CONTROL CENTRE

FOR CENTRALISED LUBRICATION SYSTEM WITH PROGRESSIVE FEEDER

CCL *Alpha*

Model No. 906716-E

USER'S MANUAL

CONTENTS

1. DESCRIPTION

Control centre CCL *Alpha* is designed for controlling and monitoring of centralised lubrication systems equipped with a primary progressive feeder with cycle switch.
Level switches of the lubricant reservoir and the operating switch or solenoid valve of a transfer pump can be connected to enable automatic replenishment of the reservoir of the system pump from a drum or storage tank.

FUNCTIONS

- Adjustable interval time and number of feeder cycles.
- Extra lubrication
- Machine-interlocking control.
- Output for operating indication.
- Output for alarm signal (activated at too low a flow rate or low level of lubricant reservoir).

DEFINITIONS

Lubrication interval	Time between two starts of the lubrication pump.
Cycle	Complete operating cycle of the progressive feeder connected.

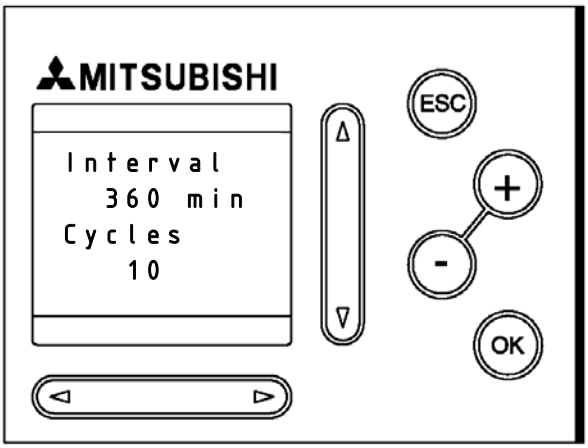
2. DATA

Protection class	IP 65	
Dimensions	230x300x145 (WxHxD)	
Weight	3,5 kg.	
Supply voltage	100-240 V AC 50/60 Hz	
Power consumption	30 W	
Outputs:	Pump, solenoid valve	Same as supply voltage max 25W.
	Operating indicator	24V DC max 5W.
	Alarm	Potential-free contact max.250V AC, 30V DC Max 1A
Inputs:	24V DC	
Adjustment range	Interval time	1 – 32 767 minutes
	Cycles	1 – 32 767

3. HANDLING

SETTINGS

The time between two starts of the lubrication pump is called the interval and is adjustable. The lubrication system must comprise a progressive feeder with cycle switch. The number of cycles at each pump start can be set. The pump is being stopped after the number of cycles set have been performed.



U-link the terminals 111 and 112 to enter the setting mode.

Place the cursor at the setting to be changed with the up/down arrow.

Change setting by pressing +or -.

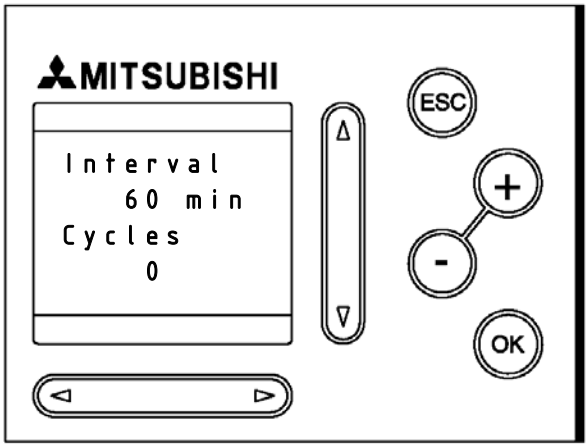
Confirm the new setting by pressing OK.

Remove the u-link between terminal 111 and 112.

Example:
A bearing requires 1 cm³ of lubricant every 6th hour. The bearing is connected to one outlet of the progressive feeder which feeds 0.1 cm³ per outlet and cycle. The required number of cycles is accordingly 10 every 6th hour = 360 minutes (”Interval”.)

