

# Low Thermal EMF Switch Model 9610A/8010B



TYPE 9610A



TYPE 8010B

Model 9610A/8010B cancels thermal EMF which is generated during accurate DC voltage measurement of Zener DC Voltage Standard (FLUKE 732B) or Accurate Digital Multi-Meter (Agilent Technologies 3458A) etc. by reversing polarity of measurement voltage.

Directly connectable to binding post (19 mm spacing). Automatic switching via external signal eliminates effect of heat from hands reducing thermal EMF minimal.



使用例 3458A (Agilent Technologies)



使用例 732B (FLUKE)

## Features

- Directly connectable to binding post of Zener DC Voltage Standard (FLUKE 732B) or Accurate Digital Multi-Meter (Agilent Technologies 3458A) etc.
- Polarity reversing can be done via external signal without manual switching, thus eliminating thermal EMF caused by heat from hands, which enables stable measurements in a short period.
- Using low thermal EMF relays makes changes of thermal EMF caused by polarity change very small.
- Polarity reversing can be controlled by signal from Relay Controller (type 8010B) via USB or manually
- Control via USB enables automatic measurements.

## Specifications

Item/Model	TYPE 9610A	TYPE 8010B
Thermal EMF	Less than 0.1μV (Transient response is less than 10 nV caused by thermal EMF due to polarity reversing. Refer to Fig.1) (Reproducibility is less than 10 nV caused by thermal EMF due to polarity reversing. Refer to Fig.2)	-
Input Terminal	Banana Plug (spacing between terminals 19 mm)	-
Output Terminal	LEMO 3-pin connector	-
Signal Input Terminal	LEMO 2-pin connector	
Size (WxDxH) mm	27×45×58	69×28×115
Operation	-	USB and manually
Power Supply	-	USB power or 1 006P9V type dry cell battery
Relay Driving Signal	-	DC 5 V 10 ms (via USB) USB power and double insulation by PhotoMos relay
Function	-	Battery level warning

- Specifications are subject to change without notice due to improvement
- SunJEM will design products to meet your individual requirements.  
Please feel free to consult with us for products other than ready-made ones.

## Reference Information

Transient response of thermal EMF (Fig.1) and drift of thermal EMF (Fig.2) after polarity reversing, reversing 54 times with approx. 30-second interval.

