Orbit® 3 EtherNet/IP™ Interface
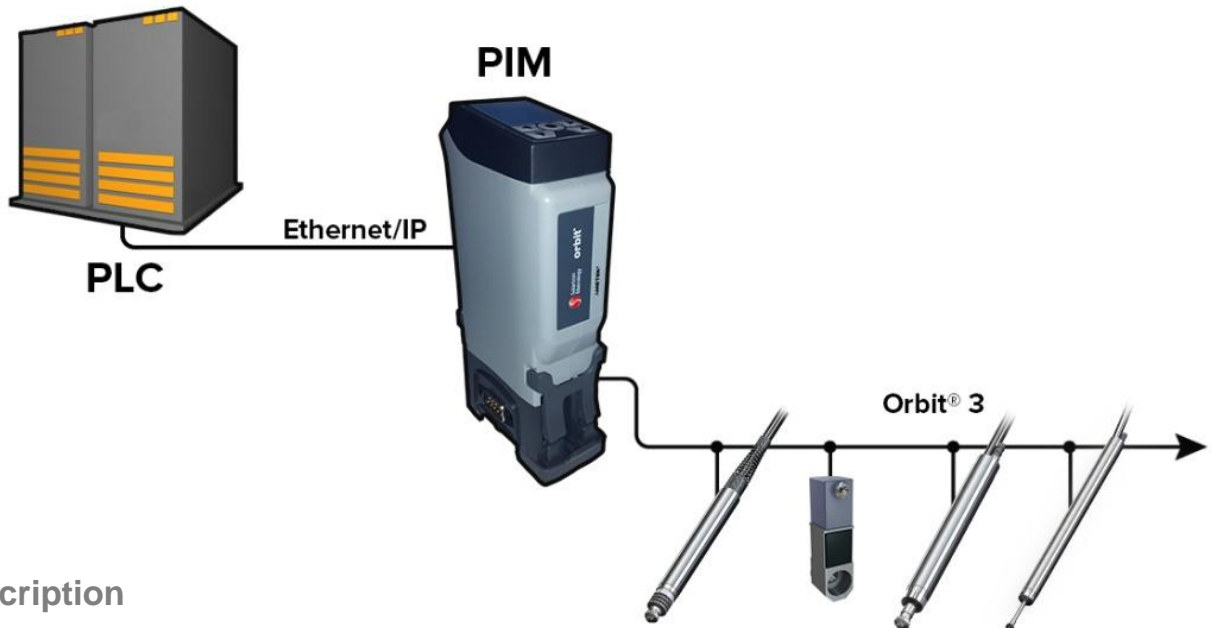

Description

The PIM, is a PLC compatible EtherNet/IP™ to ORBIT®3 interface module, that enable easy connections between any EtherNet/IP™ 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 EtherNet/IP™ .This stand alone, Din Rail mounted module provides one EtherNet/IP™ 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 device uses an AnyBus Compact Com M40 module to communicate on the EtherNet/IP™ ™ network. This is a pre-certified device, as it uses standard operational settings from AnyBus, thus providing network conformance.

It should be noted that afore-mentioned network conformance applies to the EtherNet/IP™ interface **only** and not to the complete product.

The EtherNet/IP™ protocol driver supports the Explicit and Cyclic Messaging implementation of the protocol as a server. The EtherNet/IP™ port is a very powerful data transfer tool designed for easy connection to Rockwell Automation PLCs. Applications are found in many industries including manufacturing, automation and control, power generation and food processing.