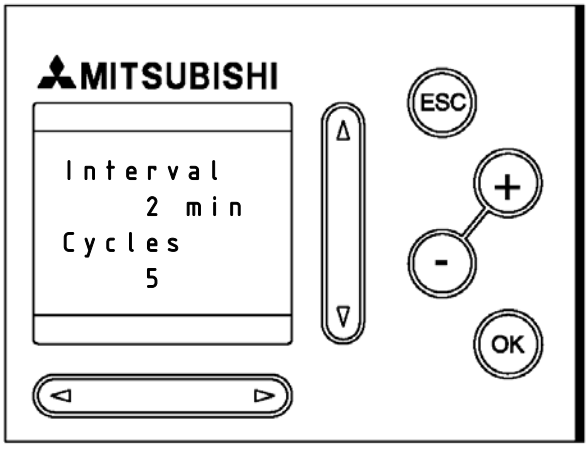
NORMAL OPERATION

In normal operation mode the display shows the time elapsed of the interval time since the last start.



In this example 60 minutes has elapsed of the interval time.

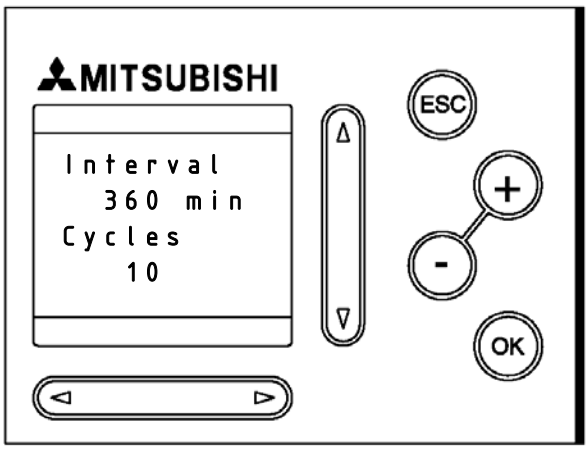
During the pumping phase the display shows the number of cycles performed and the pumping time from the start.



In this example the pump has been operating 2 minutes and 5 cycles have been performed.

EXTRA LUBRICATION

An extra lubrication may be activated at any time.



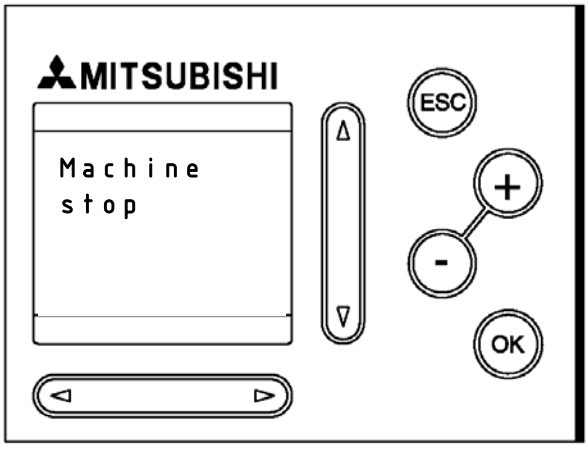
Increase the interval by pressing + until it equals the entered time and press OK.

AUTOMATIC REPLENISHMENT.

The level switches of the lubricant reservoir and the switch or solenoid valve of the transfer pump can be connected to the control centre. This will then monitor automatic replenishment of the reservoir from the storage tank or drum. The transfer pump starts when the low level switch closes and stops when the high level switch closes.

MACHINE INTERLOCKING.

The control centre can be controlled by the lubricated machine, so called, machine interlocking.



When the contact for machine interlocking is being closed (the lubricated machine is stopped) the lubrication phase in progress, if any, is stopped as well as the time counting.
At restart of the machine the lubrication phase and the time counting resumes.

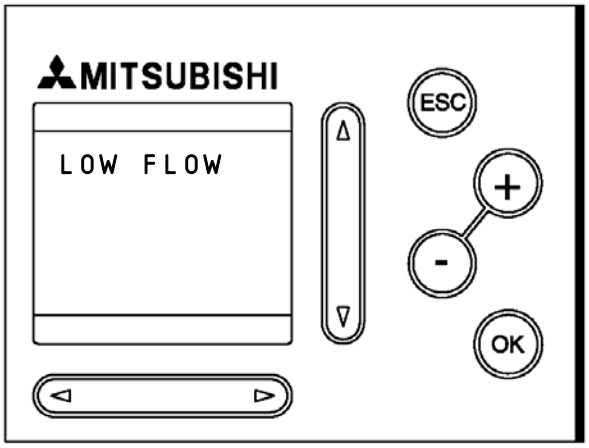
OPERATING INDICATOR

The operating indication output (24V DC) has the same functions as the lamp in the front of the control centre.

