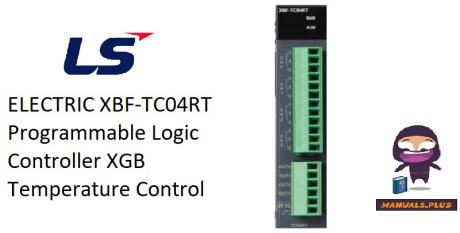


LS ELECTRIC XBF-TC04RT Programmable Logic Controller XGB Temperature Control Installation Guide

Contents

LS ELECTRIC XBF-TC04RT Programmable Logic Controller XGB Temperature Control

This installation guide provides simple function information of PLC control. Please read carefully 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 indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
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 module.
8. When disposing of PLC and battery, treat it as industrial waste.

Operating Environment

To install, observe the below conditions.

<table>
<tr><th>No</th><th>Item</th><th colspan="4">Specification</th><th>Standard</th></tr>
<tr><td>1</td><td>Ambient temp.</td><td colspan="4">0 ~ 55℃</td><td>–</td></tr>
<tr><td>2</td><td>Storage temp.</td><td colspan="4">-25 ~ 70℃</td><td>–</td></tr>
<tr><td>3</td><td>Ambient humidity</td><td colspan="4">5 ~ 95%RH, non-condensing</td><td>–</td></tr>
<tr><td>4</td><td>Storage humidity</td><td colspan="4">5 ~ 95%RH, non-condensing</td><td>–</td></tr>
<tr><td rowspan="9">5</td><td rowspan="9">Vibration Resistance</td><td colspan="3">Occasional vibration</td><td>–</td><td>–</td></tr>
<tr><td>Frequency</td><td>Acceleration</td><td>Amplitude</td><td>Number</td><td rowspan="9">IEC 61131-2</td></tr>
<tr><td>5≤f<8.4</td><td>–</td><td>3.5mm</td><td rowspan="8">10 times in each direction for
X, Y, Z</td></tr>
<tr><td>8.4≤f≤150</td><td>9.8 (1g)</td><td>–</td></tr>
<tr><td colspan="3">Continuous vibration</td></tr>
<tr><td>Frequency</td><td>Acceleration</td><td>Amplitude</td></tr>
<tr><td>5≤f<8.4</td><td>–</td><td>1.75mm</td></tr>
<tr><td>8.4≤f≤150</td><td>4.9 (0.5g)</td><td>–</td></tr>
</table>

