

GE71

OIL Lubrication unit Single line system



Application

As an intermittent operation unit to feed volumetric dosing meters in single-line systems

Operation

It can be operated as follows:

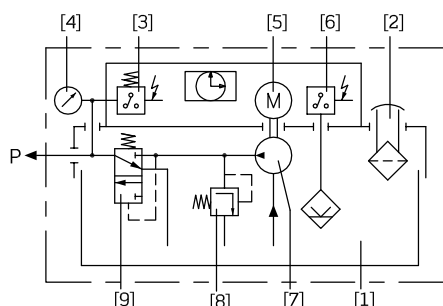
- Without control device. Programmed from the machine's automation (plc, automaton, etc..)
- With control device (only with 3 litres tank)

In units with pressure switch, the pump's operation time is the pressure switch signal + 10 seconds.

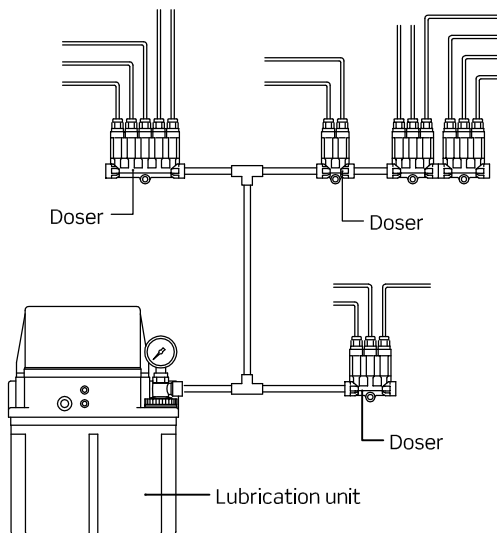
Depending on the control system, they can be equipped with different accessories for monitoring and controlling the operation:

- Manual pushbutton (intermediate lubrication)
- Electrical level (minimum level control in the tank)
- Pressure gauge (visual control of the pressure cycle)
- Green light (voltage input / motor running)
- Red light (alarm or system fault)

Hydraulic diagram



- | | |
|-----------------------|----------------------------|
| 1- Tank | 6- Level switch |
| 2- Filling cap-filter | 7- Gear pump |
| 3- Pressure switch | 8- Pressure limiting valve |
| 4- Pressure gauge | 9- Relief valve |
| 5- Electric motor | P = Pressure outlet |



Technical characteristics

Tank..... 2-3 litres in plastic
Degree of protection..... IP54

Gear pump

Lubricant Mineral or synthetic oil
Viscosity 30 ÷ 1500 cSt
Flow 0,1-0,2 l/min
Working pressure 30 bar
Working temperature..... +10°C ÷ +40°C

Motor

Voltage.....	115V~	230V~	24Vdc
Frequency	50/60Hz	50/60Hz	
Power (50Hz).....	115W	115W	55W
Consumption (50Hz).....	0,8A	0,5A	2,5A
rpm (50Hz).....	2800	2800	2800

Service mode..... S3 20%*
Maximum operation time..... 5 min
Maximum cycles/hour..... 20

* 20% is the ratio between the operation time and the stop time.
E.g. 1 min of operation time corresponds to 5 min stop time

Pressure switch

Without pressure..... Open
Breakdown voltage..... 42V
Connection current..... 2,5A
Maximum contact load..... 30VA
Connection pressure..... 14 bar

