I-7565-DNM FAQ

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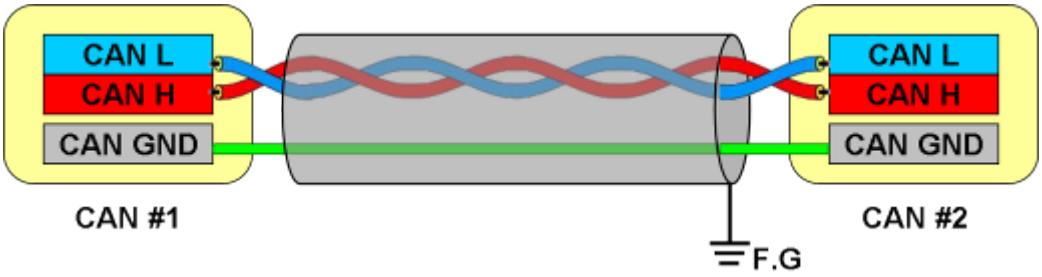
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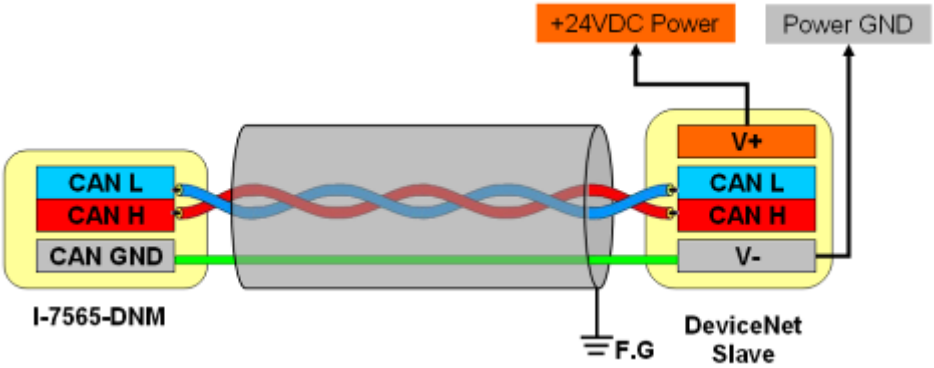
Q1: How to connect the CAN bus of the I-7565-DNM with the slave device which need DC power in the CAN bus? (2013/10/12, Johney)

Ans:

Here shows the instruction of the wire connection.



CAN bus wire connection without DC power



CAN bus wire connection with 24VDC power

(2013/10/12, Johney)

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Q2: How to develop the x64 software with the I-7565-DNM? (2013/10/15, Johney)

Ans:

The users need the following steps.

(1) Install the VS2008 VC++ and x64 Compiler tool

(2) Install the VS2008 and Windows Software Development Kit

The Visual C++ Express version does not support the x64 tool. The users need extra x64 tool. The user can download the Windows Software Development Kit (SDK) for free from the Microsoft website.

(3) The user can use the DumpBin /Headers tool to see if the DLL supports x86 or x64 platform.

(2013/10/15, Johney)

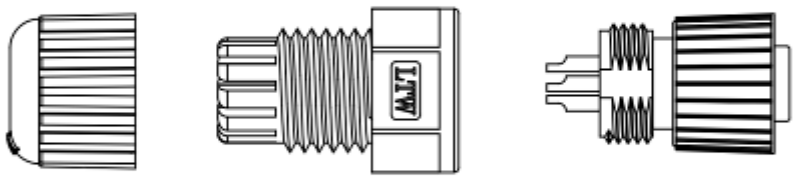
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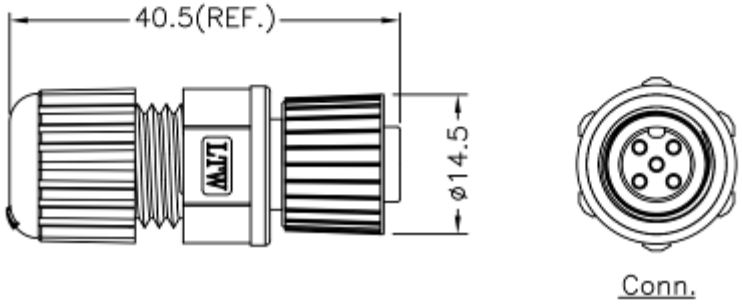
Q3: How to connect the M12 connector with the I-7565-DNM? (2013/11/02, Johney)

Ans:

We have provided the M12 connector on the website. Here shows the information.







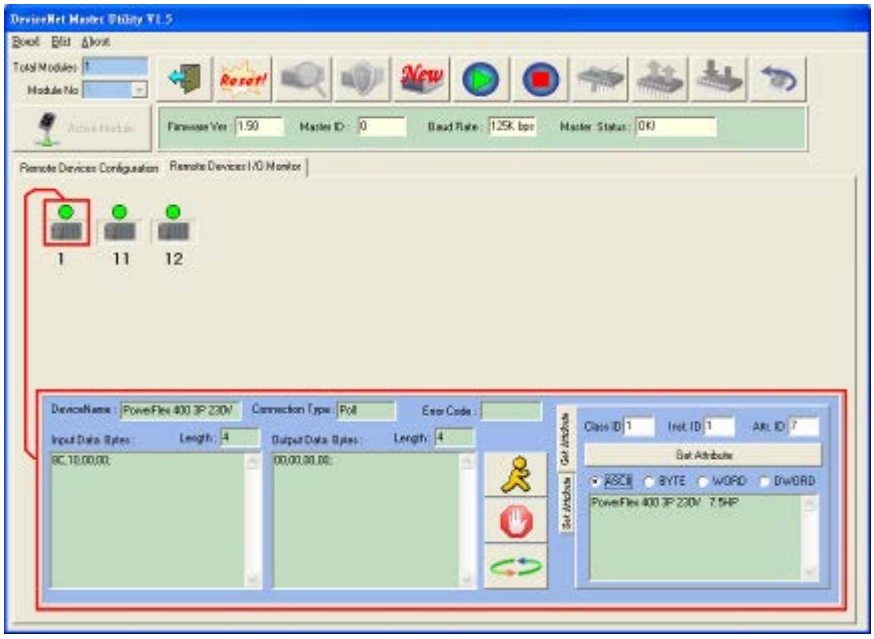
(2013/11/02, Johney)

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Q4: How to connect the DeviceNet slave which has 2-byte instance ID with the I-7565-DNM? (2013/11/05, Johney)

Ans:

We have provided the new firmware to support the 2-byte instance ID. Please update the firmware to v1.5 or newer. We have verified the firmware works fine by the AB inverter.





(2013/11/05, Johney)

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Q5: What is the meaning of the Explicit_EPR in the AddDevice() function? (2013/11/07, Johney)

Ans:

It is the “Expected Packet Rate”. This means that the timeout value when the slave device does not response. There are various slave devices which have different performance. We suggest that the user set the value of 2500 which is the default value of the DeviceNet spec.

(2013/11/07, Johney)

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Q6: Does the I-7565-DNM support loading the EDS file function? (2015/12/02, Johney)

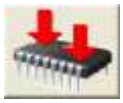
Ans:

There is another method which works like loading the EDS file.
By using the DNM_Utility, the user could add slave devices one by one in the first I-7565-DNM. The setting information will always be saved in the module, even the module was moved to another PC.

After adding all slave devices, the users are able to "Export the setting" from the I-7565-DNM. By using the "Export" button in the DNM_Utility, the setting of the I-7565-DNM will be save in a file (*.EEP). The “Export” button was shown In the ch 3.1.11 of the DNM_Utility manual which is “DeviceNet Master Utility User Manual.pdf”.



The file (*.EEP) could be viewed as the EDS file of the I-7565-DNM. The users can "Import the file" into another I-7565-DNM by the DNM_Utility. The "Import" button was shown in the ch3.1.12 of the DNM_Utility manual which is “DeviceNet Master Utility User Manual.pdf”.



