

**Notes:**

**MANUAL REVISION**

If you contact us in reference to this manual, please include the following document number

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 Part Number : URML413  
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# Quick Start Manual for FIOA-0800-RP



Product Code:

FIOA-0800-RP-B/G

Field Analog I/O Model  
 No. of Analog Inputs and Outputs  
 RTD Input (PT100)  
 B: Black case & G: Grey case



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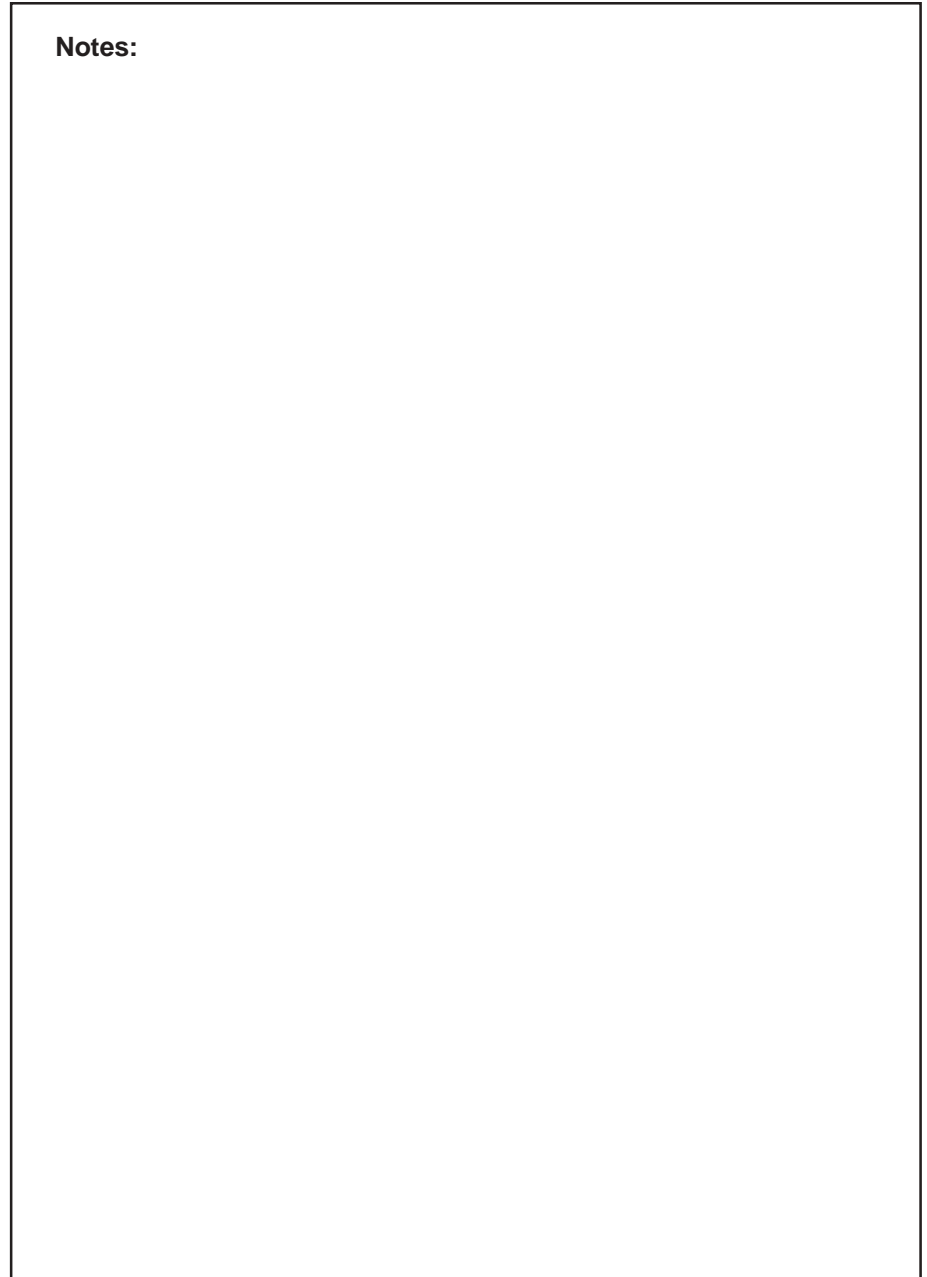


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Thank you for purchasing our FIOA Series product - FIOA-0800-RP. This manual gives you a quick overview of this model. Read this manual thoroughly before installing and operating the unit.

