



PS00007254A02

## GE20-0032ETN-M

### Digital Output Module

### User Guide

Shenzhen Inovance Technology Co., Ltd.

Add.: Inovance Headquarters Tower, High-tech Industrial Park,

Guanlan Street, Longhua New District, Shenzhen

Tel: (0755) 2979 9595

Fax: (0755) 2961 9897

www.inovance.com





# Preface

## ■ Introduction

GL20-0032ETN-M series 32-channel digital output expansion module supports output of source type and can be used with GL20 series communication interface modules and Easy series PLC products.

This guide describes the mechanical installation, electrical installation and programming examples of the product.

## ■ Standard Compliance

The following table lists the certifications, directives, and standards that the product may comply with. For details about the acquired certificates, see the certification marks on the product nameplate.

| Certification        | Directive Name |                                           | Standard                                                                                                                              |
|----------------------|----------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| CE certification     | EMC directive  | 2014/30/EU                                | <b>24 VDC products</b><br>EN 61131-2<br><b>24 VAC products</b><br>EN 61131-2<br>EN 61000-3-2<br>EN 61000-3-3                          |
|                      | LVD directive  | 2014/35/EU                                | EN 61010-1<br>EN 61010-2-201                                                                                                          |
|                      | RoHS directive | 2011/65/EU<br>amended by (EU)<br>2015/863 | EN IEC 63000                                                                                                                          |
| UL/cUL certification | -              |                                           | UL 61010-1<br>UL 61010-2-201<br>UL 61010-2-030<br>CAN/CSA-C22.2 No. 61010-1<br>CSA C22.2 NO. 61010-2-201<br>CSA C22.2 NO. 61010-2-030 |

| Certification     | Directive Name | Standard |
|-------------------|----------------|----------|
| KCC certification | -              | -        |
| EAC certification | -              | -        |

## ■ More Data

| Data Name                                              | Data Code  | Description                                                            |
|--------------------------------------------------------|------------|------------------------------------------------------------------------|
| GL20-RTU-ECT Communication Interface Module User Guide | PS00004985 | This guide describes the installation, wiring and more of the product. |
| GL20-RTU-PN Communication Interface Module User Guide  | PS00007594 | This guide describes the installation, wiring and more of the product. |

## ■ Revision History

| Date         | Version | Description                                                                                                                                                                             |
|--------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| April 2023   | A02     | <b>New:</b><br>Added General specifications in section 1.3<br><br><b>Update:</b> <ul style="list-style-type: none"> <li>● Updated section 2.2</li> <li>● Updated section 3.1</li> </ul> |
| January 2023 | A01     | Minor corrections.                                                                                                                                                                      |
| January 2023 | A00     | First release.                                                                                                                                                                          |

## ■ How to Obtain

This guide is not shipped with the product. If you need to obtain the electronic PDF file, you can obtain it in the following ways:

- Log in to Inovance's website ([www.inovance.com](http://www.inovance.com)), choose **Support > Download**, search by keyword, and then download the PDF file.
- Scan the QR code on the product with your mobile phone.

## ■ **Warranty Agreement**

The warranty period of the product is 18 months as of the date of manufacture (refer to the barcode on the equipment). If otherwise agreed upon, the agreed terms and conditions shall prevail. After the warranty period expires, maintenance will be charged.

Within the warranty period, maintenance will be charged for damages caused by the following:

- Operations not following the user instructions
- Fire, flood, or abnormal voltage
- Use of the product for non-recommended functions
- Use of the product outside the scope of intended use
- Force majeure such as natural disasters, earthquake, lightning strike

The maintenance fee is charged according to the latest Price List of Inovance. If otherwise agreed upon, the terms and conditions in the agreement shall prevail.

For details, see Product Warranty Card.

# Fundamental Safety Instructions

## ■ Safety Precautions

1. Before installing, using, and maintaining this equipment, read the safety information and precautions thoroughly, and comply with them during operations.
2. To ensure the safety of humans and products, follow the signs on the product and all the safety instructions in this user guide.
3. "CAUTION", "WARNING", and "DANGER" items in the guide only indicate some of the precautions that need to be followed; they just supplement the safety precautions.
4. Use this equipment according to the designated environment requirements.  
Damage caused by improper use is not covered by warranty.
5. Inovance shall take no responsibility for any personal injuries or property damage caused by improper use.