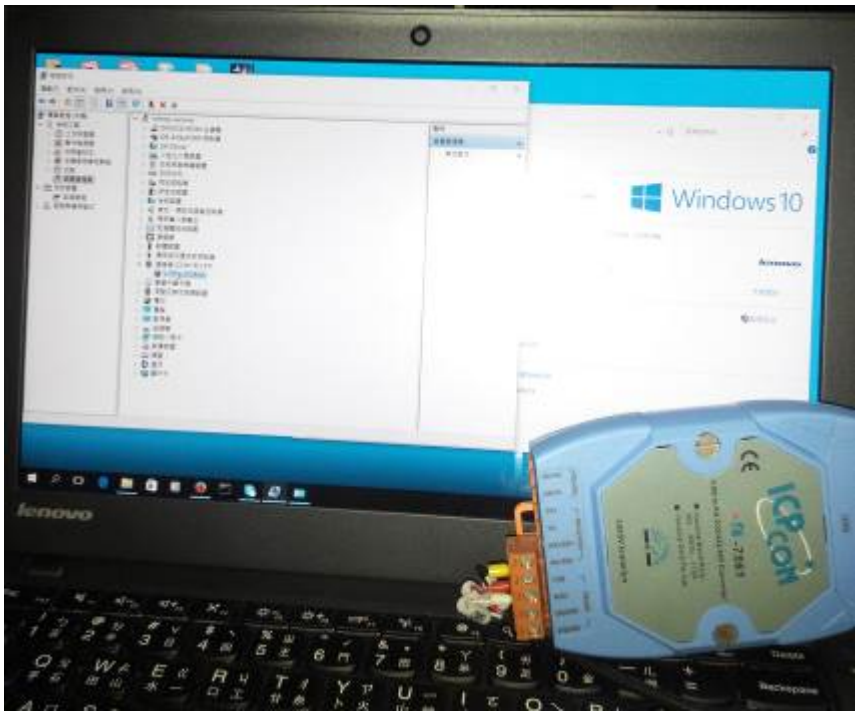
The configured I-7565-DNM has all the slaves’ information. The users just make the I-7565-DNM to start working in the Labview and no need to add the slave devices again. (2015/12/02, Johney)

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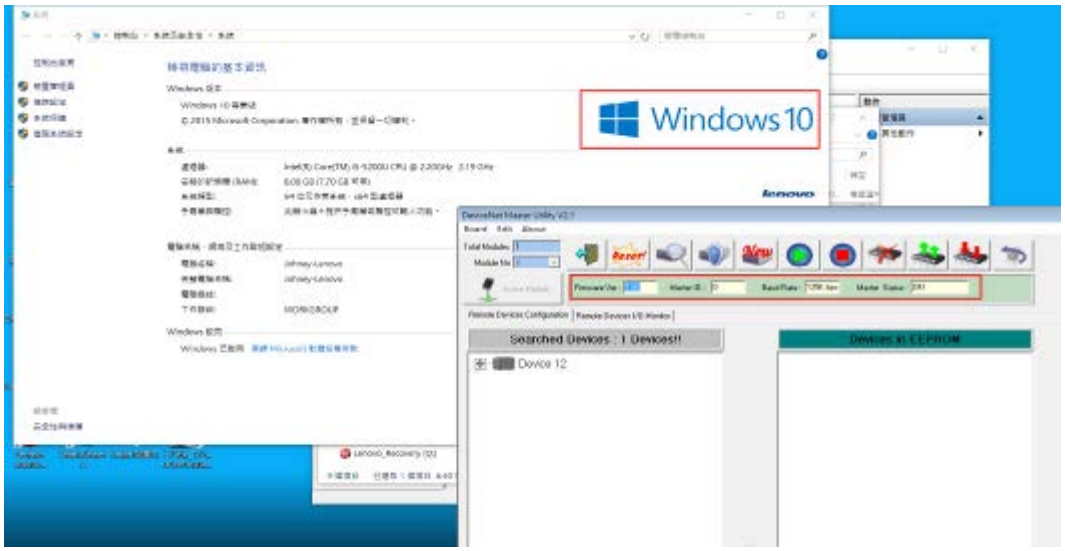
Q7: Does the I-7565-DNM could work on Win10 system? (2016/12/16, Johney)

Ans:

The I-7565-DNM was based on the I-756x USB driver. Here shows the I-7561 could work on Win10 system.



The DNM_Utility and I-7565-DNM also work fine on Win10 system.



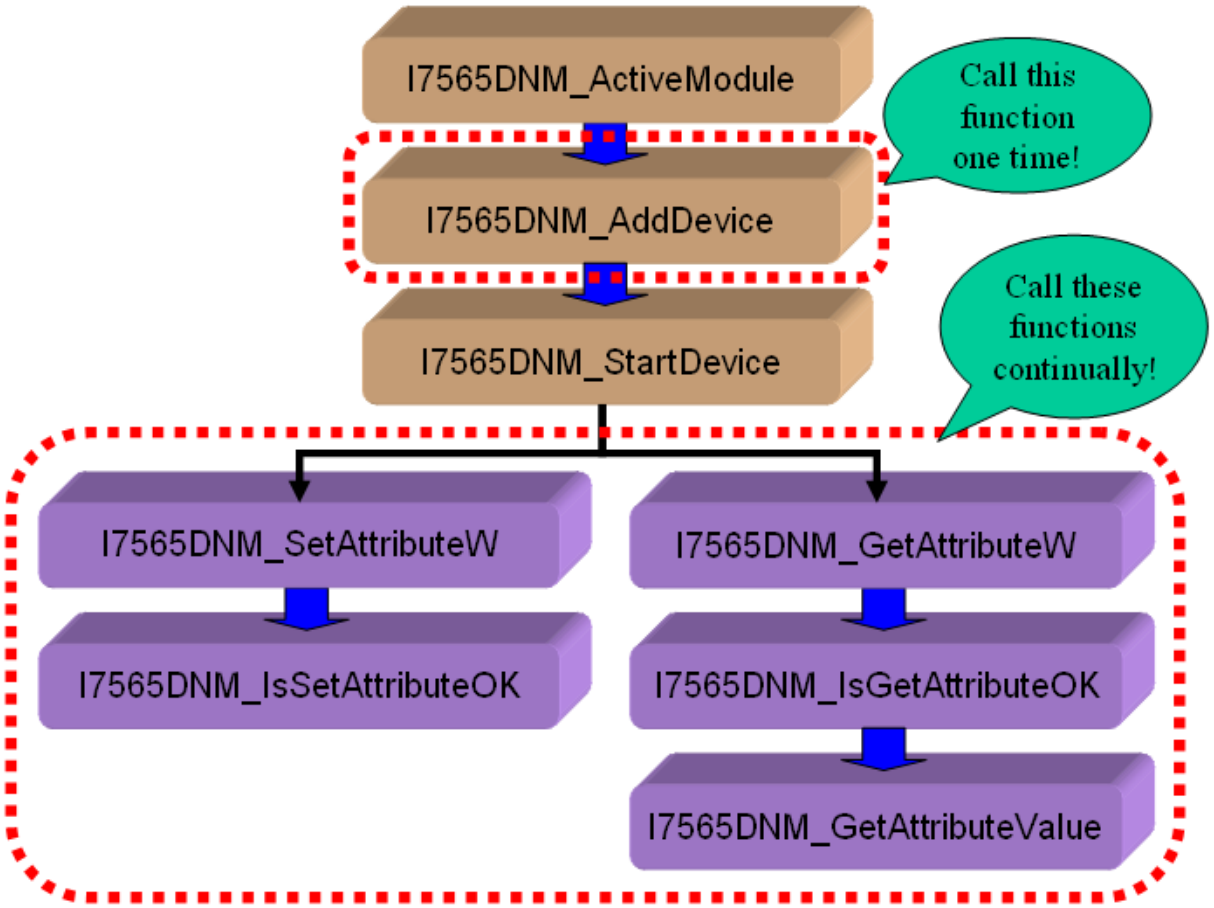
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Q8: Does the I-7565-DNM could only work with Explicit Message connection? (2016/12/16, Johney)

Ans:

Yes. The firmware version v1.6 or newer could support this methodology.

After added slave devices, you need to call I7565DNM_StartAllDevice API. It will make the I-7565-DNM to communicate with all slave devices. The user could follow the flow char in the manual. Here is the example in page 38.



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Q9: Does the I-7565-DNM could suspend the I/O connection? (2016/12/16, Johney)

Ans:

Yes. The firmware version v1.6 or newer could support this methodology.

Here is the example which the I-7565-DNM suspend the I/O connection and then send explicit message. Finally, the I-7565-DNM resumed the I/O connection.

```
Ret = I7565DNM.I7565DNM_PauseIOConnection(ActiveBoardNo, SlaveMacID)
alllcate = GetAllocationInfo(ActiveBoardNo, SlaveMacID)

Dim ReadOutData(512) As Byte
Dim woIOData(1) As Byte

Thread.Sleep(200)
woIOData(0) = "&H01"
woIOData(1) = "&H07"
Ret = I7565DNM.I7565DNM_SendExplicitMSG_W(ActiveBoardNo, SlaveMacID, "&H10", "&H6D", "&H01", 2, woIOData)
If (Ret = I7565DNM.DNMXS_NoError) Then
    'Debug.Print("Init : OK!!")
    Dim timer As Integer = 0
    While Timeout(timer, 1000, 20000)
        Ret = I7565DNM.I7565DNM_IsExplicitMSGRespOK(ActiveBoardNo, SlaveMacID)
        If (Ret = I7565DNM.DNMXS_NoError) Then
            Thread.Sleep(1000)
            Ret = I7565DNM.I7565DNM_GetExplicitMSGRespValue(ActiveBoardNo, SlaveMacID, 512, ReadOutData)
            If (Ret = I7565DNM.DNMXS_NoError) Then
                '' Debug.Print("Return : OK!!")
               Thread.Sleep(1000)
               Exit While
            Else
                ' MessageBox.Show(String.Format("GetReadAttibuteMSGRespValue : Error! {0}", Ret))
            End If
        Else
            Debug.Print("")
        End If
    End While

Else
    ' Debug.Print(String.Format("Init fail : Error! {0}", Ret))
End If

Thread.Sleep(200)
Ret = I7565DNM.I7565DNM_ResumeIOConnection(ActiveBoardNo, SlaveMacID)
```


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Q10: How to communicate with the [SMC Valve] by the I-7565-DNM? (2016/12/16, Johney)

