3. OPERATING METHOD - 2 (COMPUTING FUNCTIONS AND MEMORY FUNCTIONS)

3.1 Computing Functions

3.1.1 General

Two types of computing functions are provided : primary computing functions and secondary computing functions.

Only the names of the primary and secondary computing functions are listed here. Detailed description of the various functions is given in subsection 3.1.3 onward.

(1) Primary Computing Functions

① SCALING
② %DEVIATION
③ DELTA
④ MULTIPLY
⑤ DECIBEL CONVERSION
⑥ REAL VALUE
⑦ dBm CONVERSION
⑧ RESISTANCE VALUE TEMPERATURE COMPENSATION

(2) Secondary Computing Functions

① COMPARATOR-1
② COMPARATOR-2
③ STATISTICAL PROCESSING

Notes on description of each computing function

(1) Symbols Used in Calculation Expressions

* : Multiplication symbol
Σ : Cumulative addition symbol
/ : Division symbol

(2) Each of the computation results displays shown by way of example is for the case of 7 1/2 digit display.
In actuality, the symbol 'E' for the exponential part is not displayed.

Note : Subsection 3.1.2, "Constant setting and the display of computation results", should be read before proceeding to description of each computing function.

3.1.2 Constant Setting and the Display of Computation Results

(1) Constant Setting

In principle, constants should be set in fundamental units.

Unless otherwise specified, real-number constants must be set in floating point BCD (binary coded decimal) form.

The setting range is from –19999999 E9 to 199999999 E9
(± 1.9.9.9.9.9.9.9. ± E9).

Only the mantissa part can be set if the exponential part is 0, and integers can be input if the exponential part is an integer.

Constants X, Y, Z, HIGH-1, HIGH-2, LOW-1, LOW-2, and LIMIT can be set to the previous values using the MD key.

Note : Data integrity is not guaranteed if the function range is changed over to another range during the time from the preceding measurement operation to MD key setting.

(2) Display of Computation Results

① Computation results are rounded up or off, depending on the output digit mode.

② OL (overload) is displayed if the particular measured value is out of the permissible range.

The units display section displays the units of measurement that correspond to the computation results.

③ For the display formats of computation results, see the description of the computation items.

CAUTION

(1) Fundamental units
Voltage measurement : V
Current measurement : A
Resistance measurement : Ω

(2) The COMPUTE key is automatically set to the OFF position if changes are made to the computation mode, constant settings or ON/OFF switching of data memory during execution of a computing operation.

3.1.3 SCALING

[Data operated on]

SCALING allows computation to be made on the following data:

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$$R = \frac{D - Y}{X} * Z$$

R : Results of computation
D : Data to be operated on
X : Constant (Set value)
Y : Constant (Set value)
Z : Constant (Set value)

[Setting range of constants]

X : ±19999999 E-9 to ±19999999 E+9 (except 0)
Y, Z : ±19999999 E-9 to ±19999999 E+9

[Display of computation results]

The significant digits in each measured value are automatically identified and the computation results are displayed in the following order of priority :

(1) R : −19999999 to +19999999
This value is displayed in the units of measurement.

(2) R : ±19999999 E-19 to ±19999999 E+19
This value is displayed in the fundamental units of each measurement function.
However, if the particular value has an exponential part, then the fundamental units are not displayed.

(3) In the fundamental units, a computation error message is displayed if the exponential part is larger than E+19, and "0. E-19" is displayed if the exponential part is smaller than E-19.

[Applications]

Output signals from pressure, thermal, distortion, and other such sensors and transducers can be measured. Direct reading of these measurements is possible because they can be converted into the units that correspond to the respective physical quantities.

(1) Setting "Y=0, Z=1" allows a $\frac{D}{X}$ calculation to be made, thus giving the results of division of data by the desired value (X).

Using this computation, it is also possible to measure the voltage drop (D) across the resistor (X) and directly read the value of the current flowing through the resistor.

(2) Setting "X=Z=1" allows R=D-Y calculation and hence elimination of offset values.

(3) Offset values and slope-compensated scaling factors can be obtained by first assigning to Y the sensor output value existing when the sensor input is zero and then assigning to X the span value between the zero and full-scale of the sensor input level so that Z becomes equal to 1.

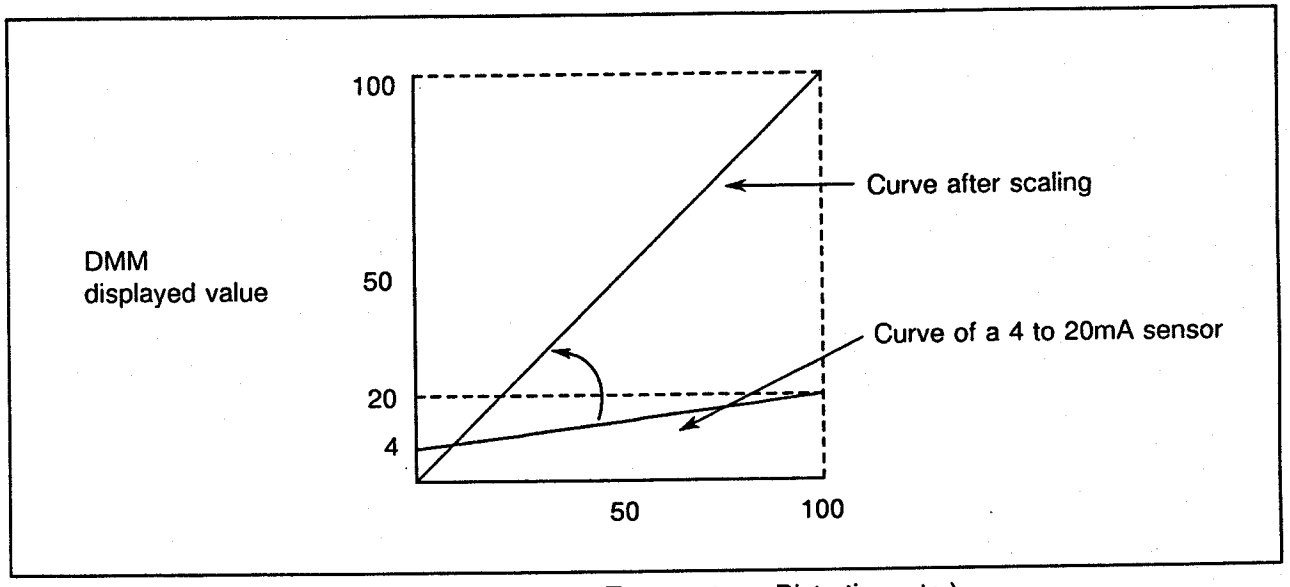


Figure 3-1 Sensor Inputs (Pressure, Temperature, Distortion, etc.)
[Scaling for Direct Reading of 4mA to 20mA Sensor or Transmitter Values]

