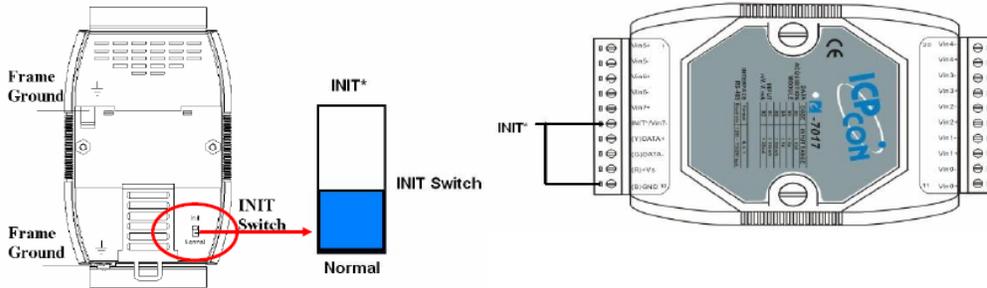


Calibration procedures for I/M-7018Z, I/M-7019R

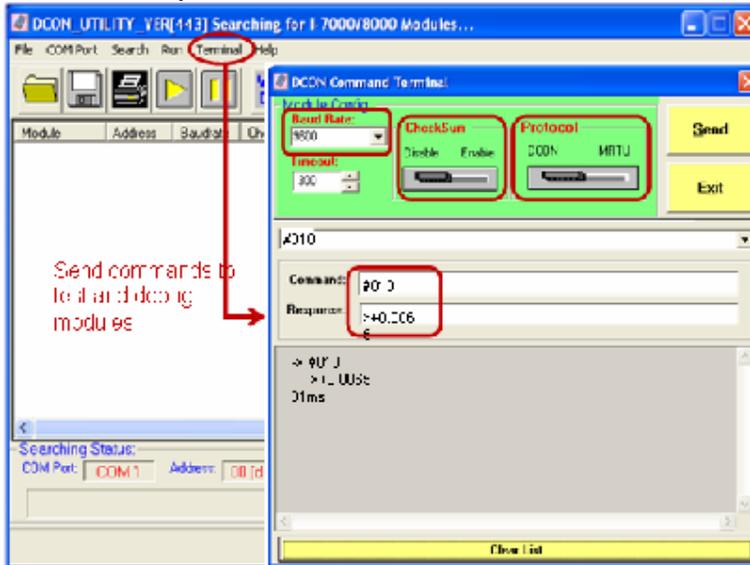
- 1) The module should be switched to DCON protocol.
  - a. Ensure module is connected on INIT mode. Power OFF module, switch to INIT setting, and power ON module:

New Version

Old Version



- b. INIT mode is only to change baud rate and checksum settings on the module if desired. (Default Baud rate is 9600, Checksum disabled).
  - c. Power OFF module, change back to Normal mode, and power ON module again.
- 2) Use DCON Utility to set DCON Protocol, and send commands to module.



- 3) Please ensure that the module has been powered on and warmed up for at least 30 minutes.
- 4) Set the type code to calibrate for each channel by sending command \$AA7CiRrr:
  - \$ = Delimiter Character
  - AA = Address of the module in HEX format (00 to FF)
  - 7 = Command to set channel range code
  - Ci = i specifies the input channel (0 to 7)
  - Rrr = rr represents the type code to be set for the channel

For example: \$017C0R01, sets module with address 01, channel 0, to type code 01 +/- 50mV. (See Section 1.11 of Manual for Configuration Tables)

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- 5) The following steps must be performed 3 times for each channel, to ensure accurate calibration procedure. Each channel is independent and can be set to different types of inputs.

1. Enable calibration per channel:

Send command ~AAEV:

~ = Delimiter character

AA = Address of the module in HEX format (00 to FF)

E = Command to enable/disable calibration

V = 1: enable calibration  
0: disable calibration

For example: ~01E1, sets module with address 01, to enable calibration.

2. Apply zero calibration voltage. ( 0 mV for type 01).

3. Send zero calibration command

Send command \$AA0Ci:

\$ = Delimiter character

AA = Address of the module in HEX format (00 to FF)

0 = Command for the zero calibration

Ci = i specifies the input channel (0 to 7)

For example: \$010C0, sets module with address 01, channel 0, to accept 0 mV calibration.

Response should be: !AA, or !01 for module address 01.

\*\* Please note this command takes 16 seconds. Do not disconnect zero calibration voltage input during this time. \*\*

4. Apply span calibration voltage. (50mV for type 01).

5. Send span calibration command

Send command \$AA1Ci:

\$ = Delimiter character

AA = Address of the module in HEX format (00 to FF)

1 = Command for the span calibration

Ci = i specifies the input channel (0 to 7)

For example: \$011C0, sets module with address 01, channel 0, to accept 50 mV calibration.

Response should be: !AA, or !01 for module address 01.

\*\* Please note this command takes 16 seconds. Do not disconnect zero calibration voltage input during this time. \*\*

6. Repeat steps 1 through 5, 3 times for each independent channel.

- 6) Calibration is complete once each channel has received 3 measurements of zero voltage and 3 measurements of span voltage. Set module back to ModBus protocol.