GE Versamax Series Service Manual

IC200PNS001

1. Description

The IC200PNS001 is an Profinet network interface unit that is part of the VersaMax series, formerly manufactured by GE Intelligent Platforms (GE IP), now under Emerson Automation. This module is mainly used to implement distributed I/O architecture as it supports communication up to 2880 total bytes of discrete I/O data and 2880 bytes of analog I/O data over Profinet network at

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Versamax**
Manufacturer	**Emerson Automation / GE Fanuc (former)**
Manufacturer	**GE Intelligent Platforms (Former); Emerson Automation (Current)**
Part	**Number IC200PNS001**
Series	**VersaMax**
Part	**Number IC200PNS001**
Power	**Consumption 0.60 Amperes at 5 Volts DC**
Product	**type Remote I/O Profinet Network Interface Unit**
Product	**Description Profinet network interface unit**
Supported	**protocol PROFINET version Version 2.2 Class A IO-Device**
Supported	**Protocols PROFINET Slave, Version 2.2 Class A IO-Device**
Proficy	**Machine Edition Version Required Version 7.0 or later**
Supported	**topologies Linear, Star, Ring (redundant)**
No.	**of Ports Two (2) RJ45ports**
Module	**Dimensions Height: 132mm (5.2 inches), Width: 134mm (5.28 inches)**
Distance	**100 m**
Supported	**topologies Linear, Daisy chain, Ring, Star**
Number	**of Port Connectors Two RJ-45**
Transmission	**rate 10/100 mbps**
Transmission	**speed 10/100 mbps**
I/O	**Discrete Points 2880 bytes total 1440 bytes of input data 1440 bytes of output data**
Maximum	**cable distan**

3. Product Information

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Series Versamax

Manufacturer Emerson Automation / GE Fanuc (former)

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Distance 100 m

Supported topologies Linear, Daisy chain, Ring, Star

Number of Port Connectors Two RJ-45

Transmission rate 10/100 mbps

Transmission speed 10/100 mbps

I/O Discrete Points 2880 bytes total 1440 bytes of input data 1440 bytes of output data

Maximum cable distance 100 meters per segment

PNS Status and Control Bits 32 input status bits and 32 output control bits

I/O Analog Words 2880 bytes total 1440 bytes of input data 1440 bytes of output data

Mounting DIN Rail

I/O Data Update on the PROFINET LAN Configurable: 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms

No. of modules Eight (8) modules

No. of supported I/O modules up to Eight (8) modules

RoHS Compliance Yes

No. of racks Not supported

I/O Discrete Points 2880 bytes total; 1440 bytes of input data/1440 bytes of output data

Operating Temperature Range 0 to 60 degrees Celsius surrounding air temperature without a fan

I/O Update rate Configurable: 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms

I/O Analog Words 2880 bytes total; 1440 bytes of input data/1440 bytes of output data

Compatible controllers Series 90-70; PACSystem RX7i; PACSystem RX3i

Diagnostic data 32 input status bits; 32 output control bits

I/O Data update rate 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms

The IC200PNS001 is a Profinet network interface unit from the VersaMax product family. It is mainly used to implement distributed I/O architecture utilizing Profinet industrial protocol specifically, Profinet slave Version 2.2 Class A I/O Device. This module can be used not only with VersaMax series but with other controllers such as PACSystem RX3i and RX7i controllers. The IC200PNS001 is installed with Two (2) RJ45 ports that functions as an embedded switch and utilizes a single IP address only. can be used in different Ethernet topologies specifically, linear, star and ring. Both port supports 10/100 mbps transmission rate and able to handle a total of 2880 bytes of discrete input and output specifically, 1440 bytes of input data and 1440 bytes of output data. Similarly, this module can process up to 2880 bytes of analog I/O particularly, 1440 bytes of analog input and 1440 bytes of analog output. For diagnostic data, this module has built-in 32 input status bits and 32 output control bits. Up to Eight (8) VersaMax I/O modules and carriers can be installed per instance of IC200PNS001. It has configurable data update rates of 1ms, 2ms, 4ms, 8ms, 16ms, 32ms, 64ms, 128ms, 256ms and 512ms. This module has 5 VDC backplane current consumption of 3 Watts and physically measures 134mm (5.28 in) x 132mm (5.2 in). The IC200PNS001 uses 10/100BASE-T transmission media with maximum cable distance of 100 meters per segment which can be extended with the use of ethernet switches or media converters such as fiber optic media converter.

The GE Fanuc Versamax IC200PNS001 PROFINET Scanner (PNS) module requires an RX3i PLC CPU with Firmware version 7.0 or newer and the Proficy Machine Edition software version 7.0 or later. The module coordinates the Versamax remote node with the PROFINET I/O network. The GE Fanuc IC200PNS001 PROFINET Scanner (PNS) module has functions such as input data retrieval and output data delivery. It has features such as PROFINET alarms and diagnostics reporting, which allows for the hot swap of an excessive power supply that has been de-energized and it allows for configuration with the Classless InterDomain Routing with supernetting and subnetting. It also offers field upgrade options, and the firmware can be updated via the USB port (the port is intended for firmware upgrades only and not for a permanent connection). The GE Fanuc IC200PNS001 PROFINET Scanner (PNS) module can connect the remote node to the PROFINET I/O network to oversee the I/O status if the communication is lost. Other functions include module scanning (both output and input scans), managing the module configuration, PROFINET communication between modules and I/O controllers within the PROFINET Scanner node, and reporting or issuing fault information in the form of diagnostics and alarms to the I/O controller. In addition, the PNS module’s main remote I/O publishes data on the PROFINET network to an I/O controller and it receives the

data generated from an I/O controller on the PROFINET network. This module has an operating temperature range between 0 and 60 degrees Celsius for the surrounding air temperature with no fan.