

TDM-500i

Intelligent Dialer

Technical Manual



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1 Introduction

Telefire's TDM-500i Intelligent Dialer is intended for use in fire-, security- and safety detection systems to automatically dial and play pre-recorded voice messages on alarm and trouble events to emergency services and key personnel.

The TDM-500i is available in the following configurations:

- **TDM-500i** – the standard version that uses 24Vdc input
- **TDM-500i/12** – an optional version that uses 12Vdc input

The TDM-500i has the following features:

1. Programming phone numbers and recording messages integral to the dialer, without additional tools.
2. Programming of separate phone lists and messages for two distinct and separate events.
3. Programming up to 10 phone numbers for each event (optionally up to 32 numbers)
4. Up to 15-digit phone numbers
5. Digital display of phone numbers and control codes whilst programming and during normal operations
6. Bypass relay to allow connection to non-dedicated phone line
7. Pulse or tone (DTMF) dialing
8. Phone line monitoring, including reporting to the fire alarm control panel
9. Monitoring of the control panel's control lines
10. Optional RS-232 interface
11. Password protection for programming and recording
12. Programmable delay for dialing through in-house telephone switchboards
13. Selectable triggering: either change-level or pulse (input pulse latching)
14. Adding, editing, displaying, and deletion of phone numbers
15. Recording and automatic playback of multiple messages:
 - Message triggered by event A, consisting of two linked segments, the first describes the event (segment A, up to 10 seconds), and the second, location and telephone number (segment C, common to both messages, up to 20s)
 - Message triggered by event B, consisting of two linked segments, the first describes the event (segment B, up to 10 seconds), and the second, location and telephone number (segment C, common to both messages, up to 20s)
 - Or a common messages for both events (up to 40 seconds) – available from version 2.01.05
16. Optional printing of the dialing list and dialer configuration (requires tool P/N GSRS-232)
17. Failure indication and programmable Open Collector (CNT) output
18. Buzzer Silence for telephone line errors – available from version 2.01.05
19. Selection of positive or negative level activation for A or B inputs – available from version 2.01.05



Warning

Connect to the Open Collector only equipment that draws less than 150mA.

2 Compatibility (all equipment except control panels)

2.1 Control Panels

The TDM-500i is compatible with the following control panels:

- ADR-3000 analog addressable control panel
- All TSA-1000 models
- TSA-1000X
- TSA-200 and TSA-200X
- All GSA-1000 models
- GSA-2B

3 Installation

The TDM-500i dialer can be installed either in close proximity to the control panel or at a distance, as the control lines are monitored.

The dialer’s enclosure includes wire openings. Do not drill holes in the enclosure.

3.1 Cabling

Connect the telephone company’s (TelCo) line directly to the dialer’s LINE connection.

Connect the telephone for regular use to the TEL connection.

Connect the dialer to a battery-backed power source from the control panel.

Connect the dialer to the control panel as per the diagrams on page 7 onwards.



Warning

Connect the dialer to proper ground – see page 7 onwards. Improper grounding may cause improper operation of the dialer under certain conditions.

4 Programming

Programmed data is retained in non-volatile memory even without a power source.



Note

Do not disconnect power after programming before exiting programming state with the **Exit** key.

When error messages are displayed, press the **Prog** key for several seconds in order to enter programming mode.

4.1 Dialer Configuration

Press **Prog** – the display will show “_.”. Key in the password (default **9241**). The display will change to **P**. Key in **1** and the display will change to **d**.

