

Model

AX-1138B

External standard type  
2 ch digital thermistor checker  
(high current measurement type)

Compare two-measured thermistor with external standard thermistor at one time, percentage measurement



- Compares with external standard thermistor or polymer PTC element, can be percentage measured for standard value regardless of temperatures characteristic at room temperature
- Process high speed the percentage measurement for high resistance thermistor depends on Rs/Rx at the same time measurement
- Can be measured resistance value of external standard and measured object
- The function can be corrected an error of external standard resistance value [ $\pm 9.999\%$ ]
- Installed digital comparator for right and wrong judgment can be set instinctively
- Measurement current, a checking circuit of an abnormal measuring current are equipped as standard
- Machine interface and RS-232C interface are equipped as a standard

## Specifications

Measuring range and Accuracy (at  $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ )

Range	Measurement and display range	Measuring current	Measurement	Measurement accuracy [Slow]	Measurement accuracy [Fast]
1 $\Omega$	Measurement range Resistance range 10%~150%  % measurement indication range -99.99%~+50.00% ( $\pm 5000$ count display)	100mA	% measurement Resistance value	$\pm 3$ digits $\pm \alpha$ $\pm 0.03\%$ rdg + 2 digit	$\pm 5$ digits $\pm \beta$ $\pm 0.05\%$ rdg + 5 digit
10 $\Omega$		10.0mA	% Measurement Resistance value	$\pm 2$ digits $\pm \alpha$ $\pm 0.02\%$ rdg + 2 digit	$\pm 3$ digits $\pm \beta$ $\pm 0.03\%$ rdg + 3 digit
100 $\Omega$		10.0mA			
1k $\Omega$		1.00mA			
10k $\Omega$		100 $\mu\text{A}$			
100K $\Omega$	Resistance measurement indication range 0 $\Omega$ ~ Resistance range $\times 1.5$ (0~15000 count display)	10.0 $\mu\text{A}$	% Measurement Resistance value	$\pm 3$ digits $\pm \alpha$ $\pm 0.03\%$ rdg + 3 digit	$\pm 5$ digits $\pm 1.5 \beta$ $\pm 0.05\%$ rdg + 5 digit
1M $\Omega$		1.00 $\mu\text{A}$	% Measurement Resistance value	$\pm 5$ digits $\pm 1.5 \alpha$ $\pm 0.05\%$ rdg + 5 digit	$\pm 10$ digits $\pm 2 \beta$ $\pm 0.10\%$ rdg + 5 digit

Measurement integration time: [Slow]=AC1 period (20.0mS/16.6mS), [Fast]=4mS (1  $\Omega$  ~ 100k  $\Omega$  range), 10mS (1M  $\Omega$  range)

$\alpha = (| \text{Rs Count resistance measurement} - 10000 |) / 2000$  digit

$\beta = (| \text{Rs Count resistance measurement} - 10000 |) / 1500$  digit

Measurement integration time	[Slow] : AC1 ~ 10 cycles, [Fast] : 0.1mS ~ 99.9mS
Sampling time	Free run : 5 times per second [Slow], 10 times per second [Fast] External control : Measurement integration time + (1 ~ 10mS) [Differs from range], The fastest about 1mS
Contact check	Selection setting of OFF • PRE • AFT • ALL, Check determination : $47 \Omega \pm 10 \Omega$ (I-V between the terminals)
Comparator set range	[Resistance measurement] : 0 ~ 15000 count both for HI and LO (Resistance range = 10000 count) [% Measurement] : $\pm 0.00\%$ ~ $+50.00\%$ both for HI and LO ( $\pm 5000$ count)
Display comparator decision	Lo/GO/Hi judgment to indicate LED on each Rx1, Rx2, Buzzer setup
Machine interface control signal (Connector: 57-40240 Equivalent)	Input: External start, External hold Output: total 14 pcs, Open collector output (max. 40V, 100mA) Judgment output: RxA • RxB = LO/GO/Hi/CE, Rs = NG Status output: EOC, RxA • RxB INDEX, Preliminary 2ch
RS-232C communication	Asynchronous, Baud rate: 4800 ~ 38400bps, Dsub25S
Operation condition	[Temp.] $+5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ [Humidity] less than 85% (Disabled when condensation)
Power supply	AC85V ~ 265V, 50/60Hz, about 60VA
Outer dimension	about 333 (W) $\times$ 99 (H) $\times$ 300 (D) mm (excluding protruding parts such as rubber legs, etc.)
Weight	about 4kg

## The Outline

AX-1138B selects to judge the device that is sharp at temperature change such as thermistor or polymer PTC element to compare high speed by connecting the standard device outside, it can be measured for the two Rx resistance at the same time. The function set a corrected value for a true standard is equipped to use the external standard device.

As Rs and Rx always measures at the same time, it can be percentage measurement to reduce the effect of commercial power on the high resistance measurement.

Option

- GP-IB Interface
- RS-232C Interface
- AS-5927 control board

\*Either one interface can built-in the option above.