TALINOR (UK) LTD.
ELEVATOR ELECTRONICS MANUFACTURERS

ELEVATOR SPEECH UNIT DBR4

DATA SHEET

- Solid State Recording.
- Sequential messages for up to 32 floors.
- Five auxiliary messages.
- Many signalling options: Binary code, Gray Code, Discrete (one wire per floor), **Stand-alone**.
- 2, 4, or 8 minutes total recording time.
- Desktop or on-site Message editing via PC (Personal Computer).

Description

The speech unit is a microcomputer based message enunciator for elevators. There are two message lists used for different purposes:

1. Sequential messages for announcement on each floor.
2. Auxiliary messages for special announcements.

Messages can be edited and recorded via a PC, or on0site using a laptop, and then downloaded to the unit for playback. (Model CV)
It is also possible to record messages directly to the DBR4 using the on-board microphone. (Model RV)

Messages types: Sequential messages for floor announcements.
Auxiliary messages for special announcements.

Message count: Sequential messages : 32 messages max.
Auxiliary messages : 5 messages max.

Message duration: Sequential messages : 95 Seconds total time.
Auxiliary messages : 25 Seconds total time.
Sequential message duration can be extended to 215 seconds or to 455 seconds depending on speech, integrated circuit and model.

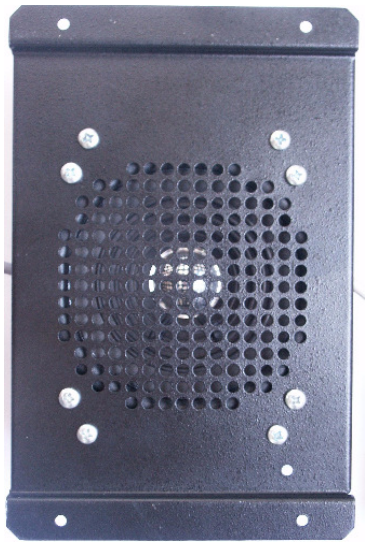
Message selection: 1. Sequential messages are selected by a five bit binary combination, terminals Y1…Y5. These can be factory set active high or active low by request (default setting: active high). Gray code is also available.
2. Auxiliary messages are selected via one wire per message input.

Message activation: Sequential Messages: Sequential messages are activated by the "Talk" input pin, triggered, usually, via the 'car slowing' output from the controller, this ensures that the unit only announces floors at which the lift car is stopping. (Also available on request, activation of sequential messages when the binary code changes, effectively creating a talking position indicator, i.e. the unit will announce each floor whether stopping or not.)
Auxiliary messages: Auxiliary messages are activated by pins 1 to 5. If two or more auxiliary inputs are activated simultaneously the messages will sound one after the other in the sequence the commands were received.

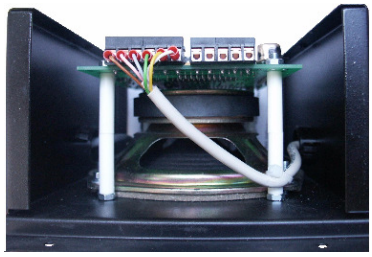
Message recording: Computer recording: Messages can be recorded on any PC using any commercial voice processing software capable of generating .wav files (this software is easily available).
Studio recording is possible if messages are recorded in .wav format.
Each message must be recorded to its own .wav file and can then be downloaded using Talinor's free software package "WAVEPLAY" which is supplied with the unit.
Direct recording: There is also an option to enable recording directly to the DBR4 (without a PC) via an on-board microphone. (Request model 'RV'.)

Top View

Underside View



Side View



Playback
The “Play “ button triggers playback of recorded messages for checking quality, volume, clarity etc.

Downloading

When the messages have been saved on your computer as individual .wav files a play list must be created in “WAVEPLAY” which lists the message files to be recorded to the DBR4. If sequential and auxiliary messages are required two play lists must be made, one for sequential messages and the other for auxiliary messages.

PC System requirements:
1. Mouse.
2. 16 Bit color graphic card.
3. Sound Card.
4. 3Mb Hard disc space.
5. Windows 98 or Windows XP

Installation of WAVEPLAY2 program for Windows98:
1. Insert the supplied CD ROM.
2. Click **START** button on windows task bar, click **RUN** and open “**A:\SETUP.EXE**”, click **OK**. Follow the instructions on the screen.

Installation of WAVEPLAY3 program for Windows XP:
1. Insert the supplied CD ROM.
   The installation will start automatically.

