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LS XBM-DN32H
Programmable
Logic Controller

LS XBM-DN32H Programmable Logic Controller Installation Guide

Contents

LS XBM-DN32H Programmable Logic Controller

Product Specifications

- C/N: 10310001549
- Product: Programmable Logic Controller – XGB CPU (Modular)
- Compatible Modules: XBM-DN32H, XBM/XEM-DR14H2, XBM/XEM-DN/DP16/32H2, XBM/XEM-DN/DP32HP
- Dimensions: 6mm x 6mm x 6mm
- Operating Conditions: Temperature range -55°C to 70°C, Humidity 5%RH to 95%RH

Product Usage Instructions

1. Ensure the PLC unit is powered off before installation.
2. Connect the compatible modules (XBM-DN32H, XBM/XEM-DR14H2, XBM/XEM-DN/DP16/32H2, XBM/XEM-DN/DP32HP) as needed.
3. Securely mount the PLC unit in a suitable location following manufacturer guidelines.

Configuration

1. Connect the USB-301A cable to the PLC for programming.
2. Use the C40HH-SB-XB and XTB-40H(TG7-1H40S) accessories for additional functionality with compatible modules.

Operation
Ensure all connections are secure and the PLC is powered on. Monitor the status indicators for proper functionality.

Maintenance
Regularly inspect the PLC unit for any signs of damage or wear.
Keep the unit clean and free from dust accumulation.

Frequently Asked Questions (FAQ)

Q: What is the operating temperature range of the PLC?A: The operating temperature range is -55°C to 70°C.

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

Safety Precautions

Meaning of warning and caution inscription

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. Protect the product from being gone into by foreign metallic matter.
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 product.
8. When disposing of PLC and battery, treat it as industrial waste.

Operating Environment

To install, observe the below conditions.

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

Performance Specifications

The following table shows the general specifications of the XGB. For more information, please refer to user manual.

General Specifications

Items	Specifications
Operation method	Reiterative operation, fixed cycle operation, Interrupt operation, constant period scan
I/O control method	Batch processing by simultaneous scan (Refresh method), Directed by program instruction
Processing speed (Basic instruction)	XBM-H type: 83ns/step, XBM/XEM-H2/HP type: 40ns/step
Program memory capacity(MK)	H type: 20Kstep, H2/HP Type: 64Ksteps
Program memory capacity(IEC)	H2/HP type: 384Kbyte
Maximum expansion stages	Main + Expansion 7slot (Communication: max 2slot, High speed I/F: max 2 slot)
Operation mode	RUN, STOP, DEBUG
Self-diagnosis function	Delay of operation, abnormal memory, abnormal I/O
Program port	USB(1Ch)
Back-up method	Setting latch area at basic parameter
RTC	Operates for 183 days(25℃), when power is off after charging(3.0V)
Built-in function	Cnet(RS-232, RS-485), Enet, PID, High-speed counter Positioning: • XBM-DN32H: 2axis, APM Command • XBM/XEM-DN/DP16/32H2: 2axis, XPM Command • XBM/XEM-DN/DP32HP: 6axis, XPM Command • [XBM/XEM-DR14H2: Not supported]

Applicable Support Software

For system configuration, the following version is necessary.

1. XG5000 Software
    - XBM-DN32H, XBM-DN/DP32H2, XBM-DN/DP32HP: V4.22 or above
    - XEM-DN/DP32H2, XEM-DN/DP32HP: V4.26 or above
    - XBM/XEM-DN/DP16H2, XBM/XEM-DR14H2: V4.75 or above
2. O/S
    - XBM-DN32H: O/S V1.0 or above
    - XBM-DN/DP32H2, XBM-DN/DP32HP: O/S V2.0 or above
    - XEM-DN/DP32H2, XEM-DN/DP32HP: O/S V2.1 or above
    - XBM/XEM-DN/DP16H2, XBM/XEM-DR14H2: O/S V3.0 or above

