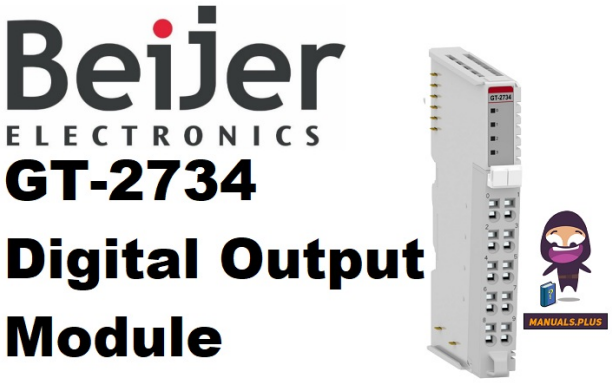

Beijer ELECTRONICS GT-2734 Digital Output Module User Manual

Contents

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Beijer ELECTRONICS GT-2734 Digital Output Module

Product Information

Specifications

- **Model:** GT-2734 Digital Output Module
- **Doc ID:** 73009 2025-02
- **4 digital** MOS relay outputs
- **Max. voltage:** 240 VDC/VAC
- **Max. current:** 0.5 A
- **Terminal type:** Cage clamp
- **Removable terminal** with 10 points

Product Usage Instructions

Installation

- Ensure that the power source is turned off before installation.

Mounting

- Mount the module securely onto a DIN rail using appropriate mounting accessories.

Mounting Specific Modules

- Follow the instructions to mount GL-9XXX, GT-XXXX, or GN-9XXX modules as required.

Connecting Cables

- Connect the cables to the removable terminal block as per the wiring diagram provided in the manual.

Powering Up

- Apply the field power and data pins properly to power up the module.

About This Manual

- This manual contains information on the software and hardware features of the Beijer Electronics GT-2734 Digital Output Module. It provides in-depth specifications and guidance on the installation, setup, and usage of the product.

Symbols Used in This Manual

- This publication includes Warning, Caution, Note and Important icons where appropriate to point out safety-related or other important information.

The corresponding symbols should be interpreted as follows:

-  **WARNING:** The Warning icon indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury and major damage to the product.
-  **CAUTION:** The Caution icon indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury and moderate damage to the product.
-  **NOTE:** The Note icon alerts the reader to relevant facts and conditions.
-  **IMPORTANT:** The Important icon highlights important information.

Safety

- Before using this product, please read this manual and other relevant manuals carefully. Pay full attention to safety instructions!
- In no event will Beijer Electronics be responsible or liable for damages resulting from the use of this product.
- The images, examples and diagrams in this manual are included for illustrative purposes.
- Because of the many variables and requirements associated with any particular installation, Beijer Electronics cannot take responsibility or liability for actual use based on the examples and diagrams.

