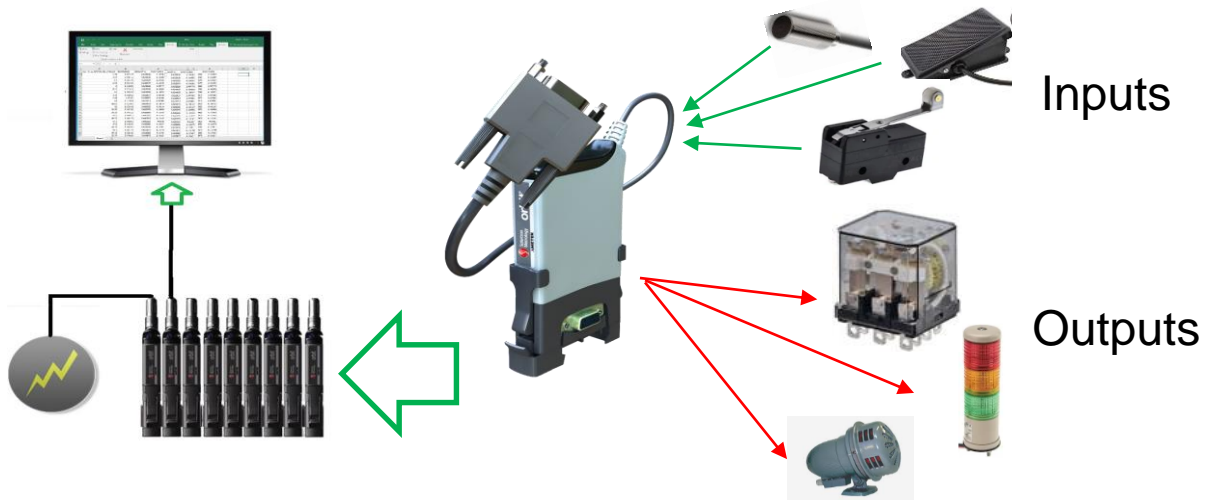


## DIOM2 (DIGITAL INPUT/OUTPUT MODULE V2)

### Description

The Digital Input/output Module, (DIOM2) is cost effective module that provides up to 6 inputs and 4 outputs, controlled by Solartron's Orbit Digital Measurement Network providing full integration with all of Solartron's Digital sensors. Providing an excellent solution for automation and process control.



### Applications

The DIOM2 provides multiple input lines for switches and proximity sensors as well as outputs for solenoid valves, relays, contactors, lamps and other items. With Orbit's modular set up, multiple DIOMs can be used for countless Input/Output combinations.

### Benefits

The DIOM2 provides optimum configuration as between 1 and 150 DIOMs can connect to the Orbit network providing the right number of inputs and outputs thus saving cost. The DIOM2 is simple to configure using either the Solartron Gauge Computer Software or Orbit Library.

### Design and Functions

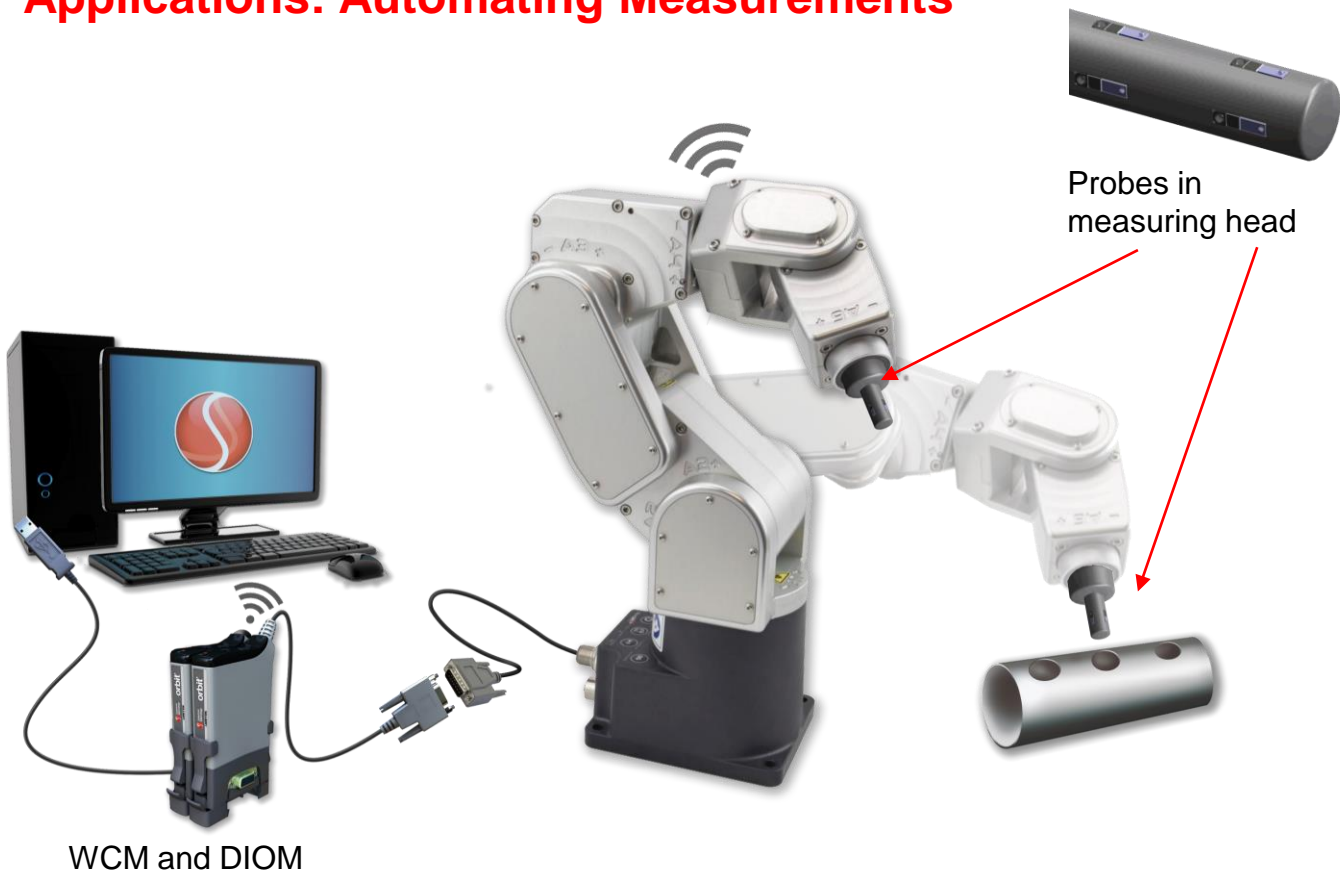
The DIOM2 has the following characteristics

