2 • Controls and Indicators

All controls and indicators are located on the front panel and consist of pushbuttons, LED indicators, and a liquid-crystal display (LCD).

Front Panel Illustration and Description

DECS-250 controls and indicators are illustrated in Figure 2-1 and described in Table 2-1. The locators and descriptions of Table 2-1 correspond to the locators shown in Figure 2-1.
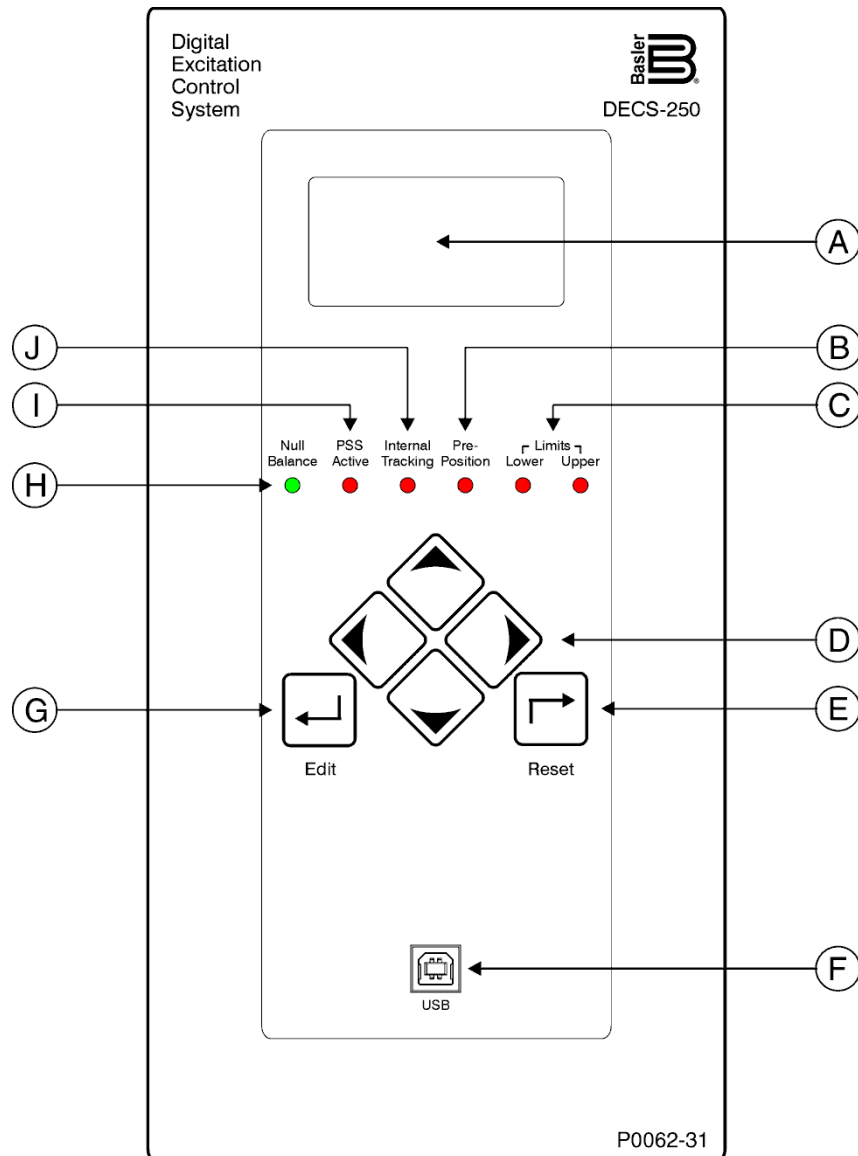

Figure 2-1. Front Panel Controls and Indicators

Locator	Description
A	*Display.* The liquid crystal display (LCD) serves as a local source of information provided by the DECS-250. The LCD displays operating setpoints, loop gains, metering, protection functions, system parameters, and general settings. The 128 by 64 dot pixel, backlit LCD displays white characters on a blue background.
B	*Pre-Position Indicator.* This red light emitting diode (LED) lights when the active mode setpoint is at any of the three pre-position (predefined) settings.
C	*Limit Indicators.* Two red LEDs indicate when the active mode setpoint reaches the minimum or maximum value.
D	*Scrolling Pushbuttons.* These four buttons are used to scroll up, down, left, and right through the menus displayed on the LCD (locator A). During an editing session, the left and right scrolling pushbuttons select the variable to be changed and the up and down scrolling pushbuttons change the value of the variable.
E	*Reset Pushbutton.* This button cancels editing sessions, resets alarm annunciations and latched alarm relays, and can be used for quick access to the metering screen.
F	*Communication Port.* This type B USB jack connects the DECS-250 with a PC operating BESTCOMS*Plus*® for local communication. BESTCOMS*Plus* is supplied with the DECS-250.
G	*Edit Pushbutton.* Pressing this button starts an editing session and enables changes to DECS-250 settings. At the conclusion of the editing session, the Edit pushbutton is pressed to save the settings changes.
H	*Null Balance Indicator.* This green LED lights when the setpoint of the inactive operating modes (AVR, FCR, FVR, var, and PF) match the setpoint of the active mode.
I	*PSS Active Indicator.* This red LED lights when the integrated power system stabilizer is enabled and can generate a stabilizing signal in response to a power system disturbance.
J	*Internal Tracking Indicator.* This red LED lights when any inactive mode (AVR, FCR, FVR, Var, or Power Factor) is tracking the setpoint of the active mode to achieve a "bumpless" transfer when changing active modes.

