

Communication Interface Manual



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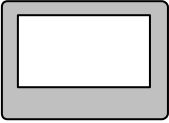
GE Fanuc 90-30/90-70 / Versamax Series

GE Fanuc 90-30(SNP/SNP-X)/Versamax PLC CPU Direct

The following section describes the system configuration and interface between GE Fanuc 90-30 / Versamax PLC and TOP using RS-422 or RS-232 communication through CPU Loader Port.

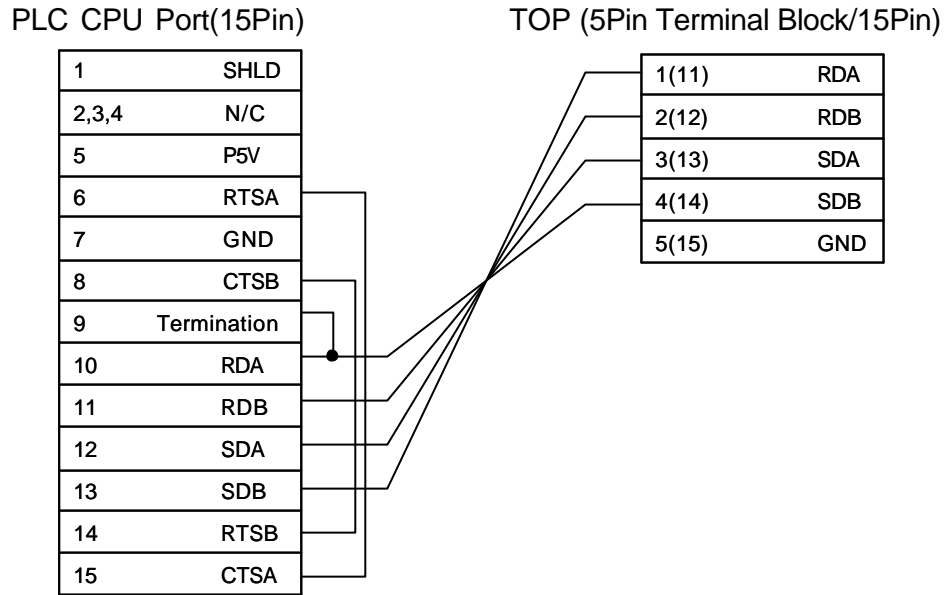
< System Configuration >

This figure shows system configuration to connect GE Fanuc 90-30 PLC to TOP.

| PLC | Comm. Unit | Cable | TOP |
|---|--|--|---|
|  |  | |  |
| Fanuc 90-30 (CPU311/CPU331) | None | Refer to Cable Connection. (RS-422) | All TOP |
| Versamax (IC200CPU001 / 002 / 005) | None | Refer to Cable Connection (RS-422) Refer to Cable Connection (RS-232) | |

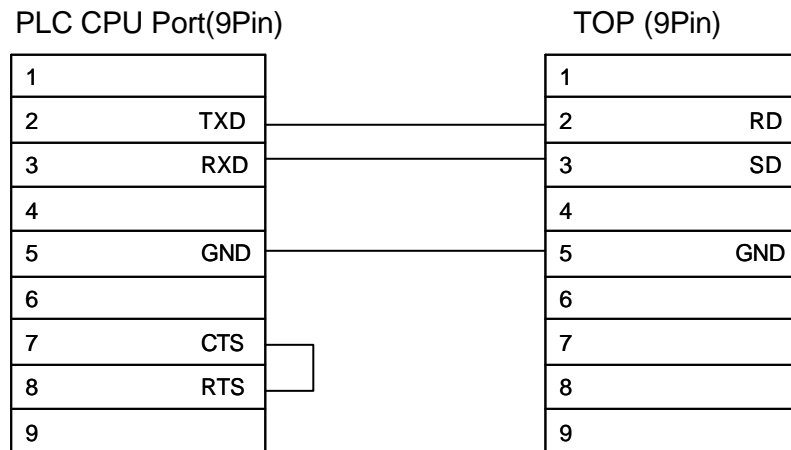
< Cable Diagram >

(1) RS-422 (GE Fanuc 90-30 / Versamax TOP (for 5Pin Terminal Block or 15Pin Connector))



Pin No. 6-15, 8-14, 9-10 has to be commonly connected.