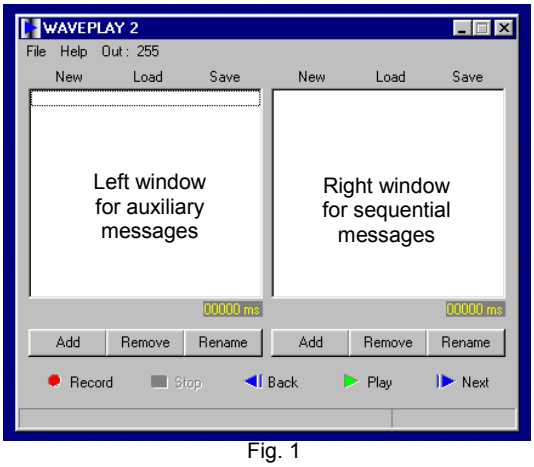


Fig. 1

After starting WAVEPLAY
The messages can be recorded to the DBR4 when:

1. Messages have been created and saved on your computer.

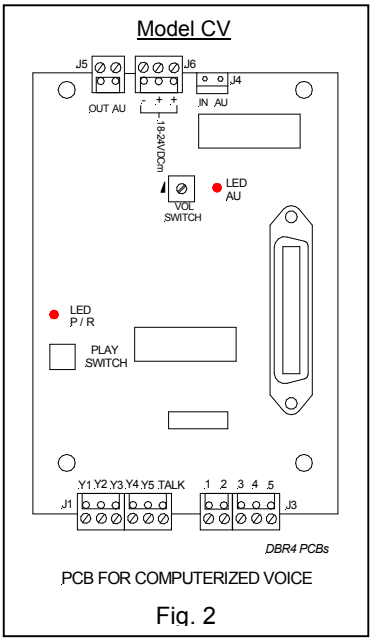
2. The DBR4 is connected according to Fig. 4 except that J1 and J3 should not be connected.

Downloading Procedure

Double click on the “WAVEPLAY” icon to start the program. The “WAVEPLAY” window will open. (See fig. 1 (above).)
Connect the DBR4 according to the connection diagram (fig 2).
To download the sequential messages play list click the **LOAD** button on the right window (fig. 1).
(The right window is dedicated to sequential messages.)
Assign (click on) the desired .wpl file (play list) and click the **OPEN** button. The play list will appear in the right window.
To download the auxiliary messages play list click the **LOAD** button on the left window (fig. 1).
(The left window is dedicated to auxiliary messages.)
Assign (click on) the desired .wpl file (play list) and click the **OPEN** button. The play list will appear in the left window.

To create a new play list (.wpl file):

1. Click the **NEW** button (left for auxiliary or right for sequential messages).
2. Click the **ADD** button. Now select the appropriate .wav files and click on the **OPEN** button, the messages will appear in the window. The messages will be announced in the order in which they appear in the window. To change the order place the cursor over the message to be moved, press and hold the left mouse button and move the message to its new location within the window, then release the mouse button.



PCB FOR COMPUTERIZED VOICE
Fig. 2

3. To save the play list click the **SAVE** button, name the play list and click **SAVE**. A .wpl file will be created on your hard disc for future use.

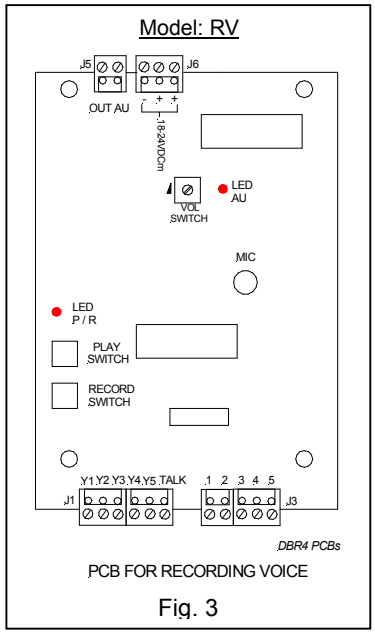
Note: since there are two windows you can create two play lists (one in each window) simultaneously. Each window has to be saved separately.

To listen to your play list, through your PC's speakers, click on a message in the window and click the **PLAY** button, click on sound mixer icon on your task bar (usually a yellow speaker) and move the mixer slides to set the sound level so that the "AU" lamp on the DBR4 blinks as the message is sounded. If the "AU" lamp is on continually as the message is sounded the audio level is too high. If the "AU" lamp does not light the message audio level is too low. (The audio level needs to be adjusted for one message only.)

To download the messages in the window (fig2) to the DBR4 click on the **RECORD** button. The following will show: "**MESSAGE RECORDING PLEASE WAIT**", the P/R lamp will light and the messages in the right window (the play list) are transferred to the DBR4 speech unit. The sequential messages (right window) are transferred first and afterwards (7 sec delay) the auxiliary messages (left window) will be transferred.
When all the messages (sequential and auxiliary) have been transferred the P/R lamp will switch off.