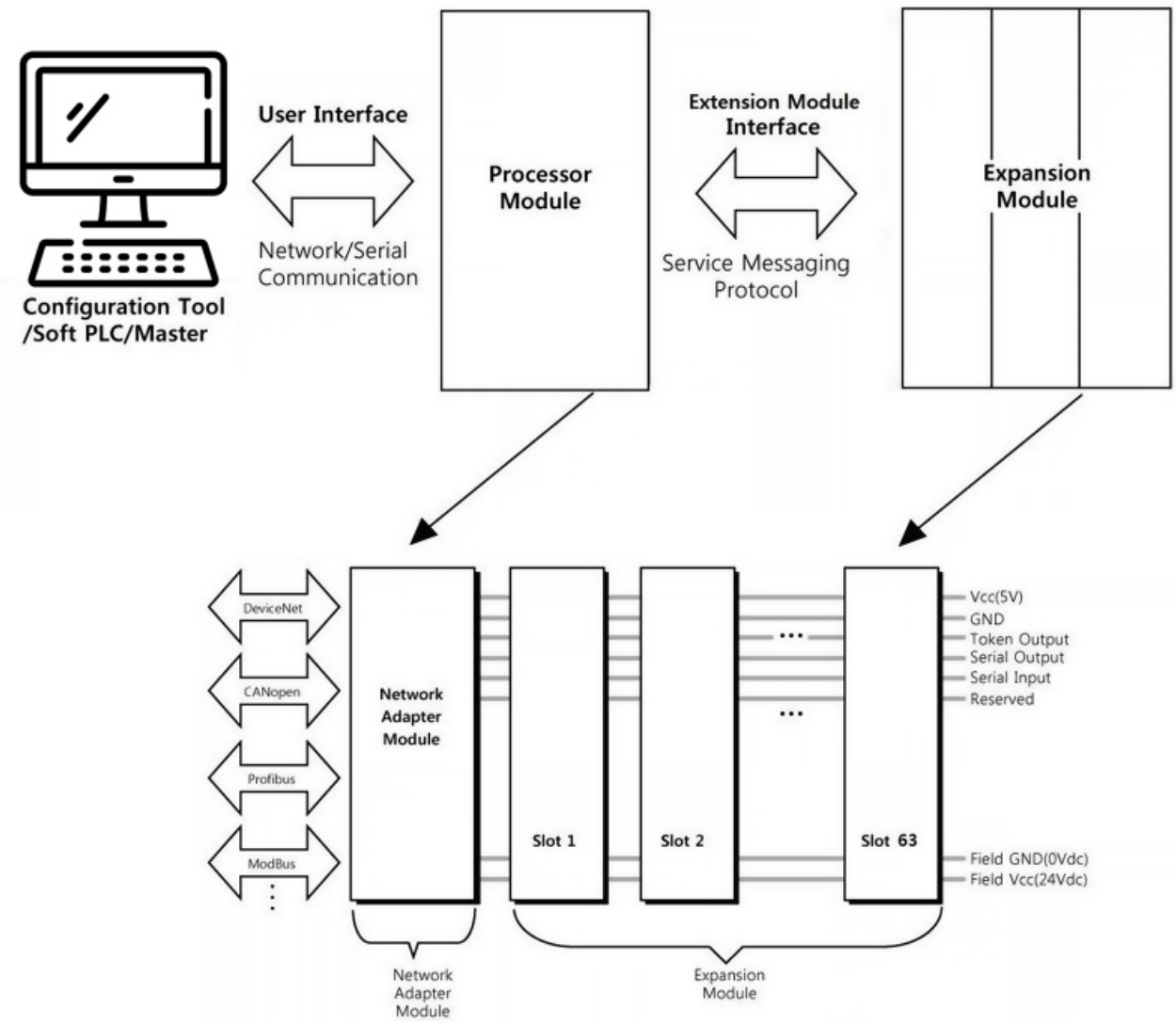
Product Certifications

The product has the following certifications.

General Safety Requirements

-  **WARNING:** Do not assemble the products and wires with power connected to the system. Doing so causes an “arc flash”, which can result in unexpected dangerous events (burns, fire, flying objects, blast pressure, sound blast, heat).
- Do not touch terminal blocks or IO modules when the system is running. Doing so may cause an electric shock, short circuit or malfunction of the device.
- Never let external metallic objects touch the product when the system is running. Doing so may cause an electric shock, short circuit or malfunction of the device.
- Do not place the product near inflammable material. Doing so may cause a fire.
- All wiring work should be performed by an electrical engineer.
- When handling the modules, ensure that all persons, the workplace, and the packing are well grounded.
- Avoid touching conductive components, The modules contain electronic components that may be destroyed by electrostatic discharge.
-  **CAUTION:** Never use the product in environments with temperatures over 60℃. Avoid placing the product in direct sunlight.
- Never use the product in environments with over 90% humidity.
- Always use the product in environments with pollution degree 1 or 2.
- Use standard cables for wiring.