Press	Display	Programming	Range	Factory Default
1	–	Dialing method 0 – Pulse 1 – DTMF	0 / 1	1
2	–	Dialing Cycles	1 – 9	4

Press	Display	Programming	Range	Factory Default
3	–	Delay in Seconds – delay while dialing through switchboards	1 – 9	1
4	–	Message Repeats	1 – 9	4
5	–	Event latching 0 – unlatched 1 – latched	0 / 1	0
6	The display will show the current programming and C . Key in Enter to confirm and the display will change to _	Select level activation polarity (version 2.05.01 and above) 00 – A negative; B negative 01 – A negative; B positive 10 – A positive; B negative 11 – A positive; B positive	00 – 11	01
7	–	Outgoing messages 0 – multiple A, B, C 1 – single message (version 2.05.01 and above)	0 / 1	1
9	–	See output control table below		
*	C .	Restore to factory default. Press ENTER to confirm. The dialer will show E10 (no recorded messages) as confirmation		

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Note

Configure the dialer (option 6) to **01** when connecting to ADR-3000, GSA-1000 or GSA-2B
 Configure the dialer (option 6) to **11** when connecting to TSA-1000 or TSA-1000X
 Configure the dialer (option 6) to **10** when connecting to TSA-200, or TSA-200XT or TSA-200X

Press	Display	Output Programming	Output		Factory Default
			Voltage between CNT and +24V	Voltage between CNT and +12V	
9	The display will show the current programming and C . Key in Enter to confirm and the display will change to _	00 – output not used			00
		10 – DC present	24 V	12 V	
		11 – DC present	0 V	0 V	
		20 – TelCo line connected	24 V	12 V	
		20 – TelCo line disconnected	0 V	0 V	
		21 – TelCo line connected	0 V	0 V	
		21 – TelCo line disconnected	24 V	12 V	
		80 – No fault present	24 V	12 V	
		80 – Any fault present	0 V	0 V	
		81 – No fault present	0 V	0 V	
		81 – Any fault present	24 V	12 V	

4.2 Configuring Dialing List

Press **Prog** – the display will show “_”. Key in the password (default **9241**). The display will change to **P**.

Key in **2** and the display will change to **L**.

Key in **1** for dialing list A or **2** for dialing list B.

Press	Display	Programming
1	L	Add a phone numbers and press Enter .
2	_	Edit a number (see “Editing Dialing List” below)
0	F	Display available space
#		Display sequence number in dialing list + programmed phone number + available space (see “Displaying Dialing List” below)
*	C .	Erase dialing list. Press Enter to confirm.

Key in the switchboard’s access number, **#**, and the phone number to delay dialing through a switchboard.

4.2.1 Editing Dialing List

Enter the sequence number in the list and the new number.

Let’s assume, for example, that two numbers were programmed. The first is 03 921 1955, and the second 03 921 1111. Replacing the second number (03 921 1111) with a new number (say, 03 921 1816) will be done thus:

Select dialing list A or B (see “Configuring Dialing List”, above) and enter **2** to edit (display will show _). Key in **02** to select the second number (display will show **L**). Enter the new number and press **Enter** to confirm.

4.2.2 Displaying Dialing List

Display of the phone number’s sequence, the programmed phone number, ending with available space.

As an example, let’s say that two numbers were programmed into the dialing list. The first is 03 921 1955, and the second 03 921 1816.

Displaying the dialing list will cause the following number sequence:

01	039211955	02	039211816	F08
Sequence	Phone number	Sequence	Phone number	Available space

4.3 Printing Dialing List and Configuration

Press **Prog** – the display will show “_.”. Key in the password (default **9241**). The display will change to **P**.

Key in **2**. The display will change to **L**. Pressing **#** will print the dialing lists and configuration on a serial printer connected via an RS-232 adapter (GSRS-232).

4.4 Message Types

4.4.1 Single Message (factory default)

A single 40 second message that is activated by either event A or B

4.4.2 Multiple Messages

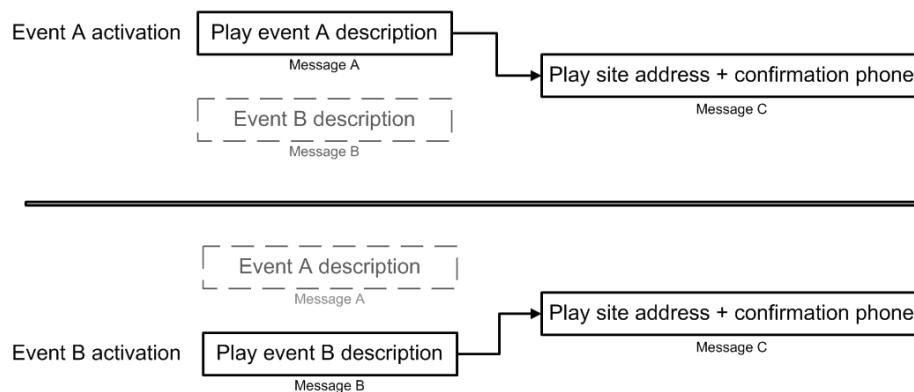
See option 7 on page 3.