No voltage:	Control centre is switched off or machine-interlocked.
Alternating voltage 0 - 24V:	Alarm
Voltage on	Control centre is operating.

ALARMS

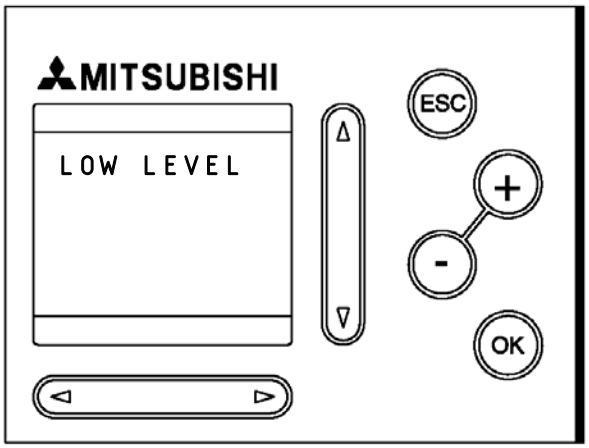
If the entered number of cycles have not been performed at the end of the interval time, a low flow alarm will be activated.



The system stops lubricating and the alarm contact closes.

To acknowledge the alarm, press ESC - a new lubrication phase is then started.

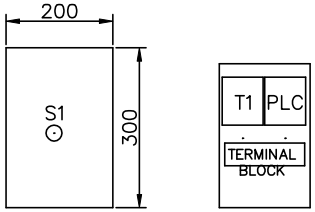
If the alarm level switch in the lubricant reservoir is triggered, a low level alarm is activated.



The system stops lubricating and the alarm contact closes.

The alarm is deactivated when the reservoir has been replenished.

