

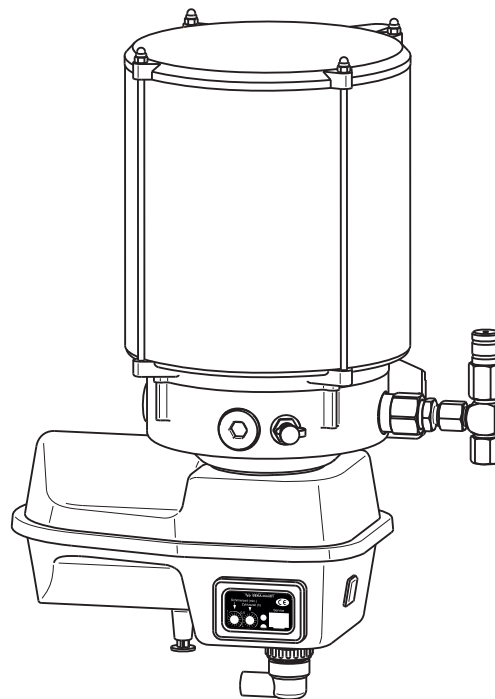
Integrated electronic controller

Type EP-tronic T1

with bayonet connector

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Electronic pump EP-1 with integrated controller EP-tronic T1:

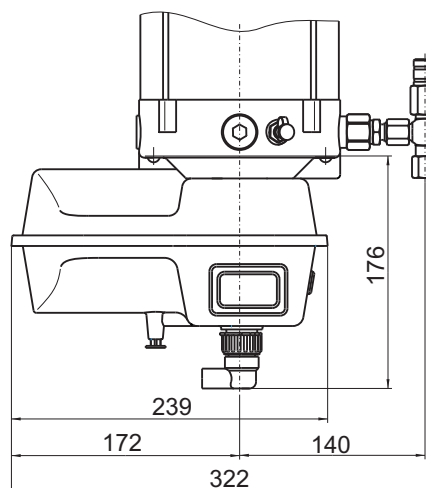


1. General Information:

The integrated control device EP-tronic T1 is used for the time-dependent control of the central lubrication pump EP-1 in progressive devices, particularly for vehicles without continuous operating voltage connection such as e.g. trailers or semi-trailers.

Installation dimensions:

The electrical pump EP-1 with integrated controller EP-tronic T1 can be equipped with various reservoir versions. For the installation dimensions of the reservoir versions, see the description EP-1.





EP-tronic T1

2. Function sequence

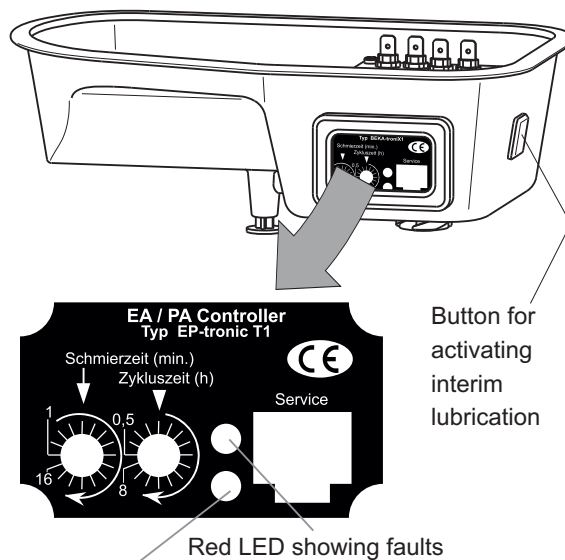
After connecting the power supply, the green and the red LEDs light up for approx. 1.5 sec., thus indicating that the controller is operative (activation control).

Every time the controller is activated for the first time, a lubrication process begins. The green LED in the control half shell is lit during the entire lubrication procedure.

The integrated electronic controller EP-tronic T1 is equipped with a data memory which serves, amongst other things, to record the elapsed times. If the voltage supply is interrupted during a lubrication or a cycle, time is stopped and recorded. Once the power supply is switched on again, the remaining lubrication or cycle time is read from the memory, and the function sequence will be resumed from where it was interrupted.

