

ELBE 194

For CAN bus inputs and outputs



- Clear and simple operation
- time-saving commissioning
- rapid diagnosis
- very easy carrying and positioning
- condition monitoring via LEDs
- Heavy-duty design, class IP65 protection

1 Description

The ELBE194 operating terminal is used for controlling functions on mobile machines. The standard model is equipped with a text display with 4x20 characters for entering control values and for displaying operating status, process values and error messages. An optional graphics display can be supplied. The electronics are mounted in a heavy-duty, waterproofed aluminium housing. Specially designed for CAN-bus applications, the unit can be used as a slave or master terminal. The standard model is provided with 16 application keys, 16 LEDs, 2 sensor inputs and 1 PWM outputs. The foil keyboard can be configured to suit customer requirements. The power supply is controlled by an ON/OFF button. For control and diagnostics, up to three external sensors can be connected (voltage, current or pulse frequency). The terminal is equipped with a socket connector for an 8-pole plug, series 720, manufactured by Binder. Thanks to the snap-in latch, the plug can be plugged in and out quickly. There is plug-in provision for the optional terminating resistor.

Master operation:

When operated as a master, the electronics are programmed in accordance with by the customer's application. Bucher's proven BIOS is already implemented. Various network members such as joysticks, slave modules and CAN nodes can be connected and managed. If the customer so requires, additional CAN electronic modules can be incorporated into the software. With the help of the function keys and integrated display, the user can parameterise, configure and activate defined functions in a suitable manner. Information on each application, together with date and time, can be stored in non-volatile memory. Comprehensive and customer-specific data logging facilities are therefore possible. To meet the requirements of our global user base, there is a choice of 4 operating languages

Slave operation:

When operated as a slave, the ELBE194 transmits potentiometer and function key values in a cyclic manner. By means of additional messages, various texts can be shown on the display and the LEDs can be switched on and off.

2 Safety information

2.1 General

Before commissioning the unit, read the operating manual carefully and take note of all relevant points! The safety information is concerned not only with operating of the unit, but also with its suitability and admissibility for the planned application.

2.2 Machine safety

Do not use the electronic unit as the sole means of preventing dangerous situations on machines and equipment. Machines and plant must be designed so that fault conditions cannot result in a situation that poses danger to the operating personnel. The legal operator of the machine and plant is responsible for the safe design and manufacture of the machine and plant (Directive 89/392 EEC, II B).

2.3 Maintenance and repair

Before any work on the machine and plant is started, switch off the electronic unit and isolate it from the power supply. If electrical welding is to be carried out on the machine and plant, completely unplug the electronic unit.

2.4 Installation and commissioning

Only plug in the unit under no-voltage conditions. Ensure that the cable connector has a strain-relief device, and that the contacts are protected against corrosion. Route cables so that they cannot be damaged by rubbing or vibration.