## ■ Safety Levels and Definitions

 **DANGER** : Indicates that failure to comply with the notice will result in death or severe personal injuries.

 **WARNING** : Indicates that failure to comply with the notice may result in death or severe personal injuries.

 **CAUTION** : Indicates that failure to comply with the notice may result in minor or moderate personal injuries or damage to the equipment. Please keep this guide well so that it can be read when necessary and forward this guide to the end user.

### Control System Design

 **DANGER**

- Provide a safety circuit outside the PLC so that the control system can still work safely once external power failure or PLC fault occurs.
- Add a fuse or circuit breaker because the module may smoke or catch fire due to long-time overcurrent caused by operation above rated current or load short-circuit.



- An emergency stop circuit, a protection circuit, a forward/reverse operation interlocked circuit, and an upper position limit and lower position limit interlocked circuit must be set in the external circuits of PLC to prevent damage to the machine.
- To ensure safe operation, for the output signals that may cause critical accidents, please design an external protection circuit and safety mechanism.
- Once PLC CPU detects abnormality in the system, all outputs may be closed; however, when a fault occurs in the controller circuit, the output may not be under control. Therefore, it is necessary to design an appropriate external control circuit to ensure normal operation.
- If the PLC output units such as relays or transistors are damaged, the output may fail to switch between ON and OFF states according to the commands.
- The PLC is designed to be used in an indoor electrical environment (overvoltage category II). The power supply must have a system-level lightning protection device, assuring that overvoltage due to lightning shock cannot be applied to the PLC power supply input terminals, signal input terminals and output terminals and so forth, so as to avoid damage to the equipment.

## Installation



- Installation must be carried out by the specialists who have received the necessary electrical training and understood enough electrical knowledge.
- Disconnect all external power supplies of the system before removing/installing the module. Failure to do so may result in electric shock, module fault or malfunction.
- Do not use the PLC where there is dust, oil smoke, conductive dust, corrosive or combustible gases, or exposed to high temperature, condensation, wind & rain, or subject to vibration and impact. Electric shock, fire and malfunction may also result in damage or deterioration to the product.
- The PLC is open-type equipment that must be installed in a control cabinet with lock (cabinet housing protection > IP20). Only the personnel who have received the necessary electrical training and understood enough electrical knowledge can open the cabinet.



- Prevent metal filings and wire ends from dropping into ventilation holes of the PLC during installation. Failure to comply may result in fire, fault and malfunction.
- Ensure there are no foreign matters on ventilation surface. Failure to comply may result in poor ventilation, which may cause fire, fault and malfunction.
- Ensure the module is connected to the respective connector securely and hook the module firmly. Improper installation may result in malfunction, fault or fall-off.

### **Wiring**



- Wiring must be carried out by personnel who have received the necessary electrical training and understood enough electrical knowledge.
- Disconnect all external power supplies of the system before wiring. Failure to comply may result in electric shock, module fault or malfunction.
- Perform good insulation on terminals so that insulation distance between cables will not reduce after cables are connected to terminals. Failure to comply may result in electric shock or damage to the equipment.



- To avoid electric shock, cut off the power supply before connecting the product to the power supply.
- The input power of the product must meet the specifications listed in this guide. If the power input does not meet the specifications, the equipment may be damaged. Thus, check regularly that the DC power provided by the switching-mode power supply unit is stable.

### **Operation and Maintenance**



- Maintenance & inspection must be carried out by personnel who have the necessary electrical training and experience.
- Do not touch the terminals while the power is on. Failure to comply may result in electric shock or malfunction.
- Disconnect all external power supplies of the system before cleaning the module. Failure to comply may result in electric shock.
- Disconnect all external power supplies of the system before removing the module or connecting/removing the communication wirings. Failure to comply may result in electric shock or malfunction.

### **Safety Recommendations**

- On-site manual devices or other backup means must be equipped in the position where the operator directly touches the mechanical parts, such as loading and unloading mechanical tools, or the position where the machine runs automatically. The manual devices and backup means, which can start or interrupt automatic operations of the system, must be independent of the programmable controller.
- If you need to modify the program while the system is running, use the lock function or other protective measures. Ensure that only authorized personnel can make the necessary modifications.

### **Disposal**



- Treat the scrapped product as industrial waste. Dispose of the battery according to local laws and regulations.
- Recycle retired equipment by observing industry waste disposal standards to avoid environmental pollution.

