WARRANTY

All fiber optic transmission systems, products and accessories manufactured by Liteway, Inc. and it's subsidiaries are fully tested prior to shipment and are warranted against defective materials and workmanship for a period of five full years from the date of the original shipment. Should a problem occur, a Return Material Authorization Number (RMA) must be obtained from Liteway Inc. at (516) 931-2800 and the item returned to Liteway, Inc. 166 Haverford Road, Hicksville, NY 11801, USA, prepaid. Liteway Inc. will then, at its option repair or replace the defective item.

Liteway, Inc. maximum liability under this warranty is limited to the cost of the defective item only. No contingent liabilities of any kind are either assumed or implied.

Any items returned to Liteway, Inc. that have been misused, abused, damaged, modified, connected or adjusted in any way contrary to the instructions furnished by Liteway, Inc. or repaired by unauthorized personnel will not be covered by this warranty. Any non-warranty repairs required will be quoted at the current rate for such services.

Important Notices

CAUTION ! AVOID DIRECT EXPOSURE TO BEAM.

All –5, -7, -8, and -9 Models use laser diodes. These solid-state laser diodes are located in the optical ports of these units. Laser diodes produce invisible radiation that may be harmful to human eyes. Never look directly into the optical port of any fiber optic unit designed to operate with single-mode optical fiber.

NOT FOR LIFE SUPPORT SYSTEMS

Liteway, Inc. does not authorize or warrant any of its products or accessories for use in critical life support systems or applications of any kind.

135263 Rev K

OPERATING INSTRUCTIONS

LuxLink®
Optical Bypass Switch

Single Channel Models
OS-3141, OS-2141

Dual Channel Models
OS-3241, OS-2241

The OS-3141 and OS-2141 are four pole fiber optic switch that can be remotely controlled. The optical path through the units is purely optical and bi-directional, there is no optical-to-electrical-to-optical conversion. As a result there is no electrical loss or electrical bandwidth limit on the fiber optic path. The optical path can be select via a front panel switch or via rear panel contact closure or TTL level inputs. The OS-3141 and OS-2141 are non-latching switches. The OS-2141 and OS-2241 are latching switches.

Technical Specifications

Switching Time	< 10 ms
Back Reflection	< -30 dB
Insertion Loss	< 1.5 dB
Cross-talk	< -50 dB
Mechanical Life	> 1 Million cycles
Electrical/Signal Connector	5 pin removable terminal block
Temperature Range	-20º to +70ºC
Operating Power Requirements	11 to 60 VDC @300 mA
Physical Size (mm) single	5.0"(127)L x 1.0" (25.4)W x 4.0"(101.6)D
Physical Size (mm) dual	5.0"(127)L x 2.2" (56.6)W x 4.0"(101.6)D

Models, wavelength, connector

-2 = 850/1310nm Multimode LC/PC	-3 = 850/1310nm Multimode ST/PC
-5 = 850/1310nm Single-mode SC/PC	-4 = 850/1310nm Multimode SC/PC
-6 = 1310nm Single-mode LC/PC	-7 = 1310/1550nm Single-mode FC/PC

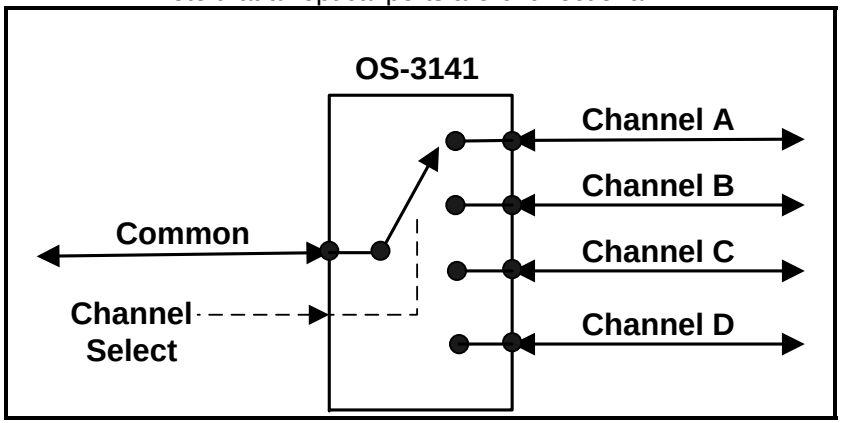
Specifications are subject to change without prior notice.

LuxLink®
Fiber Optic Transmission Systems
www.LuxLink.com
USA 516-931-2800

Installation Instructions

Common applications for this device are optical routing, system bypass, ring network restoration, and loop-back testing.

The diagram below shows the basic optical functions of the OS-3141.
Note that all optical ports are bi-directional.



The OS-3141 and OS-2141 switch will go to the D=Common state (Optical port E) under any of the following conditions:

1) The front panel mode selector switch is set to D=Com
2) The front panel switch is set to the RMT position and the rear panel control signals have no contact closures connected or no TTL logic connections.
3) The OS-3141, (non-latching version), will go to the D=Com state if or when there is a loss of electrical power. The OS-2141,(latching version), will stay in the last know state before the loss of electrical power.

For applications where two independent optical channels need to be switched, the OS-3241 is two OS-3141 in parallel and in a single enclosure.

Power Terminal Block Connections

Pin	Label	Function
1		No connection
2	Pwr+	+11 to +60 VDC
3	Pwr-	DC return

Pin 3 of the OS-3141 and OS-2141 is connected to the housing.
Pin 3 of the OS-3141-ISO and OS-2141-ISO is floating.

Signal Terminal Block Connections

Note pin 3 is Common and/or Ground

Pin 1 = Data/Contact Input C	Pin 2 = Data/Contact Input C'
Pin 4 = Data Output C	Pin 5 = Data Output C'

Pin 4 and 5 are only to be used for a master/slave system.

Power/Signal Terminal Block Remote Control Functions

When front panel switch is set to the REM position only

C C'	Optical Path
1 0	Optical Port A is routed to Common port (E)
0 1	Optical Port B is routed to Common port (E)
0 0	Optical Port C is routed to Common port (E)
1 1	Optical Port D is routed to Common port (E)

0 = contact closure from pin 1 to pin 3 or TTL logic 0 (0 to +0.8V) from pin 1 to pin 3. 1 = no contact closure from pin 1 to 3 or TTL logic 1 (+2.7 to +5 volts) from pin 1 to pin 3. Note that pin 3 is common.

Indicator Lights

Indicator	Lights when
Power	Proper power is present
A=Com	Optical Port A is routed to Common port (E)
B=Com	Optical Port B is routed to Common port (E)
C=Com	Optical Port C is routed to Common port (E)
D=Com	Optical Port D is routed to Common port (E)

Front Panel Mode Selector Switch

Note that the front panel selector only allows the remote control functions to operate the switch when it is set to the REM position. When it is set to any other position operation is as shown below.

Position	Function
A=Com	Optical Port A is routed to common optical port
B=Com	Optical Port B is routed to common optical port
C=Com	Optical Port C is routed to common optical port
D=Com	Optical Port D is routed to common optical port
RMT	Rear panel remote control signals are operational