Orbit® ProfiNet®Interface
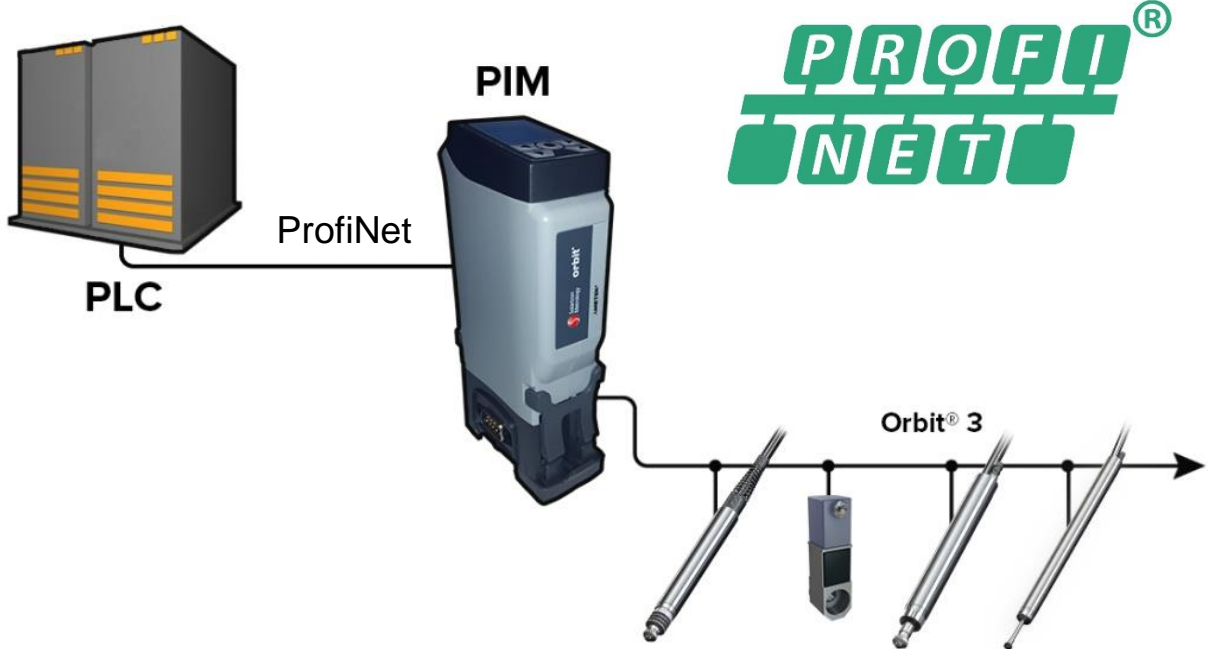

Description

The PIM, is a PLC compatible ProfiNet® to ORBIT®3 interface module, that enable easy connections between any ProfiNet® enabled controller and Solartron's flexible ORBIT®3 digital measurement system.

The PIM makes it simple to interface a wide range of contact and non contact linear measurement sensors, rotary encoders, temperature and pressure sensors and discrete inputs and outputs via ProfiNet®. This stand alone, Din Rail mounted module provides one ProfiNet® port and one ORBIT®3 port which can power up to ten sensors;. This can be extended up to a maximum of 150 sensors with the use of supplementary power modules.

The ProfiNet® System supports Explicit and Cyclic Messaging.. The ProfiNet® PIM is a very powerful data transfer tool designed for easy connection to Siemens PLCs. Applications are found in many industries including manufacturing, automation and control, power generation and food processing.

