

INSTALLATION INSTRUCTIONS

Model FS-DLC Device Loop Card

INTRODUCTION

The Siemens Device Loop Card (FS-DLC) is the driver for the Siemens P2 Addressable smoke detectors, manual stations, monitor devices and control devices used on the FS-250 Fire Alarm System Control Units. The FS-DLC contains 9 LEDs for diagnosis of problems.

OPERATION

The FS-DLC initializes, operates, and maintains all devices residing on the loop. The FS-DLC communicates all relevant device and event information, such as alarms and troubles, to the Main System Board. The sensitivity of any intelligent smoke detector and the logic functions of any intelligent output devices can be checked and adjusted from the system display and keypad. All information about the devices on the loop can be displayed on the system display. The FS-DLC allows the system polarity insensitive devices to be connected without generating errors.

The FS-DLC supports one loop of 252 Siemens P2 intelligent field devices (252 addresses) as well as device accessories (relay bases, audible bases, and remote lamps) in any combination. (The on-board microprocessor provides the FS-DLC with the ability to function and initiate alarm conditions even if the main board microprocessor fails.)

The FS-DLC contains one reset switch, and 9 LEDs as shown in Figure 1. Pushing the RESET switch (S1) re-initializes the FS-DLC operation.

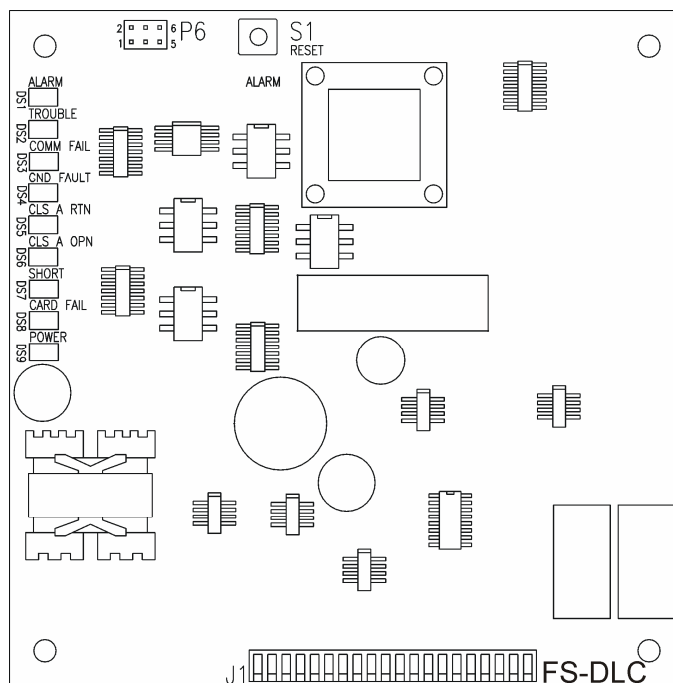


Fig. 1

The LEDs' functions are defined as follows:

LED Function	Color	Normal Condition	Action
ALARM	(Red)	Normally OFF	When illuminated, indicates that the FS-DLC has detected an alarm.
TROUBLE	(Yellow)	Normally OFF	When illuminated, indicates that the FS-DLC has detected a trouble on its field wiring.
COMM FAIL	(Yellow)	Normally OFF	When illuminated, indicates that the communication between the main board and the FS-DLC has terminated and the card goes into degrade mode.
GND FAULT	(Yellow)	Normally OFF	When illuminated, indicates that the FS-DLC has detected either a negative or positive ground fault on its field loop wiring.
CLS A RTN	(Yellow)	Normally OFF	When illuminated, indicates a return wire on the loop is reversed if the loop was set to Class A.
CLS A OPN	(Yellow)	Normally OFF	When illuminated, indicates a wire is open on the loop if the loop was set to Class A.
SHORT	(Yellow)	Normally OFF	When illuminated, indicates a wire short in the loop wiring.
CARD FAIL	(Yellow)	Normally OFF	When illuminated, indicates the card microprocessor has failed.
POWER	(Green)	Normally ON	When illuminated, indicates the power for the FS-DLC is applied to the card.

PARTS SUPPLIED

- 1 Loop Driver Board
- 4 Spacers, 1"
- 1 Instruction Sheet

The following table gives the currents necessary for power supply and battery calculations.

Model	Output Voltage	Input Current	
		Normal Standby	Maximum (Alarm)
FS-DLC	24 V DC	150mA + 1.8mA per device	150mA + 1.8mA per device

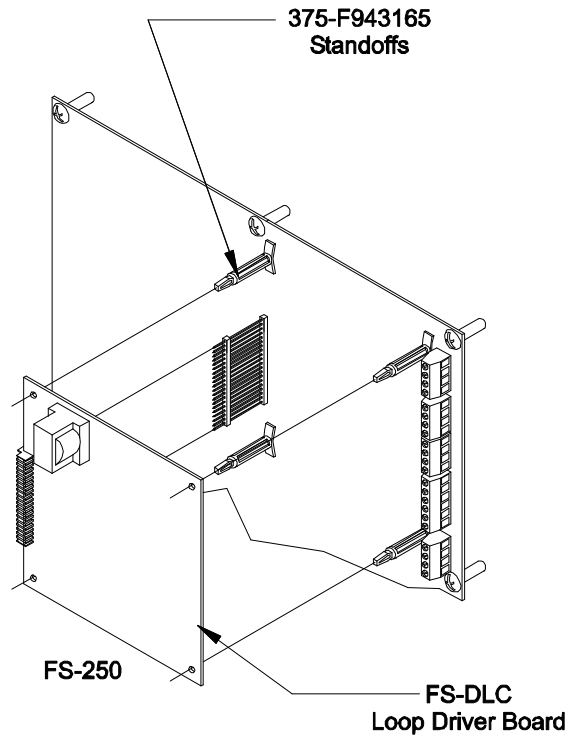
Maximum Current in Shorted Condition: 0.375 A.

