

TOP COMMUNICATION MANUAL

(CERSA-MCI LSN)



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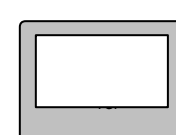
CERSA-MCI LSN

CERSA-MCI LSN interface

The following section describes the system configuration and interface between CERSA-MCI LSN and TOP by serial RS-232 or RS-485.

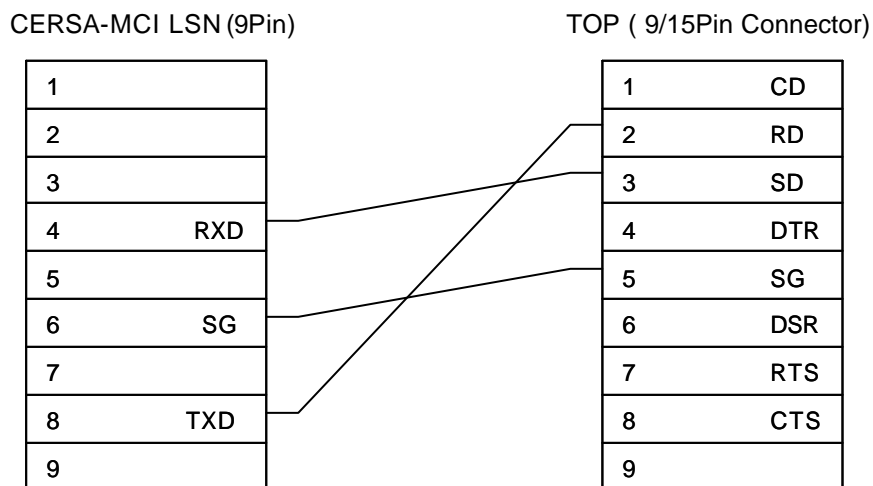
< System Configuration >

This figure shows system configuration to connect CERSA-MCI LSN to TOP.

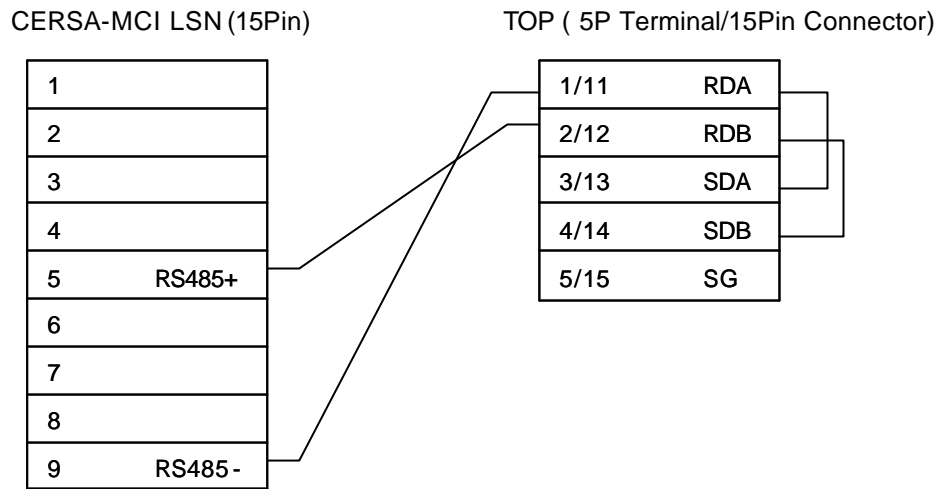
Controller	Comm. Module	Cable	TOP
			
CERSA-MCI LSN	None	Refer to Connection Diagram(RS-232) Refer to Connection Diagram (RS-485)	All TOP

< Cable Diagram >

(1) RS-232 Connection Diagram (CERSA-MCI LSN TOP)



(2) RS-485 Connection Diagram (CERSA-MCI LSN TOP)



