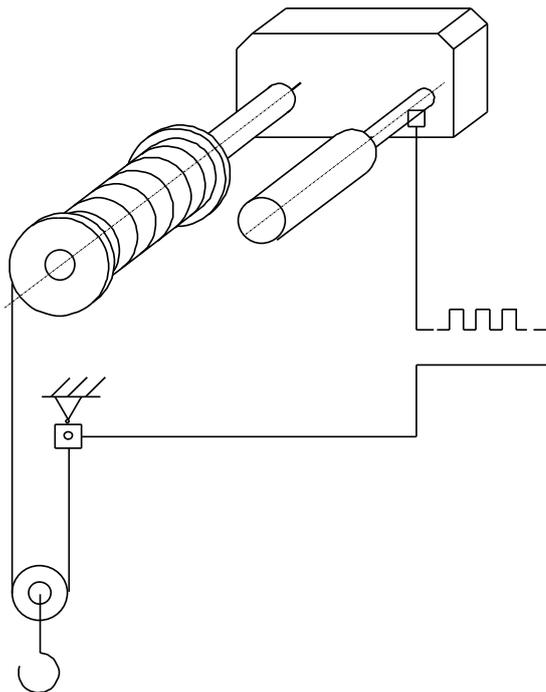


Load-collective-counter

for display and record the work load of lifting gears

LAKO 1



Maximum life expectancy

Display of exhausted economic life

Record of strain under working conditions

General

Lifting gears for mechanical handling are defined for a certain load collective. Because of the whole conception of the proportioning and approval they are dimensioned only for a limited expected life.

The using of a load-collective counter is to record the dynamic work load as precisely as possible to determine the exhausted part of the theoretically expected economic life. A general overhaul will be required if the counter indicates the final stage of the expected lifetime.

Consequently the realistically available economic life of lifting appliances depends intensely on the quality of counting method or on the type of load-collective counter, respectively.

Due to the exact load and rotation speed measurement there are the following advantages:

- Maximum utilisation of the theoretically expected life of lifting appliances
- Exact record and data storage of the actual strain under working conditions
- Consecutive calculation and display of the exhausted economic life
- Further exploitation of record data

By using the patented digital load-collective counter LAKO 1 an extension of the expected economic lifetime between 20 to 50 per cent is possible.

Characteristics

The digital record of work load is infinitely variable. Low lift speed as well as short lift distances are being considered due to the exact digital record of both values.

The exhausted economic life, the lift load and lift speed can be read off the LAKO 1 at any time. On-site function tests are possible.

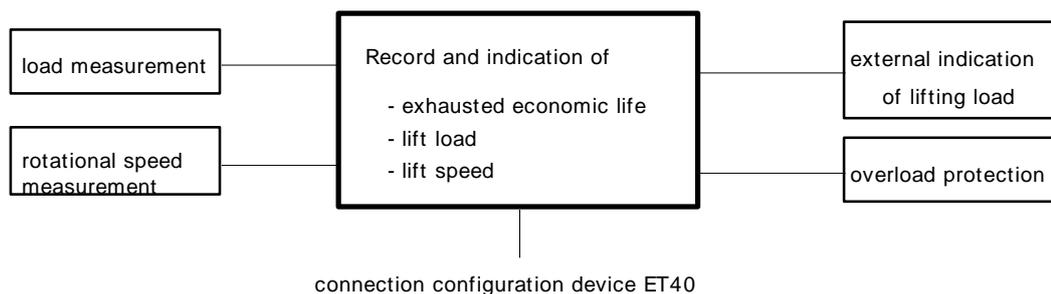
Constructional features

For the exact calculation of the exhausted economic life only the following input data are necessary:

- the rotational speed
- the lifting load

If so far no load or rotational speed indicator was fitted this can be installed as an option without problems.

The following diagram explains the simple construction of LAKO 1.



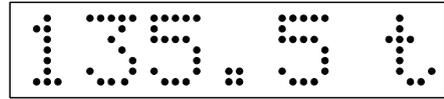
block diagram LAKO 1

Display of measuring values

Due to the integrated display all important values can be read off the LAKO 1 at a glance without any special effort.

Indication of lifting load

The full range of lifting load values is divided in about 1000 single steps, i.e.: the range from 0..100 t is recorded and indicated with an accuracy of 0.1 t.