When configured to multiple messages, the system has three messages as follows:

- Message A – describes the event that triggers by input A
- Message B – describes the event that triggers by input B
- Message C – describes the site’s address + phone number for confirmation.

Event A will cause the playing of message A followed by the playing of message C.

Event B will cause the playing of message B followed by the playing of message C.



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It is also possible to record a single 40-second message (see option 7 in the dialer configuration menu on page 3). This message will be played by either input A or input B.

4.5 Recording, Playing, or Deletion of Messages

Press **Prog** – the display will show “_.”. Key in the password (default **9241**). The display will change to **P**. Key in **3** and the display will change to *n*.

A single message is up to 40 seconds. Messages A and B are up to 10 seconds each. Message C is up to 20 seconds.

To stop recording before the full time press the “**Exit / Stop Rec**” key.

During recording the lines in the bottom of the 7-segment will flash. During playback the lines in the top of the 7-segment will flash.

Press	Display	Program
1 ¹	C.	Press Enter and record Message A
2 ¹	C.	Press Enter and record Message B
3 ¹	C.	Press Enter and record Message C
4 ¹		Play back message A.
5 ¹		Play back message B
6 ¹		Play back message C
7 ¹		Play back messages A and C
8 ¹		Play back messages B and C
9		Play single message
0	C.	Press Enter and record single message
*	C.	Press Enter – display shall show E . Press 1 to erase message A, 2 to erase message B, 3 to erase message C. To erase all messages or a single message press # .

The dialer plays the messages immediately after recording. To listen to the messages connect a loudspeaker to the SP connector.

4.6 Changing Password

Press **Prog** – the display will show “_.”. Key in the password (default **9241**). The display will change to **P**. Key in **4** and the display will change to **U**.

Press	Display	Program
1	_.	Enter new password. Display will change to C . Confirm by pressing Enter

4.7 Error Messages

Error messages are displayed by flashing the following digits in the display:

	Description	Resolution
E01	Checksum error	Enter programming mode and quit it by pressing the Exit key
E02	Data mismatch	Restore factory default and reprogram
E03	Empty or damaged dialing list	Program at least one number to one of the dialing lists
E10	<ul style="list-style-type: none"> Missing Message Three messages are recorded and dialer configuration was changed to a single message or vice versa 	Record messages A, B, C, or single outgoing message according to dialer configuration

¹ This option is valid only if configured to multiple messages.

