Model: DM1M1

DATA SHEET

- ❖ Single character dot matrix display.
- ❖ Character height 31 mm, red dots.
- ❖ Displays alphanumeric characters.
- ❖ Inputs work active high or active low (optional).
- ❖ Field programmable floor indications and signalling mode with no additional tool required.
- ❖ Supports up to six floors in one wire per floor.
- ❖ Supports up to 16 floors in binary code.
- ❖ One wire per floor latching or non-latching.
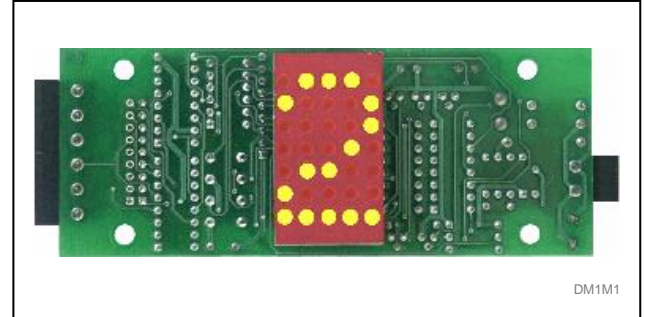
DM1M1

Description

The DM1M1 is a single character 31 mm high Dot Matrix Alphanumeric Position Indicator for elevators.
The DM1M1 is capable of displaying all alphanumeric characters (digits and letters) for up to six floors in one wire per floor signalling mode or 16 floors in binary code signalling mode. The dot matrix comes only in red.

The DM1M1 can accept active high signals (Model DM1M1-H) or active low signals (Model DM1M1-L).

Programming DM1M1 is very easy and is done via two on-board tact switches (S2, S3 and a 6 position DIP switch). (Please refer to Fig.2.)

Inputs

The DM1M1 receives signals via six inputs designated 1…6. These inputs are used to select display at each floor in both one wire per floor and binary code signalling mode.

The DM1M1 accepts the following modes of signalling:

1. One wire per floor.
2. Binary code.

One Wire per Floor Signalling Mode:

In one wire per floor signalling mode activation of one input out of the six displays the character designated to that input. The removal of the signal will cause the DM1M1 to show a blank display.

Note: Activation of an input means applying voltage to the input pin, for model DM1M1-H, or applying 0V (GND) to input pin for model DM1M1-L.

In one wire per floor signalling mode the DM1M1 can also work with latching outputs, meaning that when an input has been activated and its character is being displayed it will continue to display the character even after the input has been removed.
The character display will change when another input is activated. Input 6 has priority over all other inputs; if input 6 becomes active it will override any other input.

