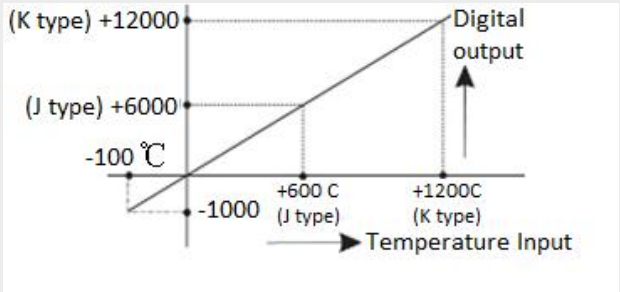
Programmable Logic Controller Module

LX TEMPERATURE BD

Model	Channels	Resolution	Functionality
LX3V-2TC-BD	2	14 bits	2 * Thermocouple Input

Specification

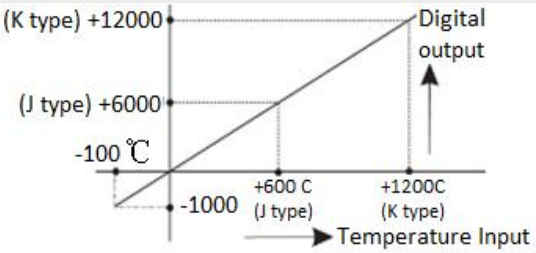
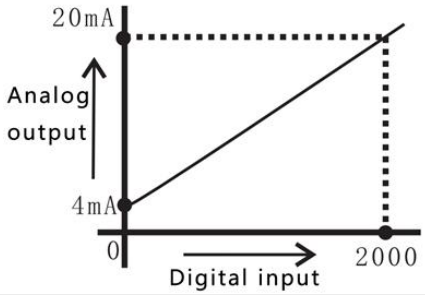
Item	LX3V-2TC-BD			
Analog circuitry	DC 24V ±10%, 70mA			
Digital circuitry	DC 5V, 90mA (From the PLC internal power supply)			
Temperature	Read data by buffers			
Analog input signal	Thermocouple: K or J type (2 channels)			
Range of rated temperature	K	-100℃ - 1200℃	J	-100℃ - 600℃
Digital output	K	-1000 - 12000	J	-1000 - 6000
	12 bits total			
Accuracy	K	0.4℃	J	0.3℃
Overall accuracy	±0.5%			
Conversion rate	700ms*2			
Conversion characteristics				

Programmable Logic Controller Module

LX TEMPERATURE & ANALOG BD

Model	Channels	Resolution	Functionality
LX3V-2TC2DAI-BD	4	14/12 bits	2 * Thermal Resistance Input ; 2 * Analog Output (4~20mA)

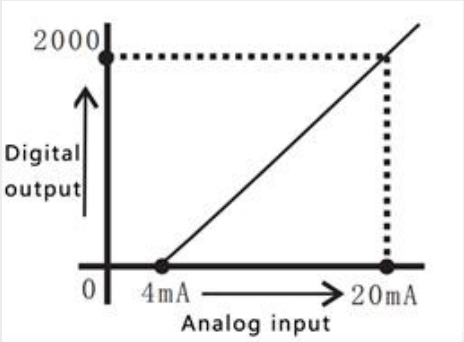
Specification

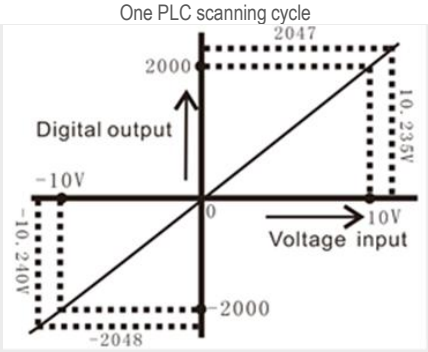
Item	LX3V-2TC2DAI-BD	
Power supply	24VDC±10%, 50mA; 5VDC±10%, 70mA (Powered by PLC host)	
	Temperature input (TC)	
Analog input signal	Thermocouple: K or J type, 2 channels (CH1, CH2)	
Range of rated temperature	K: -100℃ - 1200 ℃	J: -100℃ - 600 ℃
Digital output	K: -1000 - 12000	J: -1000 - 6000
	12 bits total	
Accuracy	K: 0.4 ℃	J: 0.3 ℃
Overall accuracy	±0.5%	
Conversion rate	50ms	
Conversion characteristics		
	Analog output (DAI)	
Rated range	4~20mA: 0~2000	
Analog output	DC 4~20mA (the external load resistance is no less than 500Ω)	
Digital output	12 bit binary	
Resolution	8uA [4~20mA / 2000]	
Precision	±0.5% of full scale	
AD conversion time	One PLC scanning cycle	
Input characteristics	The external load is 250Ω and 0-2000 is converted to 4-20mA 	
Insulation	No insulation in each PLC channel	
Occupied points	None	

