



Making Data Acquisition Easy

CAGE/NCAGE CODE: 3FNFO

M-7017Z

10/20-channel Current and Voltage Analog Input Module

Quick Start Guide

Product:

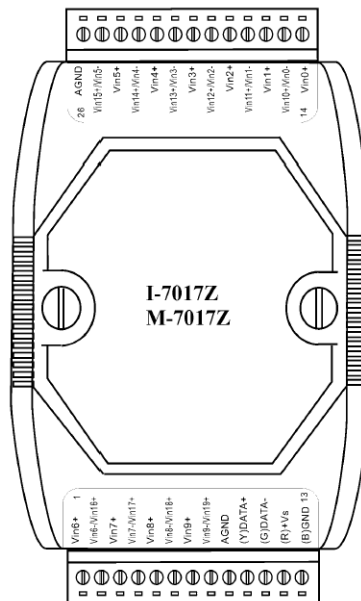
http://www.icpdas-usa.com/m_7017z.html

http://www.icpdas-usa.com/dcon_utility_pro.html

1. Introduction

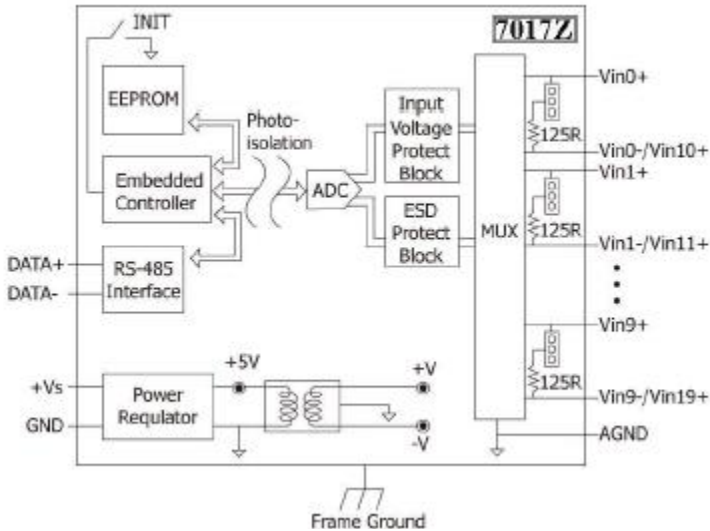
M-7017Z has software configurable channels-- from 10 differential channels into 20 single ended channels. Both voltage and current are accepted: $\pm 150\text{mV}$, $\pm 500\text{mV}$, $\pm 1\text{V}$, $\pm 5\text{V}$, $\pm 10\text{V}$, $\pm 20\text{mA}$, $0\sim 20\text{mA}$, and $4\sim 20\text{mA}$. No external resistor needed for measuring the current, all you have to do is to open the shell first and finish the setting by jumper. Measuring the current is as simple as you think! The M-7017Z also passes 240Vrms over voltage protection for differential inputs and 150Vrms over voltage protection for singleended inputs, 3000VDC intra-module isolation, $\pm 4\text{KV}$ contact ESD protection, $\pm 4\text{KV}$ EFT protection for power, and $\pm 1\text{KV}$ EFT protection for RS-485. The sampling rate of M-7017Z is changeable. There are fast mode and normal mode for your consideration. Fast Mode is 60Hz with 12 bit resolution. Normal Mode is 10Hz with 16 bit Resolution.

2. Terminal Assignment





3. Block/ Wiring Diagram



| Voltage Input | | |
|---------------|-------------------|-------------------|
| | Differential Mode | Single-ended Mode |
| JUMPER | | |
| Current Input | | |
| JUMPER | | |

4. Default Settings

Default settings for the M-7017, M-7018 and M-7019 series modules are:

- Protocol: Modbus RTU
- Module address: 01
- Analog input type:
 - Type 08, -10V to 10V, for the M-7017 and M-7019 series
 - Type 1B, -150V to 150V, for the M-7017R-A5
 - Type 0D, -20mA to +20mA for the M-7017C and M-7017RC
 - Type 05, -2.5V to 2.5V, for the M-7018 series
- Baud Rate: 9600 bps
- Filter set at 60Hz rejection (Not used by the M-7019R, firmware version B2.6 and earlier)



