



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 A/S 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.
⑨	I/O signal or communication line shall be wired at least 100mm away from a high-voltage cable or power line.

2 Use of 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/s ² (1g)			-
		Continuous vibration				
		Frequency	Acceleration			Amplitude
5≤f<8.4Hz	-	1.75mm				
8.4≤f≤150Hz	4.9m/s ² (0.5g)	-				

3 Applicable Version

■ For system configuration, the following version is necessary.

- 1) XBC Series : SU(V1.90 or above), H(V2.80 or above), U(V1.70 or above)
- 2) XEC Series : SU(V1.80 or above), H(V2.20 or above), U(V1.70 or above)
- 3) XBM Series : S(V3.80 or above), H(V1.10 or above)
- 4) XG5000 Software : V4.21 or above

4 Standard of Cable

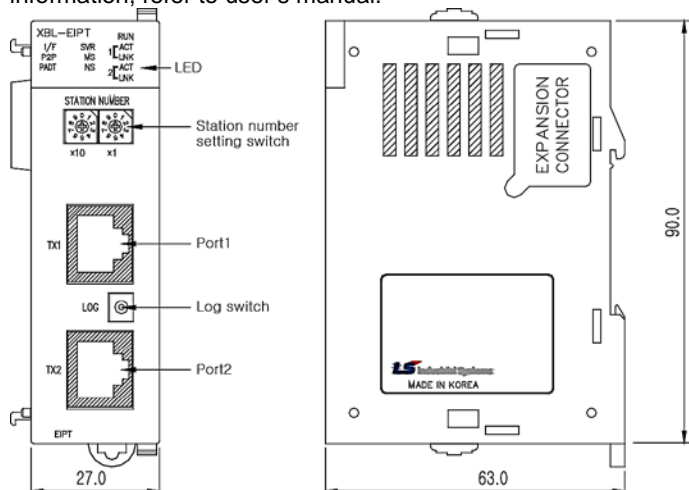
■ Cable is recommended for CAT5E over S-FTP cable. Cable types vary Depending on your system configuration and environment. Please consult a professional supplier before installation.

1) Electrical Characteristic

Item	Unit	Value	Condition
Conductor resistance	Ω/km	93.5 Or less	25℃
Voltage endurance(DC)	V/1min	500V	In air
Insulation resistance(Min)	MΩ-km	2,500	25℃
Characteristic impedance	Ω	100±15	10MHz
		6.5	10MHz
		8.2	16MHz
		9.3	20MHz
Attenuation	Db/100m Or less	47	10MHz
		44	16MHz
		42	20MHz
Near-end crosstalk Attenuation	Db/100m Or less	47	10MHz
		44	16MHz
		42	20MHz

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.



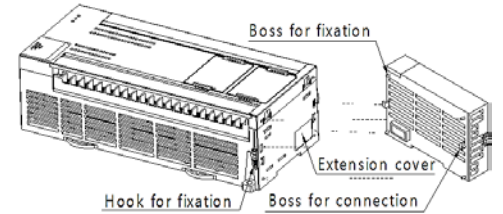
■ LED details

Name	Status	LED Status description
RUN	On	CPU running normal condition
	Off	CPU running abnormal condition
I/F	Blink	CPU running normal condition
	On/Off	CPU running abnormal condition
P2P	On	When P2P(EIP) service is enable
	Off	When P2P(EIP) service is disable
PADT	On	When XG5000 remote connection is enable
	Off	When XG5000 remote connection is disable
SVR	On	When external Client is connected
	Off	When external Client is not connected
MS	Green On	Normal operation
	Green Blink	Device Configuration mode
	Red Blink	When recoverable error is occurred or inappropriate setting
	Red On	When unrecoverable error is occurred
NS	Red and Green Blink	Self-testing
	Green Blink	When Device in not connected
	Green On	When Device is connected
	Red Blink	When time out is occurred
n ACT(n=1,2)	Red On	When duplicated IP address is detected
	Red and Green Blink	Self-testing
n ACT(n=1,2)	Blink	When communication is normal
n LNK(n=1,2)	On	When network link is established
	Off	When network link is not established

6 Mounting & Installation

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

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



7 Wiring

■ Installation of cable

- 1) 10/100BASE-TX's max. extended length between nodes is 100m.
- 2) This switch module provides Auto Cross Over function so the user can use both cross and direct cable.

Pin No.	Sign	Cable wiring	
		Straight cable	Cross cable
1	TD+	1 ---- 1	1 ---- 3
2	TD-	2 ---- 2	2 ---- 6
3	RD+	3 ---- 3	3 ---- 1
6	RD-	6 ---- 6	6 ---- 2
4,5,7,8	Not used	-	-

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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