EtherNet/IP™ is credited to ODVA

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EtherNet/IP™

The EtherNet/IP™ protocol is one of the primary connectivity tools to different Rockwell platforms or any other PC's that support EtherNet/IP™ . 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

General Protocol Information

Messaging	Explicit and Cyclic Messaging Supported
	125 word read and write data lengths

EtherNet/IP Server Specifications

In server mode, the module accepts commands from one or more clients to read/write data stored in the modules internal registers

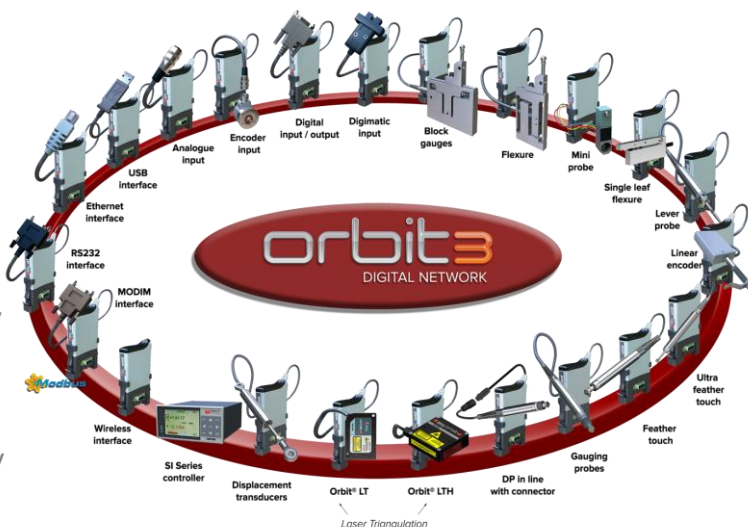| Connections	4 cyclic, 6 explicit
CIP Services Supported	0x4C - CIP Data Table Read

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

	PIM EtherNet/IP Interface
Performance	
Connection	EtherNet/IP
Data Rate (max) Baud	12 MB
No of Modules (Note 1)	150 using Explicit Messaging
	50 using Cyclic Messaging
No of Module powered	10 direct, up to 150 with additional Power Supply modules
Readings per second	400 readings/sensor/sec for 2 sensors
	150 readings/sensor/sec for 24 sensors
Power Supply	24 VDC nominal (18V to 32 VDC allowed).
	PIM provides power for up to 10 Orbit Probe and up to 4 LTH/LTM Laser modules
Indications	Integral LCD Screen and Keypad for screen selection
Configuration PC Port	micro USB port
Ethernet Port	2 x RJ485 Connectors

Environment	
Sealing	IP43
Operating Temperature °C	-20 to +70
Storage Temperature °C	0 to 60
EMC Emissions	EN61000-6-3
EMC Immunity	EN61000-6-2

Note 1: Explicit messaging can read the following items: measurement, status, max and min, from 150 sensors. Cyclic messaging can read measurement and status synchronised from 50 sensors

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Configuration and Set Up

The PIM Orbit network is easily configured using a PC based application that utilises the PIM's Micro 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 EtherNet/IP™ settings such as DHCP enable, host name, IP address, subnet mask and default gateway.
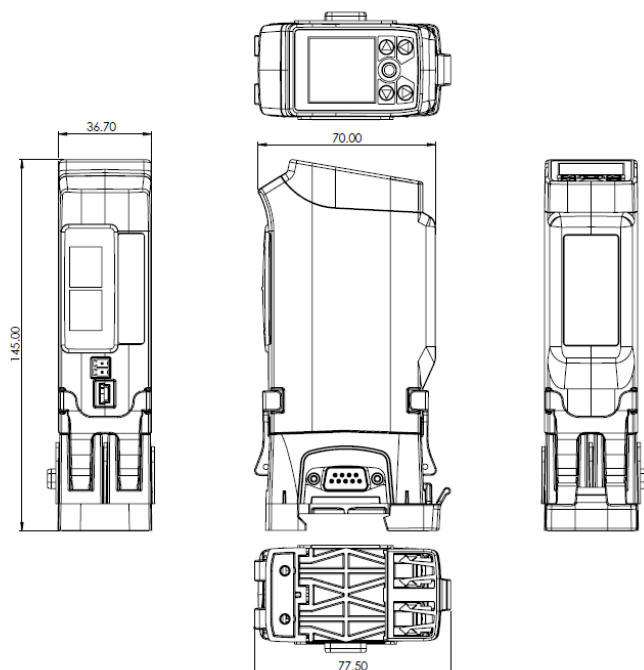
Accessories

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

Dimensions

For 3D drawings, please contact sales.solartronmetrology@ametek.co.uk

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

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