



INSTALLATION INSTRUCTIONS

Type LTG 50 Ampere Plug-in Busway



Type LTG Plug-in busway is a standardized, prefabricated busway system rated 50 amperes, 300 volts, in 2-, 3-, and 4-pole arrangements. The two-pole system may therefore be used for 2-wire, 277-volt lighting branch circuits on 4-wire, 3-phase, 277/480Y volt systems. The 3-pole system may be used for 3-wire, 3-phase, 250 volts, 3-wire 125/250 volts, solid neutral, a-c or d-c or for two 2-wire, 277-volt circuits with common neutral, provided both circuits are connected to the same phase and not more than 25-ampere rating.

Coupling sets, hangers, elbows and feed-in boxes are available to meet practically any requirement of the distribution system and the building design.

Plugs of various types, which may be inserted at any point along the run without special fittings, are available.

All devices are listed by Underwriters' Laboratories, Inc. (except as noted) and should be installed in accordance with the National Electrical Code or local inspection requirements. LTG Plug-in busway may be used as a branch circuit or feeder in conjunction with appropriate overcurrent protective devices. Local interpretations will indicate whether unfused plugs or devices with overcurrent protection will be required, depending upon the size of the overcurrent devices protecting the run and the rating of the tap-off devices. (See Articles 210 and 220 of the National Electrical Code.)

The LTG busway system should be supported at intervals not exceeding five feet in accordance with section 3643 of the National Electrical Code.

HANGING DEVICES



DLTG-CP
Coupling Plate



Fixed Plate
DLTG-F



DLTG-S
Sliding Plate



DLTG-M1
Hanger



DLTG-M3
Hanger

Three types of plates for hanging the LTG housing are available, all provided with holes and $\frac{3}{4}$ " x 20 pan-head shoulder screw and nut for attaching to DLTG-M1 or M3 hangers. DLTG-S slides onto the housing and, therefore, is used when making original installations. It cannot be applied afterward without dismantling the sections. DLTG-F is attached at any point to the housing with clamp screws. DLTG-CP is similar to DLTG-F, but longer, and is used to couple sections together mechanically, as well as for hanging. Both DLTG-F and DLTG-CP may be mounted after the original installation without dismantling the run.

Two types of hangers for attaching to the above devices are available. DLTG-M1 is a hook-type hanger used with messenger cable only and may also be used as an intermediate support for the messenger cable. It has a hole for $\frac{3}{16}$ -inch bolt in its base and is $1\frac{1}{4}$ inches high. DLTG-M3 is $3\frac{1}{16}$ inches high and, in addition to use with messenger cable, is designed to receive a $\frac{3}{8}$ -inch rod hanger.

For convenience in ordering, various combinations of hanger plates and hangers are listed under "INSTALLATION METHODS."

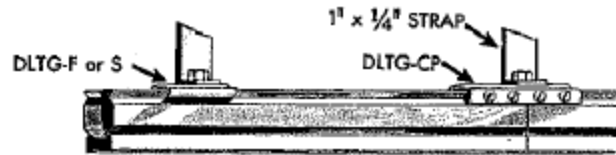
These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

GENERAL  ELECTRIC

INSTALLATION METHODS

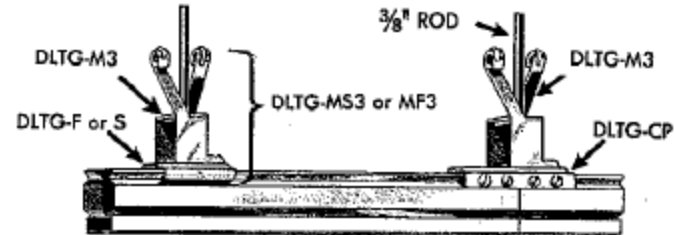
STRAP HANGING

Flat iron, perforated strap or rods may be bolted directly to hanger and coupling plates or similar devices. Use either type hanger plate as desired.



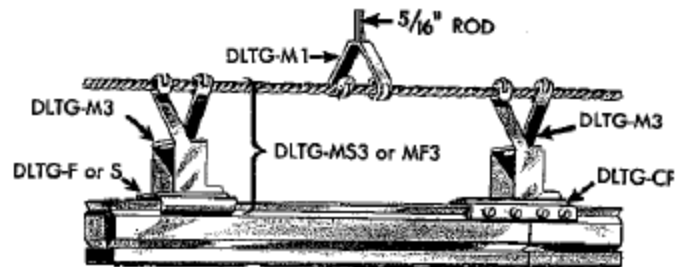
ROD HANGING

Use rods 3/8-inch diameter or smaller and DLTG-M3 hanger in combination with desired type of hanger plate. Note that shoulder screw allows DLTG-M3 to act as a turnbuckle so that leveling adjustments can be made.



MESSENGER CABLE HANGING

Use DLTG-M1 or DLTG-M3 hangers in combination with desired type of hanger plate. If suspended type center feed-in boxes are planned, use DLTG-M3 hanger so as to provide clearance between the LTG housing and the messenger cable for the feed-in box. Use DLTG-M1 for intermediate support of messenger cables.



