

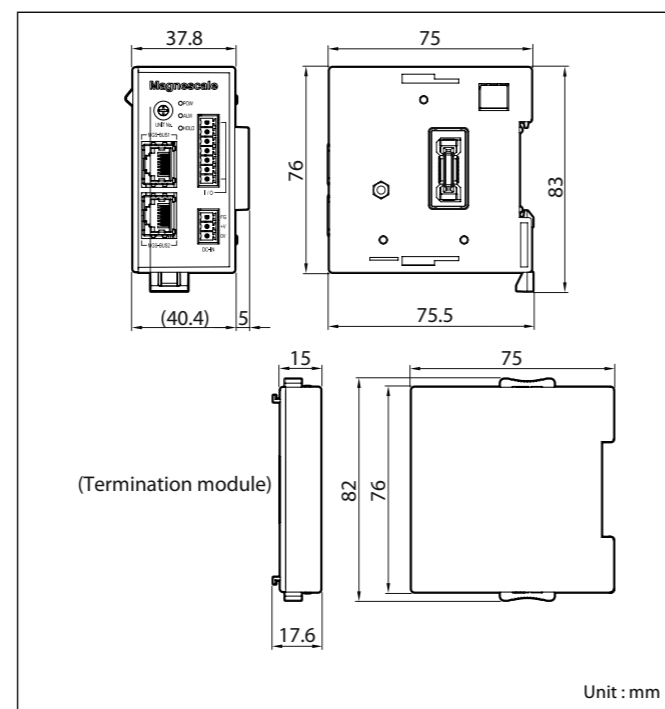
5. Specifications

Model name	MG80-MA1 / MG80-MA2
Supply voltage	DC 10.8 to 26.4 V
Power consumption	2.4 W or less
Maximum number of connectable MG80-CM	16 modules*1
Maximum number of connectable LZ80-K	2 modules*1
Power input socket	Terminal block ×1 (3-pin)
I/O	7-pin connector, photocoupler-insulated, 4 inputs, 1 output MG80-MA1 : Current sink type MG80-MA2 : Current source type
Interface connectors	For data: RJ45 ×2 (shielding compatible)
Communication protocol	100BASE-TX
Transfer speed	100 Mbit/s
Maximum cable length	20 m (CAT5e shielded type recommended*2)
Unit number setting	Rotary switch
Indicator lamps	Power : Green LED ×1, Alarm : Red LED ×1, Hold: Orange LED ×1
Operating temperature/humidity range	0 to +50 °C (no condensation)
Storage temperature/humidity range	-20 to +60 °C (20 to 90% RH)
Mass	Approximately 130 g
Mounting method	DIN rail

*1 Up to four MG80-MA can be connected to the LT80-NE, and up to 16 MG80-CM can be connected to each MG80-MA, for an overall configuration of 32 modules. Up to two LZ80-K1/K2 can be connected to each MG80-MA, for an overall configuration of eight modules.

*2 The customer must provide the communication cables.

6. Dimensions



Magnescale

Main module

MG80-MA1 / MG80-MA2

Instruction Manual

Read all the instructions in the manual carefully before use and strictly follow them.

Keep the manual for future references.

Safety Precautions

Magnescale Co., Ltd. products are designed in full consideration of safety. However, improper handling during operation or installation is dangerous and may lead to fire, electric shock or other accidents resulting in serious injury or death. In addition, these actions may also worsen machine performance.

Therefore, be sure to observe the following safety precautions in order to prevent these types of accidents, and to read these “Safety Precautions” before operating, installing, maintaining, inspecting, repairing or otherwise working on this unit.

Warning Indication Meanings

The following indications are used throughout this manual, and their contents should be understood before reading the text.

Symbols requiring attention Symbols prohibiting actions




CAUTION





DO NOT
DISASSEMBLE

Warning Failing to follow the precaution items given below may lead to severe injury or death.

-  Do not open the cover of the MG80-MA1 / MG80-MA2 to disassemble or modify the unit, as this may result in burns or injury.
These actions may also damage the internal circuitry.

Caution Failing to follow the precaution items given below may lead to injury or damage to surrounding objects.

-  The unit does not have an explosion-proof structure. Therefore, do not use the unit in an atmosphere charged with inflammable gases as this may result in fire.
-  Be sure to turn off the power before connecting or disconnecting power and signal connectors in order to prevent damage or misoperation.