To play back your messages:
1. Sequential messages: Make sure the P/R lamp is off. Press the **PLAY** button on the DBR4 for less than 0.5 sec. The P/R lamp will light continuously. While it is lit press the **PLAY** button again to listen to the first message, then again to listen to the next message and so on until all the messages have been heard. The P/R lamp will turn off if the button is not pressed for four seconds ending the play back session.
2. Auxiliary messages: Make sure the P/R lamp is off. Press the **PLAY** button on the DBR4 for more than 0.5 sec until the P/R lamp blinks. While blinking press the **PLAY** button again to listen to the first message, then again to listen to the next message and so on until all the messages have been heard. The P/R lamp will turn off if the button is not pressed for four seconds ending the play back session.

Comment: If you don't need to save the play list for future reference play list (.wpl file) creation can be avoided. Simply add .wav to the window and download them to the DBR4, do not save the window.



PCB FOR RECORDING VOICE

Fig. 3

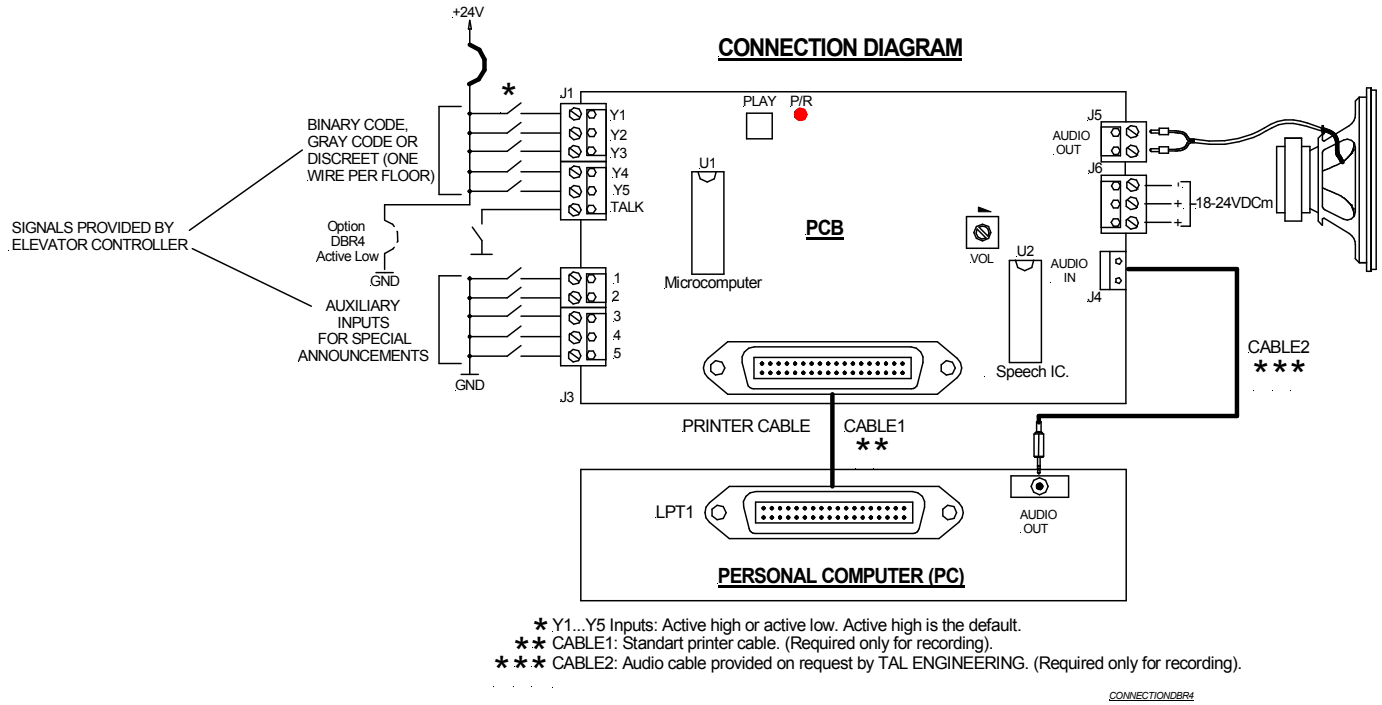


Fig. 4

Specifications

Supply voltage	18-24VDCm, (32V DC max) , 500mA. Peak
Logic Input levels	"0" < 5v, " 1" > 10v.
Audio input level	100 mV
Audio output level	10W max.
Total recording time	120 Sec, 240 Sec, 480 Sec
Max single message time	14 Sec
Housing	Metal or Plastic Box (also available with no housing)
Packed weight	1.2 Kg
Package Dimension	240mm x 164mm x 176mm
Contents of package	Speech Unit, Speaker, Mounting Hardware