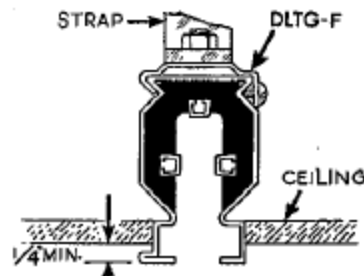
SURFACE MOUNTING

For mounting against ceiling or wall, use DLTG-F hanger plates and DLTG-CP coupling plates.



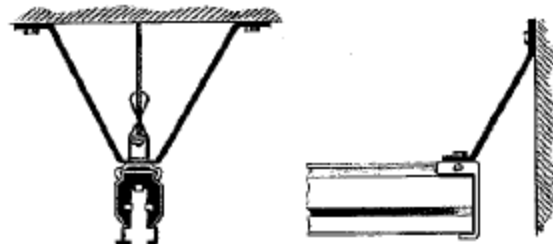
FLUSH MOUNTING

Type LTG busway may be recessed in ceiling or wall provided 1/4-inch extends beyond the surface to permit clearance for plugs. Use DLTG-F hanger plates and DLTG-CP coupling plates for support.

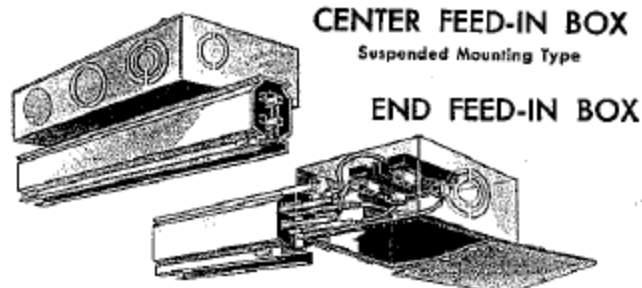


HOW TO INSTALL

First, install hanging facilities on five-foot maximum centers. Mount DLTG-M1 or M3. When system is suspended from cable or rod, it is good practice to use angle braces to assure rigid suspension of the busway. Braces are attached between the hanger and hanger plate using the same screw. These braces are not furnished.



Start installation at a feed-in box, elbow or some other fixed point. All end feed-in and surface-type center feed-in boxes have coupling plate and plug-in busbar connectors built in. Make sure that sections are inserted all the way to the alignment loops on the busway length. Insert connectors fully into busbars with curved side facing center of housing. Open type center feed-in boxes have a 13 1/2-inch length of LTG housing attached to the bottom and are assembled in the system the same as a standard section.





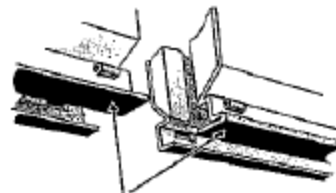
Mount coupling sets DLTG-BTP-2, 3, or 4 on one end of each length. These sets include coupling plate DLTG-CP for mechanical connection, two housing alignment pins DLTG-HP and appropriate number of bus connectors, DLTG-BC. (These may be ordered separately.) Insert busbar connectors with curved side facing center of housing and push in to the stop.



Butt adjacent sections tightly

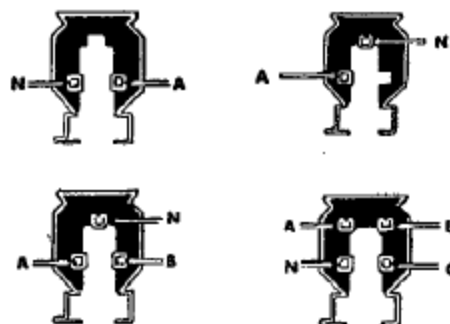
JOINING ADJACENT SECTIONS

Install one length at a time. Keep wide flange on same side throughout. Slide DLTG-S hanger plates over the top of the housing. Tighten screws on DLTG-F hanger plates and DLTG-CP coupling plates. Note that coupling plates may also be used for attaching hangers. Butt adjacent lengths tightly. Be sure ends of housing are in line.

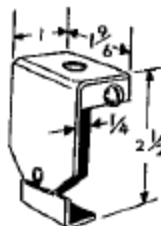


WIRING THE NEUTRAL

The design of plugs requires that the neutral be connected to the bus bars as indicated above. Note that two-pole plugs inserted in Type DLTG 2-pole or 3-pole busway always have the neutral connected to the top bar. However, a 2-pole plug for use in Type DLTGA, when installed in the 3-pole system, is connected across the phase bars A and B. Thus, if the DLTGA system was connected to a 2-wire, 120-volt source and the 3-pole system to a 3-wire, 120/240-volt system, the plug would deliver 120 volts on the 2-pole system or 240 volts on the 3-pole system. The polarizing lip on the busway housing and the polarizing wedge on the plugs, force plugs to be installed in this manner and the system should be wired accordingly.