While the voltage supply is connected, an interim lubrication can be triggered by actuating the button which is installed laterally on the pump's motor casing. In this case, the pump immediately starts a lubrication cycle; the lubrication or cycle time which has elapsed so far or which has been recorded is reset, and starts anew.

EP-tronic T1 integrated electronic controller:



Green LED showing function

Technical data for the controller:

Operating voltage:	10 to 60 V DC
Maximum current load:	I = 6,0 A
Fuse (not included in decive):	F 6,3 A (5x20) medium slow-blow fuse
Temperature range:	-35°C to +75°C
Degree of protection:	IP 65

Before the electrical connection:

Observe the voltage of the pump motor.



EP-tronic T1

3. Method of operation

When the central lubrication processor is time controlled, the cycle duration and the lubrication time can be adjusted. Cycle duration means the period from the beginning of one lubrication process to the beginning of another lubrication process.

The control has five voltage inputs, whereas three inputs (rear light, brake light, and any circulating blinker lights) are used for the voltage supply of the pump. Each of the five voltage inputs is also used for detection of vehicle movements.

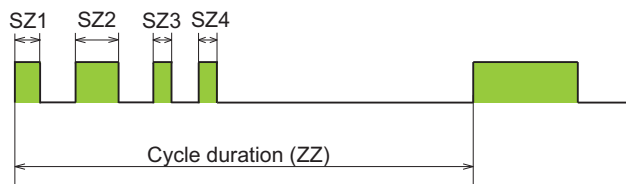
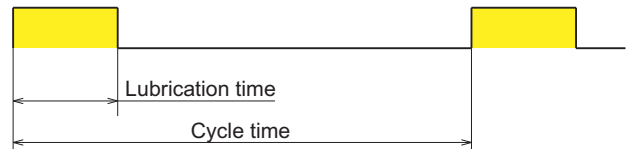
The central lubrication pump can only prime lubricant, when one of the three inputs (brake light, rear light or any circulating blinker lights) is supplied with power.

Because the voltage supply is not permanently available, the total lubricant time set-up may consist of several short lubrication periods.

If a cycle time elapses before the complete run of the lubrication time, the remaining time will be carried forward to the next lubrication cycle. The lubrication time can at the most be doubled.

If within half an hour, no voltage is detected on any of the five voltage inputs, the cycle time is stopped. The controller assumes that the vehicle is no longer in motion.

Diagram of cycle sequence:



$$SZ1 + SZ2 + SZ3 + SZ4 = \text{set-up lubrication time}$$

EP-tronic T1

4. Adjusting the parameters

The cycle time or lubrication time can be set by means of graduating switches in the controller's sight glass.

To adjust the time setting, remove the red frame on the pump's motor housing using a flat screwdriver, loosen the four Phillips screws and remove the transparent protective cover.

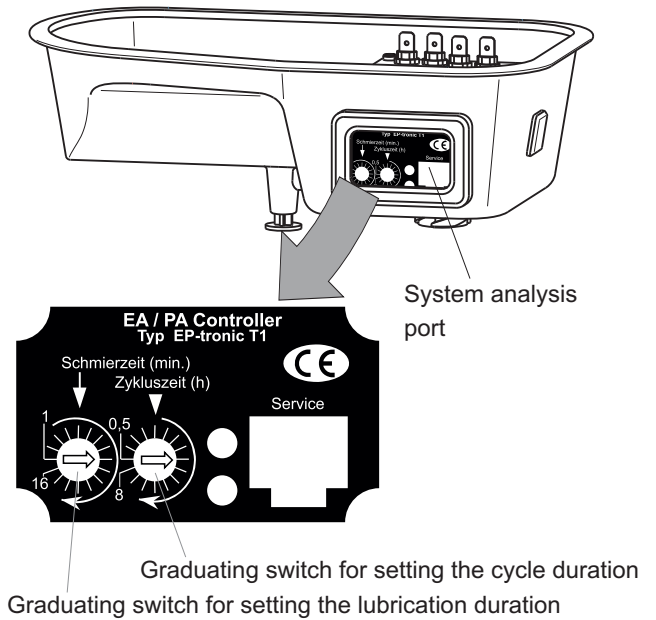
The cycle during or lubrication time can be adjusted using a flat screwdriver.

If the cover plate is not replaced properly, water may enter the controller and damage it. In this case, the guarantee is no longer valid.