Calculation expression for scaling

$$R = \frac{D - Y}{X} * Z$$

R : Results of computation
D : Data to be operated on
X : 0.16
Y : 4
Z : 1

$$R = \frac{D - 4}{0.16}$$

3.1.4 %DEVIATION

[Data operated on]

DEVIATION allows computation to be made on the following data :

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$$R = \frac{D - X}{|X|} * 100$$

R : Results of computation
D : Data to be operated on
X : Constant (Set value)

[Setting range of constants]

X : ±19999999 E-9 to ±19999999 E+9 (except 0)

[Display of computation results]

R : −1999.9999 to +1999.9999
Unit : Display is made in %.
A computation error message is displayed if the particular R value is out of the permissible range.

[Applications]

This function can be applied to selection, ranking, etc. of resistors or other circuit components. Setting a reference value to X makes it possible for the deviation of data D from X to be obtained in percentage terms.

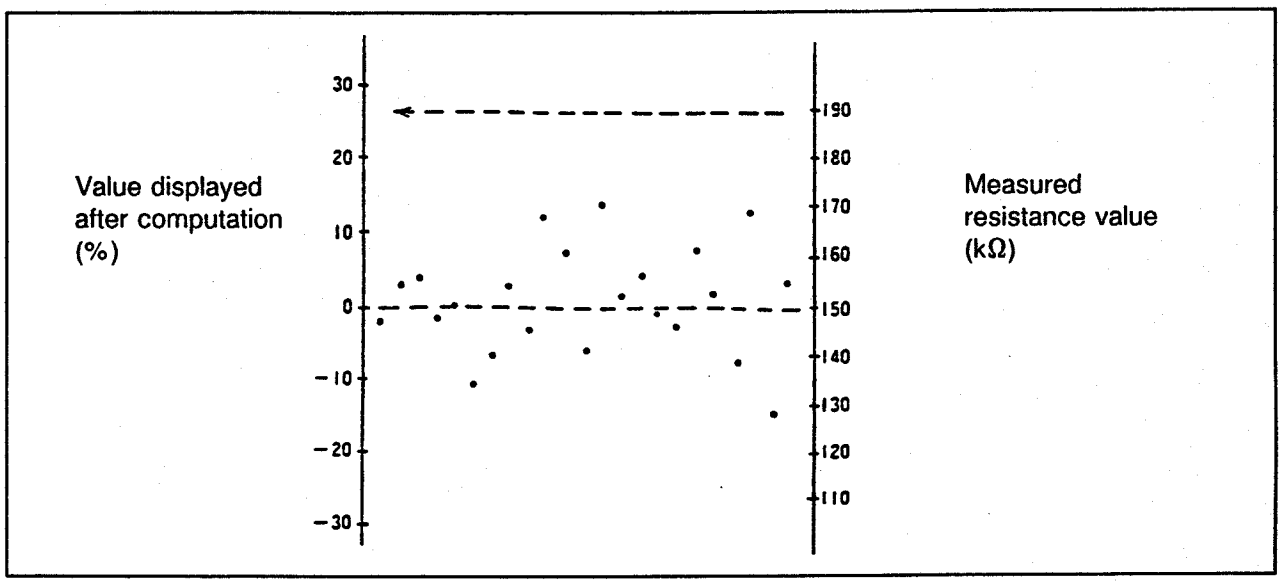


Figure 3-2 Application Example of ΩDeviation Caliculation
(Measurement of Resistance Value Deviation with X Set Equal to 150kΩ)

3.1.5 DELTA

[Data operated on]

DELTA allows computation to be made on the following data:

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$R = Dt - Dt{-}1$

R : Results of computation
Dt : Data to be measured at time t
Dt-1 : Data to be measured during the sampling operation that precedes time t

[Display of computation results]

R : −19999999 to +19999999

This value is displayed in the units of measurement.
A computation error message is displayed if the particular R value is out of the permissible range.

[Notes on execution of computation]

(1) When DELTA computation is performed, the data to be operated on will be displayed as the results of the first processing operation.
In the second and subsequent processing operations, the results of computation will be displayed.

(2) If the measurement function is changed over to another function during the execution of computation, then the data that has been set using the preceding function will be initialized and then computation will proceed.

[Applications]

This function allows display of input signal variations for each sampling interval. Differential values of the input signal are therefore obtained. This computation function is effective when the input signal is judged to be in a stable state (that is, below the required level) by monitoring variations in temperature' pressure' etc.

