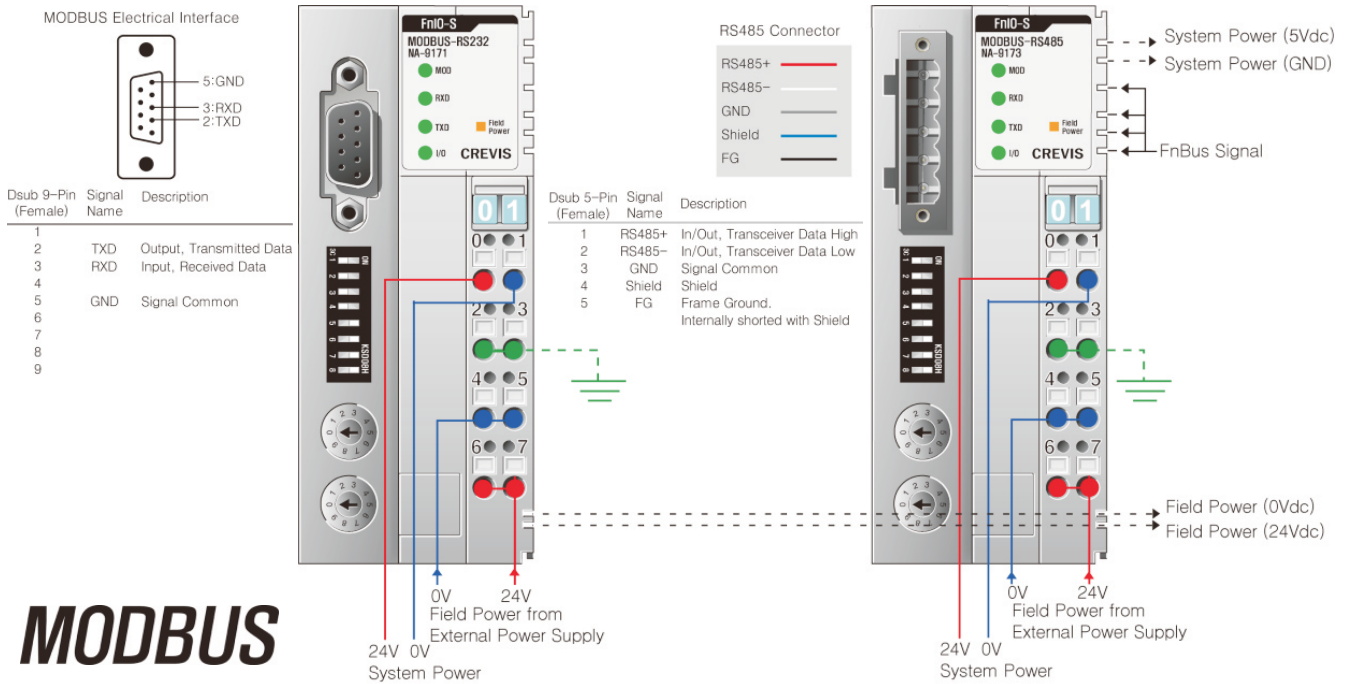


MODBUS-RS232 / RS485 Network Adapter, 252 bytes input and 252 bytes output



MODBUS

Item	NA-9171	NA-9173
Interface Specification		
Adapter Type	Slave node (MODBUS RS232 Serial RTU/ASCII Server)	Slave node (MODBUS RS485 Serial RTU/ASCII Server)
Max. Expansion Module	32 Slots	
Max. Input Size	126 Words (252 Bytes)	
Max. Output Size	126 Words (252 Bytes)	
Max. Length Bus Line	15m (NA-9171, RS232)	1200m (NA-9173, RS485, Depend on baud rate)
Max. Nodes	1 Node (NA-9171, RS232)	64 Node (NA-9173, RS485)
Baud Rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps	
Protocol	RTU and ASCII	
Interface Connector	Dsub 9 Pin (Female)	5 Pin Open Connector
Settable Node Address	1~99 with two rotary switches	
Indicator	5 LEDs 1 Green/Red, Module Status (MOD) 1 Green, Received Data (RXD) 1 Green, Transmit Data (TXD) 1 Green/Red Expansion Module Status (I/O) 1 Green, Field Power Status	
Module Location	Starter module- left side of FnIO system	
Field Power Detection	About 11Vdc	
General Specification		
System Power	Supply Voltage : 24Vdc nominal Supply Voltage Range : 11~28.8Vdc Protection : Output Current Limit (Min. 1.5A) Reverse Polarity Protection	
Power Dissipation	70mA Typical @24Vdc	
Current for I/O Module	1.5A @5Vdc	
Isolation	System Power to Internal Logic : Non-isolation System Power to I/O Driver : Isolation	
Field Power	Supply Voltage : 24Vdc nominal Supply Voltage Range : 11~28.8Vdc	
Max. Current Field Power Contacts	DC 10A Max	
Weight	150g	
Module Size	45mm x 99mm x 70mm	
Environment Condition	Refer to " Environment Specification"(page : 1-191)	

Network Adapter

Status Indicator LED

MOD : Module Status LED

Status	LED is	To indicate
No Power	Off	No power is supplied to the unit.
Device Operational	Green	The unit is operating in normal condition.
Device in Standby	Flashing Green	The device needs commissioning due to configuration missing, incomplete or incorrect.
MODBUS Error	Green/Red Toggle	MODBUS error such as watchdog error, CRC/LRC error, Setup dip switch, error, etc.
Minor Fault	Flashing Red	Recoverable Fault - EEPROM sum check error.
Unrecoverable Fault	Red	The device has an unrecoverable fault. - Memory error or CPU watchdog error.

