INSTALLATION OPERATION AND SERVICE MANUAL

FOR THE TRACE T910-404 4-20 OUTPUT MODULE 3-Channel

PN: T900-020 Rev. C

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1 SUMMARY

The 4-20 Output Module provides 4-20mA outputs for up to 3 impurities detected by the Trace ta3000, ta5000, and ta7000 Gas Analyzers.

1.1 FEATURES

- 4-20 mA Outputs for 3 impurities as detected by the ta3000, ta5000, and ta7000 analyzers
- Power supplies for each channel isolated from each other

1.2 COMPONENTS

The key components of the 4-20 Output Module are:

1. The 4-20 mA converter printed circuit board
2. Three isolated 24v power supplies
3. A 5v power supply to drive the board

2 MOUNTING, ELECTRICAL CONNECTIONS, AND SET-UP

Customer connections are documented via a diagram inside the 4-20ma module cabinet.

The 4-20 Output Module is shipped as an individual unit capable of mounting on a rack or bench top. Connection between the 4-20 Output Module Unit and the analyzer is made with a straight-through serial cable (included) and attached to COM3 on the analyzer. 4-20 mA current output cables (not included) should be connected externally to the desired 4-20 output channel on the terminal block.

Twisted/shielded wire pairs should be used for these connections. (A recommended cable is Alpha wire AG part number 1212C.) Each twisted pair should be connected to the output terminal block on the outside of the 4-20 housing, while observing the output polarity indicated on the terminals.

These cables are then connected to the user's circuit, which should consist of a resistance of not more than 750 ohms and not less than zero ohms. A power cord is supplied and should be connected to the unit after all other connections have been completed.

Once the all the connections in the previous section are completed, the 4-20 mA module will be powered on. (The module may be connected to a running analyzer, after which the user can press the "Page" button repeatedly on the analyzer until the "Auxiliary 4->20 ma Setup" screen is displayed (Figure 1).)

The module is now ready for operation. If the interface screen is not available on the analyzer, the analyzer does not recognize the 4-20 module. Please check the connections.

3 4-20 Output Module Operation

The 4-20 Output Module provides current outputs for all channels of the ta3000, ta5000, and ta7000 analyzer. Current outputs are initialized to 4mA upon power up of the module (even without being connected to the analyzer).

The following steps define how to configure the analyzer for the Full Scale values you wish to use:

- Using the "Edit" and arrow buttons below the analyzer's display panel to select a channel.
- After entering the edit mode for one of the channel's, use the arrow buttons to enter a full-scale value.
- After entering a full-scale value, continue to arrow the cursor's position until it is no longer within the "FS Range" column, then press "Esc" button to store the entered values.

After completion of entering the full-scale values, the 4-20 mA interface is complete and will provide the required output upon completion of the analyzer's next cycle.

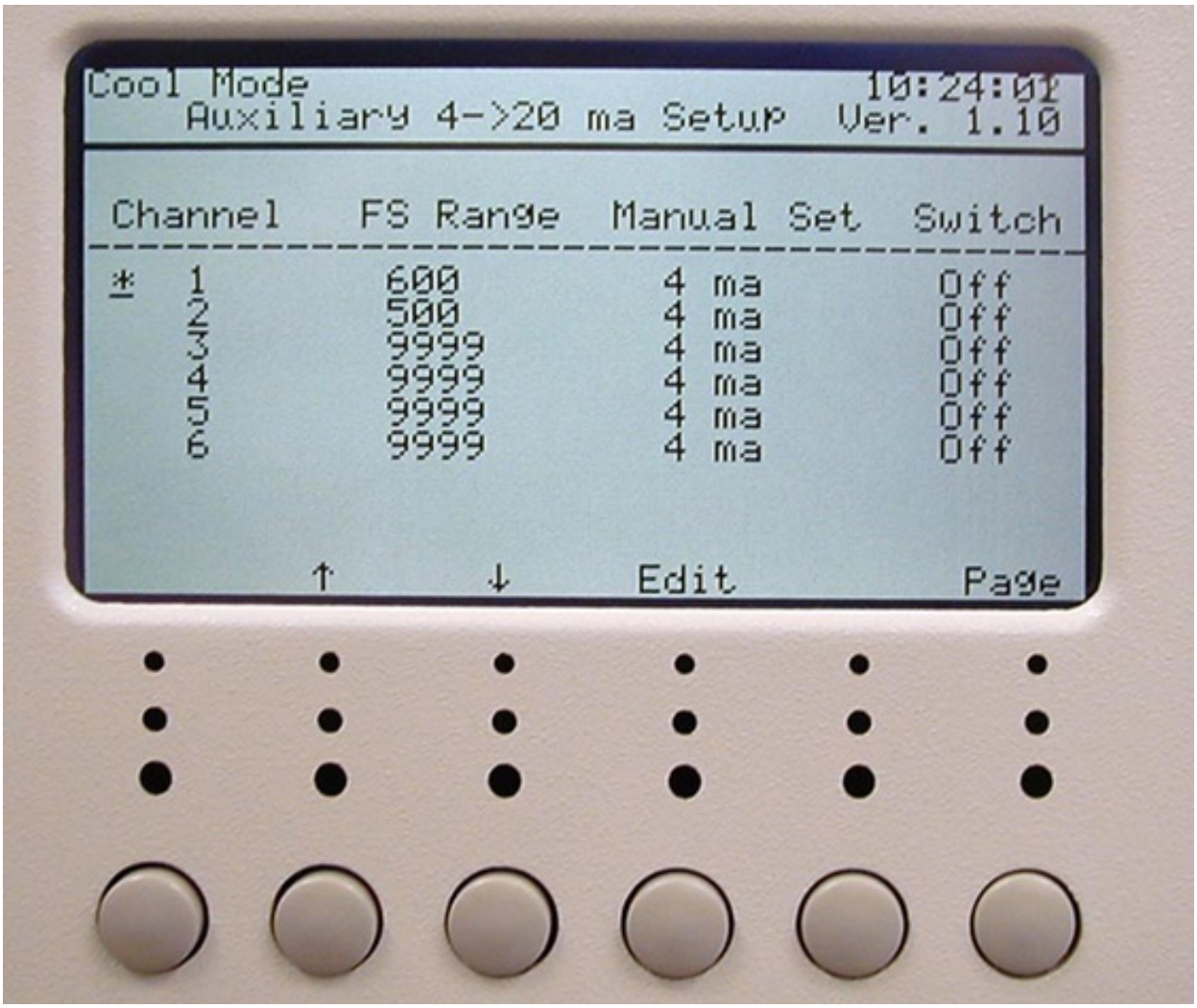

Figure 1. 4-20mA Interface Screen