LX ANALOG BD

Model	Channels	Resolution	Functionality
LX3V-4ADI-BD	4	12 bits	4 * Analog Input (4~20mA)
LX3V-4ADV-BD	4	12 bits	4* Analog Input (-10V~10V)

Specification

Item	LX3V-4ADI-BD
Power supply	5VDC±10%, 70mA (Powered by PLC host)
	Analog input (ADI)
Analog input range	DC 4~20mA (input resistance 250KΩ). Absolute maximum input: -2mA, +30mA
Rated range	4~20mA: 0~2000
The maximum display range	-500~2048
Resolution	8uA[4mA ~20mA / 2000]
Precision	±0.5% of full scale (4~20mA:±0.08mA)
AD conversion time	One PLC scanning cycle
Input characteristics	
Insulation	No insulation in each PLC channel
Occupied points	None

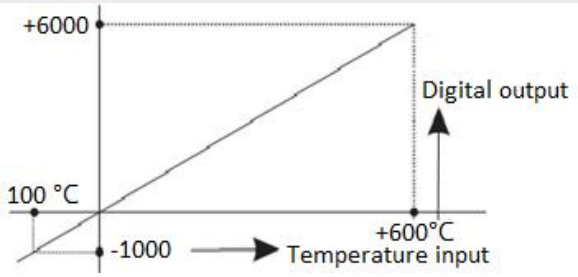
Item	LX3V-4ADV-BD
Power supply	5VDC±10%, 70mA (Powered by PLC host)
	Analog input (ADV)
Analog input range	DC-10V~10V (input resistance 160KΩ). Note: If the input voltage exceeds ±15V, the unit will be damaged.
Rated range	-10V~10V: -2000~2000
The maximum display range	-2048~2048
Resolution	5mV[10V default scope 1/2000]
Precision	±0.5% of full scale
AD conversion time	One PLC scanning cycle
Input characteristics	
Insulation	No insulation in each PLC channel
Occupied points	None

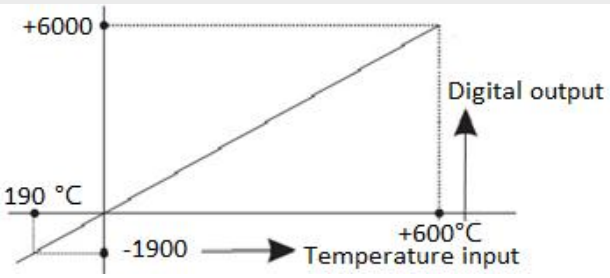
Programmable Logic Controller Module

LX TEMPERATURE BD

Model	Channels	Resolution	Functionality
LX3V-2PT-BD	2	14	2 * Thermal Resistance Input
LX3V-2PTS-BD	2	14	2* Thermal Resistance Input, Precision >0.1℃°

Specification

Item	LX3V-2PT-BD
Analog circuitry	DC 24V ±10%, 50mA
Digital circuitry	DC 5V, 90mA (From the PLC internal power supply)
Celsius	Read data by buffers
Analog input signal	PT100 sensor, 3 wires, 4 channels (CH1, CH2, CH3, CH4), 3850PPM/℃
Sensor current	1mA, 100Ωpt100
Compensation range	-100℃ - 600℃
Digital output	-1000 - 6000
	12 bits total, 11 bits for data and 1 bit for sign
Accuracy	0.2℃ - 0.3℃
Overall accuracy	±1%
Conversion rate	700ms
Conversion characteristics	

