Features

- Four Channel 0 ~ 20mA 16 bit Resolution ADC
- Four Relay output with configurable alarm or Master Control
- Four 24V Digital Input
- Modbus RS-485 Protocol Interface.
- Individual Channel offset calibration
- Resolution at 0.001 V
- Convenient address selection rotary switch from 1 – 99 Address
- Complete range of baud rate settings supported
- Sensor open indication, Analog values in integer and float values
- Suitable for both Din Rail and Wall Mountable
- Product Dimensions 110mm x 70mm x 55mm (L x W x H)

Supported Modbus Function Codes

01 - Read Coils
02 – Read Discrete Inputs
05 – Write Single Coil
15 – Write Multiple Coils
03 – Read Holding Registers
04 – Read Input Registers
06 – Write Single Register
16 – Write Multiple Registers

Input Registers (Read Only)

(30001) - (30004)
- Channel 1 ~ 20mA in 16bit signed decimal values at resolution 0.001
  0 – 20000

mV in Float Values
(30011) - (30018)
- Channel 1 ~ 20mA in float
- 0 ~ 20000.000 mA

Note:-

Above Input registers are also mapped and accessible through **Holding Register starting 42001** which helps in for PLC cards have only having holding register access

Coils (Read / Write)

(20001) to (20004)
- Relay Output 1~4 Status and Control.
  Setting this bit to 1 will Switch ON Digital Output and 0 will switch OFF

Discrete Inputs (Read Only)

(10001) to (10004)
- Input 1~4 Status. 1 indicates Input is High and 0 indicates Low

(10005) to (10008)
- Channel 1~4 Sensor Status.
  1 indicates Sensor Open 0 indicates Working

(10009, 10011, 10013, 10015)
- Analog Channel 1~4 low value alarm status respectively
  1 indicates alarm is on due to low value / 0 indicates value is with in normal range

(10010, 10012, 10014, 10016)
- Analog Channel 1~4 high value alarm status respectively
  1 indicates alarm is on due to high value / 0 indicates value is with in normal range

Holding Registers (Read/Write)

(40001) - (40004)
– Channel 1~20mA Offset Calibration Register
-10000 to +10000 in 0.001 mA

(40005, 40010, 40015, 40020)
– Alarm 1 Trigger mode register (Set a high or low in Corresponding Input Status)
0 – Not enabled.
1 – Either CH1 Minimum Value OR CH1 Maximum Value Triggers Alarm Status
2 – CH1 Maximum Value Triggers Alarm Status
3 – CH1 Minimum Triggers Alarm Status

(40006, 40011, 40016, 40021)
Alarm 1 will Trigger to ON State if the CH1 Volt is below the set Minimum
– signed integer -32000 to 32000

(40007, 40012, 40017, 40022)
Alarm 1 will Trigger to ON State if the CH1 Volt is above the set Maximum
– signed integer -32000 to 32000

Configuration Setting

(40101)
– Device Address as per the address switch – (Read Only)

(400102)

(Reg.Value) – Baud Rate

0 – 300	8 – 14400
1 – 600	9 – 19200
2 – 1200	10 – 38400
3 – 1800	11 – 57600
4 – 2400	12 – 62500
5 – 4800	13 – 115200
6 – 7200	
7 – 9600	**Default. 9 – 19200**

(40103)
(Reg.Value) – Bits, Parity, Stop Bit
0 – 8 N 1
1 – 8 E 1
2 – 8 O 1
3 – 8 N 2
4 – 8 E 2
5 – 8 O 2

Default. 0 – 8 N 1

Default Mode Switch

Default mode is handy when the serial communication setting are forgotten.
Setting the Address switch to 00 will put the device in default mode
Address Set to 00   - Default mode ON
– Slave Address – 1, Baud 19200, 8N1
Address Set to non 00 - Default mode OFF
– As per the saved configuration values.
Note:
No parameter selection is changed just by entering the default mode. All the parameters remains same including the communication settings unless changed by the master.
This mode can be used to read the present settings and/or change the settings

Sensor Open indication

      If Channel 1 or 2 Sensor is not connected value is read as 0.0 mA and corresponding Discrete Input bit is set.

Diagnostics

Tx LED   - Quick Blink Indicates Tx Data in Normal operation
Rx LED   - Quick Blink Indicates Rx Data in Normal operation
Power LED   - Power Supply Status
X1~X4 LED   - Input X1~X4 is read high
RL1~RL4 LED - Relay 1~4 is ON

Electrical Details

Power Supply: 15V to 24 V DC
Relay Output : 230AC ~ 1Amp / 30VDC ~ 2Amp Max
Digital Input : 15 to 24V DC

Top Connector

Relay connector

RS485

A	B	SHLD
1	2	3

CM1&2	NO1	NO2	CM3&4	NO3	NO4
1	2	3	4	5	6

Bottom Connector

Power

24V	GND
1	2

Sensor Connector

CH 1+	CH 2+	CH 3+	CH 4+	GND
1	2	3	4	5

Digital Inputs

IN1	IN2	IN3	IN4
1	2	3	4