This document is based on information available at the time of its publication and may not cover all the details or variations in hardware or software. Renu Electronics reserve the right to update information in this publication without prior notice.

**IMPORTANT**

FIOA Series Products are intended to work with PLCs which actually take control actions. It is assumed that the user is well acquainted with the PLC system being used and Windows based software usage, in general. Never use FIOA units to perform emergency stop applications. It is advised that separate switches be used outside the PLC for ANY emergency stops.

**Any mechanical or electrical modification to this unit will void all warranties.**

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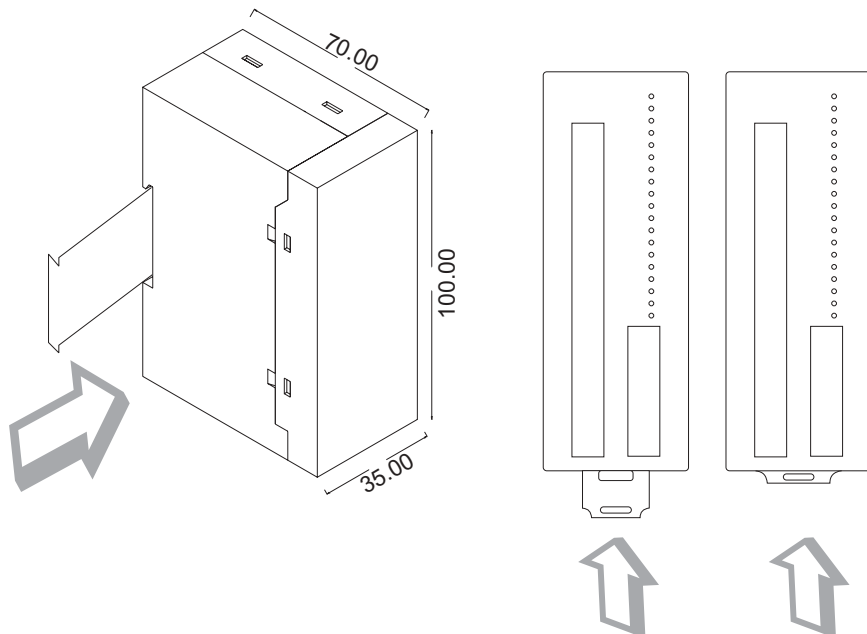
◆ **Introduction**

The FIOA series products add analog capability to your PLC / SCADA System.

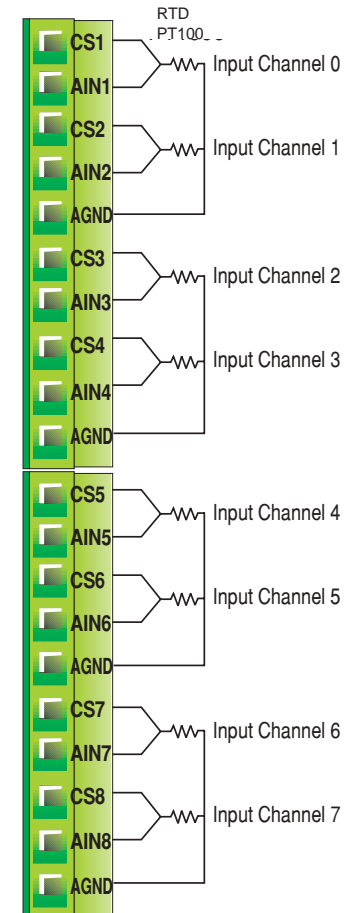
**FIOA-0800-RP** model has 8 analog (PT-100) inputs. It has one (2 Wire RS485) communication port. The COM port is used to connect any modbus master device (PLC / SCADA / Operator Interface device). This module supports Modbus RTU (Slave) protocol.