(2) RS-232 (Versamax TOP (for 9Pin Connector))



GE Fanuc 90-30[SNP/SNP-X] PLC Setup

(1) Serial Parameter Setup

Recommended settings are 19200 bps, Data 8 bit, Stop 1 bit, Parity ODD.

| PLC Settings | |
|-----------------|-----------|
| Baud Rate | 19200 bps |
| Data Length | 8 bit |
| Stop Bit | 1 bit |
| Parity Bit | ODD |
| Station Address | 0 |

(2) Set Control ID – CPU ID (When using SNP protocol)

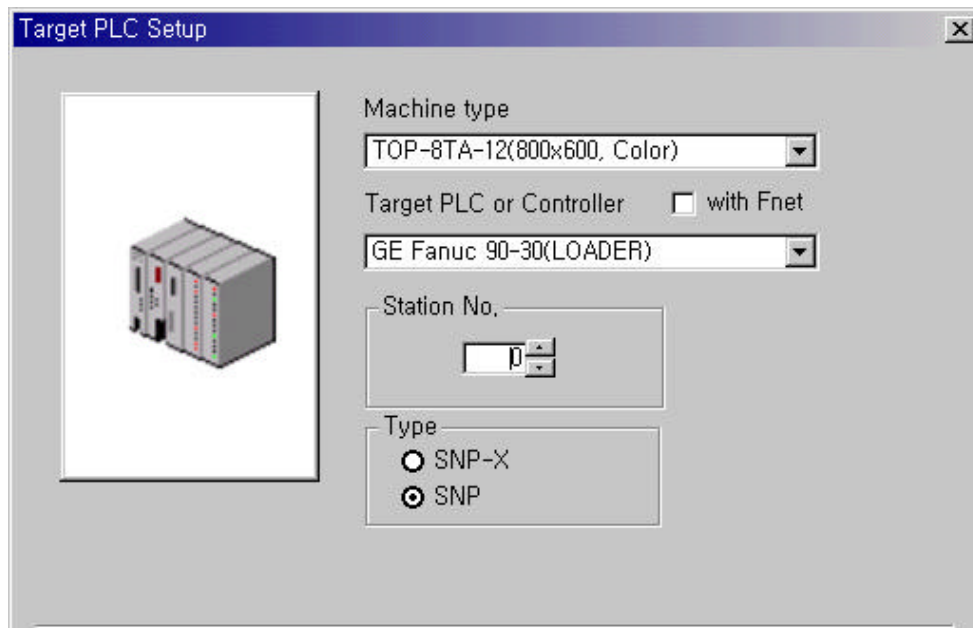
When using SNP protocol, a PLC CPU controller ID for a given PLC CPU has to be specified. Maximum of six ASCII characters can be permitted for GE FANUC 90-30 series. In order to recognize CPU ID from TOP by GE FANUC 90-30, CPU ID has to be set as the following rules.

- CPU ID setup for PLC : '0' ~ '99' DECIMAL CHARACTER

< TOP Setup >

(1) TOP Designer Setup

Select "GE Fanuc 90-30(LOADER)" in PLC Type.



(2) Selecting Protocol

Select 'SNP' or 'SNP-X' protocol according to protocol to be available.

(3) CPU ID Setup (When using SNP protocol)

If having selected SNP protocol in Target PLC setup window of TOP Designer, CPU ID of TOP Designer has to be set as same as CPU ID of PLC. Because TOP Designer uses station number as PLC CPU ID, PLC CPU ID has to be entered in 'Station Number' column of TOP Designer.

(4) TOP Serial Setup

Serial Settings are as follows.

