SDI-C

SDI CONTACT ALARM SYSTEM

INSTRUCTION BOOK

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DESCRIPTION

These devices transmit relay contact control and alarm signals over any SDI “Serial Digital Interface” link. The control signal is injected onto the signal path using a frequency band that does not interfere with the SDI video signal. This system can be used with any existing SDI video signal to provide contact command and control information carried on the same coax cable.

Contact closures at the SDI-CTX transmitter input will be repeated as relay contact closures at the SDI-CRX receiver output. The unit can be ordered with supervised resistance contact input and outputs.

The SDI-CTX SID Alarm Contact Control Transmitter and the SDI-CRX Alarm Contact Control Receiver together make up an 8 channel alarm and control system. The transmitter injects the control signal at one end of the coaxial cable and the receiver unit recovers the signal and operates relays at the other end of the coaxial cable.

Simply feed your SDI video signal and contact information into one unit and recover the SDI and contact signals at the other end.

There is a separate system alarm contact on the receiver that will operate upon loss of power to the transmitter terminal or loss of transmission path (SDI link failure).

When an SDI signal is applied to the SDI-CTX a small portion of the low frequency spectrum is cleared to make way for a data carrier. That carrier is inserted onto the cable at a -45dBm level to prevent it from interfering with the SDI video signal. After the signal is received by the SDI-CRX the carrier signal is then removed from the coaxial cable.

In this way you can control equipment at the transmitter site over the cable or monitor conditions at the site. The ability to transmit contact controls to the transmitter site or anywhere you need to have them will help you to maintain control of your system. Can you think of a place in your system that you could use remote contact control? If so this equipment will do the trick.

The system is housed in a black ABS enclosure that has a UL flame rating of 94-VO and is powered by 24VAC power transformers.

MOUNTING INSTRUCTIONS

The rugged one piece mounting structure allows you to mount the unit firmly in place with four screws. Select a place to mount the unit away from any harsh or wet environment, mounting indoors or in a weather-tight enclosure is recommended. The SDI-CTX should be located near your originating signals and the SDI-CRX near your alarm panel or the place you wish to bring the signals to. Select a position that gives you the best access to your SDI signal and reduces the labor of installation.

HOW TO CABLE THE SDI-CTX

Connect the SDI signal that you wish to use to the "SDI IN/OUT" BNC connector on the SDI-CTX and connect the coaxial cable going to the SDI-CRX to the "TO SDI-CRX" BNC connector. It is not necessary for power to be on at this time, but if it is the SDI path will only be interrupted during the cable attachment.

Next attach the alarm or control wires for each station to the green connector block marked A through H. Each pair of screw terminals marked A through H are LOOP inputs. Attach your contact closures to these screw terminals. You may use a common ground for contact inputs by identifying the ground contact connector for each pair of contacts A through H and connecting them together or in "Common". An Ohmmeter can be used to determine which connectors are common to ground. Look for continuity between the outer shield on the SDI BNC connector and the grounded side of the A-H terminals.

HOW TO CABLE THE SDI-CRX

Connect the SDI signal coming from the SDI-CTX transmitter's "TO SDI-CRX" BNC connector to the SDI-CRX "TO SDI-CTX" BNC connector. Then connect the "SDI IN/OUT" BNC connector to the next piece of equipment in your digital video chain. This is the SDI video you supplied to the SDI-CTX transmitter at the signal origin.

Next attach the alarm or control wires for each station to the green connector block marked A through H. These wires can go to your alarm panel or control device. Each pair of screw terminals marked A through H are the outputs of relay contacts. The outputs from connector block A through H will duplicate the input contact signal conditions from the SDI-CTX transmitter inputs. A contact closure at A of the SDI-CTX will result in a Relay closure at A of the SDI-CRX and so on for each pair of contacts A through H.

POWER SUPPLY INSTALLATION

The SDI-CTX and SDI-CRX are powered by two 24 VAC wall mount power transformers. Connect a 24 VAC power transformer to the Green terminal block marked AC 24V. At this time you will see the Green LED turn on to indicated power up, it will either be on or will be flashing on and off, depending on the communication status.

OPERATION

When the units have been installed and are operating you will see that when a contact on the SDI-CTX is closed a relay on the SDI-CRX closes. Through the SDI data path the alarm sense is relayed to the alarm panel or other equipment directly. If the power fails on the SDI-CTX or the SDI signal is prevented from reaching the SDI-CRX an alarm contact relay marked "ALM" will close on the SDI-CRX, this is the System Alarm. If a system alarm communication failure occurs between the SDI-CTX and the SDI-CRX all contacts on the SDI-CRX will maintain in the state they were in before the alarm condition and the system alarm contact will close. When communication is restored the contacts will change to match the transmitter contacts. If during a communications failure the power to the receiver unit is removed, all contacts will go open until the power and communications are restored.

CARE AND MAINTENANCE

There is no routine maintenance or calibration required with this equipment. There are no field adjustable controls to adjust inside the box.

APPLICATIONS (WHERE TO USE THE SYSTEM)

This system can be used anywhere that an SDI signal exists. Some uses are in LASER OPTIC, Fiber Optic transmission, STL microwave applications, Digital TV Broadcast transmissions, Cable TV, Alarm and Control and many other applications. Basically anywhere an audio signal goes, you can monitor and control contact closures to control your system.

SDI-CTX

ALARM INPUT	**SPECIFICATIONS**
Channels	8
Connectors	20 Pos. Screw Terminal
Alarm Sense	Contact closure (Loop)
Maximum Loop Resistance	1K or Specify

SDI	
Standard	Any
Impedance	Hi-Z Video loop through
Connectors	2 BNC female Input/Output
Size	5.50"L X 4.3"W X 3.0"D
Power	24 VAC 150 mA

SDI-CRX

ALARM OUTPUT	**SPECIFICATION**
Channels	8
Connectors	20 Pos. Screw Terminal
Alarm Report	A Form Relay 1 Amp Max.
Loop Resistance	1 Ohm or specify

SDI	
Standard	Any
Impedance	Hi-Z Video loop through
Connector	2 BNC female Input/Output
Size	5.50"L x 4.3"W x 3.0"D
Power	24 VAC 150 mA