Electric level switch

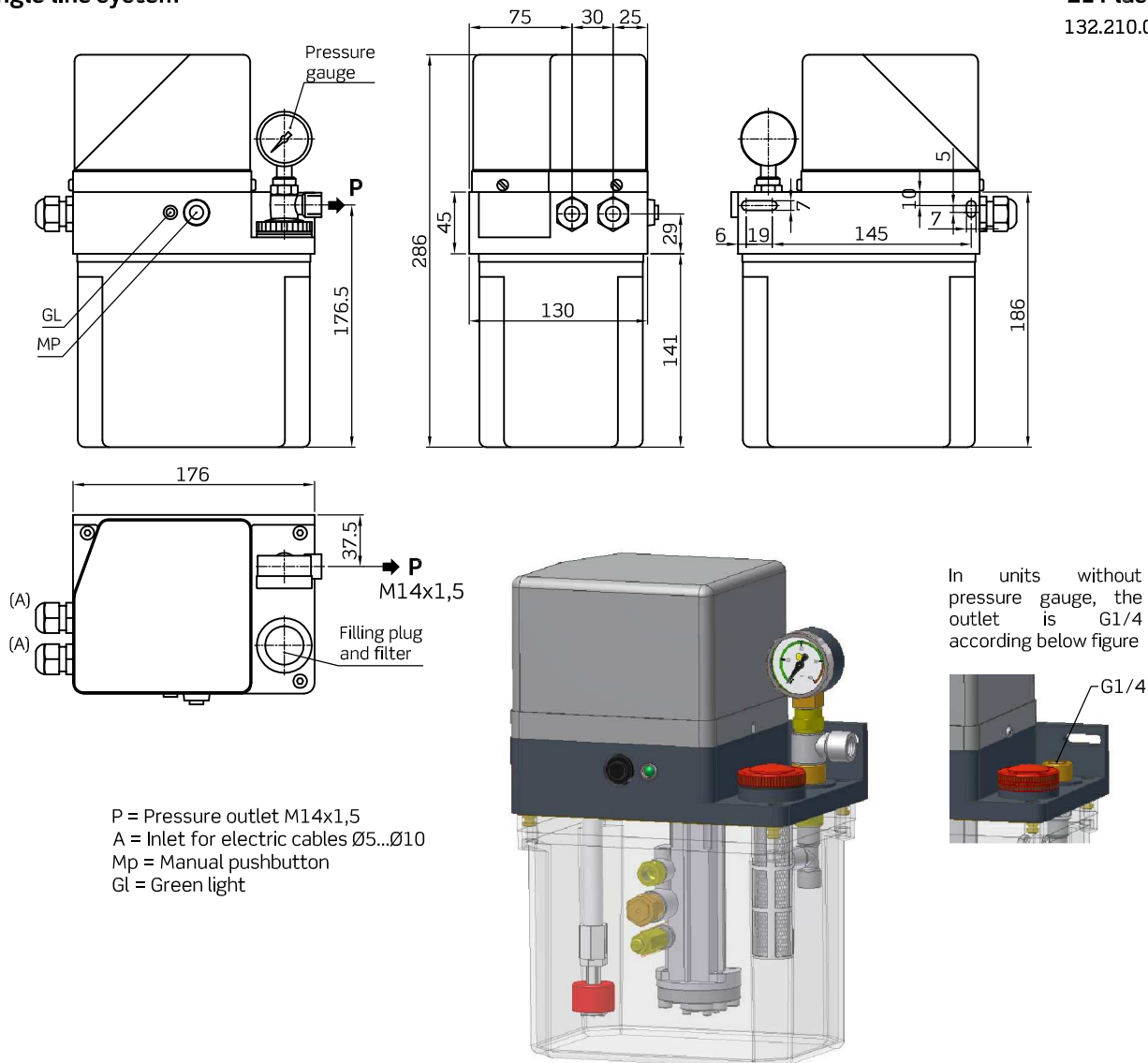
Type of contact..... Reed
Voltage..... 10 ÷ 230V
Connection..... max. 0,5A
Power breakdown..... max. 20W
Function see diagram

Diagram represented
with tank **without** oil



OIL lubrication unit
Single line system

GE71/A
2L Plastic
132.210.000



P = Pressure outlet M14x1,5
A = Inlet for electric cables Ø5...Ø10
Mp = Manual pushbutton
Gl = Green light

