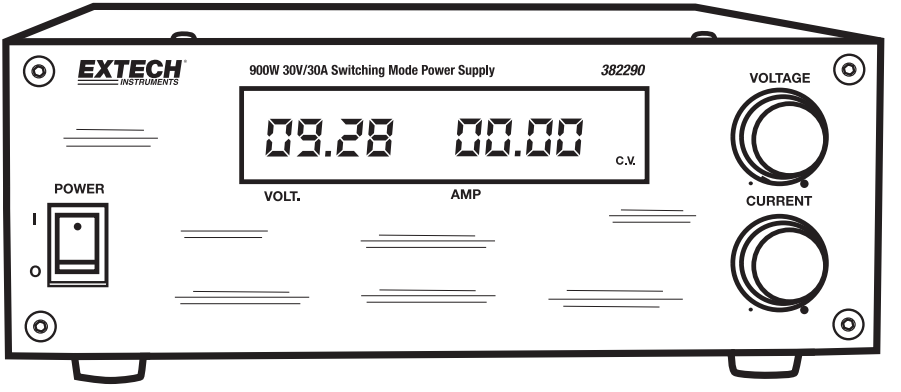
User's Guide

EXTECH INSTRUMENTS

Model 382290

900W Switching Mode DC Power Supply

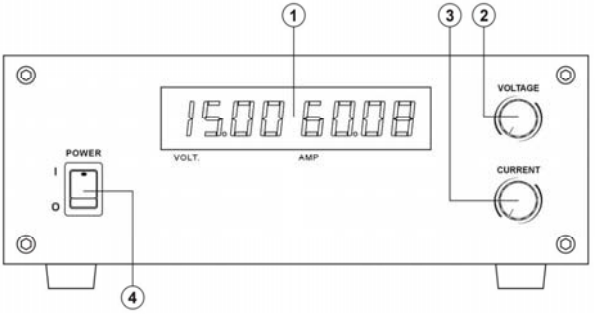


Introduction

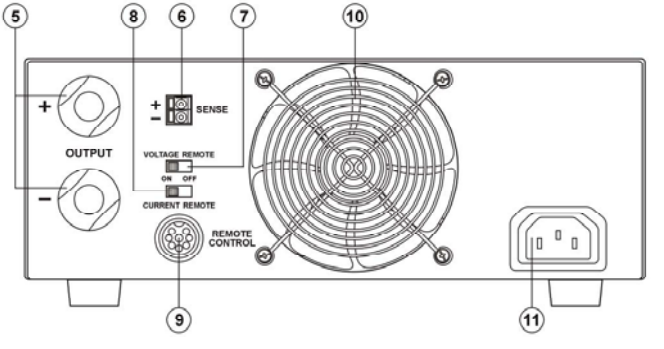
Congratulations on your purchase of the Extech 900W Switching Mode DC Power Supply. The Model 382290 can be used for many applications including bench testing, field service, hobby and telecommunication equipment use. Remote control functionality allows you to turn the power on/off and adjust the output voltage and current without turning the dials. This power supply is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Power Supply Description

1. Voltage & Current LED display
2. Voltage adjustment
3. Current adjustment
4. Power On/Off switch



5. Output terminals
6. Remote Sensing Terminal
7. Voltage Remote Control On/Off switch
8. Current Remote Control On/Off switch
9. Remote Control Terminal
10. Cooling fan
11. AC input



Operation

Standard Operation without Remote Control or Remote Sensing

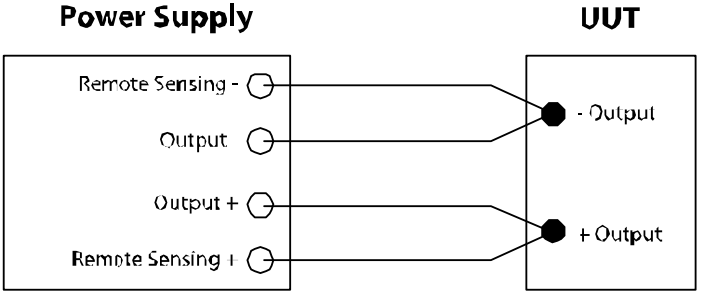
1. If you do not use the remote control feature, insure that both voltage and current remote control On/Off switches are in the OFF position.
2. Connect the unit under test to the power supply.
3. Use the POWER button to turn the unit ON or OFF. When the unit is powered up, the LED indicator will light green.
4. Use the Current and Voltage adjustment knobs for setting variable Current and Voltage output signals respectively.
5. The LED display will indicate actual current and voltage outputs.

Operation with Remote Sensing

CAUTION: Observe correct polarity and never short the Remote Sensing Terminal

1. Connect the unit under test to the power supply.
2. Connect the unit under test to the Remote Sensing Terminal using 22AWG wire or greater.
3. Use the POWER button to turn the unit ON or OFF. When the unit is powered up, the LED indicator will light green.
4. Use the Current and Voltage adjustment knobs for setting variable Current and Voltage output signals respectively.
5. The LED display will indicate actual current and voltage outputs.

Note: Always disconnect the Remote Sensing Terminal connections first.

