IQ plus® 355 Digital Weight Indicator

Analog Output Option

PN 43381

IQ plus 355 Analog Output Module Installation

To install or replace the analog output module, ensure power to the indicator is disconnected, then place the indicator face-down on an antistatic work mat. Loosen all in-use cord grips and remove the screws that hold the backplate to the enclosure body. Lift the backplate away from the enclosure and set it aside.

Caution *Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

NOTE: *Ensure jumpers JP1 and JP2 on analog output board are installed in position 1 (POS1) as shown in Figure 1.*

Mount the analog output module on its standoffs in the location shown in Figure 1 and plug the module input into connector J5 on the IQ plus 355 board. Connect output cable to the analog output module as shown in Table 1, then reassemble the enclosure as described on page 2.

Pin	Signal
1	+ Current Out
2	– Current Out
3	+ Voltage Out
4	– Voltage Out

Table 1. Analog Output Module Pin Assignments

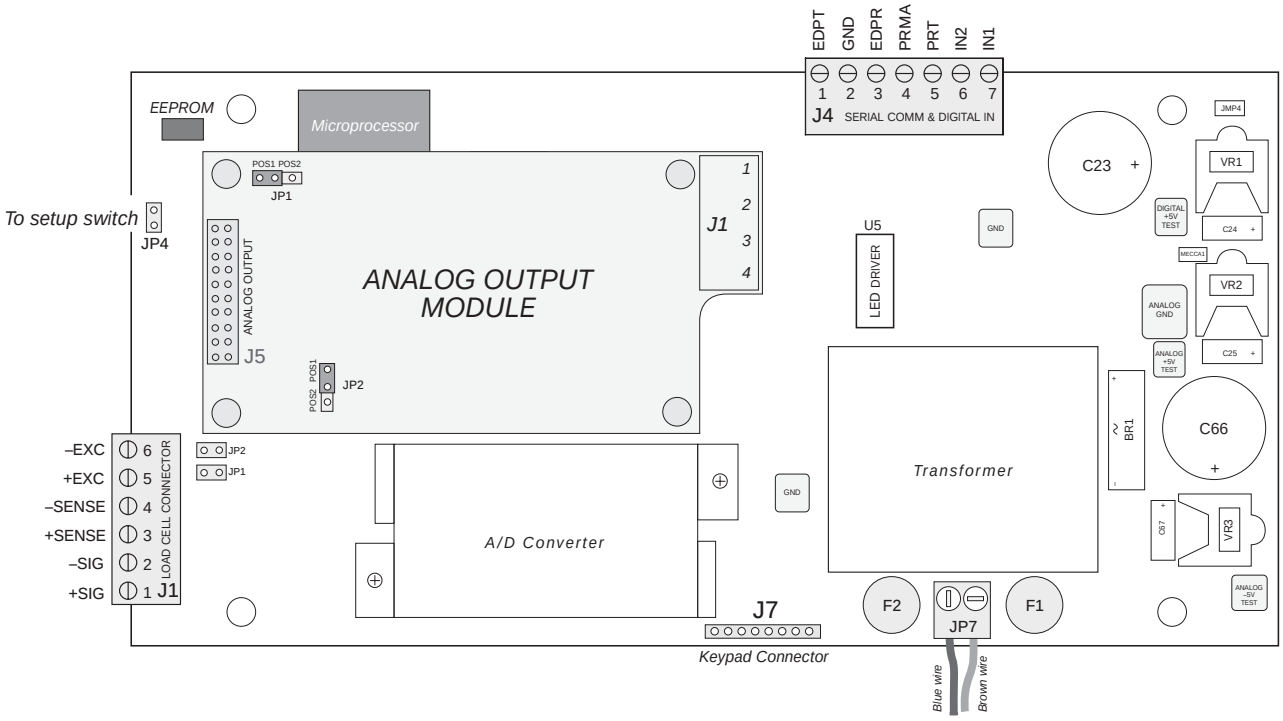

Figure 1. Analog Output Module Installation on IQ plus 355 Board

Enclosure Reassembly

Once cabling is complete, position the backplate over the enclosure and reinstall the backplate screws. Use the torque pattern shown in Figure 2 to prevent distorting the backplate gasket. Torque screws to 15 in-lb (1.7 N-m).