# 1 Product Information

## 1.1 Model Number and Nameplate

GL 20 - 00 32 E TN - M

①                      ②                      ③                      ④                      ⑤                      ⑥                      ⑦

|                                                          |                                       |                                                       |                                                                                                      |
|----------------------------------------------------------|---------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| ① <b>Product Information</b><br>GL: General local module | ③ <b>I/O Points</b><br>00: 0 input    | ⑤ <b>Module Type</b><br>E: Logic I/O expansion module | ⑦ <b>Terminal Type</b><br>M: Ejector header (For the PUSHIN terminal, this item is empty by default) |
| ② <b>Serial Number</b><br>20: 20 series module           | ④ <b>I/O Points</b><br>32: 32 outputs | ⑥ <b>Output type</b><br>TN: Transistor output (sink)  | - -                                                                                                  |



**INOVANCE**

**GL20-0032ETN-M**  
32 Digital Output Module

POWER INPUT: DC24V 200mA  
OUTPUT: DC24V/0.5A RES LOAD

SN:0123456789123456

QC PASSED

Certification

MANUAL

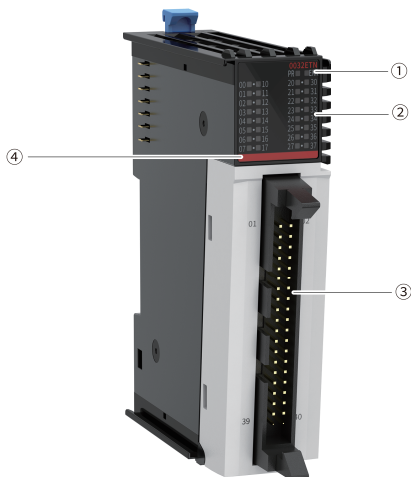
|      |     |     |      |
|------|-----|-----|------|
| 24V1 | 01  | 02  | 24V1 |
| COM1 | 03  | 04  | COM1 |
| DO37 | 05  | 06  | DO27 |
| ...  | ... | ... | ...  |
| DO31 | 17  | 18  | DO21 |
| DO30 | 19  | 20  | DO20 |
| 24V0 | 21  | 22  | 24V0 |
| COM0 | 23  | 24  | COM0 |
| DO17 | 25  | 26  | DO07 |
| ...  | ... | ... | ...  |
| DO11 | 37  | 38  | DO01 |
| DO10 | 39  | 40  | DO00 |

www.inovance.com  
Suzhou Inovance Technology Co., Ltd. Made in China

Based on the above description of model number and nameplate, the relevant ordering data of this product is described in the following table.

| Model          | Description                                         | Product Code | Applicable Model                                 |
|----------------|-----------------------------------------------------|--------------|--------------------------------------------------|
| GL20-0032ETN-M | GL20 series 32-channel transistor NPN output module | 01440377     | GL20 communication interface module, Easy series |

## 1.2 Components



| No. | Name                    | Description           |                              |                 |                                                                                                                                                                                                                                        |
|-----|-------------------------|-----------------------|------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ①   | Signal Indicator        | PR<br>(POWER<br>+RUN) | Power / running<br>indicator | Yellow<br>green | ON: The module is in<br>normal operation.<br>Flashing quickly: The<br>module is addressed<br>successfully.<br>Flashing slowly: The<br>module is powered on<br>but not addressed.<br>OFF: The module is not<br>powered on or is faulty. |
|     |                         | ERR                   | Error indicator              | Red             | Module fault                                                                                                                                                                                                                           |
| ②   | I/O signal<br>indicator | 00 to 37              | I/O signal indicator         | Yellow<br>green | ON: Input/Output active<br>OFF: Input/Output<br>inactive                                                                                                                                                                               |

| No. | Name                 | Description                                                                       |                        |                                                                                   |                                                                                                         |
|-----|----------------------|-----------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| ③   | Terminals            | /                                                                                 | 0 input and 32 outputs | /                                                                                 | See Terminal Definition for detailed definition<br><a href="#">"3.2 Terminal Definition" on page 20</a> |
| ④   | Color identification |  | Red: Digital output    |  | Orange: Analog output                                                                                   |
|     |                      |  | Gray: Digital input    |  | Green: Analog input                                                                                     |
|     |                      |  | White: Communication   |  | Blue: Other module                                                                                      |

## Note

- Flashing quickly: on for 200 ms followed by off for 200 ms.
- Flashing slowly: on for 200 ms followed by off for 1000 ms.