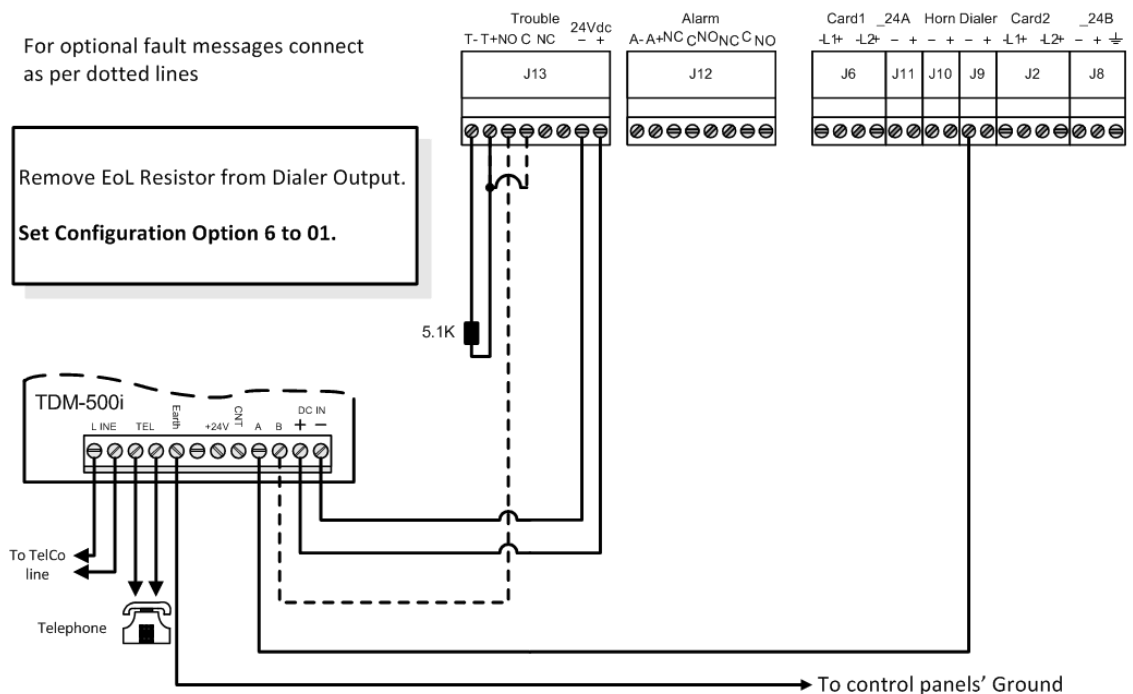
	Description	Resolution
LE	Line Error	Connect TelCo line or report line error to your local telephone company.

4.8 TelCo Line Error – Buzzer Silencing

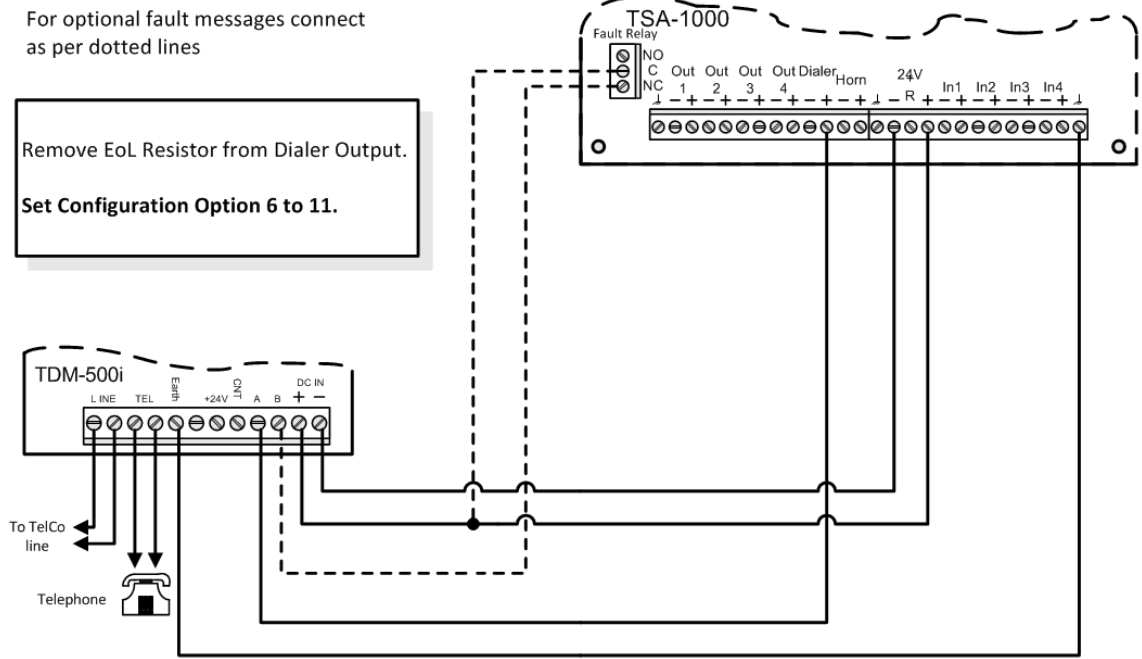
The telephone line is supervised. When there is no connection the TDM-500i will beep as an indication that there is a line failure. Press the **Exit** key for a few seconds to silence the buzzer.

