

SmartGate

SmartI/Os (SIO)

SmartI/Os (SIO)

IO Controller

- Modular and Extendable I/O Controller
- It can be used standalone or with INDATECH SmartGate - Edge IOT Gateway -
- RS485 interface with Modbus RTU communication
- 5* INDATECH SIO module variants are available:
 - SIO-4ID4UD** 4x Digital Input + 4x Digital Output
 - SIO-4IA4UD** 4x Analog Input (4~20mA) + 4x Digital Output
 - SIO-4IA4UA** 4x Analog Input (4~20mA) + 4x Analog Output (4~20mA / 0~10V)
 - SIO-8ID** 8x Digital Input
 - SIO-8UD** 8x Digital Output
- 12~24 VDC, -25~75°C,
- EMC Level 3, 79.6x 28 x110 mm



I/O INTERFACE

- DI:** Digital Opto-isolated input
0~2V Logic Low, 9~36V Logic High
- DO:** Relay (100,000 endurance)
DC contacts rating 3A / 30V DC
AC contacts rating 3A / 250V AC, NO
- AI:** Analog Input 4~20mA
- AO:** Analog Output
Voltage Output 0~10V
Current Output 4~20mA

COMMUNICATION INTERFACE

- COM:** RS485
- Protocol:** Modbus RTU
Slave address 1~255

Order Code:

- 10006849 SIO-4ID4UD**
4x Digital Input + 4x Digital Output
- 10006850 SIO-4IA4UD**
4x Analog Input (4~20mA) + 4x Digital Output
- 10006851 SIO-4IA4UA**
4x Analog Input (4~20mA) + 4x Analog Output (4~20mA / 0~10V)
- 10006852 SIO-8ID**
8x Digital Input
- 10006853 SIO-8UD**
8x Digital Output (3A)

POWER

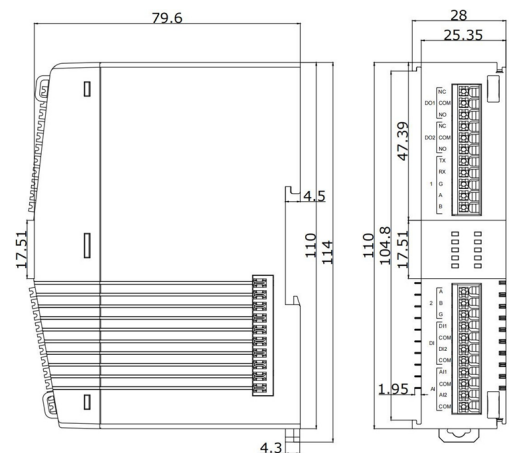
- Power in:** 12~24V, DC-in

MECHANICAL

- Material:** ABS housing, IP30
- Dimensions:** (W)28x(D)79.6x(H)110mm
- Weight:** < 100g
- Mounting:** Wall/Book and DIN Rail Mount

ENVIRONMENT

- Operating temp.:** -25~75°C
- Storage temp.:** -40°C to 85°C
- Humidity:** 10% to 90% RH @40°C, non-condensing
- EMC:** Level 3, IEC 61000, CE, FCC, RoHS



*All product information may subject to change without prior notice.

*The rights of all brand names, product names and trademarks belong to their respective owners.

SARC ITALIA SRL

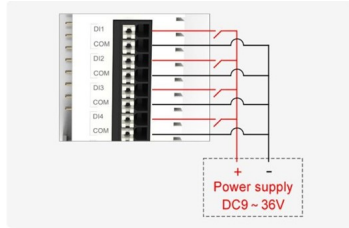
Strada Albareto, 503 - 41122 Modena - ITALY
Tel. +39 059 8751076 Fax. +39 059 8751025

Website: www.indatech.it

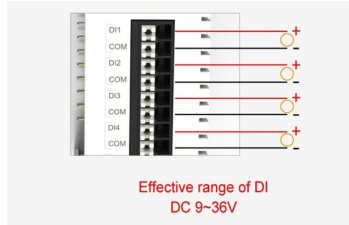
Email: info@indatech.it

Copyright © 2024 INDATECH. All rights reserved.