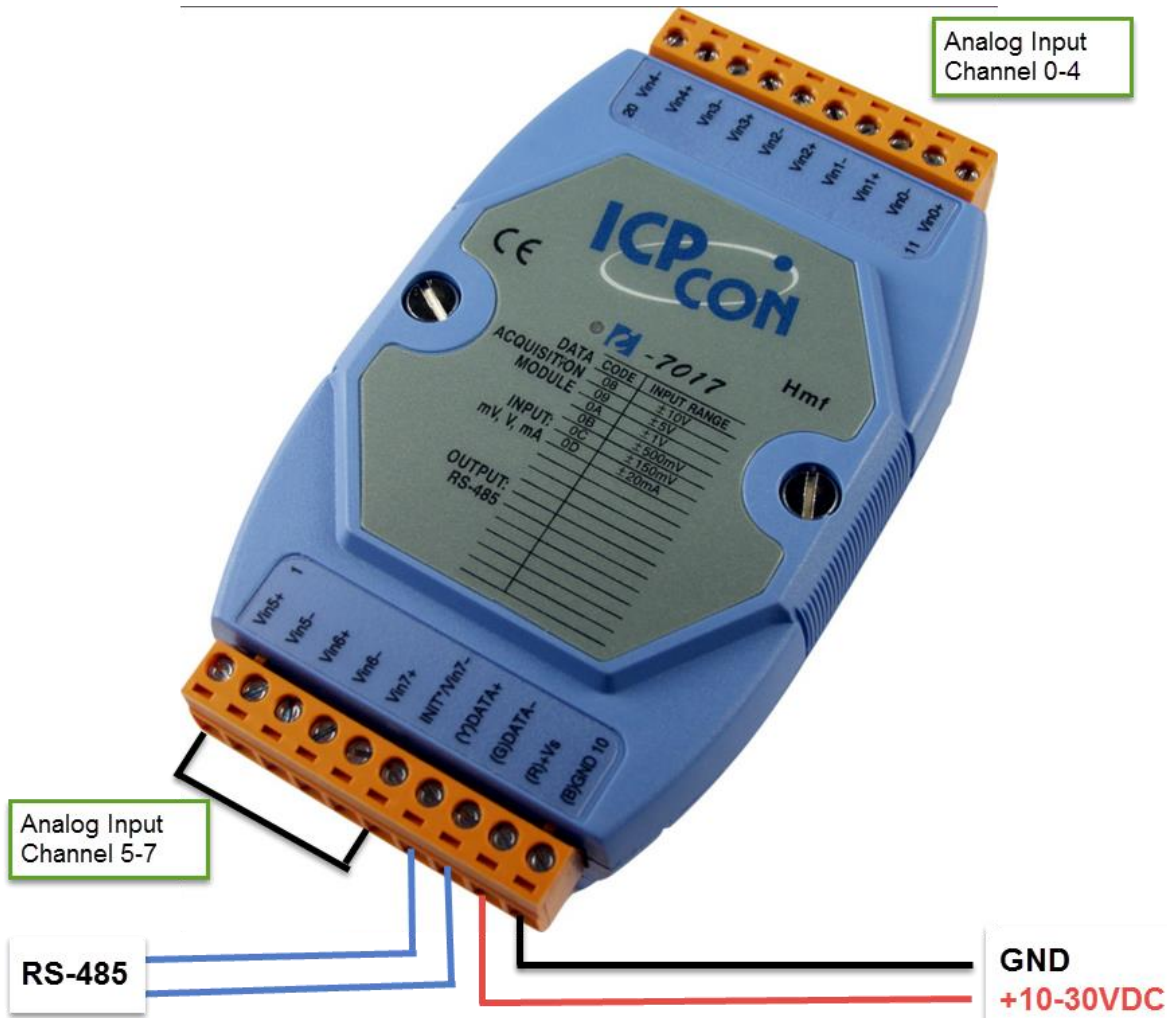
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5. Configuration

To install the module, follow the steps below:

1. Connect the thermistor analog input.
2. Connect the module to the RS-485 network using the DATA+ and DATA- terminals. If the host is only equipped with an RS-232 interface, then an RS-232 to RS-485 converter will be required.
3. Connect the module to the power supply using the +Vs and GND terminals. Note that the voltage supplied should be in the range of +10 to +30V DC.





