



# **INDILOAD**

**DATACARD**

**MANUAL**

**Feb 2005**

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## Chapter 1 : General

The **DATACard** is an independent data recording card which allows the user to store the most important crane data without the need for a permanent link with a fixed computer.

The DATACard has a memory (non-volatile RAM) supported by a lithium battery (with a minimum service life of 5 years) and stores the following data :

- number of overloads
- number and duration of lifting and lowering movements
- number and duration of cross and long travels
- number of “tips” in the above functions
- load spectrum according tot the loads lifted

The data are tapped using a compatible MS-DOS (portable) PC through an RS232 output assembled on the card.

The storage capacity (memory) of the card is at least 1 year (using the lifting keyboard at a rate of 8 hours/day).

The **DATACard** is supplied :

- either as an additional card for the **INDILoad Mark 1**
- or as an independent “box” in a metal housing to be used with load limiters of other makes fitted with a 0-10 VDC output or with recording devices which have a reinforced output (between 0 an 10 VDC).

A CD-ROM and a **COM CABLE** is supplied with every **DATACard** for the installation and tapping of the software with the stored data.

The data are converted into an ASCII file or can be converted into a special software program we have developed in-house, that is :

**“DGraph”**.

This powerful and user-friendly program operates in the **“Windows”** environment and displays the stored data in tables and graphs. It allows the user to schedule maintenance work, to locate unproductive hours and to find the “safe working period” (SWP) so that the exact (FEM) user class can be determined.

## Chapter 2 : Connections

Two versions are supplied :

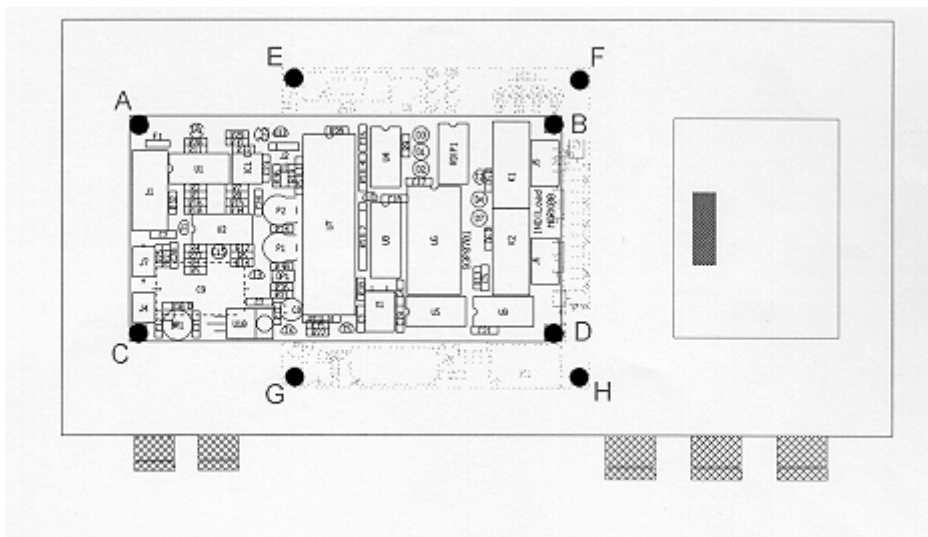
- A. as an additional card for the INDILoad Mark 1
- B. as a “stand alone” unit in a housing

Depending on the version you purchase, please follow the instructions given below :

### A. as an additional card for the INDILoad Mark 1

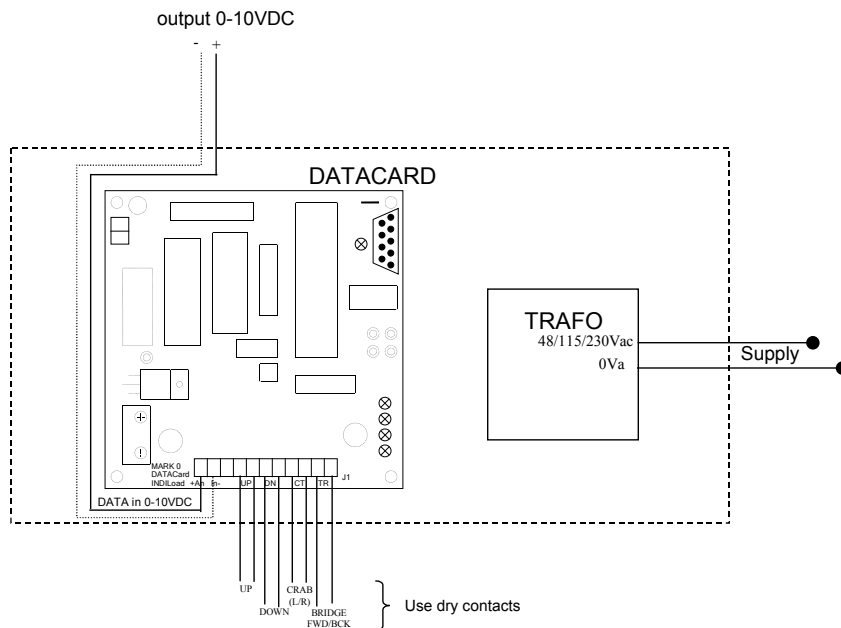
If the **DATACard** is supplied separately, you first have to fit it into the box of the load limiter Mark 1.

