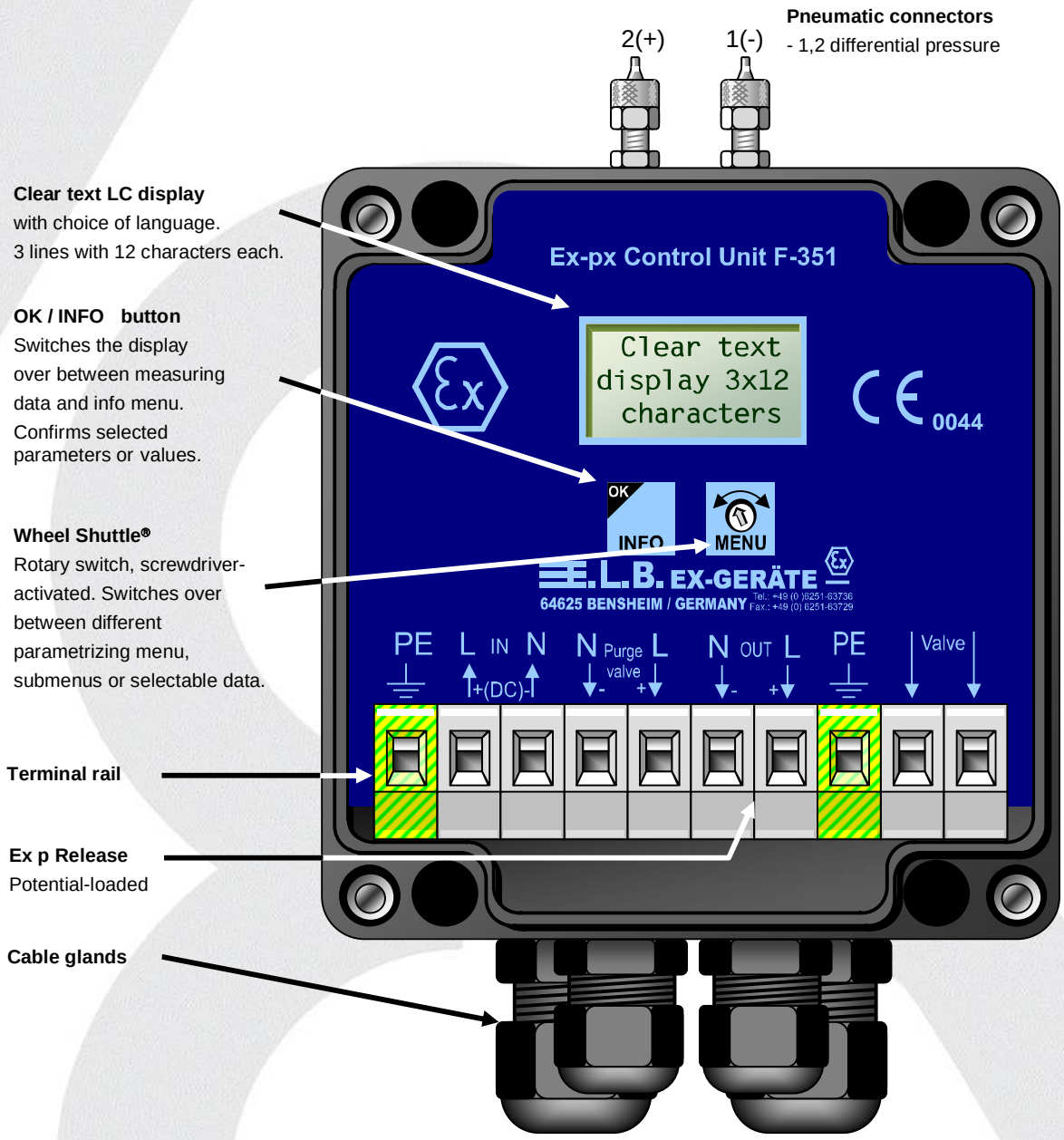
1 Basic functional description special purge control unit F-351.B*

Specially designed for quick and easy replacement.
For a detailed description see manual F-350.



1 General Functional Description

After a self-test and start-up, the controller F-351 monitors the flow rate of the compressed air or inert gas during the initial purging process, and then monitors and regulates the internal pressure of the Ex-p enclosure with regards to the surrounding atmosphere during normal operation.

Display

In three lines of 12 characters each, the digital display shows the enclosure's internal pressure during normal operation, and the remaining purging time in minutes and seconds during the initial purging process. During normal operation, you can call up further information by pressing the button "OK / Info". Faults which are detected during the self-check are shown here with a number.

OK-button

The button on the left side ("OK / INFO") is used in normal operation to call up the stored parameters "Enclosure Pressure", "Purging Time", "Switchpoint of Purge Start", "Switchpoint of Minimum Pressure" and "Switchpoint of Overpressure". During the parametrization, this button is used to select and confirm the various parameters.

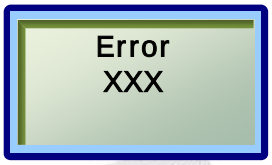
Rotary switch

The right field ("Menu") permits access to the Wheel Shuttle® with a tool (e.g. a screwdriver) for parametrizing the controller. With this Wheel Shuttle, you can start the parametrization and set the individual parameter values.

Screw terminal

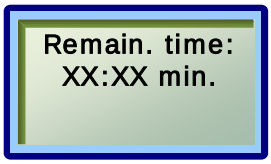
In the lower part of the cover (see page 1), the terminal assignment of the Controller is shown. Terminals 1 to 3 are inputs; they provide electrical power to the Controller. Terminals 4 to 19 are outputs, over which the monitoring unit drives its peripherals, e.g. the digital/proportional controller.

Immediately after the compressed air supply is opened and the main voltage is applied, the internal self-check of the controller begins automatically. Any fault occurring during the self-check sequence is indicated by



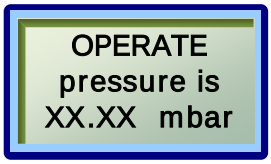
An explanation of the fault numbers (XX) is given in the manual, section 3.5 "Faults and Troubleshooting", Table 1: Faults detected during the self-check.

If the self-check is carried out successfully, the initial purging of the enclosure commences, ending when at least five times the enclosure volume has been circulated. The purging process is indicated by the message



in the display. All the time, the remaining purging time is counted down to 00 min and 00 seconds.

After the end of the purging sequence, the Non-Ex units in the enclosure are switched on. The overpressure in the enclosure then constantly monitored for adherence to the setpoint value (factory setting: 2.0 mbar) and also for transgressing of the MIN value (factory setting: 0.9 mbar) and exceeding of the MAX value (factory setting: 20.0 mbar). Normal operation is indicated by the message



in the display.

Attention!
Please note that the menu items marked in red on the following page have no function in this version.

In order to use the menu items respectively the signals from 9 to 11, you need the following special version of the control unit: F-351.BC and additionally an Optorelay F-369.

1.1 Menu plan F-351.P*

(Menü En SW 221001-211001 Rev.1.4 Motorsystem.doc)