About the G-series System

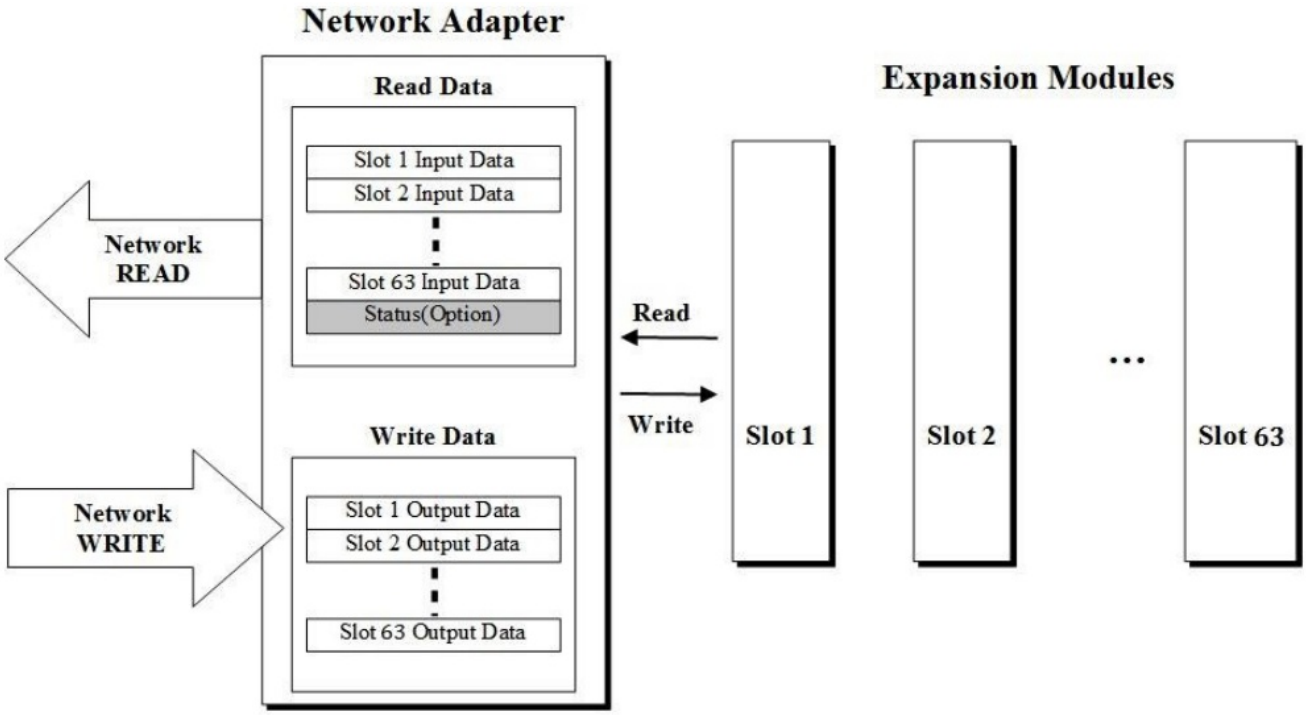


System overview

- **Network Adapter Module** – The network adapter module forms the link between the field bus and the field devices with the expansion modules.
- The connection to different field bus systems can be established by each of the corresponding network adapter modules, e.g., for MODBUS TCP, Ethernet IP, EtherCAT, PROFINET, CC-Link IE Field, PROFIBUS, CANopen, DeviceNet, CC-Link, MODBUS/Serial, etc.
- **Expansion Module** – Expansion module types: Digital IO, Analog IO, and Special modules.
- **Messaging** – The system uses two types of messaging: Service messaging and IO messaging.

IO Process Data Mapping

- An expansion module has three types of data: IO data, configuration parameters, and memory registers.
- The data exchange between the network adapter and the expansion modules is made via IO process image data by internal protocol.



- Data flow between network adapter (63 slots) and expansion modules
- The input and output image data depend on the slot position and the data type of the expansion slot. The ordering of input and output process image data is based on the expansion slot position.
- Calculations for this arrangement are included in the manuals for network adapters and programmable IO modules.
- Valid parameter data depends on the modules in use. For example, analog modules have settings of either 0-20 mA or 4-20 mA, and temperature modules have settings such as PT100, PT200, and PT500.
- The documentation for each module describes the parameter data.

Specifications

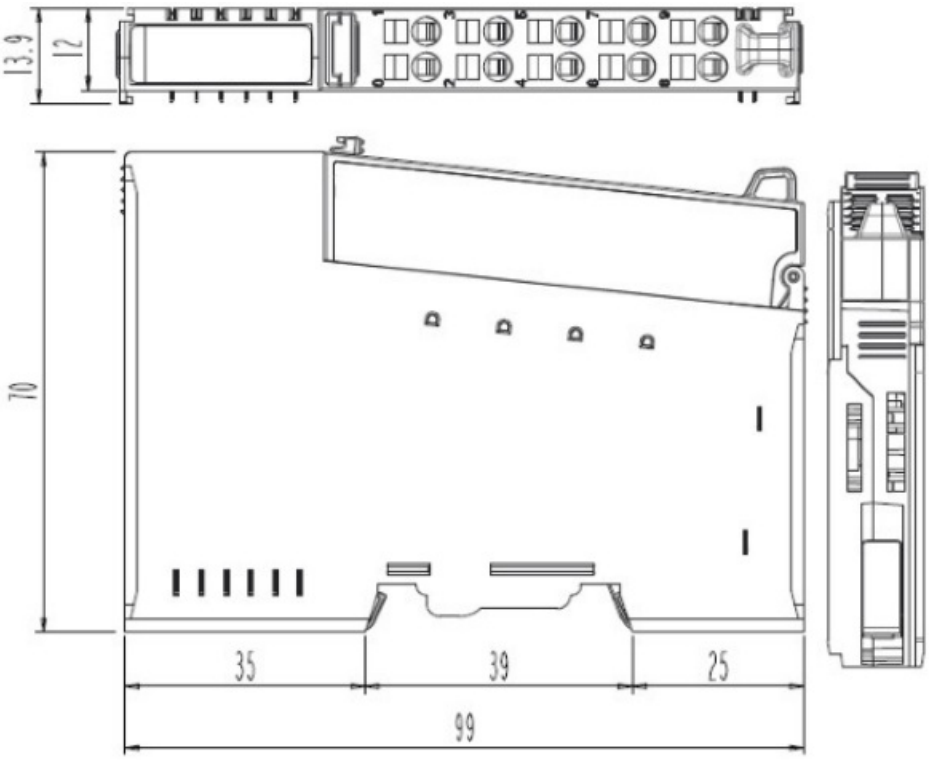
Environmental Specifications

Operating temperature	-20°C – 60°C
UL temperature	-20°C – 60°C
Storage temperature	-40°C – 85°C
Relative humidity	5% – 90% non-condensing
Mounting	DIN rail
Shock operating	IEC 60068-2-27 (15G)
Vibration resistance	IEC 60068-2-6 (4 g)
Industrial emissions	EN 61000-6-4: 2019
Industrial immunity	EN 61000-6-2: 2019
Shock operating	IEC 60068-2-27 (15G)
Vibration resistance	IEC 60068-2-6 (4 g)
Industrial emissions	EN 61000-6-4: 2019
Industrial immunity	EN 61000-6-2: 2019
Installation position	Vertical and horizontal
Product certifications	CE, FCC, UL, cUL
Product certifications	CE, FCC, UL, cUL

