

## Model: RS01-BN

### Feature:

- Support BACnet MSTP / Modbus 485
- LCD for configuration
- Support password for secure screen
- Support real time clock for monitoring settings



### Operation:

RS01-BN is a remote screen. It supports BACNet for monitoring data on a BACNet system. With this device you can monitoring or control many devices that support BACNet MSTP or Modbus RTU 485. All user fields name can be set by BACnet Protocol.

### Electrical Rating:

Power Requirements	24 VAC +/-10% input @ 50 or 60 Hz
Power Consumption	1A @ 24 VAC
AC Power	NEC Class 2

### Operating Environment

Ambient operating temperature:	32°F to 122°F (0°C to 50°C), <93% RH, non-condensing
Ambient operating environment	Operate in a dry location, which is protected from exposure to salt spray or other corrosive elements. Exposure to flammable or explosive vapors must be prevented.
Shipping and Storage environment	-13°F to 158°F (-25°C to 70°C), 5% to 95% RH, non-condensing



## PIN CHAR

24 VAC/24VDC	24 VAC/DC	A+	B-
Power Supply	Power Supply	Signal Net +	Signal Net -

### Button defines:

<ENT> go to update mode from view mode. Accept the value or press a button.

<UP> go to upper field

<DOWN> go to lower field.

<TRK> x10 value or change value On/Off.

<LEFT> go to previous screen or decrease a value.

<RIGHT> Go to next screen or increase a value.

### LCD Screen definition:

User Screen (4 Pages with 32 Field):

Display value of set point, input sensor 1, input sensor 2, input sensor 3, input sensor 4, operation mode, output value 1, output value 2, error status....

Password Screen:

Use to enter the secure screen.

Setup screen:

Set up date, month, year / Hour, minute, second.

Set up baud rate and address of BACnet device.

Password protected mode:

Only allow user change settings by enter corrected password.

Boundary size (mm):

With x Height x Depth

163 x 102 x 50

Installation hole (mm):

With x Height

156 x 92

For more information please contact:

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### **Configurator Screen:**

1. User Settings:
  - a. Old Password: Enter your old password when you want to change the password number.
  - b. New Password: Enter your new password when you change the password number.
  - c. Date / Month / Year: Enter the Date / Month and Year that you want to set up.
  - d. Hour / Minute / Second: Enter the Hour / Minute / Second that you want to set up.
  - e. Update button: When you enter old password and new password it will update password, otherwise it will update the time.
  - f. Reset button: Reset configuration of Screen.
  
2. BACnet Configuration:
  - a. MAC Address: MAC Address of BACnet when configure screen as BACnet. Modbus Address when configure Screen as Modbus.
  - b. Baud rate: Identify of Baud rate. It equal Actual Baud rate / 1000. Example: 9 ⇔ Baud rate = 9600. 38 ⇔ Baud rate = 38400.
  - c. Number of Screen: Define number of user screen. Value from 1..4
  - d. Number of Items: Define the number of item in user screen. Value from 0 .. 32
  - e. Protocol: Select the protocol for communication. Please note that, the screen is configured by BACnet Protocol. After Configure you can change the protocol to Modbus and use it.
  - f. Off Screen: The delay time to turn off screen. 0 mean not turn off the screen.

**BACnet points for Configuration.**

Instance Number	Object type	Object property	Display on Screen	Field Number	User Screen
0 → 7	AV	Name	Label Name	1 → 8	1
		Present Value	Value of field		1
		High Limit			1
		Low Limit			1
		Scale			1
		Unit	Unit of field		1
8 → 15	AV	Name	Label Name	9 → 16	2
		Present Value	Value of field		2
		High Limit			2
		Low Limit			2
		Scale			2
		Unit	Unit of field		2
16 → 23	AV	Name	Label Name	17 → 24	3
		Present Value	Value of field		3
		High Limit			3
		Low Limit			3
		Scale			3
		Unit	Unit of field		3
24 → 31	AV	Name	Label Name	25 → 32	4
		Present Value	Value of field		4
		High Limit			4
		Low Limit			4
		Scale			4
		Unit	Unit of field		4
32	AV	Name	Name of Screen		1
33	AV	Name	Name of Screen		2
34	AV	Name	Name of Screen		3
35	AV	Name	Name of Screen		4



## Unit define for Screen

BACnet unit ID	BACnet Unit Description	Display on Screen
0	UNITS_SQUARE_METERS	1 0 ⇔ RUN / STOP
1	UNITS_SQUARE_FEET	1   0 ⇔ Alarm / Normal
2	UNITS_MILLIAMPERES	... mA
3	UNITS_AMPERES	... A
4	UNITS_OHMS	... Ohm
5	UNITS_VOLTS	... V
6	UNITS_KILOVOLTS	1   0 ⇔ Auto / Man
7	UNITS_MEGAVOLTS	1   0 ⇔ ON / OFF
8	UNITS_VOLT_AMPERES	.. VA
9	UNITS_KILOVOLT_AMPERES	1   0 ⇔ Start / Stop
19	UNITS_KILOWATT_HOURS	... KWH
20	UNITS_BTUS	... BTU
29	UNITS_PERCENT_RELATIVE_HUMIDITY	... %RH
48	UNITS_KILOWATTS	... KW
53	UNITS_PASCALS	... Pa
55	UNITS_BARS	... bar
56	UNITS_POUNDS_FORCE_PER_SQUARE_INCH	... PSI
62	UNITS_DEGREES_CELSIUS	... oC
64	UNITS_DEGREES_FAHRENHEIT	... oF
95	UNITS_NO_UNITS	
96	UNITS_PARTS_PER_MILLION	... PPM
98	UNITS_PERCENT	... %
124	UNITS_MILLIVOLTS	... mV

## Modbus Point for Display Screen

Register ID	Register Type	Description	Value Type
1 → 32	Holding Register	Value of item in screen	Signed Int 16

Note: Modbus Register Value will device 10 in these units for easy read/write:

- UNITS\_MILLIAMPERES
- UNITS\_VOLTS
- UNITS\_BTUS
- UNITS\_BARS
- UNITS\_POUNDS\_FORCE\_PER\_SQUARE\_INCH
- UNITS\_DEGREES\_CELSIUS
- UNITS\_DEGREES\_FAHRENHEIT
- UNITS\_PARTS\_PER\_MILLION

Example: Write value: 231 into field with unit oC. Displayed value will be 23.1 oC.

For more information please contact:

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