

CONTROL TIMER

AP2

APPLICATION

The electronic control and checking device, control unit AP2, is used to control and check operation of multi-line central lubrication systems and systems fitted with progressive distributors. It is applied in lubrication circuits with electrically driven lubrication pumps, e.g. UCF, VEG, Z1, T1 and progressive distributors of the PRA, PRB and BVA series, which can be furnished with proximity switches.

The AP2 control device is very universal and can be connected regardless of the lubrication circuit construction or the total number of lubricated points. The building block design enables easy customization for more complicated functions of the lubrication circuit.

DESCRIPTION

Control timer AP2 consists of a distribution box with a transparent opening cover with IP65 protection. Under the cover there is a panel with control and indication elements. At the right top of the panel there is a film control keyboard with a display. Next to the keyboard there are placed three indicators. POWER indicating the device power supply. Another, LUBRICATION indicates the lubrication device operation, i.e. grease is supplied into the system. ERROR indicates that the minimum level of grease was reached in a tank (flashing red indicator on a foil keyboard) or that the given number of grease cycles has not run (showing E1, E2 or E3 on display). Other system operation information is shown on the film keyboard display. In the left side of the panel there are the current circuit breaker buttons. On the right side of the box there is the main switch and the STOP button. At the bottom of the box there are cable terminals for input and output wiring - supply voltage, lubrication pump electromotor connection, cycle sensor connection, minimum level indication, E1, E2 or E3 failure indication – specified number of unperformed lubricating cycles, external inter-lubrication button.

The connection is realized via conductors on the terminal board, which is placed at the bottom of the box under a separately detachable cover.

OPERATION

Control timer electronically checks and controls pump operation in two independent modes. On the film control panel the operator adjusts the specific value of the lubrication period and the pause or pause period and the number of lubricating cycles for a lubrication circuit with progressive distributors.

The basic mode is the LUBRICATION PERIOD – PAUSE PERIOD program. If the lubrication circuit contains a progressive distributor with an electronic operation indication (proximity switch), which is connected to the control timer, the control timer is automatically set in the NUMBER OF CYCLES – PAUSE PERIOD program.

1. LUBRICATION PERIOD – PAUSE PERIOD

In this connection program, the lubrication period, which is the interval when the lubrication pump is in operation, and the pause period, which is the interval when the pump is not operated, are set.

2. NUMBER OF CYCLES – PAUSE PERIOD

In this program, the pause period, which is the interval when the pump is not operated, is set accordingly as for program No. 1. The lubrication period is specified by the number of lubricating cycles. The number of cycles is defined by the number of the triggering control proximity switch, which is placed on one of the progressive distributors. The lubrication pump operates continuously up to the time when the specified number of cycles is reached. For lubricating circuit operation check there is also set the maximum period during which the control sensor shall trigger. If no trigger occurs during this interval, i.e. the lubrication cycle is not finished, an alarm displays (E1, E2 or E3 sign on the screen).

Furthermore, it is possible to connect indication of the minimum lubricant level in the lubrication pump reservoir (red light flashing). In the pause mode, with the START button you can at any time perform an inter-lubrication cycle taking 60 sec., while the pause time is still active. If the remaining pause time is less than 60 sec., when this period expires the inter-lubrication cycle finishes and the control timer continues with the selected program. The inter-lubrication cycle shall always be used after the reservoir lubricant filling, when the lubricant minimum level was broken and its alarm was triggered or when performing any repairs on the lubrication circuit after the control sensor alarm was triggered (E1, E2 or E3 alarm).