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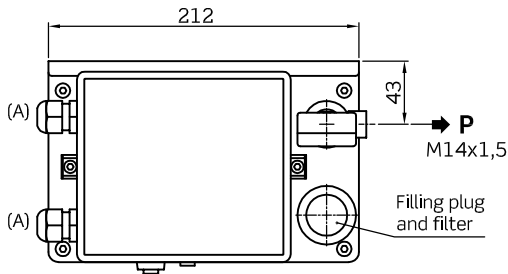
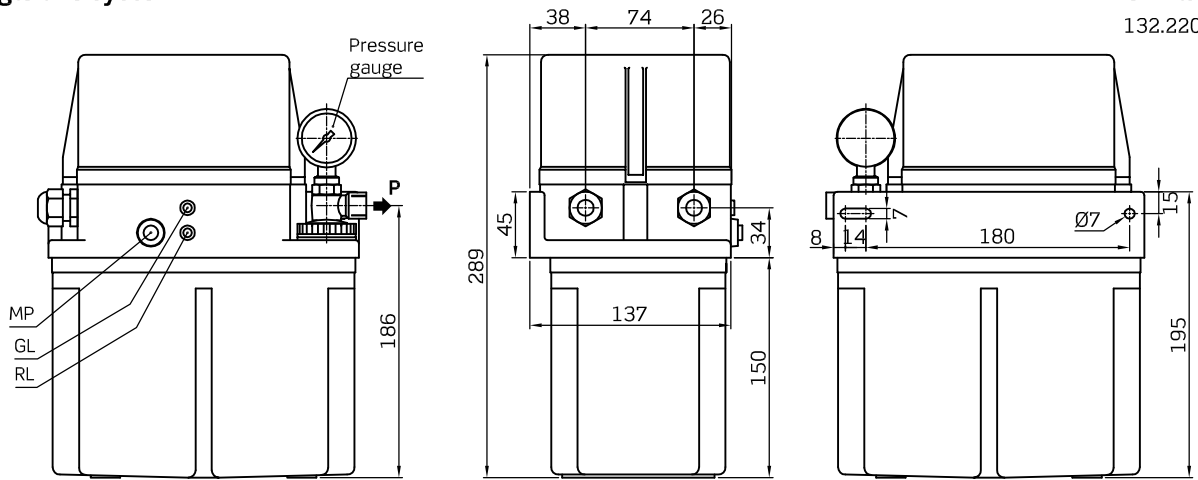
Tank capacity	X	Control system	X	X	Voltage	X	Monitoring system	X	Pump flow
2 litres	A	Without	0	0	24Vdc	1	MP	1	0,1 l/min
			1	1	115Vac	2	LS	2	
			2	2	230Vac	3	PG	3	
						4	PS	4	
							GL		

MP = Manual pushbutton
LS = Level switch
PG = Pressure gauge
PS = Pressure switch
GL = Green light

The green light is switched on only during the motor's running time

OIL lubrication unit
Single line system

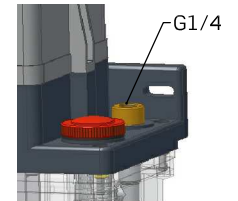
GE71/B
3L Plastic
 132.220.000



P = Pressure outlet M14x1,5
 A = Inlet for electric cables Ø5...Ø10
 MP = Manual pushbutton
 GL = Green light
 RL = Red light



In units without pressure gauge, the outlet is G1/4 according below figure



GE71 / X - 1 / X X X X

Tank capacity	X	Control System	X	Voltage	Monitoring System						Pump flow		
					MP	LS	PG	PS	GL	RL			
3 litres	B	Without	0	0	24Vdc	1	✓				✓	2	0,2 l/min
				1	115Vac	2	✓	✓			✓		
2	230Vac			3	✓	✓	✓			✓			
4	230Vac			4	✓	✓	✓	✓		✓			
		Time	2	0	24Vdc	5							
				1	115Vac								
		Time + pulses	7	2	230Vac								

In the units without control the green light is switched on only during the motor's running time.
 In the units with control the green light remains switched on while the unit is under voltage