5 Connection Diagrams

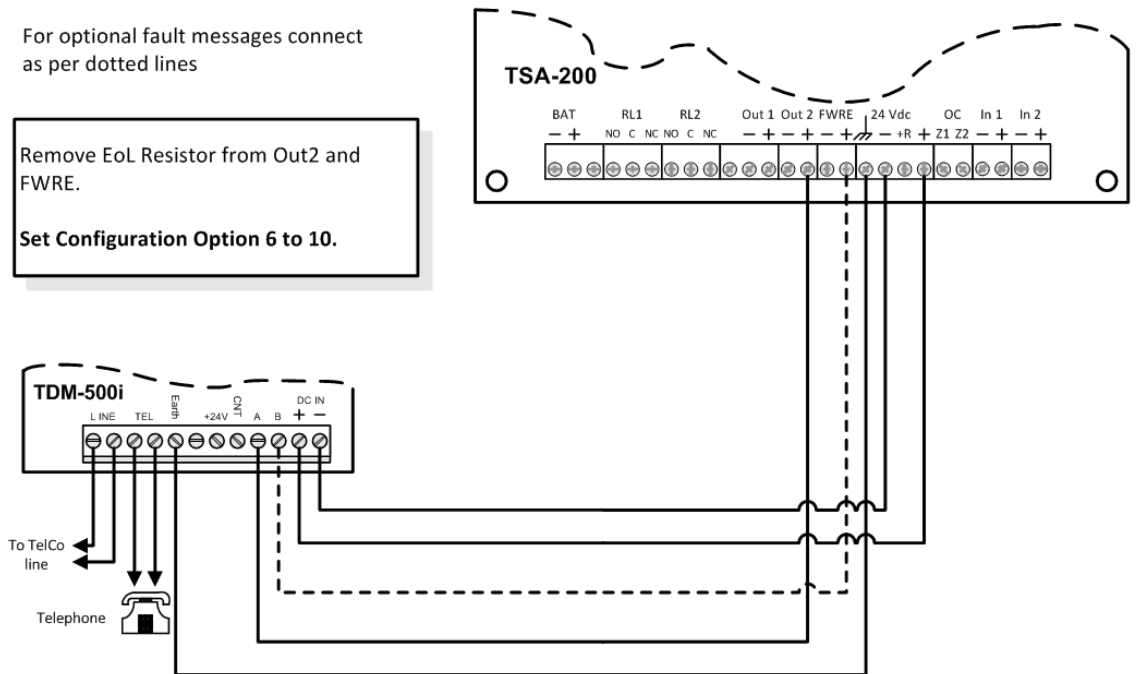
5.1 Connecting a TDM-500i to an ADR-3000



