

LOAD WEIGHING DEVICE

DROIL

DATA SHEET

- ❖ Full load indication – Red LED.
- ❖ Overload indication – Red LED, Buzzer.
- ❖ Very easy calibration – Press key switch for recording load.
- ❖ Easy installation.

Description

This load-weighing device for elevators is designed to make a warning signal if the car is fully loaded or overloaded by measuring the descent of the car's floor on the rubber buffers when the car is loaded.

This load-weighing device is designed to replace old, inaccurate and less sensitive micro switches (electric snap switch).

The advantages of this device are: high sensitivity; accurate switching point; easy adjustment of switching point and good repeatability.

The device consists of two parts:

Sensor – Aluminium Bar (refer to fig. 1):

The sensor is an aluminium-bending bar located beneath the car in contact with the underside of the car floor.

As the car is loaded the aluminium bar bends proportionally to the load.

The electronic card (P.C.B.), usually located behind the switch panel in the car, "reads" the strain on the aluminium bar.

There are two possible setting points: Full load and Overload.

When the strain on the bar reaches the point designated as "Full load" a relay is activated and an LED is lit. When the strain reaches the point designated as "Overload" a further relay is activated and another LED is lit and the buzzer is activated continuously.

The two designated points are simple to set via a push button associated with each point.

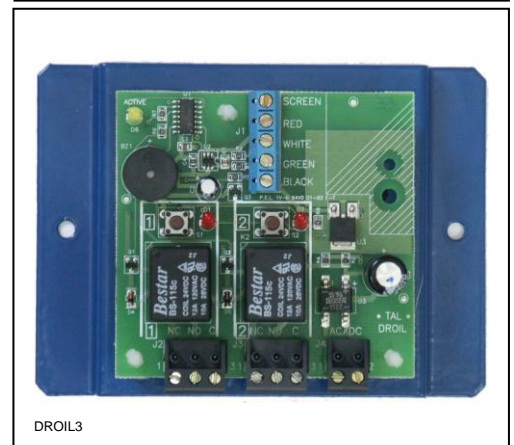
The sensor is connected to the electronic card via a 5meter cable (or an optional 7 meter cable).

Indicators (refer to fig. 2):

D1 (Red LED) : Indicates that "Full load" relay is activated.

D2 (Red LED) : Indicates that "Overload" relay is activated (also buzzer is activated continuously).

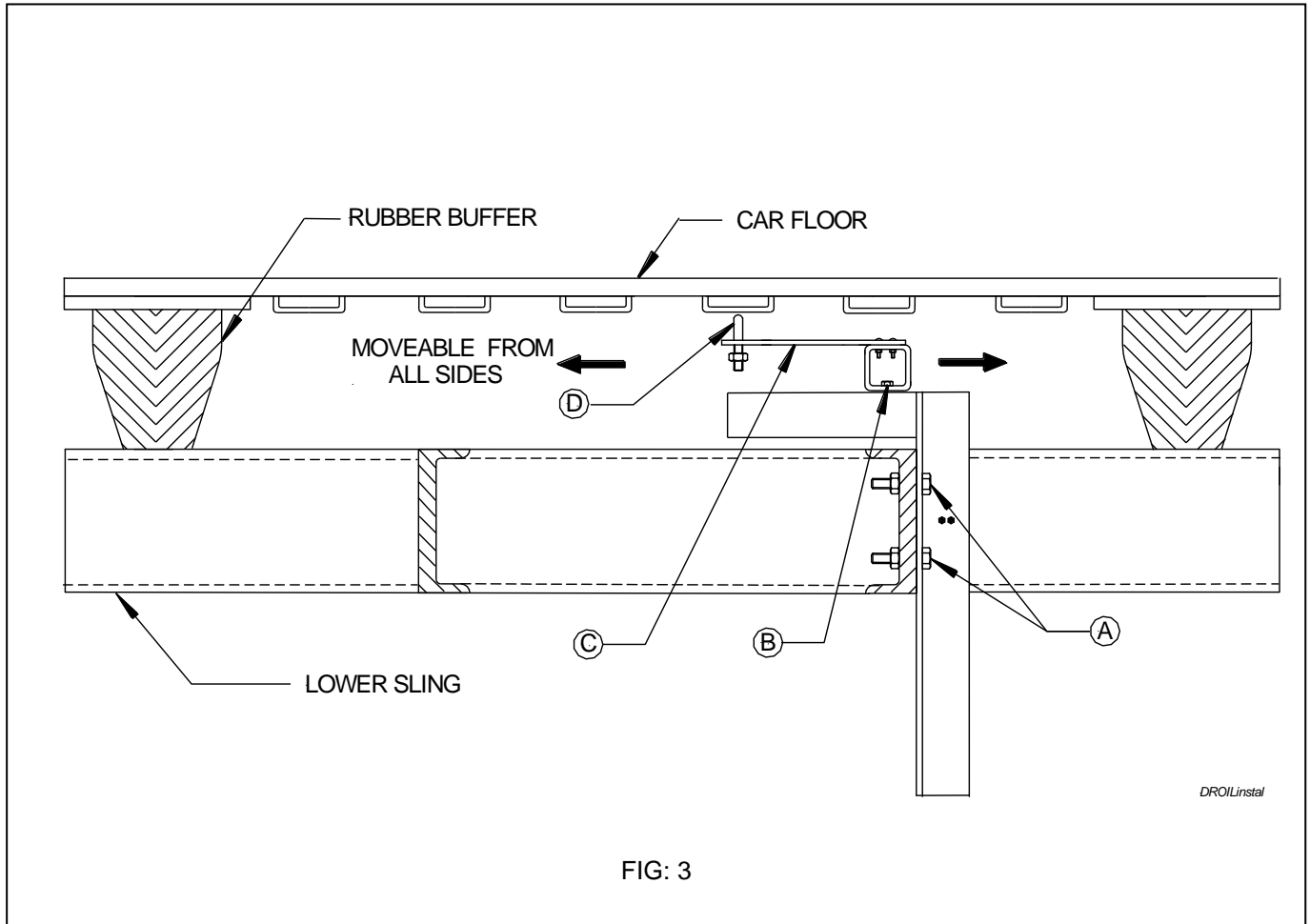
D6 (Yellow LED): When this LED is flashing at a slow rate then the power is applied and the microcomputer is operating properly. When this LED is flashing at a fast rate and the buzzer is sounding then there is a high strain on the aluminium sensing bar (the bar is bent too much) and the load must be **reduced immediately** to prevent damage to the sensor.