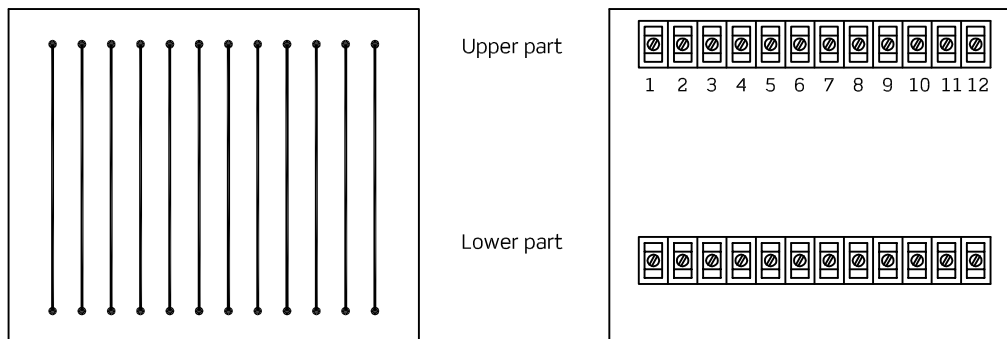
MP = Manual pushbutton
 LS = Level switch
 PG = Pressure gauge
 PS = Pressure switch
 GL = Green light
 RL = Red light

Connection plate for units without control

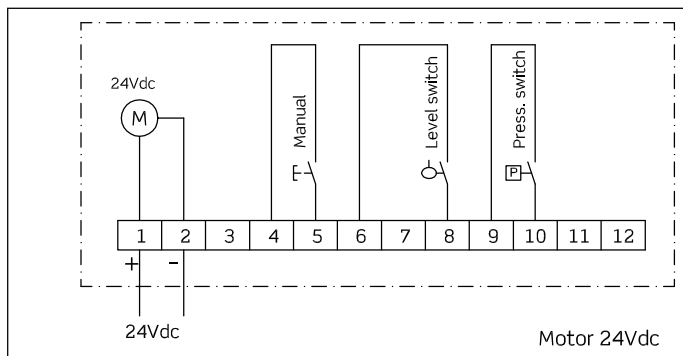
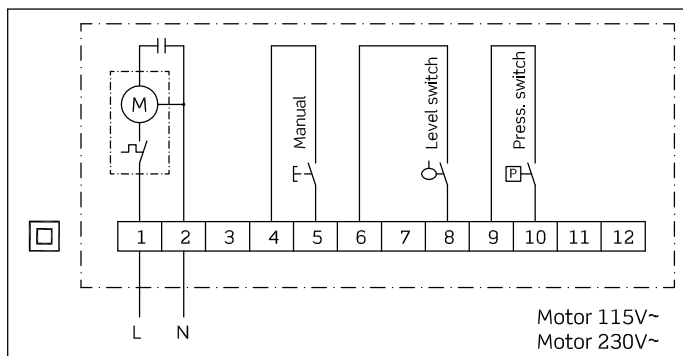
EF01/0-2

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For application to connect the units' internal signals via the lower part with the control sources via the upper part.



Electrical connection diagram



All the contacts on this diagram are indicated at rest position.

On the electrical level (tank without oil) the minimum level contact is activated by the float

Electrical level \Rightarrow Tank without oil

Pressure switch \Rightarrow Circuit without pressure

Manual pushbutton \Rightarrow Not pressed

Heat protector only incorporated in single-phase motors 115V~ and 230V~

If the current is cut as a result of abnormal overheating, this device is resettable (it is automatically reactivated when the temperature returns to normal), therefore, it is not necessary to carry out any work on the motor.