< CERSA-MCI LSN Communication Setup >

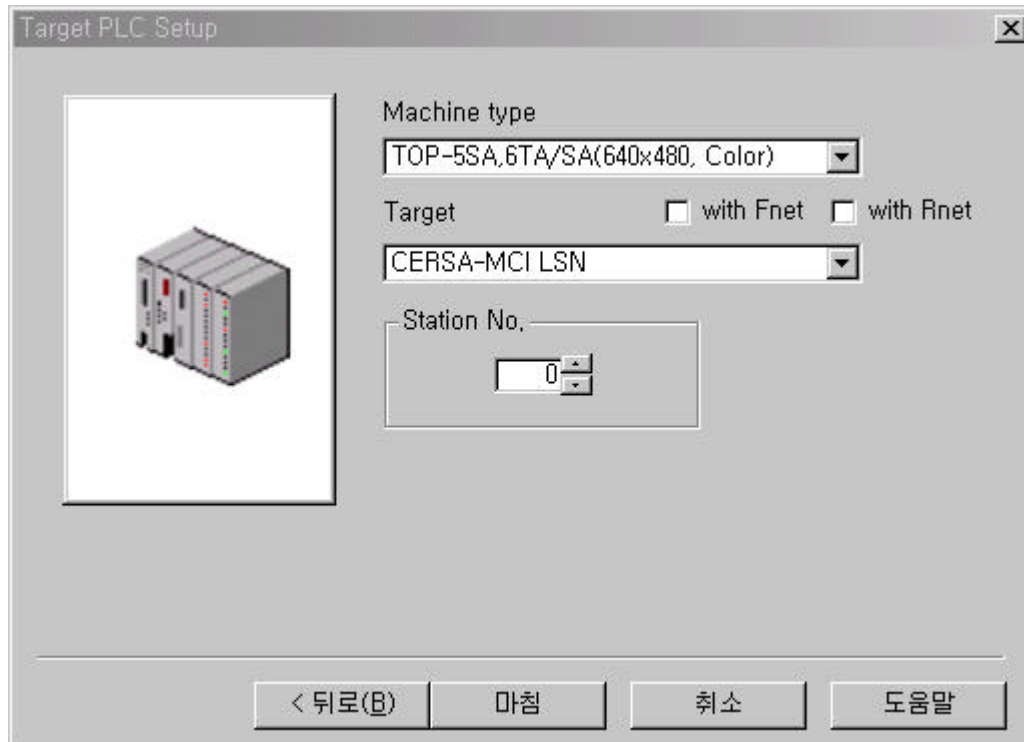
Default communication settings for LSN are as following table.

Communication Setup	
Baudrate	38400 bps
Data Bit	8 bit
Stop Bit	1 bit
Parity Bit	None

< TOP Setup >

(1) TOP Designer setup

Select Controller type of CERSA-MCI LSN Series as shown figure.



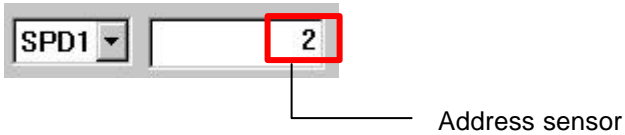
(2) Serial communication setup in TOP

Communication setup in 'Comm. Setup' Menu are as follows :

- Serial Baud Rate : Same as controller's setup
- Serial Data Bit : Same as controller's setup
- Serial Stop Bit : Same as controller's setup
- Serial Parity Bit : Same as controller's setup
- Serial Signal Level : Same as controller's setup
- Station No. at Communication Diagnosis(0~31) : Same as controller's setup

< Address sensor Setup >

Address sensor can be set separately for all devices of CERSA-MCI LSN and is composed of 2 digits from 0 to 99 as followings.



<Data setup (Data write)>

In data setup of CERSA-MCI LSN, it is impossible to input single data using 'Key Display' tag. In order to set data of items such as Line Configuration, Diameter and Speed, all data for each item has to be set at the same time using 'Comm(z)' Tag. The method of data setup is as follows.

1. Selection and setup of Tag for data setup

- (1) First of all, several 'Key Display' tags should be selected enough to display all data (For example, in case of Speed data, 3 Key display tags is need to display 'Nominal / Lower / Upper speed) and system buffer address be assigned to for the address of 'Key display' tag.

Note : In assigning address of system buffer, address of 'Key display' tags must have continuous address as like 100, 101, 102.