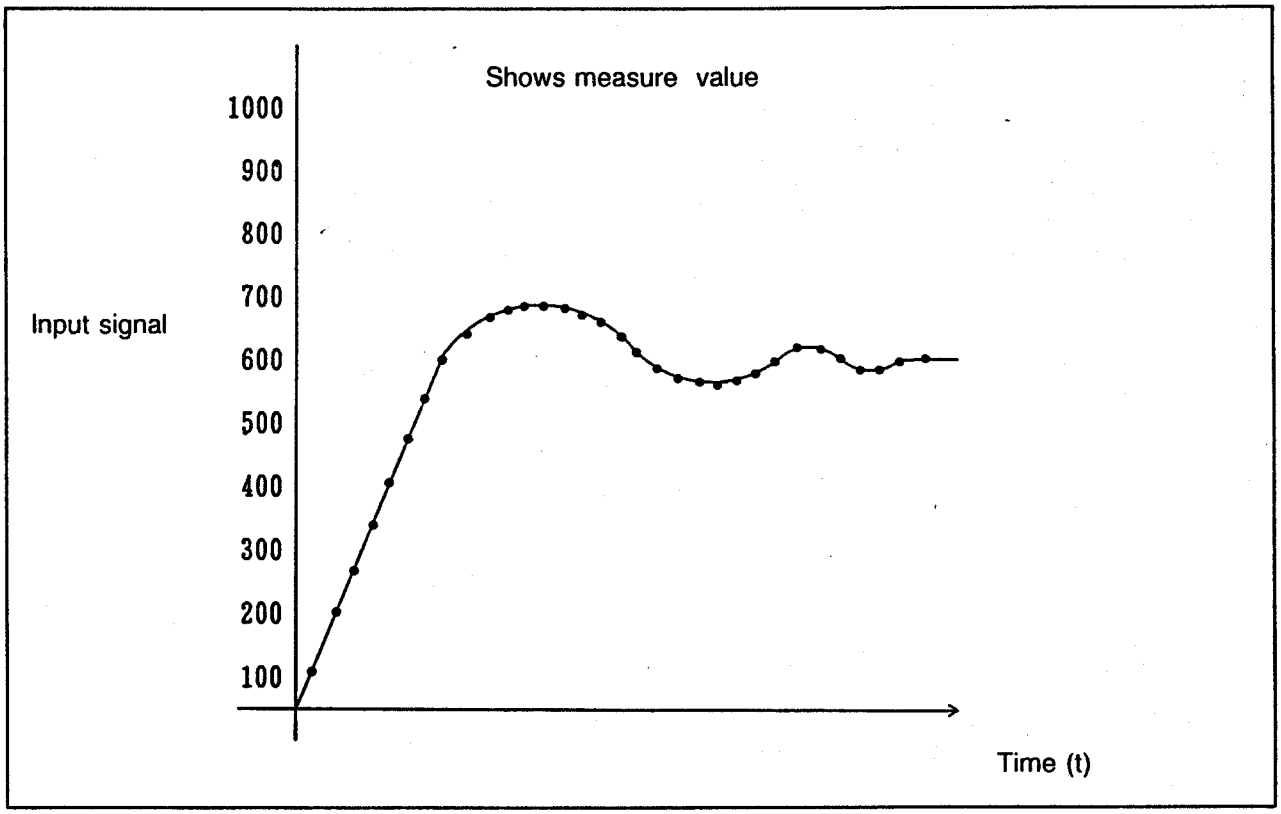


Figure 3-3 Application Example of DELTA Processing

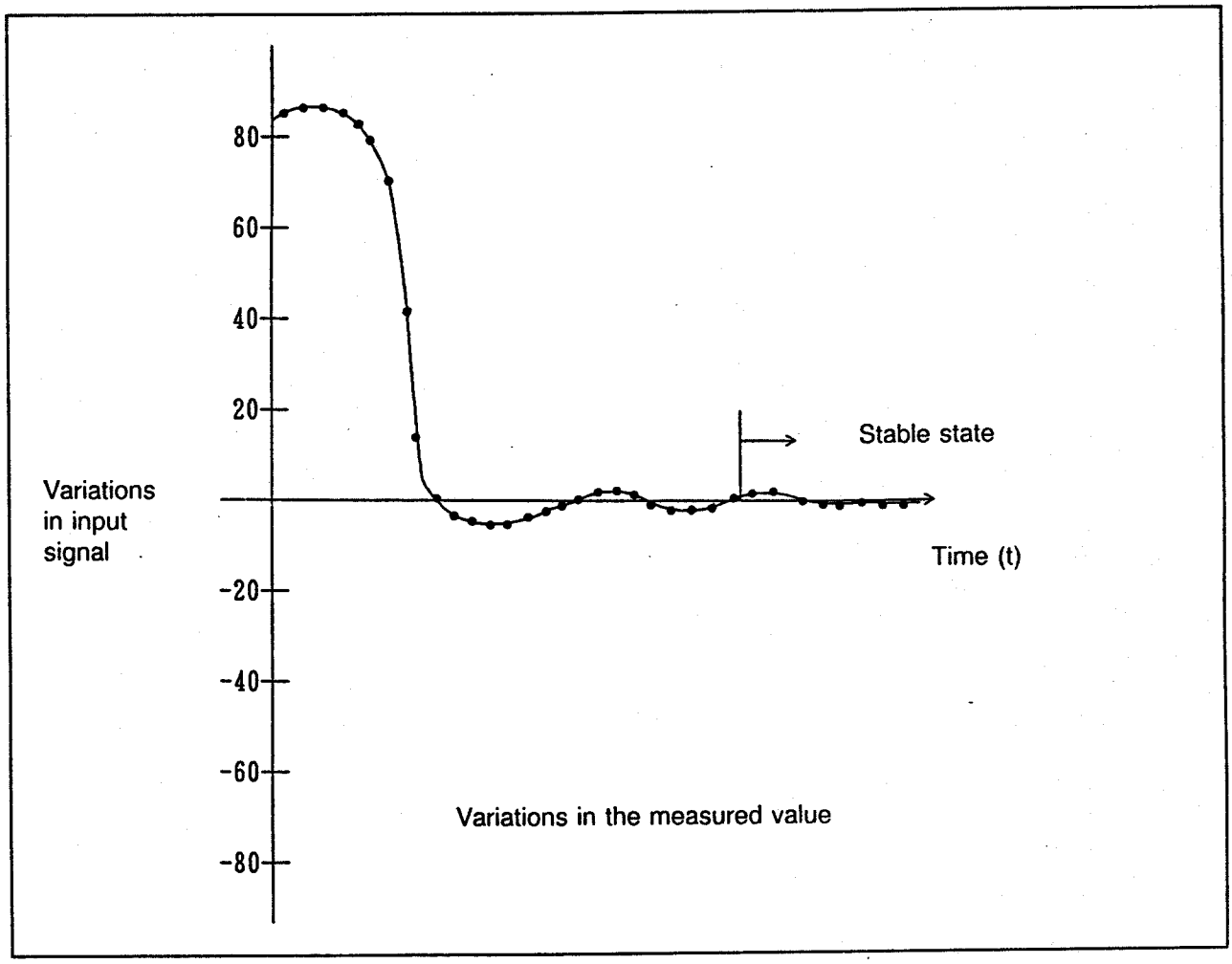


Figure 3-3 Application Example of DELTA Processing (cont'd)

