8. Dimensions / Mounting Hole Drawing
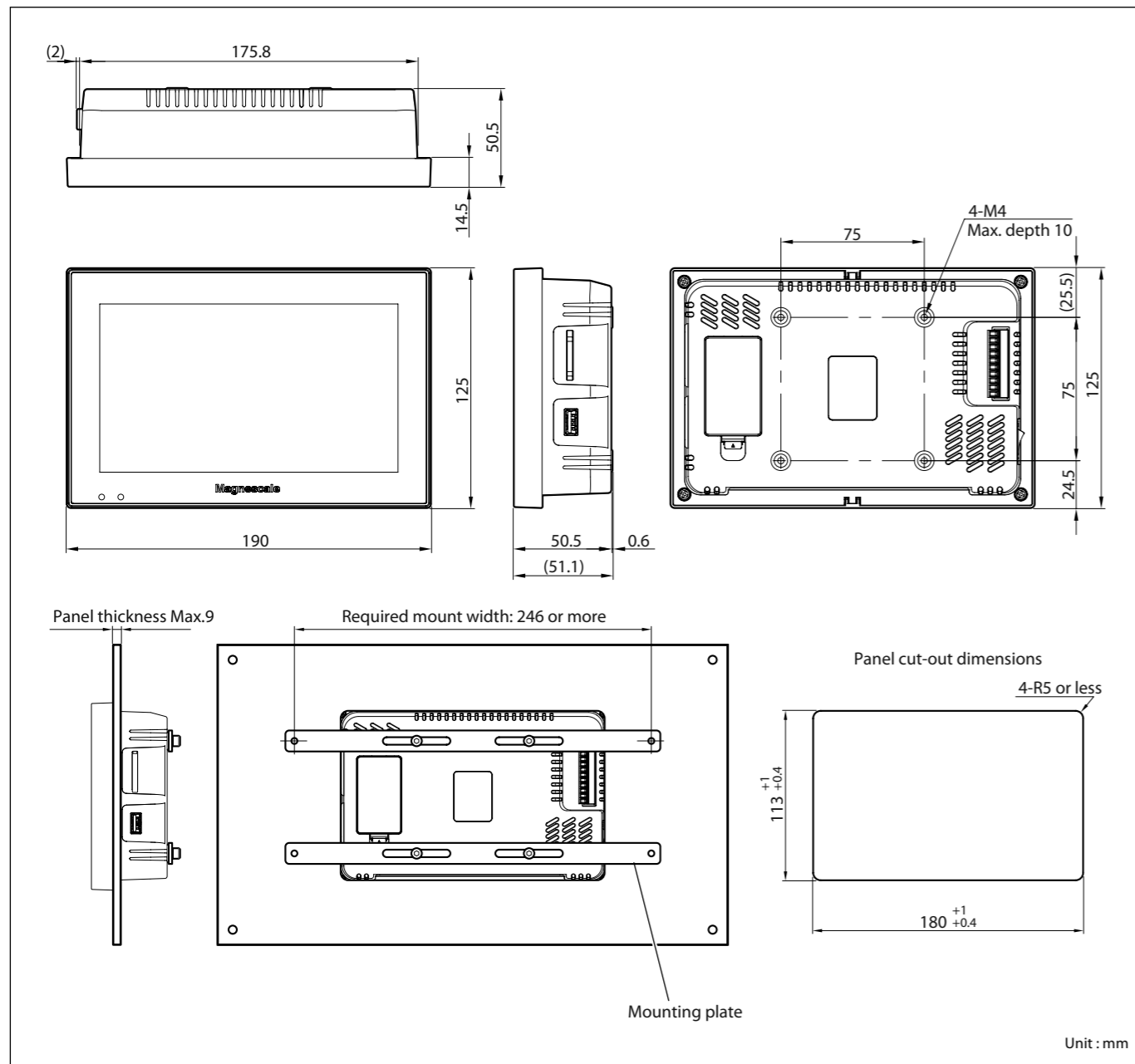
(2) 175.8

50.5
14.5

4-M4
Max. depth 10

75

(25.5)
75
125
24.5

125

190

50.5   0.6
(51.1)

Panel thickness Max.9

Required mount width: 246 or more

Panel cut-out dimensions

4-R5 or less

113 $^{+1}_{+0.4}$

180 $^{+1}_{+0.4}$

Mounting plate

Unit : mm

Magnescale

Display unit
LT80-NE
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 LT80-NE 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.

■ 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.