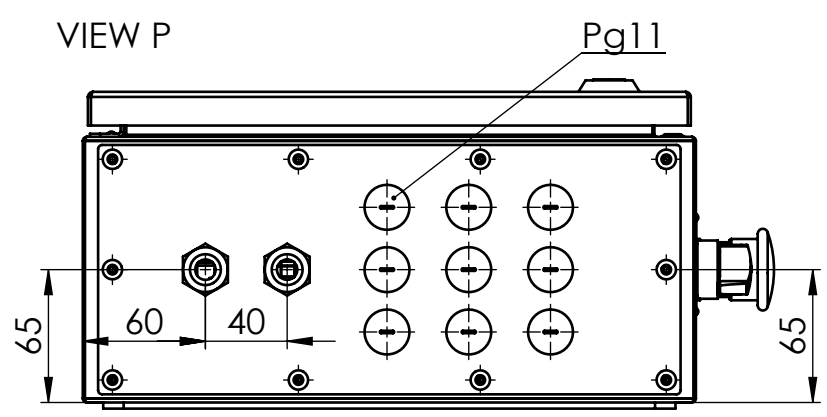
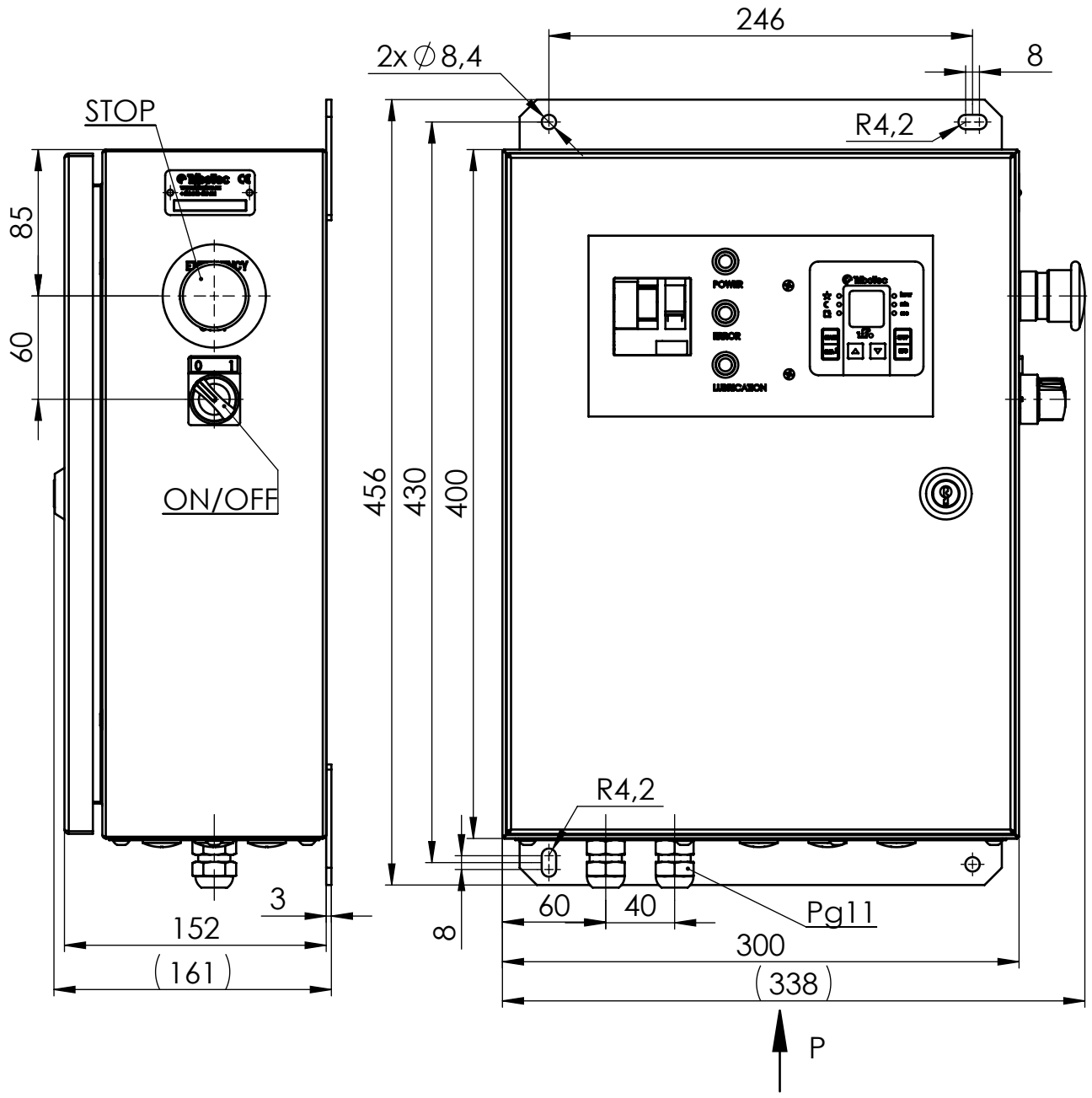
SERVISE AND MAINTENANCE


The AP 2 control timer is mounted in the vertical position. It is fixed to the holder or directly to the lubrication pump frame using four screws with $\varnothing 8$. Position the control timer so as to prevent any mechanical damage and moisture penetration. The control timer connection shall be carried out according to the applied standards and regulations for electrical device installation. The connection shall be performed according to the wiring diagram.

In compliance with the user manual, set the required lubrication cycle using the film button panel; 1: lubrication period – pause period, or 2: number of cycles – pause period.

TECHNICAL DATA

Lubrication pump operating voltage	230VD/400VY, 50Hz
Control timer control voltage	24V DC
Protection	IP65
Operating period	1 to 59 sec., 1 - sec. increments 1 to 99 min., 1 - min. increments
Pause period	1 to 59 sec., 1 - sec. increments 1 to 59 min., 1 - min. increments 1 to 99 hours, 1 - hour increments
Cycle control time setting	1 to 99 min.
Number of adjustable cycles	1 to 99
Working environment temperature	- 10 to 60°C
Dimensions in mm (W x H x D)	300 x 400 x 160
Weight	10 kg
Installation position	vertical



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Type	AP2	
Code	9 55 0697	