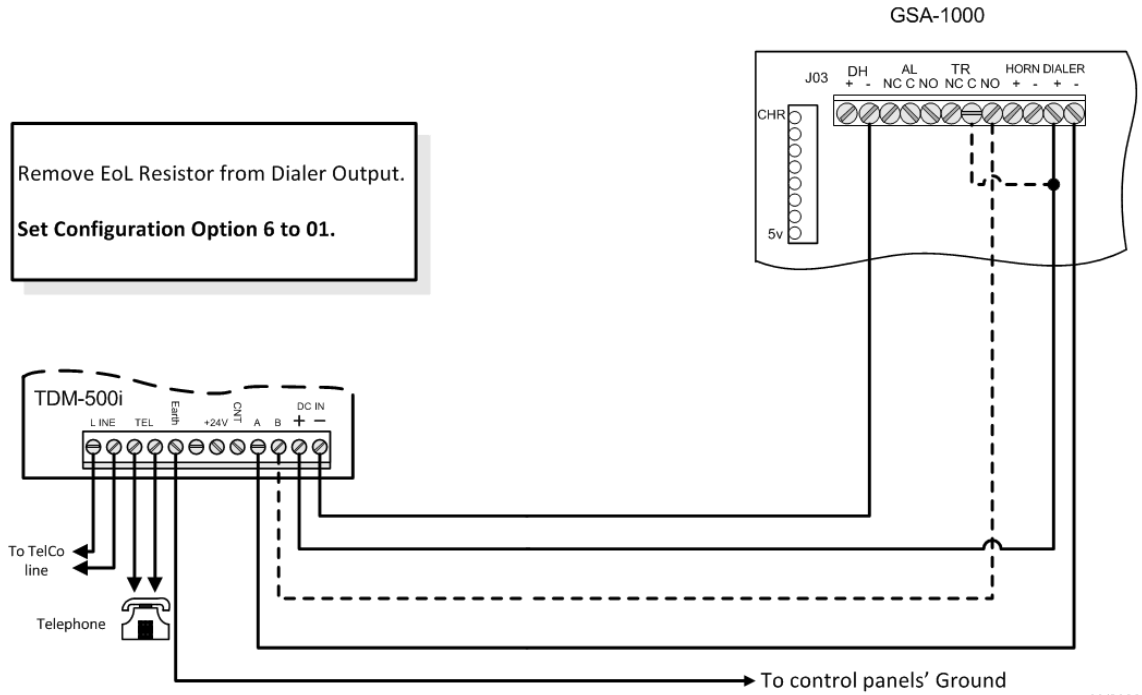
5.2 Connecting a TDM-500i to a TSA-1000 / TSA-1000X



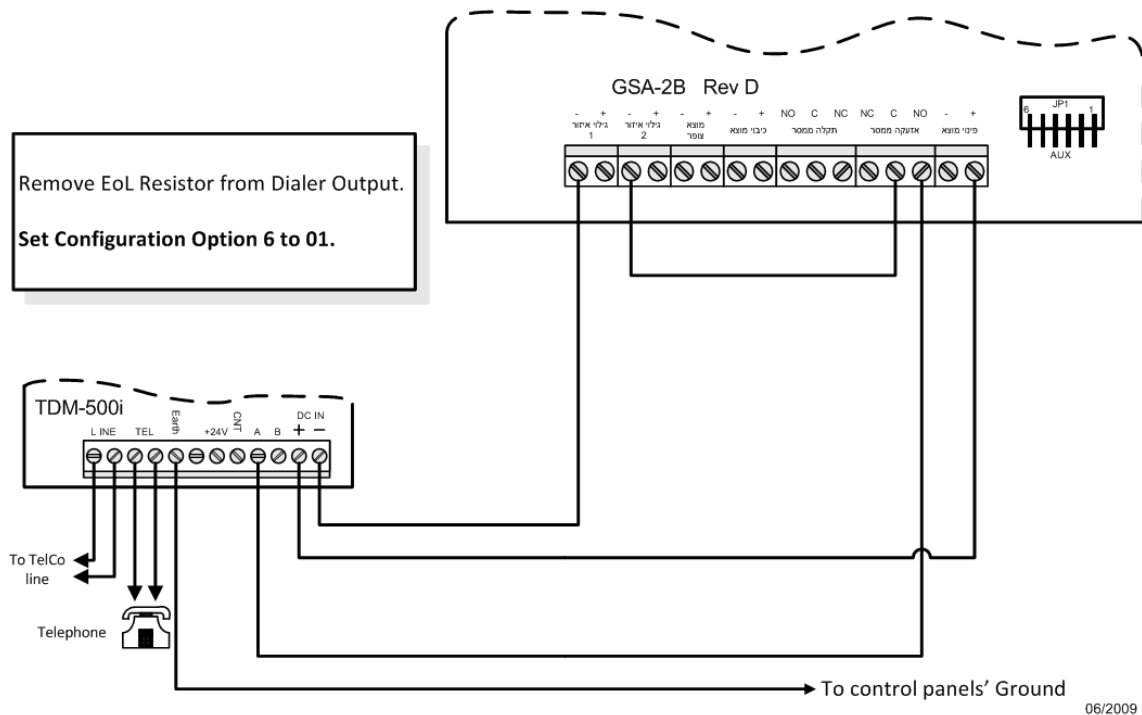
5.3 Connecting a TDM-500i to a TSA-200 / TSA-200XT / TSA-200X



