Magnescale

SPEED X PRECISION

Next generation high speed data acquisition system

› **LT80** | Intelligent multi measurement station

› **MG80**

› **LZ80** series

Clear and easy to use HMI functions

- 7-inch touch screen LCD display (1024x600)
- Displays I/O status, add/sub results and measurement modes (Current value, Min, Max, P-P)
- Multiligual support (Japanese/English/German/Italian/Spanish/French)
- Key-lock feature to prevent accidental operation

Expandable multi-axis measurement module system

- Connect up to 32 Magnescale DK- or DT-series gauges (via MT adaptor)
- Wide variety of measurement applications with multiple I/O functions
- Allows for defective part identification, trend management, part sorting and tolerance judgement by 2 or 4 stage comparator function
- Add/subtract operations and scaling functions allow real-time calculation of measured values

3 different interfaces allow for data transfer and parameter setting

- Measurement data is transferred to PC via Ethernet
- Data storing and Parameter writing in SD card/USB flash drive
- Data can be automatically saved to USB or SD card via custom LT80 settings or by PLC I/O commands.
- Featuring our "PLC Link" function, which allows measurements to be directly written to a PLC

Flexible installation

- LT80 available with panel mount or VESA-compatible display stand
- DIN rail mount for easy installation (MG80 and LZ80)
- 20m maximum between MG80 modules and LT80 display via Ethernet cable
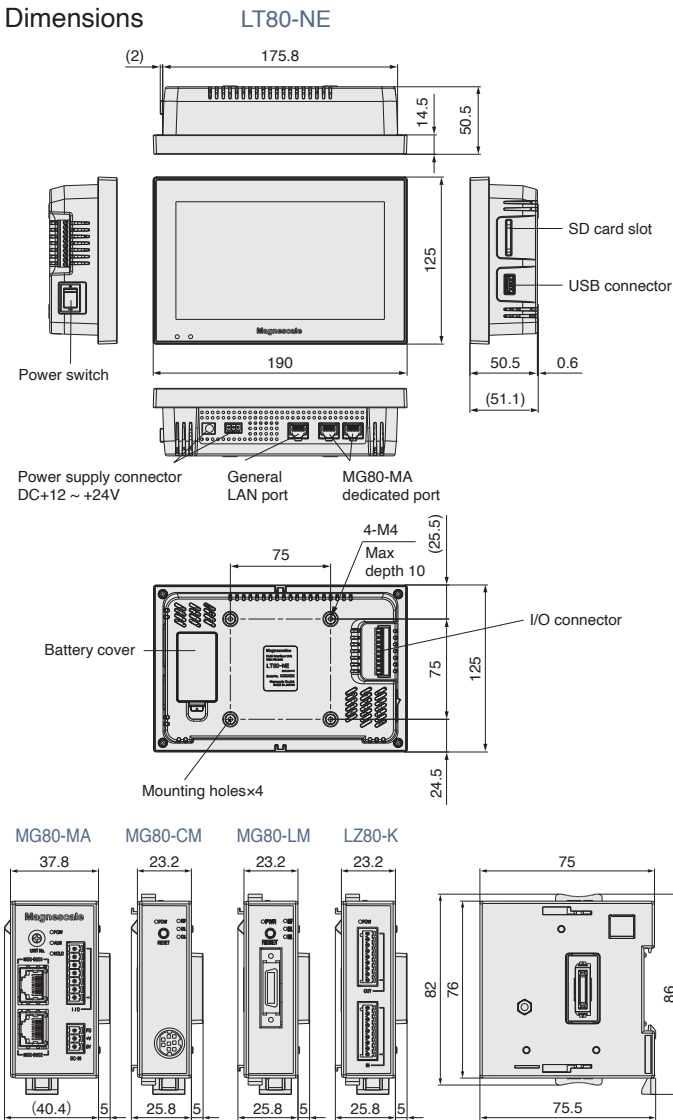
Magnescale Co., Ltd.