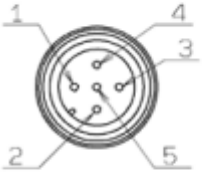
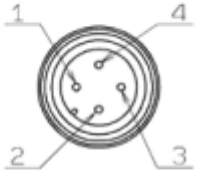
Ans:

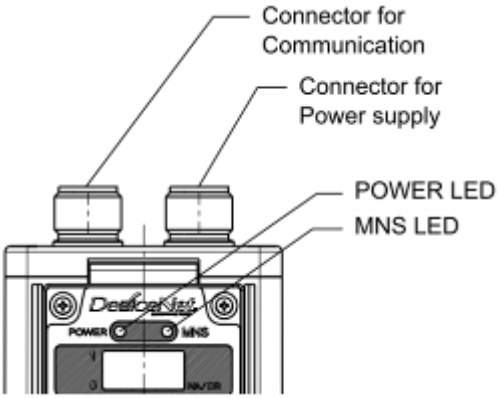
SMC ITVH-2000 :

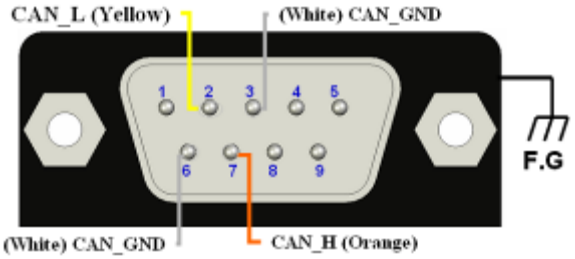
Series ITV electro-pneumatic and electronic vacuum regulators control air/vacuum pressure in proportion to an electric signal. They are light weight in design with a bright and easy to read LED display.

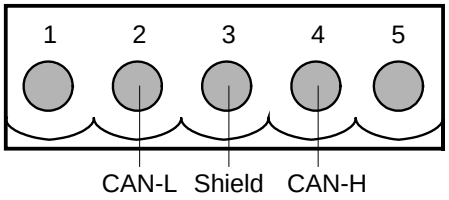


Wire connection with the DeviceNet Master:

DeviceNet™ Connector M12 5PIN CONNECTOR	Power supply Connector M12 4PIN CONNECTOR
	
1. DRAIN	1. Vcc
2. V+	2. No Connection
3. V-	3. GND
4. CAN H	4. No Connection
5. CAN L	

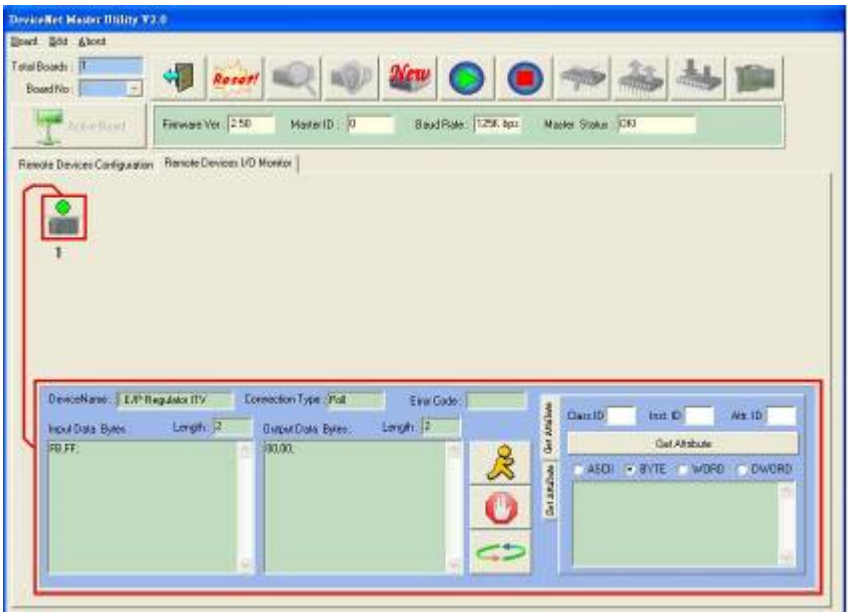




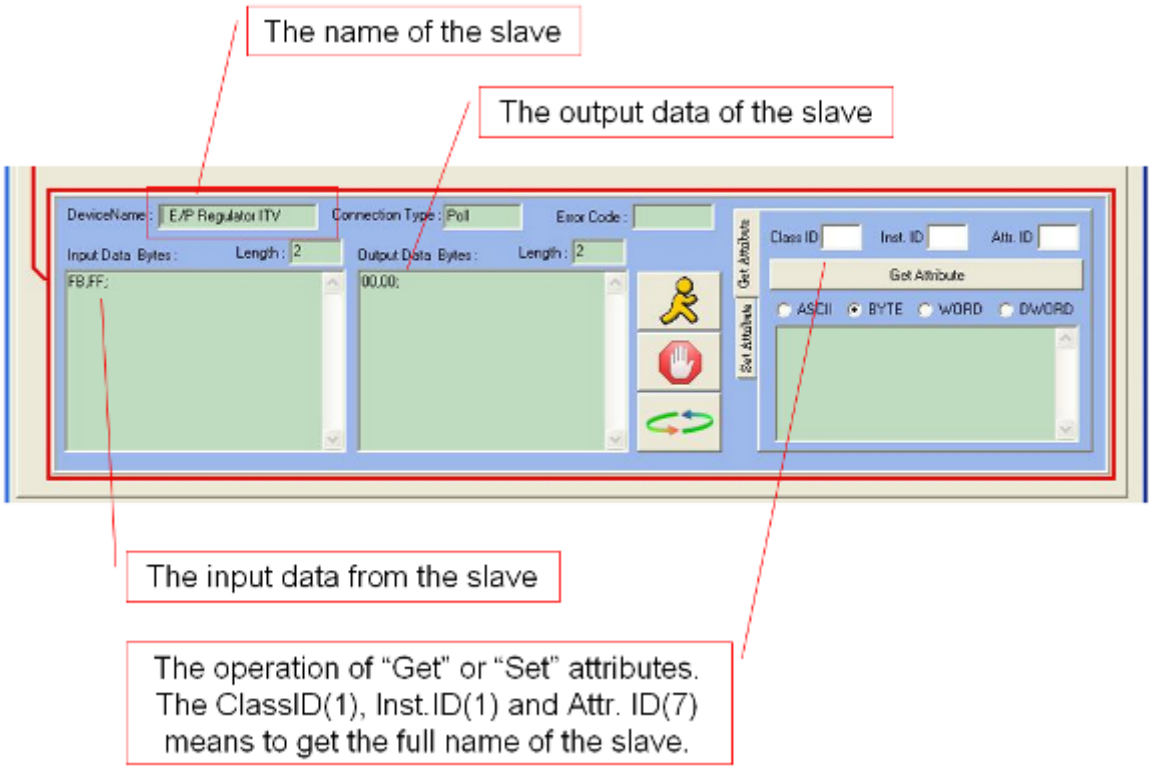


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The DNM Utility communicates with the SMC ITV valve :



Here shows that the DNM_Utility has communicated the SMC valve.



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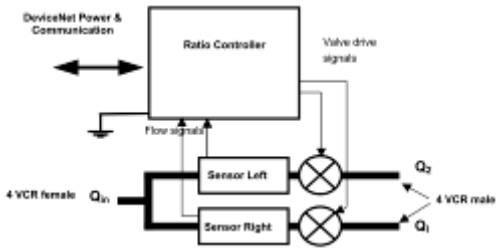
Q11: How to communicate with the [MKS FRCA Valve] by the I-7565-DNM? (2016/12/16, Johney)

Ans:

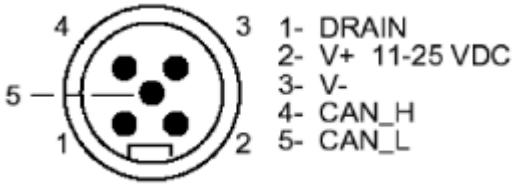
MKS FRCA Ratio Mass-Flo Controller :

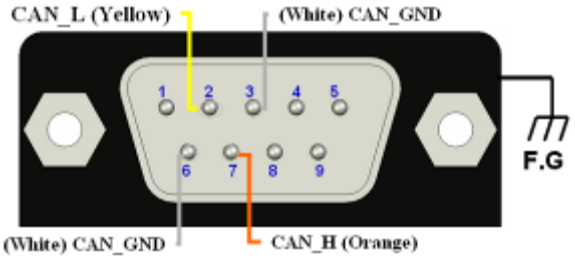
The MKS FRCA Ratio Mass-Flo® controller is a compact unit, which accurately divides the mass flow of gas or any mixture of gasses (Qin) into two proportionate flows (Q1 & Q2). The flow outputs are controlled by programming the ratio of the two outputs (α = Q2/Q1) to a value equal to or greater than 1. The MKS FRCA Ratio Mass-Flo controller uses proven thermal sensor technology to measure the flows through the unit and provides quick response to changes in ratio (α) setpoint. The ratio of the flow outputs of the MKS FRCA Ratio Mass-Flo controller remains constant through input flow perturbations.