## 1.3 Specifications

### ■ General specifications

| Item                   | Specification          |
|------------------------|------------------------|
| IP rating              | IP20                   |
| Dimensions (W x H x D) | 24 mm x 100 mm x 75 mm |
| Weight                 | Approx. 87 g           |

### ■ Power supply specifications

| Item                          | Specification                 |
|-------------------------------|-------------------------------|
| Rated bus input voltage       | 5 VDC (4.75 VDC to 5.25 VDC)  |
| Rated bus input current       | 125 mA (typical@5 V)          |
| Rated terminal input voltage  | 24 VDC (20.4 VDC to 28.8 VDC) |
| Rated terminal input current  | 24 mA (typical@24 V)          |
| Rated terminal output voltage | /                             |

| Item                          | Specification |
|-------------------------------|---------------|
| Rated terminal output current | /             |
| Hot swap                      | Not supported |

## ■ Interface Specifications

| Item                          | Specification                                                                                                                                                                                          |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output type                   | Digital output, low side                                                                                                                                                                               |
| Output mode                   | Sink                                                                                                                                                                                                   |
| Output channels               | 32                                                                                                                                                                                                     |
| Output voltage class          | 24 VDC $\pm$ 10% (21.6 VDC to 26.4 VDC)                                                                                                                                                                |
| Output load (resistive load)  | 0.5 A/point; 8 A/module                                                                                                                                                                                |
| Output load (inductive load)  | 7.2 W/point; 48 W/module                                                                                                                                                                               |
| Output load (lamp load)       | 5 W/point; 36 W/module                                                                                                                                                                                 |
| ON/OFF hardware response time | 100 $\mu$ s/100 $\mu$ s                                                                                                                                                                                |
| Leakage current at OFF        | 10 $\mu$ A                                                                                                                                                                                             |
| Switching frequency           | 100 Hz with resistive load, 0.5 Hz with inductive load, 10 Hz with lamp load                                                                                                                           |
| Isolation                     | Yes                                                                                                                                                                                                    |
| Output action display         | Output indicators are turned ON (via software control) when the outputs are in the driving state                                                                                                       |
| Output derating               | Full load when operating at 45°C (namely, 32-channel output current does not exceed 8 A), output current derated to 50% when operating at 55°C (namely, 32-channel output current does not exceed 4 A) |
| Protection functions          | Short circuit protection, overcurrent protection                                                                                                                                                       |

## ■ Software specifications

| Item                         | Specification                                            |
|------------------------------|----------------------------------------------------------|
| Programming software version | AutoShop V4.8.1 and above<br>InoProShop V1.7.3 and above |
| Output mode upon stop        | Output zero, output last value, output preset value      |

| Item                                         | Specification                                                           |
|----------------------------------------------|-------------------------------------------------------------------------|
| Preset value                                 | 0 or 1                                                                  |
| Output port anomaly detection and indication | /                                                                       |
| Output channel logic level configuration     | Not supported                                                           |
| Independent channel enable configuration     | Not supported                                                           |
| Diagnostic report configuration              | Not supported                                                           |
| When in stop mode                            | Output according to output mode upon stop and present value, no refresh |
| I/O mapping                                  | Supports bitwise, byte-wise and word-wise addressing                    |

## 1.4 Environmental Specifications

| Item                          | Specification                                                   |
|-------------------------------|-----------------------------------------------------------------|
| Ambient operating temperature | -20°C to 55°C                                                   |
| Ambient operating humidity    | 10% to 90% RH (non-condensing)                                  |
| Working environment           | No corrosive and flammable gas and no excessive conductive dust |
| Ambient storage temperature   | -40°C to 70°C (<90% RH, non-condensing)                         |
| Maximum altitude              | ≤2000 m                                                         |
| Pollution degree              | 2 or less                                                       |
| Noise immunity                | 2 kV on power supply line (Conforms to IEC 61000-4-4)           |
| Overvoltage category          | I                                                               |
| EMC immunity level            | Zone B, IEC61131-2                                              |