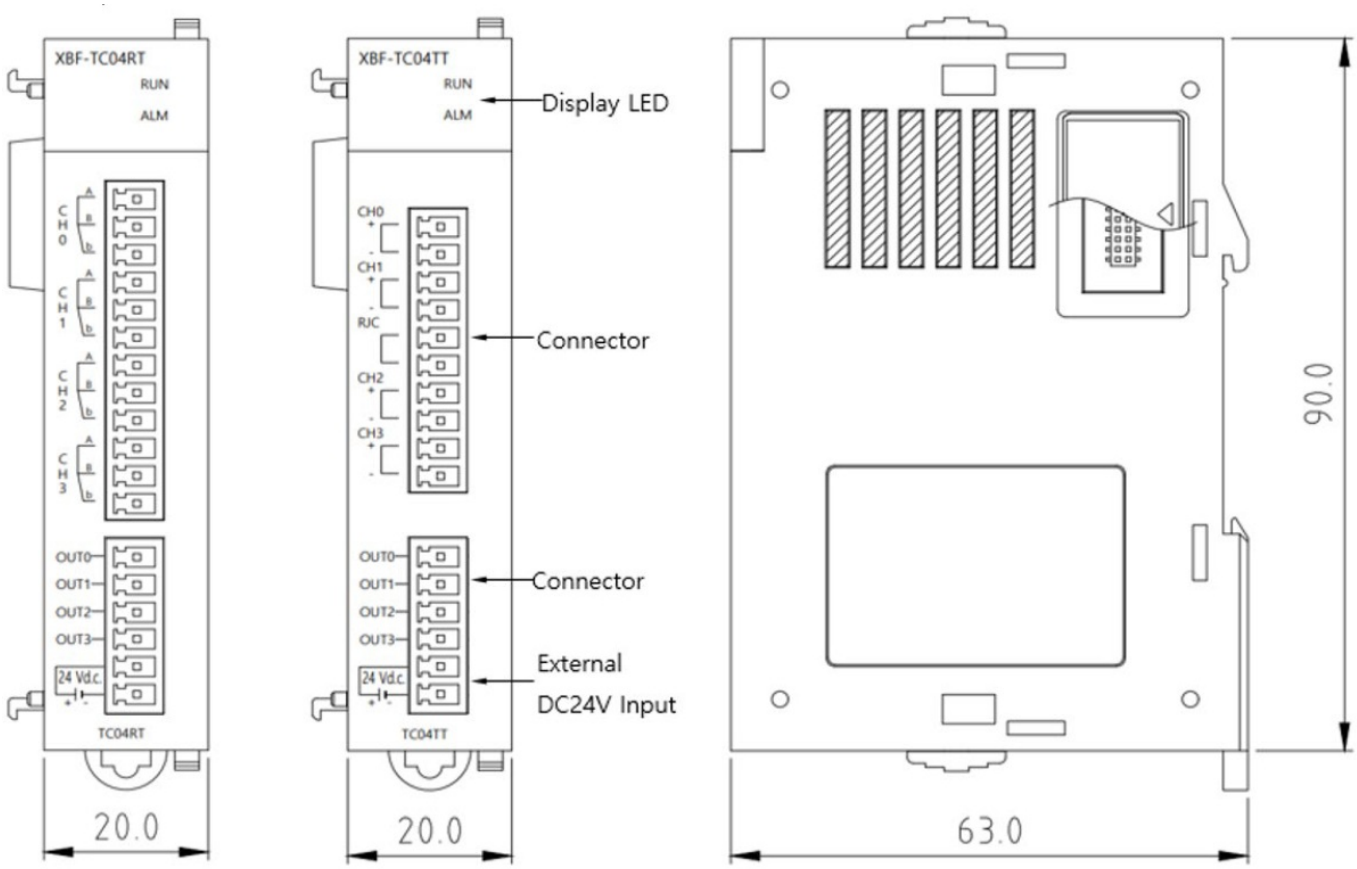
Applicable Support Software

For system configuration, the following version is necessary.

1. XBC Type: H(V2.4 or above), SU(V1.5 or above), U(V1.0 or above)
2. XEC Type: H(V1.8 or above), SU(V1.4 or above), U(V1.0 or above)
3. XG5000 Software: V4.0 or above
   (V4.60 or above : Available PT1000 in XBF-TC04RT)

Parts Name and Dimension (mm)

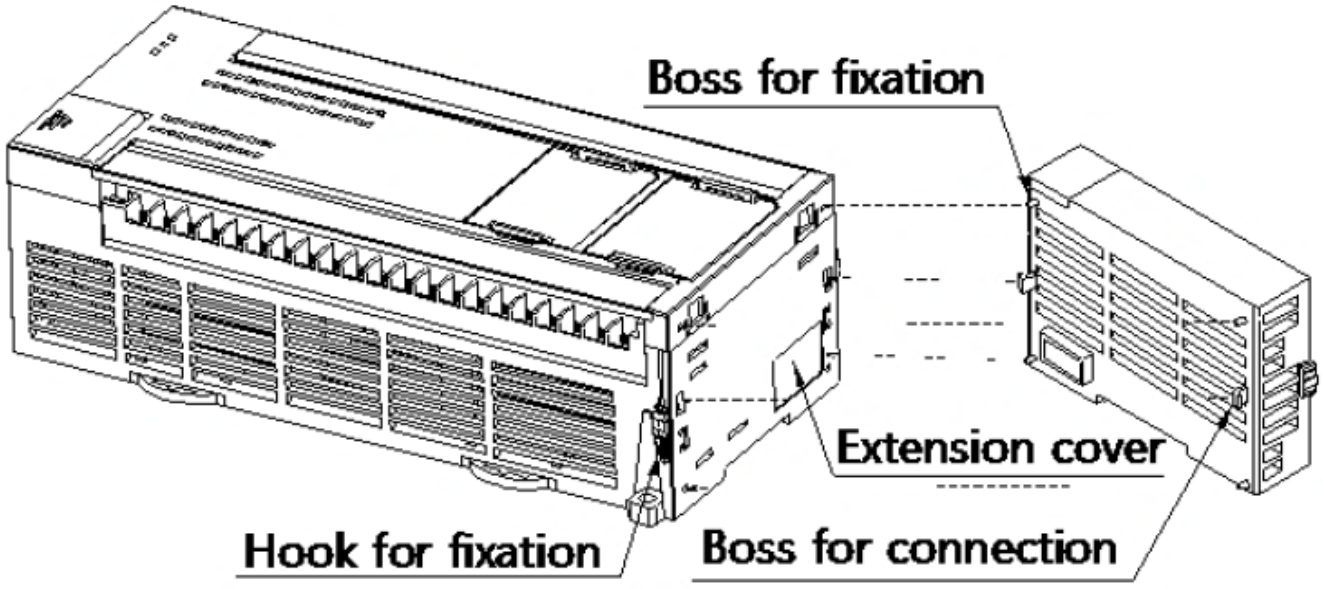
This is front part of the Module. Refer to each name when driving the system. For moreinformation, refer to user manual.



