




B-TIMER Filter cartridge lifetime computer for BAUER filter systems - P21 P31 P41

Introduction

Read these operating instructions carefully before using the B-TIMER. (Valid for devices from version 300.301.811 onwards).

 **The settings in the setup menu are critically important in terms of the ability to display the filter capacity correctly. Without these settings, the B-TIMER can only be used as an operating hours counter!**

 **Ensure that the compressor's pressure retention valve is set to 150 bar (factory setting) and that it is functioning correctly, otherwise the filter capacity may be displayed incorrectly and the operation may not, under certain circumstances, be detected correctly.**

 **Before delivery, ensure that all the maintenance counters (a+b+c) have been reset. (Otherwise, the B-TIMER signals incorrect maintenance intervals, since the storage times are not taken into consideration.) If the items in question have not been reset, it must be done without delay. Refer to the 'Reset' section on page 4.**

DESCRIPTION

The **B-TIMER** (Figure 1) is a self-activating mini-computer that keeps track of the compressor's operating hours and calculates the filter cartridges' lifetime with the help of the time, the temperature, the type of cartridge and the delivery quantity of the compressor. It displays the operating hours, the cartridge's service life and the compressor's upcoming maintenance-related tasks. The **B-TIMER** needs neither an external power supply nor a connection to the compressed air system. It is mounted on the enclosure of the filter to be monitored with the help of a fastener and is thus the ideal monitoring device for all mobile BAUER compressors. It is particularly well-suited for sport-diving devices that are powered by either gasoline or diesel fuel. Every system of BAUER-KOMPRESSOREN can easily be retrofitted with the B-TIMER.

Intended usage

This device serves solely as an appliance that can be used to display the operational status and does not release the user from the additional responsibility to monitor and measure the breathing air quality of the filter system in accordance with national norms (e.g. EN 12021). This **cannot** be done with the **B-TIMER**.

The **B-TIMER** may only be used with BAUER compressors, BAUER processing plants and original BAUER filter cartridges. It has only been designed and approved for the aforementioned **BAUER** filter systems, not for the Verticus and Mini-Verticus plants. The respective cartridge numbers are contained in the software. Every other type of utilisation counts as utilisation that is not in accordance with the regulations. Damages resulting from such utilisation are subject to the manufacturer's/supplier's risk exclusion, warranty exclusion and liability exclusion policies.

In case of external filter cartridges, even those of similar dimensions, the service life can deviate significantly from the intended service life on account of, e.g. different filling materials and fill quantities. Secure and correct functionality cannot be guaranteed for compressors and filter systems produced by other manufacturers, as the compressed air in these items may be at different temperatures and the efficiency of the upstream final interceptor may be different. The B-TIMER has only been tailored to the interaction between BAUER compressors, BAUER filter systems and original filter cartridges.

Be mindful of the **application limits** of the device:

Working temperature: 0 °C to +50 °C

Storage temperature: -20 °C to +70 °C

Protection class: IP65 (protection against contact, dust-proof, protection against hose water)

Vibration, ± 3 g when in operation

Max. humidity: 95%; non-condensing



Figure 1 B-TIMER

Installation

Use the enclosed fastener to mount the B-TIMER at the centre of the gold-coloured filter's enclosure. In case of the P41, mount it on the grey micro-filter's enclosure. Both its legs must lie on the container. Ensure that it does not come into contact with the filter's fastening clamps. If the B-TIMER needs to be remounted, e.g. during the replacement of the filter's enclosure, ensure that the underside of the heat conduction pad has not been damaged.