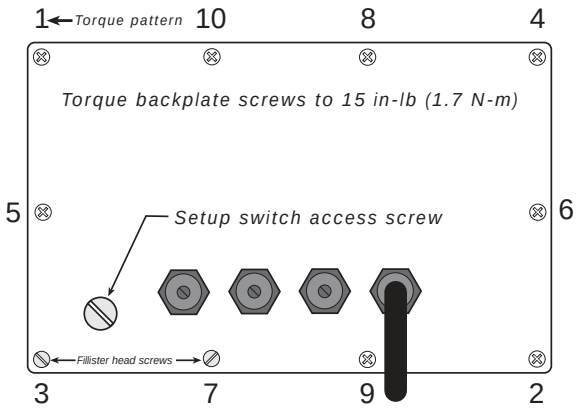

Figure 2. IQ plus 355 Enclosure Backplate

Analog Output Calibration

The following calibration procedure requires a multimeter to measure voltage or current output from the analog output module. No test weights are required for calibration.

NOTE: *The analog output must be calibrated **after** the indicator itself has been configured and calibrated.*

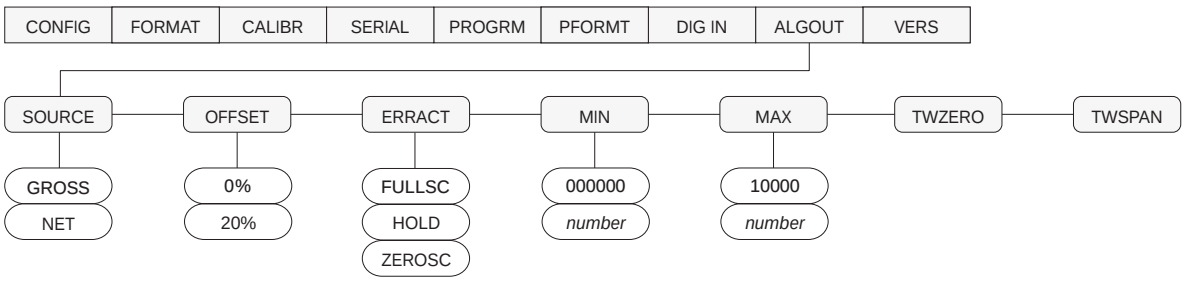

Figure 3. Analog Output Menu

1. Enter setup mode and go to the ALGOUT menu (see Figure 3).
   - Set OFFSET to 0% for 0–10 V output, 20% for 4–20 mA output
   - Set MIN to lowest weight value to be tracked by the analog output
   - Set MAX to highest weight value to be tracked by the analog output

   To enter MIN and MAX values, use the ◁ and ▷ keys to select the digit; use △ and ▽ to increment or decrement the value.
2. Connect multimeter to analog output:
   - For voltage output, connect voltmeter leads to pins 3 and 4
   - For current output, connect ammeter leads to pins 1 and 2
3. Adjust zero calibration: Scroll to the TWZERO parameter. Check voltage or current reading on multimeter. Press and hold △ or ▽ to adjust the zero value up or down.**
4. Adjust span calibration: Scroll to the TWSPAN parameter. Check voltage or current reading on multimeter. Press and hold △ or ▽ to adjust the span value up or down.
5. Final zero calibration: Return to the TWZERO parameter and verify that the zero calibration has not drifted. Press and hold △ or ▽ to re-adjust the zero value as required.
6. Return to normal mode. Analog output function can be verified using test weights.