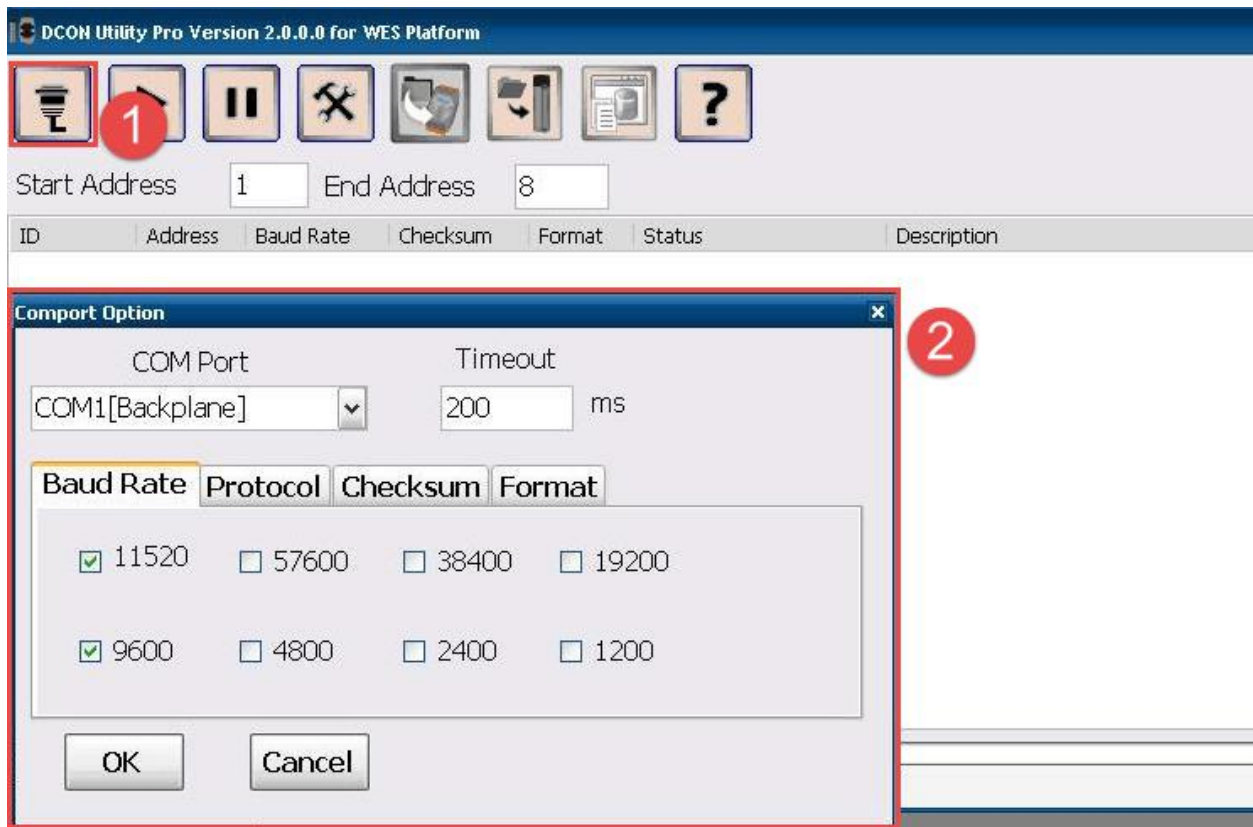
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4. Open DCON utility pro

- 1 click on COM port(first icon).
- 2 It can select multi-options such as Baud Rate, Protocol, Checksum, and Format to search module. The default settings for the module can be found in Section 3. Click OK after selecting the COM port setting.

