

SI 3500

Twin axis display / controller



- ▶ Intuitive menu
- ▶ 2 channel 7 digit colour displays
- ▶ 2 channel analogue colour displays
- ▶ Auto colour change for in/out range
- ▶ Auto course/fine resolution
- ▶ Peak hold facility
- ▶ Data logging facility
- ▶ RS232 output
- ▶ Discrete I/O
- ▶ 4-20mA or DC output

Specifically designed for use with Solartron's high performance Orbit® network, the SI 3500 features an intuitive, menu driven-twin axis display which can be programmed to display readings, set Limits/Alarms, Peak Hold, Track, or act as a Data Logger for inputs from one or two transducers.

LCD Display	
Digital	2 x colour
Analogue	2 x colour horizontal bars
Update speed	40Hz
Display length (mm)	± xx.xxxxx (user selectable)
Display length (ins)	± x.xxxxx (user selectable)
Resolution mm	Down to 0.05µm (user selectable)
Resolution ins	Down to 0.000005" (user selectable)
Keypad	
Membrane type with 9 keys	Print, Zero, Up, Down, Left, Right, Enter, Peak Hold/Track, Menu
Measurement type	A, B, A+B, A-B, (A+B/2), (A-B/2), (B-A/a) X and Y
Data Logging	10,000 readings via switch or 1ms to 24hr time interval
Indications	mm/inch, Lower & Upper Limits, Out of Range, Measurement Mode
Power requirement	+24 VDC ± 10%
External I/O	
Serial	RS232 serial port (for printer or PC)
Discrete Output	2 x 3 isolated
Analogue Output	2 channels DC or 4-20mA
Environmental	
Front Panel	IP65
Case	IP51
Rear connection	IP51
EMC	Immunity: EN6100-6-2:2001 Emissions: EN61000-6-3:2001
Storage Temperature (°C)	-20 to +50
Operating Temperature (°C)	0 to +50
Mechanical	
Mounting	Bench top or panel mount
Dimensions WxHxD (mm)	Without bezel 134 x 65x160 With bezel 144 x 74 x 175

DR 600 and DR 700

Digital readouts



Designed specifically for use with Orbit, the DR 600 and 700 have a 24 character alphanumeric display which guides the user through a series of menus from initial setup to gauging applications and arithmetic operations.

Both DRs have functions:

- ▶ Zero
- ▶ Print
- ▶ Motor Drive
- ▶ Program Select
- ▶ Units
- ▶ Preset
- ▶ Maximum/Minimum
- ▶ Limits/Tolerance
- ▶ Multiple Probes
- ▶ Probe Scan
- ▶ Mathematics
- ▶ Resolution
- ▶ Count Direction
- ▶ Reference Mark
- ▶ Display Freeze
- ▶ Lock

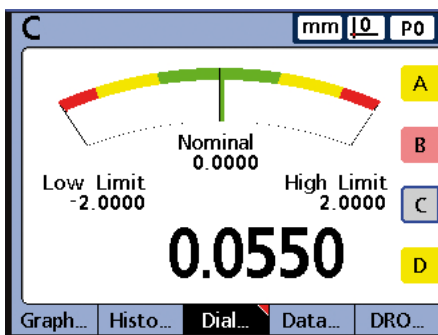
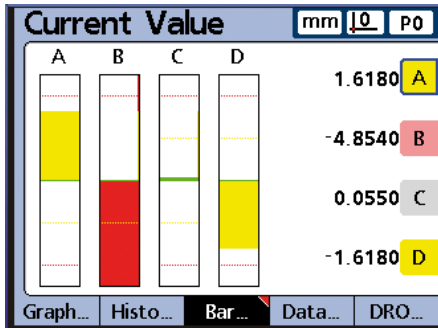
The DR 700 also has:

- ▶ Scaling Factor
- ▶ Max A + Max B
- ▶ Gauging Mode
- ▶ Autosense Mode
- ▶ Peak Mode

	DR600	DR700
Display Type	24 character alpha numeric display	
Display length	±999.9999mm or ±39.370078"	
Resolution	Down to 0.05µm or 0.000005"	
Range Lamps	Indicates Hi/OK/Lo for limited detection	
Input		
Number of Orbit modules	up to 10 without external PSIM example up to 30 with external PSIM example	
External input/output		
Single output	✓	✓
Digital I/O	✓	✓
Motor drive	✓	✓
Measurement configurations		
Individual probe	✓	✓
Probe pair	✓	✓
Multiple probes	✓	✓
Scan	✓	✗
Gauging mode	✗	✓
Electrical		
Power supply (VAC)	96 to 244	
Line frequency (Hz)	47 to 440	
Environmental		
Storage temperature range (°C)	-20 to + 60	
Operating temperature range (°C)	0 to +40	
Humidity	0 to 95% non condensing	
Safety rating	EN61010-1	
EMC	Emission: EN50081-1 Immunity: EN50082-2	
IP rating	Front panel: IP65 Unit: IP40	
Mechanical		
Dimensions (mm)	235 x 190 x 90	
Weight (kg)	2.25	