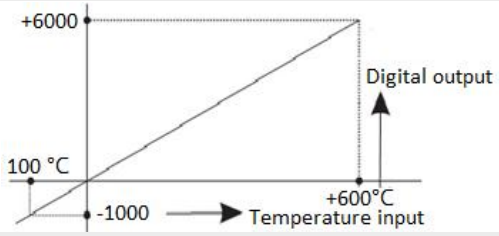
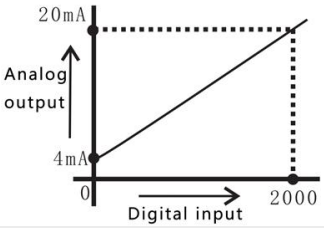
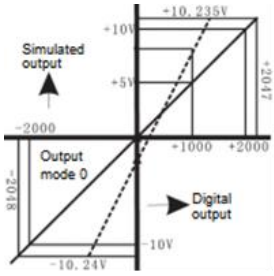
Item	LX3V-2PTS-BD
Analog circuitry	DC 24V ±10%, 50mA
Digital circuitry	DC 5V, 90mA (From the PLC internal power supply)
Celsius	Read data by buffers
Analog input signal	PT100 sensor, 3 wires, 2 channels (CH1, CH2)
Sensor current	1mA, 100Ω, (PT100)
Compensation range	-190 °C - 600 °C (Out of range display 32767)
Digital output	-2000 - 6100
	16 bits total, 15 bits for data and 1 bit for sign
Accuracy	0.05 °C
Overall accuracy	±0.5% of the full range (compensation range)
Conversion rate	50ms
Conversion characteristics	

Programmable Logic Controller Module

LX TEMPERATURE & ANALOG BD

Model	Channels	Resolution	Functionality
LX3V-2PT2DAI-BD	4	14/12 bits	2 * Thermal Resistance Input ; 2 * Analog Output (4~20mA)
LX3V-2PT2DAV-BD	4	14/12 bits	2 * Thermal Resistance Input ; 2 * Analog Voltage Output(-10v-10v)

Specification

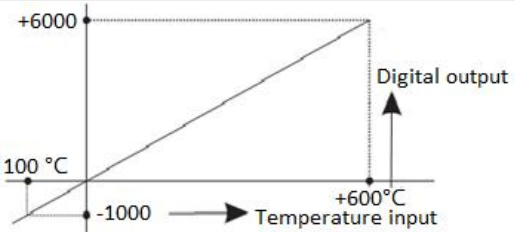
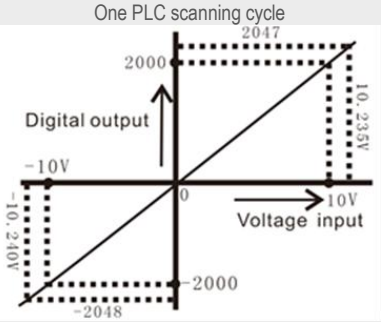
Item	LX3V-2PT2DAI-BD	LX3V-2PT2DAV-BD
Power supply	24VDC±10%, 50mA; 5VDC±10%, 70mA (Powered by PLC host)	5VDC±10%, 70mA (Powered by PLC host)
	Temperature input (PT)	
Analog input signal	PT100 sensor, 3 wires, 2 channels (CH1, CH2)	
Sensor current	1mA sensor: 100Ω(PT100)	
Compensation range	-100 ℃ - 600 ℃	
Digital output	-1000 – 6000 (Unit: 0.1 ℃) 12 bits total, 11 bits for data and 1 bit for sign	
Accuracy	0.2 ℃ - 0.3 ℃	
Overall accuracy	±0.5%	
Conversion rate	50ms	
Conversion characteristics		
	Analog output (DAI)	**Analog output (DAV)**
Rated range	4~20mA: 0~2000	-10V~10V: -2000~2000
Analog output	DC 4~20mA (the external load resistance is no less than 500Ω)	DC-10V~10V (the external load resistance is no less than 2KΩ)
Digital output	12 bit binary	
Resolution	8uA[4~20mA / 2000]	5mV[10V default scope 1/2000]
Precision	±0.5% of full scale	
AD conversion time	One PLC scanning cycle	
Input characteristics	The external load is 250Ω and 0-2000 is converted to 4-20mA  	
Insulation	No insulation in each PLC channel	
Occupied points	None	

Programmable Logic Controller Module

LX TEMPERATURE & ANALOG BD

Model	Channels	Resolution	Functionality
LX3V-2PT2ADV-BD	4	14/12 bits	2 * Thermal Resistance Input ; 2 * Analog Voltage input(-10v-10v)