Menu Navigation

The DECS-250 provides local access to DECS-250 settings and metering values through a menu structure displayed on the front panel LCD. An overview of the menu structure is illustrated in Figure 2-2. Movement through the menu structure is achieved by pressing the four scrolling pushbuttons.
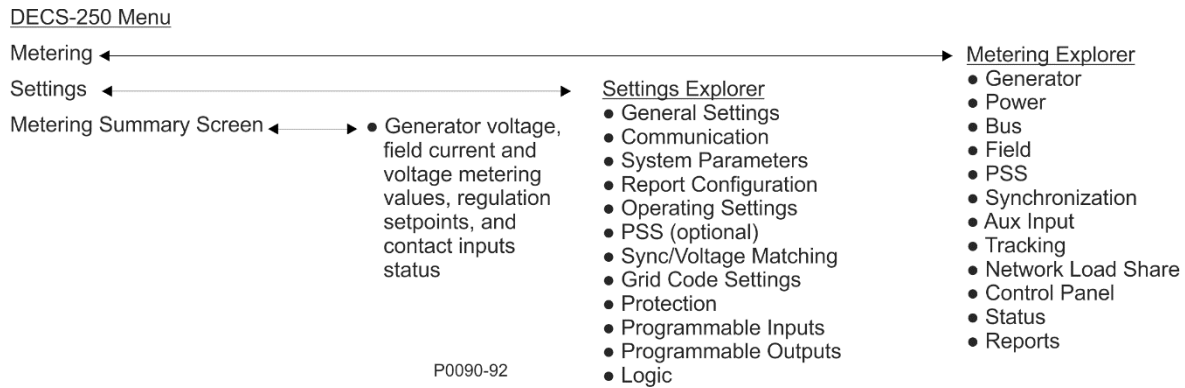
DECS-250 Menu

Metering

Settings

Metering Summary Screen ⟷ • Generator voltage, field current and voltage metering values, regulation setpoints, and contact inputs status

Settings Explorer
● General Settings
● Communication
● System Parameters
● Report Configuration
● Operating Settings
● PSS (optional)
● Sync/Voltage Matching
● Grid Code Settings
● Protection
● Programmable Inputs
● Programmable Outputs
● Logic

Metering Explorer
● Generator
● Power
● Bus
● Field
● PSS
● Synchronization
● Aux Input
● Tracking
● Network Load Share
● Control Panel
● Status
● Reports

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Figure 2-2. Menu Structure Overview

Adjusting Settings

A setting adjustment is made at the front panel by performing the following steps.

1. Navigate to the screen listing the setting to be changed.
2. Press the Edit button and enter the appropriate username and password to gain the needed level of security access. (Information about implementing and using username and password protection is provided in the *Security* chapter of this manual.)
3. Highlight the desired setting and press the Edit button to view the setting editing screen. This screen lists the setting range or the permissible setting selection.
4. Use the scrolling pushbuttons to select the setting digits/selections and adjust/change the setting.
5. Press the Edit button to save the change.

Display Setup

BESTCOMS*Plus* Navigation Path: Settings Explorer, General Settings, Front Panel HMI
HMI Navigation Path: Settings, General Settings, Front Panel HMI

Front panel display appearance and behavior can be customized to meet user preferences and site conditions. These BESTCOMS*Plus* settings are illustrated in Figure 2-3.

LCD

LCD setup includes a contrast adjustment to suit the viewing angle used or compensate for environmental conditions. The ability to reverse the display colors is provided to accommodate lighting conditions and user preferences.

Sleep Mode

Sleep mode reduces the demand on control power by turning off the LCD backlight when no pushbutton activity is seen for the duration of the LCD Backlight Timeout setting.

Language

Language modules are available for the DECS-250. Once a language module is implemented it can be enabled via the Language Selection setting.

Screen Scrolling

The display can be set to automatically scroll through a user-selected list of metered values. This feature is enabled and disabled with the Enable Scroll setting. The rate at which scrolling occurs is configured with the Scroll Time Delay setting.

Figure 2-3. Front Panel HMI Settings