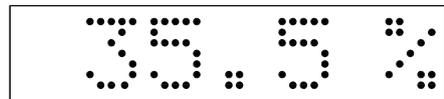
Indication of rotational speed

The speed of lifting the load is displayed in units of [1/min], for example: the number of motor shaft rotations per minute.



Indication of exhausted economic life

The display of exhausted economic life is provided in per cent of the total used up time.



Options

In addition to the standard version there are a number of options available enlarging the LAKO 1 application possibilities considerably.

Lifting load display

If no lifting load display is installed, it can be fitted with only little effort.

Rotational speed display

Can be fitted easily.

Indication of lifting speed

Instead of the rotational speed the exact lifting speed [m/min] can be displayed.

External display of lift load

Can be offered in several numeral heights and numbers of digits. These displays can be fitted directly to the LAKO 1, distance is no problem.

Overload electronic control

If the maximum permissible lift load is exceeded an alarm can be set off or the lifting mechanism can be switched off.

Slack rope electronic control

In case vision is obstructed it may be necessary to control the touch down of the lowered load or to recognise slack of the rope. In these cases an alarm can be set off or the lifting mechanism can be switched off.

Output of data to serial interface

For further processing of data there is a possibility to feed the recorded data to a SPS or PC.

Automatic control of the limit to exhausted economic life

If a given value of exhausted life is exceeded (e.g. 95 %) an alarm (relays output) can be set off.

Technical data

main supply

230 V~, 50Hz

Power consumption

ca. 10VA

Indication

- No indication
- lifting load [t or kg]
- rotational speed [1/min]
- residual using duration [%]

Ranges of lifting load

0..20 t	LAKO 1/20
0..50 t	LAKO 1/50
0..100 t	LAKO 1/100
0..>100 t	LAKO 1/1000

Inputs

- Lifting load measurement
- rotational speed measurement
- configuration device

Outputs (options)

- overload protection
- slack rope protection
- limit of exhausted economic life
- external display of lift load
- serial interface

Housing

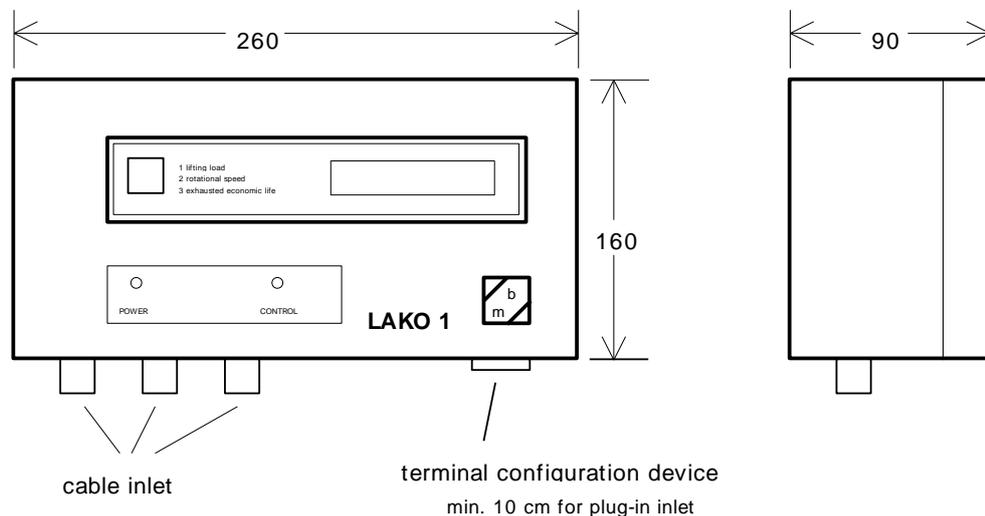
material: aluminium

dimensions: 260x160x90 mm (LxWxH)

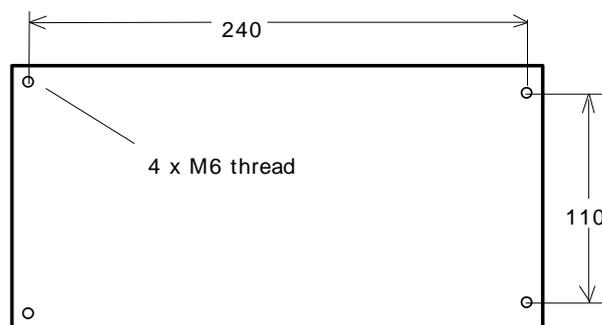
Weight

ca. 3kg

Dimensional Drawings



Dimensions of housing



holes for fixing the housing