



GE Fanuc

Series 90 & VersaMax

Overview

Maple Systems' **BLU300 Series** Operator Interface Terminals (Maple OITs) communicate with GE Fanuc Series 90 and VersaMax PLCs using the SNP-X protocol. When configured with BlueLeaf configuration software, the Maple OIT is the master in a point-to-point single master, single slave format.

Compatible PLCs	
Family	Model
Series 90-30	311, 313, 323, 331, 340, 341, 351 (requires RS232/422 converter), CMM311 (RS232 only)
Series 90-70	731, 771, 772, 780, 782, 788, 790, 915, 925, CSE784, CSE924 (requires RS232/422 converter), CMM711 (RS232 only)
Series 90 Micro	UC693UDR001, IC693UDR002, IC693UAA003, IC693UDR005, IC693UAL006, IC693UAA007, IC693UDR010 (requires RS232/422 converter)
VersaMax	CPU001 (RS232 only)
VersaMax Micro	All IC200U models
VersaMax Nano	All IC200N Models

Communications Cable

Important Note: The BLU300 Series operator interface terminal supports connection to the PLC using RS232 or two-wire RS485. The GE Fanuc PLCs do not support two-wire RS485. Therefore, you must connect the RS232 port on the PLC or use a RS232/422 converter.

A list of communications cables offered by Maple Systems as well as cable assembly instructions to assist you in assembling your own communications cable are available on our website at www.maple-systems.com/cables.htm.

WARNING: If your communications cable is not wired exactly as shown in our cable assembly instructions, damage to the OIT or loss of communications can result.

PLC Settings

The Modem Turnaround Delay must be set to 0.

The Level 2 Password in the PLC must be set to NULL

The SNP-X port's Baud Rate, Parity, Data Bits, and Stop Bits settings must match the settings in BlueLeaf

Accessible PLC Memory

Register Memory

The following table lists the PLC's register memory ranges that the Maple OITs are able to access. Please note that your PLC's memory range may be *smaller* or *larger* than that supported by these OITs. The following register memory can be displayed in 16 or 32 bit format on the Maple OIT.

PLC Register Type	Address Range	Format	PLC Register Description
%R	1-2048	ddd (d=decimal)	Data Memory Registers
%AI	1-128	ddd	Analog Input Registers
%AQ	1-128	ddd	Analog Output Registers

Discrete Memory

The following table lists the PLC's discrete memory ranges that the Maple OITs are able to access. Please note that your PLC's memory range may be *smaller* or *larger* than that supported by these OITs. The following discrete memory is displayable in single-bit format on the Maple OIT.

PLC Bit Type	Address Range	Format	PLC Register Description
%I	1-512	dd (d=decimal)	Discrete Inputs
%Q	1-512	dd	Discrete Outputs
%T	1-256	dd	Discrete Temporaries
%M	1-1024	dd	Discrete Internals
%SA	1-32	dd	SA Status Discretes
%SB	1-32	dd	SB Status Discretes
%SC	1-32	dd	SC Status Discretes
%S	1-32	dd	S Status Discretes
%G	1-1280	dd	Genius Global Registers

Important Memory Considerations

If your PLC's memory range is smaller than the range supported by the Maple OITs, it is possible to configure the OIT to monitor a PLC memory address which does not exist. Since this can cause unpredictable results, when you configure the OIT please ensure that all selected PLC memory addresses are valid for your PLC model.

Do not configure the OIT to write to any PLC memory address which should only be written to by the PLC.

BlueLeaf Settings

The following table lists the communications settings that must be configured in BlueLeaf. These settings can be found in the Tools...HMI-PLC Comm Settings menu under the PLC tab. Please note:

- the **Recommended Settings** column provides the recommended setting based upon the default settings most commonly used in the GE Fanuc Series 90 PLCs
- the **Options** column lists BlueLeaf options; your PLC may not support every option

Name	Recommended Settings	Options	Important Notes
PLC type:	GE Fanuc Series 90 (SNP-X)		
Com Port:	RS232	RS232, RS485 (2-wire only)	Tools...Set HMI-PLC Port
Baud Rate:	19200	4800, 9600,19200, 38400,57600, 115200	Must match the SNP-X port setting. Use the fastest baud rate supported by the PLC.
Data Bits:	8	7 or 8	Must match the SNP-X port setting.
Stop Bits:	1	1 or 2	Must match the SNP-X port setting.
Parity:	Odd	Even, Odd, None	Must match the SNP-X port setting.
Net Addr:	1	0-255	Does not apply to this protocol.