~~Serial Baud Rate : 19200~~

~~Serial Data Bit : 8~~

~~Serial Stop Bit : 1~~

~~Serial Parity Bit : ODD~~

~~Serial Signal Level : RS-422~~

~~Controller's Station No. at Comm. Diagnosis(0~31)~~

: Same as controller's Station Address (Same as CPU ID for SNP protocol)

Versamax PLC Setup

(1) Serial Parameter Setup

Recommended settings are 19200 bps, Data 8 bit, Stop 1 bit, Parity ODD.

| PLC Settings | |
|-----------------|-----------|
| Baud Rate | 19200 bps |
| Data Length | 8 bit |
| Stop Bit | 1 bit |
| Parity Bit | ODD |
| Station Address | 0 |

(2) Set Control ID – CPU ID (SNP protocol)

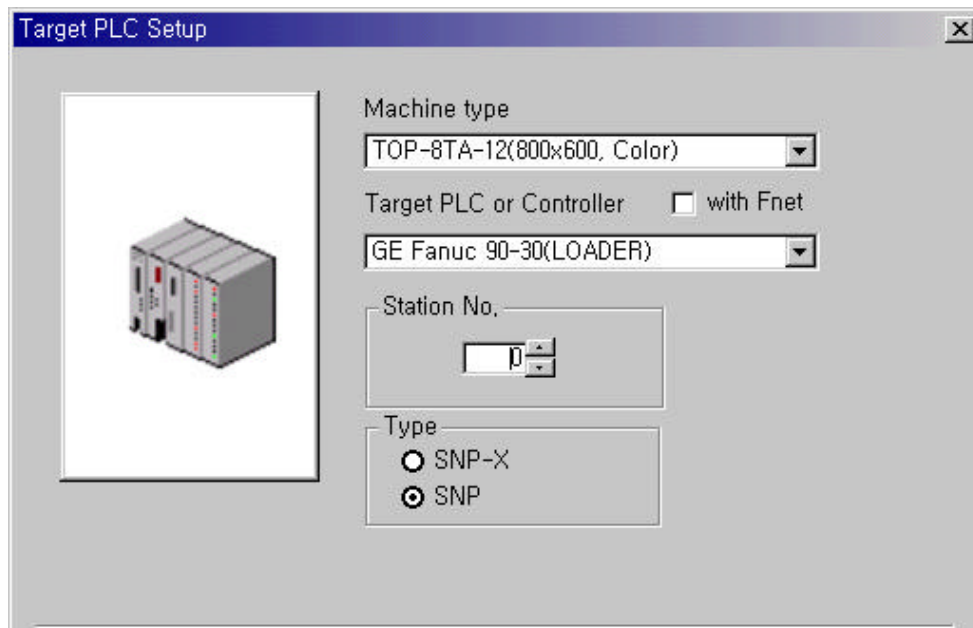
When using SNP protocol, a PLC CPU controller ID for a given PLC CPU has to be specified. Maximum of six ASCII characters can be permitted for VersaMax series. In order to recognize CPU ID from TOP by VersaMax, CPU ID has to be set as the following rules.

- CPU ID setup for PLC : '0' ~ '99' DECIMAL CHARACTER

< TOP Setup >

(1) TOP Designer Setup

Select "GE Fanuc 90-30(LOADER)" in PLC Type.



(2) Selecting Protocol

Select 'SNP' protocol instead of "SNP-X" protocol.

(3) CPU ID Setup (SNP protocol)

If having selected SNP protocol in Target PLC setup window of TOP Designer, CPU ID of TOP Designer has to be set as same as CPU ID of PLC. Because TOP Designer uses station number as PLC CPU ID, PLC CPU ID has to be entered in 'Station Number' column of TOP Designer.

(4) TOP Serial Setup

Serial Settings are as follows.

~~Serial Baud Rate : 19200~~

~~Serial Data Bit : 8~~

~~Serial Stop Bit : 1~~

~~Serial Parity Bit : ODD~~

~~Serial Signal Level : RS-422~~

~~Controller's Station No. at Comm. Diagnosis(0~31)~~


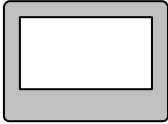
: Same as controller's Station Address (Same as CPU ID for SNP protocol)

GE Fanuc 90-70(SNP-X) PLC Serial Interface

The following section describes the system configuration and interface between GE Fanuc 90-70 PLC and TOP using RS-422 communication through IC697CMM711 Unit.

