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.

OPERATING INSTRUCTIONS

LuxLink®
Fiber Optic Universal Sensor Transmission System

Models; INST-3001, INSR-3001

The ***LuxLink***® INST / INSR-3001 system consists of the INST-3001 transmitter and INSR-3001 receiver and will transmit DC voltages or standard analog current loop signals in a wide variety of industrial and instrumental applications.

Technical Specifications

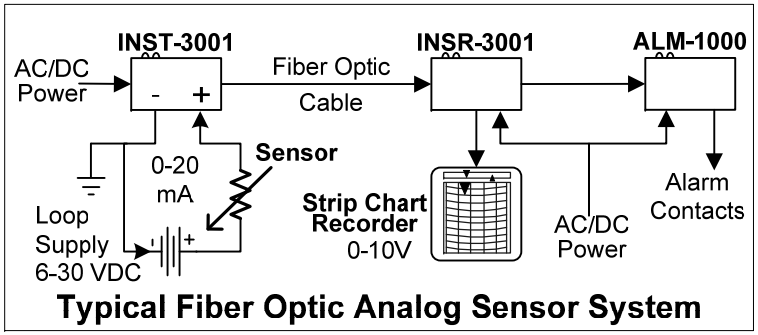
System Bandwidth min.	DC to 50 KHz (3dB)
In/Output Level	0 to ±1, ±3 or ±10 volts or 0-20 mA
In/Output Impedance	10K ohms (voltage mode) 50 ohms (current)
Signal / Noise Ratio	60 dB typical
Accuracy / Linearity	± 0.25 %
Drift	100 ppm/ºC full scale
Operating Wavelength	850nm (-1), 1310nm (-3,-7), 1550nm (-9)
Optical Loss Budget	0 – 13 dB
Signal Connectors	Removable terminal block for V or mA, BNC for V only
Fibers Accommodated	1 multimode (-1,-3), 1 single-mode (-7,-9)
Temperature Range	-35º to +75ºC
Power Requirements	11-24 VAC/DC @350 mA max
Physical Size (mm)	5.0"(127)L x 3.0"(76)D x 1.0" (25.4)W

All specifications measured with 1Km of 62.5u multimode fiber.
All specifications are subject to change without prior notice.

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

Installation Instructions

The diagram below shows a typical application of the INST/INSR-3001 in remote sensor application.



Typical Fiber Optic Analog Sensor System

DIP Switch Settings

Before applying power set the 10 position DIP switch for the mode of operation desired as follows:

Signal	1	2	3	4	5	6	7	8	9	10
± 1 V pp	*	On	Off	Off	**	**	Off	On	***	Alm
± 3 V pp	*	Off	On	Off	**	**	Off	On	***	Alm
± 10 V pp	*	Off	Off	On	**	**	Off	On	***	Alm
0 - 20 mA	*	On	Off	Off	Off	Off	On	Off	***	Alm

* Switch 1 is not used has no effect.

** Switch 5 & 6 are used to set the coupling for the for the voltage mode only. In current mode Switch 5 & 6 are set to off.

Coupling Mode	Sw 5	Sw 6
DC Coupled	Off	On
AC Coupled	On	Off

When AC coupled the system low end bandwidth is only 20 Hz.
Also note: The current mode is always DC coupled.

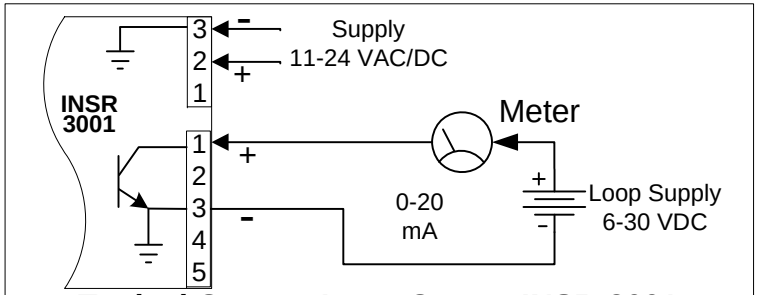
*** Switch 9 is used to select what the Alarm mode will sense:
ON = Hi and Lo limits, & the loss of link will activate alarm
OFF = Only the loss of link will activate the alarm.

Switch 10 is used to select or defeat the Alarm mode.
ON = Alarm defeated enabled, (alarm mode not active)
OFF = Alarm defeated disable, (alarm mode active)

Signal Terminal Block Connections

Pin	Label	Function
1	mA+	+ Current Loop Input or Output
2	mA-	Tx only = +12 VDC Output for powering current loop. Rx only = - Current Loop Input (=ground)
3**	Gnd	Ground, Common, Enclosure
4	V-	Voltage Common (This is also BNC shell)
5	V+	+ Voltage Input or Output (This is also BNC pin)

**Note; On Tx pins 3 & 4 are connected together and to the case.
On Rx pins 2, 3, & 4 are connected together and to the case



Typical Current Loop Output INSR-3001

Power Terminal Block Connections

Pin	Function
1	Alarm output for use with optional Alarm Sensing Unit ALM-1000. No other connections should be made to this terminal.
2	+11 to 24 DC or AC Volts input
3	AC or DC return (Common to Housing)

Be certain to check all connections, settings and voltages before applying power.

Indicator Lights

Indicator	Lights when
Pwr	Proper power is present.
Alrm	The loss of data alarm is activated and any failure mode is present.
Link	The transmitter and receiver are linked.
Hi Limit	An input signal has exceeded the (+) limit. This applies to voltage or current mode.
Lo Limit	An input signal has exceeded the (-) limit. This applies only to voltage mode.