Method of functioning

The **B-TIMER** display displays the following functions:

- Operating hours of the compressor plant. A blinking 'h' indicates that the compressor-operation has been detected.
- Cartridge life in % via 4 segments in the filter-cartridge symbol.
- When the remaining capacity reaches or falls below 20% of the total lifetime, the final segment starts blinking and the figure displayed for the operating hours switches over to the cartridge's order number.
- The compressor plant displays the upcoming maintenance-related tasks with the help of alphabets and figures displaying the operating hours.
A = 500 hours or 1 year
B = 1000 hours or 2 years
C = 2000 hours or 4 years
- A battery symbol is used to indicate that the lithium battery is weak and must be replaced. **The data is saved and is not lost when the battery is changed.**

The **B-TIMER** is operated with the help of the entry and selection keys.

Error display

If the temperature sensor in the device malfunctions, 'Error 1' or 'Error 2' comes up at the display (Figure 3).

In such a case, use of the B-TIMER should be discontinued. Send the device to the factory for repairs, or send it to the next agency.

Battery replacement

The battery (1, Figure 4) is placed in the battery compartment. To replace the order, withdraw plug (2) and pull the battery out of the battery compartment. Make sure you use a battery of the same type (BAUER order number 82743).

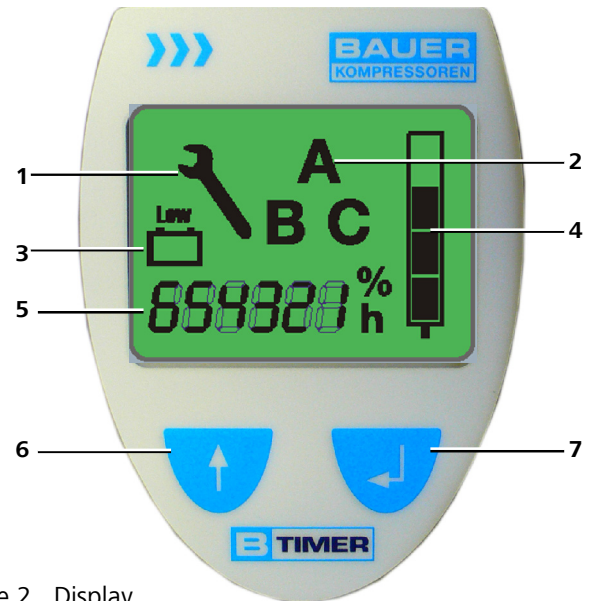


Figure 2 Display

- 1 Key symbol (maintenance due)
- 2 Alphabet (type of maintenance)
- 3 Battery symbol
- 4 Cartridge saturation display
- 5 Operating hours or cartridge no.
- 6 Selection keys
- 7 Entry keys

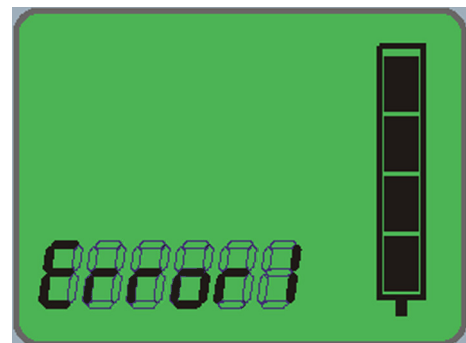


Figure 3

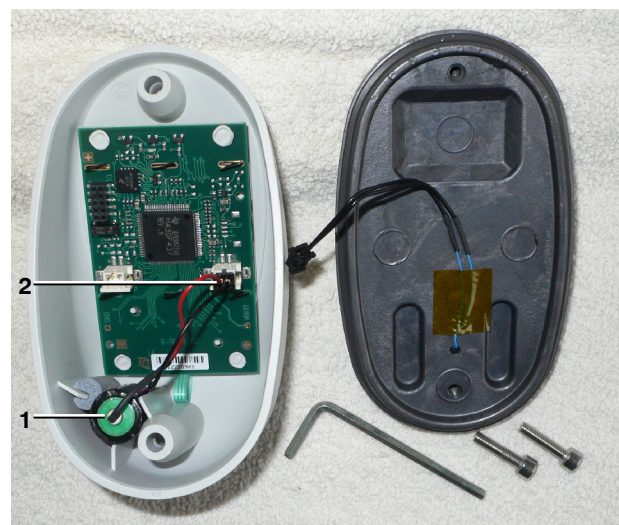


Figure 4 Battery replacement

Operation



The B-TIMER switches itself on when the compressor is activated. The fact that the compressor is in operation is indicated by the blinking 'h' symbol.

