



SIO-100S Series

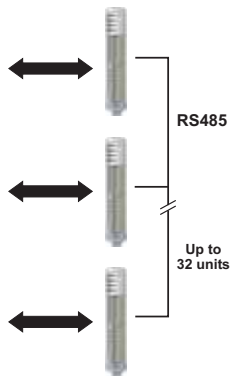
Industrial Serial I/O

- Analogue and Digital I/O multiplexer
- Data transfer via Modbus or exception reporting protocol
- RS232 and RS485 communication ports
- I/O interface for MTL wireless networks
- Configurable input types



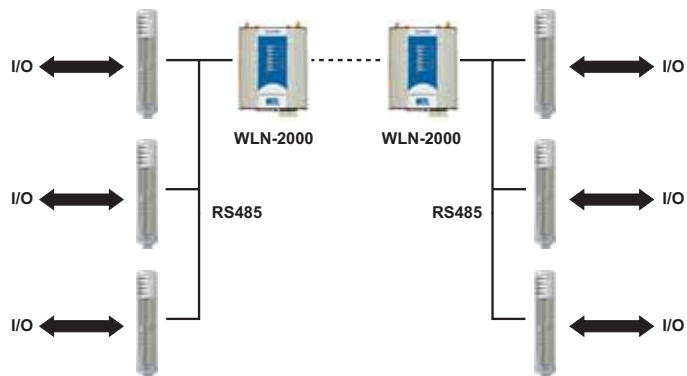
Flexible serial I/O with multiple application modes

- Selectable communications protocol - Modbus (RTU) or exception reporting (peer to peer with security encryption).
- Each model has a minimum of 8 (SIO-110DX has 16) digital I/O channels - each channel can be used as a volt free contact input or FET output (30VDC, 0.2A maximum).
- Each DIO channel can function as a pulse output to a maximum 15Hz with the first four DIO/pulse input channels on the SIO-110DX to a maximum pulse rate of 1kHz. Pulse inputs provide both totalised count and pulse rate as separate values.
- Configurable analogue inputs - 0-20/4-20mA: 0-10V. Selectable as 8 single terminal inputs (commoned) or 4 dual-terminal 'floating' inputs (SIO-120AI).
- Analogue outputs are commoned with selectable 'supply' or 'sink' connections (SIO-130AO).
- Each analogue input has a high/low set point to determine a set-point status.
- Field test and display I/O inputs and/or force outputs, monitor and confirm communications and configure units with user friendly configuration software.



Serial I/O transfer

(peer to peer, exception reporting or Modbus)



Expansion I/O for MTL wireless I/O

SPECIFICATION

DIGITAL INPUTS

Number

SIO-110DX - up to 16 selectable I/O
SIO-120AI & SIO-130AO - up to 8 selectable I/O

Type

Volt-free contacts or NPN transistor

Surge protection

Yes

Contact wetting current

5mA

DIGITAL OUTPUTS

Number

SIO-110DX - up to 16 selectable I/O
SIO-120AI & SIO-130AO - up to 8 selectable I/O

Type

FET outputs

Voltage range

30V DC @ 200mA

ANALOGUE INPUTS - SIO-120AI only

Number

4 dual-terminal floating inputs or
8 single-terminal commoned inputs

Type

"Floating" differential inputs

Common mode voltage

27V

Power for external loops

24V DC provided

Digital filtering

1 sec

Resolution

0-20mA/0-10V - 12 bit

Accuracy

0.1%

ANALOGUE OUTPUTS - SIO-130AO only

Number

8

Type

Selectable as current/voltage source or
current sink to common

Power for external loops

20V DC provided

Maximum loop resistance

1000 ohms

Resolution

0-20mA/0-10V - 12 bit

Accuracy

0.1%

Max. total current

160mA

PULSE INPUTS - SIO-110DX only

Specifications as per digital inputs.

Number

4

Max pulse rate

1kHz

Pulse width min.

0.5ms

Terminals

DIO 1-4

PULSE OUTPUTS

Specifications as per digital outputs.

Number

8

Max pulse rate

15.625Hz

Pulse width min.

32ms

Terminals

DIO 1-8

SERIAL PORT

RS485 serial port, configurable up to
115.2kb/s, 7/8 data bits, none/even/odd
parity, 1 / 2 stopbits

RS232 configuration port - 9pin DB9 female
connector, 9.6kb/s, 8/n/1

RS485 max. cable distance 2000 m terminal
connections.

POWER SUPPLY

10.8 - 30V DC, over-voltage and reverse
power protected

Internal monitoring of supply voltage

Values may be transmitted to remote modules
for monitoring

Internal DC/DC converter provides analogue
loop supply

24VDC, 250mA for **SIO-120AI**

20VDC, 160mA for **SIO-130AO**

GENERAL

Hazardous area approvals

CSA Class 1 Div 2 (USA/Canada) -
pending

EMC compliance

To FCC Part 15, AS3548, 89/336/EEC

Environmental

Temperature: -40 to +60°C

Humidity: 0 - 99% RH non-condensing

Housing

High density thermoplastic

Dimensions

150 x 180 x 35mm

Mounting

'T' section 35mm DIN rail to EN 50022

Weight

<0.4kg

I/O terminals

Multi-way pluggable connector up to
12 AWG (2.5mm²) capacity

LED indicators

Power supply, processor OK, serial TX
and RX digital I/O.

ORDERING INFORMATION

SIO-110DX	Serial digital I/O module 16 channels
SIO-120AI	Serial AI module, 8 x DIO, 8 x AI (4 x DIFF)
SIO-130AO	Serial AO module, 8 x DIO, 8 x AO

AI = Analogue Input AO = Analogue Output

DIO = Digital Input or Outputs

DIFF = Differential inputs



The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



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EPS SIO-100S Rev1.0 210610