General Specification

Power dissipation	80 mA @ 5 VDC
Power dissipation	80 mA @ 5 VDC
Isolation	I/O to logic: Photocoupler isolation Field power: Non-Isolation
Field power	Field power passes through to the next module. Supply voltage: 24 VDC nom inal Voltage range: 15 – 32 VDC (AC power not used)
Wiring	I/O cable max. 2.0 mm² (AWG 14)
Weight	58 g
Module size	12 mm x 99 mm x 70 mm
Weight	58 g
Module size	12 mm x 99 mm x 70 mm

Dimensions

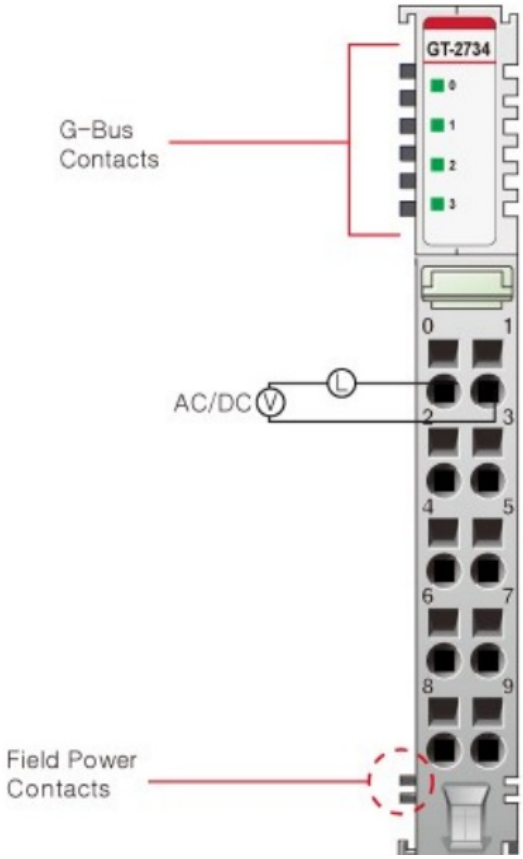


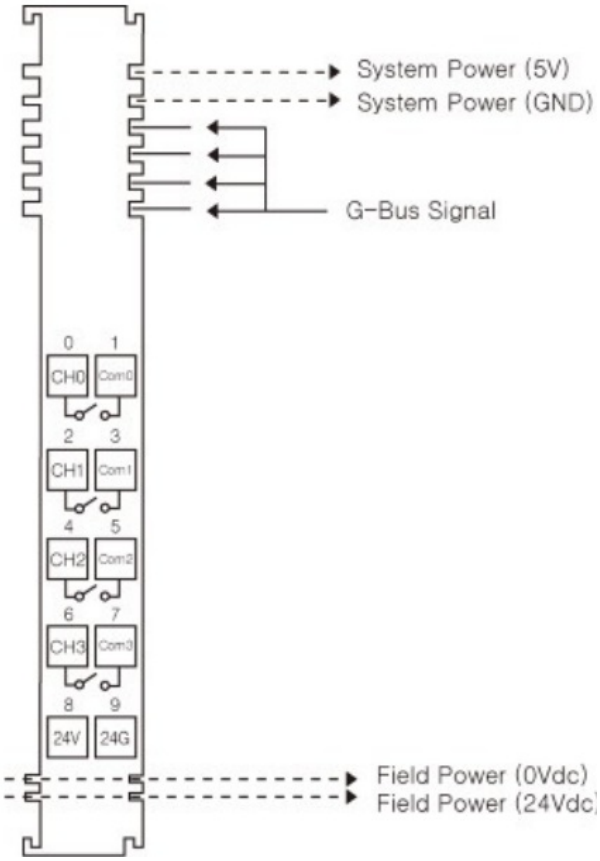
Module dimensions (mm)