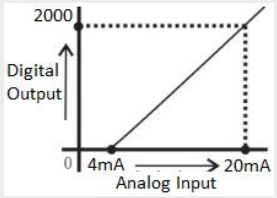
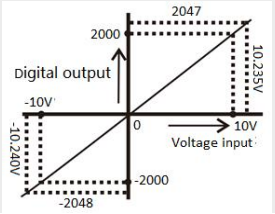
Specification

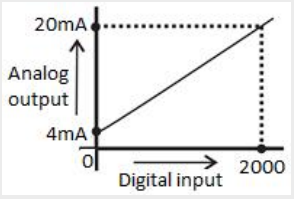
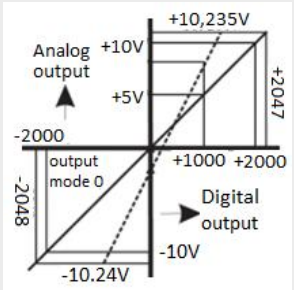
Item	LX3V-2PT2ADV-BD
Power supply	5VDC±10%, 70mA (Powered by PLC host)
	Temperature input (PT)
Analog input signal	PT100 sensor, 3 wires, 2 channels (CH1, CH2)
Sensor current	1mA sensor: 100Ω(PT100)
Compensation range	-100 ℃ - 600 ℃
Digital output	-1000 – 6000 (Unit: 0.1 ℃) 12 bits total, 11 bits for data and 1 bit for sign
Accuracy	0.2 ℃ - 0.3 ℃
Overall accuracy	±1%
Conversion rate	50ms
Conversion characteristics	
	Analog input (ADV)
Analog input range	DC-10V~10V (input resistance 160KΩ). Note: If the input voltage exceeds ±15V, the unit will be damaged.
Rated range	-10V~10V: -2000~2000
The maximum display range	-2048~2048
Resolution	5mV[10V default scope 1/2000]
Precision	±0.5% of full scale
AD conversion time	One PLC scanning cycle
Input characteristics	
Insulation	No insulation in each PLC channel
Occupied points	None

LX ANALOG BD

Model	Channels	Resolution	Functionality
LX3V-2ADI-BD	2	12	2*Analog Current Input (4-20mA)
LX3V-2ADV-BD	2	12	2*Analog Voltage Input(-10v-10v)
LX3V-2DAI-BD	2	12	2*Analog Current Output (4-20mA)
LX3V-2DAV-BD	2	12	2*Analog Voltage Output (-10v-10v)

Specification

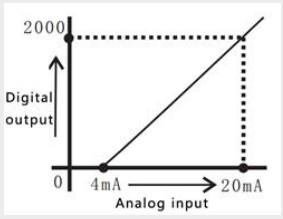
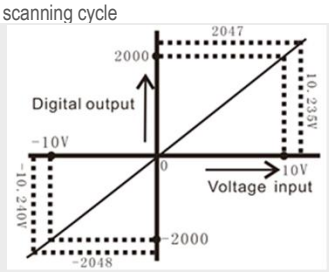
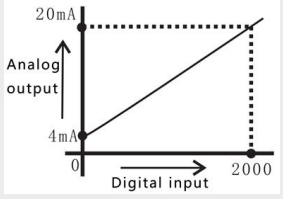
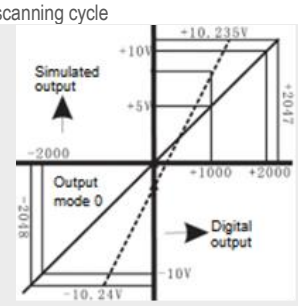
Item	LX3V-2ADI-BD	LX3V-2ADV-BD
	Current input	Voltage input
Input range	DC 4-20mA (Input resistance:250Ω)	DC -10 ~ 10V (Input resistance:150KΩ)
Digital output	12 bits binary	
Resolution	8uA (4mA-20mA/2000)	5mV (10 : 1/2000)
Precision	±1% (4-20mA: ± 0.16mA)	±1%
AD conversion time	One PLC scanning cycle	
Characteristic		
Insulation	No insulation in each PLC channel	
Occupied points	None	

item	LX3V-2DAI-BD	LX3V-2DAV-BD
	Current output	Voltage output
Output range	DC4~20mA (Load resistance should be less than 500Ω)	DC-10V~10V (the external load resistance is no less than 2KΩ)
Digital output	12 bits binary	
Resolution	8uA[4mA-20mA/2000]	5mV[10V default scope 1/2000]
Precision	±1%	Full scale ±1%
AD conversion time	One PLC scanning cycle	1 scan time （The analog digital conversion is completed by the END order）
Characteristic		
Insulation	No insulation in each PLC channel	
Occupied points	Zero point	