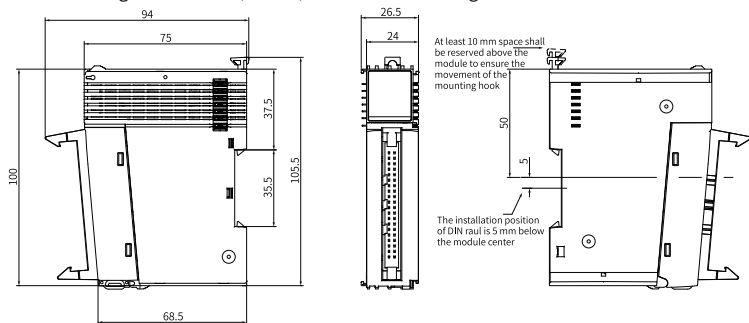
| Item                 | Specification                                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Vibration resistance | IEC 60068-2-6<br>5 Hz to 8.4 Hz, 3.5 mmp, 8.4 Hz to 150 Hz, 1g, 10 times each in X, Y and Z directions                      |
| Shock resistance     | IEC 60068-2-27<br>150 m/s <sup>2</sup> , 11 ms, 3 times each in $\pm X$ , $\pm Y$ and $\pm Z$ directions, 18 times in total |

## 2 Mechanical Installation

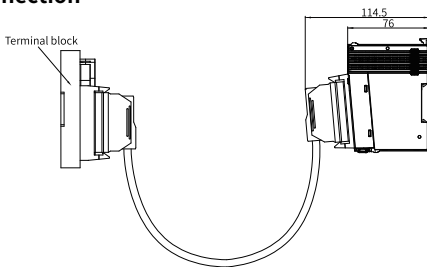
### 2.1 Mounting Dimensions

#### ■ Module

The mounting dimensions (in mm) are shown in the figure below.



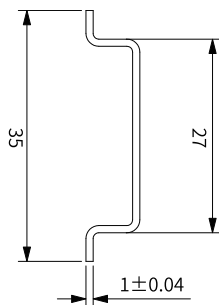
#### ■ Cable Connection



### 2.2 Installation Method

#### ■ Installing Modules Side-by-Side

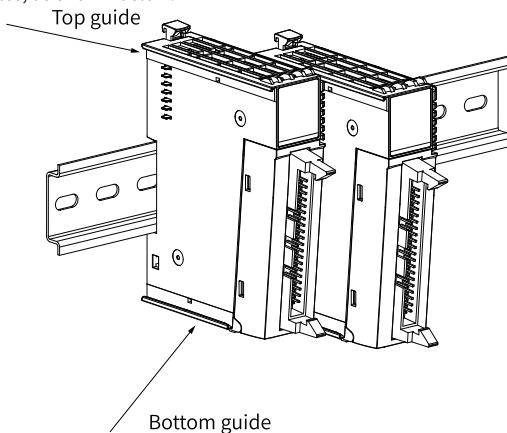
The module is mounted onto a DIN rail in conformity with IEC 60715 (width: 35 mm, thickness: 1 mm). The dimensions (unit: mm) are shown below.



## Caution

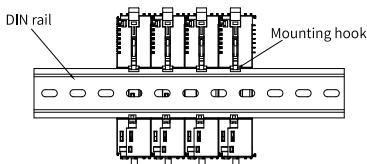
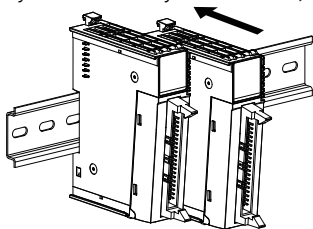
When installed on a DIN rail other than the recommended one (especially the one whose thickness is not 1.0 mm), the module will not fit in place as the mounting hook does not work.

You can install multiple modules side by side with the help of top and bottom guides on the modules, as shown below.

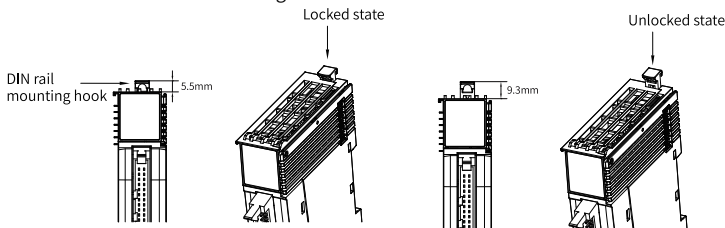


## ■ Installing Module onto DIN Rail

1. Align the module with the DIN rail and push the module in the direction indicated by the arrow until you hear a click, as shown below.