** *When using the data stream mode on either port (EDP or Printer), TWZERO must be set to greater than 50 mV.*

IQ plus® 510/710 Digital Weight Indicators

Analog Output Option

PN 43381

IQ plus 510/710 Analog Output Module Installation

To install or replace the analog output module, ensure power to the indicator is disconnected, then place the indicator face-down on an antistatic work mat. Loosen all in-use cord grips and remove the screws that hold the backplate to the enclosure body. Lift the backplate away from the enclosure and set it aside.

Caution *Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

NOTE: *Ensure jumpers JP1 and JP2 on analog output board are installed in position 1 (POS1) as shown in Figure 4.*

Mount the analog output module on its standoffs in the location shown in Figure 4 and plug the module input into connector J5 on the IQ plus 510/710 board. Connect output cable to the analog output module as shown in Table 2, then reassemble the enclosure as described on page 4.

Pin	Signal
1	+ Current Out
2	– Current Out
3	+ Voltage Out
4	– Voltage Out

Table 2. Analog Output Module Pin Assignments

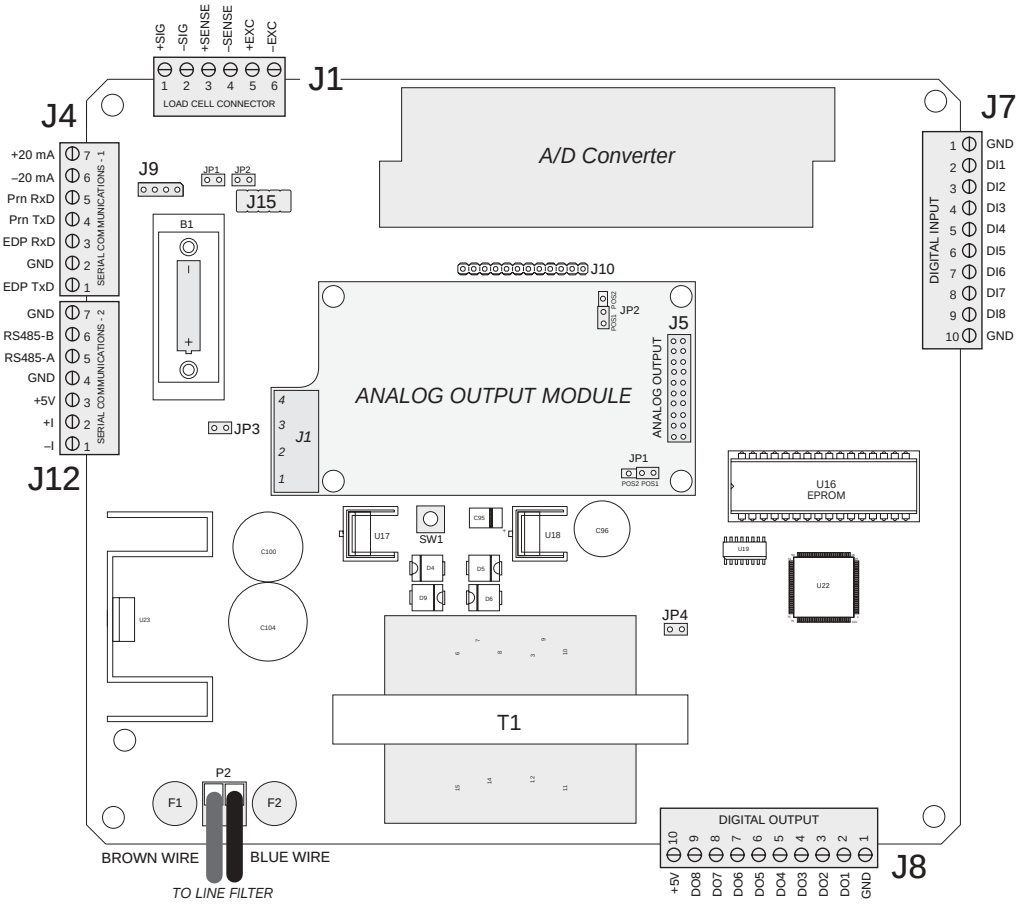

Figure 4. Analog Output Module Installation on IQ plus 510/710 Board

Enclosure Reassembly

Once cabling is complete, position the backplate over the enclosure and reinstall the backplate screws. Use the torque pattern shown in Figure 5 to prevent distorting the backplate gasket. Torque screws to 10 in-lb (1.13 N-m).