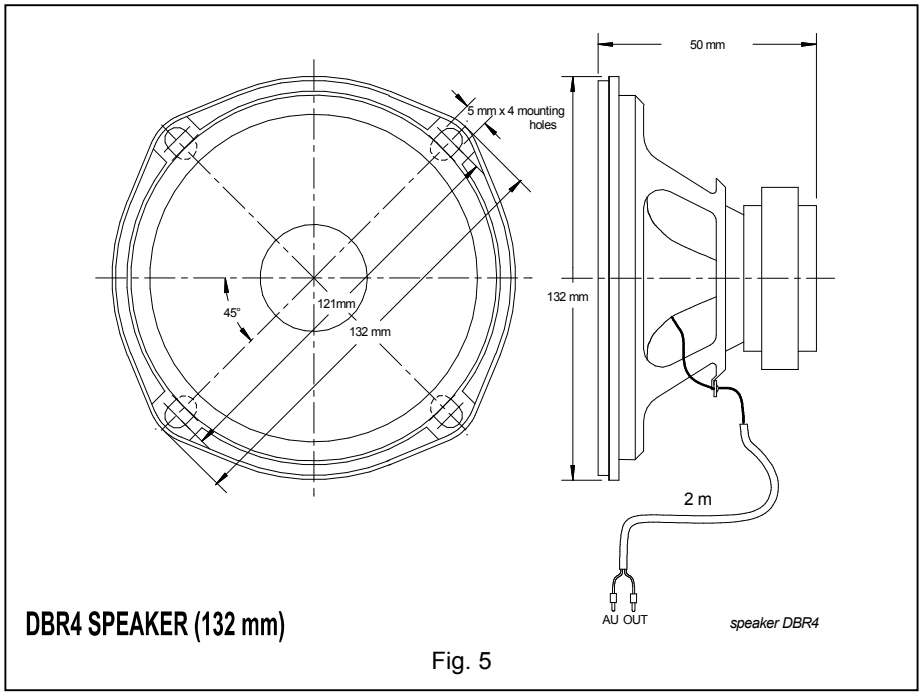


Fig. 5

Speaker for Car Operating Panel

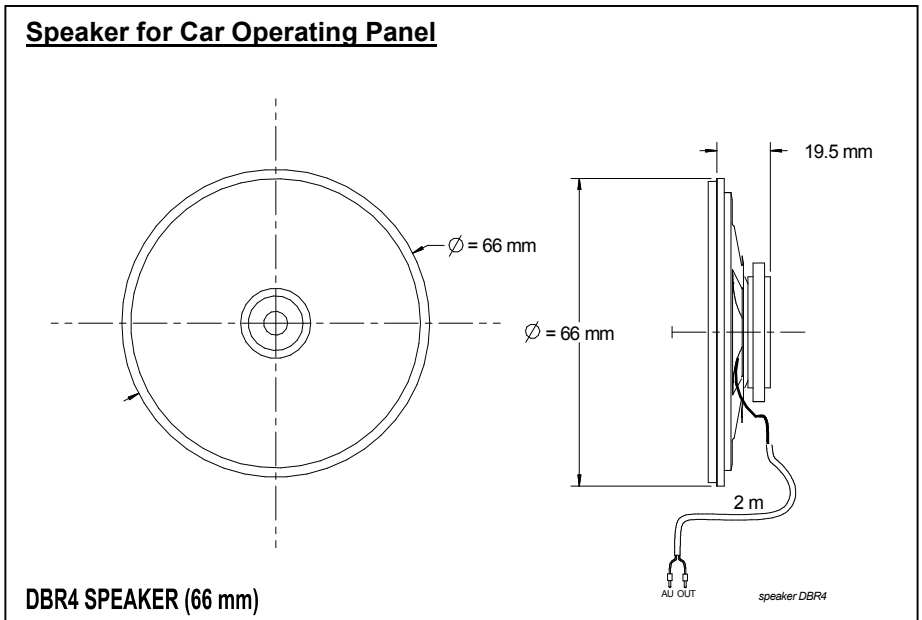


Fig. 6

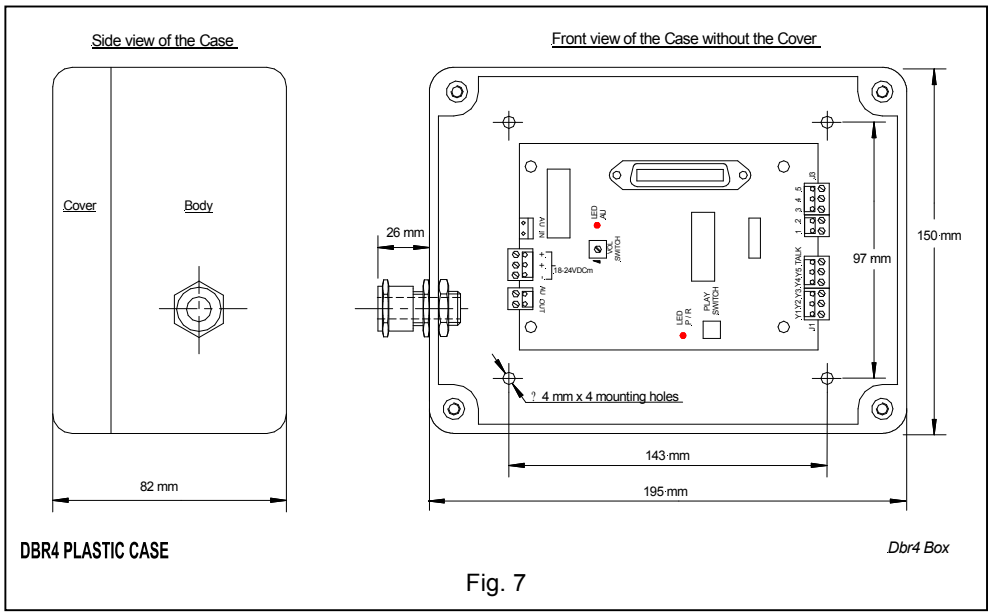


Fig. 7

Accessories

The speech unit comes with the following accessories:

1. Free Talinor software for PC recording (on request).
2. Audio cable for PC recording (on request).
3. Speaker (132mm) (please refer to fig. 5). A smaller speaker (66 mm) for installation in the car operation panel is also available on request (please refer to fig. 6).

SPEECH UNIT WITH INTERNAL SPEAKER

The DBR4 is also available with an internal speaker incorporated within a plastic or a metal enclosure (no external speaker) as follows:

Metal Enclosure

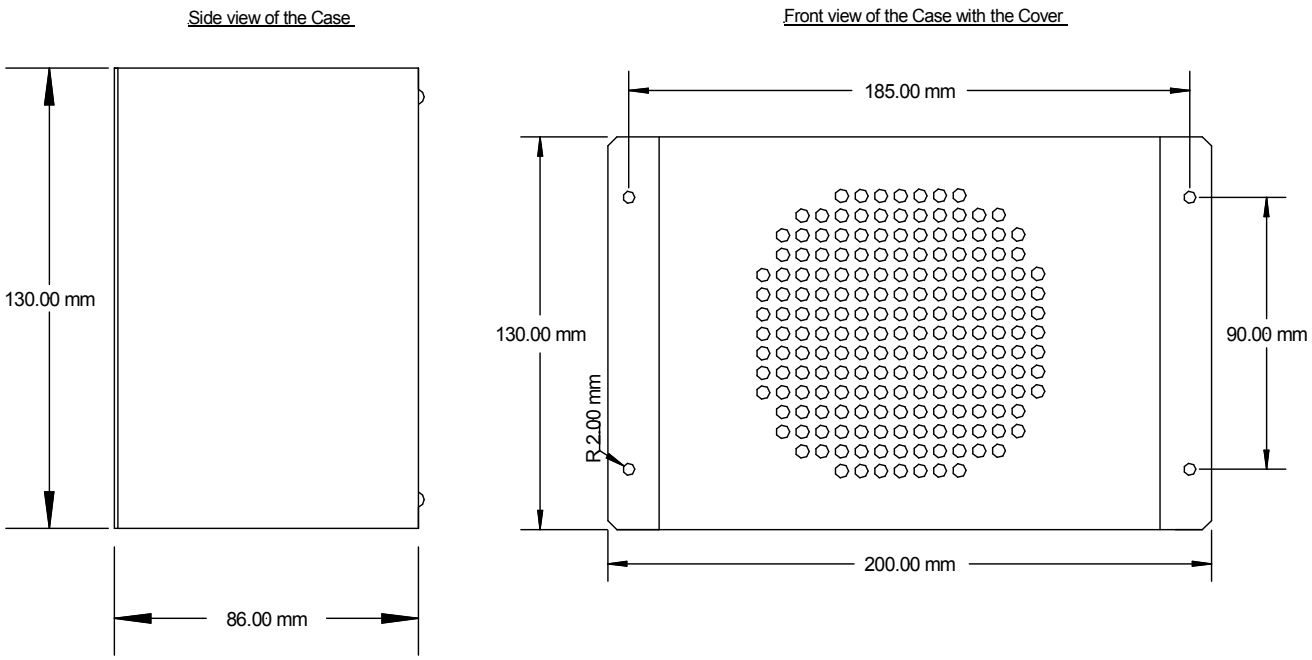


Fig. 8

Plastic Enclosure

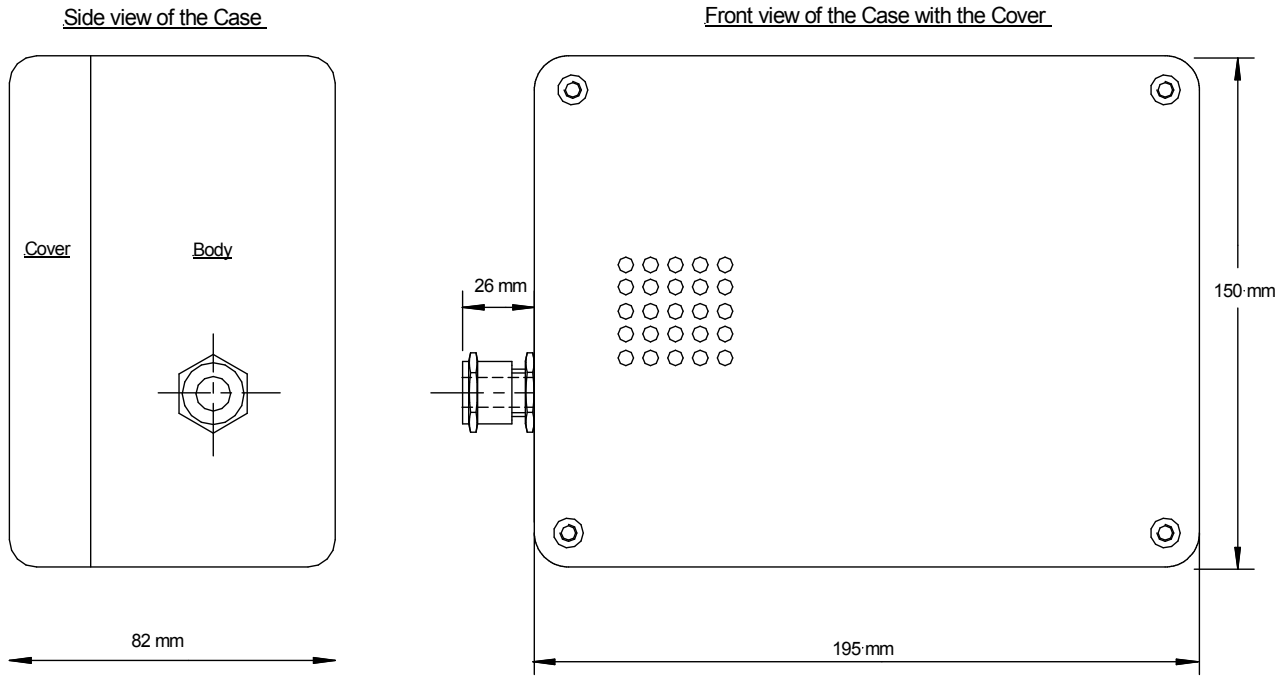


Fig. 9

STAND-ALONE SPEECH UNIT - DBR4-MC/MCT MODELS

The DBR4-MC and the DBR4-MCT are stand-alone units, which work independently of the lift's controller. These units get recognised the lift car position via two magnetic sensors and magnets mounted on the guide rails within the shaft (please refer to fig. 10 and 11 for magnetic sensor connection and magnet mounting in the shaft).
Please note that all magnets are identical except the lowest magnet, which is longer and is used for counter resetting (both sensor Y1 and sensor Y2 are activated simultaneously by this magnet).

Model DBR4-MC: This model sounds its messages without receiving a talk command. Therefore at each floor a message is sounded even if the elevator does not stop at that floor.

Model DBR4-MCT: This model sounds its messages when a talk command is received at the "TALK" pin (J1, pin6) thus a message is sounded at floors at which the car is stopping.
The talk command is taken from the lift controller (usually the car slowing contactor or door open command).

Note: Inputs (Y1 to Y5) on the DBR4-MC and DBR4-MCT stand-alone speech units must be active low. The catalogue numbers of speech unit must be DBR4-X-X-**L**-MC or DBR4-X-X-**L**-MCT (jumpers JP1 to JP5 are cut).

An active high speech unit differs from an active low speech unit by jumpers JP1 to JP5, which are cut in the active low unit.