Accessories and Cable Specifications
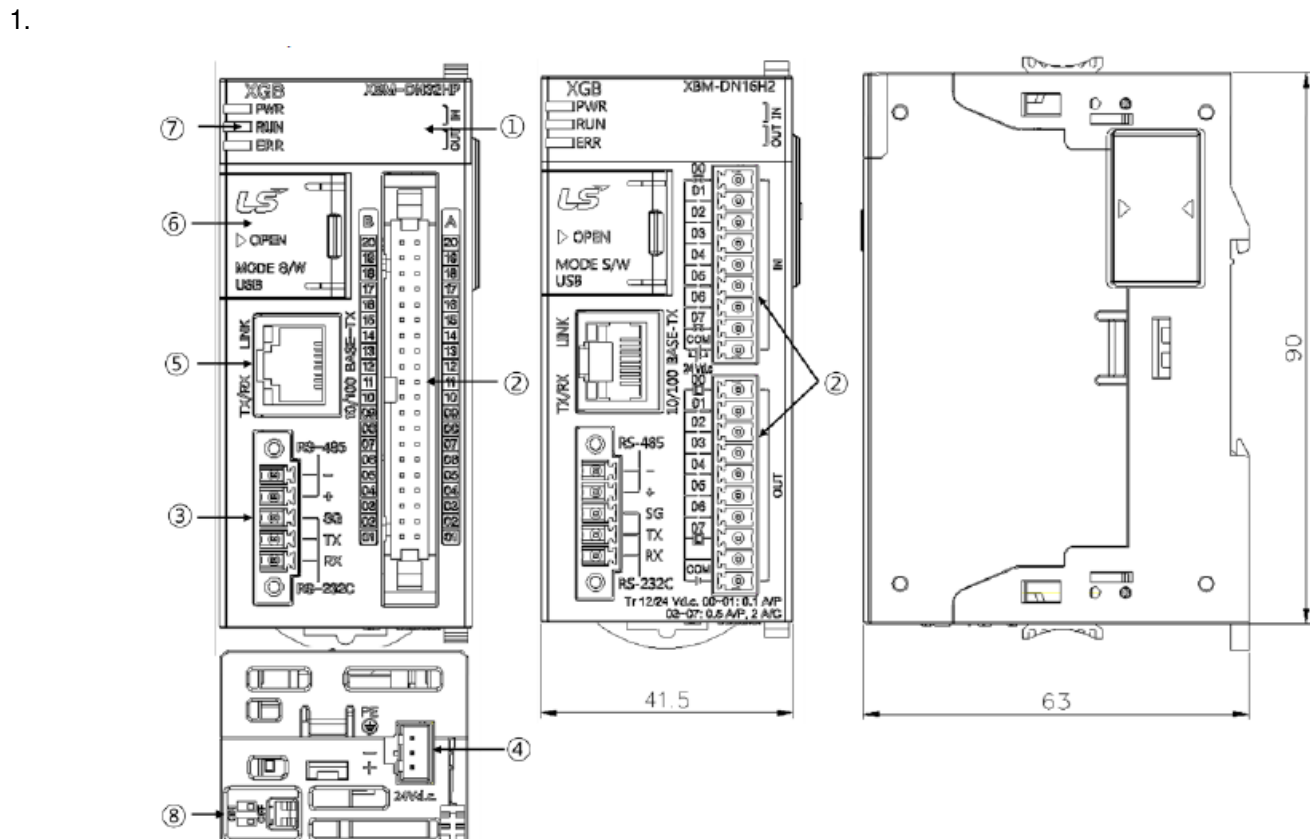
Check the component in package.

1. XGB-POWER(3P) : Power cable for connecting 24V

Check the accessory. Purchase it, if needed.

1. USB-301A: USB connect (download) cable
2. C40HH-□□SB-XBI : XBM/XEM-DN/DP32H/H2/HP Main unit input/output connection
3. XTB-40H(TG7-1H40S) :XBM/XEM-DN/DP32H/H2/HP Main unit input/output Terminal block

Parts name and Dimension (mm)

This is front part of the CPU. Refer to each name when driving the system. For more information, refer to user manual.

1.