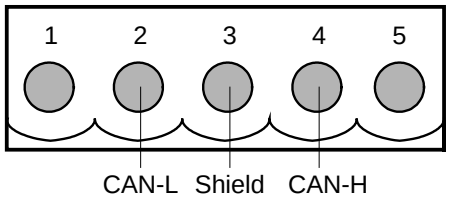




Wire connection with the DeviceNet Master:

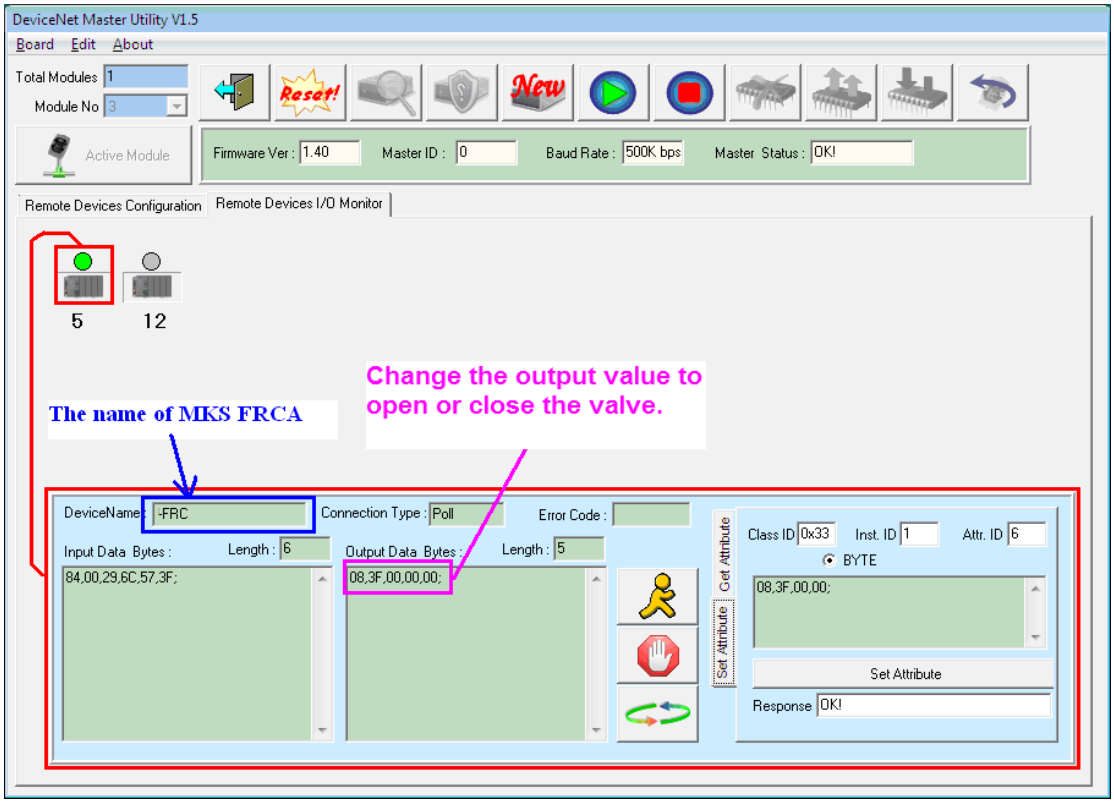






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The DNM Utility is communicating with the MKS FRCA valve



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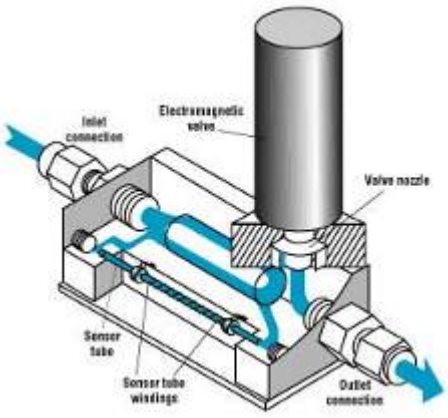
Q12: How to communicate with the [UNIT IFC-125 Valve] by the I-7565-DNM? (2017/12/07, Johney)

Ans:

CELERITY UNIT IFC-125 :

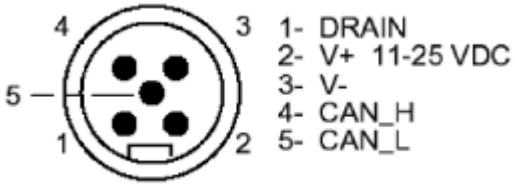
Celerity Mass Flow Controllers Precisely monitor and control the mass flow of gases in processes such as Plasma Etching, CVD, Diffusion, EPI, and Sputtering where superior accuracy is required. Mass Flow Meters are identical to mass flow controllers, except that they do not have a controlling valve. Therefore they do not control, but only accurately measure and report the gas flow that is passing through them.

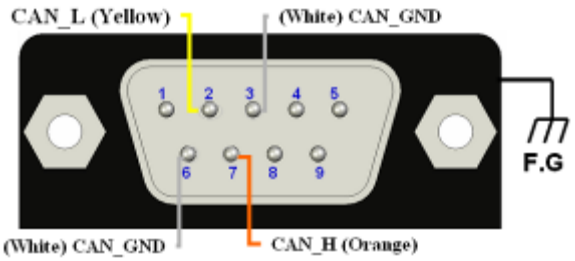


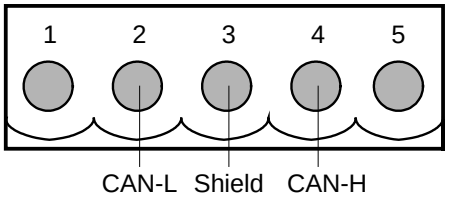


The pictures came from the manual and are belonged to the Celerity.

Wire connection with the DeviceNet Master:

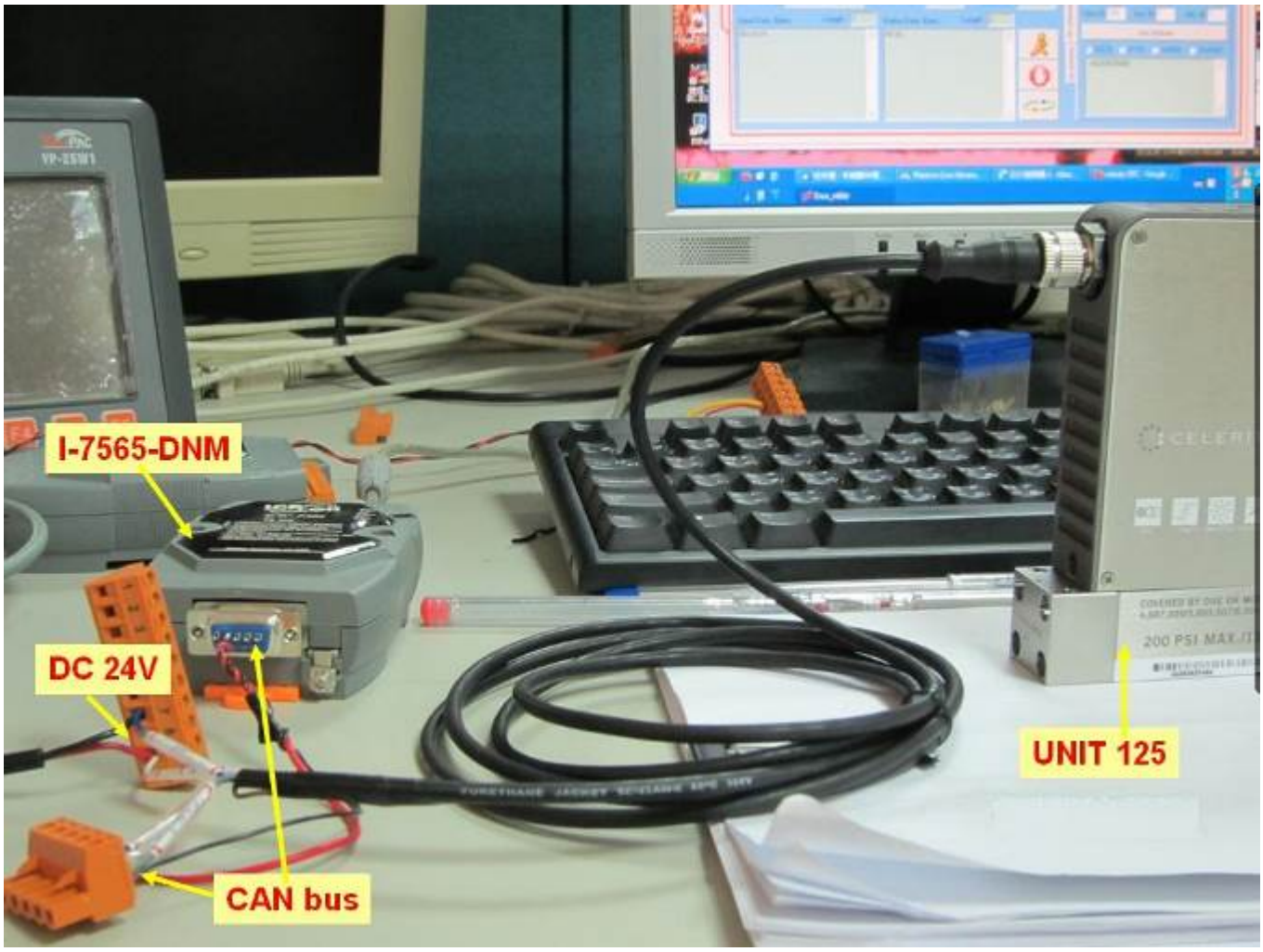






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The users need to provide extra DC 24V power in M12-5PIN of the V+(pin-2) and V-(pin-3) for the DeviceNet module.