Output Specifications

Output per module	4 points, bi-directional
Indicators	4 green output state
Relay type	MOS relay (solid state relay)
Output voltage range (load dependent)	240 VAC @ 0.5 A resistive 240 VDC @ 0.5 A resistive
Relay type	MOS relay (solid state relay)
Output voltage range (load dependent)	240 VAC @ 0.5 A resistive 240 VDC @ 0.5 A resistive
Output delay time (resistive load)	Max. AC/DC: 240 V OFF to ON: Max. 0.6 ms ON to OFF: Max. 3 ms
Output current rating	Max. 0.5 A / Channel
Frequency range (VAC)	47 – 63 Hz
Open-state leakage current	Max. 40 uA
Common type	4 points / 2 COM
Open-state leakage current	Max. 40 uA
Common type	4 points / 2 COM

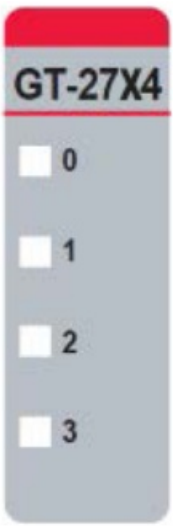
Wiring Diagram


GT-2734
G-Bus
Contacts
AC/DC
L
V
0
1
2
3
4
5
6
7
8
9
Field Power
Contacts


System Power (5V)
System Power (GND)
G-Bus Signal
CH0
Com0
CH1
Com1
CH2
Com2
CH3
Com3
24V
24G
Field Power (0Vdc)
Field Power (24Vdc)

Pin no.	Signal description
0	Output channel 0
1	COM 0
0	Output channel 0
1	COM 0
2	Output channel 1
3	COM 1
4	Output channel 2
5	COM 2
6	Output channel 3
7	COM 3
8	Common (field power 24 V)
9	Common (field power 0 V)
4	Output channel 2
5	COM 2
6	Output channel 3
7	COM 3
8	Common (field power 24 V)
9	Common (field power 0 V)

LED Indicator



LED no.	LED function/description	LED color
0	OUTPUT channel 0	Green
1	OUTPUT channel 1	Green
2	OUTPUT channel 2	Green
3	OUTPUT channel 3	Green

Channel Status

Status	LED	Indicates
No signal	Off	No output signal
On signal	Green	The output signal transmitted

Mapping Data into the Image Table

Output Image Value

Bit no.	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Reserved				D3	D2	D1	D0

Output Module Data

D3	D2	D1	D0

Parameter Data

Valid parameter length: 2 Bytes

Bit no.	Decimal bit	Description	Default value
Byte0	00-03	Fault action (0-3) 0: Fault value, 1: Hold last state	0 (fault value)
Byte1	00-03	Fault value (0-3) 0: Off, 1: On	0 (off)

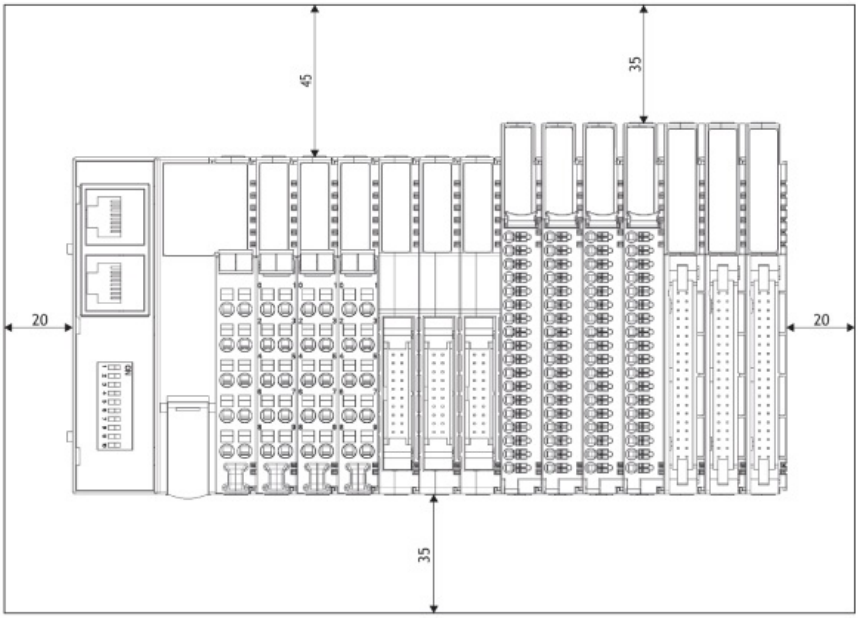
Hardware Setup

CAUTION

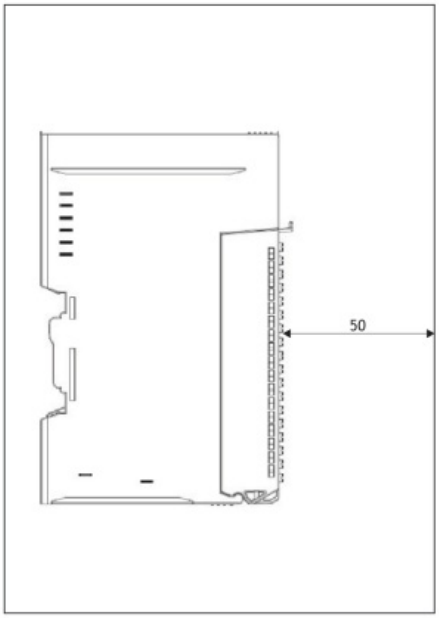
- Always read this chapter before installing the module!
- Hot surface! The surface of the housing can become hot during operation. If the device is used in high ambient temperatures, always let the device cool down before touching it.
- Working on energized devices can damage the equipment! Always turn off the power supply before working on the device.

