GE Series 90-30 Series Service Manual

IC693PTM101

1. Description

The IC693PTM101 is a Power Transducer Module that is part of the Series 90-30 platform, formerly by GE Fanuc now under Emerson Automation. This module is an intelligent module used for measuring electrical power consumption or monitoring voltages between the electrical generator and grid. This module is comprised of Three (3) parts as a Processing module, Interface board, and interface cable.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC663PTM101**
Series	**Series 90-30**
Description	**Power Transducer module**
Product	**Description Power Transducer Module**
Voltage	**10-120 Volts AC**
Mounting	**Any Series 90-30 Baseplate**
Current	**0-7.5 Amperes**
Compatible	**Series 90-30 CPU Any CPU module**
Frequency	**35-70 Hertz**
Operating	**modes Single mode; 3-phase mode; Synchro monitor mode**
Dissipation	**4 Watts**
Module	**Components: Processing module; Interface board; Interface cable**
Data	**calculation speed 20 ms at 50 hertz, 16.67 ms at 60 Hertz**
CPU	**Registers %I, %Q, %AI, and %AQ memory**
Backplane	**isolation Voltage 1500 Volts**
Memory	**allocation %I 16 bits; %Q 16 bits; %AI 25 words; %AQ 2 words**
Product	**Lifecycle Status* Discontinued/Obsolete**
Backplane	**Power Consumption 5V @ 400mA max. (from 90-30 backplane)**
Total	**Power Dissipation: 4W max**
Measured	**Parameters Voltage, Current, kW, kVAR, kVA, kWH, kVARH, kVAH Power factor, Frequency, Phase**
Resolution	**14-bit**

3. Product Information

The IC693PTM101 is a Power Transducer Module that is part of the Series 90-30 platform, formerly by GE Fanuc now under Emerson Automation. This module is an intelligent module used for measuring electrical power consumption or monitoring voltages between the electrical generator and grid. This module is comprised of Three (3) parts as a Processing module, Interface board, and interface cable.

Technical specifications for IC693PTM101

Brand GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc (Former); Emerson Automation (Current)

Part Number IC663PTM101

Series Series 90-30

Description Power Transducer module

Product Description Power Transducer Module

Voltage 10-120 Volts AC

Mounting Any Series 90-30 Baseplate

Current 0-7.5 Amperes

Compatible Series 90-30 CPU Any CPU module

Frequency 35-70 Hertz

Operating modes Single mode; 3-phase mode; Synchro monitor mode

Dissipation 4 Watts

Module Components: Processing module; Interface board; Interface cable

Data calculation speed 20 ms at 50 hertz, 16.67 ms at 60 Hertz

CPU Registers %I, %Q, %AI, and %AQ memory

Backplane isolation Voltage 1500 Volts

Memory allocation %I 16 bits; %Q 16 bits; %AI 25 words; %AQ 2 words

Product Lifecycle Status* Discontinued/Obsolete

Backplane Power Consumption 5V @ 400mA max. (from 90-30 backplane)

Total Power Dissipation: 4W max

Measured Parameters Voltage, Current, kW, kVAR, kVA, kWH, kVARH, kVAH Power factor, Frequency, Phase

Resolution 14-bit

Interface cable IC693CBL340

The IC693PTM101 is a Power Transducer Module that is part of the Series 90-30 platform of Emerson Automation, formerly by GE Fanuc Automation. This module is mainly utilized to implement electrical consumption analysis and monitoring voltage between an electrical generator and the distribution grid. It is a highly intelligent device that can be programmed to operate in Single mode, 3-phase mode, and Synchro monitor mode to perform a variety of functions. This module is mounted to a Serie 90-30 baseplate. It is designed to be connected to current and potential transformers for data calculation. This module is composed of three (3) parts, specifically, the Processing module, Interface board, and interface cable. It can be used in Wye or Delta type 3-phase power systems or with single-phase power systems. The IC693PTM101 can be used to perform accurate measurements of Root Mean Square (RMS) values of voltage and current as well as calculate power, power factor, frequency, energy, and total demand within a 15-minute period along with the 3-phase connections. Essentially, this module can cover functionalities of a Power Meter, however, with the added operating modes and functions plus the capability to be directly connected to a PLC, making data integration simplified and can be performed with ease. This module can also perform data reporting and fault monitoring. It can also be used for generator - grip synchronization feature and perform demand penalty cost reduction and load shedding requirements. The IC693PTM101 is compatible with all types of Series 90-30 PLC CPUs. The processor module may be installed to any baseplate whether CPU, Expansion or remote baseplate, providing users maximum flexibility and possibly eliminating long cable runs.

The IC693PTM101 module is a single-phase power transducer module manufactured by GE Fanuc. It is a Series 90-30 GE device that is widely used for industrial automation. It comes with a processing module, a single interface board, and an interface cable. It is used for making a connection between the power transducer and the input transformers. The module generates data which can be further used by the PLC for reporting, fault monitoring, and reduction/load shedding applications. The IC693PTM101 module comes with an input voltage rating between 10 and 120 Volts AC. It has a current rating between 0 and 7.5 Amps. The transducer module has a frequency rating from 35 to 70 Hertz with 0 outputs. The backplane isolation voltage of the module is 1500 Volts. It dissipates a total power of 4 Watts as heat. The IC693PTM101 module comes with an enhanced data processing capacity. It is able to handle and process data at impressive rates and it is able to perform data calculation within 20 milliseconds when operating at 50 Hertz, and within 16.67 milliseconds when operating at 60 Hertz. It has low latency with data processing in between 50 and 60 Hertz frequency. All the data is measured and analyzed based on the active and reactive power for each phase. The IC693PTM101 module is equipped with a predictive diagnostics feature that can provide reports and troubleshoot the entire application process. It can provide information for the module’s heartbeat, the voltage present in a phase, the valid phase polarity, the voltage measurement, and the current measurement. This transducer module should be kept away from electrostatic discharge and EMC noise.