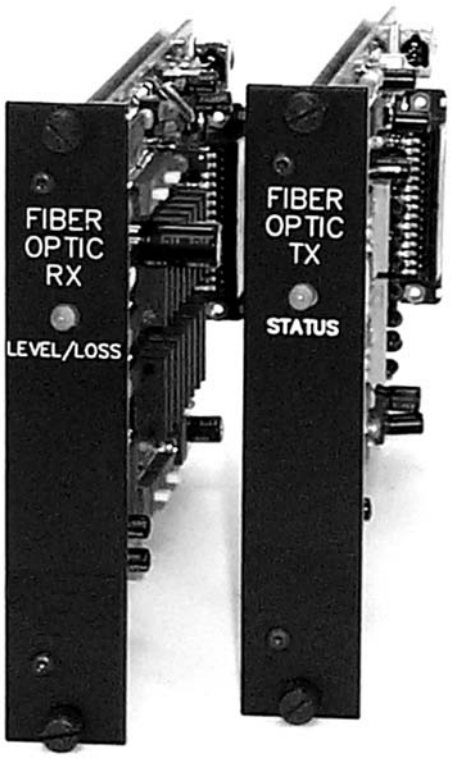
GE
Security

16-Channel Contact/TTL Data System
Models 250D and 2250D

installation instructions



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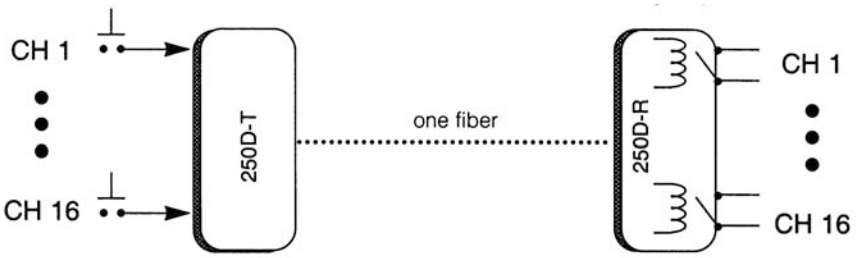

GENERAL
The GE Security 250D system transmits up to 16 channels of low-speed digital data, switch/status information, or control/function signals. The user may program the receiver to provide 16 channels of alternate-action outputs , or eight channels of each type. Outputs are TTL drivers or N/O reed relays.

ABOUT THE SYSTEM
Units are designed for rack mounting in the GE Security Card Cage, 517R Racking System, or in the 501R Miniature Enclosure. If you have ordered standalone units, they have been shipped in a 501R (figure 3, page 3).

Each unit occupies one card-cage slot. Units in the 515R or the 517R are powered from the rack. If using the 501R Miniature Rack, the GE Security power supply, model number 613P is required (ordered separately). Inputs to the transmitter, through the 44-pin connector, are normally held high to +5 volts by means of a 1K ohm pull-up resistor. A closure to ground or an open collector to ground will activate a particular channel. The receiver has a corresponding dry closure or TTL output for each channel. The relays are normally open and the TTL is normally low. Any number of channels up to 16 may be activated at any time. The transmitter's closure need only be momentary, alternate action, or a combination of momentary and alternate action.

TTL OUTPUTS
The receivers are set for relay operation at the factory. If TTL outputs are desired, four switches are provided to convert the channels to TTL in groups of four. Refer to figure 1 for the location of the switches.

OPTICAL INDICATORS
Transmitters include a status LED which, when green, indicates data is being sent.
Receivers include a LEVEL/LOSS indicator which is used to determine received optical power. This LED will glow green when sufficient optical power is received. If this LED is off, it indicates that optical power is not being received and would suggest that the fiber is open or, less likely, the transmitter or receiver is inoperative.

MOMENTARY OR ALTERNATE ACTION OPERATION
Receiver outputs may be set in the field by the user for the desired operating conditions, either 16 channels of momentary operation, 16 channels of alternate action, or eight channels of each type. To make adjustments, locate jumpers E0 and E1 (figure 1 above) found near the 8031 processor on the receiver card. For 16 channels of momentary operation, remove both jumpers. For 16 channels of alternate action operation, install both jumpers. For 8 channels of each type of operation, remove the E0 jumper and install the E1 jumper. Units are shipped with both units installed (all-alternate-action). In the event of power failure, when power is restored, all relays will be in the OPEN position, and the TTL outputs will be low.

IN CASE OF PROBLEMS
If problems should be encountered, first check to be sure power is properly connected to the modules. Also verify that the fiber is good. Then, check the transmitter status indicators. If lit, data is present. Check the Level/Loss indicators on the receivers. If they are green, the fiber optic cable connection is functional.

If any problems arise, please contact the GE Security customer service department and have the following information available: exact model number, product code, and serial numbers of your fiber optic links, and a listing of the diagnostic indicators and their respective color/condition.