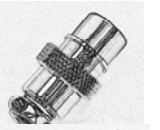


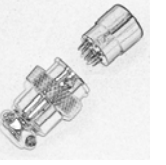
Remote Control Operation

Note: You can use the voltage and current remote control at the same time or separately. Voltage and Current can be controlled by either a 0 to 5V external voltage source or a 5kΩ variable resistor.

WARNING: The voltage and current remote control must NOT share a common ground.

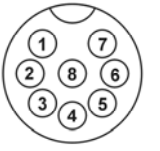
Connector Plug Assembly for Voltage Remote Control





Set up the provided remote connector plug:

1. Unscrew (counter-clockwise) the black housing to separate and expose the connection terminals
2. Solder 3 wires (22AWG) to terminals 1, 2 and 3
3. Reassemble the housing
4. Insure that the unit under test is disconnected and the power supply is off
5. Plug the remote connector plug into the remote control terminal on the back of the power supply
6. Secure the plug by locking the connector ring



Voltage Remote Control using a Voltage Source

A variable voltage source of 0 to 5V is fed into the remote terminal to adjust the output level

WARNING: If the input is higher than 5V, the Over Voltage Protection will be triggered

1. Ensure that the load is disconnected and the power supply is off
2. Connect the wire from terminal 2 to the positive (+) side of the external voltage source
3. Connect the wire from terminal 3 to the negative (-) side of the external voltage source. Note: the wire from terminal 1 is not used in this method.
4. Turn the Voltage Remote Control On/Off switch to the On position
5. Switch the power supply on
6. Vary the external input voltage from 0 to 5V to check and verify the full output voltage range of the power supply
7. Switch off the power supply

Voltage Remote Control using a 5kΩ variable resistor

1. Ensure that the load is disconnected and the power supply is off
2. Connect the wires from terminals 1, 2 and 3 as shown in the drawing
3. Turn the Voltage Remote Control On/Off switch to the On position
4. Switch the power supply on
5. Adjust the 5kΩ variable resistor to check and verify the full output voltage range of the power supply
6. Switch off the power supply

Connector Plug Assembly for Current Remote Control

Set up the provided remote connector plug:

1. Remove the screw from the black housing on the connector plug
2. Rotate the black housing to separate and expose the connection terminals
3. Solder 3 wires (22AWG) to terminals 4, 5 and 6
4. Reassemble the housing and secure with the screw
5. Ensure that the unit under test is disconnected and the power supply is off
6. Plug the remote connector plug into the remote control terminal on the back of the power supply
7. Secure the plug by locking the connector ring

Current Remote Control using a Voltage Source

A variable voltage source of 0 to 2.5V is fed into the remote terminal to adjust the output level

WARNING: If the input is higher than 2.5V, it may damage the power supply

1. Make sure that the load is disconnected and the power supply is off
2. Connect the wire from terminal 5 to the positive (+) side of the external voltage source
3. Connect the wire from terminal 6 to the negative (-) side of the external voltage source. Note: the wire from terminal 4 is not used in this method.
4. Turn the Voltage Remote Control On/Off switch to the On position
5. Switch the power supply on
6. Vary the external input voltage from 0 to 2.5V to check and verify the full output current range of the power supply
7. Switch off the power supply

Voltage Remote Control using a 5kΩ variable resistor

1. Make sure that the load is disconnected and the power supply is off
2. Connect the wires from terminals 4, 5 and 6 as shown in the drawing
3. Turn the Voltage Remote Control On/Off switch to the On position
4. Switch the power supply on
5. Adjust the 5kΩ variable resistor to check and verify the full output current range of the power supply
6. Switch off the power supply

Output On/Off Remote Control

Terminals 7 and 8 are used to remotely control the Output On/Off

1. An Open between terminals 7 and 8 enables the output (default)
2. Short terminals 7 and 8 to disable the output

Specifications

Display	Dual LED
Display Accuracy	±(1% +1d)
Voltage Output, DC	1 to 30.0 Volts
Current Output, DC	1 to 30.0 Amps
Ripple and Noise	±50mVp-p
Line Regulation	< 0.05% + 3mV/< 0.1% + 5mA
Load Regulation	< 0.1% + 5mV/< 0.2% + 5mA
Efficiency	>82%
Dynamic Power Factor Correction	>0.97 at optimal load
Power	110/220VAC (50/60Hz)
Dimensions	8.6 x 4.3 x 14.1" (220 x 110 x 360mm) (WxHxD)
Weight	12.8lbs. (5.8 kg)

Warranty

EXTECH INSTRUMENTS CORPORATION *warrants this instrument to be free of defects in parts and workmanship for* ***one year*** *from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.*

Calibration and Repair Services

Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Service Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.



Support line (781) 890-7440

Technical support: Extension 200; E-mail: support@extech.com

Repair & Returns: Extension 210; E-mail: repair@extech.com

Product specifications subject to change without notice

For the latest version of this User Guide, Software updates, and other Up-to-the-minute product information, visit our website: www.extech.com

Extech Instruments Corporation, 285 Bear Hill Road, Waltham, MA 02451

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