



Fiber Optic Lane Control

Features

- Three-color capability per unit.
- Only 84 watts (two lamps) per color and message for burnout (fail-safe) protection.
- Exceptional message visibility and clarity.
- Lower operating and service cost, easy maintenance.
- Two-way housing is lightweight, economical and easy to service.
- UL approved.

1.0 General Description (One Way)

1.1 One-Message Signal shall be capable of displaying one message. This message may be a red X, a yellow X or a downward green arrow. 1.2 Two-Message Signal shall be capable of displaying any two of the messages listed in 1.1. 1.3 Three-Message Signal shall be capable of displaying all three messages listed in 1.1.

2.0 General Description (Two Way)

2.1 Each side of a two-way lane control signal shall be capable of displaying any of the combinations listed in 1.1 through 1.3 above for one-way signals. 2.2 Two-way signals shall be serviceable from either of the two sides.

3.0 Functional Requirements

3.1 All messages shall be clearly legible, attracting attention under any lighting conditions. At full intensity the signal will be highly visible anywhere within a 20 degree cone centered about the optic axis (60 degree cone available on request). 3.2 The signal shall consist of: a. Weatherproof housing and door. b. Fiber optic module. c. Color filters for desired message colors. d. Light sources. e. Transformers. 3.3 The color of any message may be changed in the field by replacement of the supplied color filters without removing the signal from the case. 3.4 Two (2) 42-watt, 10.8-volt lamps

with a rated life expectancy of 8,000 hours shall be used for each message. Lamps shall be mounted horizontally to prevent moisture collection. 3.5 Individual glass output lenses shall be fitted over the end of each fiber optic glass bundle to provide the 20 degree viewing angle. Lenses shall be 5/8" in diameter and arranged to form the appropriate message. 3.6 Transformers shall be used to reduce the incoming 120 volts AC to 10.8 volts AC. The transformers shall contain Class A insulation and weatherproofing and be rated at 48.5 volt-amps. 3.7 The signal shall be capable of continuous operation over a range in temperature from -35 F to +165 F (-37 C to +75 C). 3.8 Power consumption shall be less than 100 watts per message (two lamps for burnout protection). 3.9 A separate transformer shall be used to isolate each light source to provide burnout protection. 3.10 Bundles shall be arranged so that in the event of a failure of one light source, the other shall continue to provide a legible message (bifurcated points are available on one- and two-message units).

4.0 Fiber Optic Modules

4.1 The fiber optic module shall consist of the following components: a. A rigid aluminum message plate. b. Fiber optic glass bundles and spares. c. Fiber optic commons. d. Color chip/lamp socket holder(s). e. Color chip(s). f. Flat black Delron lens holders. g. 5/8" glass lens (20 degree cone field of view). h. Protective back cover for fiber bundles. 4.2 The 5/8" glass lenses shall be mounted in black Delron lens cells by heat-swedging the lens into the cell onto a square-shouldered seat to insure proper location. The combined unit shall be mounted into the signal face by means of a plated snap ring on the interior. Number of cells varies according to message. 4.3 The finished lens cell assembly shall not protrude from the signal face by more than 5/16" 4.4 Door panels and lens holders shall be colored flat black to maximize legibility when activated. No color shall appear in the lenses when deactivated regardless of ambient light conditions. 4.5 Message color is provided by a tempered, optically correct glass color filter in conformance with ITE specifications. 4.6 Electrical connection shall be made via barrier-type terminal strip. 4.7 All fasteners and hardware shall be corrosion resistant stainless steel. 4.8 All components shall be readily accessible for maintenance when the door is open. 4.9 With Standard hardware and locks, no tools are needed for lamp replacement.

5.0 Mechanical Construction

5.1 Alluminum Housing a. One-way housings shall be constructed of .080" or .125" extruded alluminum 8" deep with a .063" flat aluminum back welded into the housing. b. Two-way housings shall be constructed of .063" aluminum body and a .063" thick channel aluminum framework structure inside. Housing body and inside framework shall be permanently attached to form a single unit. c. All corners and seams of one or two-way housing are heli-arc welded to provide a weatherproof seal around the entire case. d. Continuous full length stainless steel hinges, .040" x 1/16" open, shall connect to the housing and the extruded aluminum door. e. Signals shall have sufficient stainless steel 1/4-turn link-locks to tightly secure the door. f. Door gaskets shall be 3/16" x 1" neuprene to provide a weatherproof seal. g. .125" extruded aluminum doors have one side removeable to gain access to signal face. (Not required for normal maintenance.) h. Signal face shall be .080" flat aluminum or equivalent and have the entire fiber optic assembly mounted to it. i. Each door is fitted with a sun hood .063" aluminum. j. Finish on signal housings shall be two coats of exterior signal enamel applied after surface material is acid-etched and primed with zinc-cromate primer.

6.0 Optional Equipment

6.1 For improved night time visibility dimming may be provided by one of the following: a. Adjustable phase loop dimming. (Lowers voltage to one or more signal) b. 50% dimming relay with lamp monitor. (Monitors the lamp in the dimmed mode and shuts off dimmer in the event of lamp failure.)