Space Requirements

- The following drawings show the space requirements when installing the G-series modules.
- The spacing creates space for ventilation and prevents conducted electromagnetic interference from influencing the operation.
- The installation position is valid vertically and horizontally. The drawings are illustrative and may be out of proportion.
- **CAUTION:** NOT following the space requirements may result in damaging the product.



Vertical and horizontal space requirements



Required distance to door

Mount Module to DIN Rail

- The following chapters describe how to mount the module to the DIN rail.
- **CAUTION** The module must be fixed to the DIN rail with the locking levers.

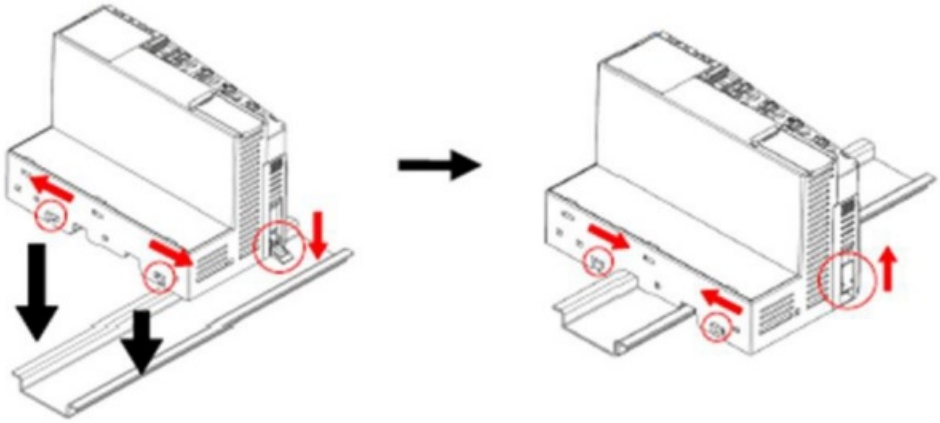
Mount GL-9XXX or GT-XXXX Module

- The following instructions apply to these module types.
- GL-9XXX
- GT-1XXX
- GT-2XXX
- GT-3XXX
- GT-4XXX
- GT-5XXX
- GT-7XXX
- GN-9XXX modules have three locking levers, one at the bottom and two on the side. For mounting instructions, refer to Mount GN-9XXX Module.
- Mount to DIN rail

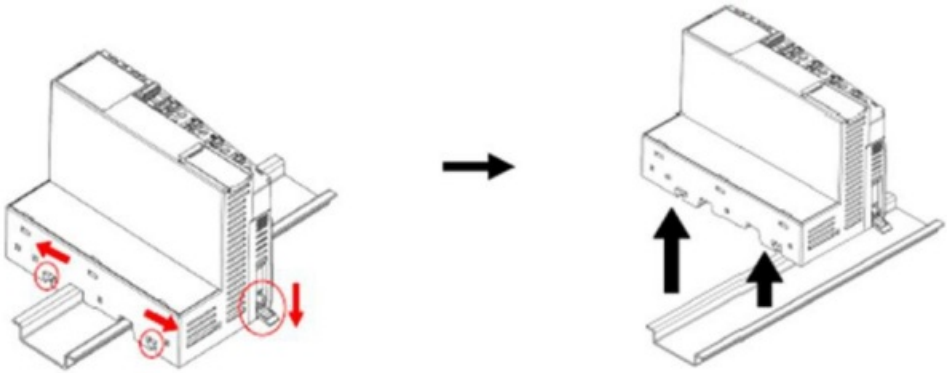
- Dismount from DIN rail

Mount GN-9XXX Module

- To mount or dismount a network adapter or programmable IO module with the product name GN-9XXX, for example GN-9251 or GN-9371, see the following instructions:



