Introduction

LGH High Voltage Connectors

The development of high voltage hermetically sealed connectors and LGH High Voltage Lead Assemblies and Receptacles represented two major advances in the science of high voltage application — both pioneered by Tyco Electronics. As a result of this technological advantage, Tyco Electronics is the leading manufacturer of high voltage, high altitude, high temperature lead assemblies and connectors. In the field of high voltage application, Tyco Electronics has conducted extensive research, development, quality studies and reliability programs yielding numerous standard products for military and industrial high voltage applications.

LGH High Voltage Lead Assemblies and Receptacles are used in many systems' designed to meet or exceed military specifications. A sampling of specifications to which samples of these products have been tested, is listed to the right. For more information contact Tyco Electronics.

LGH Test Methods and Conditions

LGH Leads and Receptacles, LGH 1⁄4 through LGH 4

Product Spec. — 108-36033 BA RS-364

Electrical

Dielectric Withstanding Voltage — BA-364-20 Condition I (MS202, Method 301)

Insulation Resistance — BA-364-21, (MS202, Method 302)

Mechanical

Vibration, Sinusoidal — BA-364-26, Test Condition I, (MS202, Method 201)

Shock — BA-364-27, Method H

Environmental

Barometric Pressure — Sea Level to 70,000 feet, MIL-Std-202, Method 105, Condition C

Thermal Shock — BA-364-32, 5 cycles -67°F to +257°F [-55°C to +125°C]
LGH High Voltage Connectors

Lead Assemblies and Receptacles

LGH leads and receptacles find wide application where high voltage is used in harsh environments. LGH leads and receptacles are lightweight, miniature, extremely reliable and they maintain peak performance under high temperature, high altitude applications. They are equally applicable to low temperature, low altitude devices.

Leads and receptacles shown on the following pages are commonly used items. Hundreds of variations of these products are available, as well as custom-made units. Consult Tyco Electronics for information on high voltage connectors for applications not satisfied by components listed here.

Voltage Ratings
The voltage ratings tabulated here and noted elsewhere apply to LGH molded-end lead assemblies properly mated with appropriate LGH receptacles, which are properly potted or otherwise protected on the back end.

LGH Lead Assemblies are manufactured with a silicone rubber end having a specified mating length (see above table) molded onto a 16 AWG white silicone rubber wire. These assemblies provide extreme reliability and safety for high voltage applications in severe environments.

Minimum Bend Radii, nominal, for cables without additional covering over silicone insulation and for shielded cable.

Maximum Conductor Resistance

All Series 4.75 ohms/1000 ft. 15.6 ohms/1000m.

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Catalog 1308940 Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

LGH Receptacles are manufactured in molded glass epoxy having a specified mating depth (see table on previous page). When used with LGH lead assemblies they offer the ultimate in dependability, even under harsh environmental conditions. Typical receptacles are shown here. Specific units, with part numbers, are shown by series in the following pages.

LGH Receptacles for Canned Units

These receptacles are for hermetically sealed, gas- or oil-filled units, and they are recommended for canned units filled with potting compound.**

**CAUTION: Follow manufacturer's instructions on preparing and handling potting. LGH voltage ratings apply only when a proper bond is achieved between the back end of the receptacle and the compound.

LGH Receptacles for Cast or Encapsulated Units

These units are for use where no metal can is required.

Specifications (All units)

Pin Assembly — Brass per ASTM-B-16 and QQ-B-626; tin plated per MIL-T-10727, Type I or II, .00010" min. thickness.*

Body — Molded glass-filled epoxy

Marking — Per MIL-STD-130

(Canned units only)

Solder Flange — Brass per ASTM-B-16 and QQ-B-626; tin plated per MIL-T-10727, Type I or II,.00010" min. thickness

Hermeticity — Leak rate less than 1 x 10^-8 cc He/sec. per MIL-STD-202, Method 112B, Cond. C.

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LGH Lead Assemblies and Receptacles, 5 KVDC, LGH 1/4

<table>
<thead>
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<tr>
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*RoHS compliant Part Number.