Main specifications

Display unit		LT80-NE
Power consumption		14W or less
Maximum connectable units		4 units of MG80-MA*1
Measurement screen	Measurement display	Display measurement values of 2, 4, 8 or 16 axis, Alarm display, Comparator group, Measurement mode, Measurement bar graph, Reset, Preset
	I/O information	I/O condition monitoring (All I/O of device and module)
Setting menu	Measuring unit setting	Resolution, direction, with or without reference point connected to MG80-CM
	Display setting	Resolution display, number of axes to display (2, 4, 8, or 16 axes)
	Measurement mode	Measurement mode setting of each axis (current, MAX, MIN, P-P)
	Comparator value setting	8 groups with 2 stages, or 8 groups with 4 stages per axis Default setting of each axis
	I/O setting	I/O function assignments of LT80-NE, I/O function assignments of connected LZ80-K, Reference point detection, Reset, Preset, Comparator output, Alarm, Reference point passed, Each channel address, Change measurement mode, Saving measurement data
	Calculation	Maximum of 16 combinations of add/subtract calculations per MG80-MA module, Scaling function
Maintenance display		Main body information, Service usage (Software update for LT80 and MG80)
System port command (using LAN port)		LT80 operation from PC (setting, measurement operation, data acquisition)

*1 When using LINK function of MG80-MA dedicated port and MG80-MA

Dimensions   LT80-NE

(2) 175.8
14.5
50.5
125
190
50.5 0.6
(51.1)
25.5

SD card slot
USB connector

Power switch

Power supply connector DC+12 ~ +24V
General LAN port
MG80-MA dedicated port

4-M4 Max depth 10
75
75
125
24.5
I/O connector

Battery cover
Mounting holes×4

Main module	MG80-MA1/MG80-MA2
Power consumption	2.4W or less
Maximum connectable units	(16) MG80-CM, (2) LZ80-K*1
I/O	7-pole connector Photo coupler insulated 4 input, 1 output MG80-MA1: Current Sink MG80-MA2: Current Source
Interface connector	For data: RJ45 x 2 (shielding compatible)
Communication protocol	100BASE-TX
Transmission speed	100 Mbit/s
Maximum cable length	20m (CAT5e shielding type recommended*2)
Setting menu	Rotary switch for setting unit number

*1 Per each MG80-MA1/MA2. Total system maximum: (4) MG80-MA1/MA2, (32) MG80-CM, (8) LZ80-K
*2 Communication cables not included

Counter module	MG80-CM
Power consumption	2.0W or less (Measuring unit excluded)
Compatible measuring units	DK series, DT series (via MT)
Alarm	Frequency response exceeded, Measuring unit not connected, Broken connection

| I/O module	LZ80-K1/LZ80-K2
Power consumption	2.0W or less
I/O	9-pole connector × 2 Photo coupler insulated 8 input, 8 output LZ80-K1: Current Sink LZ80-K2: Current Source

Latch module	MG80-LM
Power consumption	2.0W or less (Not including encoder)
Data latch interval	100 μs (Measurement data acquisition only)
	400 μs (All functions can be used, including reference operation, arithmetic function, comparator function, MAX, MIN, P-P, etc.)
Encoder signal input	A/B/Reference point
	Voltage differential type line receiver (EIA-422 compliant)
A / B signal input minimum phase difference	50 ns
Power supply for connected encoder	DC5V 500mA (Max)
Alarm	Input response frequency exceeded, encoder not connected, cable disconnection.

LT80/MG80/LZ80	
Supply voltage	DC10.8 ~ 26.4V
Operating temperature/humidity range	0 ~ +50°C (No condensation)
Storage temperature/humidity range	−20 ~ +60°C (20 ~ 90%RH)

MG80-MA 37.8 (40.4) 5
MG80-CM 23.2 25.8 5
MG80-LM 23.2 25.8 5
LZ80-K 23.2 25.8 5
75 82 76 86 75.5

Maximum connectable number of units : 16

Latch module MG80-LM

By connecting the A/B/Z signals of a rotary or linear encoder*1 to the latch module, the LT80 measurement values can be acquired by the timing of the encoder signal (trigger), and stored in the LT80 for up to 16 axes. This enables dynamic measurement based on the rotation angle or travel distance.

*1 We have confirmed the operation with Magnescale encoders. For connection to other manufacturers' encoders, please contact our sales department.

Encoder
100μs Trigger timing
Concurrent latching
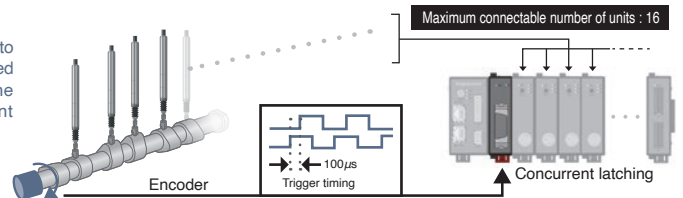
⚠ To use this product safely, please read the instruction manual carefully and thoroughly prior to usage. •Magnescale reserves the right to change product specifications without prior notice.