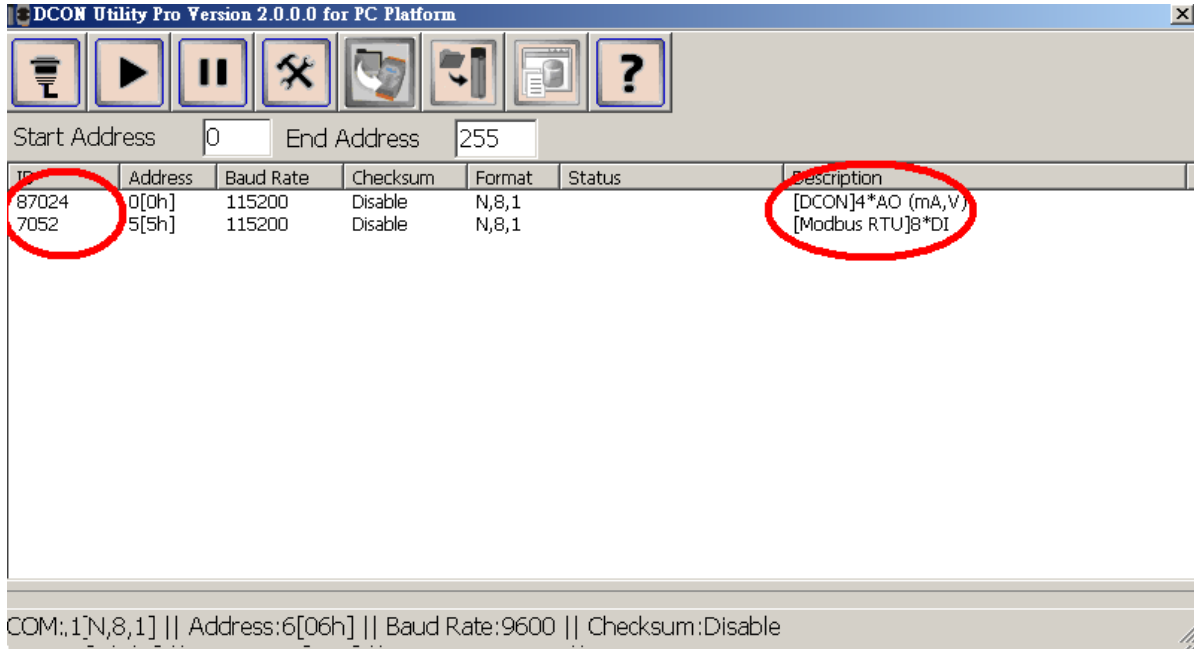




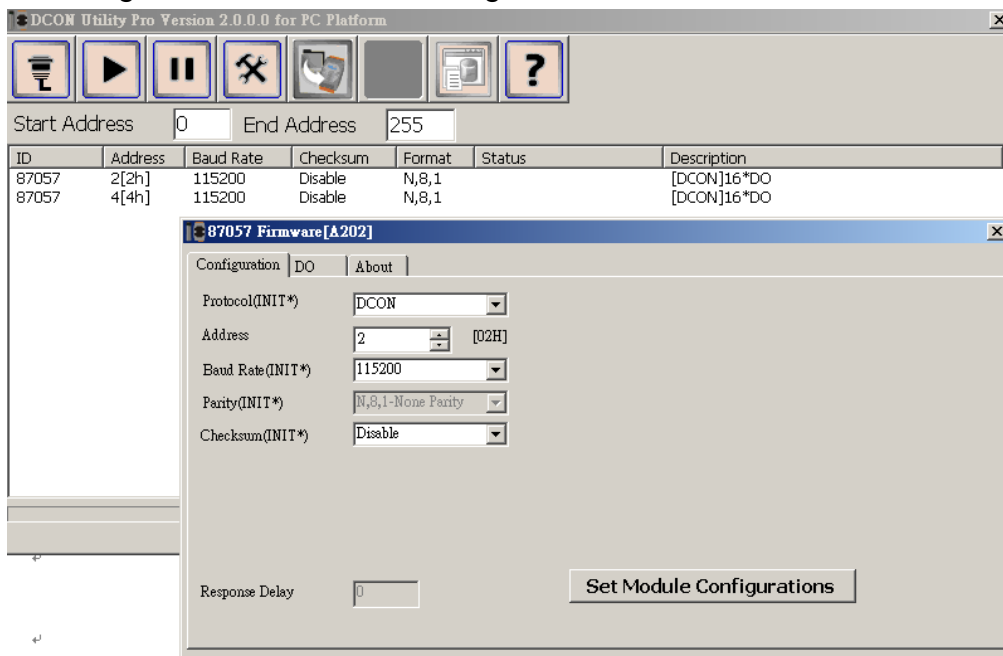
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5. DCON utility pro will search for the selected COM port according the setting previously set. DCON Utility Pro supports DCON and Modbus protocol for all ICPDAS and the others modules.