日本からの輸出時における注意

本製品（および技術）は輸出令別表第1の16の項（外為令別表16の項）に該当します。キャッチオール規制による経済産業省の許可要否につきましては、輸出者様にてご確認ください。

For foreign customers

Note: This product (or technology) may be restricted by the government in your country. Please make sure that end-use, end user and country of destination of this product do not violate your local government regulation.

Magnescale Co., Ltd.

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MG80-MA1 / MG80-MA2
2-A02-721-1A

2019.3
Printed in Japan
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General precautions

- Before and during operations, be sure to check that our products function properly.
- Provide adequate safety measures to prevent damages in case our products should develop malfunctions.
- Use outside indicated specifications or purposes and modification of our products will void any warranty of the functions and performance as specified of our products.
- When using our products in combination with other equipment, the functions and performances as noted in this manual may not be attained, depending on operating and environmental conditions.

[For U.S.A. and Canada]

THIS CLASS A DIGITAL DEVICE COMPLIES WITH PART15 OF THE FCC RULES AND THE CANADIAN ICES-003. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS.

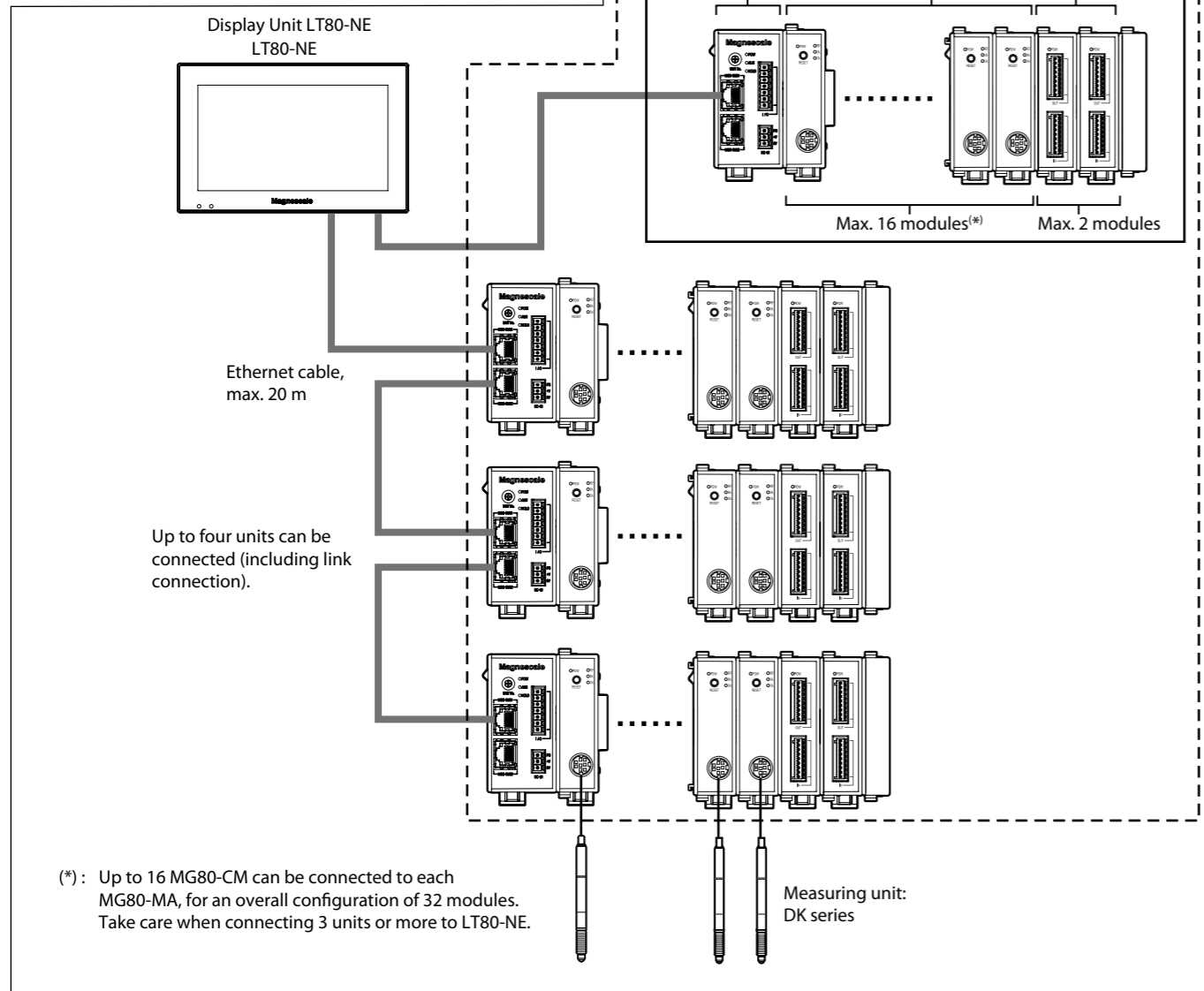
- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDERSIGNED OPERATION.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