In one wire per floor signalling mode activation of two (or more) inputs simultaneously will cause the DM1M1 to show a blank display.
Please refer to "Programming" section for instructions on how to modify the DM1M1 to work in one wire per floor signalling mode (latching or non latching).
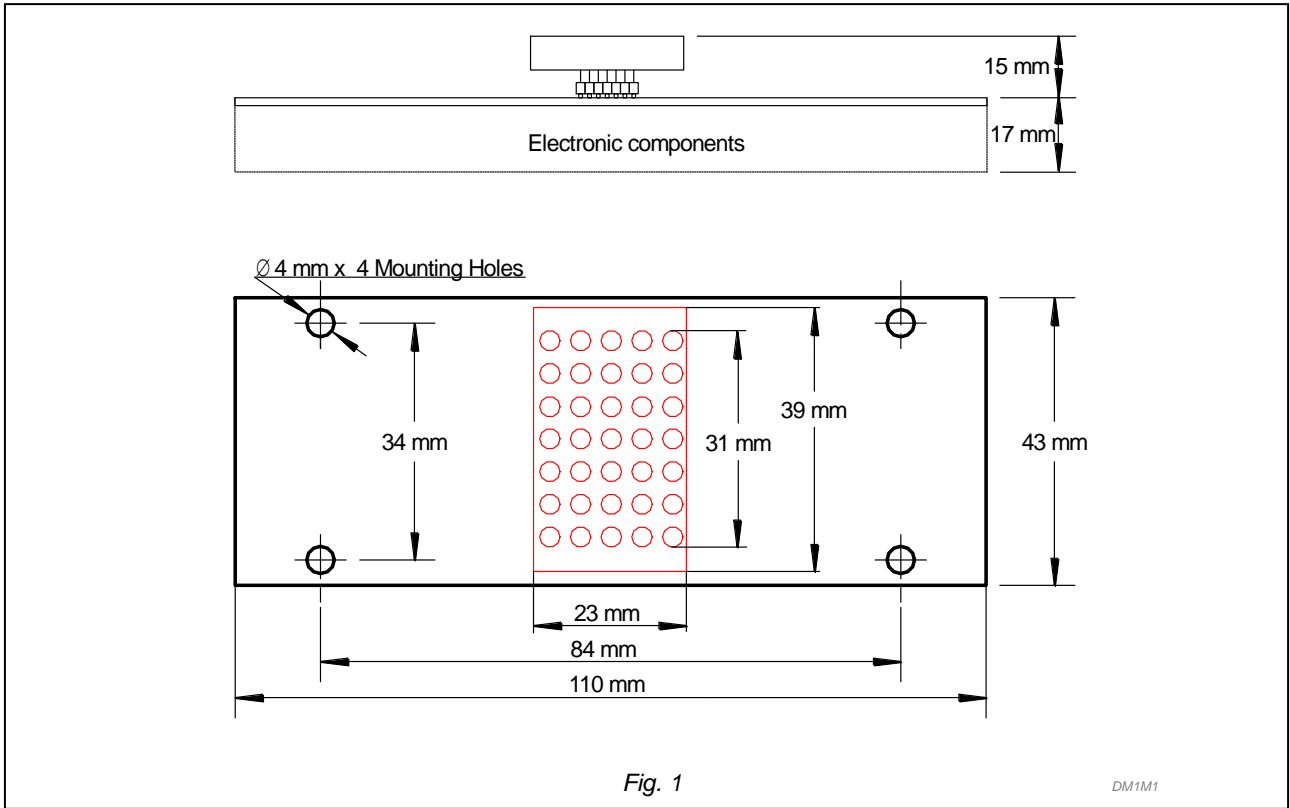
Binary Code Signalling Mode:

In binary code signalling mode, inputs 1, 2, 3 and 4 are active (inputs 5 and 6 are not active). Applying a four bit binary number to these inputs will cause the character associated with the applied binary number to be displayed. The most significant bit is input 4 and the least significant bit is input 1.
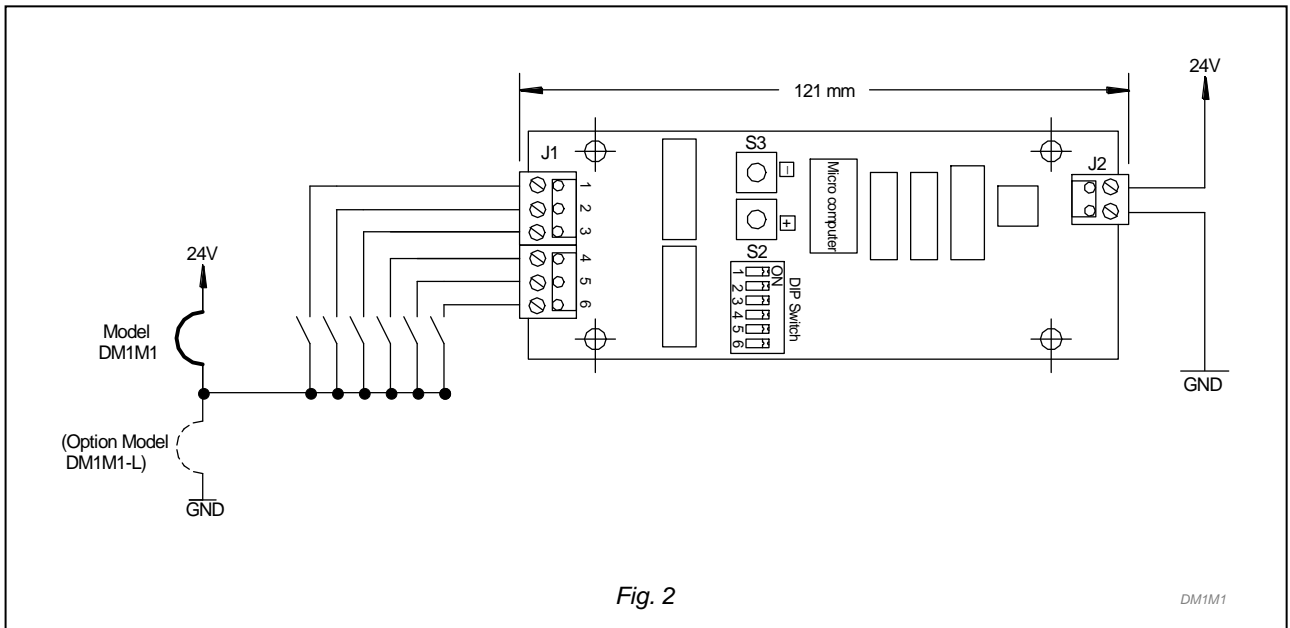Please refer to "Programming" section for instructions on how to modify the DM1M1 to work in binary code signalization mode.