To do this, follow these instructions :



- 2.A.01 Disconnect all existing electrical connections from the load limiter (if they have been previously connected)
- 2.A.02 Unscrew the four screws (A, B, C, D) and remove the card of the **Mark 1**
- 2.A.03 Unscrew the four screws (E, F, G, H) and place the **DATACard** in the place provided in the right direction (see diagram)
- 2.A.04 Screw home the four screws (E, F, G, H)
- 2.A.05 Place the board of the Mark 1 back in its original position and screw home the four screws (A, B, C, D)
- 2.A.06 Connect the power supply of the **DATACard** using the clamp of the **Mark 1** (2.01) (see operating instructions of the Mark 1)
- 2.A.07 Connect the electrical connections of the Mark 1 (see operating instructions of the Mark 1)

**B. as a “stand alone” unit in a housing**



- 2.B.01                      Connect the power supply (48, 110 or 230 VAC) to the transformer
- 2.B.02 to 2.B.07        not applicable

**Additional connections for both cases (A or B)**

Before power-on, make the following connections :

- 2.08                      Connect the 0-10VDC output from the load limiter Mark 1(or from another source) using the + and – signal output clamps  
 Make the connections between the relays (use dry contacts!) of the lift movement, lowering movement, cross travels (left and right) and long travels (forward and back) with the datacard inputs, where :

- ↑                          = lift (up)
- ↓                          = lower (down)
- ↔                         = cross travels (crab left/right)
- ↗↘                      = long travels (bridge forw/backw)

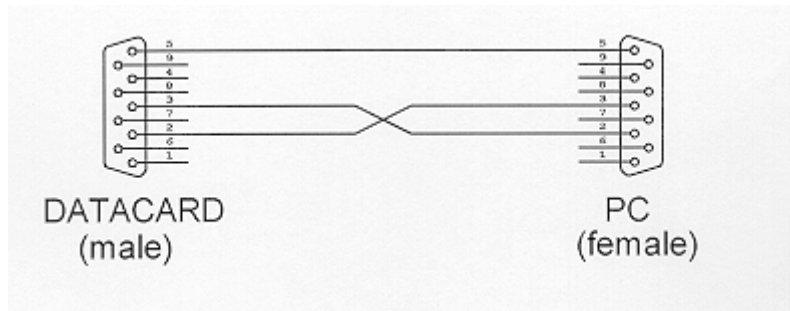
**General remark:**

We advise you to use the following types of cable :

- for 48, 110 or 230 VAC supply cable of at least 1 mm<sup>2</sup>
- for 0-10 VDC signal screened cable 1 mm<sup>2</sup>
- for connections from relays of the load limiter with the main relay lifting cable of at least 1 mm<sup>2</sup>
- for signals from the relay lifting, lowering, cross travels and long travels to the DATAcard cables of at least 1 mm<sup>2</sup>
- for the 14 VAC from Mark 1 to DATAcard cable of at least 1 mm<sup>2</sup>

## Chapter 3 : Operation

- 3.01** When using for the first time, connect the **RS232** output up to a serial port “**COM 1**” : on your compatible (portable) PC.  
For the connection between the **DATACARD** and your compatible PC use the **COMCABLE** supplied.  
If you lose the original **COMCABLE** and you wish to make a communication cable yourself, the connections must be as follows :



- 3.02** Connect the power supply.
- 3.03** Place the CD-ROM supplied with your DATACard in your PC and start the program Dgraph 3, follow the instructions.

## TO TEST THE SYSTEM

- Notice that the **green LED** at the **RS 232 connector** flashes once per second.
- Lift the weight and notice that the green LED UP from the four LED's UP/DN/CT/TR is lit.
- Lower the weight and notice that the green LED DN from the four LED's UP/DN/CT/TR is lit.
- Cross travel and notice that the green LED CT from the four LED's UP/DN/CT/TR is lit.
- Long travel and notice that the green LED TR from the four LED's UP/DN/CT/TR is lit.

## Chapter 4 : Technical Sheet DATACard

### Power supply:

DATACard : 14 VAC (from the load limiter Mark 1)  
(+/- 15 % 50/60 Hz)

DATACard in  
metal box : 48 VAC, 110 VAC ou 230 VAC  
(+/- 15 % 50/60 Hz)

### Enclosure :

DATACard : Dimensions : 107 x 110 x 24 mm  
Weight : 150 Gr.

DATACard in  
Metal box : Dimensions : 300 x 150 x 80 mm  
Weight : 3.3 Kg.  
Protection degree : IP 54

### Temperature

Range : Working temp. : -20°C à + 60°C  
Stored temp. : -40°C à + 85°C

### Inputs :

1 analog input : 0-10Vdc

4 contact inputs : wet contacts: voltage present on each input of Datacard

### Output:

RS 232 for the connection a (portable) compatible PC with  
a DOS version 3.3 (or higher)  
Connection with a special COMCABLE

### Securities :

4 LEDs for testing the good operation of the inputs (lift,  
lower, cross travels, long travels)  
1 LED for :  
a. testing the good operation of the DATACard is lit  
once a second  
b. testing the data transfer during the data tapping  
is lit 3 times a second

### Memory :

A lithium battery (with a minimum service life of 5 years)

### Storage capacity :

At least 1 year (using the lifting keyboard at a rate of 8  
hours/day).