The Filser LX 100

1) System Description

The whole Variometer-system is enclosed in a standard housing according to the federal aviation regulations. Simple and easy to use operating switches are neatly integrated on the right side of the front panel on this 80-mm (standard instrument panel cut-out 3 ½") single indicator unit. Connection to the aircraft electrical supply is made by means of a two-wired, shielded cable of 50 mm length which is included at no additional cost.

The Electronic-Vario is protected against aircraft electrical supply disturbance with the appropriate filters. When correct installation procedures are followed, the Electronic-Vario' s function is not adversely affected when using the radio.

The tube connectors for static pressure or TE-probe connection as well as flask-mounting can be found at the rear of the unit.

The complete electronic circuitry is on a GS-printed wiring board with solder resistance and is directly connected to the indicator system by using two screws. This ensures easy handling of the vario LX 100.

2) The LX 100 provides the following functions:

- TE-compensated E-vario with +/- 5 m/s or +/- 10kts. (option). Two time constants.
- A multi-tone audio is controlled by the corresponding vario- indicator
- By simply pressing down the three position switch the average for the last 30 seconds is indicated.
- A second display unit (57mm diameter-2 ¼") in +/- 5m/s or +/- 10kts. (optional) for two seat aircraft is available.

2. Installation Instructions

2.1 Inspect for visible damage caused by shipping immediately upon receipt.

2.2 MECHANICAL INSTALLATION
The 3 1/8-inch vario fits in each standard instrument hole and can easily be installed in most any cockpit.

2.3 ELECTRICAL INSTALLATION
The connector cable (length = 50mm) for electrical supply is included and must be connected as per the indication + 12V and the corresponding minus pole. The LX 100 E-vario is equipped with a protection diode against reversed polarity. It is, nevertheless important to install a fuse (0,2 A) between the battery and vario connector.

2.4 PNEUMATIC CONNETIONS
The LX 100 is connected to the flask and static pressure or the TE-Tube at the rear, where the corresponding connector tubes can be seen. Indications are provided at the rear of the vario. Make sure that the used tube fits absolutely tight to the vario-system. We recommend the installation of a moisture trap in the TE-tube conductor line. The tube should have minimum measurement of 5 x 1,5mm.

2.5 CHECK- PROCEDURE AFTER INSTALLATION
Check the following before operating the unit:

a) mechanical zero of the instrument,
b) correct installation of the electric connection to 12V DC.
c) correct pneumatic installation.

WARNING: DO NOT BLOW INTO THE INSTRUMENT OR TUBING !
THE FACTORY TE SETTING/CALIBRATION IS USUALLY CORRECT !
CHECK TE CONNECTIONS AND TUBING BEFORE ADJUSTING THE INSTRUMENT !

At the front side, a 4mm-bore hole in the panel can be seen, This is for additional correction of the indicator unit's zero-stability

The E-vario is switched on by turning the "VOL" button to the right
When switching on, a short-term, positive indication is shown, and the indicator goes back to its zero-position shortly after. The volume turns up when continuously turning the "VOL"-button to the right.

The E-vario should be switched on a few minutes before take-off for checking zero-stability. By means of a 3mm-screwdriver the zero stability can be adjusted further, if necessary. This is made by changing the position of the spindle-potentiometer which has been installed for this purpose.

3.User instructions

The LX 100 E-vario has only two user elements on the front. With the "VOL"-button, the unit is switched on/off and the volume is controlled. The tumbler-switch has three different positions. The upper and middle position allows the adjustment of the time constants and the lower position indicates the value of the average ascent of during the last 30 seconds in flight.

3.1 ADJUSTING OF THE USER ELEMENTS

a) Turn "VOL"-button to the right - switch on
b) Adjust volume by using the button accordingly (right - increase, left - decrease)
c) Turn tumbler switch up or middle - adjust time constant required
d) Press tumbler switch down - average ascent is parameter is displayed.

4. Trouble shooting

MALFUNCTION	POSSIBLE ELIMINATION OF DEFECT
A) After switch on no indication and tone	Check fuse and connection cable. Eliminate wrong connection to improper terminals, if necessary
B) Low TE-tube compensation	The connection tube between TE tube and vario should be checked for air leaks
C) Vario indicates higher level on the plus than on the minus.	see point "B"

5.Technical Data

Dimensions:	3 1/8' std. aviation cut-out (80 mm)
Weight:	400 g.
Range:	+/- 5m/s or +/- 10kts.
Tolerance:	5%
Temperature:	-15 °C to +50 °C
Operation voltage:	8,5 - 15V DC (input power is stabilized by a power regulator)
Power consumption:	typ. 35mA (depending on volume)
Flask:	0,451
Warranty:	1 year from purchase date

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