

Function marks and terminology used in **sanwa** General Catalog

Function marks

RMS True RMS (True root-mean-square value)
True RMS value. AC current and voltage of a non-sine wave can be measured by true RMS values.

Hz Frequency
Expressed in the unit of Hz (hertz). Commercial frequency of 50Hz/60Hz can be measured.

+ Capacitor
Capacitor capacity (electrostatic capacity) is measured and expressed in the unit of F (farad), μ F, etc.

CONT. LED Continuity check
The LED lights up when the measuring object is electrically conducting.

🔊 Continuity buzzer
The buzzer sounds when the measuring object is electrically conducting.

BATT CHECK Battery check
Battery voltage is measured and assessed by running a given current.

hFE hFE
Provided with graduations for measuring the DC current amplification factor (hFE) of a transistor.

4-20 4-20mA%
4-20mA for sending instrumentation signals. Expresses the current loop of 4mA as 0% and 20mA as 100%.

dBm dBm
Scaling of voltage values is performed according to the reference impedance into dBm. Convenient for use with audio equipment.

°C Temperature measurement
Temperature can be measured using the optional probe.

PC Link Temperature measurement with PC Link
Temperature can be measured using the optional probe and PC Link software. (T-300PC is necessary.)

AP OFF Auto power off
Power is automatically turned off when a certain time has elapsed after power-up. Some models have a function to cancel this function.

APS Auto power save
The display disappears to bring the device into the power-save state when a certain time has passed after power-up. Some models have a function to cancel this function.

DATA HOLD Data hold
A value indicated on the display is fixed. It is fixed even after the test lead is removed, and can be used as a record for reference purposes.

RNG HOLD Range hold
The range is fixed in the measurement of varying voltage and current which is difficult to read in the auto range.

REL Measurement of relative value
A certain measured value is assumed as 0 and measured values after that are expressed by positive or negative values relative to the value fixed as 0.

Duty Duty cycle
The duty cycle of repeating waveform is indicated on a percentage basis (%). It can be used for the analysis of control signals.

Capture **PEAK**

Capture (peak hold)
The peak value like in-rush current is indicated. The minimum pulse width capturable differs according to models.

MAX MIN MAX / MIN
The minimum value and maximum value of measured values are recorded. The recorded values can be seen later on the display.

Max HOLD Maximum value hold
The maximum value is held and displayed in the measurement of voltage, current and ADP.

Zoom Zoom bar graph
The scale is changed so as to allow reading minute changes on the bar graph.

TLR Cal Correction of resistance of test lead
This is a function to cancel the resistance portion of the internal circuit of the main body and test lead in the resistance measurement.

AUTO POL Auto polarity
Puts the indicator at the center in the automatic standby status by the setting of the selector switch so as to allow measurement by positive and negative values.

POL Switch Polarity switch
The positive and negative polarity of the measuring terminal can be changed by this switch.

Ω ADJ Zero-ohm adjuster
Cancels the contact resistance and internal resistance of the test lead to allow the measurement of the resistance value of a measuring object alone.

+ Zero-center meter (NULL)
Moves the indicator of the analog tester to the center of the scale (meter graduations) to make measurement of positive and negative voltage.

DCA ACA DC / AC measurable
Both ACA and DCA are measurable.

DSP Drop shock proof
The meter element is furnished with a taut band and impact-resistant design enough to withstand a shock of drop.

LPΩ Low power ohm
Resistance is measured by applying voltage of approximately 0.4V or less on a measuring object. It is characterized by the fact that the semiconductor does not conduct at approximately 0.4V or less even in forward direction.

LEAK Leakage current
A clamp meter that can make the measurement of leakage current have a range to allow measurements in milliamper.

BACK LIGHT Backlight
Allows indicator reading in a dark place.

OUT Output terminal
Cancels the DC current portion of voltage mixed with DC and AC to measure the AC portion alone. It is used for the measurement of audio signals.

AD Auto discharge
When the measurement of insulating resistance is complete, voltage charged in the measuring object is discharged.

232c RS232C connection
The signal output terminal is provided to send data to a PC. RS232C is the name of the signal standard.

USB USB connection
Data can be outputted by connection to the USB port of a PC.

POWER FUSE Fuse for power supply
Current-limiting fuse to break the conduction up to 100kA.

INS Ω Insulating resistance
Insulating resistance can be measured (e.g. 500V/1000MΩ).

DCV DC voltage
Mark for clamp meters with DCV function.

EF (NCV) EF function
Non contact AC voltage detection function.

🔪 Products utilizing lead-free solder
These are products that utilize lead-free solder and contain some components that do not conform to the RoHS Directive.

Glossary

Accuracy / Tolerance
Correctness. JIS defines the term "accuracy" to be used for digital testers and "tolerance" for analog testers. The accuracy / tolerance differs depending on the range.

± (□%+□) = ± (□%rdg+□dgt)
rdg is an abbreviation of "Reading" meaning a read value on digital display. "dgt" is an abbreviation of "Digit" meaning the least unit of digital display. For instance, "±2dgt" refers to error of ±2 counts.

Full-scale value (fs)
It is the indication of tolerance expressed by percentage values relative to the full-scale value of the range.