6. Configuration I/O module setting on PC





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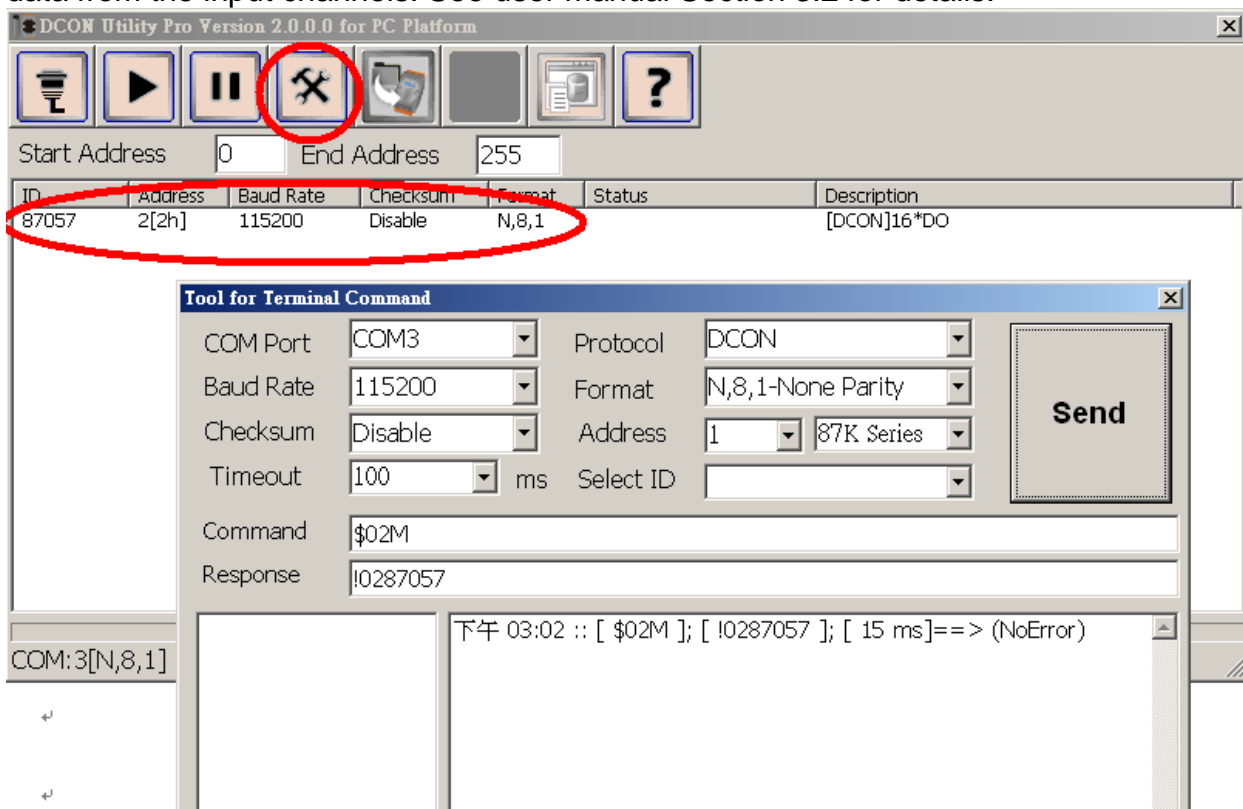
7. For M-7000 modules using the Modbus RTU protocol, configure the module using the following functions.

Sub-function 04h of Function 46h, see user manual Section 3.3.2

Sub-function 06h of Function 46h, see user manual Section 3.3.4

Sub-function 08h of Function 46h, see user manual Section 3.3.6

For M-7000 modules using the Modbus RTU protocol, use Function 04h to read the data from the input channels. See user manual Section 3.2 for details.





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8. If user doesn't know command, user can select Address and ID, it will show some refer commands as below. User can select necessary command to test or debug modules.