SI 7500

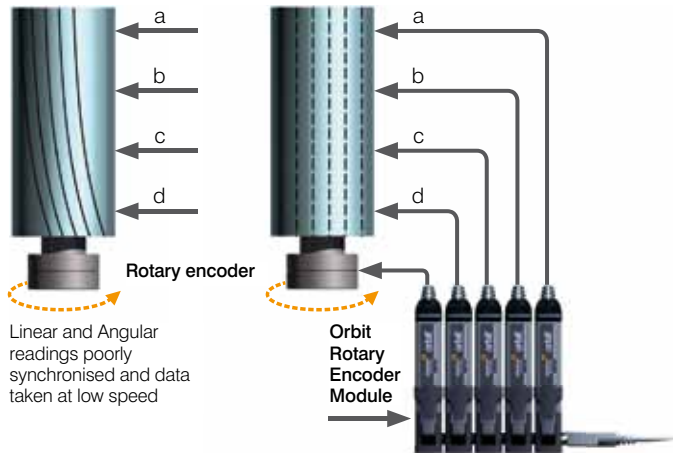
Multi channel controller



- ▶ Up to 16 digital probes / modules
- ▶ Up to 100 parts storable
- ▶ SPC support
- ▶ Suite of mathematical functions
- ▶ Intuitive menu system
- ▶ Clear graphical display

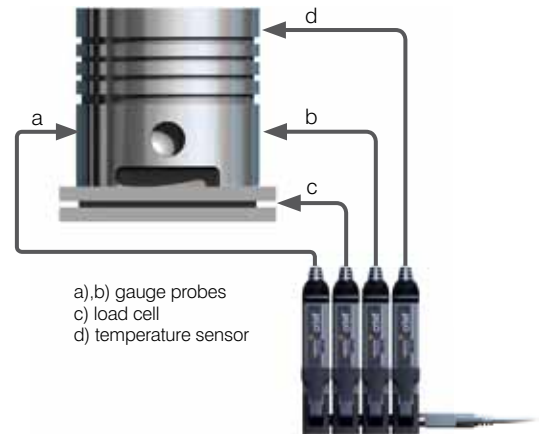
The SI 7500 is a multi axis metrology display that connects to a Solartron Metrology Orbit Network and accepts up to 16 Orbit Module inputs; such as Digital Probes, Linear Encoders and Analogue Input Modules. It features intuitive displays, helpful audio cues and user defined formulas. The SI 7500 also reports dynamic Min/Max measurements, provides SPC analysis from an integrated database and offers connectivity to PC's and other peripherals.

SI 7500	
Display type	6" Colour LCD
Resolution	0.0001mm or 0.000004"
Inputs	
Signal Input	Orbit
Connection type	Orbit Network Cable
Number of Orbit Modules	16
Additional Input/Outputs	Remote Switch, USB Port, Remote Keypad, Parallel Data Port, RS232C Serial Port, Relay Outputs x 2
Electrical Interface	
Power Supply (VAC)	85 to 264
Line Frequency (Hz)	43 to 63
Environmental	
Storage Temperature (°C)	-20 to +60
Operating Temperature (°C)	0 to +45
Humidity	0 to 95%, non condensing
Safety Rating	EN 61010-1
EMC	EN 55011:1998, EN50082-2:1995
Mechanical	
Enclosure WxHxD (mm)	292.1 x 190.5 x 69.85
Base WxHxD (mm)	254 x 50.8 x 190.5
Enclosure Weight (Kg)	1.59
Base Weight (Kg)	3.18



Synchronising data

Linear and Angular readings accurately synchronised using an Orbit Rotary Encoder Module and data from linear measuring sensors taken at high speed with the Orbit Network set in Dynamic Mode.



Orbit multiple sensor technology

Gauging components, such as automotive pistons and con' rods, with temperature compensation and weight measurement within the same measuring station. Orbit can also accept strain and pressure sensors where required. See pages 4 and 15.



Measuring angles

The precision measurement of angles requires high resolution + excellent linearity and repeatability.



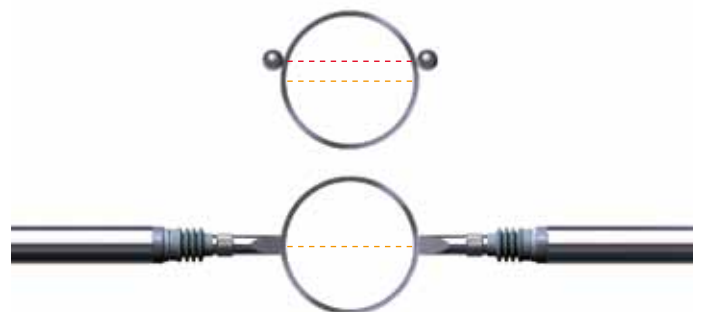
Automatic gauging systems

Automatic on line or post process is made possible with pneumatic probes and mechanical Interfaces. See pages 10 and 12.



Inside diameter gauging

Dynamic Bore Gauging using Mini Probes with Orbit set in Dynamic Mode and resolution set to $0.1\mu\text{m}$. See page 12.



Outside diameter gauging

2 probes configured A+B/2 is a common method used to measure diameters. If the centre line of the ball in a ball tip is not perfectly aligned to the centre line of the component, errors can occur. The type of tip chosen for a gauging application can have a significant effect on accuracy. A tip with a knife edge or pin is often a better solution in this type of application. For a selection of tips, see page 34.