IWATSU

CAUTION!

Restrictions on Dual Functions

1) When performing dual function measuring of DCV and ACV (or DC+ACV) by using the V terminal and LO terminal as common input terminals, DCV accuracy is affected by the rejection performance (NMRR) against ACV that is contained in the measuring signal.
For FAST samples without rejection or measuring signals except power source frequencies, measuring accuracy is not guaranteed because the measured values become unstable.
When measuring such signals or AC components that are dominant, the dual functions of ACV and DC+ACV are enabled.

2) When performing dual function measuring of DCA and ACA (or DC+ACA) by using the mA or 10A terminals and LO terminal as common input terminals, DCA accuracy is affected by the rejection performance (NMRR) against ACA that is contained in the measuring signal.
For FAST samples without rejection or measuring signals except for power source frequency, measuring accuracy is not guaranteed because the measured values become unstable.
For measuring such signals or AC components that are dominant, the dual functions of ACA and DC+ACA are enabled.

3) When performing dual function measuring of voltage/two-wire resistance and current by using the V/W terminal, mA (or 10A) terminal and LO terminal as input terminals, accuracy for voltage/resistance measurement is affected by a voltage drop caused by the measuring signal that flows on the LO terminal.

   When the test lead resistance connected to the LO terminal is Rt, and the internal wiring of the LO terminal is r (max. 30 mW), the error to be added is expressed as shown below:

   - Voltage measurement: Measuring current x (Rt + r) [V]
   - Two-wire resistance measuring (50W range of 2-wireW):
     Measuring current x (Rt + r)/1μV [count]
   - Two-wire resistance measuring (other ranges including LoW):
     Measuring current x (Rt + r)/10 μV [count]

   * [count] represents the minimum resolution for the resistance range.

   Note that the polarity of voltage/resistance measuring errors is inverse when the measuring current is DCA.
   When the measuring current is flat, the REL operation at voltage/resistance functions is enabled.
   When the measuring current is ACA, the rejection function (NMRR) determines the error.
   For FAST samples without rejection or measuring signals except power source frequencies, measuring accuracy is not guaranteed because the measured values become unstable.

4) When performing dual function measuring of AC voltage and current by using the V/W terminal, mA (or 10A) and LO terminals as input terminals, AC/DC current measuring accuracy is affected by interference.

   When ACV (or DC+ACV) is a sine wave, the frequency is Hz, the voltage RMS value is V, and the error to be added is expressed as shown below:

   - ACA (or DC+ACA): Hz x V/100 [count]
   - DCA: ±20 [count] (up to 1 kHz)
   For ACV measuring exceeding 1 kHz, affection on DCA is not guaranteed.

   * [count] represents the minimum resolution for the ACA range.

5) The dual function for DCV and ° C simultaneously indicates the thermocouple electromotive force (DCV) and temperature measuring and the measuring targets are the same.
   When the dual function for DVC and ° C is performed in the VOAC7523/7520 CH-B, DCV and temperature at different locations can be measured at the same time.

6) The resistances measured via the dual function for 2 wireW and 4 wireW are the same.
   The effects on the test lead wire and contact resistance can be compared.