3.1.6 MULTIPLY

[Data operated on]

MULTIPLY allows computation to be made on the following data:

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$R = Dt * Dt-1$

R : Results of computation
D : Data to be measured at time t
Dt–1 : Data to be measured during the sampling operation that precedes time t

[Display of computation results]

R : ±19999999 E-19 to ±19999999 E+19

This value is displayed without units.
A computation error message is displayed if the exponential part of the value is out of the E+19 range.
"0. E-19" is displayed if the exponential part of the value is out of the E-19 range.

[Notes on execution of computation]

(1) When MULTIPLY computation is performed, the data to be operated on will be displayed as the results of the first processing operation. In the second and subsequent processing operations, the results of computation will be displayed.

(2) MULTIPLY computation continues even if changes are made to the measurement function settings during the computing operation. (The product between V, A, and Ω can be obtained.)

3.1.7 dB (Decibel Conversion)

Decibel conversion allows the following data to be operated on :

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$$R = 20 * Y * \log_{10} \left| \frac{D}{X} \right|$$

R : Results of computation
D : Data to be operated on
X : Constant (Set value)
Y : Constant (Set value)

[Setting range of constants]

X : ±19999999 E-9 to ±19999999 E+9 (except 0)
Y : ±19999999 E-9 to ±19999999 E+9

[Display of computation results]

R : −1999.9999 to +1999.9999
This value is displayed in dB.
A computation error message is displayed if the output range has been overstepped.

[Notes on execution of computation]

A computation error message is displayed if the data to be operated on (D) has become zero during dB computation.

[Applications]

This function is effective typically for the following two cases :

(1) When obtaining the voltage gain level
Setting the input signal voltage value to "Y = 1, X" and then measuring the output voltage will cause :

$$Gv = 20\log_{10} \left| \frac{D}{X} \right|$$

The voltage gain level can be obtained from this expression.

(2) When obtaining the current gain level
Setting the input signal current value to "Y = 1, X" and then measuring the output current will cause :

$$Gi = 20\log_{10} \left| \frac{D}{X} \right|$$

The current gain level can be obtained from this expression.

3.1.8 RMS Value (Effective Value)

[Data to be operated on]

RMS Value allows the following data to be operated on :

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$$R = \sqrt{\frac{1}{X} \sum_{K=1}^{X} Dk^2}$$

R : Results of computation
Dk : Data to be operated on
X : Constant (Set value)
K : Variable that takes an integer from 1 to X

[Setting range of constants]

X : Integer from 2 to 10000
(If a real number is input, it will be rounded into an integer.)

[Display of computation results]

Significant digits of the data that has been measured on the maximum ragne are identified from the X number of measurements and then the computation results are displayed in the following order of priority:

(1) R : 0 to 19999999
Display is made in the measurement unit of the final data.

(2) R : 19999999 E-19 to 19999999 E + 19
Display is made in the fundamental units of each measurement function.
However, if the particular value has an exponential part, then the exponential part is displayed and the fundamental units are not displayed.

(3) In the fundamental units, a computation error message is displayed if the exponential part is larger than E + 19, and "0. E-19" is displayed if the exponential part is smaller than E-19.

[Notes on execution of computation]

(1) When RMS computation is selected, the RMS lamp under the display section will light and the entire display will go out until the first results of computation are obtained. The computation results are displayed when measurement has been performed the number of times that has been set using the constant X.

(2) If the data range that has been previously set is overstepped during RMS computation, then the data measurements become invalid and are excluded from the total number of measurements.

(3) Changes to the measurement function settings during RMS computation causes initialization of the data that has been set using the old settings of the measurement functions. In that case, computation restarts from the beginning.

[Operating notes]

(1) Depression of the HOME (HOME) key during RMS computation causes display of the results of RMS computations obtained up to that time. In that case, computation restarts from the beginning.

(2) Depression of the HOME (HOME) key during the execution of computation in the data-memory recall mode causes initialization of all previous computation results and resumption of the store-data quantity display (initial state of the recall mode).

3.1.9 dBm (dBm Conversion)

[Data to be operated on]

dBm conversion allows the following data to be operated on :

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$$R = 10 * \log_{10} \frac{D^2/X}{1mW}$$

R : Results of computation
D : Data to be operated on
X : Reference resistance value (Ω)

[Starting range of constants]

X : 0 to 19999999E9 (except 0)

[Display of computation results]

R : −1999.9999 to + 1999.9999
Unit : dBm
Display is made in Bm.

A computation error message is displayed if the output range has been overstepped.

[Applications]

This function is affective for calculation of power gain.
If the resistance value at which the voltage D has been measured is set to X, then the calculation expression is given and the power gain can be obtained from the expression.

$$Gw = 10 * \log_{10} \frac{D^2/X}{1mW}$$

[Operating notes]

dBm computation is effective only for voltage measurement.
The COMPUTE key is automatically turned off if the voltage measurement function is changed over to another function during dBm computation.

3.1.10 Resistance Value Compensation (20 degrees Centigrade)

[Data to be operated on]

Resistance value compensation allows the following data to be operated on :

(1) Measured data
(2) Data that has been recalled from the data memory

[Calculation expression]

$$R_{20} = \frac{Rx}{1 + 0.00393\ (X-20)} * \frac{1000}{Y}$$

R20 : Electric wire with resistance value as converted into 20°C (per km)
Rx : Resistance value measured at a temperature of X°C (Ω)
X : Room temperature during measurement (°C)
Y : Length of measured cable (m)

[Setting range of constants]

X : Room temperature during measurement (°C)
(±19999999 E-9 to ±19999999 E+9)

Y : Length of measured cable (m)
(0 to 19999999E9) (except 0)

[Display of computation results]

The significant digits in the final measured value are automatically identified and the computation results are displayed in the following order of priority :

(1) R : −19999999 to +19999999
Display is made in the measurement unit.