2.5 EMC-protective measures

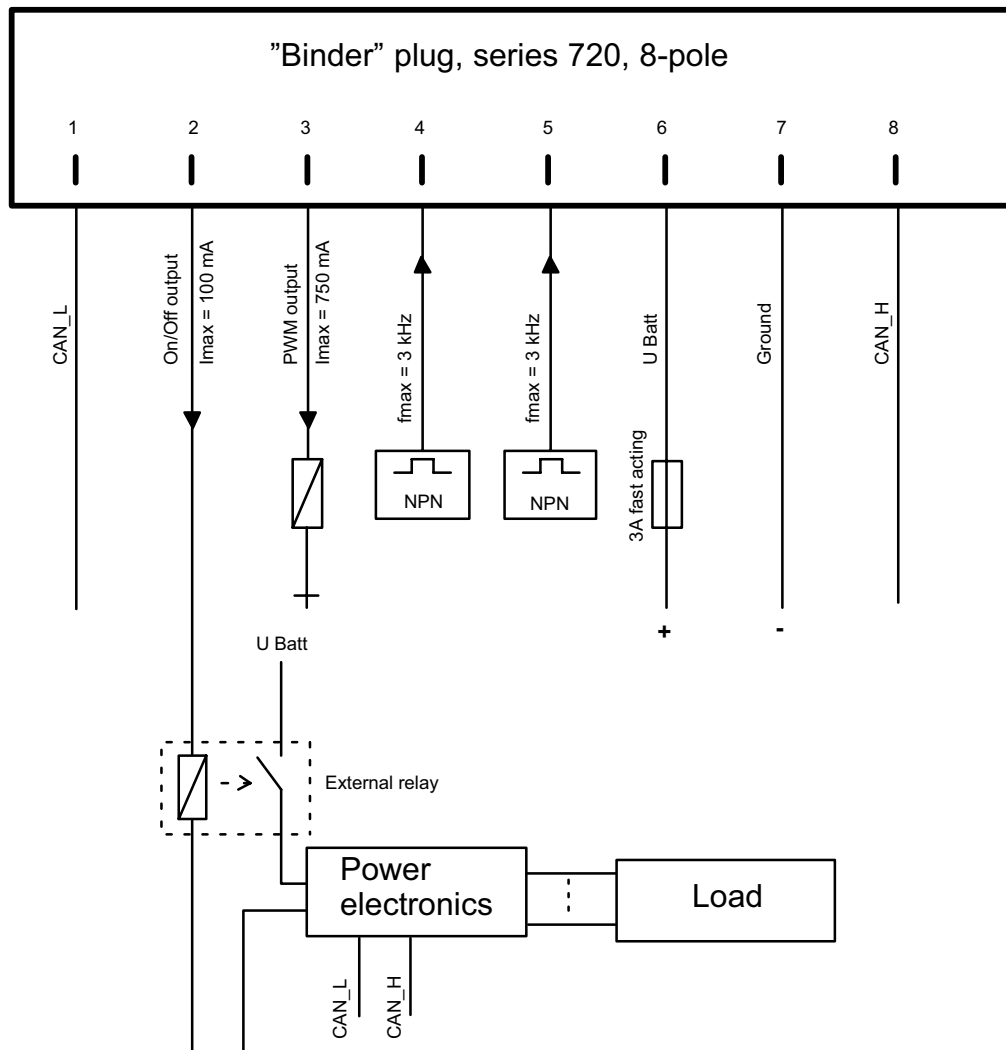
We recommend that portable or mobile radios or telephones only be used inside the machine (vehicle) when they are connected to a permanently installed external aerial.

3 Technical data

| General characteristics | | Description, value, unit |
|--------------------------------|---|---|
| Connector | | 8-pole plug, series 720, manufacturer: Binder |
| Enclosure protection | | IP 65 when plug is connected |
| Housing dimensions | | 210 x 106 x 32mm (W*H*D) (without side-mounted plug) |
| Power supply voltage UBatt | | 9 ... 30V DC; Reverse-polarity protected Current consumption approx. 0.4A without external load |
| Operating temperature | | -20 to 50°C (between -20 ...-10°C, restricted display function) |
| Storage temperature | | -20 ... 70°C |
| Weight | | 0,5 kg |
| CAN-Bus | | Protocol 2.0B active, (11 or 29 bit Identifier) Terminating resistor 120W; in/out of circuit via jumper |
| Two inputs, optionally as: | Analogue inputs | Voltage range 0V ... 8V or current range 0 ... 20mA Resolution 0bit 00h to 3FFh or 00h to 266h Protected against short circuits and over-voltage Voltage range 0V bis UBatt Input impedance ca. 18kΩ ULOW max.: 1V UHIGH min.: 4V Standard connection for NPN sensors; frequency range 0 ... 3kHz; Protected against short circuits and over-voltage |
| | Digital inputs | |
| One In-/Output, optionally as: | Analogue input Digital input PWM output | See above See above Voltage range 0V to UBatt I _{max} approx. 750mA; integral free-wheel diode Protected against short circuits and over-voltage |
| On/Off output | | Output is supplied with UBatt as soon as the terminal is switched on. I _{max} approx. 100mA; integral free-wheel diode Protected against short circuits and over-voltage |
| Integral safety features | | Hardware and software watchdog In the event of a fault, the terminal switches itself off automatically. The user must switch the terminal back on again. |

4 Connection diagram

Recommendation for standard model: ELBE194-01



5 Mounting option

Mounting in a retaining clip



6 Ordering details

| Model | Code | Part No. |
|--|-------------------------|-----------|
| Style 01 (standard): One PWM output Two pulse frequency inputs | ELBE 194-01**** | 100028400 |
| Style | | |
| Retaining clip for ELBE 194 | ELBE 194 Retaining clip | 100232821 |
| Accessories | | |
| Accessories for socket on unit | | |
| Plug connector, with latch, 8-pole | with 3 metres of cable | 100152578 |

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