Input/ Output indicator LED
2. Input/ Output connector
3. Built-in RS-232/485 connecting connector
4. Power connector
5. Built-in Enet connecting connector
6. Mode S/W, USB Cover
7. Status indicator LED
8. RS-485Termination Resistor Switch
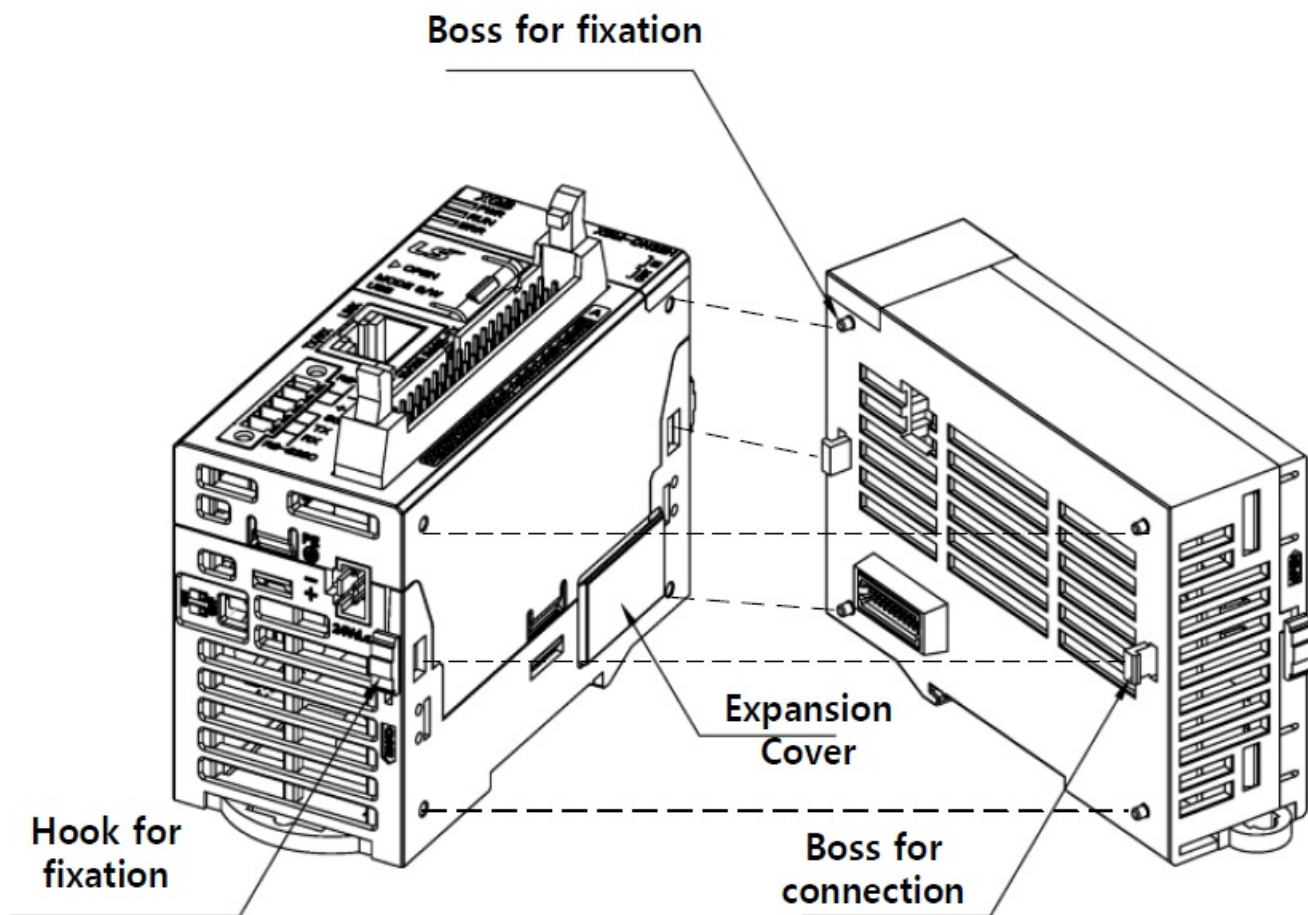
Installing / Removing Modules

Here describes the method to attach and detach each product.

1. Installing module
    1. Eliminate the Extension cover at the right-bottom side of the product.
    2. Push the product and connect it in alignment with Hook for fixation of four edges and Hook for connection at the bottom.
    3. After connection, push down the Hook for fixation and fix it completely.
2. Removing module
    1. Push up the Hook for connection and then detach the product with two hands. (Do not detach the product by force.)

Power specification

Here describes the Power specification of XGB. For more information, refer to user manual.

Items		Specification
Power Specification	Rated voltage	DC24V
	Input voltage range	DC20.4~28.8V (-15%, +20%)
	Input current	1A (Typ.550)
	Permitted momentary power failure	Less than 1

Warranty

- The warranty period is 36 months from the date of manufacture.
- The initial diagnosis of faults should be conducted by the user. However, upon request, LSELECTRIC or its representative(s) can undertake this task for a fee. If the cause of the faultis found to be the responsibility of LS ELECTRIC, this service will be free of charge.
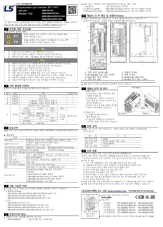
Exclusions from warranty

- Replacement of consumable and life-limited parts (e.g. relays, fuses, capacitors ,batteries, LCDs, etc.)
- Failures or damages caused by improper conditions or handling outside those specifiedin the user manual
- Failures caused by external factors unrelated to the product
- Failures caused by modifications without LS ELECTRIC's consent
- Use of the product in unintended ways
- Failures that cannot be predicted/solved by current scientific technology at the time of manufacture
- Failures due to external factors such as fire, abnormal voltage, or natural disasters
- Other cases for which LS ELECTRIC is not responsible
- For detailed warranty information, please refer to the user's manual.
- The content of the installation guide is subject to change without notice for product performance improvement.

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Documents / Resources

LS XBM-DN32H Programmable Logic Controller [pdf] Installation Guide
XBM-DN32H Programmable Logic Controller, XBM-DN32H, Programmable Logic Controller, Logic Controller, Controller

References

- ⌾ **Electric | The Largest Consumer Energy & Renewables Platform**
- ʆ **LS ELECTRIC Co., Ltd.**
- **User Manual**