(2) R : ±19999999 E-19 to ±19999999 E+19
Display is made in the fundamental unit (Ω).
However, if the particular value has an exponential part, then the exponential part is displayed and the fundamental unit is not displayed.

(3) For the fundamental unit, a computation error message is displayed if the exponential part is out of the E+19 range, and "0. E-19" is displayed if the exponential part is out of the E-19 range.

[Applications]

This computation expression is used mainly in electric wire manufacturers to convert the resistance values of annealed copper wires (IEC standard type) at 20°C into those existing at X°C.

[Operating notes]

Resistance value compensation is effective only for resistance measurement.
The COMPUTE key is automatically turned off if the resistance measurement function is changed over to another function during resistance value compensation computation.

3.1.11 COMPARATOR-1

[Data to be operated on]

COMPARATOR-1 allows the following data to be operated on :

(1) Measured data
(2) Data that has undergone primary computation processing
(3) Data that has been recalled from the data memory

[Calculation expression]

If HIGH 2 < D, then R (HIGH2)
If HIGH 1 < D ≦ HIGH 2, then R (HIGH1)
If LOW 1 ≦ D ≦ HIGH 1, then R (PASS)
If LOW 2 ≦ D < LOW 1, then R (LOW1)
D < LOW 2, then R (LOW2)

R( ) : Results of computation of each item
D : Data to be operated on
HIGH 1 : Constant (set value), upper-limit value 1
HIGH 2 : Constant (set value), upper-limit value 2
LOW 1 : Constant (set value), upper-limit value 1
LOW 2 : Constant (set value), upper-limit value 2

[Setting range of constants]

HIGH 1, HIGH 2, LOW 1, LOW 2 : ±19999999 E-9 to ±19999999 E+9

where HIGH 1 ≦ HIGH 2
LOW 2 ≦ LOW 1 (Permitted if HIGH < LOW)

[Display computation results]

The computation results are indicated by lamps as follows according to the classification of the results :

If R (HIGH2), the HIGH lamp lights.
If R (HIGH1), the HIGH lamp flashes.
If R (PASS), the PASS lamp lights.
If R (LOW1), the LOW lamp flashes.
If R (LOW2), the LOW lamp lights.

The data on which COMPARATOR-1 computation has been performed is displayed on the LCD unit.

[When the BUZZER parameter has been set]

(1) If the BUZZER parameter setting is ON-1 :
A buzzer sound is generated when the computation results are R (HIGH2), R (HIGH1), R (LOW1), or R (LOW2).

(2) If the BUZZER parameter setting is ON-2 :
A buzzer sound is generated when the computation results are R (PASS).

3.1.12 COMPARATOR-2

[Data to be operated on]

COMPARATOR-2 allows the following data to be operated on :

(1) Measured data
(2) Data that has undergone primary computation processing
(3) Data that has been recalled from the data memory

[Calculation expression]

If H2 = LIMIT + %2
If H1 = LIMIT + %1
If L1 = LIMIT – %1
If L2 = LIMIT – %2

then data D is compared with H1, H2, L1, and L2 and the results are sorted out according to which is larger.

If H 2 < D, then R (HIGH2)
If H 1 < D ≦ H 2, then R (HIGH1)
If L 1 ≦ D ≦ H 1, then R (PASS)
If L 2 ≦ D < L 1, then R (LOW1)
D < L 2, then R (LOW2)

R( ) : Results of computation of each item
D : Data to be operated on
LIMIT : Constant (set value); reference value
%1 : Constant (set value); tolerance ; (% deviation from reference value)
%2 : Constant (set value), tolerance ; (% deviation from reference value)

[Setting range of constants]

LIMIT : Reference value
± 19999999 E-9 to ± 19999999 E + 9 (except 0)

%1, %2 : Tolerance (in %)
0.000 to 100.0 (Real number consisting of four digits or less)
where %1 %2

[Display computation results]

The computation results are indicated by lamps as follows according to the classification of the results :

If R (HIGH2), the HIGH lamp lights.
If R (HIGH1), the HIGH lamp flashes.
If R (PASS), the PASS lamp lights.
If R (LOW1), the LOW lamp flashes.
If R (LOW2), the LOW lamp lights.

The % deviation value into which the operated data has been converted with respect to the reference value is displayed on the LCD unit.

[When the BUZZER parameter has been set]

(1) If the BUZZER parameter setting is ON-1 :
A buzzer sound is generated when the computation results are R (HIGH2), R (HIGH1), R (LOW1), or R (LOW2).

(2) If the BUZZER parameter setting is ON-2 :
A buzzer sound is generated when the computation results are R (PASS).

3.1.13 STATISTICS (Statistical Processing)

[Data to be operated on]

Statistical processing allows the following data to be operated on :

(1) Measured data
(2) Data that has undergone primary computation processing
(3) Data that has been recalled from the data memory

[Calculation expression]

The meaning of computation results and the calculation expression are shown below.

R (COUNT) : Number of samples
R (MAX) : Maximum value
R (MIN) : Minimum value
R (AVE) : Average value

$$R(AVE) = \frac{\sum_{K=1}^{N} Dk}{N}$$

R (P-P) : Disparation range
$R(P\text{-}P) = |\, R(MAX) - R(MIN) \,|$

R (δ) : Standard deviation

$$R(\delta) = \sqrt{\frac{1}{N-1} \sum_{K=1}^{N} (Dk - \overline{D})^2}$$

$$\text{where } \overline{D} = \left(\frac{\sum_{K=1}^{N} Dk}{N} \right) = R(AVE)$$

R (UCL) : Upper control line
$R(AVE) + 3R(\delta)$

R (LCL) : Low control line
$R(AVE) - 3R(\delta)$

R( ) : Results of computation of each item
Dk : Data to be operated on
N : Constant (set value); number of data sets

[Setting range of constants]

N : Number of data sets
Integer from 2 to 10000

[Display of computation results]

R (COUNT) : Integer from 2 to 10000

R (MAX), R (MIN), R (AVE), R (P-P), R (UCL), R (LCL)
: The output ranges and units of these values are displayed in the same manner as done for the data that is to be operated on.
If the data to be operated on is measured data or the results of scaling computation, RMS computation, resistance value temperature compensation, then the significant digits and the unit of measurement are judged from the final data that has been operated on.