ProfiNet®

The ProfiNet® protocol is one of the primary connectivity tools to different Siemens platforms or any other devices that support ProfiNet®. The Explicit Messaging aspect of the protocol has been implemented for reading and setting individual parameters, cyclic messaging has been implemented to facilitate synchronised readings
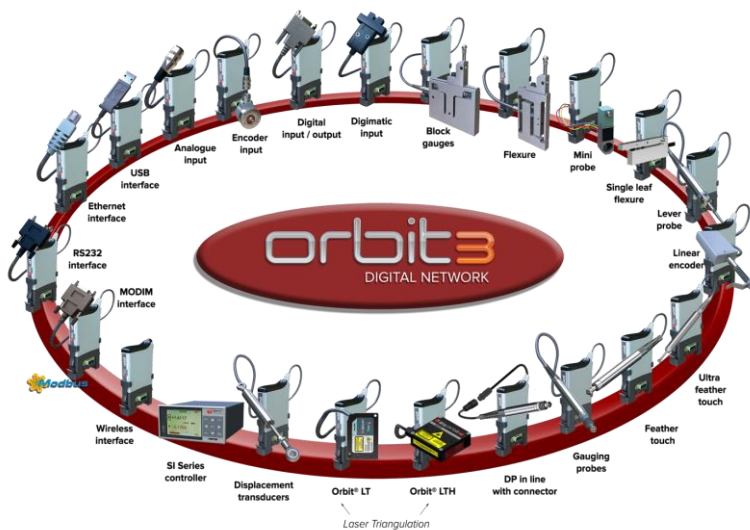
Orbit® 3 Digital Measurement System

The Solartron Orbit® 3 Digital Measurement System, in conjunction with Solartron's wide range of transducers, provides a limitless set of measuring system solutions, with numerous different interfaces to computers and PLC's, making Orbit® 3 completely flexible. Compatible products include both Contact and Non-Contact linear measuring transducers (gauging probes), specialist transducers and third party transducer interfaces.

Orbit® 3 – The Total Measurement System from Solartron Metrology

FEATURES
- ► **Excellent metrology performance**, high **accuracy,** high resolution and excellent **repeatability**
- ► Excellent lifetime value – low maintenance costs due to the high reliability of mechanics and electronics
- ► Wide range of compatible transducers
- ► **Fast reading rates** with **high data integrity**
- ► Network up to 150 different transducers with one interface
- ► Communicate with any computer or PLC
- ► Range of Software drivers and tools for easy set up

Technical Specification

Product	Profinet PIM
Environmental	
Sealing	IP43
Storage Temperature (ºC)	0 to +60
Operating Temperature (ºC)	+5 to +60
EMC Emissions	EN61000-6-3
EMC Immunity	EN61000-6-2
EMC Immunity	EN 61326-1:2013
Shock	Do not subject to excessive shocks or loads
Material	
PIM	ABS, Nylon, Acrylic
Interface	
Protocol	Profinet
Reading Rate (Readings per second)	see separate data in this data sheet
Power (input)	+18 to +32 VDC
No of Orbit Modules (powered)	Up to 10 depending on Modue type
No of Orbit Modules using additonal Power Supply	150
Display	Colour LCD with acrylic sealed cover
Electrical Interface	Etherent 2x RJ485 Connectors Micro USB for Configuration

Reading Rates

The PIM reads synchronised data from the Orbit Network. Reading rate is dependent on the number of Modules on the Orbit Network. For one module the PIM performs 277 sets of readings per second. As the number of modules increases the number of sets of readings reduces as shown in the table below.

Number of Modules	Reading Sets/Second	Total Modules Read/Second
1	277	277
2	277	554
3	274	822
5	271	1355
10	178	1780
20	122	2440
30	78	2340
48	54	2592
64	41	2593

Configuration and Set Up

The PIM Orbit network is easily configured using a PC based application PIM Utility in the orbit suite using the mini USB interface. Once configured the Orbit Network is remembered and no further setting up is required unless additional transducers are required.

The configuration application is also used to set PROFINET® settings such as DHCP enable, host name, IP address, subnet mask and default gateway (though this can also be done through the standard PROFINET methods – TIA portal, Pronetta).

A GSDML Electronic Data Sheet is provided with the Orbit3 Support Pack for windows.

Accessories

+24V Power Block with Mains leads. Available with UK, EU and US plugs
Spare T-con Mounts
Spare Earthing/Mounting brackets

Dimensions