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

Litelink®
Fiber Optic Supervised Contact Closure Transmission System

CT-7204, CR-7204

The CT/CR-7204 system consists of the CT-7204 transmitter and CR-7204 receiver and will transmit four independent supervised contact closures over a single fiber optic conductor.

Technical Specifications

Number of channels	4 Independent contacts
Speed/Response Time	10 milliseconds maximum
Transmitter Input to close	2.91 and 3.70 volts DC
Transmitter input impedance	2 K ohms +/-1% (to ground)
Receiver Output	Isolated contacts
Output Contact Ratings	0.5 A @ 125 VAC (62.5VA) 1.0 A @ 24 VDC
Output Contact Carry Current	2.0 A maximum
Output Contact Resistance	100 milli-ohms maximum
Operating Wavelength:	850nm, 1310nm, or 1550nm
Optical Loss Budget	0 to 10 dB (0-12 if single mode)
Signal Connectors	Removable Terminal Block
Operating Temperature Range	-35º to +75ºC
Power Requirements	11 to 24V AC/DC @210 mA
Physical Size (mm) CT-7204	5.0"(127)H x 1.0"(25.4)W x 7.0"(178)L
Physical Size (mm) CR-7204	5.0"(127)H x 1.0"(25.4)W x 3.0"(76)L

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

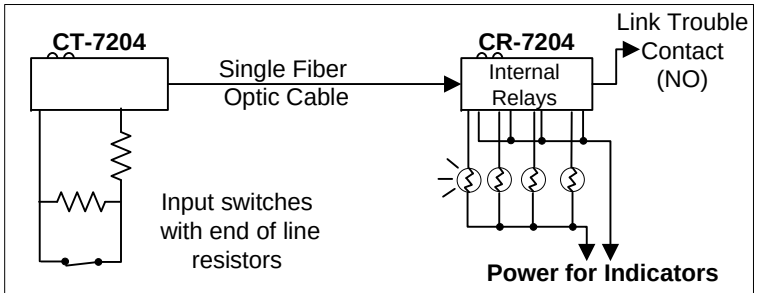
Litelink®
Fiber Optic Transmission Systems
www.LiteLink.com
USA 516-931-2800

Installation Instructions

To close a contact, the voltage at the CT-7204 input must be within predetermined range. Any voltage that differs from the predetermined values will result in an open contact condition at both the transmitter and companion CR-7204 receiver. If the CT-7204 loses power or the fiber is cut all of the CR-7204 contacts will remain in their last state before the break and the alarm condition will be indicated.

All inputs are transient protected against excessive surges on the signal and power leads. Integral indicators are provided on both units to continuously indicate the link and contact closures status as well as proper operating power to simplify troubleshooting.

The diagram below shows the typical installation of the CT-7204 and CR-7204 fiber optic contact closure transmission units.



Typical Fiber Optic Contact Closure Application

Note that the CR-7204.receiver output contacts are fully isolated from each other and any other terminal.

The Alarm switch is used to turn the alarm function on and off.

Indicator Lights

Indicator	Lights when
Pwr	Proper power is present.
Alm (alarm)	Loss of the optical carrier occurs(This usually signifying a broken fiber or excessive optical path loss) or contact trouble (short or open wire)
Contact (1-4)	A closed contact is present at the respective input or output.
Link	A valid fiber optic link is present.

Power Terminal Block Connections

Pin	Function
3	AC or DC return (Common to Housing), Ground
2	+11 to 24 DC or AC
1	Alarm output for use with optional Alarm Sensing Unit ALM-1000.

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

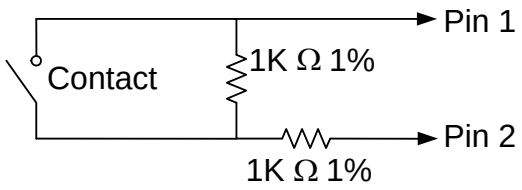
Signal Terminal Block Connections are as follows;

Pins 1, 2 = Channel 1
Pins 3, 4 = Channel 2
Pins 5, 6 = Channel 3
Pins 7, 8 = Channel 4

Pins 9,10,11,12,13 = No connection
Pin 14= Connected to 16 for Normal
Pin 15= Connected to 16 for Alarm
Pin 16 = Alarm Common

Note that the CT-7204 Pins 2, 4, 6 and 8 are common to each other and connected to +5 VDC.

Example CT-7204 Input Wiring for Channel 1



A contact state will be considered open for any of the conditions;

-- Inputs 1 and 2 are shorted together
-- Any of the connecting wires are cut open
-- The Contact switch is open.

To simulate a closed contact on a unused channel (CT-7204) connect a 1K ohm resistor between the channel input pins (pins 1 and 2)

All the CR-7204 output contacts are isolated from each other as well as the housing. The CR-7204 output contacts are only capable of switching a maximum of 0.5 Amperes (10 VA) resistive.

Fail Safe operation

If the fiber is broken or the transmitter loses power, the receiver contacts will all remain in their last state just before the break.

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