R (δ) : ±1999 E-19 to ±1999 E+19
For the mantissa part, only three and a half digits is valid.
Display is made in the same units as those of data to be operated on. However, except when there is a significant dispersion of data to be operated on, data display usually appears with the exponential part, but without unit.

[Operating procedure]

The operating procedure for statistical processing computation is described below.

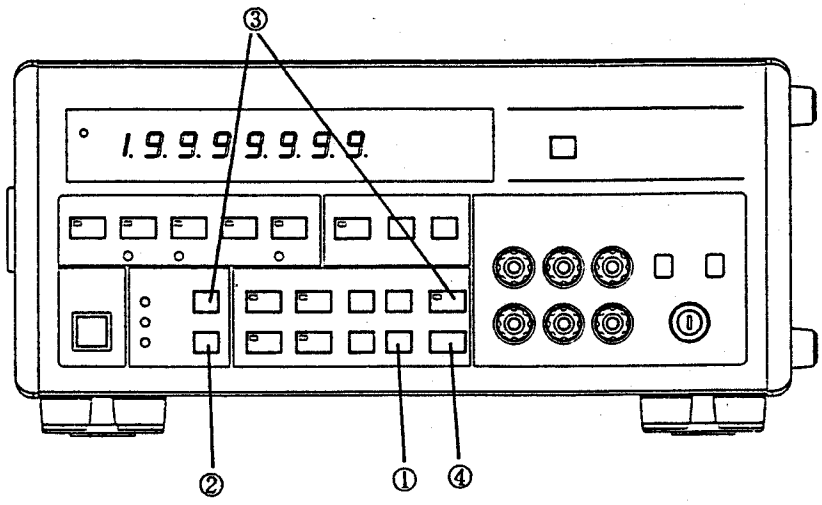
Outline

An example of execution of statistical processing computation with 1000 samples is given here.

The proceeding procedure is outlined below.

I. Setting of the number of samples (N parameter)
II. Setting of the computing function (CF parameter)
III. Execution of the computing operation
IV. Output of the computation results

I. Setting of the number of samples



[These numbers indicate the following procedure numbers]

Setting the N parameter

(1) Press the SHIFT key.

(2) Press the N key.

The existing setting of the constant N will then be displayed on the LCD unit.

2 N

Setting a constant

(3) Set the sample quantity of 1000 as the constant N.

To do this, press keys 1 0 0 0,

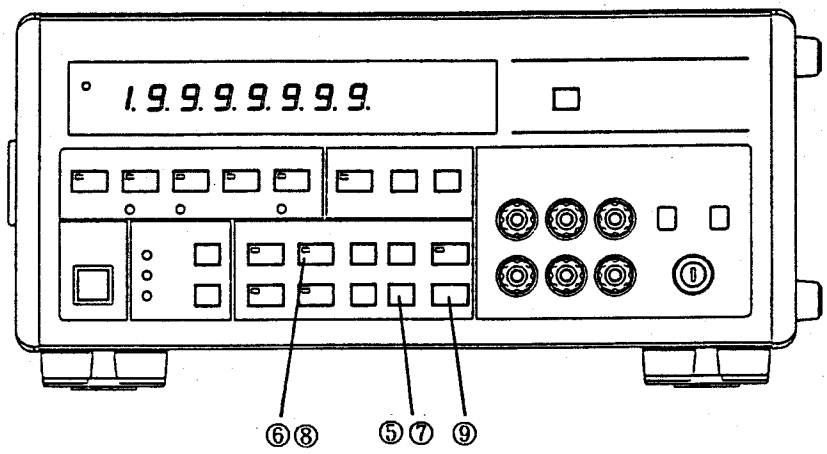
in that order.

1 0 0 0 N

Constant setting completed

(4) Press the ENTER key.

II. Setting of the Computing Function



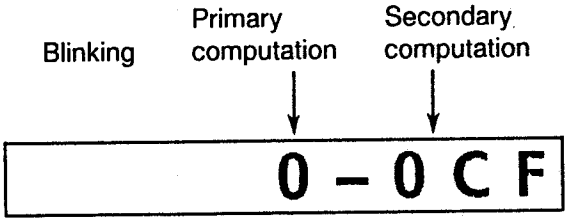
[These numbers indicate the following procedure numbers]

CF parameter setting

(5) Press the SHIFT key.

(6) Press the CF key.

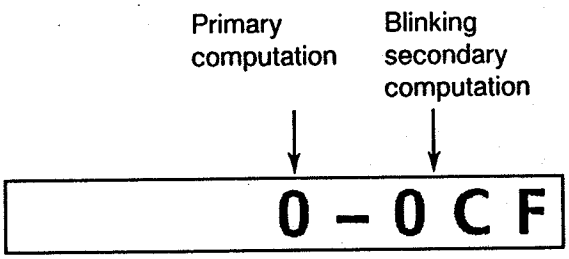
The primary and secondary computing function codes last set will then be displayed on the LCD unit.



Computing function selection

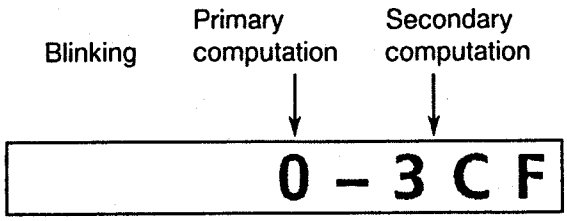
(7) Press the SHIFT key.