STAND-ALONE SPEECH UNIT
Magnet arrangement in shaft
Software version DBR4-MC

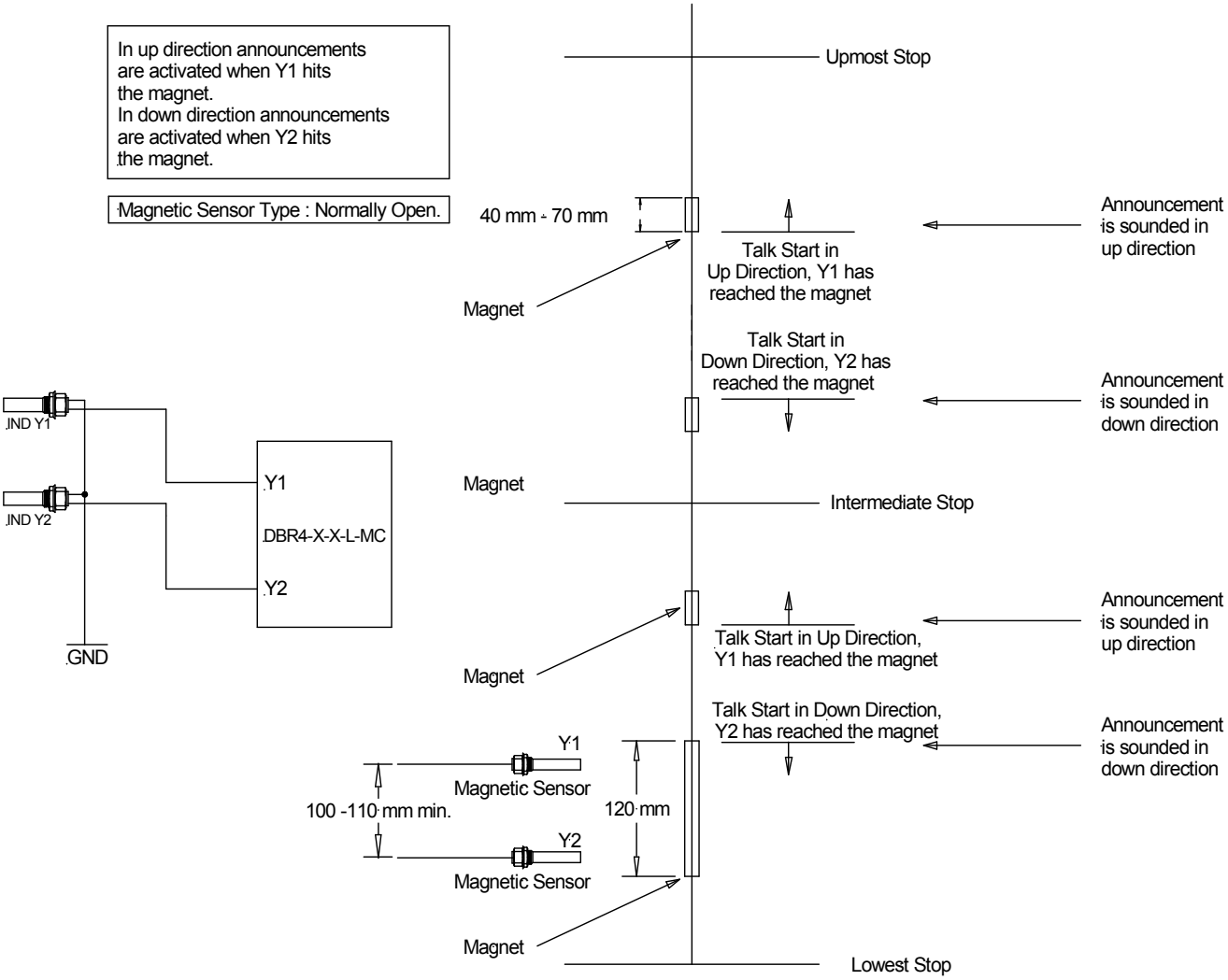


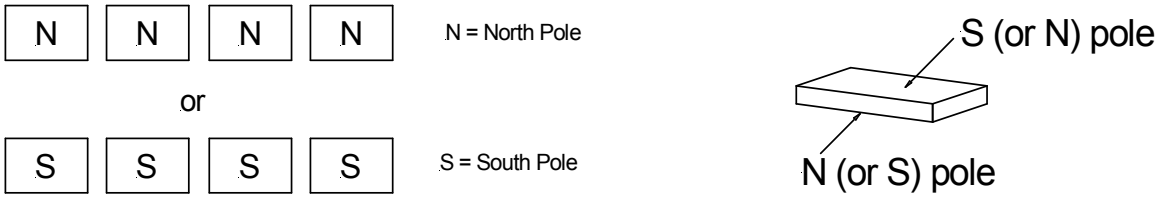
Fig. 10

Dbr4mahnet arrangement

STAND-ALONE SPEECH UNIT
Magnet arrangement in shaft
Software version DBR4-MCT

Swivel mounted bracket available for magnetic sensors to ensure accurate placement. (Please refer to Ordering Information.)

Attention: If the 120 mm magnet (at the bottom stage) consists of a series of smaller magnets laid consecutively then it is essential to ensure that the polarities of the magnets are aligned correctly, as follows:



To check the polarity alignment a test magnet must be passed over the series of magnets. All magnets in the series must attract the test magnet or all must repel the test magnet. In case of any inconsistency the offending magnet(s) must be corrected or the DBR4-MCT will not work function correctly.

When correctly aligned small gaps may appear between consecutive magnets thus increasing the overall length of the series. This will not affect the performance of DBR4-MCT in any way.