2. Make sure the DIN rail mounting hook of the module is locked. The locked and unlocked states of the mounting hook are shown below.



- If the mounting hook is pressed down, it is locked.
- If the mounting hook is lifted up, it is unlocked.

Press down the mounting hook to lock the module to the DIN rail.

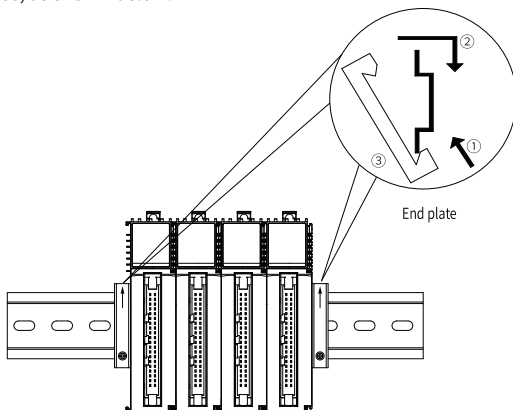


### Caution

When the module is not installed on the rail, keep the mounting hook in the locked state. Keeping the mounting hook unlocked for a prolonged time may cause the hook to fail.

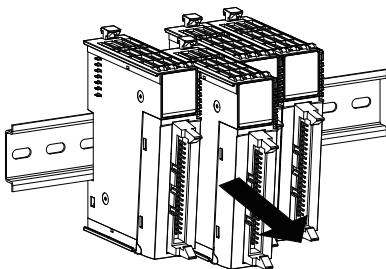
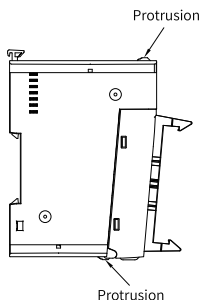
3. Mount an end plate on either side of the module assembly. To mount the end plate, hook the bottom of it to the bottom of the DIN rail, rotate the end plate to hook

the top of it to the top of the DIN rail, and then tighten the screw to lock the end plate in place, as shown below.



## ■ Removing Module

Pry the DIN rail mounting hook upwards with a tool such as slotted screwdriver, hold the protrusions and pull the module out straight forward, and then press down the top of the DIN rail mounting hook.



## 3 Electrical Installation

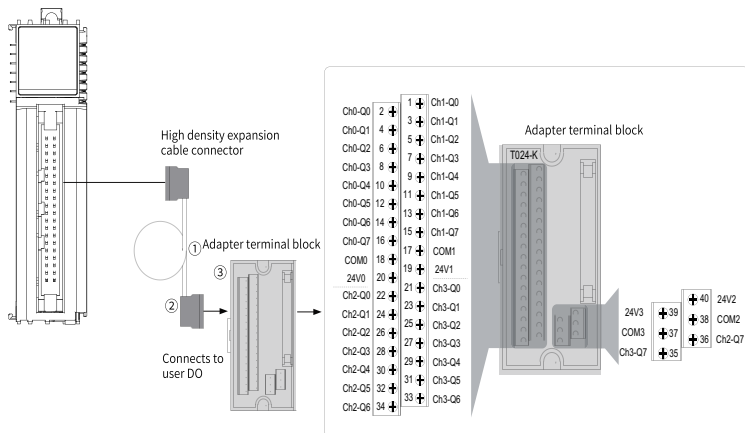
### 3.1 External Terminal Block and Cable Selection

The following table describes the order data of the terminal block and the cable.

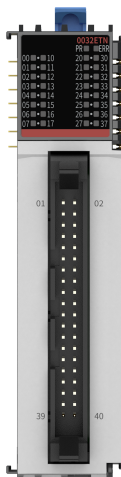
| Name                              | Material Code | Model               | Description                       | Remarks                                                                  |
|-----------------------------------|---------------|---------------------|-----------------------------------|--------------------------------------------------------------------------|
| Cable<br>(connector not provided) | 15310167      | CAB-MIL40-MIL40-0.5 | 40PIN MIL cable (500 mm)          | High density adapter cable, including two 40PIN MIL connectors (500 mm)  |
|                                   | 15310166      | CAB-MIL40-MIL40-2   | 40PIN MIL cable (2000 mm)         | High density adapter cable, including two 40PIN MIL connectors (2000 mm) |
| Terminal block                    | 15020452      | T024-K              | 40PIN MIL-to-screw terminal block | T024-K                                                                   |

#### ■ Terminal Block Connection

After installation, connect the module to the external I/O terminal block through a connecting cable. This module supports one external terminal block. When the T024-K adapter terminal block is used for connection, the correspondence between the terminals of the terminal block and the terminals of the module is shown in the figure below (When other types of adapter terminal blocks are used, check the terminal correspondence.)