LX ANALOG BD

Model	Channels	Resolution	Functionality
LX3V-2ADI2DAI-BD	4	12 bits	2 * Analog Input/ Analog Output (4~20mA)
LX3V-2ADV2DAV-BD	4	12 bits	2 * Analog Input/ Output (-10V~10V)

Specification

Item	LX3V-2ADI2DAI-BD	LX3V-2ADV2DAV-BD
Power supply	24VDC±10%, 50mA; 5VDC±10%, 70mA (Powered by PLC host)	
	Analog input (ADI)	**Analog input (ADV)**
Analog input range	DC 4~20mA (input resistance 250KΩ). Absolute maximum input: -2mA, +30mA	DC-10V~10V (input resistance 160KΩ). Note: If the input voltage exceeds ±15V, the unit will be damaged.
Rated range	4~20mA: 0~2000	-10V~10V: -2000~2000
The maximum display range	-500~2048	-2048~2048
Resolution	8uA[4mA ~20mA / 2000]	5mV[10V default scope 1/2000]
Precision	±0.5% of full scale (4~20mA:±0.08mA)	±0.5% of full scale
AD conversion time	One PLC scanning cycle	
Input characteristics		
Insulation	No insulation in each PLC channel	
Occupied points	None	
	Analog output (DAI)	**Analog output (DAV)**
Rated range	4~20mA: 0~2000	-10V~10V: -2000~2000
Analog output	DC 4~20mA (the external load resistance is no less than 500Ω)	DC-10V~10V (the external load resistance is no less than 2KΩ)
Digital output	12 bit binary	
Resolution	8uA[4~20mA / 2000]	5mV[10V default scope 1/2000]
Precision	±0.5% of full scale	
AD conversion time	One PLC scanning cycle	
Input characteristics	The external load is 250Ω and 0-2000 is converted to 4-20mA 	
Insulation	No insulation in each PLC channel	
Occupied points	None	

Programmable Logic Controller Module

LX 2RS485 BD

Model	Channels	Resolution	Functionality
LX3V-2RS485-BD	2	--	2 * RS485 Communication

Features

LX3V-RS485-BD is used for communication via RS485, it can be installed on PLC,

it has the following purposes.