Scale length
The tolerance in resistance measurement is expressed with reference to the scale length of the range.

Frequency characteristic
Frequency range of measurable signals in the measurement of AC voltage and current.

Input resistance (Impedance)
Internal resistance between measuring terminals. For instance, it is expressed as "MΩ" with the DMM and as "KΩ/V" with the AMT.

Clamp diameter
It gives a guide for the thickness of a clampable wire.

Clamp conductor size
Size of a maximum conductor shape.

Withstand voltage
It refers to insulating withstand voltage of the measuring instrument itself.

Range
The measuring range of a function is sub-divided and expressed as 2V/20V/200V, etc.

Auto range
The range is automatically increased or decreased in steps such as 2V/20V/200V and moves to the optimum range for measuring voltage.

Live-wire check
When a test lead is set at an insulating resistance measuring point on a measuring object, the ACV measuring status starts to check whether voltage is being supplied.

Display digit
Maximum number of display digits of the digital display. 1999 is expressed as 2000. Three and a half digits and four and a half digits are also used.

Function
Function for measuring voltage, current, resistance, electrostatic capacity and frequency.

Resolution
Displayable minimum value of the last digit. For instance, the resolution of the 1.999V range is 0.001V.

A
AD-71AC.....P47
AD-72AC.....P47
AP33.....P35
AU-31.....P33
AU-32.....P33

C
C-01.....P48
C-08S.....P48
C-77.....P48
C-77H.....P48
CAD-2L.....P41
CAD-3L.....P41
CAM600S.....P07

C-CA.....P48
C-CD.....P48
C-CDS.....P48
C-CL.....P48
C-CP.....P49
CD731a.....P28
CD770.....P25
CD771.....P26
CD772.....P26
CD750P.....P28
CD800a.....P27
C-DA.....P49
C-DCM2000.....P49
CL-11.....P46
CL-100SD.....P46
CL124.....P12
CL-13.....P46
CL140.....P13
CL-15.....P46
CL-16.....P46
CL-20D.....P13
CL-22AD.....P13
CL33DC.....P13
CL-506.....P47
C-M53.....P49
C-NH7.....P49
CP-7D.....P35
C-PC10/S.....P49
C-PM3.....P49
CS-10VB.....P41
C-SE2.....P49
C-SP.....P48
C-SPH.....P49
C-STH.....P49
CX506a.....P32
C-YS.....P49

D
DA-50C.....P28
DCL10.....P06
DCL1000.....P06
DCL20R.....P09
DCL1200R.....P08
DCL30DR.....P11
DCM-22AD.....P10
DCM60L.....P07
DCM400.....P07
DCM400AD.....P10
DCM2000AD.....P10
DCM2000R.....P11
DG6.....P18
DG7.....P18
DG8.....P18
DG9.....P18
DLC-330L.....P11
DLC-400A.....P11
DM1008S.....P19
DM1528S.....P19
DM508S.....P19
DM5218S.....P19

E
EM7000.....P32

H
H-50.....P49
H-70.....P49
HFE-5.....P47
HFE-6.....P47
HFE-6T.....P47
HV-10.....P46
HV-20.....P46
HV-50.....P46
HV-60.....P46

K
K-250CD.....P47
K-250PC.....P47
K-8-250.....P47
K-8-300.....P47
K-8-500.....P47
K-8-650.....P48
K-8-800.....P48
K-AD.....P48
KB-RS1.....P47
KB-RS2.....P47
KB-USB1.....P47
KB-USB2.....P47
KD1.....P44
KS1.....P44

L
LP1.....P39
LS-10.....P13
LX2.....P37
LX3132.....P37

M
MG125.....P17
MG500.....P17
MG1000.....P16

O
OPM35S.....P39
OPM-360.....P38
OPM36M.....P39
OPM37LAN.....P38
OPM-570L.....P39
OPM-572.....P40
OPM-572MD.....P40

P
PC20.....P25
PC500.....P24
PC5000.....P23
PC510.....P24
PC520M.....P23
PC Link.....P21/47
PC Link Plus.....P21/47
PDM508S.....P19
PDR-301.....P43
PM3.....P29
PM7a.....P29
PM11.....P29
PS8a.....P29

R
RD700.....P27
RD701.....P27

S
SE-100.....P42
SE-200.....P42
SE-9000.....P42
SE-9000M.....P42
SH-88TR.....P33
SP-18D.....P34
SP20.....P34
SP21.....P34

T
TA55.....P34
TH3.....P40
TL-10T.....P45
TL-100-OM.....P46
TL-112.....P45
TL-122.....P46
TL-21.....P45
TL-21M.....P45
TL-23.....P45
TL-25.....P45
TL-506S.....P46
TL-507.....P46
TL-508S.....P46
TL-61.....P45
TL-61T.....P45
TL-63.....P45
TL-82.....P45
TL-84.....P45
TL-88.....P45
TL-8IC.....P47
TL-91.....P45
TL-91M.....P45
TL-95.....P45
TL-M54.....P46
TL-PM3.....P46
TL-PM5.....P46
TLF-120.....P46
T-300PC.....P47
T-THP.....P47

V
VS-100.....P35

Y
YX360TRF.....P33
YX-361TR.....P32