Filter Placement

Proper placement of the filter helps to assure its continuous operation for a long time. Please follow these requirements for installation:

- ❑ Place filter on a flat surface with the connections and label clearly visible and easily accessible.
- ❑ Install filter in a dry location away from clutter and debris and from the possibility of spillage, including from floor and bench cleaning. Install filter away from traffic so that it does not interfere with movement of personnel and machinery.
- ❑ Ambient temperature at the place of installation should not exceed the range of 5^0...40^0C (41^0 to 104^0F). Do not install filter in small confined spaces with restricted air circulation in order to avoid potential overheating. Do not place anything on the top of the filter.
- ❑ Use proper wire gage per safety regulations.
- ❑ Make sure that the wire connections are properly fastened.

Filter Care

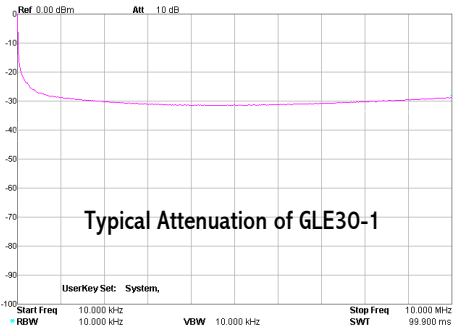
Normally, filter requires no maintenance and no calibration. It is recommended, though, to periodically inspect filter for overheating, to verify properly tightened connections and to clean its surface from dust with dry cloth.

Under normal operation the filter should not heat up. If the filter does feels "warm" or "hot" to the touch - more than 10^0C (18^0F) higher than the ambient temperature or the temperature of the surface on which the filter is mounted), this may mean that your ground circuit has excessive current which may be a safety hazard. Ground current can be tested with a regular clamp ampermeter (your equipment must be operational for that). Contact your safety specialist immediately. For warranty or other questions contact OnFILTER or its authorized distributors. Full text of warranty can be found in the Library section at www.onfilter.com

Specification

Rated Max. Current of Equipment	30A RMS	
DC Resistance	<1 Ohm (0.1 Ohms typ.)	
External Wire gage	AWG14...6	(1.6mm...4.1mm diameter)
Dimensions (WxLxH)	2.56"x5.63"x1.75"	(67x143x44mm)

This filter qualifies for inclusion into UL 508A panel by certification with UL 1203



Typical Attenuation of GLE30-1

OnFILTER, Inc.
730 Mission Dr. Ste. 102
Santa Cruz, CA 95060 U.S.A.
Tel. +1.831.824.4052
FAX +1.206.350.7458
www.onfilter.com
info@onfilter.com

Intertek

All specifications are subject to change without notice. U.S. Patent 10,263,591 . Made in U.S.A.

Ground Line EMI Filter
GLE30-1

User's Guide

OnFILTER

Thank you for buying ground line EMI filter!

Our Ground Line EMI filters are designed to effectively suppress high-frequency electrical noise on ground. This noise (often called conducted EMI—ElectroMagnetic Interference) causes numerous equipment malfunctions, including lock-up, erratic response, software errors, and other often "unexplained" and "random" equipment behavior, as well as electrical overstress (EOS) of sensitive electronics.

EMI on ground is common in industrial environment because grounding connects all equipment together and serves as a conduit for propagation of electrical noise throughout the entire facility. The only practical way to deal with it is by using properly-designed filters. For more details on this subject please visit Library section on OnFILTER' web site www.onfilter.com.

Safety First!

Grounding is a safety element, therefore anything dealing with grounding of equipment must be done by trained professionals and verified. Improperly done or missing ground can cause equipment malfunction or damage, injury to personnel or death. Make sure that implementation of Ground Line EMI Filter is done by trained electrician.

Ground Line EMI Filters shall never be used in any circuit other than ground. Do not use the filter in circuits that intentionally carry current, such as phase ("live"), neutral or other lines. Although Ground Line EMI Filter GLE30-1 is designed not to interfere with proper safety operation of your circuit breakers and fuses for equipment rated up to 30A, it is not designed to continually conduct such current.

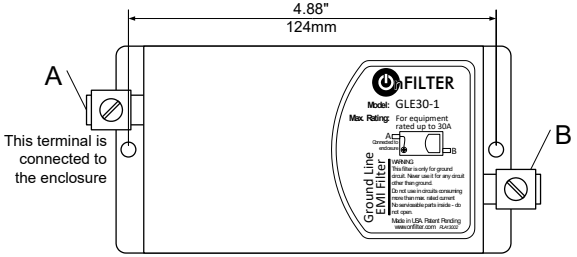
WARNING

- ❑ Never use Ground Line EMI Filter in any circuit other than ground
- ❑ Do not use Ground Line EMI Filter with the equipment rated to higher current than the rating of the filter
- ❑ Verify proper ground connection after installing the filter
- ❑ This filter is not for household use
- ❑ No serviceable parts inside - do not open

Filter Installation and Connection

Basics

Ground EMI Filter is a non-polar device. It can be connected in ground line in either direction. The only consideration is that the enclosure of the filter is electrically connected to the left terminal ("A") of the filter as shown here.

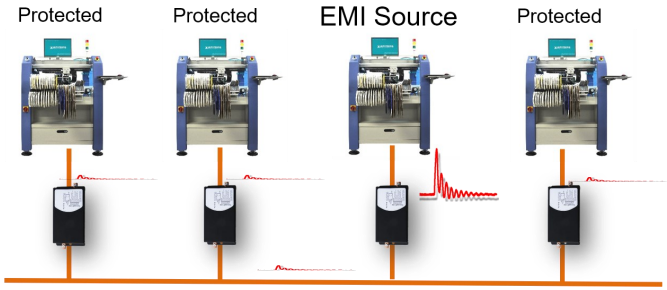


If the filter is fastened down to a metal surface, this surface will be electrically connected to that left terminal "A" via the enclosure. In this case, connect that surface to the left terminal "A" of the filter and the terminal "B" of the filter to the other ground point. Otherwise, the filtering circuit will be shorted which will negate the filtering function of the filter.

Ground Line Filter and Facility Grounding

Many factories utilize special grounding throughout the facility, such as ground bars, ground wires and alike. Ground Line EMI Filter GLE30-1 can block propagation of noise throughout the facility while maintaining proper ground connection.

To protect equipment in the industrial setting consider connecting ground of every tool to the facility ground as shown here. This will block EMI injected into ground by some other "noisy" equipment from reaching your tool.



Example of Installation of GLE30-1 to protect each tool from EMI

Avoid Ground Loops

Make sure that your equipment is connected to ground only via the filter, otherwise there would be more than one path to ground and the effectiveness of the filter in suppression of EMI will be negated.

In some factories equipment is connected to ground via power line connection as well as via separate facility grounding. In such cases as a first step connect Ground Line EMI Filter between the equipment and that separate facility grounding. This would block the noise from reaching your equipment via the facility ground. As a second step, use another Ground Line EMI Filter in ground circuit of power supply to your equipment.

Should the noise on your equipment's ground persist, the noise may be coming via other ways. Consider using our CleanSweep® AC power line EMI filter that also includes filtering in ground. OnFILTER manufactures a broad line of power line, servo motor and other filters for variety of voltage, current and phase configurations. Please check www.onfilter.com for details.