RXD : Received Data LED

Status	LED is	To indicate
Not Powered	Off	Device is not on-line or may not be powered
Adapter received correct message frame	Flashing Green	Adapter(Slave) received correct frame which address to the slave or broadcast. About 20msec flashing.

TXD : Transmit Data LED

Status	LED is	To indicate
Not Powered	Off	Device is not on-line or may not be powered
Adapter transmit frame	Flashing Green	Adapter(Slave) transmit frame. About 20msec flashing.

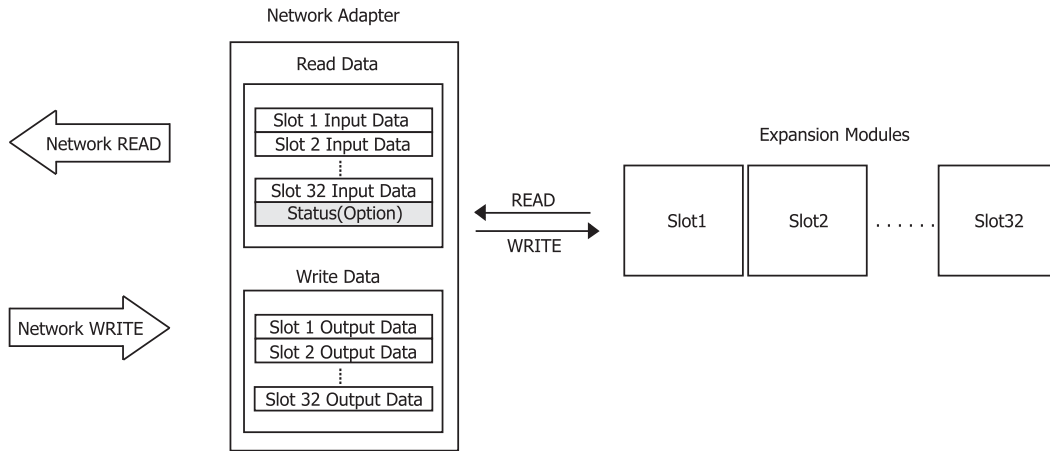
I/O : Expansion Module Status LED

Status	LED is	To indicate
Not Powered Not Expansion Module	Off	Device has no expansion module or may not be powered
Fn-Bus On-line, Do not Exchanging I/O	Flashing Green	Fn-Bus is normal but does not exchanging I/O data (Passed the expansion module configuration).
Fn-Bus Connection, Run Exchanging I/O	Green	Exchanging I/O data
Fn-Bus Connection Fault during Exchanging I/O	Red	One or more expansion module occurred in fault state - Changed expansion module configuration - Fn-Bus communication failure
Expansion Configuration Failed	Flashing Red	Failed to initialize expansion module - Detected in invalid expansion module ID - Overflowed Input/Output Size - Too many expansion module - Initial protocol failure - Mismatch vendor code between adapter and expansion module.

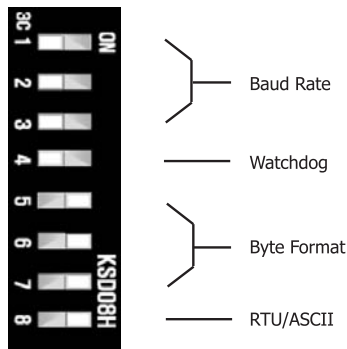
Field Power : Field Power Status LED

Status	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



MODBUS DIP Switch Setup



Item	Item setup	DIP Switch							
		#1	#2	#3	#4	#5	#6	#7	#8
Baud Rate	1200 bps	OFF	OFF	OFF					
	2400 bps	ON	OFF	OFF					
	4800 bps	OFF	ON	OFF					
	9600 bps	ON	ON	OFF					
	19200 bps	OFF	OFF	ON					
	38400 bps	ON	OFF	ON					
	57600 bps	OFF	ON	ON					
Watchdog	Disable Watchdog				OFF				
	Enable Watchdog				ON				
Byte Format	8 bit, No Parity, 1 Stop					OFF	OFF	OFF	
	8 bit, Even Parity, 1 Stop					ON	OFF	OFF	
	8 bit, Odd Parity, 1 Stop					OFF	ON	OFF	
	8 bit, No Parity, 2 Stop					ON	ON	OFF	
	7 bit, No Parity, 2 Stop Reference					OFF	OFF	ON	
	7 bit, Even Parity, 1 Stop Reference					ON	OFF	ON	
	7 bit, Odd Parity, 1 Stop Reference					OFF	ON	ON	
RTU/ASCII Mode	RTU Mode					ON	ON	ON	OFF
	ASCII Mode								ON

* ASCII Mode is not available