How to communicate with the [IFC-125 Valve] by DeviceNet master
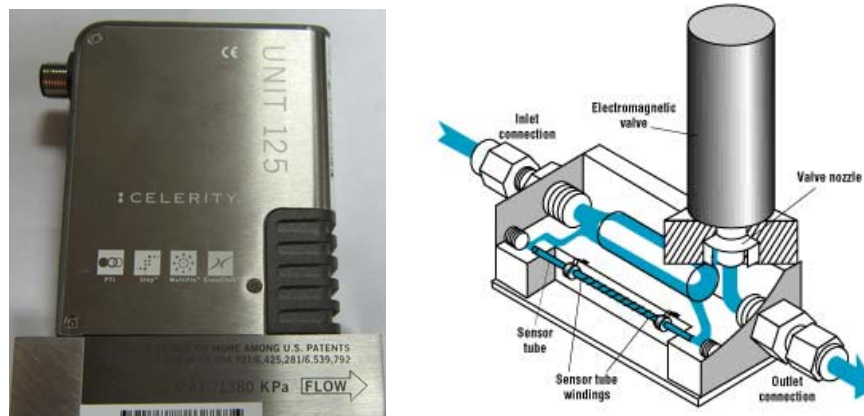
DeviceNet Master series:

　　DeviceNet Master series includes the USB interface(I-7565-DNM), PCI interface(PISO-DNM100U) and PAC module(I-8124W). They can represent an economic solution of DeviceNet application and be a DeviceNet master device on the DeviceNet network. They support Group 2 only Server and UCMM functions to communication with slave devices. They are popularly applied in the industrial automation, building automation, vehicle, marine, and embedded control network.

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.

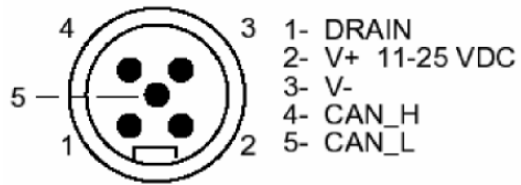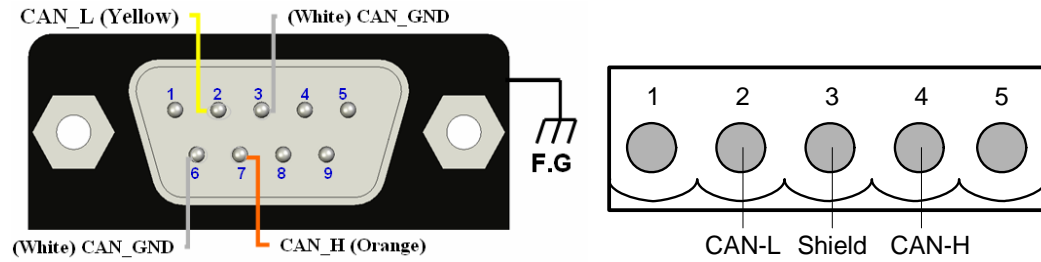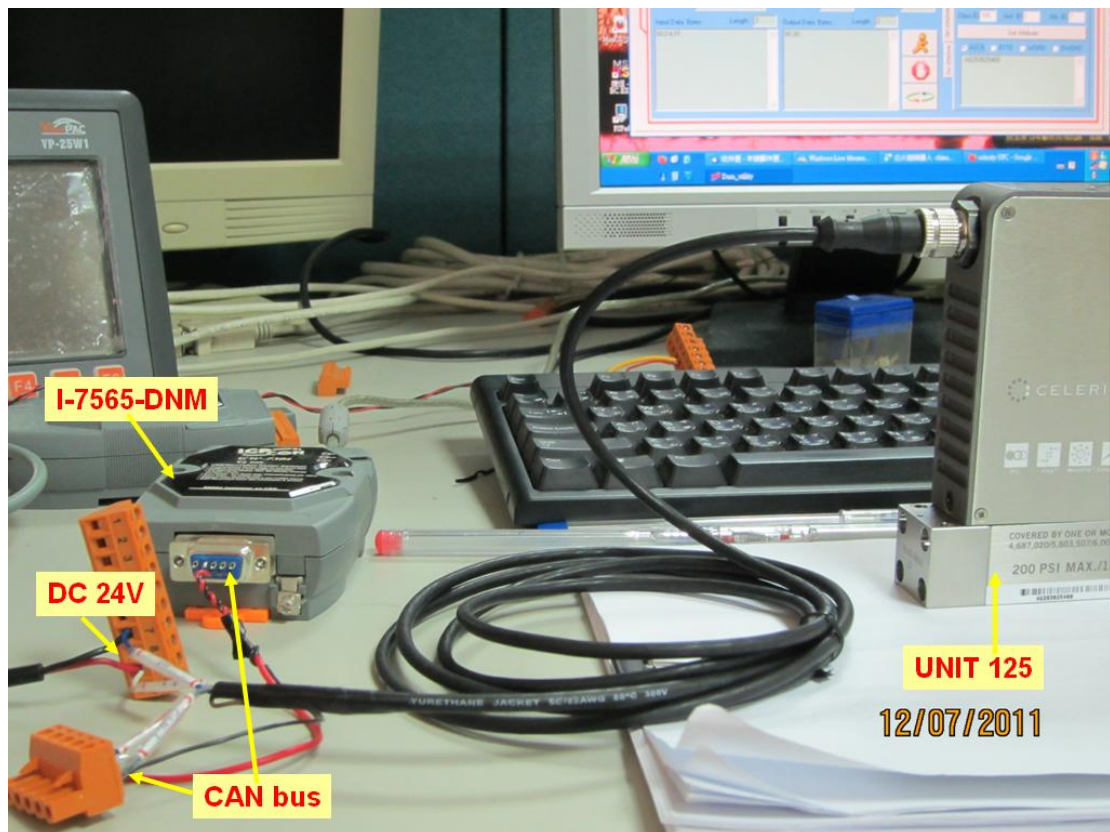## Wire connection with the DeviceNet Master:

Figure 3. 9000 Series DeviceNet Connector Pinout (Male)

1- DRAIN
2- V+ 11-25 VDC
3- V-
4- CAN_H
5- CAN_L

CAN_L (Yellow)   (White) CAN_GND
(White) CAN_GND   CAN_H (Orange)
F.G

CAN-L Shield CAN-H

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.

DNM Utility

The software utility includes various useful functions which help users to diagnose and access the DeviceNet devices. The users do not care about the protocol and configurations. The users could download from the website below.

ftp://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/devicenet/master/dnm_utility/

Set the UNIT IFC-125 MAC-ID = 19

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.