



This installation guide provides simple function information or PLC control. Please read carefully this data sheet and manuals before using products. Especially read precautions then handle the products properly.

1 Safety Precautions

■ Meaning of warning and caution label

	WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
	CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices

WARNING	
①	Do not contact the terminals while the power is applied.
②	Be sure there are no foreign metallic matters.
③	Do not manipulate the battery(charge, disassemble, hitting, short, soldering).
CAUTION	
①	Be sure to check the rated voltage and terminal arrangement before wiring
②	When wiring, tighten the screw of terminal block with the specified torque range
③	Do not install the flammable things on surroundings
④	Do not use the PLC in the environment of direct vibration
⑤	Except expert service staff, Do not disassemble or fix or modify the product
⑥	Use the PLC in an environment that meets the general specifications contained in this datasheet.
⑦	Be sure that external load does not exceed the rating of output module.
⑧	When disposing of PLC and battery, treat it as industrial waste.

2 Operating Environment

■ To install, observe the below conditions.

No	Item	Specification	Standard			
1	Ambient temp.	0 ~ 55℃	-			
2	Storage temp.	-25 ~ 70℃	-			
3	Ambient humidity	5 ~ 95%RH, non-condensing	-			
4	Storage humidity	5 ~ 95%RH, non-condensing	-			
5	Vibration Resistance	Occasional vibration		10 times in each direction for X, Y, Z	IEC 61131-2	
		Frequency	Acceleration			Amplitude
		5≤f<8.4Hz	-			3.5mm
		8.4≤f≤150Hz	9.8m/s²(1g)			-
		Continuous vibration				
		Frequency	Acceleration			Amplitude
5≤f<8.4Hz	-	1.75mm				
8.4≤f≤150Hz	4.9m/s²(0.5g)	-				

3 Applicable Support Software

■ For system configuration, the following version is necessary.

- 1) XBC Series : SU(V1.5 or above), H(V2.4 or above), U(V1.1 or above)
- 2) XEC Series : SU(V1.4 or above), H(V1.8 or above), U(V1.1 or above)
- 3) XBM Series : S(V3.5 or above), H(V1.0 or above)
- 4) XG5000 Software : V4.00 or above

4 Accessories and Cable Specifications

■ Check RS-232/485 Connector attached in the module. (XBL-C41A)

■ Check terminal resistance contained in the box. (XBL-C41A)

- 1) Terminal resistance : 120Ω, 1/2W, allowance 5% (2EA)

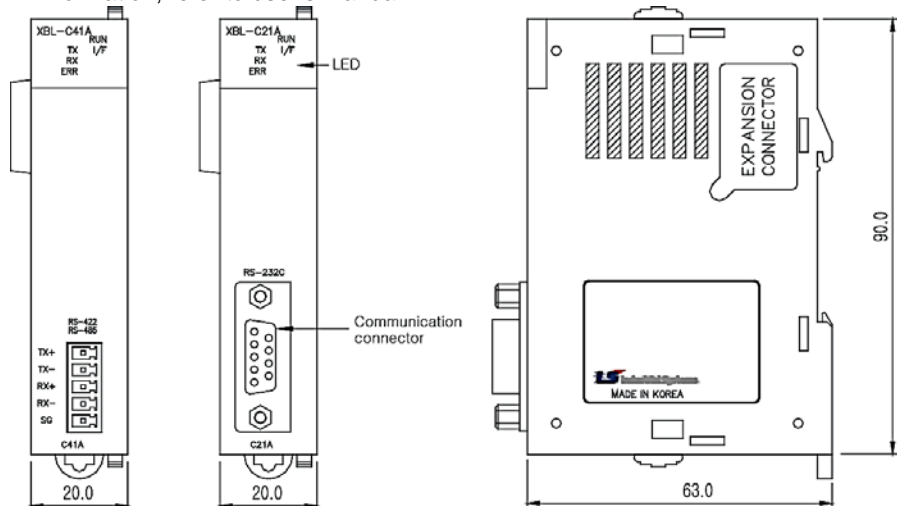
■ When using RS-422 or RS-485 communication channel, twisted pair cable shall be used with consideration of communication distance and speed.