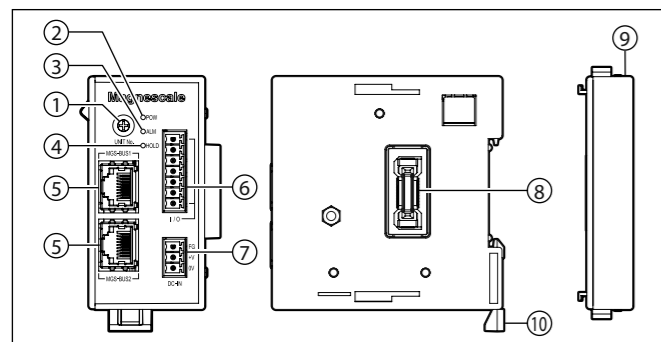
1. Overview

This product is a dedicated main module for the display unit LT80-NE. It is used in combination with counter modules and I/O modules. Operations and I/O settings within the composition units are performed using the display unit.

During operation, also refer to the display unit, counter module, and I/O module Instruction Manuals.



2. Name and Function of Each Part



① Module number setting switch

Sets the module number to a number from 1 to 9. (0 and A to F are not used.)

This number is displayed on the display unit as the module number.

② POWER lamp

Lights green when the power is on.

③ ALARM lamp

Lights red when any counter module within the unit is in the alarm status.

④ HOLD lamp

Lights orange when the hold function (in which current value output data is latched or peak value data updating is stopped) is activated in any counter module within the unit.

⑤ Dedicated MGS-BUS / Link port

The MG80-MA has two ports for display unit connection and main module link connection. Either port can be used for LT80-NE communication and MG80-MA linking. Use commercially available Ethernet communication cables. <Communication cable>

A CAT5e or higher shielded type is recommended.
Cable length: 20 m or less

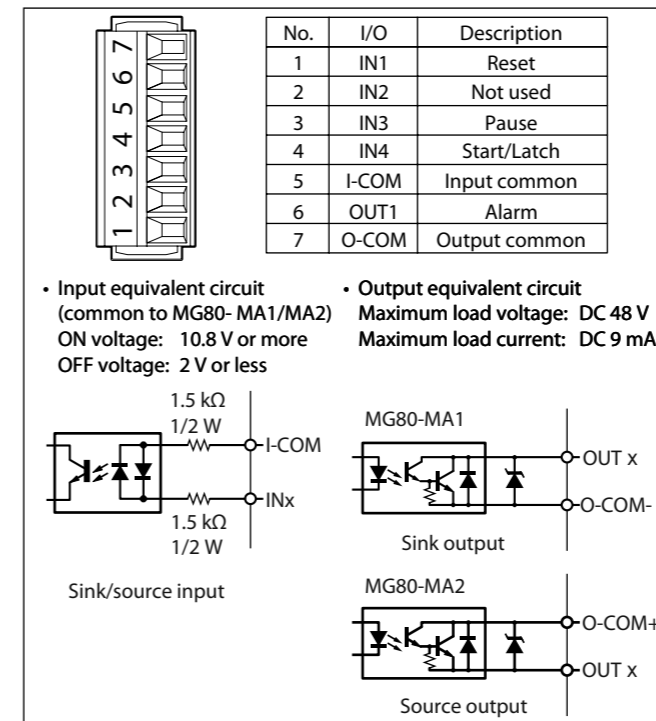
⑥ I/O connector

This I/O connector is used to operate all of the counter modules within the unit at once.