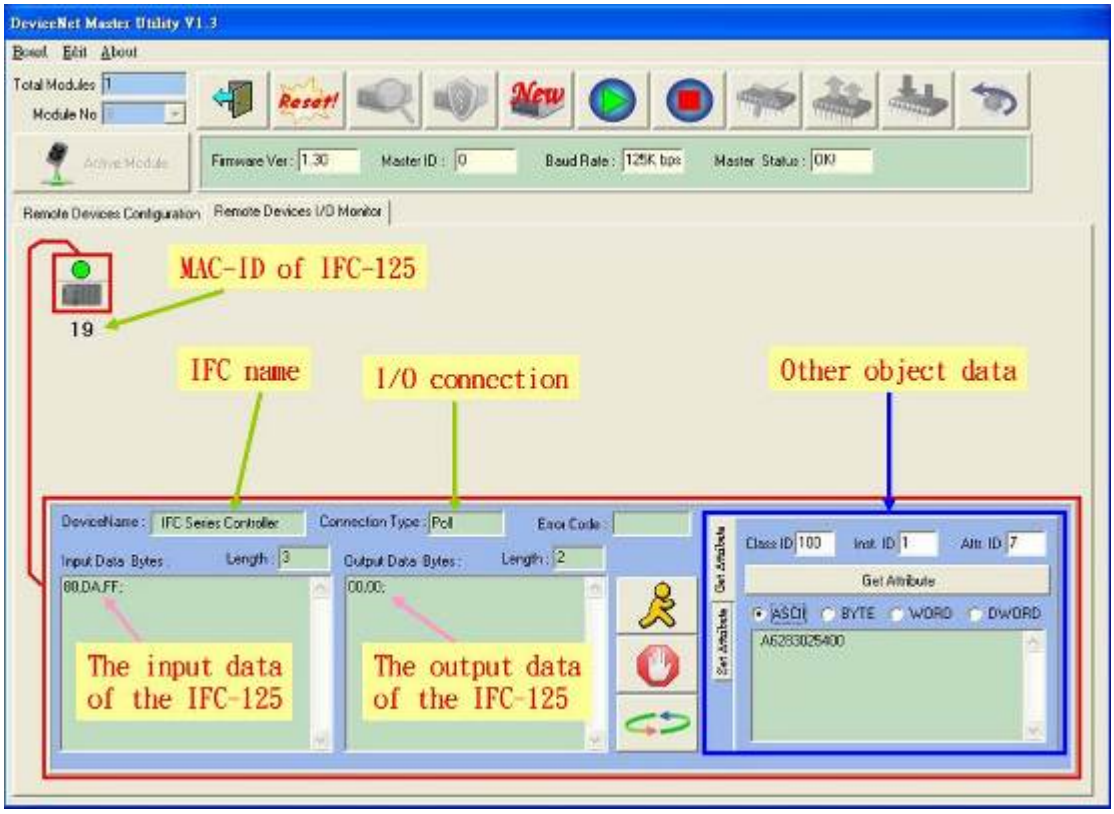


Set the UNIT IFC-125 MAC-ID = 19



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The DNM Utility is communicating with the UNIT IFC-125 valve



The node #19(IFC-125 valve) supports Poll connection. The Poll connection is with 3-byte input data and 2-byte output data which indicates the valve information.

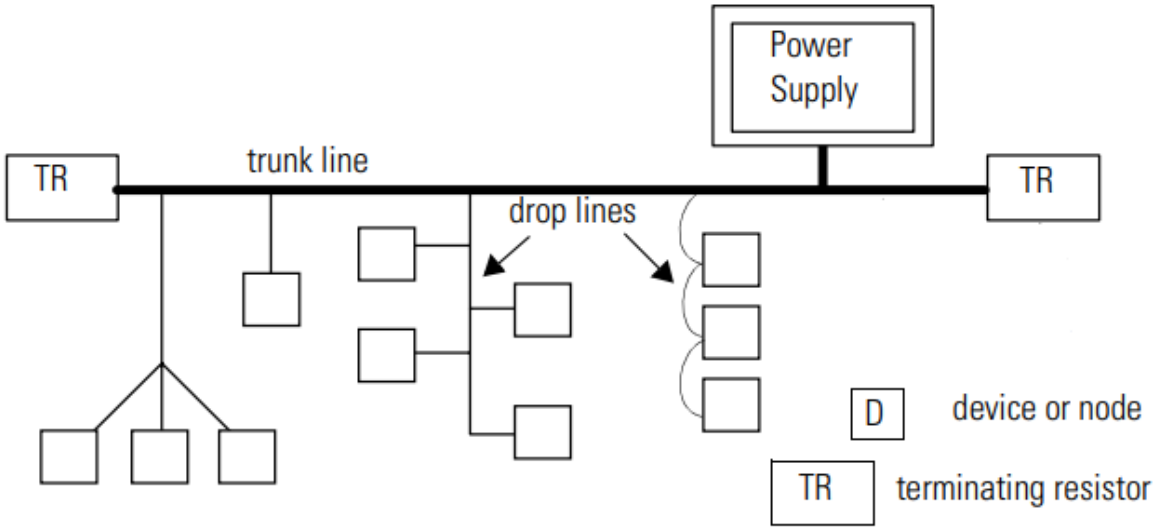
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Q13: The DeviceNet network led(NET) is blinking as connecting with the I-7565-DNM. (2020/11/04, Johney)

When the NET led blinking, it shows the CAN network meets some errors. Usually, there are two frequent problems.

1. The baud rate is mismatch.
   If you change the baud rate of the network, make sure that all slave devices change to the new baud rate. Mixed baud rates produce communication errors. There are only 125 kbps, 250 kbps, 500 kbps baud rates supported.

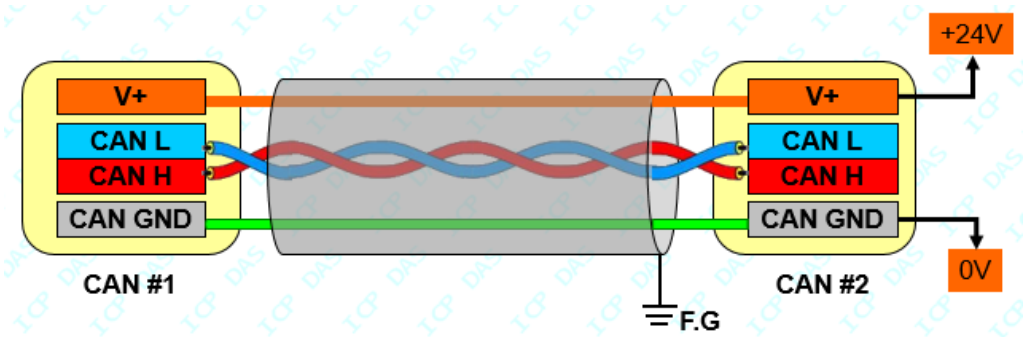
2. The wrong terminal resistor.
   Ensure that you have one 121Ω terminating resistor at each end of the trunk line.



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Q14: Why the I-7565-DNM can’t go online? (2020/11/06, Johney)

1. Make sure the CAN network has other slave devices. The single PISO-DNM100U cannot go online alone.
2. Make sure the DeviceNet network has connected to the power source.



3. Make sure the communication distance and the baud rate. The ideal CAN table shown below.

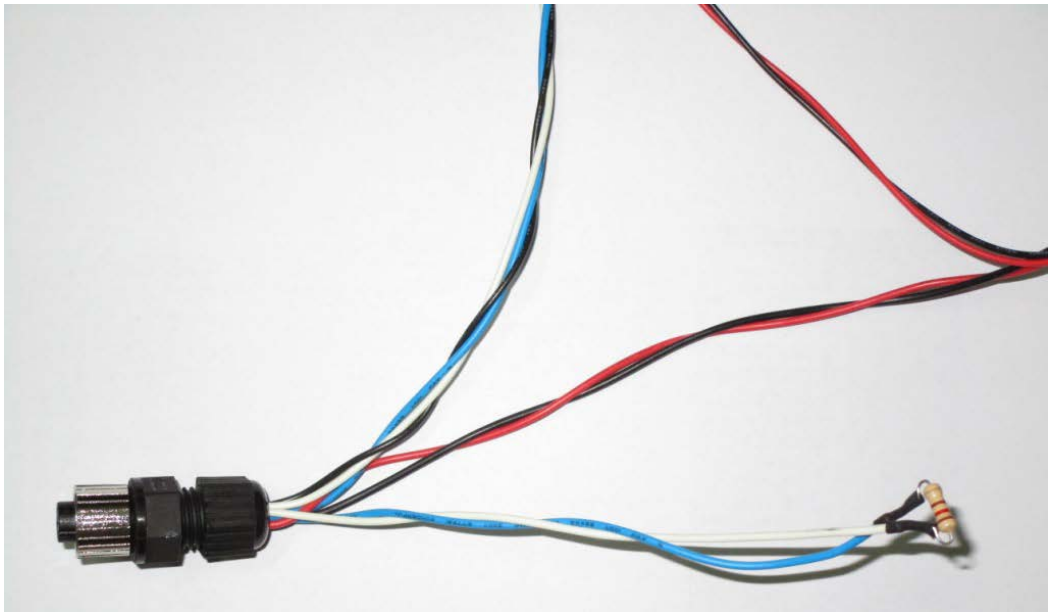
CAN Baud Rate	Ideal CAN bus distance
500 Kbps	100 meters
250 Kbps	250 meters
125 Kbps	500 meters

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Q15: How can I add a terminal resistor with the M12 connector? (2020/11/12, Johney)

Ans:

Here shows the instruction.