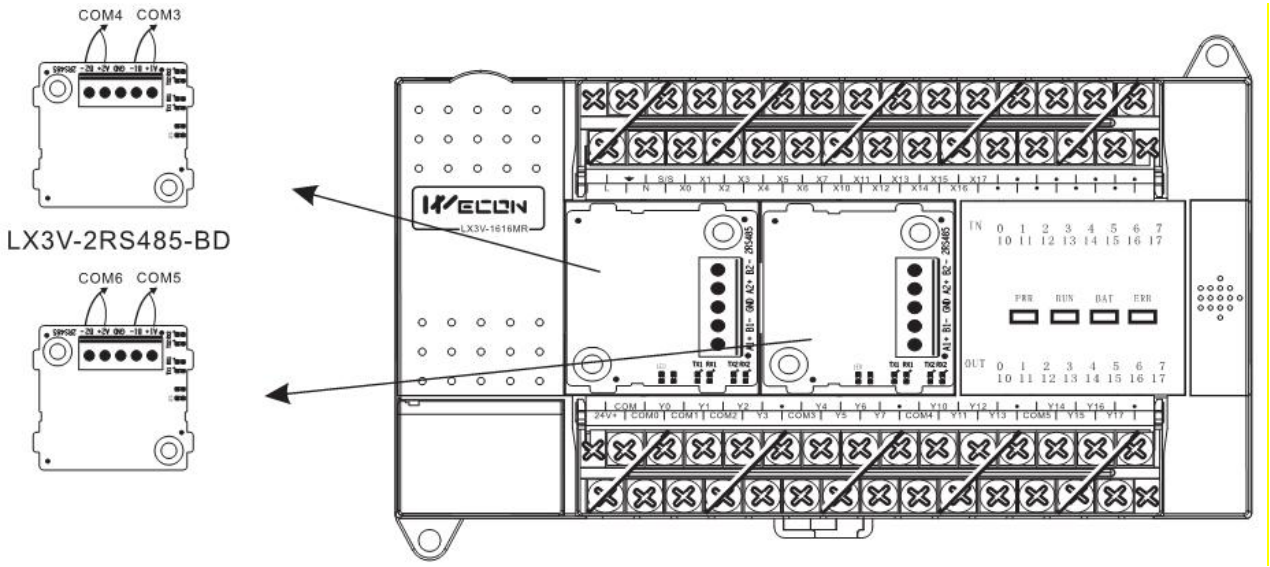
1)Data transmission by no-protocol

Data transmit to designation register's address by RS instruction.

2)Data transmission by proprietary protocol

Data transmission is in based on 1: N via RS485.

Installed two BD Module



Function of serial communication

COM 1	It supports download and HMI monitoring protocols, supports RS422 and RS485.
COM 2	It supports HMI monitoring protocol, MODBUS RTU protocol, RS instruction, only supports RS485.
COM 3	It supports MODBUS RTU protocol, RS instruction, N: N protocol only supports RS485.
COM 4	It supports MODBUS RTU protocol, RS instruction, N: N protocol only supports RS485.
COM 5	It supports MODBUS RTU protocol, RS instruction, N: N protocol only supports RS485.
COM 6	It supports MODBUS RTU protocol, RS instruction, N: N protocol only supports RS485.

LX ETHERNET BD

Model	Channels	Resolution	Functionality
LX3VP-ETH-BD	1	--	1 * Ethernet Communication

Features

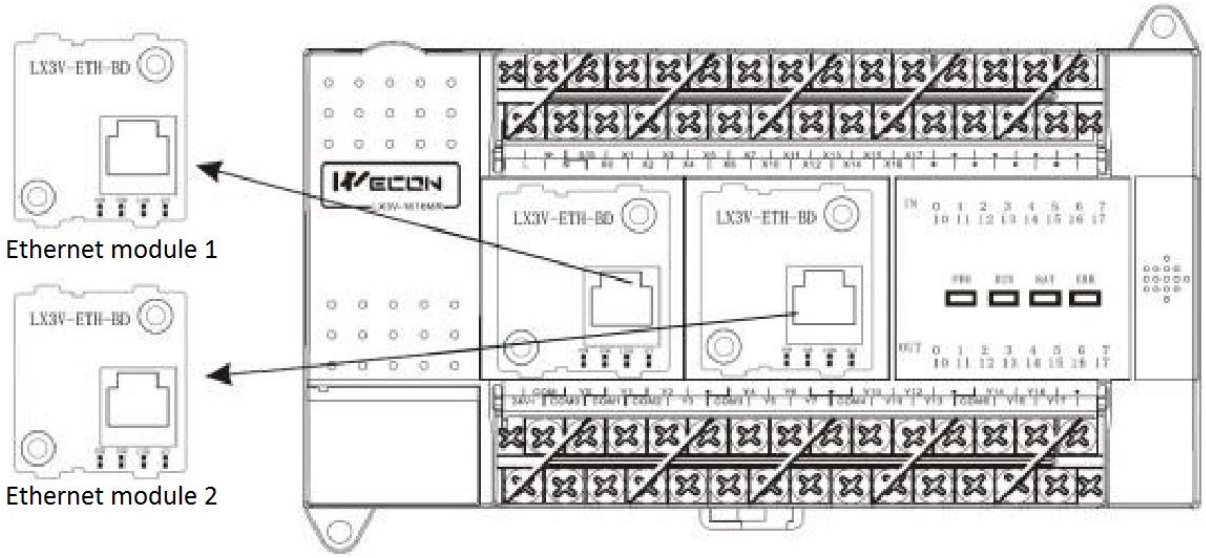
1) It could use LX3V-ETH-BD to add Ethernet communication ports.

It is internally installed in the top of PLC, thus it is not necessary to change the PLC's installation area;

2) Maximum number of connections 8, regardless of master and slave;

3) The current protocol only supports: MODBUS-TCP.

The case of two BD Module



Light

POW: power light, normal state is always bright when connected

COM: the flicker frequency corresponds to communication with plc

DATA: data light blinks if the communication with network is normal

LINK: when connect to the network then the light is lit, if the connect is abnormal, there will be exterminated or chaotic situation