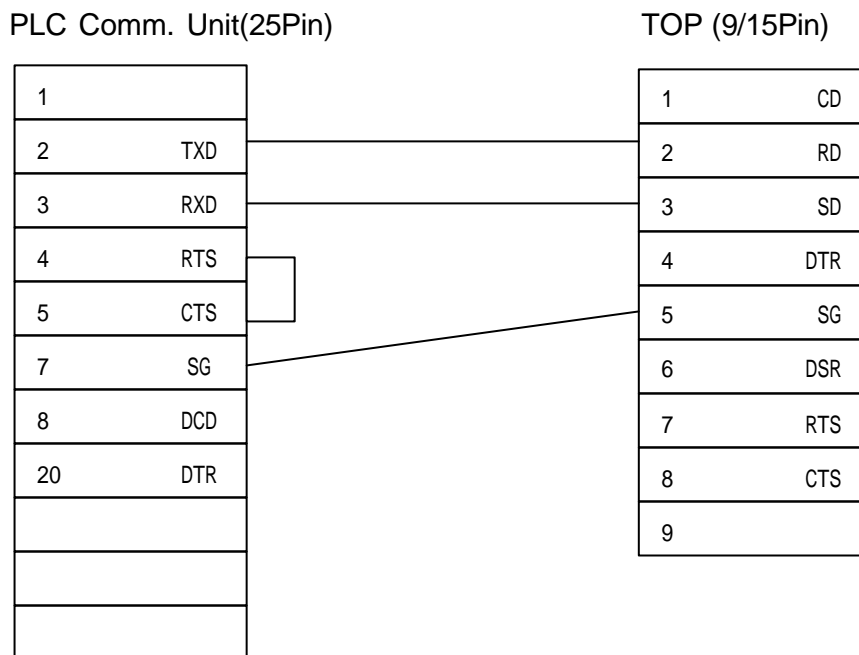
< System Configuration >

This figure shows system configuration to connect GE Fanuc 90-70 PLC to TOP.

| PLC | Comm. Unit | Cable | TOP |
|---|-------------|----------------------------|---|
|  | | ←————→ |  |
| GE FANUC 90-70 (CPU731/732/771/772/781/782) | IC697CMM711 | Refer to Cable Connection. | All TOP |

< Cable Diagram >

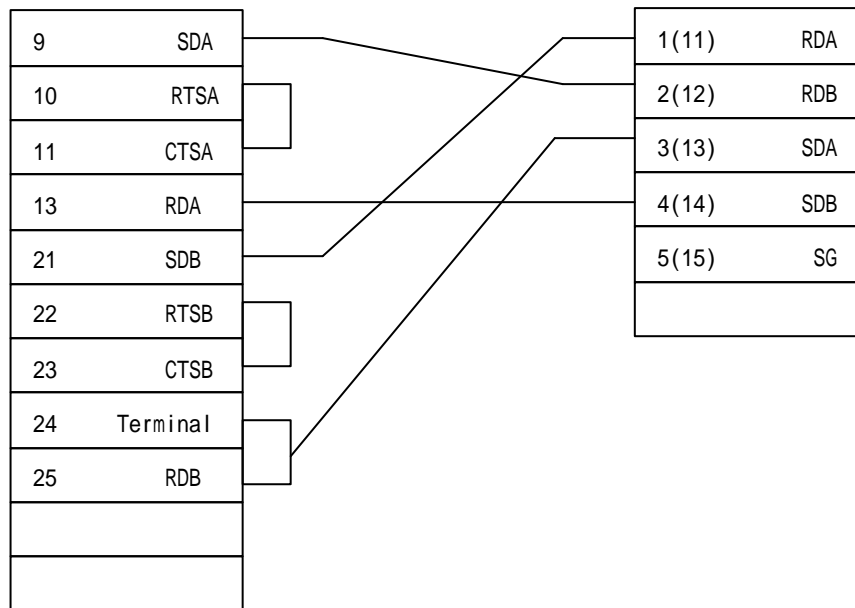
(1) RS-232C (GE Fanuc 90-70 TOP (for 9/15Pin Connector))



(1) RS-422 (GE Fanuc 90-70 TOP (for 5Pin Terminal Block or 15Pin Connector))

PLC Comm. Unit(25Pin)

TOP
(5Pin Terminal Block/15Pin)



