

SR850 OFFSET AND LINE NOTCH ADJUST **(P101, P102, P103, P201, P202, P221, P222)**

OFFSET ADJUST:

Note: Adjust pots as low as possible

Voltage Offset (P101)

1. Reset the unit by turning ON the unit while pressing the setup key
2. Set the Lock-in using the following settings:
 - sensitivity = 100mV
 - Oct = 24 dB
 - R display / X output
 - θ display / Y output
 - Amplitude = 0.004 V
 - Frequency = 1.000 Hz
3. Adjust P101 to make R (channel one display) less than 10 mV. ($R < 10$ mV)
4. Change Sensitivity = 10 mV and adjust P101 again to obtain a $R < 1$ display.
5. Change the Sensitivity = 1 mV and adjust P101 to get a $R < 0.02$ display.

CMRR Offset (P102)

1. Reset the unit. (A quick reset will do. You can do this by turning the unit ON while pressing the local key)
2. Connect a T-connector on Sine output and connect a similar length cable to A/I and B inputs. Connect those cables to the T-Connector on the Sine output.
3. Set the Lock-in using the following setting:
 - Sensitivity = 2 mV
 - Turn on the Sync Filter ON (Sync < 200 Hz should light up)
 - A-B input
 - Oct = 24 dB
 - DC couple
 - R display / X output
 - θ display / Y output
 - Amplitude = 1.000 V
 - Frequency = 100.00 Hz
4. Adjust P102 to obtain a $R < 0.2$ mV.
5. Then change the sensitivity to 200 μ V and adjust P102 again to get a $R < 2\mu$ V

Voltage Offset (P101)

1. Disconnect all the cables and reset the unit.
2. Set the following:
 - Sensitivity = 1 mV
 - Oct = 24 dB
 - R display / X output
 - θ display / Y output
 - Amplitude = 0.004 V
 - Frequency = 1.000 Hz
3. Adjust P101 to obtain a $R < 0.02$ mV display.

Current Offset (P103)

1. Settings:
 - Sensitivity = 100 mV
 - Oct = 24 dB
 - I (10^6) input
 - DC couple
 - Ground
 - R display / X output
 - θ display / Y output
 - Amplitude = 0.004 V
 - Frequency = 1.000 Hz
2. Adjust P103 to get a $R < 10$ nA display.
3. Change Sensitivity = 10 mV and adjust P103 to make $R < 1$ nA.

4. Change Sensitivity = 1 mV and adjust P103 to get $R < 0.02 \text{ nA}$.

LINE OFFSET ADJUST:

Note: Adjust pots as low as possible.

Line Notch (60 Hz, Domestic / 50 Hz, Foreign)

1. Connect A input and Sine output with a cable and reset the unit.
2. Set the following settings:
 - Sensitivity = 1 V
 - Sync < 200 Hz = ON
 - Oct = 24 dB
 - Line notch
 - R display / X output
 - θ display / Y output
 - Amplitude = 1.000 V

For 60 Hz, Domestic:

- Reference Phase = 0.234°
- Reference Frequency = 60 Hz

For 50 Hz, Foreign:

- Reference Phase = 0.246°
- Reference Frequency = 50 Hz

3. Adjust P221 and P222 to make $\theta = 0^\circ$ or 180° and $R > 20 \text{ mV}$
 - *Hint: Adjust P222 to make $R > 20$ first then adjust P 221 to make $q = 0^\circ$ or 180° (+/- 0.1°)*
4. Adjust P222 to make $R < 10 \text{ mV}$
5. Set Sensitivity to 10 mV and adjust P222 to make $R < 1 \text{ mV}$. If you cannot make it less than 1 mV, tweaking P221 will help and going back and forth between the two to meet the condition.

2xLine Notch (60 Hz, Domestic / 50 Hz, Foreign)

1. Set the following settings:
 - Sensitivity = 1 V
 - Sync < 200 Hz = ON
 - Oct = 24 dB
 - 2 x Line notch
 - R display / X output
 - θ display / Y output
 - Amplitude = 1.000 V

For 60 Hz, Domestic:

- Reference Phase = 0.246°
- Reference Frequency = 120 Hz

For 50 Hz, Domestic:

- Reference Phase = 0.229°
- Reference Frequency = 100 Hz

2. Adjust P201 and P202 to make $\theta = 0^\circ$ or 180° and $R > 20 \text{ mV}$
 - *Hint: Adjust P202 to make $R > 20$ first then adjust P 201 to make $q = 0^\circ$ or 180° (+/- 0.1°)*
3. Adjust P202 to make $R < 10 \text{ mV}$.
4. Set Sensitivity to 10 mV and adjust P202 to make $R < 1 \text{ mV}$. If you cannot make it less than 1 mV, tweaking P221 will help and going back and forth between the two to meet the condition.