Installing / Removing Modules

Here describes the method to attach each product each product.

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 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 disconnection, and then detach the product with two hands.
       (Do not detach the product by force)



Performance Specifications

Performance specifications are as follows.

Item	**XBF-TC04TT**		**XBF-TC04RT**	
Input type	Thermocouple		RTD	
Input type and input range	K	-200~1300℃, 0~500℃	PT100 Note 1)	-200~850℃, -200~300℃, -200~100℃
	J	-200~1200℃, 0~500℃	JPT100	-200~600℃
	T	-200~400℃	PT1000 Note 2)	-200~850℃
Precision	±0.2%(25℃), Temperature coefficient: ±100 ppm/℃(0.01%/℃) But, ±2.0℃ for T type at -200~100℃ range			

Note

1. -200~300℃, -200~300℃ are supported by firmware V1.80, XG5000 software V4.70 or higher.
2. Applicable Version: Firmware V1.50 or above, XG5000 software V4.60 or above.

Wiring

Precaution for wiring

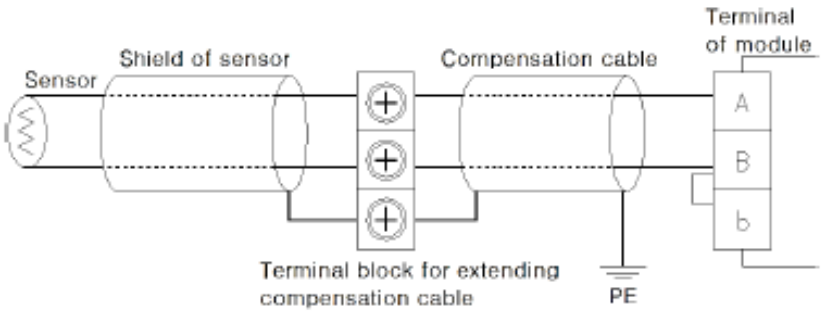
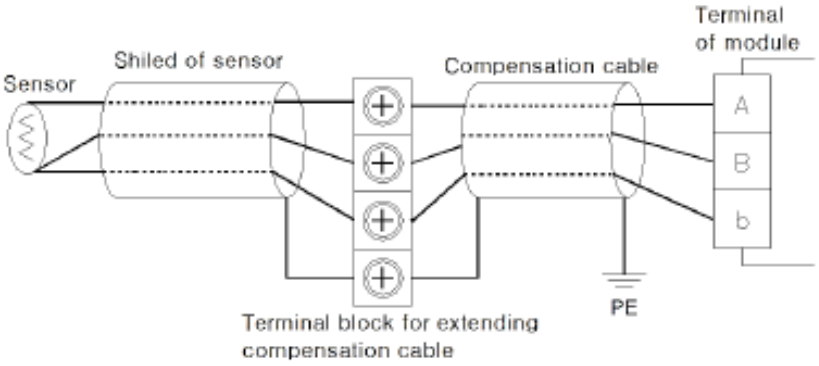
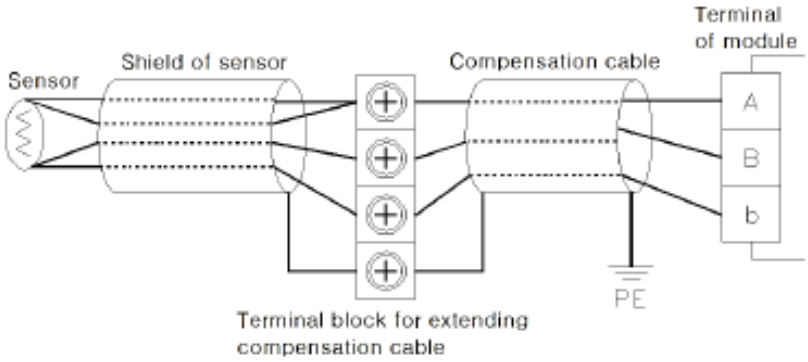
1. Don’t let AC power line near to analog input module’s external input signal line. Withan enough distance kept