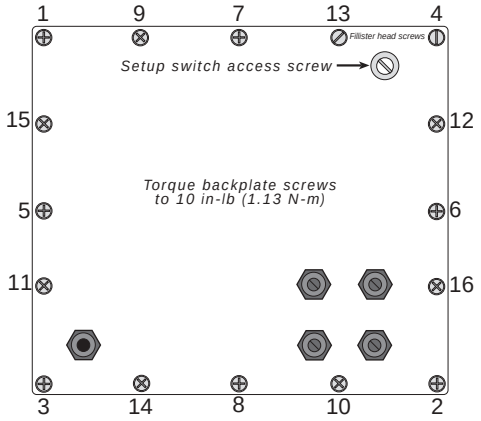

Figure 5. IQ plus 510/710 Enclosure Backplate

Analog Output Calibration

The following calibration procedure requires a multimeter to measure voltage or current output from the analog output module. No test weights are required for calibration.

NOTE: *The analog output must be calibrated **after** the indicator itself has been configured and calibrated.*

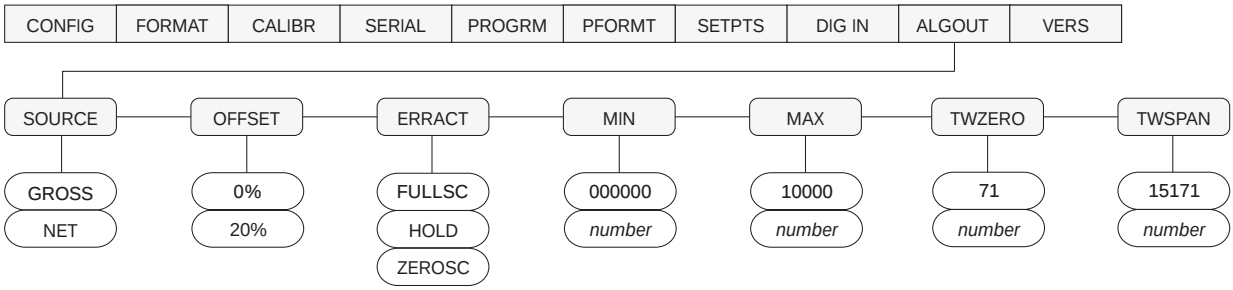

Figure 6. IQ plus 710 Analog Output Menu

1. Enter setup mode and go to the ALGOUT menu (see Figure 6).
   - Set OFFSET to 0% for 0–10 V output, 20% for 4–20 mA output
   - Set MIN to lowest weight value to be tracked by the analog output
   - Set MAX to highest weight value to be tracked by the analog output

   To enter MIN and MAX values, use the ◁ and ▷ keys to select the digit; use △ and ▽ to increment or decrement the value.
2. Connect multimeter to analog output:
   - For voltage output, connect voltmeter leads to pins 3 and 4
   - For current output, connect ammeter leads to pins 1 and 2
3. Adjust zero calibration: Scroll to the TWZERO parameter. Check voltage or current reading on multimeter. Press and hold △ or ▽ to adjust the zero value up or down.
4. Adjust span calibration: Scroll to the TWSPAN parameter. Check voltage or current reading on multimeter. Press and hold △ or ▽ to adjust the span value up or down.
5. Final zero calibration: Return to the TWZERO parameter and verify that the zero calibration has not drifted. Press and hold △ or ▽ to re-adjust the zero value as required.
6. Return to normal mode. Analog output function can be verified using test weights.

IQ plus® 350 Digital Weight Indicator

Analog Output Option

PN 43381

IQ plus 350 Analog Output Module Installation

To install or replace the analog output module, ensure power to the indicator is disconnected, then place the indicator face-down on an antistatic work mat. Remove the screws that hold the backplate to the enclosure body. Loosen all in-use cord grips then lift the backplate away from the enclosure and set it aside.