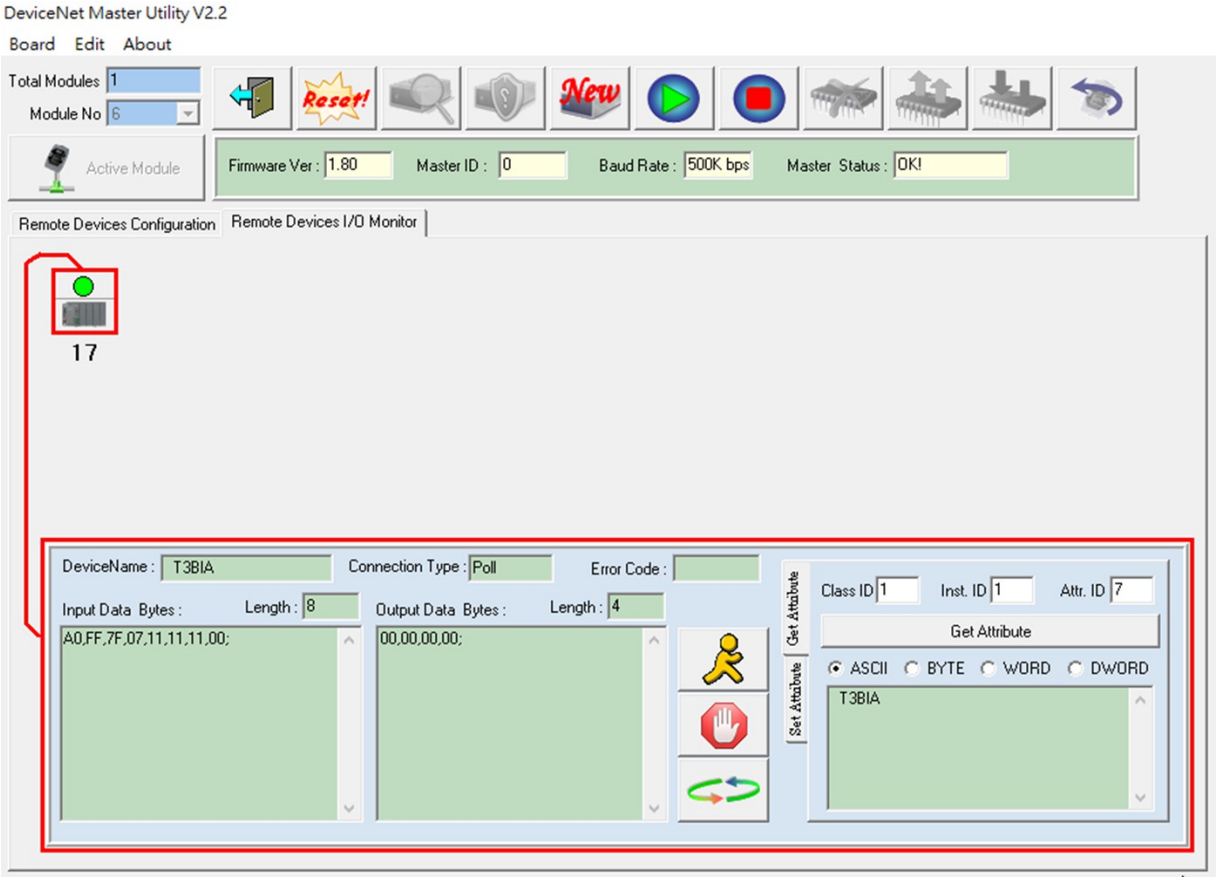


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Q16: How to open/close the MKS T3BIA with the DNM_Utility? (2020/11/18, Johney)

Ans:

Here shows the output data bytes of the DNM_Utility.



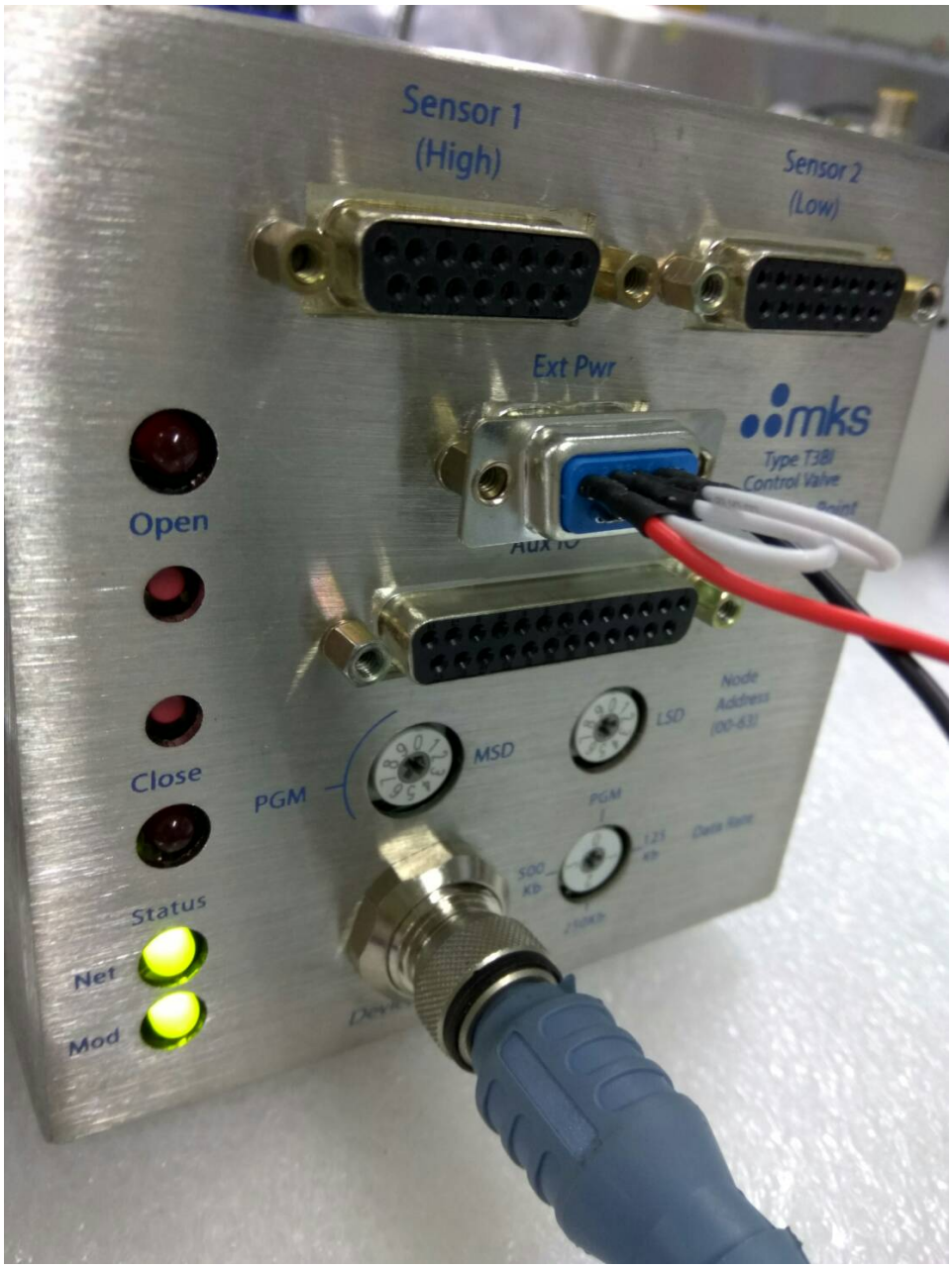
Output(4 bytes)	Input(8 bytes)	Plate
00,00,00,01;	A0,FF,7F,FF,FF,00,00,00	Open
00,00,01,01;	A0,FF,7F,00,00,00,00,01	Close
00,00,02,01;	A0,FF,7F,FF,FF,00,00,02	Open

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Q17: The PISO-DNM100U can’t find the MKS T3BIA. How to connect the external power of the MKS T3BIA? (2020/11/21, Johney)

Ans:

Here shows the connection.