The adjusting ranges can be changed over by means of the diagnostic software BEKA-DiSys, even on site if the controller has already been operated before at the customer's.

All adjusting ranges for the lubrication period and all cycle time ranges can be combined at random.

EP-tronic T1 integrated electronic controller:



Adjusting the parameters:

Lubrication times:

- 1 to 16 min. (16 grades every 1 min.)
- 2 to 32 min. (16 grades every 2 min.)
- 2 to 32 sec. (16 grades every 2 sec.)

Cycle duration:

- 0.5 to 8 h (16 grades every 0.5 h)
- 2 to 32 min. (16 grades every 2 min.)
- 2 to 32 h (16 grades every 2 h)

When changing the adjusting ranges, the label in the controller window must be replaced.

Labels can be ordered in German language with various lubrication and cycle time combinations (refer to table below); other languages are available on request.

Range of lubrication time	Range of cycle duration		
	0.5 h to 8 h	2 min. to 32 min.	2 h to 32 h
I 1 min. to 16 min.	0490030325	0490030326	0490030327
II 2 min. to 32 min.	0490030328	0490030329	0490030330
III 2 sec. to 32 sec.	0490030331	0490030332	0490030333

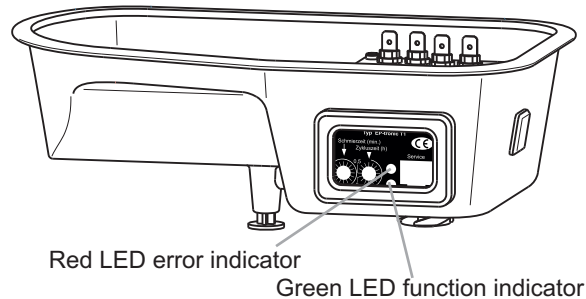
EP-tronic T1

Summary of Signal indicators and Terminal diagram

5. Summary of Signal indicators:

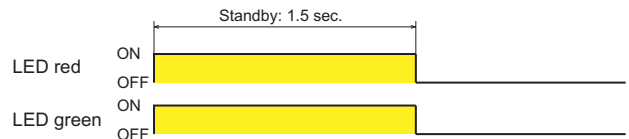
The pump's functions are indicated via two control LEDs (green/red) in the display on the pump's motor casing, where the red LED always indicates an error in the program sequence.

EP-tronic T1 integrated electronic controller:



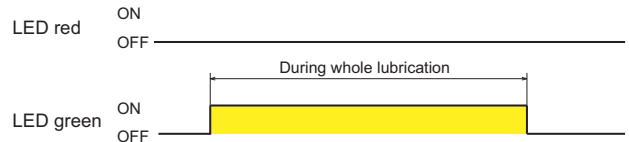
a) Standby

Standby indicator:



b) Lubrication activated

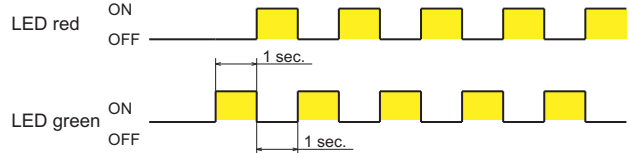
Lubrication sequence:



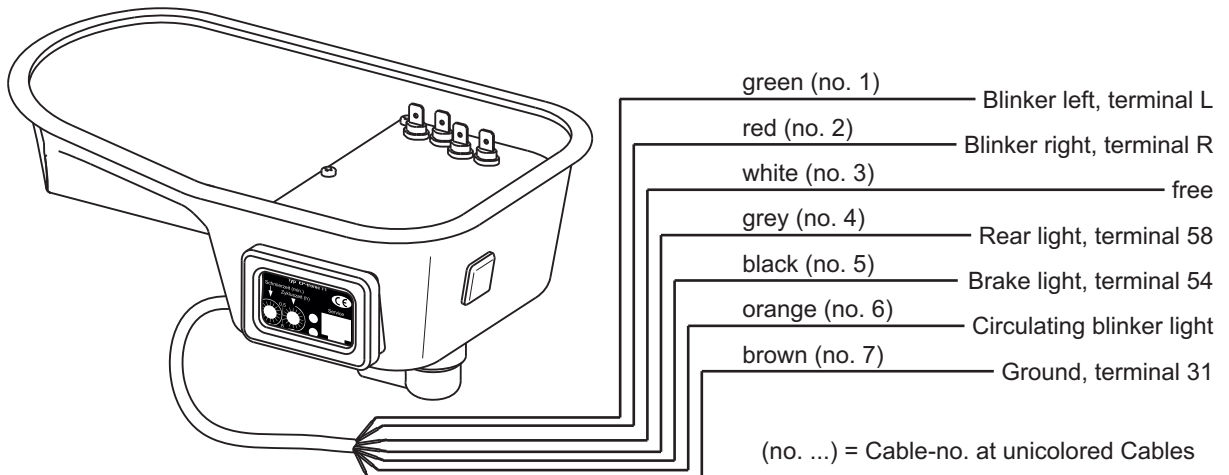
g) Test lubrication (constant lubrication)

