CANopen - Network Adapter
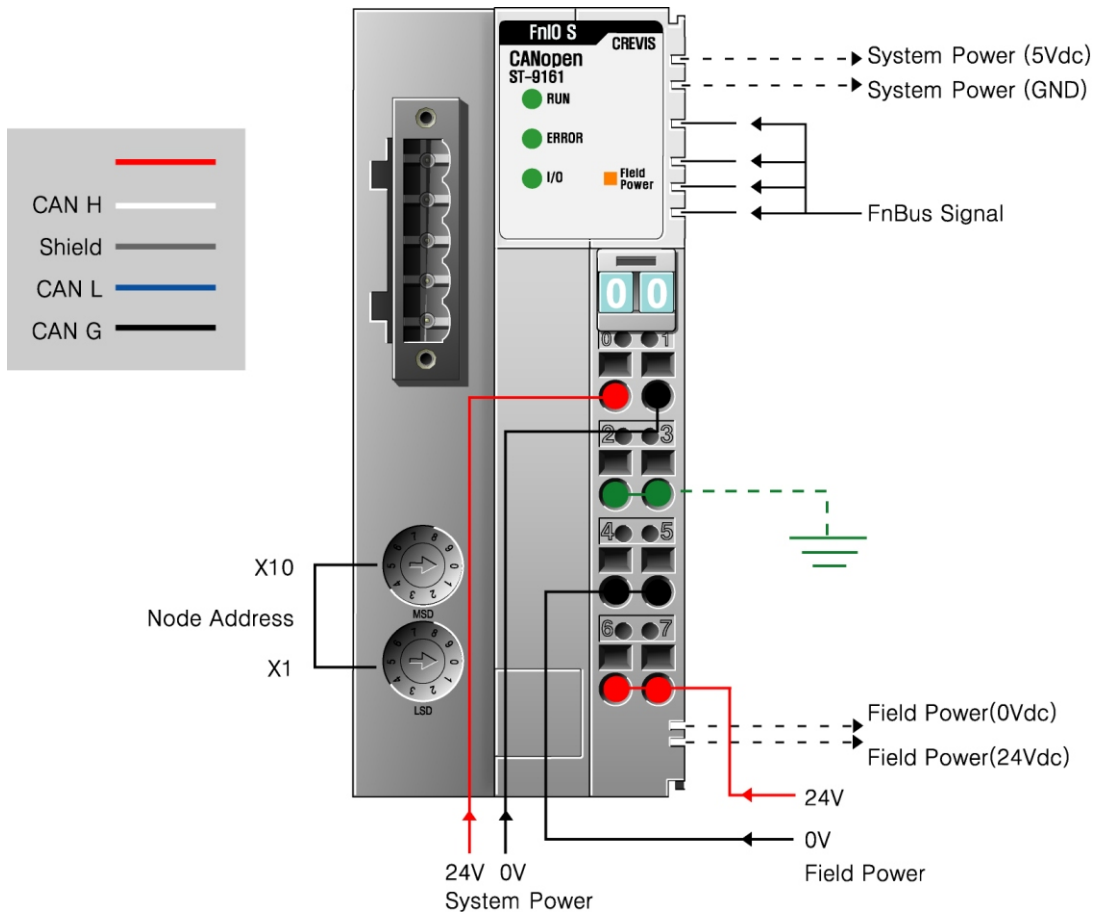
CANopen

- NA-9161 is CANopen Network Adapter and connected with CANopen via 5 Pin Open Connector.
- NA-9161 works as a Slave in the Master/Slave cercumstance .
- The Node Size is able to extend upto maximum 99 units.
- Each NA-9161 can receive and transmit maximum 8 PDOs.
- The NA-9161 has the indicator for the diagnostic functions (RUN, Error, expansion module status, field power status) .
- It supports the communication speed from 10Kbps to 1Mbps.
- The Network Adapter and the expansion module can be represented as a parameter on PC by usnig the configuration tool
  software provided from Master.

Items	CANopen Adapter Module
Communication Interface Specifications	
Number of Network Modules	Max. 99 Slot
Expansion I/O Module	Max. 32 Slot
Peripheral signal	Input 64 bytes / Output 64 bytes
Indicators	1 green CAN-RUN Status Indicator
	1 red CAN-ERR Status Indicator
	1 green/red FnBus Status Indicator
	1 green Field Power supply Status Indicator
Communication Rate	10 KByte ...1 MByte
Max. bus length	Depending on Baud rate
Number of PDOs available	8 Transmit PDOs / 8 Receive PDOs
Number of SDOs available	1 Standard SDOs
General Specification	
System Power	Supply voltage : 24Vdc nominal
	Voltage range : 11~28.8Vdc
Power Dissipation	100mA Typical @ 24Vdc
Current for I/O Module	1.5A @ Max. 5Vdc
Isolation	Network to Logic : Isolation
	Logic to Field power : Isolation
	Logic to System power : Non-isolation
Field Power	Supply voltage : 24Vdc nominal
	Voltage range : 11~28.8Vdc
Current in Jumper Contacts	DC 10A Max. capacity
Weight	155g
Module Size	42mm X 99mm X 70mm
Environment Condition	Refer to " 2. Environment Specification "

Status Indicator LED

RUN : CAN-RUN LED

State	LED is	To indicate
Not Powered Not On-line	Off	The Device is not on-line or may not be powered
		Not completed the Dup-MAC_ID test yet
On-line, STOPED	Single Flash Green	The Device is in STOPED state
On-line, PRE-OPERATIONAL	Blinking Green	The Device is in the PRE-OPERATIONAL state
On-line, OPERATIONAL	Green	The Device is in the OPERATIONAL state

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ERR : CAN-ERR LED

State	State	To indicate
Not Powered Not On-line	Off	Device is in mode baud rate search or may not be powered.
Warning limit reached On-line	Single Flash Red	At least one of the error counters of the CAN controller has reached or exceeded the warning level(too many error frames).
Error Control Event On-line	Double Flash Red	The guarding monitor has asserted, guarding telegrams are no longer being received. The adapter is pre-operational state.
Sync Error On-line	Triple Flash Red	A sync error has occurred. - The adapter is pre-operational(PDOs switch off).
Bus Off	Red	Device is in the cyclic data exchange mode with the parameterization master.

I/O : Expansion Module Status LED

State	State	To indicate
Not Powered No Expansion Module	Off	Device has no expansion module or may not be powered
Fn-Bus On-line, Do not Exchanging I/O	Flash Green	Fn-Bus is on-line but does not exchanging I/O data - Passed the expansion module configuration.
Fn-Bus Connection, Run Exchanging IO	Green	Expansion Slot is connected and run exchanging I/O data
FnBus connection fault during exchanging IO	Red	One or more expansion module occurred in fault state. - FnBus communication failure.
Expansion Configuration Failed	Flash Red	Failed to initialize expansion module - detected invalid expansion module ID. - overflowed Input/Output Size - initial protocol failure

Field Power : F ield Power LED

State	LED is	To indicate
Not Supplied Field Power	Off	Not supplied 24Vdc field power
Supplied Field Power	Green	Supplied 24Vdc field power

Mapping Data into the Image Table

CANopen Adapter

Read Data

TPDO Map

Slot 1 Input Data
Slot 2 Input Data
⋮
Slot 32 Input Data

Write Data

RPDO Map

Slot 1 Output Data
Slot 2 Output Data
⋮
Slot 32 Output Data

Network TPDO

Network RPDO

READ
Write

Expansion Slot1

Expansion Slot2

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Expansion Slot32