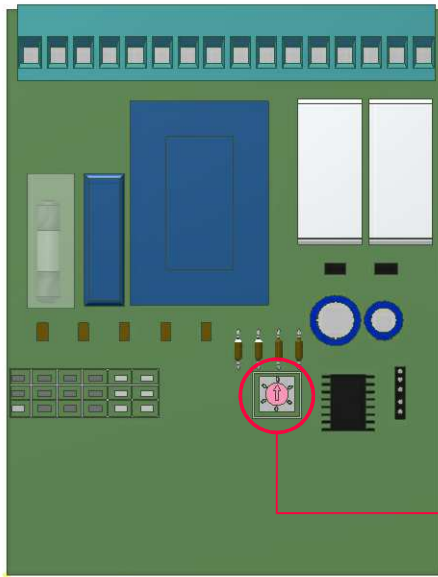
CAUTION!!!

Safety measures must be taken: disconnect the main switch before carrying out connection coupling.

Control and Monitoring device

24Vdc ⇒ EE02/C-1-0
115V~ ⇒ EE02/C-1-1
230V~ ⇒ EE02/C-1-2

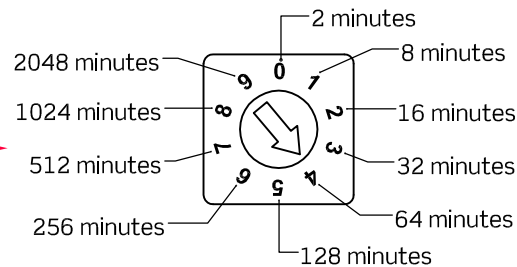
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-TIME-

-PAUSE time programmable by time via the selector
-OPERATION time: pressure switch signal + 10 seconds.
Depends on the flow and number of points in the installation.
A maximum duration of 3 minutes has been set, after which the alarm will be activated.

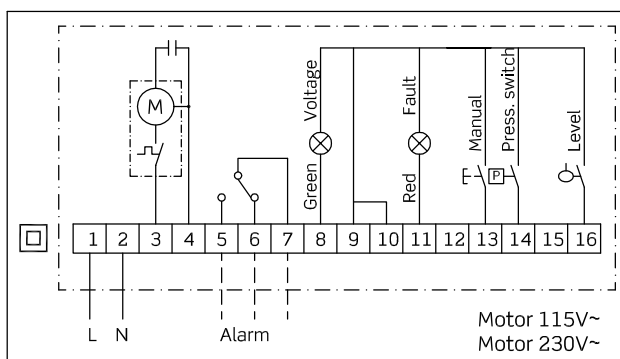
Configuring the device: select the desired pause time value by turning the selector in the direction of the corresponding number.



Monitoring system

If the alarm is activated during start-up, the red led will light up indicating the relevant fault:

Type of alarm	Indicates	To cancel the fault
Fixed red led	1- Minimum level of oil in the tank 2- Level switch fault	-Fill the tank and press the manual pushbutton -Check the level switch
2 flashes of red led	Pressure fault (not enough pressure after motor in operation for 3 minutes)	-Check there are no leaks in the circuit -Check pressure switch status



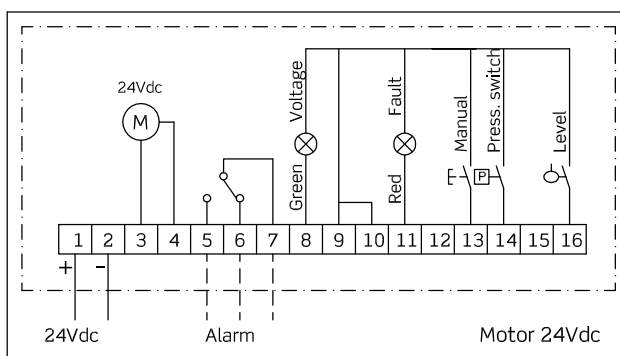
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Pressure switch ⇒ Circuit without pressure
Manual pushbutton ⇒ Not pressed

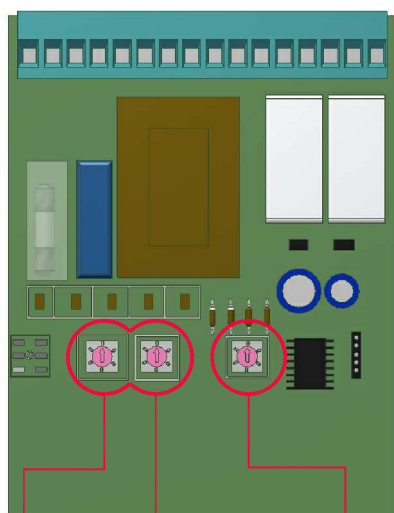
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If the current is cut as a result of abnormal overheating, this device is resetable (it is automatically reactivated when the temperature returns to normal), therefore, it is not necessary to carry out any work on the motor.