- ▶ Rugged Plastic Housing
- ▶ Connect Multiple Modules
- ▶ DIN Rail Mounting for easy installation
- ▶ User friendly

Precision. Quality. Reliability

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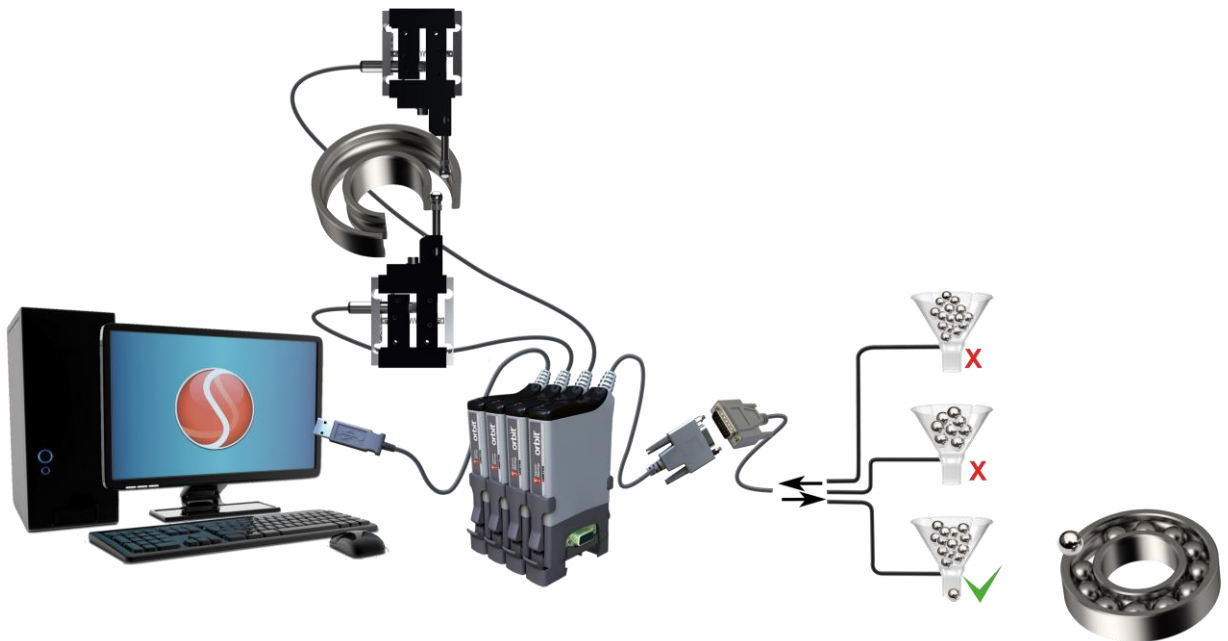
## Applications: Automating Measurements



A robot arm has Solartron probes measuring bores, the probe information is transmitted back to Orbit via Solartron Wireless Control Module. The DIOM activates the measurement process and triggers Orbit to record the measurements when the robot arm is in the correct position.

## Applications: Bearings

In bearing manufacture it is necessary to match bearing races to the best ball size to create the best bearings.



In this application two Solartron flexures check the size of a bearing race, this data is then processed by Orbit and a DIOM2 is used to select the correct size balls to best match the race. The flexures provide excellent repeatable measurements with a very long life.