This causes blinking of the secondary computing display, enabling setting of the statistical computation function.



Computing function setting

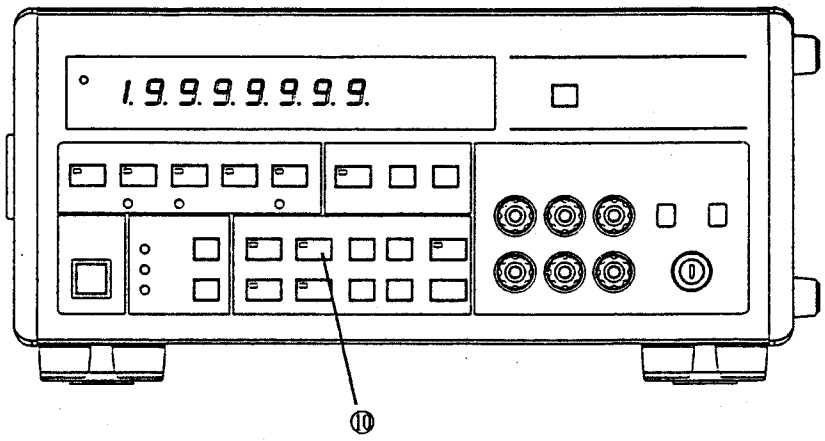
(8) Input the statistical computation function code '3'.



Setting of the computing function completed

(9) Press the [ENTER] key.

III. Execution of the computing operation

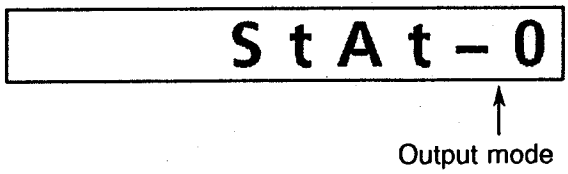


[These numbers indicate the following procedure numbers]

Execution of computation

(10) Press the COMPUTE key.

This initiates the computing operation. Computation is performed on 1000 samplings and the data that is currently undergoing processing is displayed on the LCD unit. When computation is completed, the waiting state for input of an output mode will be displayed on the LCD unit. The output mode, which refers to the computation results output method, is available in two versions : stepped output mode and continuous output mode. The output mode last set will be displayed at this point of time.



[Stepped output mode]

The stepped output mode refers to the mode in which eight types of computation results are output one by one. If this mode is desired, set "0" in the display position shown above.

[Continuous output mode]

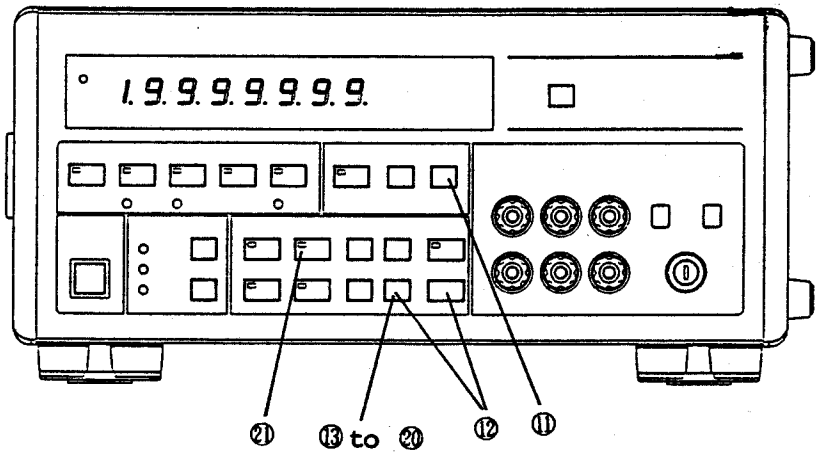
The continuous output mode refers to the mode in which eight types of computation results are all output at one time. If this mode is desired, set "1" in the display position shown above.

Note: If data is to be both displayed and output, the stepped output mode should be selected. If the output object is to be displayed only, then the display speed will become too high to see.

IV. Output of the computation results

The operating procedures for data output in the stepped output mode and in the continuous output mode are described here.

[Data output in the stepped output mode]



[These numbers indicate the following procedure numbers]

Setting of the stepped output mode

(11) Press the 0 key.

This causes the stepped output mode to be displayed on the LCD unit.

```
StAt-0
```

Execution of stepped output

(12) Press the ENTER key.

This causes the number of samples to be output first. Subsequent computation results are output each time the SHIFT key is pressed.

Number of samples

```
1000 N
```

[Output order]

The computation results are output in the following order each time the SHIFT key is pressed :

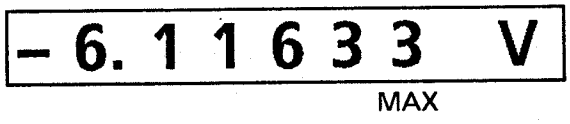
Number of samples	
Maximum value	R (MAX)
Minimum value	R (MIN)
Average value	R (AVE)
Dispersion range	R (P-P)
Sigma	R (δ)
Average value + 3 sigma	R (UCL)
Average value –3 sigma	R (LCL)

If the SHIFT key is pressed following the completion of output of all the eight types of computation results, then the output mode input awaiting display (the display appearing in procedural step (10)) reappears.

Execution of stepped output

(13) Press the SHIFT key.

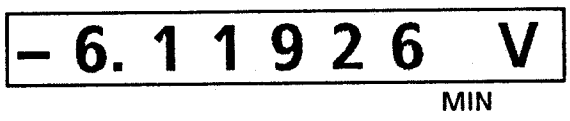
This causes display of the maximum value and lighting of the MAX lamp located below the display section.



Execution of stepped output

(14) Press the SHIFT key.

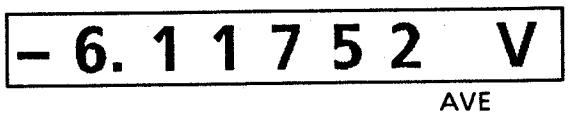
This causes display of the minimum value and lighting of the MIN lamp located below the display section.