WIRING

Disconnect BATTERY and AC prior to working on equipment.

Loop Driver Board(s) Mounting on FS-250 Main Board

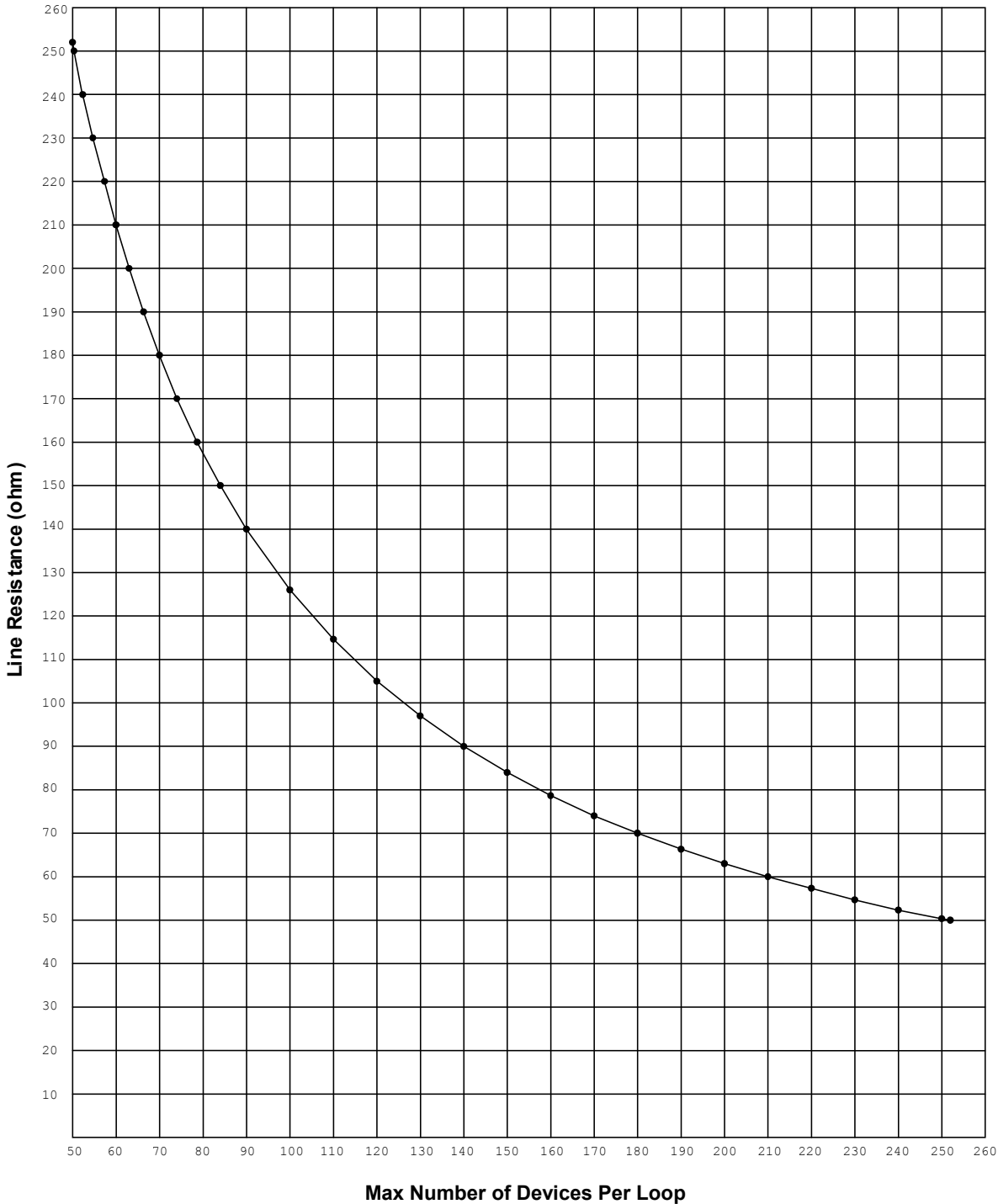
1. Place the provided standoffs (P/N 375-F943165) in locations shown on the Main Board.
2. Carefully align connector J1 on the Loop Driver Board with connector J9 on the FS-250 Main Board (P/N FS-MB / FS-MB2).



COMPATIBILITY

1. The FS-DLC supports only Siemens P2 intelligent devices. The compatibility identifiers for the compatible devices are the model numbers listed in Appendix B of the FS-250 Owners Manual, P/N 315-049353. Use any combination of those listed.
2. The FS-DLC supports one loop of up to 252 Siemens P2 intelligent field devices.
3. All circuits are power limited to NFPA 70 per NEC 760. The FS-DLC supports the use of 18 AWG min. non-shielded, non-twisted, thermoplastic fixture wire without conduit, if permitted by local building codes.
4. No end of line device is required.
5. Total circuit resistance must not exceed 50 ohms when 252 devices are loaded into one zone. (Refer to the Line Resistance Graph)
Maximum capacitance: 0.5 μ F between line+ and line-
 1.0 μ F between line and chassis
6. T-tapping is not allowed on Class A loops.

LINE RESISTANCE GRAPH



FS-DLC LINE RESISTANCE vs MAX NUMBER OF DEVICES

Note: The total number of devices can not exceed 252.