

SI100

A new Digital system from the Solartron Orbit stable! The SI 100 is an economical, single channel solution with integral display that can be output to a PLC via ModBus, the most widely used network in the Industrial world. The SI 100 is part of Orbit ACS, a new line of Digital systems specially built for automation and process control.

- ▶ Modbus communication or Solartron ASCII Serial outputs
- ▶ High accuracy with Solartron's Real time Orbit error mapping
- ▶ 0.1 μm display resolution
- ▶ High sampling speed 5 ms per reading
- ▶ Eliminated losses due to analogue to digital conversion via PLC connection
- ▶ User defined keypad functions
- ▶ Colour display LCD screen
- ▶ Discrete I/O
- ▶ Available with large number of integral transducers
- ▶ Mathematical Functions



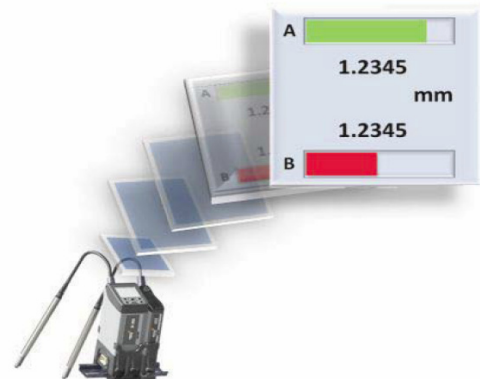
simply
Modbus



Solartron Metrology, the world leader in digital gauging probe innovation, introduces a new single channel digital probe with integral display. Powered by a 24 VDC supply, the module can communicate using the industrial standard Modbus RTU (or ASCII) protocol, providing a simple connection to most PLCs Discrete Input and Output lines are also provided for simple interfacing and control.

The SI100 naturally comes with all of the standard metrology functions such as zero, preset and TIR. The unit can also be programmed to provide limit information.

For a dual channel solution see the SI200.



Typical Application



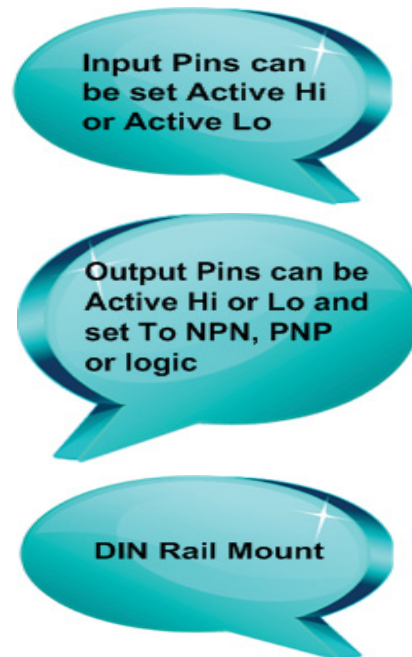
FROM MEASUREMENT SI100 to PLC via MODBUS



FROM MEASUREMENT SI100 to PLC USING PRINT INPUT AND RS-232 SERIAL PORT

Interfacing to the SI100

12	Input 4: Spare
11	Input 3: Print
10	Input 2: Preset
9	Input 1: Zero
8	Output supply In
7	Output 3
6	Output 2
5	Output 1
4	RS232RX MODBUS B
3	RS232TX MODBUS A
2	0V Power In Return
1	18 - 32 V Power In



Interfacing the SI100 is simple using the terminal connections on the rear of the module.

Serial Output Options

The SI100 provides a standard Modbus interface, it can be user configured via the menu screens to use pins 3 and 4 as an RS232 interface. Once configured in RS232 Mode the user can select several different protocols offering compatibility with Solartron's SI3000, SI1500 and C55. This is for retrofit/replacement applications.

Accessories

- +24 VDC Power Block and Mains Lead (2 m).
- Spare Mounting Modules.
- Firmware Upgrade Cable. (USB A to Mini B)
- Upgrade kit SI100 to SI200.

For 3D drawings please contact sales.solartronmetrology@ametek.com

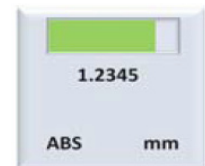
Technical Specification

Performance	
Mathematics	Absolute Measurement MAX-MIN
Accuracy	See Table
Keypad (5 keys)	
Navigation	▲Up, ▼Down, ◀Left ▶Right ■Enter
Functions	Print, Zero, Preset, and set up via menu
Type	Sealed membrane
Inputs and Outputs	
Serial	RS232 or RS485 Serial communications MODBUS RTU or ASCII
3 Discrete Outputs	HI, OK or LO Alerts (programmable)
Output Types	NPN, PNP or Logic
3 Discrete Inputs	Print, Zero, Preset,
1 Discrete Input	Configurable
Analogue Display	
Single Bar	Analogue representation of reading
Scale	Programmable

Digital LCD Display	mm	inches
Digital Measuring Range 1	0 to ±99.9999	0 to ±9.99999
Digital Measuring Range 2	0 to ±999.999	±99.9999
Digital Resolution range 1	0.0001	0.00001
Digital Resolution range 2	0.001	0.0001
Environmental		
Input Voltage	18 to 32 V	
Input Current (@24 V)	<50 mA	
Sealing: Transducer	IP65 to Fully Sealed Dependent on Type	
Sealing: Electronics	IP41 (top and front), (IP20 rear)	
Operating Temperature	+5 to +70 °C	
Storage Temperature	-20 to +80 °C	
Electrical Immunity	EN61000-6-2 and EN61326	
Electrical Emissions	EN61000-6-3 and EN61326	
Mechanical		
Standard Cable length	2 m (others available on request)	
Mounting	DIN rail	
Weight	260 g (nominal)	

SI100 with Standard Digital Gauging Probes

	SI100P/1	SI100P/2	SI100P/5	SI100P/10	SI100P/20
Axial cable Outlet (probe)	SI100PR/1	SI100PR/2	SI100PR/5	SI100PR/10	SI100PR/20
Radial Cable Outlet (probe)					
Measurement Range (mm)	1	2	5	10	20
Probe Body Diameter			8h6		
Pre Travel (mm)			0.15		
Post travel			0.85		
Accuracy (% reading)	0.05	0.05	0.05	0.06	0.07
Repeatability			<0.15		
Resolution			<0.1		
Tip Force (N) at centre range			0.7±20%		



Note:
Display can be rotated to accommodate different Mounting orientations

The SI100 is available with many other Solartron transducers, such as mini probes and displacement sensors. Please contact your local sales representative or distributor.

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Q 09540

Solartron pursues a policy of continuous development. Specifications in this document may therefore be changed without notice.

Datasheet 503083
Issue 2
EDCR 20227