ACCESSORIES



END CAP — DLTG-EC

End caps are used to close ends of run. They are easily removed when run is to be extended.

SECTIONALIZING COUPLING — DLTG-SEC

Used wherever it is desired to break the electrical continuity of a run while maintaining mechanical continuity — ordinarily where a long run is fed at more than one point. (Not UL listed.)



FIXTURE SUPPORTS

Two types of fixture supports are available — the hook type DLTG-FH (left) (not U/L listed) and the universal type DLTG-UFS (right). The hook type consists of a hook, clamp plate and spring. To install this device, insert the back end of the hook in the busway slot, push on the hook and turn it 90 degrees. The hook is not centered in the clamp plate. It should be turned in the proper direction so that the plate seats on the busway with both lips of the plate on the polarizing lip side and turn it until the lip rests on the polarizing lip. Lift and turn the plate on the other side in the same way. Then push on the hook and turn until the device can be removed.



DLTG-FH

The universal type can be mounted parallel with or at right angles to LTG housing. Place "U"-shaped piece over the housing with the threaded portion near trough slot. Place fixture support against trough, with threads on "U"-shaped bail extending through either set of mounting holes. For parallel mounting, use holes that are on a line with extended ears of support. For perpendicular mounting, use other set of mounting holes.



DLTG-UFS

FINAL INSPECTION

After the entire LTG busway system has been assembled, adjust hangers so that run is level and in line, make sure that all joints are butted tight and aligned; tighten all screws. Give system thorough test for grounds, short circuits and polarization. To prevent entrance of foreign matter or unauthorized tampering with bus bars, slot closure DLTG-SK5 may be installed between plugs.



STRUTS

The insulators for all four-pole LTG (DLTG-422) have molded struts at the open end for shipping reinforcement. These struts must be removed to permit passage of a trolley (currently available only on replacement basis). Tap these struts with a screwdriver to break them out cleanly. This is not necessary for stationary plug take-offs.



BUSWAY PLUGS

Most unfused plugs, except those with a conduit box, are provided with cable clamps suitable for multi-conductor cords having a maximum $\frac{1}{16}$ -inch diameter.

In accordance with Section 2559, NEC, all portable equipment must be grounded. On Type LTG systems where receptacle-type plugs are desired, Cat. No. DARP221A or DARP221B should be used as these plugs are designed to accept convenience plugs with a grounding stab. If Cat. No. DATRP221 or DATORP221 are used, an adapter should be installed so that the grounding pigtail may be connected to the ground terminal screw on the cable clamp.

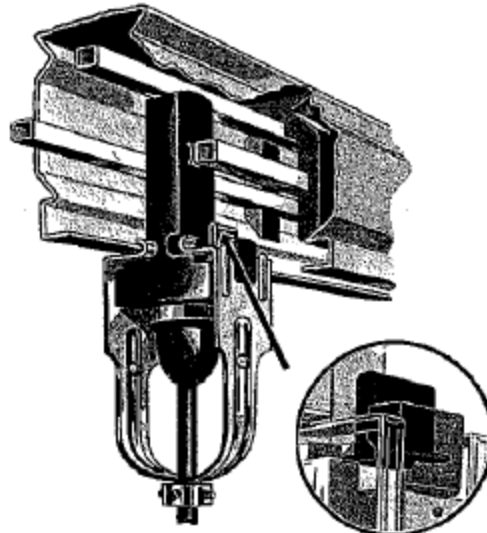
The neutral terminal on all plugs is identified by the letter "W" (white wire).

BALANCING LOADS

To balance loads on three-pole systems, or to provide separate switching circuits, polarizing wedges are provided (see insert). Wedges are inserted in a slot in either side of two- and three-pole plugs, after which cord clamps slips over plug ears to keep wedges in place.

Plugs for the 4-pole system are of fixed polarity and should be wired according to color-coded terminals provided. Two-pole plugs for the 4-wire system have colored polarizing wedges for easy identification, as follows: RED on DATRP-221-4A; BLACK on DATRP-221-4B and BLUE on DATRP-221-4C.

Plugs for the 2- and 3-pole systems will not operate in the 4-pole system.



METHOD OF INSERTING

To energize plugs, compress cord clamps and insert in housing slot, keeping polarity wedge on

narrow flange side of trough. After insertion, release clamps, permitting clamps to anchor plug.

EXTENSION AND REARRANGEMENT

When the time comes to move or rearrange your LTG system, it can go with you. Standardized pre-fabricated units can be easily dismantled and reassembled to suit the new location. Extensions are easily made with units carried by your local General Electric distributor.

care. Annual inspections will help to give you this service. Clean out any accumulations of dust, dirt, and foreign matter. Tighten screws, bolts and hanger fittings.

MAINTENANCE

Your Type LTG busway is designed to serve you well over a long period of time with reasonable

ROLL-IN HANGING SYSTEM

When busway is to be installed by the roll-in method, also see Installation Instruction GEH-2609.

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