Caution *Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

NOTE: *Ensure jumpers JP1 and JP2 are installed in position 1 (POS1) as shown in Figure 7.*

Mount the analog output module on its standoffs in the location shown in Figure 7 and plug the module input into connector J5 on the IQ plus 350 board. Connect output cable to the analog output module as shown in Table 3, then reassemble the enclosure as described on page 6.

Pin	Signal
1	+ Current Out
2	– Current Out
3	+ Voltage Out
4	– Voltage Out

Table 3. Analog Output Module Pin Assignments

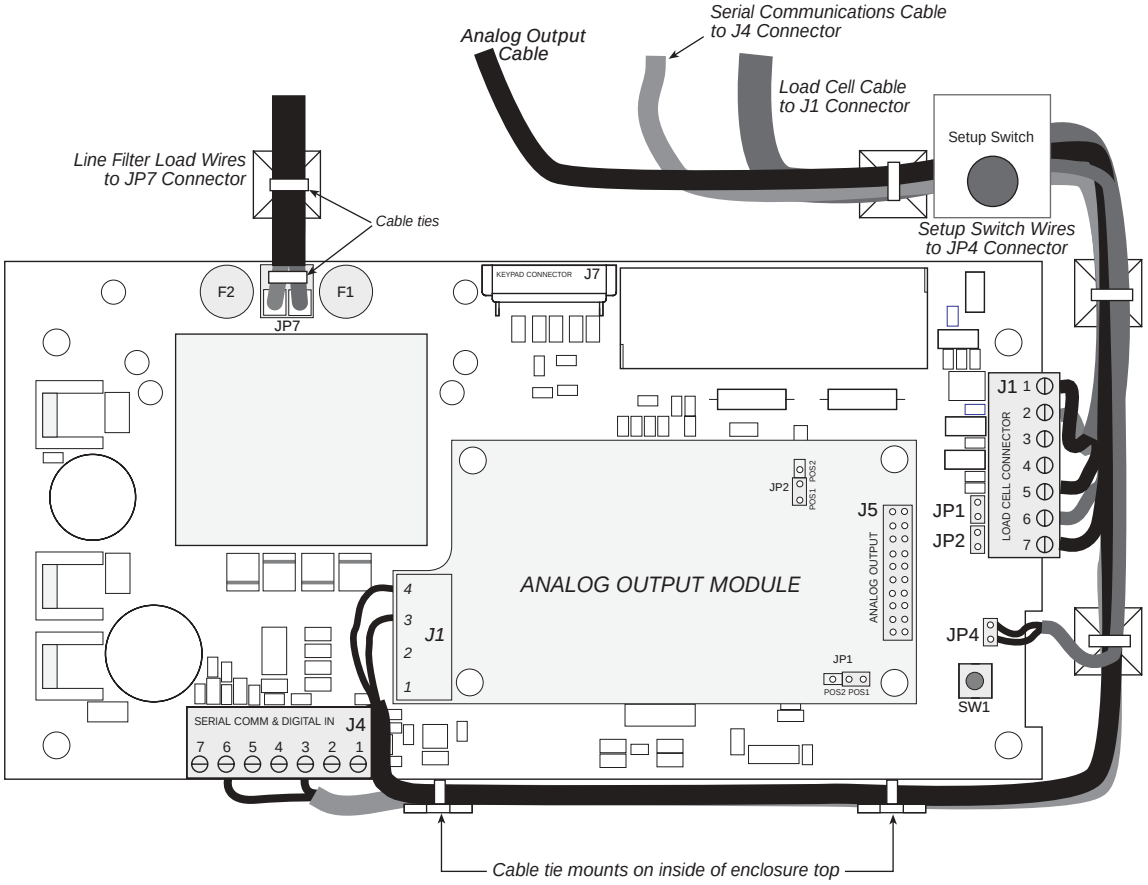

Figure 7. Analog Output Module Installation and Wiring on IQ plus 350 Board

Enclosure Reassembly

Once cabling is complete, position the backplate over the enclosure and reinstall the backplate screws. Use the torque pattern shown in Figure 8 to prevent distorting the backplate gasket. Torque screws to 15 in-lb (1.7 N-m).