Dry Contacts for DI

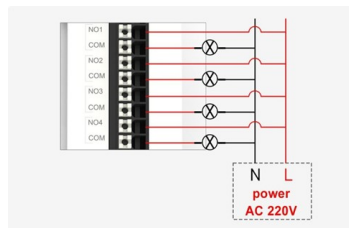


Wet Contacts for DI

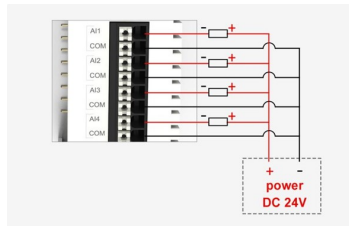


Effective range of DI
DC 9-36V

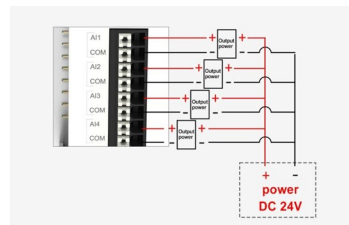
DO Cable Wiring



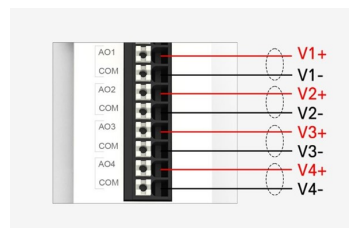
AI Cable Wiring for 2-wire 4-20ma Sensor



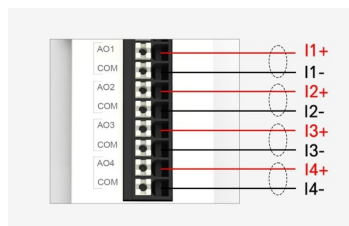
AI Cable Wiring for 4-wire 4-20ma Sensor



Analog Output(0-10V)



Analog Output(4-20mA)



Modbus RTU Registers

Function code:

Code (HEX)	Description	Data Access
01	Read Coil(s)	Bit access
02	Read Discrete Input(s)	Bit access
03	Read Single or Multiple Holding Register(s)	16-bit access
04	Read input status	16-bit access
05	Write Single Coil	Bit access
06	Write single holding register	16-bit access
0F	Write multiple coils	Bit access
10	Write Single or multiple holding registers	16-bit access

Register for storing RS485 parameters

Name	Register type	Register address (DEC)	Function code (HEX)	Bit(s)	Description
Baud rate	Holding Register	0032-0033	03, 10	32 bits	4 bytes
Data bits	Holding Register	0034	03, 06, 10	16 bits	8
Stop bit(s)	Holding Register	0035	03, 06, 10	16 bits	1, 2
Parity bit	Holding Register	0036	03, 06, 10	16 bits	0: None 1: Even 2: Odd

Register for storing system parameters

Name	Register type	Register address (DEC)	Function code (HEX)	Bit(s)	Description
Slave address	Holding Register	0017	03, 06	16 bits	Default: 1
Reboot	Holding Register	0016	06	16 bits	Data Field: 0xFF00
SN	Holding Register	0112-0121	03	10 Words	Length: 20 strings
Filter time for DI	Holding Register	0048-0055	03, 10	16 bits	Range: 10~65535ms

I/O register

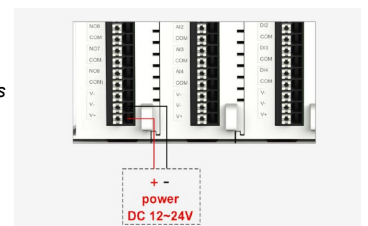
Name	Register type	Register address (DEC)	Function code (HEX)	Bit(s)	Description
DI	Discrete Inputs	0000-0007	02	1 bit	
AI	Input Registers	0000-000F	04	32 bits	Float 32
DO	Coils	0000-0007	01, 05, 0F	1 bit	ON: 0xFF00, OFF: 0x0000
AO output type	Holding Register	0190-0193	03, 06, 10	16 bits	0~10V: 0x0001 4~20mA: 0x0004
AO output value	Holding Register	0000-000F	03, 10	32 bits	4mA: 0x457A0000 20mA: 0x469C4000 0V: 0x00000000 10V: 0x461C4000

INDATECH SIO - IO controller series supports the combination of different models, allowing users to choose according to their needs. The products include an extension rail and an extension interface component. Simply join two modules together to connect them.

The leftmost I/O module acts as the first slave and supplies power to all I/O modules. All I/O modules are accessed via the RS485 serial port of the first slave. Slave addresses are assigned from left to right: setting the address of the first module causes subsequent modules to increment by one.

ATTENTION

When using multiple IO controllers in combination, only one power supply is supported. Please do not connect multiple power supplies for power input



*All product information may subject to change without prior notice.

*The rights of all brand names, product names and trademarks belong to their respective owners.

SARC ITALIA SRL

Strada Albareto, 503 - 41122 Modena - ITALY
Tel. +39 059 8751076 Fax. +39 059 8751025

Website: www.indatech.it

Email: info@indatech.it

Copyright © 2024 INDATECH. All rights reserved.