DM1M1

Dimensions Diagram

Electronic components

15 mm

17 mm

∅ 4 mm x 4 Mounting Holes

34 mm

39 mm

31 mm

43 mm

23 mm

84 mm

110 mm

Fig. 1

DM1M1

Wire Connection Diagram

121 mm

24V

J1

S3

Micro computer

J2

S2

DIP Switch

1 2 3 4 5 6

ON

24V

GND

Model
DM1M1

(Option Model
DM1M1-L)

GND

Fig. 2

DM1M1

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Programming

Programming is performed by use of the "+"and "-" buttons, and by the DIP switch.

1. Programming the Signalling Mode

Activate switches 5 and 6 on the DIP switch.

Choose via the "+" and "-" buttons one of the following options as they are displayed:

1. N - <u>One wire per floor signalling mode</u>, non latching outputs.
2. L' - <u>One wire per floor signalling mode</u>, latching outputs. Choose this mode only with DM1M1-L model.
3. L - <u>One wire per floor signalling mode</u>, latching outputs. Choose this mode only with DM1M1-H model.
4. E' - <u>One wire per floor signalling mode</u>, latching outputs. Choose this mode only with DM1M1-L. Model E' is identical to L' except initialisation is different.
5. E - <u>One wire per floor signalling mode</u>, latching outputs. Choose this mode only with DM1M1-H. Model E is identical to L except initialisation is different.
6. Binary code signalling mode.

After the choice has been made deactivate switches 5 and 6 on DIP switch.

2. Programming Floor Indications

In One Wire per Floor Signalling Mode:

a. Activate DIP switch for the floor to be programmed.
b. Press the "+"or "-" button until the desired character is displayed (+ scrolls up, - scrolls down).
c. Return DIP switch to "OFF" position.
d. Repeat step a-c for each floor.

In Binary Code Signalling Mode: Selection of floor number to be programmed is achieved by setting the DIP switch to the floor number in binary code.

For example: If floor 5 is to be programmed set DIP switch to 0101.

ON	OFF	ON	OFF	OFF	ON
1	2	3	4	5	6

"0"=OFF
"1"=ON

DIP switch 1 is the least significant bit, DIP switch 4 is the most significant bit. After floor has ben selected use "+" or "-" button to select desired character to be displayed at the selected floor.

Note: DIP switch 6 must be set "ON" in order to enable floor programming.

When floor programming is finished return switch 6 to "OFF" position.

DM1M1

Specifications

Power supply	12 – 31VDC or DCm. (Rectified unfiltered.)
Current consumption	80mA – 150mA.
Signaling	6 wires, 1 wire per floor, or four wired binary code.
Display	Dot matrix (5 x 7 dots) 31mm height dot size 2.5mm dia.
Input threshold, all inputs	0V DC - 10V DC = "0" 15V DC - 24V DC = "1".
Input impedance, all inputs	100K approx.
Terminals	Pluggable.
Weight	60 gr.

Signals Polarity

If signals applied to 1…6 are:

1. Active high, use model DM1M1-H.
2. Active low, use model DM1M1-L.

DM1M1-H differs from DM1M1-L only by pull up resistor network RN4=22K which is added on DM1M1-L.

Ordering Information

DM1M1-H   Active High Input
DM1M1-L   Active Low Input

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