- 1) Item : Low Capacitance LAN Interface Cable
- 2) Type : LIREV-AMESB
- 3) Size : 2P X 22AWG(D/0.254 TA)
- 4) Manufacturer : LS Cable Co., Ltd
- 5) Electrical characteristics

Items	Unit	Characteristics	Condition
Conductor Resistance	Ω/km	59 or less	25℃
Withstanding Voltage (DC)	V/1min	500V, 1Min.	In air
Insulation Resistance	MΩ-km	1,000 or more	25℃
Capacity	Pf/M	45 or less	1kHz
Characteristic Impedance	Ω	120±12	10MHz

5 Parts name and Dimension (mm)

■ This is front part of the product. Refer to each name when operating the system. For more information, refer to user's manual.



LED details

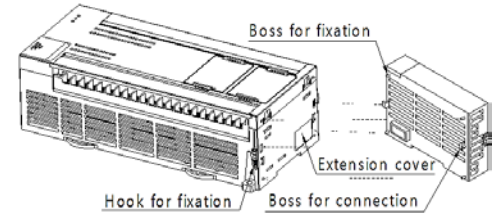
Name	Description	Status	LED Status Description
RUN	Cnet operation status	On	Normal operating
		Off	Abnormal operating of Cnet I/F module
I/F	Interface status with CPU	On	Interface error with CPU module
		Off	Communication module initialization error
		Blinks	Normal operating
TX	During frame transmission	On	During frame transmission
		Off	Frame transmission completed
RX	During frame receiving	On	During frame receiving
		Off	Frame receiving completed
ERR	Displays fame error	On	Frame error
		Off	Normal frame

6 Installing / Removing Modules

■ Here describes the method to attach each module to the base or remove it.

- 1) Installing module

- ① Eliminate the Extension Cover at the product.
- ② Push the product and connect it in agreement with Hook For Fixation of four edges and Hook For Connection.
- ③ After connection, push down the Hook For Fixation and fix it completely.



- 2) Removing module

- ① Push up the Hook For Disconnection, and then detach the product with two hands. (Do not detach the product by force)

7 Wiring

■ Wiring for Communication

- 1) RS-232C connector (modem connection)

Cnet(9-PIN)		Signal Direction	Modem(25-PIN)	
Pin No	Name		Name	Pin No.
1	CD	←	CD	8
2	RXD	←	RXD	3
3	TXD	→	TXD	2
4	DTR	→	DTR	20
5	SG	→	SG	7
6	DSR	←	DSR	6
7	RTS	→	RTS	4
8	CTS	←	CTS	5
9	RI	←	RI	22

- 2) RS-422 Connector for communication

Cnet(5-Pin)		Signal Direction (Cnet ↔ external device)	External comm. Device	
Pin No	Name			
1	TX+	→	RX+	
2	TX-	→	RX-	
3	RX+	←	TX+	
4	RX-	←	TX-	
5	SG	→	SG	

- 3) RS-485 Connector for communication

Cnet(5-Pin)		Signal Direction (Cnet ↔ external device)	External comm. Device	
Pin No	Name			
1	TX+	→	RX+	
2	TX-	→	RX-	
3	RX+	←	TX+	
4	RX-	←	TX-	
5	SG	→	SG	

- 4) For more information about wiring, refer to user manual.

8 Warranty

■ Warranty period

- 18 months after the production date.

■ Scope of Warranty

18-month warranty is available except:

- 1) The troubles caused by improper condition, environment or treatment except the instructions of LS ELECTRIC.
- 2) The troubles caused by external devices
- 3) The troubles caused by remodeling or repairing based on the user's own discretion.
- 4) The troubles caused by improper usage of the product
- 5) The troubles caused by the reason which exceeded the expectation from science and technology level when LS ELECTRIC manufactured the product
- 6) The troubles caused by natural disaster

■ Change in specifications

Product specifications are subject to change without notice due to continuous product development and improvement.

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