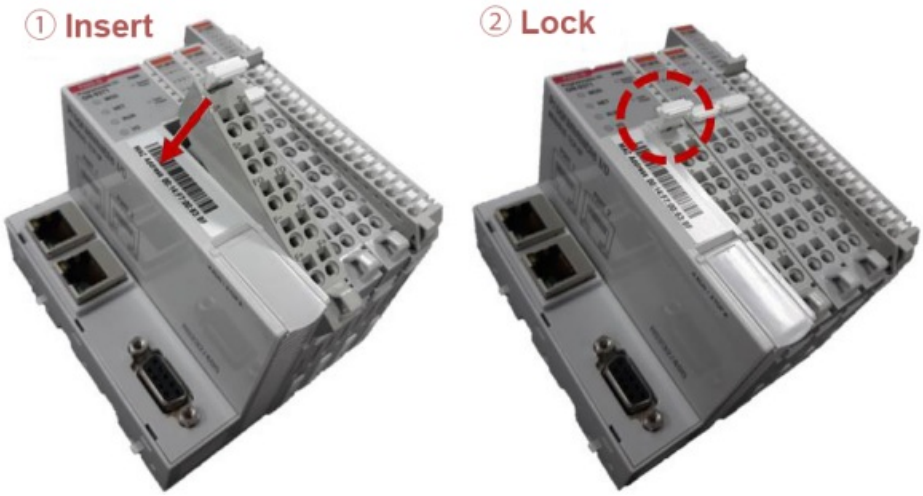
- Mount to DIN rail



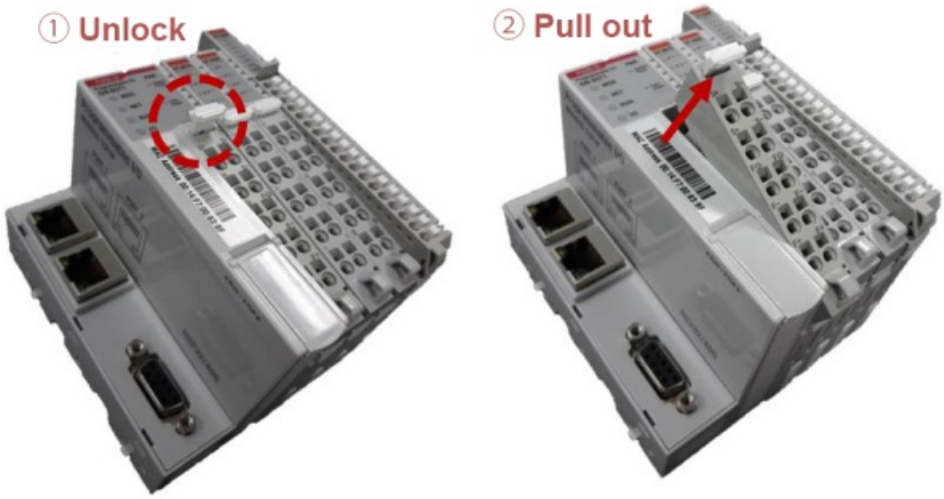
- Dismount from DIN rail

Mount Removable Terminal Block

- To mount or dismount a removable terminal block (RTB), see the instructions below.



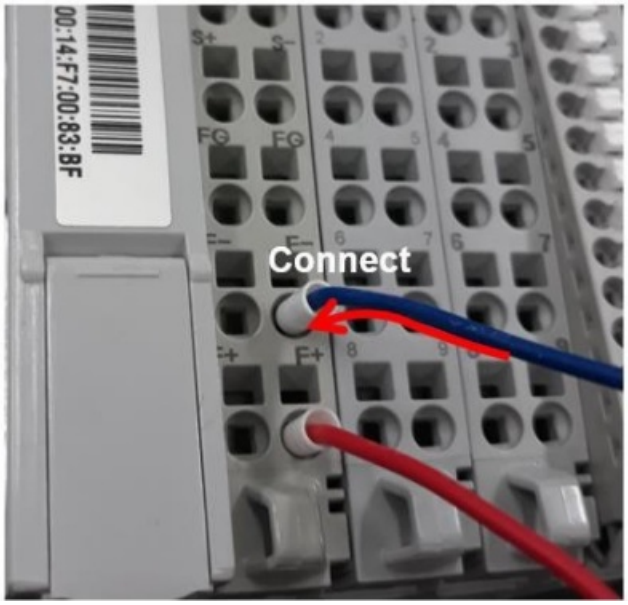
- Mount a removable terminal block



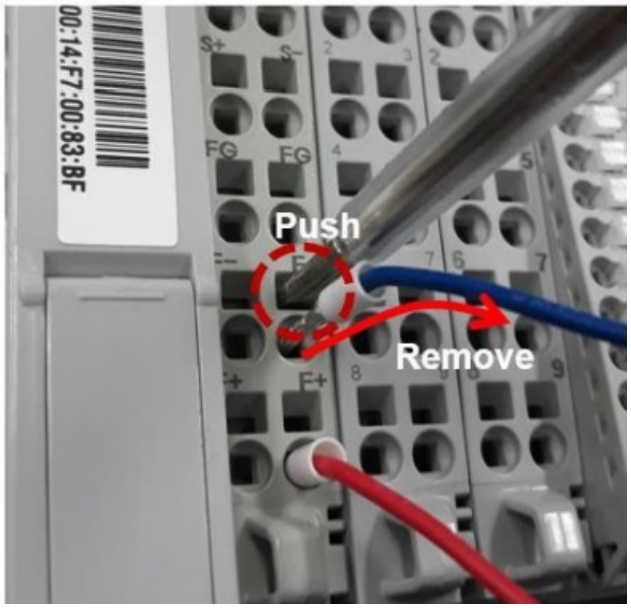
- Dismount a removable terminal block

Connect Cables to Removable Terminal Block

- To connect/disconnect cables to/from the removable terminal block (RTB), see the instructions below.
- **WARNING:** Always use the recommended supply voltage and frequency to prevent damage to the equipment and ensure optimal performance.