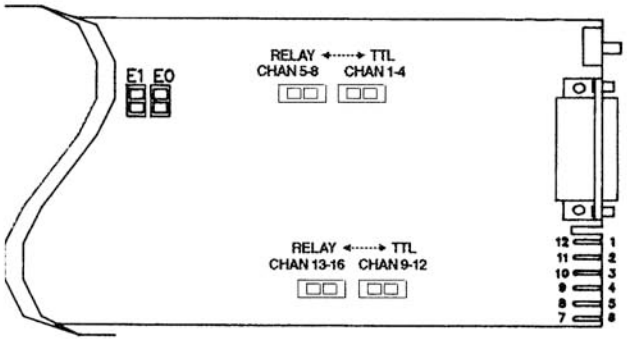

Figure 1. Side view of receiver rack card showing approximate location of receiver output adjustment jumpers E0 and E1, and the four Relay-TTL switches.

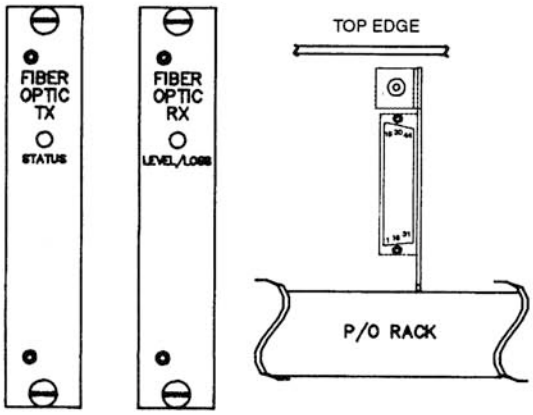

Figure 2. Bezels and rear view of transmitter or receiver (same for both).

TRANSMITTER

Pin	Function
1	Ch. 1 Contact or TTL Input
2	Ch. 2 Contact or TTL Input
3	Ch. 3 Contact or TTL Input
4	Ch. 4 Contact or TTL Input
5	Ch. 5 Contact or TTL Input
6	Ch. 6 Contact or TTL Input
7	Ch. 7 Contact or TTL Input
8	Ch. 8 Contact or TTL Input
9	Ch. 9 Contact or TTL Input
10	Ch.10 Contact or TTL Input
11	Ch. 11 Contact or TTL Input
12	Ch. 12 Contact or TTL Input
13	Ch. 13 Contact or TTL Input
14	Ch. 14 Contact or TTL Input
15	Ch. 15 Contact or TTL Input
16	Ch. 16 Contact or TTL Input
17	no connection
18 - 33	Ground

RECEIVER - RELAY OPTION

Pin	Function
1, 18	Ch. 1 Relay Output
2, 19	Ch. 2 Relay Output
3, 20	Ch. 3 Relay Output
4, 21	Ch. 4 Relay Output
5, 22	Ch. 5 Relay Output
6, 23	Ch. 6 Relay Output
7, 24	Ch. 7 Relay Output
8, 25	Ch. 8 Relay Output
9, 26	Ch. 9 Relay Output
10, 27	Ch.10 Relay Output
11, 28	Ch. 11 Relay Output
12, 29	Ch. 12 Relay Output
13, 30	Ch. 13 Relay Output
14, 31	Ch. 14 Relay Output
15, 32	Ch. 15 Relay Output
16, 33	Ch. 16 Relay Output
17	no connection
41 - 44	Ground

RECEIVER - TTL OPTION

Pin	Function
1	Ch. 1 TTL Output
2	Ch. 2 TTL Output
3	Ch. 3 TTL Output
4	Ch. 4 TTL Output
5	Ch. 5 TTL Output
6	Ch. 6 TTL Output
7	Ch. 7 TTL Output
8	Ch. 8 TTL Output
9	Ch. 9 TTL Output
10	Ch.10 TTL Output
11	Ch. 11 TTL Output
12	Ch. 12 TTL Output
13	Ch. 13 TTL Output
14	Ch. 14 TTL Output
15	Ch. 15 TTL Output
16	Ch. 16 TTL Output
17	no connection
41 - 44	Ground

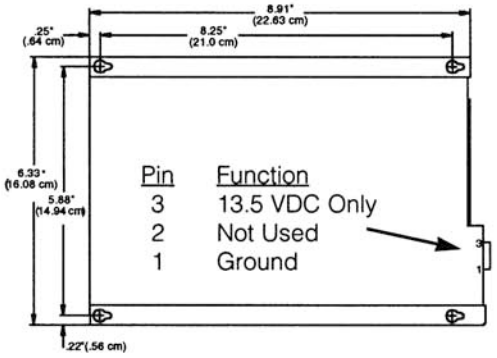

Figure 3. 501R Miniature Enclosure

NOTE: To provide earth ground reference, Stand Alone (Enclosure) modules need to be connected to a good earth ground. This can be accomplished by connecting a copper-based conductor from the modules ***DC Common/Ground*** pin to an approved earth ground.

Customer Support

For assistance in installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, please contact technical support during normal business hours (Monday through Friday, excluding holidays, between 6 a.m. and 5 p.m. Pacific Time).

GE Security

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