■ This product has an internal lithium battery. Be sure to observe the following cautions:
- Replace the battery every 5 years. Do not charge the battery.
- Turn off the power before replacing the battery. After you replace the battery, reset the clock.
- Replace the battery with a battery of the same type (CR2032) and insert it facing the correct polarity.
- Dispose of the removed battery in accordance with the laws and regulations of the region or country concerned.
- Remove the battery before disposing of this product.
- When disposing of the removed battery, cover it with tape, etc.
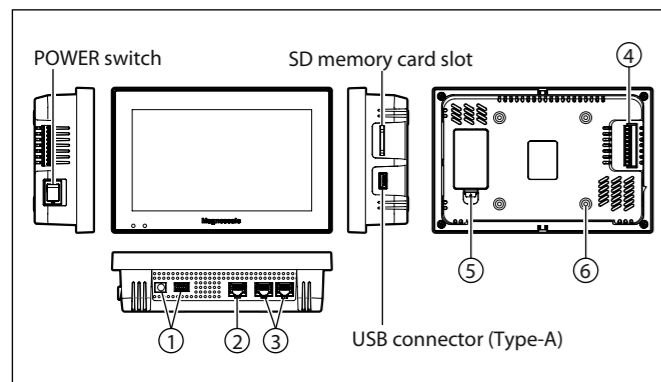
[For U.S.A. and Canada]

1. Overview

This product is a display unit capable of displaying measurement data and making various settings for an interface unit consisting of a main module (MG80-MA), counter modules (MG80-CM), and I/O modules (LZ80-K).

For the setting method, refer to the LT80-NE Operation Manual available at the Magnescale website.

URL: http://www.magnescale.com/mgs/product/LT80.html

2. Name and Function of Each Part

POWER switch
SD memory card slot
④
① ② ③
USB connector (Type-A)
⑤ ⑥

① Power input connector

This connector is used to supply external power.

When using the DC jack: Use the special AC adaptor PSC-21A / 22A / 23A (sold separately).

When using the terminal block: Supply external power. (DC +12 V to 24 V)

No.	Name	Description
1	FG	Frame ground
2	Vin	DC+12 to 24 V
3	0 V	0 V

② General-purpose LAN port

This is used to export the saved measurement data from a personal computer connected to the LAN port. This port supports Ethernet. Use a commercially available Ethernet communication cable.

<Communication cable>

CAT5e or higher shielded type

③ MGS-BUS dedicated port

This display unit has two dedicated ports for main modules. Connect to the main modules using commercially available Ethernet communication cables.

<Communication cable>

A CAT5e or higher shielded type is recommended.

Cable length: 20 m or less

④ I/O connector

This is a general-purpose I/O connector with four input and four output I/O terminals. I/O supports both sink type and source type.

The I/O function settings are made on the screen.

No.	Name	Description
1	I-COM	Input common
2	IN1	Input 1
3	IN2	Input 2
4	IN3	Input 3
5	IN4	Input 4
6	OUT1	Output 1
7	OUT2	Output 2
8	OUT3	Output 3
9	OUT4	Output 4
10	O-COM	Output common

- Input equivalent circuit
  ON voltage : 10.8 V or more
  OFF voltage : 2 V or less

- Output equivalent circuit
  Maximum load voltage : DC 48 V
  Maximum load current : DC 9 mA

1.5 kΩ 1/2 W
1.5 kΩ 1/2 W

⑤ Battery cover

This is the internal battery holder cover. Remove it only when replacing the battery. Always attach this cover when using the display unit.
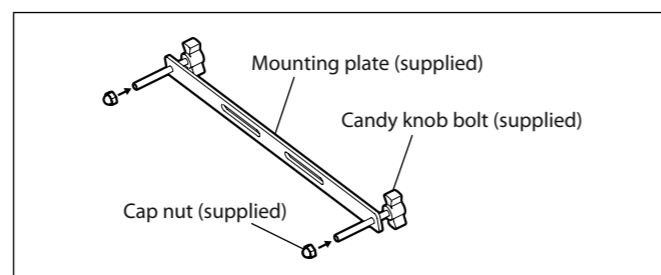
⑥ Mounting hole (×4)

These are used when mounting the display unit in a panel or securing it to a display stand. Use the supplied set screws.

When mounting in a panel: Attach the supplied mounting plates.