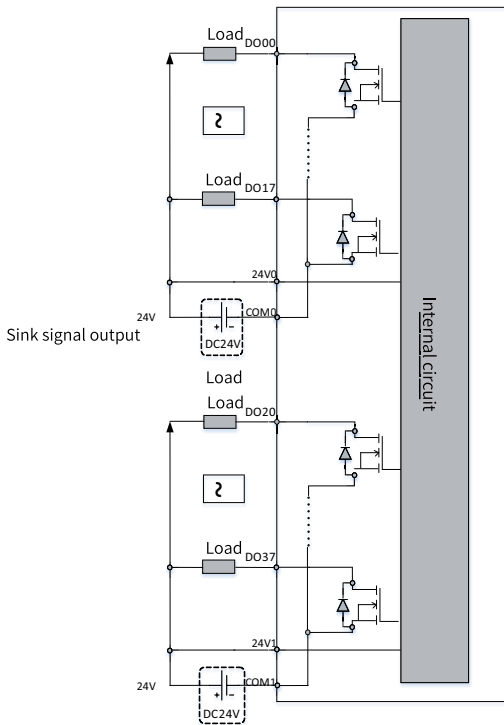


## 3.2 Terminal Definition



| Left Indicator | Left Signal | Left Terminal | Right Terminal | Right Signal | Right Indicator |
|----------------|-------------|---------------|----------------|--------------|-----------------|
| /              | 24V1        | 01            | 02             | 24V1         | /               |
| /              | COM1        | 03            | 04             | COM1         | /               |
| 37             | DO37        | 05            | 06             | DO27         | 27              |
| 36             | DO36        | 07            | 08             | DO26         | 26              |
| 35             | DO35        | 09            | 10             | DO25         | 25              |
| 34             | DO34        | 11            | 12             | DO24         | 24              |
| 33             | DO33        | 13            | 14             | DO23         | 23              |
| 32             | DO32        | 15            | 16             | DO22         | 22              |
| 31             | DO31        | 17            | 18             | DO21         | 21              |
| 30             | DO30        | 19            | 20             | DO20         | 20              |
| /              | 24V0        | 21            | 22             | 24V0         | /               |
| /              | COM0        | 23            | 24             | COM0         | /               |
| 17             | DO17        | 25            | 26             | DO07         | 07              |
| 16             | DO16        | 27            | 28             | DO06         | 06              |
| 15             | DO15        | 29            | 30             | DO05         | 05              |
| 14             | DO14        | 31            | 32             | DO04         | 04              |
| 13             | DO13        | 33            | 34             | DO03         | 03              |
| 12             | DO12        | 35            | 36             | DO02         | 02              |
| 11             | DO11        | 37            | 38             | DO01         | 01              |
| 10             | DO10        | 39            | 40             | DO00         | 00              |

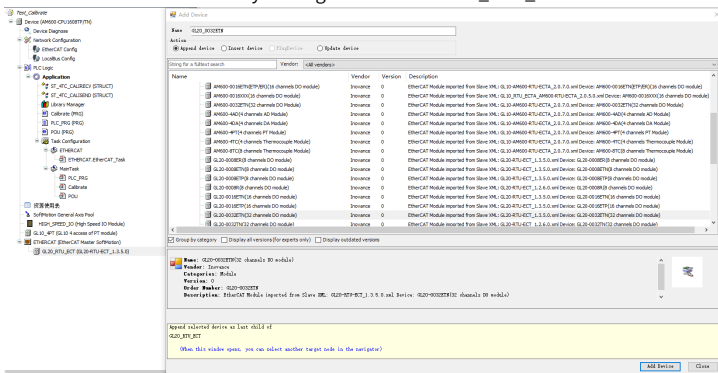
### 3.3 Terminal Wiring



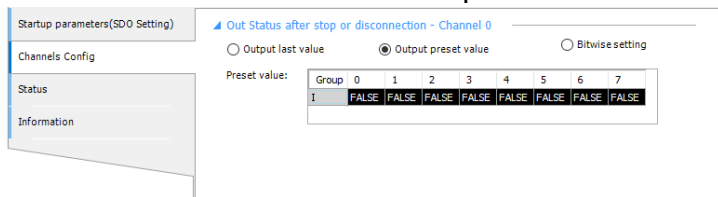
## 4 Programming Examples

The following is an example where AM600 is used as the master control module along with the GL20-0032ETN module.