To switch on the B-TIMER without putting the compressor into operation, press one of the buttons on the display: the main menu is displayed (Figure 5).



If no button is actuated for 1 minute, the display reverts to the main menu. The B-TIMER switches itself off if the compressor-operation is not detected in 2 minutes.

Functional display



Press the selection button to display the desired function (↑).

Press the ↑ button. The remaining filter-capacity is displayed (Figure 6).

Press the ↑ button. The number of operating hours lying between the point in question and service interval A (500 hours or yearly) is displayed (Figure 7).

Press the ↑ button. The number of hours remaining before service interval B (1000 hours or every two years) is displayed (Figure 8).

Press the ↑ button. The number of hours remaining before service interval C (2000 hours or every four years) is displayed (Figure 9).

Press the ↑ button. The filter-cartridge number is displayed (Figure 10). The filter icon blinks.

Press the ↑ button. The display reverts to the main menu.

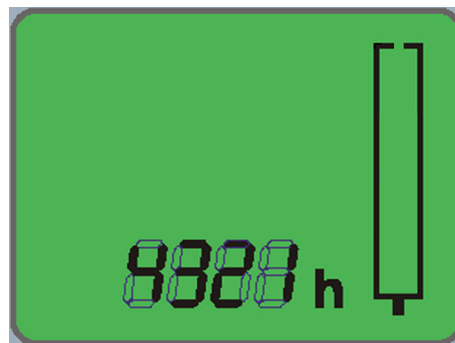


Figure 5

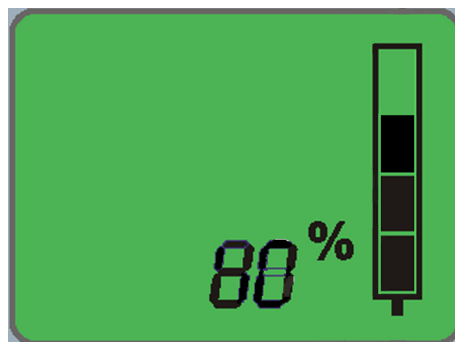


Figure 6



Figure 7



Figure 8

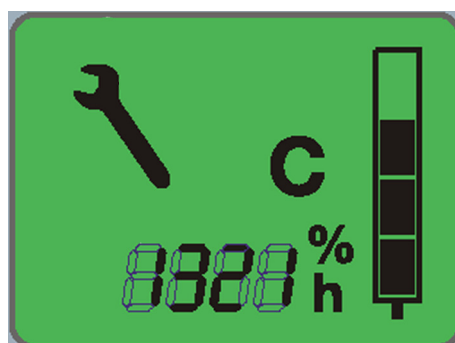


Figure 9

Reset



The filter capacity may only be reset after the cartridge has been replaced!

To reset the filter capacity or the A, B and C service intervals, hold the ↓ button down for more than 5 seconds when the respective display has been activated (Figure 11).

Setup

To navigate to the setup menu of the various functions of the **B-TIMER**, hold down the ↑ and ↓ buttons simultaneously for more than 5 seconds when the cartridge number is being displayed (Figure 10). The filter icon starts blinking (Figure 12), which indicates the setup mode.

The applicable filter-cartridge no. is set under **setup A**. To change the article number, hold down the ↓ button for 3 seconds, after which the number starts blinking. Use the ↑ button to set the desired number. Use the ↓ button to accept the number in question.



Article numbers beginning with 999 must be set in a special manner.