◆ **Dimensional Details:**

FIOA units are shipped with a separate DIN rail plate which can be attached to the unit, if desired. User can use the unit with or without the DIN rail plate. Following sketch shows dimensional details of FIOA with the DIN rail plate.



**Wiring Diagram:**



Note:

CSx: Current source(x equals to 1 to 8)

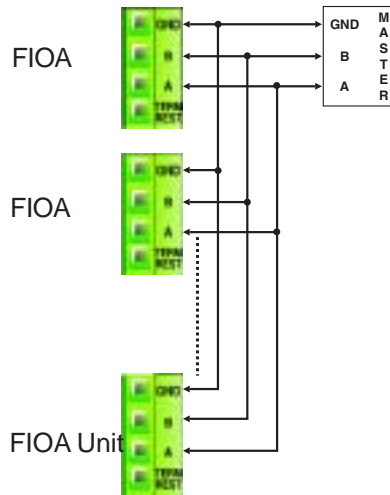
AINx: Analog input(x equals to 1 to 8)

AGND: Analog ground. Analog ground for all channels is internally shorted on PCB

Connect RTD PT100 as shown in the above diagram between the points CS, AIN and AGND

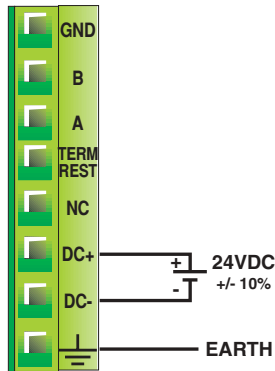


**Multidropping connection:**



**Note:** Where “n” is up to 32. Connecting repeater can increase it to 64.

**Power Supply Connection:**



**PLC Communication**

The unit supports Modbus RTU (Slave) protocol. Dedicated modbus registers are used for tracking analog RTD PT100 inputs. Unit scans all the inputs continuously and stores this information into Input register. The communication parameters and unit address are set by DIP switch.

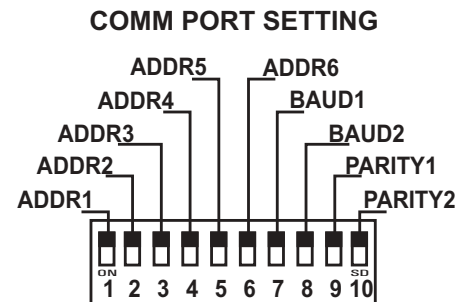
**Specifications: -**

- Power Supply : 24 VDC +/- 10%
- Analog Inputs : 8 RTD PT100 (3 Wire)  
(Input temperature range -200°C to +850°C)
- Communication Port : 2 Wire RS-485
- I/O Terminals : Pluggable terminals.
- Operating Temperature : 0°C to 50°C
- Storage Temperature : -20°C to 80°C
- Humidity : 10% to 90% (Non condensing)
- Mounting : DIN rail mounting
- Dimensions (DIN rail) : 70 X 100 X 35 mm

**Communication Parameters And Modbus Tag Definition**

Unit supports MODBUS driver for communication with Master device.

**Com Port Settings:**



UNIT ID	ADDR6	ADDR5	ADDR4	ADDR3	ADDR2	ADDR1
1	0	0	0	0	0	0
2	0	0	0	0	0	1
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.
64	1	1	1	1	1	1

BAUD RATE	BAUD2	BAUD1
9600	0	0
19200	0	1
57600	1	0
115200	1	1

PARITY	PARITY2	PARITY1
NONE	0	0
ODD	0	1
EVEN	1	0



The following dedicated modbus registers assigned to analog inputs:

Analog Inputs	MODBUS Tag.
INPUT 1	40001
INPUT 2	40002
INPUT 3	40003
INPUT 4	40004
INPUT 5	40005
INPUT 6	40006
INPUT 7	40007
INPUT 8	40008

The temperature value shown in the Modbus registers is in degree Celsius multiplied by 10 in signed integer format.  
e.g. If the input value is 145.5 degree Celsius the value shown in Modbus register will be 1455

**Port Details: (2 wire RS485)**