- (2) Select 'Touch' tag and assign condition to trigger 'Comm(Z)' tag. (For example, the condition of touch operation is ON on 'touch' for 0th bit of system buffer address 200).
- (3) Select 'Comm(z)' tag and assign triggering condition in accordance with the above (2) conditions. Operation items are listed as follows.
 - Comm. Type : Write (THIS => PLC)
 - Start Addr. In PLC : Data item to be set(in case of Speed, Start Addr. In PLC has to be set as SPD1)
 - No. of Word : Number of data for item(in case of Speed, No. of Word is 3 – Nominal, Upper, Lower speed)
 - Start system buffer : System address to be assigned as the above (1).

2. The method of data setup

After selecting and assigning tags, the method of data setup is as following.

- (1) Enter all data of item using 'Key display' tag.
- (2) If pressing 'Touch', all data setup will be done.

<The example of Data setup (Data write)>

(1) The example of Line Configuration setup

- Key Display Tag : system buffer address from 300 to 304(address 300 and 304 is set to 32bit. Address 300 and 304 are respectively allocated to LIN1 and LIN4)
- Touch Tag : The triggering condition of Comm(z) tag is ON on 'touch' for 0th bit of system buffer address 400
- Comm(z) Tag :
 - * Triggering condition : 'ON' condition for 0th bit of system buffer address 400
 - * Start Addr. in PLC : LIN1
 - * No. of Word : 4
 - * Start system buffer - 300

(2) The example of Diameter setup

- Key Display Tag : system buffer address from 310 to 312. Address 310 to 312 are respectively allocated to DIA1 to DIA3
- Touch Tag : The triggering condition of Comm(z) tag is ON on 'touch' for 1st bit of system buffer address 400
- Comm(z) Tag :
 - * Triggering condition : 'ON' condition for 1st bit of system buffer address 400
 - * Start Addr. in PLC : DIA1
 - * No. of Word : 3
 - * Start system buffer - 310

(3) The example of Speed setup

- Key Display Tag : system buffer address from 320 to 322. Address 320 to 322 are respectively allocated to SPD1 to SPD3
- Touch Tag : The triggering condition of Comm(z) tag is ON on 'touch' for 2nd bit of system buffer address 400
- Comm(z) Tag :
 - * Triggering condition : 'ON' condition for 2nd bit of system buffer address 400
 - * Start Addr. in PLC : SPD1

- * No. of Word : 3
- * Start system buffer : 320

(4) The example of Spool Length setup

- Key Display Tag : system buffer address 330 (32bit). Address 330 is allocated to SPLL
- Touch Tag : The triggering condition of Comm(z) tag is ON on 'touch' for 3th bit of system buffer address 400
- Comm(z) Tag :
 - * Triggering condition : 'ON' condition for 3th bit of system buffer address 400
 - * Start Addr. in PLC : SPLL
 - * No. of Word : 1
- * Start system buffer : 330

<Available Device List>

Item	DEVIC E	Command
Line Configuratioin	LIN1	Length statistics
	LIN2	Capstan Diameter
	LIN3	Capstan Pulse
	LIN4	Shift Correction
	LIN5	Address sensor
Diameter	DIA1	Nominal Diameter
	DIA2	Lower Limit Diameter
	DIA3	Upper Limit Diameter
Speed	SPD1	Nominal Speed
	SPD2	Lower Limit Speed
	SPD3	Upper Limit Speed
Spool length	SPLL	Spool Length Limit
	SPLC	Spool Length Count
Current parameter	CDIA	Current Diameter
	CALM	Current Alarm
	CSPD	Current Speed
	CSPL	Current Spool Length
Statistics	STC1	The number of diameter measures in the group since last read statistics command
	STC2	The minimum diameter of the group
	STC3	The maximum diameter of the group
	STC4	Standard Deviation
	STC5	Variance
Ovality	OVL1	The average diameter during the last rotation cycle
	OVL2	The minimum diameter during the last rotation cycle
	OVL3	The maximum diameter during the last rotation cycle
	OVL4	The difference between the maximum and the minimum diameter
	OVL5	The number of diameter measures during the last rotation cycle