CONTROL. CABINET
MOUNTING PLATE

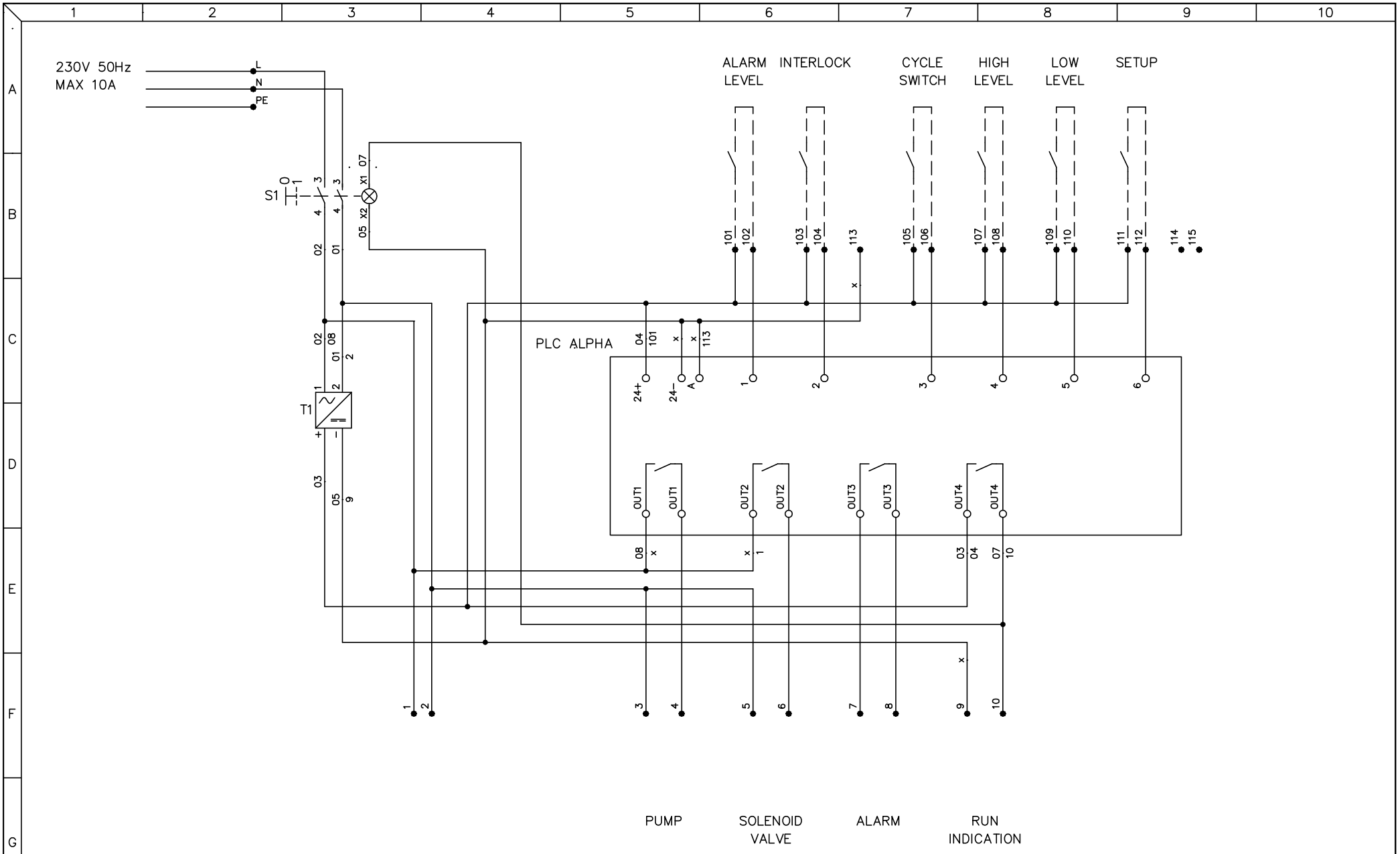


DEPTH: 180CM

		Filename: 906716 Designed by: KS Drawn by: KS Date: 20111104	NOVAEL +46(0)120–812 00 www.novael.se	CCL ALPHA CONTROL CABINET 906716 LAYOUT	Proj.no. 906716	Sheet 101	Cont. 301
					Drawing no 906716		
					Customer referens 906716		B

Item designation	Description	Type/No	Eldata	Manufacture/ Deliverer	Remark	Sheet
CONTROL CABINET	CONTROL CABINET	CAB PC 302018T		FIBOX		101
MOUNTING PLATE	MOUTNING PLATE	200X300X180		FIBOX		101
PLC	PLC ALPHA	ALPHA AL2-10MR-D		MITSUBISHI		301
S1	MAIN SWITCH	ZB4-BK1253+ZB4-BZ103	YELLOW+2NO	SCHNEIDER ELECTRIC		301
	LIGHT BLOCK	ZBV-B5	24VAC/DC, YE	SCHNEIDER ELECTRIC		301
T1	TRANSFORMER	DR-30-24	230VAC/24VDC	MEANWELL		301
25	TERMINAL BLOCK	WDU 2,5	2,5kmm	WEIDM?LLER		301
1	TERMINAL BLOCK	WPE 4 YELLOW/GREEN	4kmm	WEIDM?LLER		301
2	TERMINAL BLOCK	WTR 2,5	2,5kmm	WEIDM?LLER		301
6	SCREW CAP	M20		NEA		
6	NUT	M20		NEA		

		Filename: 906716 Designed by: KS Drawn by: KS Date: 20111104	NOVAEL +46(0)120-812 00 www.novael.se	CCL ALPHA CONTROL CABINET 906716 PARTS LIST	Proj.no. 906716	Sheet 201	Cont. 301
					Drawing no 906716		
					Customer referens 906716		B



		Filename: 906716 Designed by: KS Drawn by: KS Date: 20111104	NOVAEL +46(0)120–812 00 www.novael.se	CCL ALPHA CONTROL CABINET 906716 CIRCUIT DIAGRAM	Proj.no. 906716 Drawing no 906716 Customer referens 906716	Sheet 301 Cont. – B