# Measurement Data Management

Convenient data collection tool and quality control software

## Mini-Printer Equipped with Data Logging Function
## SERIES 264 — Digimatic Mini-Processor DP-1VA LOGGER

A

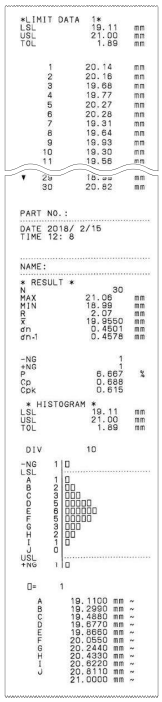
**In addition to the conventional (DP-1VR) printing and statistical calculation functions, data logger and USB output functions are added and enhanced!**

- This is a palm-sized printer used to print measurement data from Digimatic gages or to perform statistical analysis.
- The versatile **DP-1VA LOGGER** printer not only prints measurement data, but performs a variety of statistical analyses, draws histograms and D-charts and also performs complex operations on Xbar-R control charts.
- The data logger function allows storage of up to 1,000 pieces of data in memory, and batch transfer of stored data to an Excel-format inspection certificate, etc., by connecting to a PC with a USB cable (optional).


### Example of printout

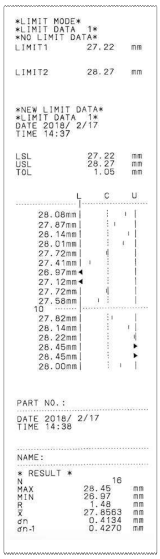
**MODE1**

Various statistical calculations are executed using all input data. If the tolerance limits have been set, GO/±NG judgment and histogram creation are also enabled.



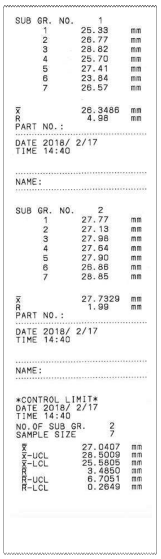

**MODE2**

In addition to the MODE1 function, measurements within the tolerance limits are printed out as a D chart*. This chart allows you to identify the trend of variations in measurement data.
* D chart stands for Displacement chart.




**MODE3**

Only input of data automatically enables calculation processing of complex control limit values as well as calculation for creating an Xbar-R control chart.

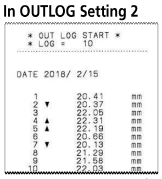



### Example of batch printing log data

**In OUTLOG Setting 1**

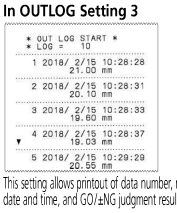

This setting allows printout of measurement time, measurement value, and GO/±NG judgment result.

**In OUTLOG Setting 2**




This setting allows printout of data number, measurement value, and GO/±NG judgment result.

**In OUTLOG Setting 3**




This setting allows printout of data number, measurement date and time, and GO/±NG judgment result.

### Statistical calculation data

**MODE0**

GO/±NG judgment

**MODE1, 2**

N: Number of pieces of data
MAX: Maximum value
MIN: Minimum value
R: Range
$\bar{X}$: Mean value
σn: Standard deviation of a population (N)
σn-1: Sample standard deviation (N-1)
–NG: For the number of pieces of data smaller than the lower limit
+NG: For the number of pieces of data larger than the upper limit
P: Percentage of rejects
Cp: Maximum process capability potential
Cpk: Actual process capability achieved

**MODE3**

N: Number of pieces of data
MAX: Maximum value
MIN: Minimum value
n: Number of subgroups (up to 10)
$\bar{X}$: Mean value in a subgroup
R: Range of a subgroup
$\bar{\bar{X}}$: Mean value
$\bar{X}$-UCL: Upper control limit
$\bar{X}$-LCL: Lower control limit
$\bar{R}$: Center (R control)
R-UCL: Upper control limit (R control)
R-LCL: Lower control limit (R control)

### Specifications

- **264-505**
- Model: **DP-1VA LOGGER**
- Data input: Digimatic input, RS-232C input (specific to Mitutoyo **KA** counter)
- Data processing capacity:
  Mode 0: 100,000 pcs. of data
  Modes 1,2: 9,999 pcs. of data
  Mode 3: Sample size
  10×9,999 subgroups=99,990 pcs. of data
- GO/±NG judgment (five sets can be defined)
- Output: 1) USB output
  2) RS-232C data output at TTL levels
  3) GO/±NG judgment result output (+NG, GO, –NG)
- Input timer: Input intervals
  0.25 s, 1 s, 5 s, 30 s, 1 min, 30 min, 60 min
- Printing method: Thermal line printer
- Printing speed: 0.8 s per line (6.5 mm/s) (using AC adapter)
- Printing line: 10,000 lines of normal characters per roll
  7,000 lines of large characters per roll
- Printing paper: High durability thermo-sensitive paper
  Width 58 mm × length 48 m
  Note: If it is to be used for official documents, or stored more than 5 years, it is recommended to make a more durable copy.
- Power supply: 2 power methods
  1) AC adapter 100 to 240 V 50/60 Hz AC adapter (6 V, 2 A) as a standard accessory.
  2) 4 pcs. of LR6/AA size (alkaline or Ni-Mh)
  Note: Manganese dioxide batteries are not usable.
- Battery life: About 10,000 lines* (if data is printed once every 5 seconds using 1,600 mA NiMH batteries at 20 ℃ )
  * This is a typical value and is not guaranteed.
- External dimensions: 94 (W) ×201 (D) ×75.2 (H) mm
- Mass: 390 g (main unit)

### Optional Accessories

1) USB cable (A-microB) : **06AFZ050** (1 m)
2) RS-232C output cable: **09EAA084** (1 m, D-SUB 9 pin)
3) RS-232C counter cable: **09EAA094**
   Cable for **KA** counter (1 m, D-SUB 25-pin)
4) GO/±NG judgment cable: **965516**
   (2 m, 10 pin terminal/separate)
5) Foot switch: **937179T**

### Consumable Items

Printing paper (10 rolls): **09EAA082**


Refer to the **DP-1VA LOGGER** Brochure (**E12041**) for more details.