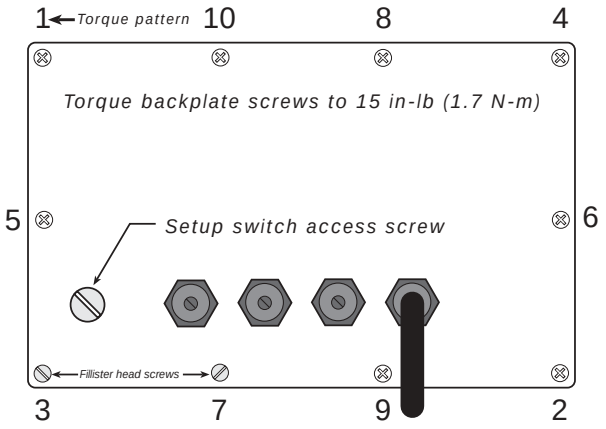

Figure 8. IQ plus 350 Enclosure Backplate

Analog Output Calibration

The following calibration procedure requires a multimeter to measure voltage or current output from the analog output module. No test weights are required for calibration.

NOTE: *The analog output must be calibrated **after** the indicator itself has been configured and calibrated.*

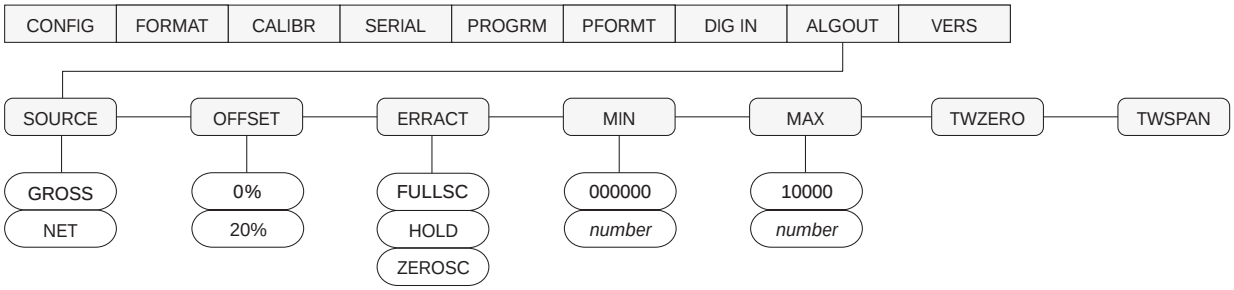

Figure 9. Analog Output Menu

1. Enter setup mode and go to the ALGOUT menu (see Figure 9).
   - Set OFFSET to 0% for 0–10 V output, 20% for 4–20 mA output
   - Set MIN to lowest weight value to be tracked by the analog output
   - Set MAX to highest weight value to be tracked by the analog output

   To enter MIN and MAX values, use the ◁ and ▷ keys to select the digit; use △ and ▽ to increment or decrement the value.
2. Connect multimeter to analog output:
   - For voltage output, connect voltmeter leads to pins 3 and 4
   - For current output, connect ammeter leads to pins 1 and 2
3. Adjust zero calibration: Scroll to the TWZERO parameter. Check voltage or current reading on multimeter. Press and hold △ or ▽ to adjust the zero value up or down.
4. Adjust span calibration: Scroll to the TWSPAN parameter. Check voltage or current reading on multimeter. Press and hold △ or ▽ to adjust the span value up or down.
5. Final zero calibration: Return to the TWZERO parameter and verify that the zero calibration has not drifted. Press and hold △ or ▽ to re-adjust the zero value as required.
6. Return to normal mode. Analog output function can be verified using test weights.