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Control and Monitoring device

24Vdc ⇒ EE03/C-1-0
115V~ ⇒ EE03/C-1-1
230V~ ⇒ EE03/C-1-2

450.500.000

-TIME OR PULSES-

-PAUSE time programmable via the selector by time or pulses (electrical signals emitted during a machine's working rhythm)

-OPERATION time: pressure switch signal + 10 seconds.

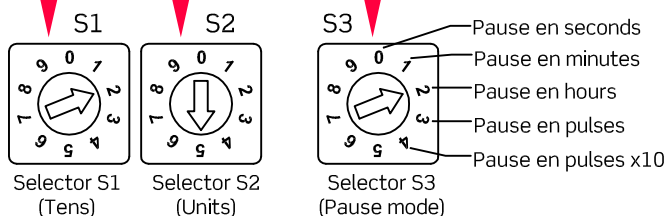
Depends on the flow and number of points in the installation.

A maximum duration of 3 minutes has been set, after which the alarm will be activated.

Configuring the device:

-Select the desired pause mode via selector S3: Time / Pulses.

-Select the value of this pause via selectors S1 and S2 (Tens and Units)



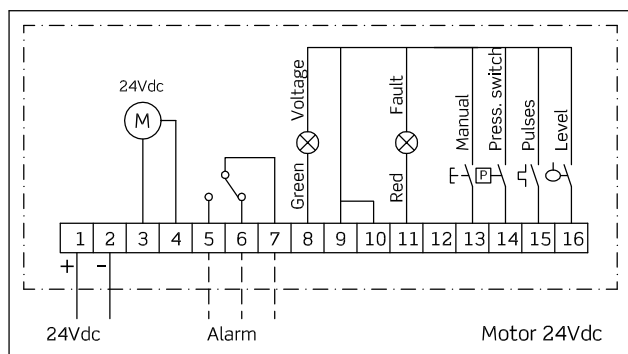
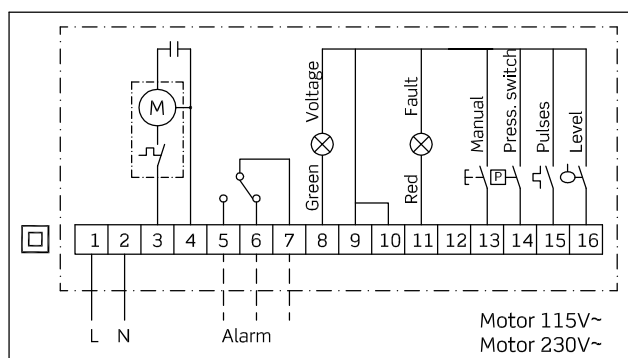
Application examples:

S1	S2	S3	One lubrication cycle every:
9	0	0	90 seconds
3	5	1	35 minutes
0	1	2	1 hour
8	0	3	80 pulses
7	5	4	75 pulses(x10)=750 pulses

Monitoring system

If the alarm is activated during start-up, the red led will light up indicating the relevant fault:

Type of alarm	Indicates	To cancel the fault
Fixed red led	1- Minimum level of oil in the tank 2- Level switch fault	-Fill the tank and press the manual pushbutton -Check the level switch
2 flashes of red led	Pressure fault (not enough pressure after motor in operation for 3 minutes)	-Check there are no leaks in the circuit -Check pressure switch status
3 flashes of red led	Device configuration fault	Check that -The pause mode selector is not out of range -The units and tens selectors are not at "0" at the same time



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