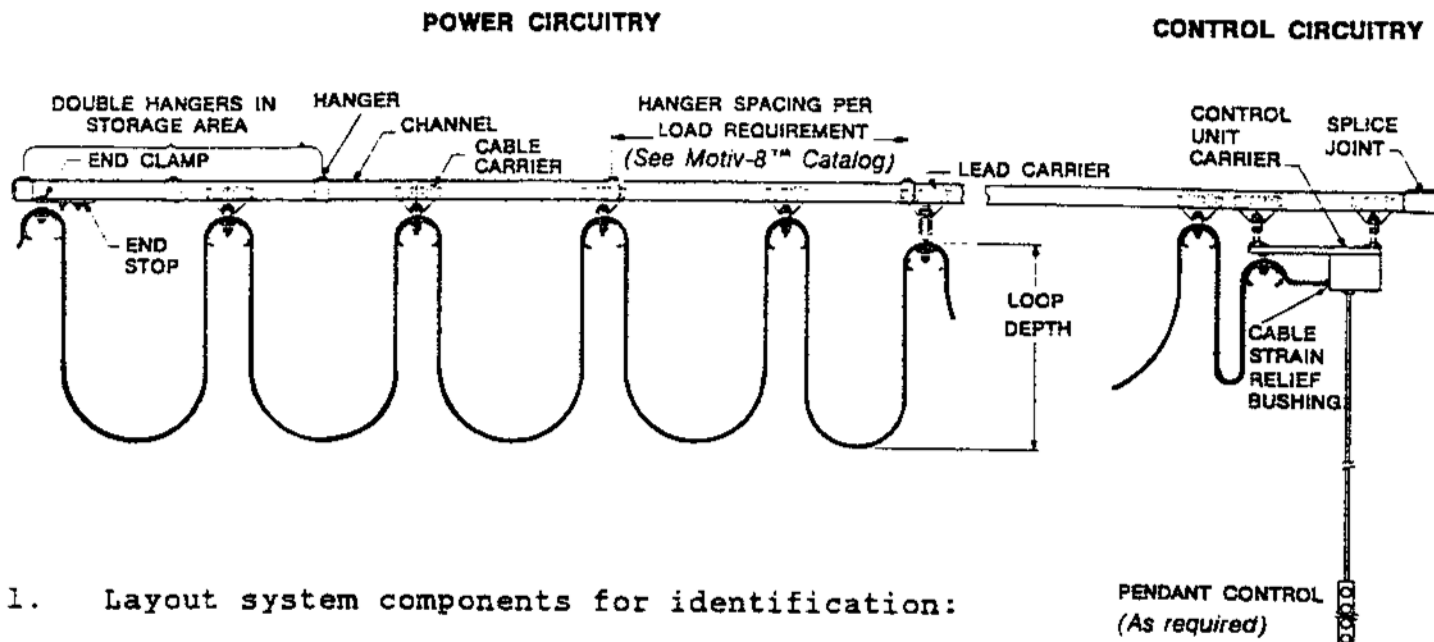


10102 F Street- Omaha, NE 68127
Ph:(800) 521-4888 Fax:(402)339-9627

INSTALLATION INSTRUCTIONS

SQUARE BAR FESTOON CABLE SYSTEMS

TYPICAL SYSTEM LAYOUT:



1. Layout system components for identification:

Square Bar	Support track for carriers. Mounted in diamond position. Typically 20' lengths.
Lead Carrier	First carrier on traveling end of system, designed to accommodate the towing device.
Control Carrier	<u>Option item</u> to the lead carrier, designed for mounting of pendant control and control box.
End Clamp	Fixed end support for cable entering from power source.
End Stop	Fixed stop located between the end clamp and first carrier. Designed to protect the end clamp.
Hanger	Fixed support for square bar. Recommendations: Hanger spacing is 5' for Standard Duty Track, 10' for Heavy Duty Track. Additional hanger location in storage area.
Splice Coupler	For joining two sections of square bar (two per joint).
Drill Fixture	Used for drilling holes at proper position for attachment of hangers, end clamp and end stop(s).
Tow Bar	<u>Optional item</u> that acts as a towing device allowing electrical system to follow vehicle (often special designed for application).
Tow Cable	<u>Optional item</u> used in high speed applications to reduce festoon cable wear.

2. Drill hanger support structure locations. NOTE: Review hanger position and splice locations before drilling.
3. Attach hangers to support structure.
4. Mark hanger, end clamp and end stop position on square bar. Position drill fixture. Drill as required. NOTE: Standard Duty Bar use 1/4" drill bit, Heavy Duty Bar use 5/16" drill bit.
5. Mount square bar into hangers.
6. ADJACENT SQUARE BAR LENGTHS: A) Mark and drill hanger locations B) Attach splice couplers C) Mount square bar into hangers and splice to existing bar.
7. Determine loop depth of cable (Loop depth is vertical distance from saddle of cable carrier to the bottom of cable loop when two adjacent carriers are touching). Mark cable where saddle will be positioned. Install cable to carriers. Allow extra length of cable for hook-up area before lead carrier and after end clamp. Attach tow cables (optional item) between end clamp and first carrier and between each carrier.
8. Install carriers onto square bar.
9. Mount End Clamp and End Stop onto square bar. NOTE: On pendant control lines and/or systems where travel is near the end of the bar it is recommended to install a second end stop.
10. Install towing device. Towing device shall tow lead carrier in a parallel position and not strain against the carrier travel direction.
11. Verify electrical power is off. Cycle the system manually for proper travel lengths.
12. Make all electrical connections and test electrical system. Cycle system under supervision.