Execution of stepped output

(15) Press the SHIFT key.

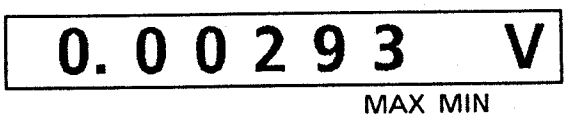
This causes display of the average value and lighting of the AVE lamp located below the display section.



Execution of stepped output

(16) Press the SHIFT key.

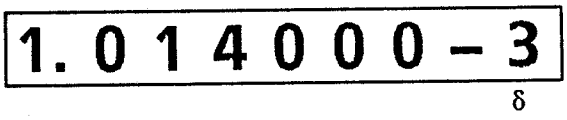
This causes display of the dispersion range and lighting of the MAX and MIN lamps located below the display section.



Execution of stepped output

(17) Press the SHIFT key.

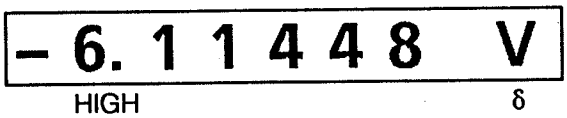
This causes display of the sigma value (δ) and lighting of the lamp located below the display section.



Exeution of stepped output

(18) Press the SHIFT key.

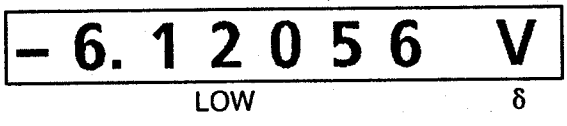
This causes display of the UCL value and lighting of the δ and HIGH lamps located below the display section.



Execution of stepped output

(19) Press the SHIFT key.

This causes display of the LCL value and lighting of the δ and LOW lamps located below the display section.



Execution of stepped output

(20) Press the SHIFT key.

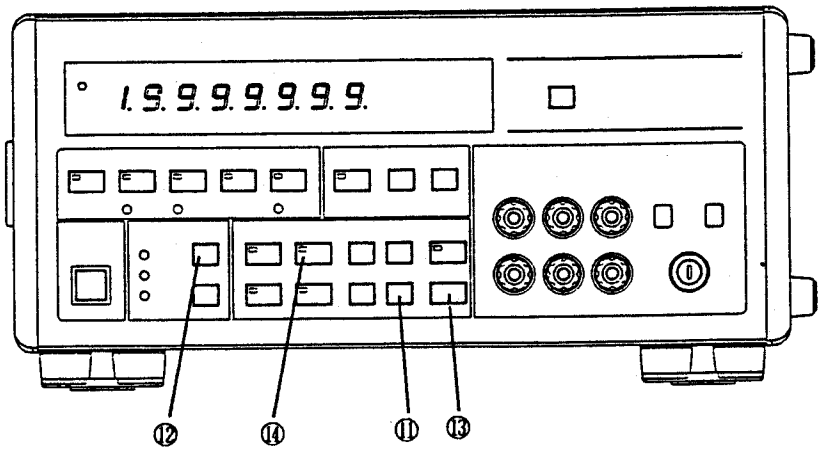
Output of all the eight types of computation results has been completed when step (19) above was carried out. If this step (20) is carried out, then the output mode input awaiting display (the display appearing in step (10)) reappears.

End of the stepped output mode

(21) Press the COMPUTE key.

This causes the COMPUTE lamp to go out, the stepped output mode to terminate, and the equipment to return to the measurement mode.

[Data output in the continuous output mode]



[These numbers indicate the following procedure numbers]

Setting of the continuous output mode

(11) Press the SHIFT key.

(12) Press the 1 key.

This causes the continuous output mode to be displayed on the LCD unit.

S t A t – 1

Execution of continuous output

(13) Press the ENTER key.

This causes the eight types of computation results to be continuously output.

S t A t – 1

These computation results are output in the following order :

Number of samples	
Maximum value	R (MAX)
Minimum value	R (MIN)
Average value	R (AVE)
Dispersion range	R (P-P)
Sigma	R (δ)
Average value + 3 sigma	R (UCL)
Average value–3 sigma	R (LCL)

When output of all the eight types of computation results is completed, the output mode input awaiting display (the display appearing in procedural step (10) reappears automatically.

End of the continuous output mode

(14) Press the COMPUTE key.

This causes the COMPUTE lamp to go out, the continuous output mode to terminate, and the R6871E/E-DC to return to the measurement mode.

[Notes on the display made until the specified number of samplings is reached]

If statistical processing computation is selected, the data that is subjected to computation will be displayed until the specified number of samplings is reached.

When the specified number of samplings is reached, the computer will wait for input of an output mode. The results of statistical processing computation will be displayed according to the readout mode selected.

[Notes on execution of computation]

(1) If the particular data oversteps the selected data range during execution of statistical processing computation, then the data becomes invalid and is excluded from the total measurement count.

(2) If the measurement function being used is changed over to another function during execution of statistical processing computation, then the data that has been obtained using the previous function is initialized and computation restarts from the beginning.

[Operating notes]

(1) If the HO (HOME) key is pressed during execution of statistical processing computation, then the computing operation will terminate at that time and the display indicating the waiting state for input of an output mode will appear.

(2) If the HO (HOME) key is pressed during readout of the statistical computation results, then the readout operation will terminate immediately.
(The lamp of the COMPUTE key will stay lit and statistical computation will start anew.)

(3) If the COMPUTE key is pressed during setting of the readout mode, then the statistical computing operation will terminate. At the same time, the readout mode of the statistical computation results will end and the R6871E/E-DC will resume the measurement mode.

(4) If the HO (HOME) and COMPUTE keys may be pressed at any time.

(5) Depression of the HO (HOME) key during the execution of statistical processing in the data-memory recall mode (or during readout of computation results) will cause initialization of the data being operated on (or of all previous computation results) and resumption of the store-data quantity display (initial state of the recall mode).

(6) To terminate the data-memory recall mode during readout of computation results, first press HO (HOME key) or COMPUTE to exit from the readout mode.