



Omron

CS & CJ Series

Overview

Maple Systems' **BLU300 Series** Human-MachineInterface Terminals (Maple HMIs) communicate with Omron CS & CJ Series PLCs using the expanded Host Link protocol. When configured with Blue Leaf software, the Maple HMI is the master in a point-to-point single master, single slave format. Please refer to the *Blu300 Operation Manual* for more information.

Compatible PLCs	
Family	CPU Model(s)
CS Series	CS1G, CS1H
CJ Series	CJ1M, CJ1G, CJ1H

Communications Cable

The BLU300 should be connected to the PLC's Host Link port.

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 HMI or loss of communications can result.

PLC Settings

The host link port may be built into the PLC or connected as an additional plug-in module.

The Host Link unit (node) number must be set to 01 or higher.

The PLC must be placed into Monitor mode.

Accessible PLC Memory

Register Memory

The following table lists the PLC's register memory ranges that the Maple HMIs are able to access. Please note that your PLC's memory range may be *smaller* or *larger* than that supported by these HMIs. The following register memory can be displayed in 16, 32, or 64 bit format on the Maple HMI.

PLC Register Type	Address Range	Format	PLC Register Description
CIO	0-6143	dddd (d=decimal)	Common I/O
HR	0-4095	dddd	Holding Relays
AR	0-4095	dddd	Auxillary Relays
TIM (PV)	0-4095	dddd	Timer Preset Value Registers
CNT (PV)	0-4095	dddd	Counter Preset Value Registers
DM	0-32767	dddd	Data Memory Registers
WR	0-511	ddd	Work Relays

Discrete Memory

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

PLC Bit Type	Address Range	Format	PLC Bit Description
CIO	0.0 to 6143.15	dddd.bb (d=decimal, b=bit)	Common I/O
HR	0.0 to 4095.15	dddd.bb	Holding Relays
AR	0.0 to 4095.15	dddd.bb	Auxiliary Relays
TIM (C-Flg)	0.0 to 4095.0	dddd.0	Timer Completion Flags ¹
CNT (C-Flg)	0.0 to 4095.0	dddd.0	Counter Completion Flags ¹
DM	0.0 to 32767.15	dddd.bb	Data Memory Area
WR	0.0 to 511.15	ddd.bb	Work Relays

Notes: (1) - For completion Flags, the bit number must be specified as 0

Important Considerations

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

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

The “function key” button object will function as a “momentary” button, independent of the attribute selected. This is overcome by latching the bit in the PLC logic.

BlueLeaf Settings

The following table lists the communications settings that must be configured in BlueLeaf software. These settings can be found in the “Tools...HMI-PLC Communications Settings” menu.

- the **Recommended Settings** column provides the recommended setting based upon the default settings most commonly used in the Omron CS/CJ PLCs
- the **Options** column lists BlueLeaf’s options; your PLC may not support every option.

Name	Recommended Settings	Options	Important Notes
PLC type:	Omron PLC - CS/CJ Series		
Serial port I/F:	RS232		Use RS232 only
Data Bits:	7	7 or 8	Must match the PLC’s port setting.
Stop Bits:	2	1 or 2	Must match the PLC’s port setting.
Baud Rate:	9600	9600,19200, 38400,57600, 115200	Must match the PLC’s port setting. ** If possible, use the fastest baud rate supported by the PLC.
Parity:	Even	Even, Odd, None	Must match the PLC’s port setting.
Net Addr:	1	1-31	Must match the PLC’s Hostlink node number. ** Do not use address 0