It has three input pins and one output pin.

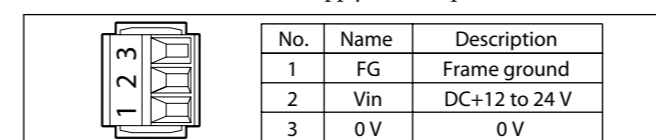
MG80-MA1 : Current sink type

MG80-MA2 : Current source type



⑦ Power input connector

This connector is used to supply external power. (DC +12 to 24 V)



⑧ Module connector

Connects a counter module.

⑨ Termination module

This is the termination module. Connect to the endmost position of the unit.

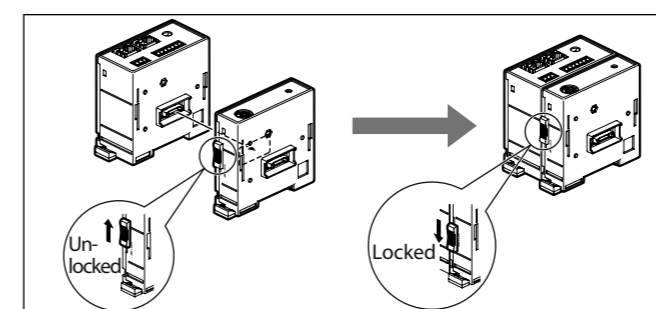
⑩ DIN rail anchoring lever

This lock mechanism secures the main unit to the DIN rails.

3. Installation

3-1. Connecting the Counter Modules

Unlock the slide locks of the counter module to be connected. Connect the connectors of the main module and the counter module, and return the top and bottom slide locks to the locked positions to secure the module.

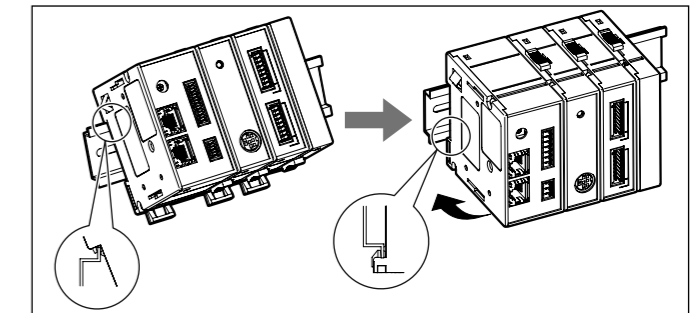


3-2. Installing the Unit on the DIN Rails

This product supports 35 mm wide DIN rails.

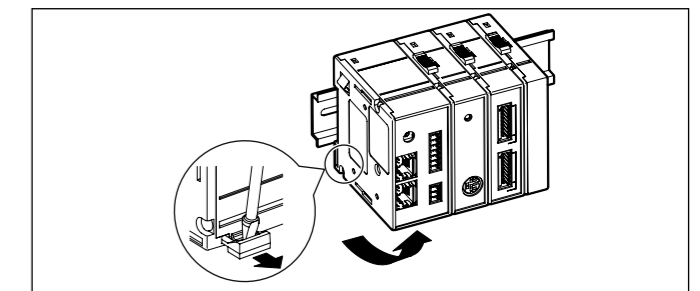
When the interface unit is shipped from the factory, the tabs on the DIN rail anchoring levers are locked.

Align the top side of the groove in the unit's rear panel with the top of the DIN rails, and install the unit by pushing it into position until a clicking sound is heard so that the bottom side of the groove fits snugly on the DIN rails.



3-3. Removing the Unit from the DIN Rails

While holding the unit in place so that it will not fall, pull down the DIN rail anchoring levers of all the modules until a clicking sound is heard.



4. Connections

Caution

Do not supply power until all of the connections are complete. Make the following connections and settings. (Refer to "Name and Function of Each Part".)

- Power input connector connection
- Connections of each module (*)
- Main module link connection (Ethernet cable)
- Connection with the display unit (Ethernet cable)

(*) Number of modules that can be connected within the unit and connection positions

Up to 16 counter modules and up to two LZ80-K modules can be connected to each main module. Always connect the LZ80-K modules in the endmost position of the composition units, and make them subordinate to the MG80-MA.

