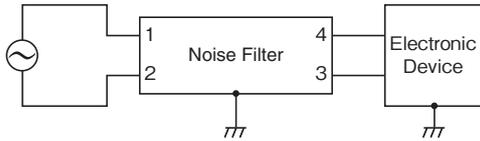


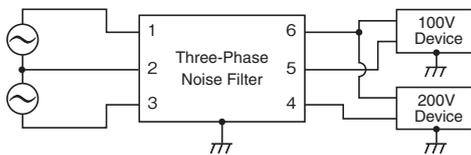
## 1. Connection Method

### (1) Single-Phase



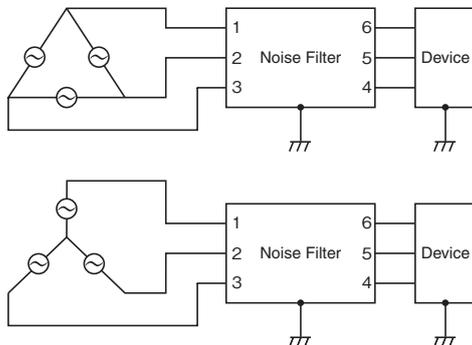
Both positive  $\oplus$  block terminal earth terminals are connected to a metal case, and as a result, both can be connected to the frame ground of the electronic device. They can also be used as grounding terminals.

### (2) Single-Phase Three-Line



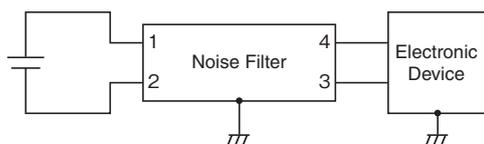
A three-phase three-line noise filter can be used in single-phase three-line systems.

### (3) Three-Phase Three-Line



Both block terminal type (FG) are connected to a metal case, and as a result, both can be connected to the frame ground of the electronic device. They can also be used as grounding terminals.

### (4) DC Input

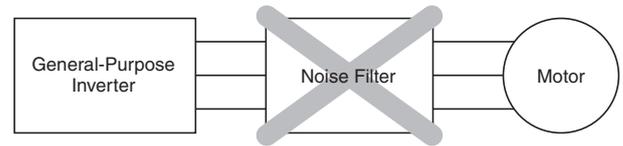


Both (FG) terminals are connected to a metal case, and as a result, both can be connected to the frame ground of the electronic device. They can also be used as grounding terminals.

## 2. Handling Warnings

### (1) The standard noise filter cannot be used between a general-purpose inverter and a motor.

Please select a specialized filter for the general-purpose inverter output side.



EMC filter

### (2) Use with direct current and commercial frequencies (50/60 Hz).

If used at a frequency other than commercial frequencies, inquire with a TDK-Lambda sales representative in advance.

### (3) The DC line specialized noise filter cannot be used on AC lines.

### (4) Leakage Current

The noise filter has internal line bypass capacitor built-in, and as a result, leakage current flows.

When selecting an electric leakage breaker, take into consideration the leakage current of the noise filter.

### (5) Permissible Inrush Current

If the back of the noise filter is connected to a switching power supply, a large inrush current will flow when the input power is turned on.

If the inrush current duration is approximately one-quarter cycle of a 50/60 Hz commercial power supply, the permissible current value is 50 times as much as the rated current.

### 3. Noise Filter Safety Standards

Each country has the following safety standard on noise filters.

Refer to each product catalog for acquired standards.

- United States: UL1283
- Canada: CSA C22.2 No.8
- Europe: EN60939

### CE Markings

Devices (final set products) that meet European EMC Directive is mandatory to apply CE Marking.

As a result, most of the products in this catalog that categorized as component do not apply CE markings. If you look for the products in this catalog for use in CE marking devices, please select European safety standards certificated products.

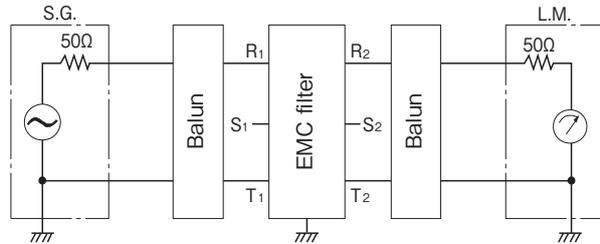
### CCC Certification

Noise filters are exempt from CCC certification.

### 4. Methods of Measuring Characteristic Data

#### (1) Method of measuring insertion attenuation

Measurement of attenuation when an EMC filter is inserted in a circuit generally complies with the Military standard (MIL-STD-220), but many Power Line EMC Filters of TDK-Lambda brand use are measured in accordance with the following measurement method.



$$\text{Attenuation} = 20 \log_{10} E_2 / E_1 \text{ [dB]}$$

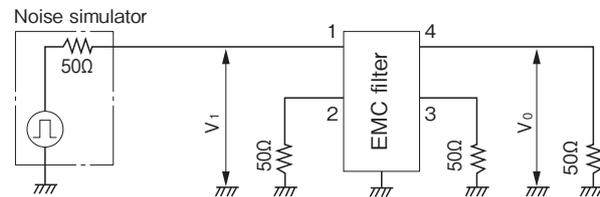
E<sub>1</sub>: Level when an EMC filter is inserted in the circuit

E<sub>2</sub>: Level when an EMC filter is not inserted in the circuit

The baluns in the circuit contain change-over switches so that stand-alone measurements can be made for the differential mode (symmetrical wave) portion and the common mode (asymmetrical wave) portion.

#### (2) Method of measuring pulse attenuation

##### (a) Differential mode (symmetrical wave) portion measurement circuit



##### (b) Common mode (asymmetrical wave) portion measurement circuit

