

SWP LOAD MANAGEMENT SYSTEM FOR HOISTS

The SWP-LOAD is an electronic device with two main functions : overload protection and calculation of the SWP (Safe Working period) of a hoist. Furthermore the device supervises other parameters of the hoist :



- . slack rope detection
- , control of the wear of the brakes
- . control of engine overheating
- . number of starts
- . number of inchings
- . number of working hours
- . number of overloads
- . load indicator

Also a Maintenance Management Module is integrated in the SWP-LOAD, indicating the operator when the hoist needs service, taken into consideration the SWP-time.

SWP THEORY

For technical and safety reasons it is important to know the "safe working period" related to the real loads on the hoist. This SWP will indicate the time left for the operator to use the hoist in technically safe conditions.

The calculation of the remaining SWP will consider the following parameters:

- . D: theoretical total working period at nominal load
- K : real load factor (= real load/nominal load, with Kmin = 0,5)
- . t : working time of the hoist

and will be calculated according to the following formula:

 $SWP = D - \sum_{i} (K_i^3 \times t_i)$



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SPECIFICATIONS

ELECTRICAL	Relay	3 change-over contacts
		contact load : 250 VAC/10 A
	Safety features	in case of power supply failure, short-circuit or
		cable-break, automatic switch over to safety condition
		continuous check of load cell
		autotest of hardware and load cell with start up
	Control inputs	potentialfree contacts
	Load cells	mV output: 0,3 to 2,0 mV/V
	Analogue Output	0 – 10 V
	Power supply	48/110/230 VAC (+/- 10%), 50/60 Hz, 100 mA
MECHANICAL	Housing	plastic housing for mounting on DIN rail
		dimensions : 187 x 96 x 67,5 mm
ENVIRONMENTAL	Temperature	operating temperature : - 10 °C to + 60 °C
		storage temperature : - 40 °C to + 85 °C



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