< GE Fanuc 90-70[SNP-X] PLC Setup >

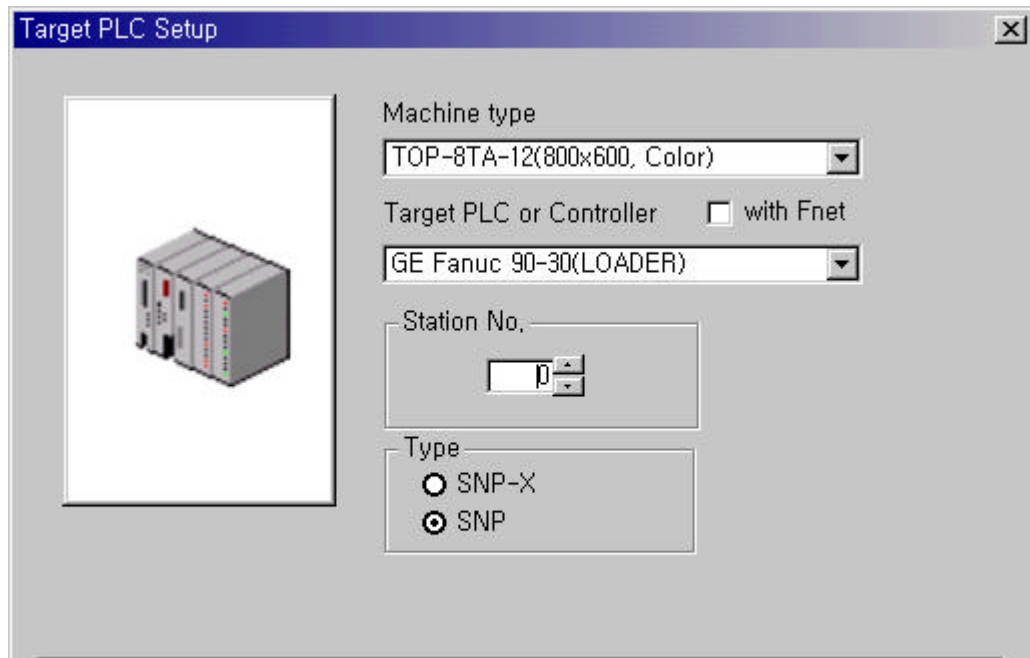
Recommended settings are 19200 bps, Data 8 bit, Stop Bit 1 bit, Parity ODD.

| PLC Setting | |
|-----------------|-----------|
| Baud Rate | 19200 bps |
| Data Length | 8 bit |
| Stop Bit | 1 bit |
| Parity Bit | ODD |
| Station Address | 0 |

< TOP Setup >

(1) TOP Designer Setup

Select "GE Fanuc 90-70[SNP-X](LOADER)" in PLC type.



(2) TOP Serial Setup

Serial Settings are as follows.

- Serial Baud Rate : 19200
- Serial Data Bit : 8
- Serial Stop Bit : 1
- Serial Parity Bit : ODD
- Serial Signal Level : RS-422
- Controller's Station No. at Comm. Diagnosis(0~31)
: Same as controller's Station Address

Available Address List

(1) GE Fanuc 90-30/90-70[SNP-X]

| Device | Bit Address | Word Address |
|---------------------------|-----------------|-----------------|
| Input Relay(I) | I0001 ~ I12288 | I00001 ~ I12273 |
| Output Relay(Q) | Q00001~ Q12288 | Q0001 ~ Q12273 |
| Internal Relay(M) | M00001 ~ M12288 | M0001 ~ M12273 |
| Global Relay(G) | G0001 ~ G7680 | G0001 ~ G7665 |
| Momentary Relay(T) | T001 ~ T256 | T001 ~ T241 |
| System Function Relay(SA) | SA001 ~ SA128 | SA001 ~ SA113 |
| System Function Relay(SB) | SB001 ~ SB128 | SB001 ~ SB113 |
| System Function Relay(SC) | SC001 ~ SC128 | SC001 ~ SC113 |
| System Function Relay(S) | S001 ~ S128 | S001 ~ S113 |
| Register(R) | | R00001 ~ R16384 |
| Analog Input(AI) | | AI0001 ~ AI8192 |
| Analog Output(AQ) | | AQ0001 ~ AQ8192 |