away between, it will be free from surge or inductive noise.

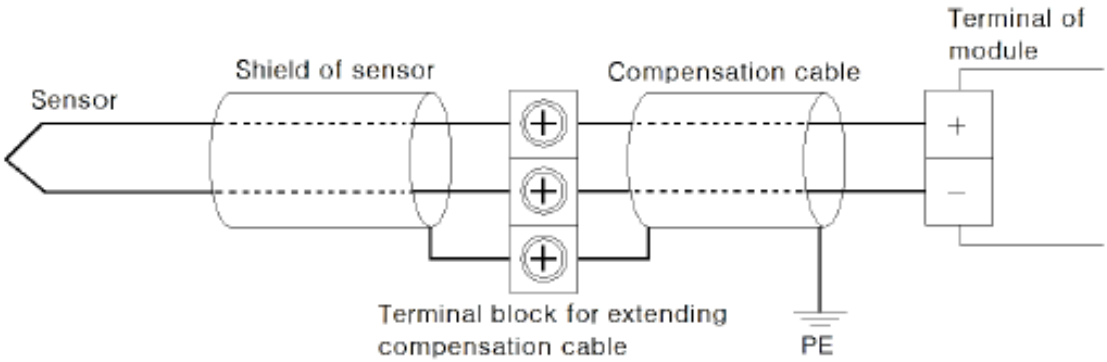
2. Cable shall be selected in due consideration of ambient temperature and allowablecurrent. More than AWG22 (0.3mm²) is recommended.
3. Don’t let the cable too close to hot device and material or in direct contact with oil forlong, which will cause damage or abnormal operation due to short-circuit.
4. Check the polarity when wiring the terminal.
5. Wiring with high-voltage line or power line may produce inductive hindrance causingabnormal operation or defect.
6. Enable the channel that you want to use.

Wiring examples

1) RTD type wiring

Method	Wiring examples
2-wire	
3-wire	
4-wire	

2) TC type wiring



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, LS ELECTRIC or its representative(s) can undertake this task for a fee. If the cause of the fault is found to be the responsibility of

LS ELECTRIC, this service will be free of charge.

- Exclusions from warranty
  1. Replacement of consumable and life-limited parts (e.g. relays, fuses, capacitors, batteries, LCDs, etc.)
  2. Failures or damages caused by improper conditions or handling outside those specified in the user manual
  3. Failures caused by external factors unrelated to the product
  4. Failures caused by modifications without LS ELECTRIC's consent
  5. Use of the product in unintended ways
  6. Failures that cannot be predicted/solved by current scientific technology at the time of manufacture
  7. Failures due to external factors such as fire, abnormal voltage, or natural disasters
  8. 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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· LS ELECTRIC Middle East FZE (Dubai, U.A.E.)	Tel: 971-4-886-5360
· LS ELECTRIC Europe B.V. (Hoofddorf, Netherlands)	Tel: 31-20-654-1424
· LS ELECTRIC Japan Co., Ltd. (Tokyo, Japan)	Tel: 81-3-6268-8241
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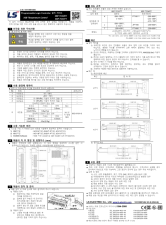
Documents / Resources

	LS ELECTRIC XBF-TC04RT Programmable Logic Controller XGB Temperature Control [pdf] Installation Guide XBF-TC04RT, XBF-TC04RT Programmable Logic Controller XGB Temperature Control, Programmable Logic Controller XGB Temperature Control, Logic Controller XGB Temperature Control, Controller XGB Temperature Control, XGB Temperature Control, Temperature Control, Control

References

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