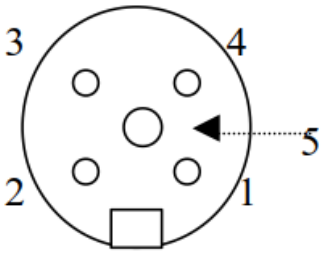
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Q18: The I-7565-DNM is DB9 of CAN-H and CAN-L. How to connect to the M12 connector of the MKS T3BIA? (2020/11/27, Johney)

Ans:

Here is the M12 pin assignment. You can connect the corresponding pins.

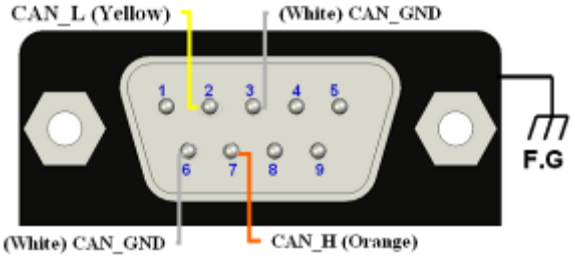
1 - Drain (bare)
2 - V+ (red)
3 - V- (black)
4 - CAN_H (white)
5 - CAN_L (grey)

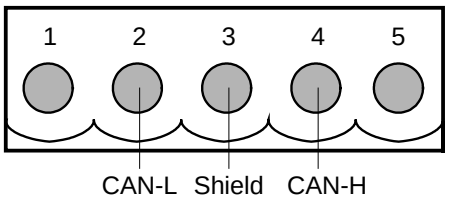


Mating Connector (Female)



Wire connection with the DeviceNet Master:





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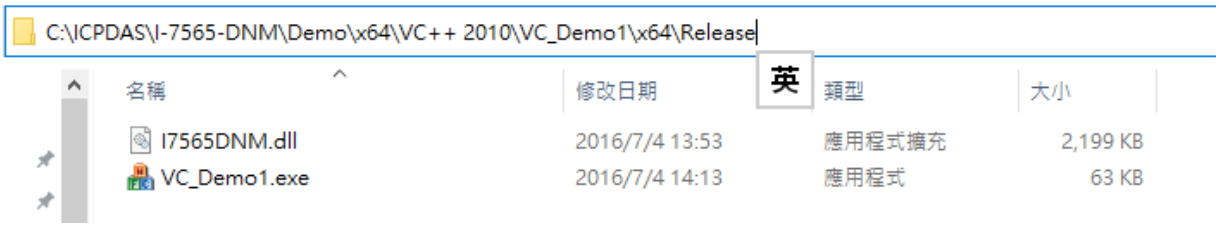
Q19: When developing the I-7565-DNM with LabVIEW, I got the “Library not found or fail to load”. How to solve this problem? (2020/12/03, Johney)?

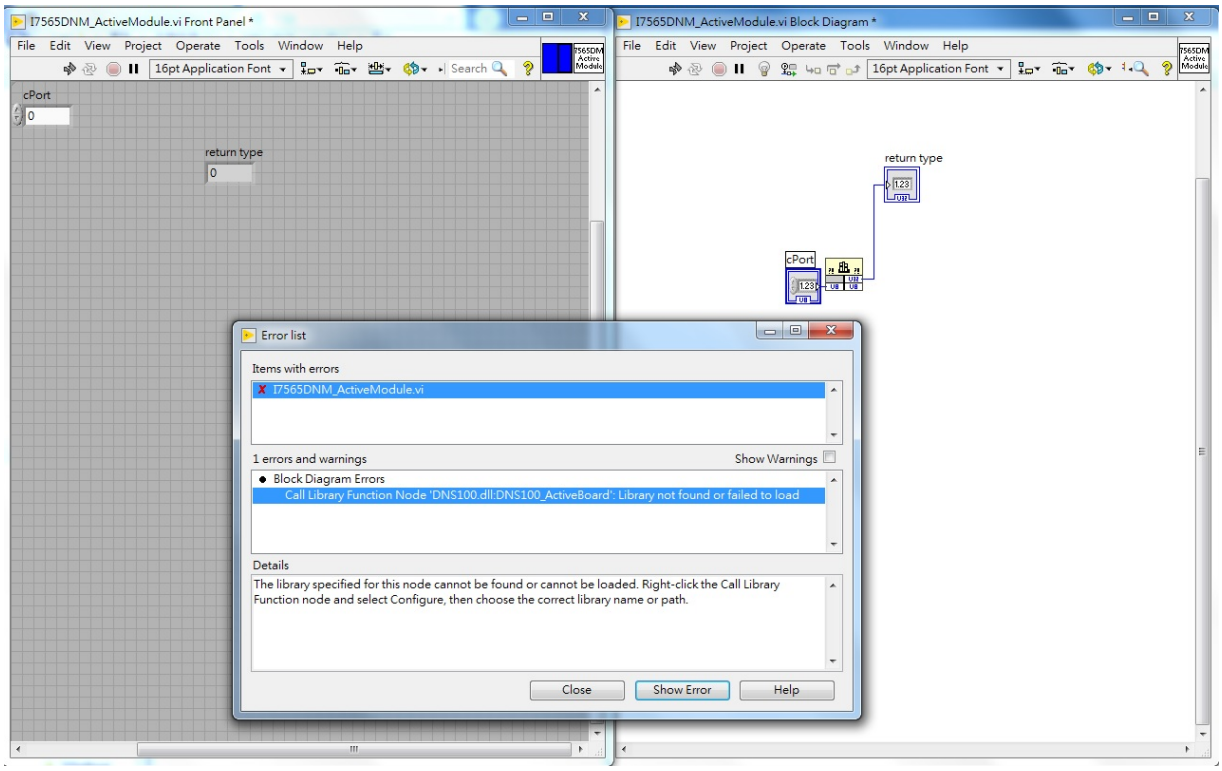
Ans:

If you have the situation below, it needs the x64 version of the I7565DNM.dll.

After installing the I-7565-DNM setup file, it locates at the

C:\ICPDAS\I-7565-DNM\Demo\x64\VC++ 2010\VC_Demo1\x64\Release\I7565DNM.dll





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Q20: When developing the I-7565-DNM with Ubuntu 16.04, I got the “File in wrong format”. How to solve this problem? (2020/12/07, Johney)?

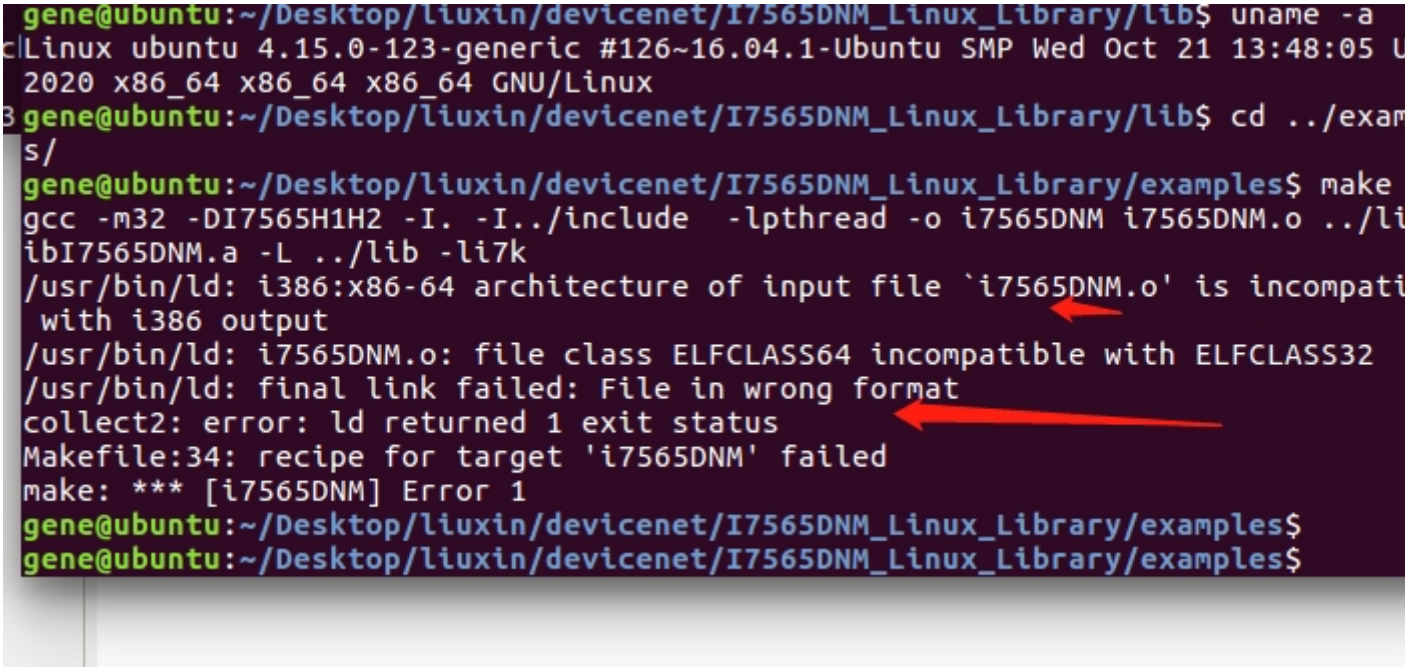
Ans:

If you have the situation below, it needs the x64 version of the library.