Installation

The sensor should be mounted beneath the floor of the car on the lower slings. It should be attached firmly to one of the car's U bars.

The screw "D" at the end of the aluminium bar should be adjusted to contact (or almost contact) the floor of the car.

**Calibration**

To calibrate the unit for "Full load" simply press and hold S1 (refer to fig. 2) until LED1 stops flashing. When LED1 flashes it is indicating that load status is being recorded, do not release S1 until flashing stops. This procedure should be performed with the **car fully loaded**.

To calibrate the unit for "Overload" simply press and hold S2 (refer to fig. 2) until LED2 stops flashing. When LED2 flashes it indicating that load status is being recorded, do not release S2 until flashing stops. This procedure should be performed with the **car overloaded**.



DROIL BODY

DETAILS

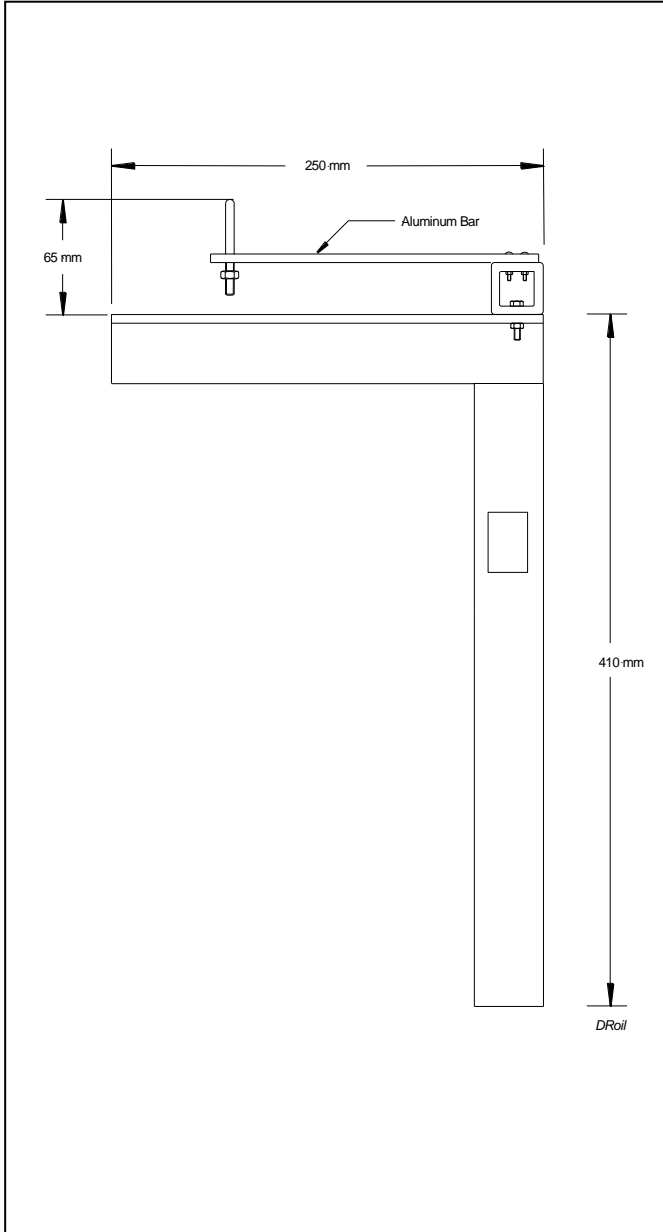


FIG. 1

DROIL PCB

DETAILS

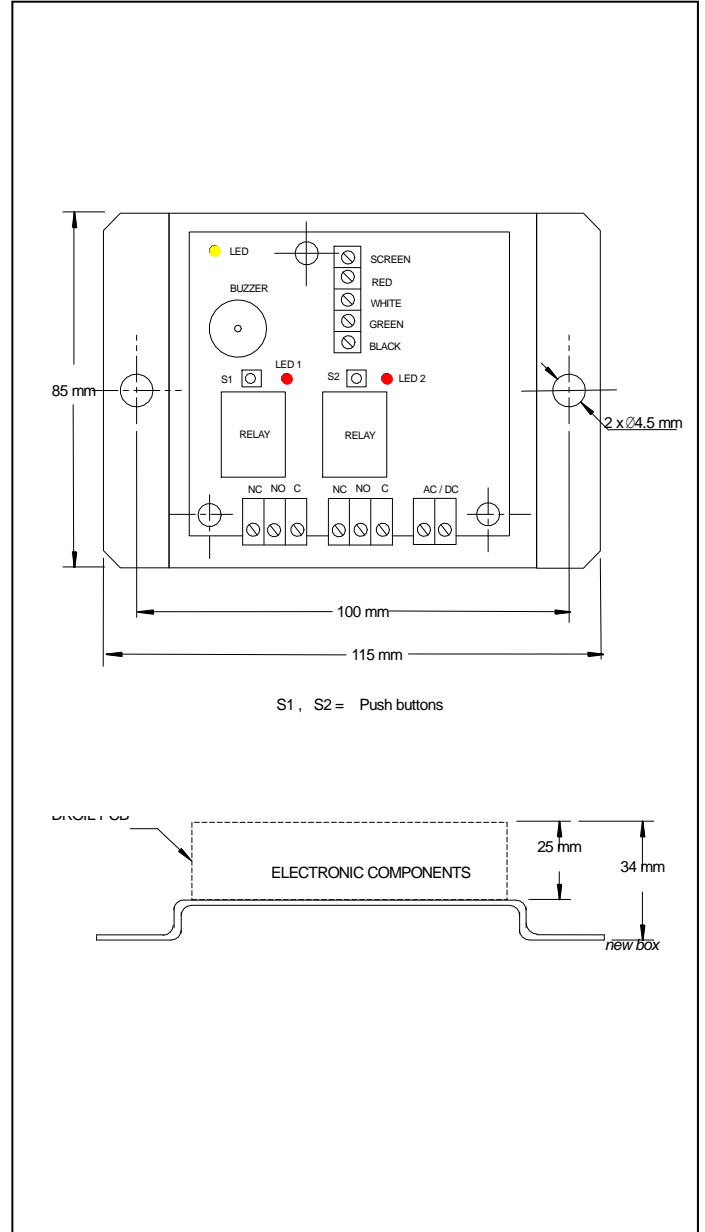
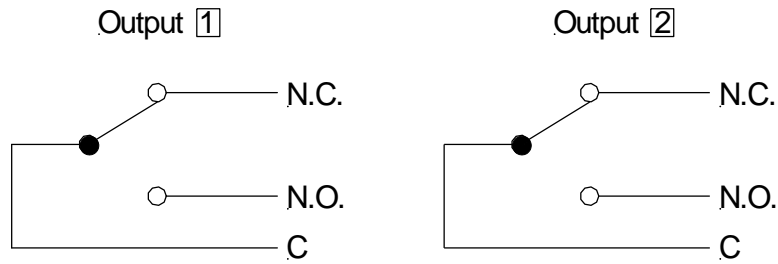


FIG. 2



Output Relays**Specifications**

Power input	24V AC/DC.
Power Consumption	40mA max. (NO RELAY ACTIVATED).
Outputs	Two outputs: full load and overload. Each output is a changeover relay output. Contact: 5A@28VDC max.
Calibration	Once a year.
Packed weight	2 Kg.

Ordering information

DROIL - 5 , 5 meter cable.
 DROIL - 7 , 7 meter cable.

Packing Information

Each unit is packed in a 48 x 27 x 10 cm. carton.
 Bulk packages of 5, 10 and 20 units are available.

WARNING

THE DROIL LOAD WEIGHING DEVICE IS NOT A SAFETY SYSTEM and must not be used as such.
 It is not designed for personnel safety applications and must not be used as a stand-alone personnel safety system.
 DROIL LOAD WEIGHING DEVICE is for elevator use only.

