FIOA-0800-R
(PT1000 Inputs)

FIOA-0800-RP
(PT100 Inputs)

RTD Input Module :

- Low cost compact RTD Input modules with DIN rail mounting
- FIOA-0800-R accepts eight RTD PT1000 type inputs
  FIOA-0800-RP accepts eight RTD PT100 type inputs
- 12 bit resolution
- User definable Address, Baud rate and Parity through Switches
- High Speed Modbus RTU (Slave) communication
- 2 wire RS485 port provided on pluggable terminal block
- Can be multi dropped as Modbus Slave on RS485 Network
- LED Indication for Power and Communication
- Very simple to configure through DIP switches. No programming Software needed.

Possible Applications :

FIOA can be used for various applications in industries. Typical configuration includes the following :

1. Connect RTD directly to your Controller.

HIO 140

RTD inputs

2. Multiple FIOA units (Modbus Slaves) connected to Modbus Master

PLC Modbus Master

Node 1

RS 485
Modbus
Network

Node n

3. Data Acquistion Application (SCADA Connectivity)

HMI Software ASTRA
- by Renu Electronics

Converter
Example CNV-02
- by Renu Electronics

Modbus RS485

Node 1

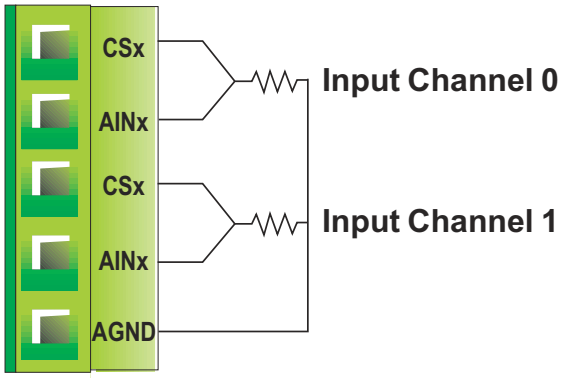
Node 2

Node n

* Images not to Scale.

Typical Wiring Diagram :

RTD (PT1000) / RTD (PT100)



Note:
CSx: Current source(x equals to 1 to 8)
AINx: Analog input(x equals to 1 to 8)
AGND: Analog ground.Analog ground for all channels is internally shorted on PCB

Connect RTD PT1000 as shown in the above diagram between the points CS, AIN and AGND

Specifications of RTD (PT1000):

Uses 3 wire compensation technique.
Excitation Current is 0.1mA.
Power dissipated in RTD is 0.010mW @ 1000Ω.
Range supported : -200 to 850°C

Specifications of RTD (PT100):

Uses 3 wire compensation technique.
Excitation Current is 0.5mA.
Power dissipated in RTD is 0.025mW @ 100Ω.
Range supported : -200 to 850°C

General Specifications :

Power	: 24V DC ±10%, 2W maximum
Operating Temperature	: 0° to 50°C
Storage Temperature	: -20° to 80°C
Humidity	: 10% to 90% (Non condensing)
Mounting	: DIN rail mounting
Dimensions	: 100 W x 70 H x 35 D mm
Immunity to ESD	: as per IEC61000-4-2
Immunity to Fast Transients	: as per IEC61000-4-4
Immunity to Radiated electromagnetic field	: as per IEC61000-4-3
Immunity to Conducted disturbances	: as per IEC61000-4-6
Surge	: as per IEC61000-4-5
Radiated emission	: as per EN61000-6-4

Communication Port	: 2 wire RS485 terminal block
Communication Protocol	: Modbus RTU Slave
Baud rate	: 9600, 19.2k, 57.6k or 115.2k (DIP Switch Selectable)
Parity	: Odd, Even or None (DIP Switch Selectable)
Device ID	: 1-64 (DIP Switch Selectable)

Basic Operations :

FIOA-0800-R is an Analog Input Model that accepts eight PT1000 inputs .
FIOA-0800-RP is an Analog Input Model that accepts eight PT100 inputs .

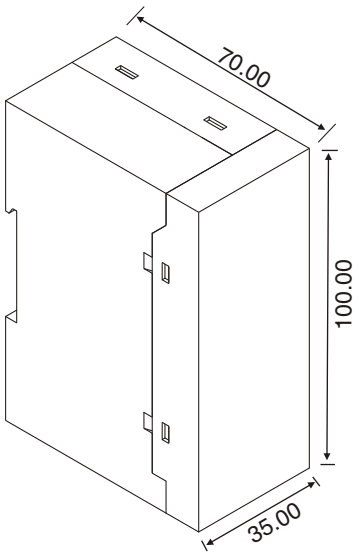
Units support standard Modbus RTU (slave) protocol for communicating with master device.
Analog inputs are isolated from the communication port .

Power supply is also isolated from all internal circuitry.
Selectable DIP Switches help the user to configure the communication parameters of FIOA unit and use them as per application requirements.

Setup required for FIOA configuration:

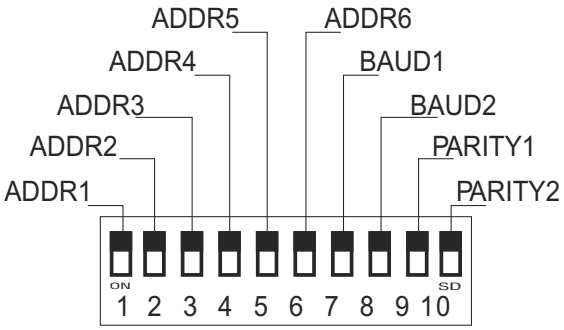
1. FIOA unit
2. +24VDC regulated power supply
3. FIOA to Device cable

Dimensions :



All dimensions are in mm.

Comm Port Settings :



Models :

Model	Type of Input	No. of Channels
FIOA-0800-R	RTD (PT1000)	8
FIOA-0800-RP	RTD (PT100)	8

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