## Connectivity

The DIOM2 is designed to operate with Solartron's Orbit Digital Measurement Network or with Solartron's Gauge Computer Software. The minimum system requires a PC, one of Solartron's Orbit Controller modules (e.g. USBIM) and a DIOM2.



## Connectivity Details

For details of how to connect to a DIOM2 please see the Orbit Modules Manual 502914 available at

<https://www.solartronmetrology.com/service-and-support/resource-centre/manuals>

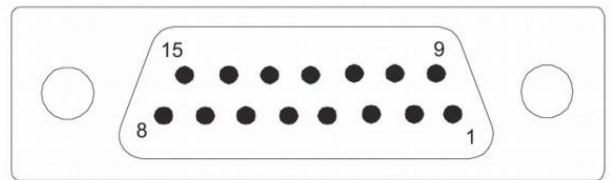
## Technical Specification

Performance and Features	DIOM2
<b>Inputs</b>	
Number of Inputs	6
Input Type	Configurable Active High or Active Low (default active low)
Input Voltage Range	-5V to +40V
Logic level low	0.80V min 1.3V typ
Logic level high	2.90V max 2.29V typ
Hysteresis	0.54V min 1.0V typ
Input debounce (ms)	Configurable 0 (default) 5,10,25,50
Input Frequency	DC to 1 kHz
<b>Outputs</b>	
Number of Outputs	4
Output Type	Configurable NPN, PNP, Logic (default state NPN, OFF)
Logic Output	Pull up from +5V 2 std TTL loads
NPN/PNPExternal Supply limit	+10 to +30 V
Current Limit	150 mA
Max In Rush Current	600 mA duration <200 ms
Rise/Fall Times	
Pull up	<500ns (470ns typical)
Pull up release	Depends on load (<1.5µs typical)
Pull down	<300ns (290ns typical)
Pull down release	Depends on load (<2.5µs typical)
<b>Electrical Interface</b>	
Protocol	Solartron Orbit 3
Compatible Controllers	USB, Ethernet, RS232
Power requirements (5V DC)	70 mA no load, 450 mA full load
<b>Environmental</b>	
EMC Emissions	EN61000-6-3
EMC Susceptibility	EN61000-6-2
Safety	EN61010:2010
Materials	Primarily ABS and Nylon (module housing)
ROSH	Fully ROSH compliant

## Pin Configuration

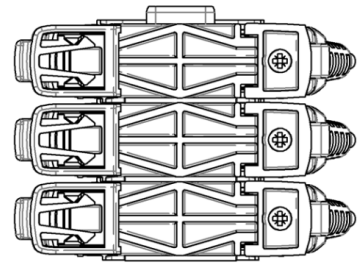
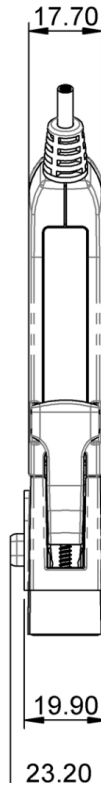
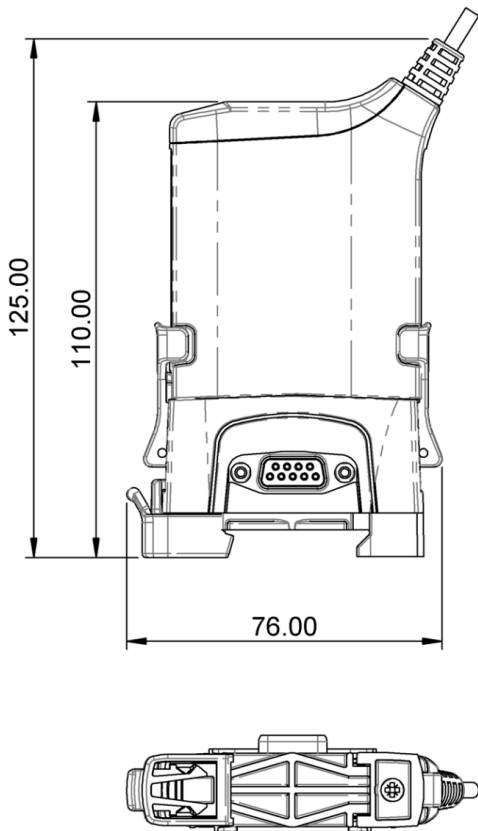
Pin	Signal
1	0V
2	0V
3	Input 1
4	Input 2
5	Input 3
6	Input 4
7	Input 5
8	Input 6
9	Output 4
10	Output 3
11	Output 2
12	Output 1
13	Output Supply In
14	Not used
15	+5V out

**DIOM2 Plug: front view**



The DIOM2 has a 15 way D type plug (Pins/male) fitted as standard,

## Dimensions





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### Distributors

Solartron have 30+ distributors worldwide, see website [www.solartronmetrology.com](http://www.solartronmetrology.com) for your nearest distributor

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In the laboratory, on the shop floor or in the field, Solartron Metrology's products provide precise linear measurements for quality control, test and measurement and machine control. Solartron Metrology is a world leader in the innovation, design and manufacture of precision digital and analogue dimensional LVDT gauging probes, displacement sensors, optical linear encoders and associated instrumentation.



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