Dbr4mahnet arrangement

Fig. 11

Discrete Signalling (One wire per floor) Speech Unit - Version DBR4- D

The DBR4 can be ordered to work with discrete (one wire per floor) signalling. In this mode message selection is performed by activating (active high or active low) only one input from of Y1 to Y5 at a time. In order to sound the selected message a "Talk" command (pin J1, 6) must be received. A maximum of 5 sequential messages can be played by this model.
Ordering number of this model is: DBR4-X-X-X-**D**-X.
(Please refer to fig. 4 for electrical connection diagram.)

Active High, Active Low Information

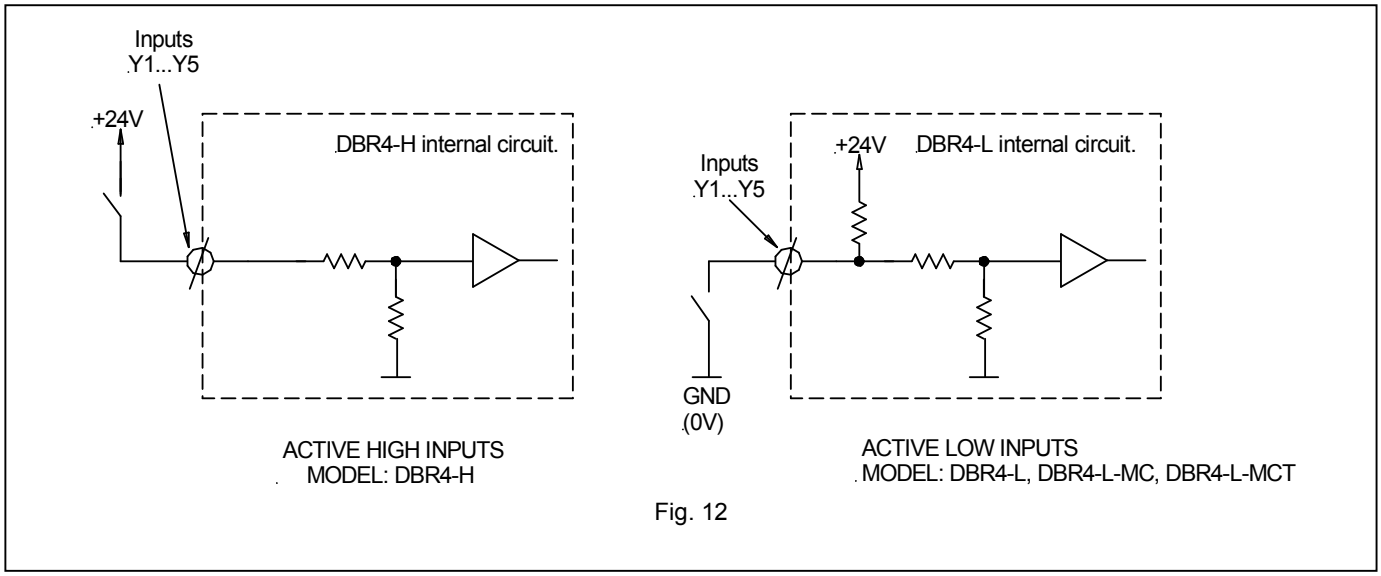


Fig. 12

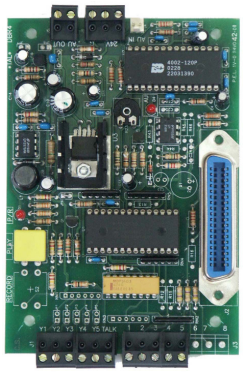
Ordering Information

DBR4 -	Recording	-	Recording Time	-	*Polarity	-	Signalling	-	Speaker	-	Enclosure
	CV RV		2 Minutes 4 Minutes 8 Minutes		Active High Active Low		MC MCT B G D		S M I		Me Pl Ne

*Do not specify for stand-alone signalling (MC and MCT)

CV	- PC recording.
RV	- Field recording.
H	- Y1….Y5 are active high (Default).
L	- Y1….Y5 are active low.
MC	- Stand alone unit, with no external talk command.
MCT	- Stand alone unit, with external talk command.
B	- Binary code.
G	- Gray Code.
D	- Discrete (one wire per floor). **Maximum 5 sequential messages.**
2,4,8 minutes	- Total recording time in minutes.
S	- Standard speaker (132 mm).
M	- Small speaker (66 mm).
I	- Internal speaker.
Me	- Metal Enclosure
Pl	- Plastic Enclosure
Ne	- No Enclosure

To convert an active low unit to an active high unit simply cut jumpers JP1 to JP5.

DBR4 PCB	Plastic Enclosure	Metal Enclosure	External Speaker
			

Talinor (UK) Ltd. reserves the right to change specifications without notice.

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