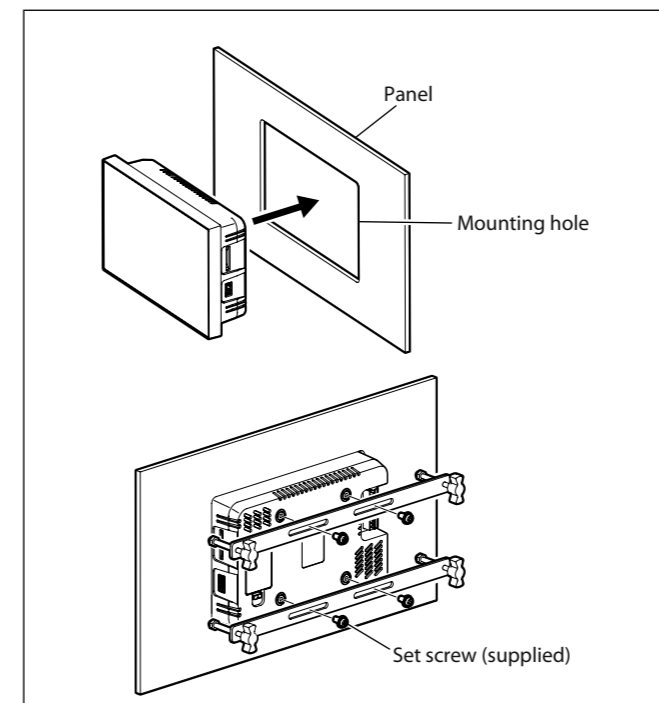When using a display stand: Use a commercially available stand that supports VESA75.

# 3. Installation

When mounting in a panel

1. Open a mounting hole in the panel to be secured. (Refer to the panel cut-out dimensions.)
2. Screw the candy knob bolts into the mounting plates and secure the cap nuts to the bolt tips.

Mounting plate (supplied)
Candy knob bolt (supplied)
Cap nut (supplied)

3. Insert the display unit through the mounting hole, and secure the mounting plates to the display unit with the supplied set screws.

Panel
Mounting hole
Set screw (supplied)

4. Tighten the candy knob bolts until they contact the panel to hold the display unit and mounting plates against the panel.
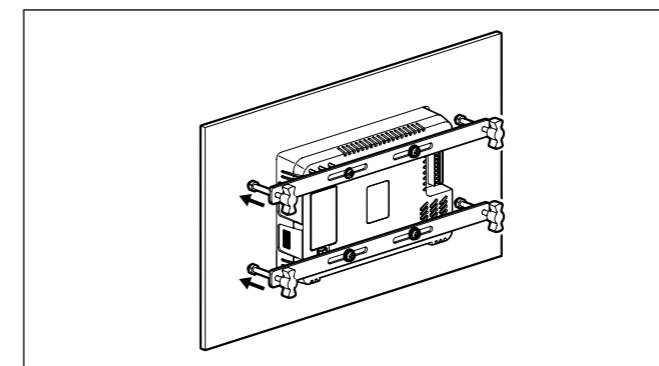
* When using a commercially available stand that supports VESA75, pay attention to the length of the screws used to secure the display unit.

Screw hole for securing the display unit: M4, depth 10 mm

4. Connections

Make the following connections and settings. (Refer to "Name and Function of Each Part.")

- Power input connector connection
- I/O connector settings
- Connections with main modules (Ethernet cables)
- General-purpose LAN port connection (Ethernet cable)

Note

When connecting with the interface unit, make sure that each module is connected in the correct order. Always connect the I/O module in the endmost position of the composition units, and connect a termination module.

5. Display Unit Startup and Initial Settings

After finishing all the connections, supply power to the display unit and main modules.

Once communication is established between the display unit and each main module, check the connection configuration. (Startup time: approximately 50 seconds)

Check that all measuring units appear in the display, and then make the various settings. The settings are saved automatically. The display unit starts up in the previous setting status the next time the power is turned on.

6. Caution When Stopping Power Supply

Do not stop power supply in the following conditions. Otherwise, the data or the display unit software may be corrupted, or the system may not start up.

- While making function settings
- While transferring data to a SD memory card or USB memory
- While exporting data from the general-purpose LAN port
- While updating the display unit or main module software

7. Specifications

Model name	LT80-NE
Supply voltage	DC 10.8 to 26.4 V
Power consumption	14 W or less
Maximum number of connectable MG80-MA	4 units[*1]
Power input socket	Terminal block ×1 (3-pin) DC jack (EIAJ4) ×1
General-purpose I/O	Photocoupler-insulated, 4 inputs, 4 outputs (functions set by the display unit)
Interface connectors	For control: RJ45 ×1 (shielding compatible) For data: RJ45 ×2 (shielding compatible) SD memory card slot ×1 USB A connector ×1
Communication protocol	100BASE-TX
Transfer speed	100 Mbit/s
Maximum cable length	20 m (CAT5e shielded type recommended[*2])
Display size, resolution	7" WSVGA 1024 (H) × 600 (V)
Touch panel type	Analog resistive film type
Operating temperature/ humidity range	0 to +50 °C (no condensation)
Storage temperature/ humidity range	−20 to +60 °C (20 to 90% RH)
Mass	Approximately 820 g
Mounting method	Panel mount, VESA75 mount[*3]
Accessories	Instruction manual, mounting plate, set screws (for mounting plate) ×4

[*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.

[*3] Supports VESA standard 75×75.