1. Add GL20-0032ETN module by adding it under the GL20\_RTU\_ECT module.



2. Double click the module and set **Out Status after stop or disconnection**.



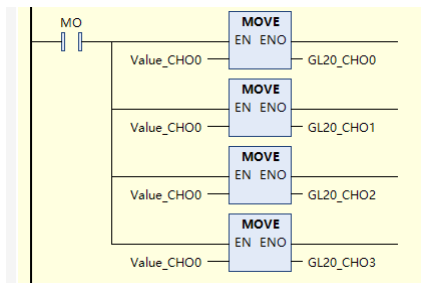
3. Add custom output variables GL20\_CHO0, GL20\_CHO1, GL20\_CHO2, and GL20\_CHO3.

| PROGRAM POU |       |                  |         |           |                |                          |                          |         |            |
|-------------|-------|------------------|---------|-----------|----------------|--------------------------|--------------------------|---------|------------|
|             | Scope | Name             | Address | Data type | Initialization | Persistent               | Constant                 | Comment | Attributes |
| 31          | VAR   | GL20_0032_OUT0   |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 32          | VAR   | GL20_0032_OUT1   |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 33          | VAR   | GL20_0032_OUT2   |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 34          | VAR   | GL20_0032_OUT3   |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 35          | VAR   | GL20_0032_Value0 |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 36          | VAR   | GL20_0032_Value1 |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 37          | VAR   | GL20_0032_Value2 |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |
| 38          | VAR   | GL20_0032_Value3 |         | USINT     |                | <input type="checkbox"/> | <input type="checkbox"/> |         |            |

4. Map the variables GL20\_CHO0, GL20\_CHO1, GL20\_CHO2, and GL20\_CHO3 to the output channels of the configured module.

| General                         | Find     | Filter                         | Show all                             | Add FB for IO Channel... |               |      | Go to Instance                       |
|---------------------------------|----------|--------------------------------|--------------------------------------|--------------------------|---------------|------|--------------------------------------|
| Process Data(PDO Setting)       | Variable | Channel                        | Address                              | Type                     | Default Value | Unit | Description                          |
| Startup parameters(SDO Setting) | +        | Device control                 |                                      | UNINT                    |               |      | Device control                       |
|                                 | +        | Application:POU.GL20_0032_OUT0 | GL20_0032ETN Digital output CH0-8bit | %QW4                     | USINT         |      | GL20_0032ETN Digital output CH0-8bit |
| Online                          | +        | Application:POU.GL20_0032_OUT1 | GL20_0032ETN Digital output CH1-8bit | %QW5                     | USINT         |      | GL20_0032ETN Digital output CH1-8bit |
|                                 | +        | Application:POU.GL20_0032_OUT2 | GL20_0032ETN Digital output CH2-8bit | %QW6                     | USINT         |      | GL20_0032ETN Digital output CH2-8bit |
| CoE Online                      | +        | Application:POU.GL20_0032_OUT3 | GL20_0032ETN Digital output CH3-8bit | %QW7                     | USINT         |      | GL20_0032ETN Digital output CH3-8bit |
|                                 | +        | LBUS status                    | %IWI0                                | UNINT                    |               |      | LBUS status                          |
| Device Diagnosis                | +        | Fault ID                       | %IWI1                                | UNINT                    |               |      | Fault ID                             |
| EtherCAT I/O Mapping            |          |                                |                                      |                          |               |      |                                      |
| EtherCAT IEC Objects            |          |                                |                                      |                          |               |      |                                      |
| Status                          |          |                                |                                      |                          |               |      |                                      |
| Information                     |          |                                |                                      |                          |               |      |                                      |

5. Define the input and output variables with the LD programming language as shown in the figure below.



6. After successful compiling, download the project and run it.