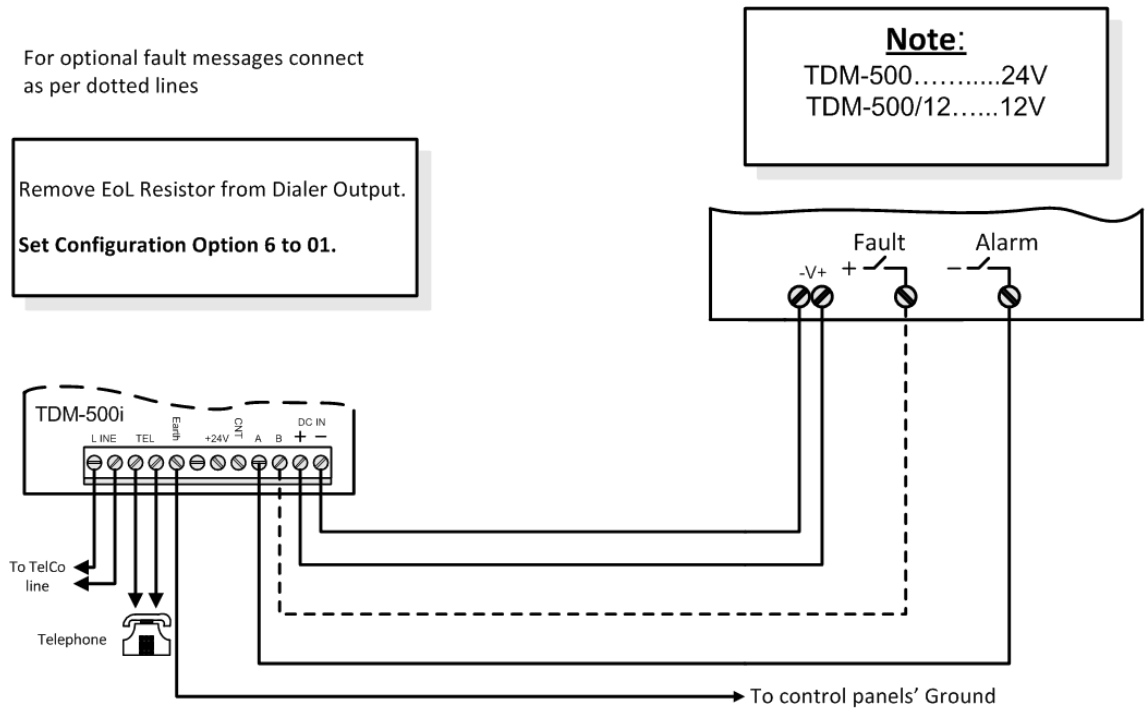
5.4 Connecting a TDM-500i to a GSA-1000



5.5 Connecting a TDM-500i to a GSA-2B



5.6 Connecting a TDM-500i or a TDM-500i/12 to a Generic Control Panel



6 Specification

Dimensions (W / H / D)	167 / 125 / 33 mm
Weight	600 gr.
Operating Temperature Range	-10°C – +60°C (14°F – 140°F)
Relative Humidity Range	10% – 93% non-condensing
Operating Voltage (nominal):	
TDM-500i:.....	24Vdc
TDM-500i/12:.....	12Vdc
Current Consumption:.....	20mA (Standby) 40mA (Dialing)

All values are nominal. Specifications are subject to change without prior notice

7 Certification

Telefire's TDM-500i Conventional Intelligent Dialer has the following approvals:

- Israeli Communication Authority 7-10205-0-100760
- Approved by the Israeli Standards Institute