To adjust the time controlling to continual lubrication for servicing purposes, the lubrication time must be set to a higher value than the cycle duration.

Test lubrication:



6. Terminal diagram:



EP-tronic T1

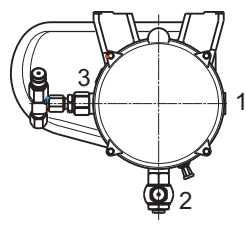
7. Ordering key for EP-1 with integrated controller

Construction type _____ 2183 . X . X . X . X . X . XXXX

Motor voltage	
with bayonet connector	
12 V	24 V
3	4

	Fig.				
1	1	2	3	4	0
2	1	2	3	4	0
3	1	2	3	4	0
Outlet position	PE-120	PE-120 V	PE-60	PE-170	without

Fig.	Code	Fig.	Code	Fig.	Code	Fig.	Code
001	G	002	K	003	N	004	R
010	H	020	L	030	P	040	S
011	J	022	M	033	Q	044	T
100	1	200	4	300	V	400	D
110	2	220	5	330	B	440	E
111	3	222	6	333	C	444	F
120	7	021	9	122	8	123	U
Special variants							Z



Order example:
 Outlet position: 1 2 3
 Fig.: 0 2 1
 Code: 9

Other combinations of pump elements on demand!

Size of reservoir	1.9 kg	2.5 kg	4 kg	8 kg
Code	1	4	2	8

Integrated electronic controller EP-tronic T1				
Lubrication time range	Cycle time range			
	0.5 h to 8 h	2 min. to 32 min.	2 h to 32 h	
I 1 min. to 16 min.	1	A	J	
II 2 min. to 32 min.	2	B	K	
III 2 sec. to 32 sec.	3	C	L	

Button for interim lubrication	without	with
Code	0	1

Special types	without
Code	0000

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Subject to alterations!



EP-tronic T1 Retrofitting and Ordering key for integrated controller

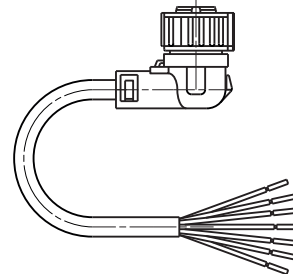
8. Retrofitting:

The integrated controller EP-tronic T1 can be retrofitted to the electric pump EP-1, i. e. to pumps which have been delivered without controller and to replace existing controllers.

However, retrofitting to pumps without controller is only possible after the year of construction 2004.

Controllers delivered for retrofitting or replacement are not provided with connection cable, as this is normally available. If the controller is to be installed in a pump which has not been equipped with a controller so far, or to be replaced by a controller with another connector, the connecting cable must be ordered separately.

7-wire connecting cable. length 10 m, with bayonet connector:



Order-no.: FAZ02499-21

9. Order key for integrated controller, installed in lower casing:

Construction type				2183 . 90 . 10 . X . X . XXXX
Connector version				
with bayonet connector	10			
Integrated electronic controller EP-tronic T1				
Lubrication time range	Cycle time range			
		0.5 h to 8 h	2 min. to 32 min.	2 h to 32 h
I	1 min. to 16 min.	1	A	J
II	2 min. to 32 min.	2	B	K
III	2 sec. to 32 sec.	3	C	L
Button for interim lubrication		without	with	
Code		0	1	
Special types	without			
Code	0000			