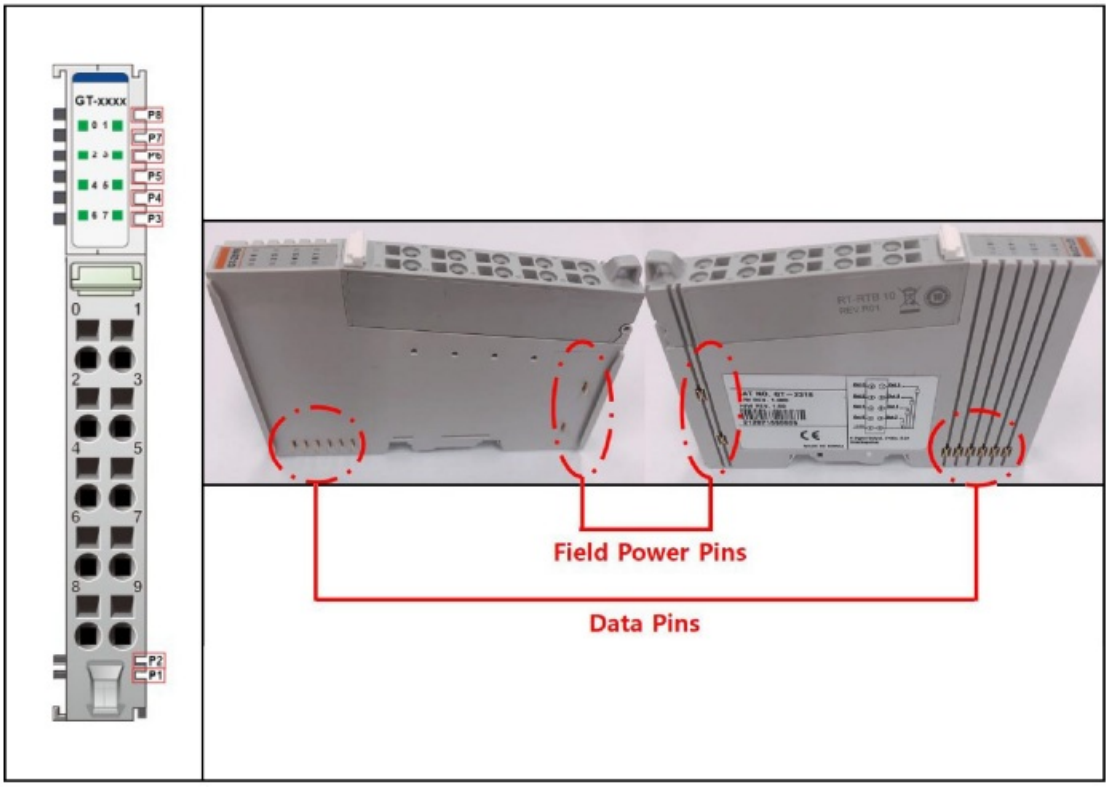
- Connect cable



- Disconnect cable

Field Power and Data Pins

- Communication between the G-series network adapter and the expansion module, as well as the system /field power supply of the bus modules, is carried out via the internal bus. It is comprised of 2 Field Power Pins and 6 Data Pins.
- **WARNING:** Do not touch the data and field power pins! Touching can result in soiling and damage by ESD noise.



Pin no.	Name	Description
P1	System VCC	System supply voltage (5 VDC)
P2	System GND	System ground
P3	Token output	Token output port of processor module
P4	Serial output	Transmitter output port of processor module
P5	Serial input	Receiver input port of processor module
P6	Reserved	Reserved for bypass token
P7	Field GND	Field ground
P8	Field VCC	Field supply voltage (24 VDC)

- 4 digital MOS relay outputs, max. 240 VDC/VAC, 0.5 A, cage clamp, 10 pt removable terminal

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- **+4640358600**

FAQ

- **Q: What should I do if the module does not power up?**
  - **A:** Check the power connections and ensure the field power pins are correctly connected.
- **Q: Can I exceed the maximum voltage and current limits?**
  - **A:** No. Exceeding the specified limits can damage the module and connected components.

Documents / Resources

	**Beijer ELECTRONICS GT-2734 Digital Output Module** [pdf] User Manual GT-2734 Digital Output Module, GT-2734, Digital Output Module, Output Module, Module

References

- **User Manual**