Hold down the ↓ button for 3 seconds, and then enter 999000 with ↑. The last 0 starts blinking. Appoint the corresponding digit with ↑ and accept it with ↓. When the 2nd zero starts blinking, appoint the digit as described above, and carry out the same procedure for the 3rd digit.

When the ↑ button is pressed, the display switches over to **setup B** (setting of the delivery quantity). The filter icon starts blinking (Figure 13). The delivery quantity (in l/min.) can be found in the compressor's instruction manual. To change the configuration, hold down the ↓ button for 3 seconds, after which the 1st digit starts blinking. Use the ↑ button to set the desired number. Use the ↓ button to accept the number in question and repeat the same procedure until all three digits have been set correctly.

When the ↑ button is pressed again, the display switches over to **setup C** (setting of operating pressure). The filter icon starts blinking (Figure 14).

To change the operating pressure, hold down the ↓ button for more than 3 seconds. Press the ↑ button to enter the new operating pressure. (Options: 200 bar, 300 bar or 200/300 bar). Press the ↓ button to confirm the new setup.



The filter capacity must be reset after the setup preferences have been entered and a new filter cartridge has been inserted. Refer to the 'Reset' section.

When the ↑ button is pressed again, the display switches over to the **setup menu for the operating hours**. Press the ↓ button for 2 seconds, after which the last digit starts blinking. Use the ↑ button to appoint the desired digit and press the ↓ button. Repeat this procedure until all the digits have been entered. Repeated actuation of the ↑ button leads the system back to the main menu. Pressing the ↑ and ↓ buttons (for 2 seconds) makes it possible to repeat the setup procedure.

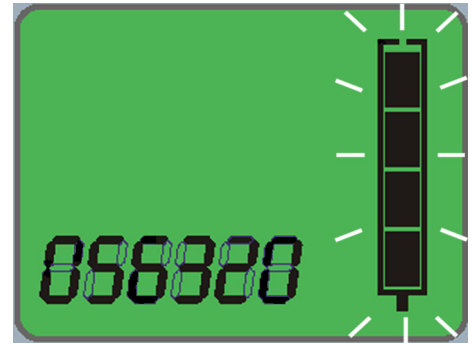


Figure 10



Figure 11

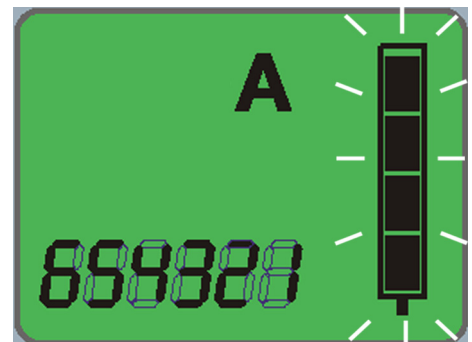


Figure 12

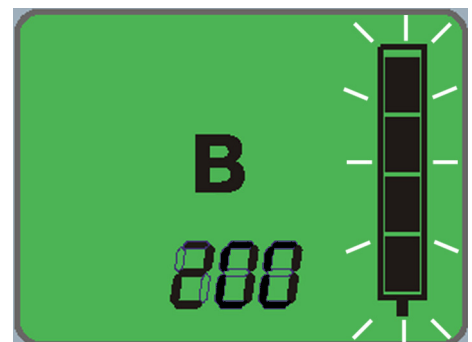


Figure 13

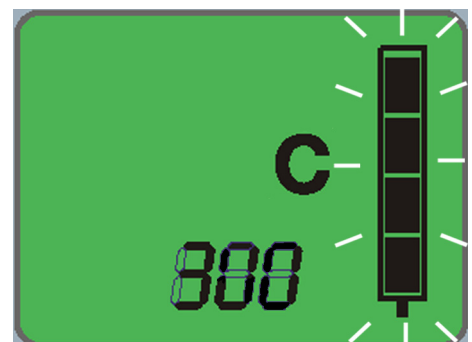


Figure 14