Please download from the link below.

https://www.icpdas.com/en/download/show.php?num=1968&model=I-7565-DNM-G

I7565DNM_Linux_Library.tgz

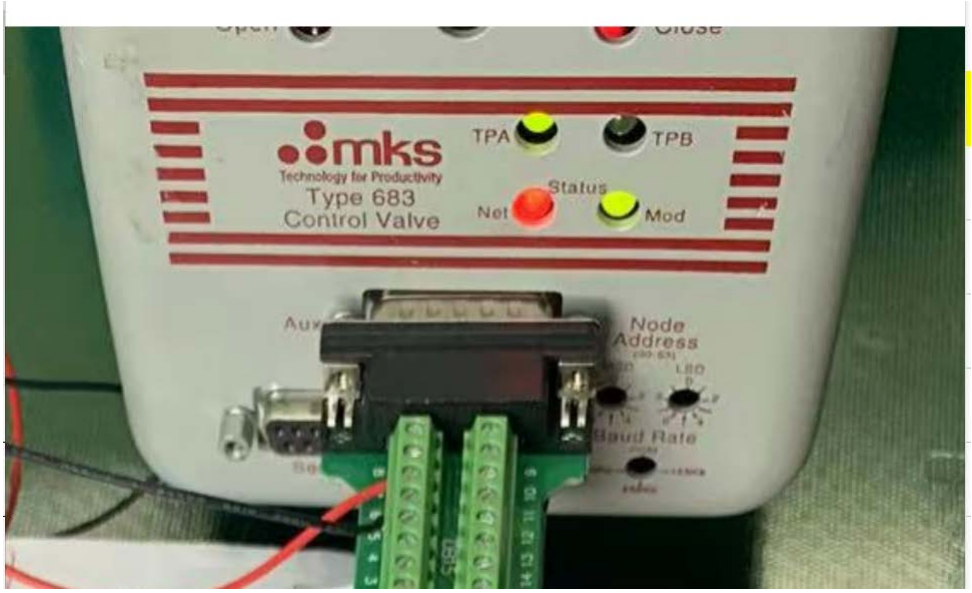


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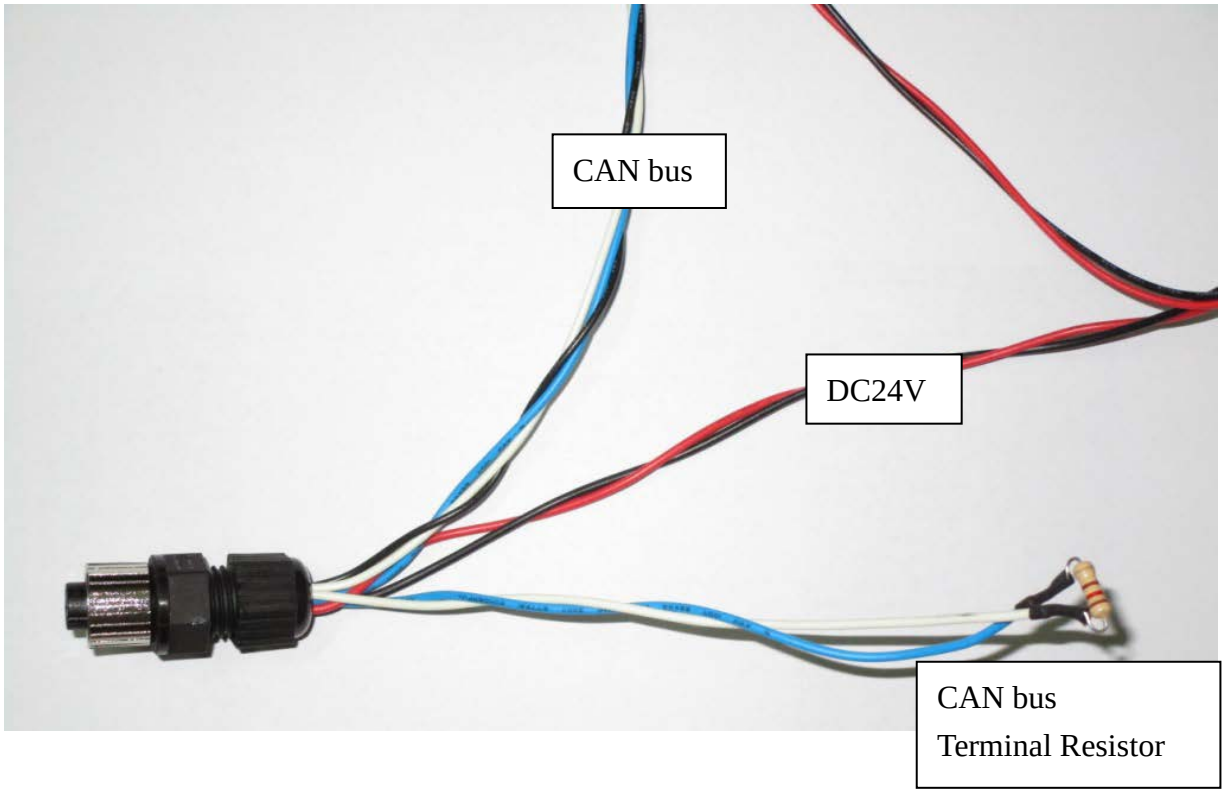
Q21: When using MKS 683B with the I-7565-DNM, the DNM_Utility can not find the MKS683B. What is problem is? (2023/02/07, Johney)?

Ans:

The AUX power pin of the MKS683B can not provide the DeviceNet bus. Here is the wrong picture.



The users need to provide power into the D-Sub 9-pin or M12 connector. Here show the correct M12 cable with DC24V power.

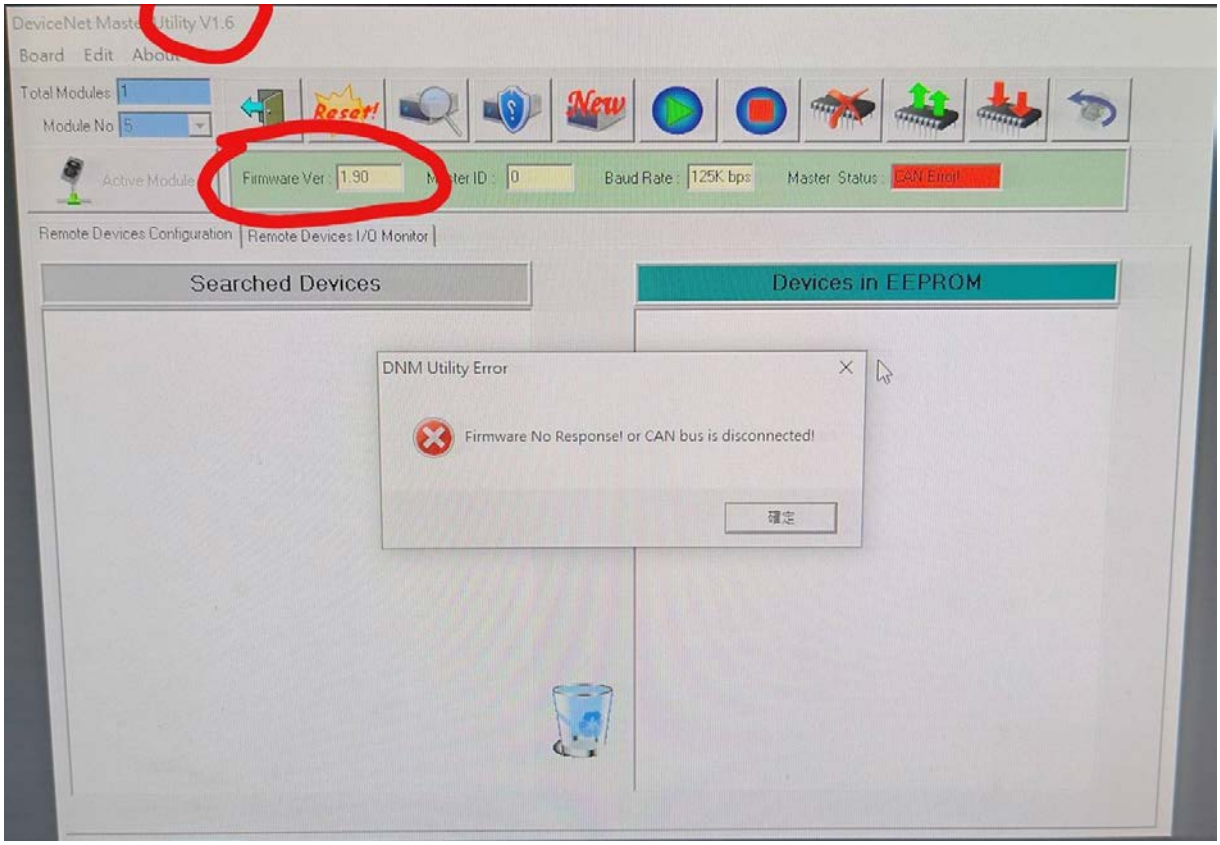


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Q22: When using I-7565-DNM with DNM_Utility, the DNM_Utility shows CAN bus disconnected. What the problem is? (2023/07/03, Johney)?

Ans:

The I-7565-DNM can not work alone. It will show the message when activing.



It should work with at least one slave device and check if there is exists terminal resistors in the end of the CAN bus.

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