

I/A Series® Hardware Panel Display Station



The Panel Display Station is a digital display station with configurable measurement indications and parameter adjustability (e.g., setpoint, bias, ratio). It connects to a Control Processor, via the Fieldbus, for access and display of selected variables of any process measurement or calculated value contained in the I/A Series systems control data base. The Panel Display Station features:

- Bar graph display of any three I/A Series variables
- Display of variables
 - Analog and digital representation of I/A Series variables
 - Unique configurable identification label for each variable
 - Independent configurable engineering units for each variable

- Progressive or “jog” ramping rates
- DIN panel mounting

Bar Graph Display

The Panel Display Station shows three columns in clear, bright, and easy-to-read bar graph formats using vacuum fluorescent displays. The columns show the scaled analog value of any I/A Series system control block variable. Displayed variables are assigned or changed during Display Station Interface (DSI) block configuration. In the Local mode of operation, the variables and associated bar graphs, when selected, are typically configured to be driven via the ramping keys. In the Remote mode of operation, certain variables are typically configured to be driven by a remote I/A Series signal.

Individual columns can be configured to display in either a full bar or single segment “tick” mode. The displayed range is -2 to +102% of scale. If the value of the variable exceeds this range, the appropriate pointer blinks. If the value of the variable exceeds 0 and +100% of scale, the appropriate pointer illuminates. All illuminated segments on each column may be blinked, depending on the configured remote I/A Series parameter.

Display of Variables

A column shows the percent scaled analog value of any I/A Series system control block variable. When a column is selected, by the SEL key, the column's linearly scaled value is displayed on the alphanumeric display. The value of the column is converted from raw counts into configurable engineering units and displayed on the Selected Value display with its associated engineering units label. The string, or loop tag, for the selected variable is shown on the Selected Tag alphanumeric display.

Progressive or “Jog” Ramping Rates

The ramping action of the station allows fine tuning by small “jogs” and progressive ramping rates to facilitate rapid variable adjustment.

In the local mode of operation, the operator can “jog” or progressively ramp the value of an I/A Series control block. While “jogging” or ramping, and including a configured ramp timeout period, the Selected Value alphanumeric display shows the value equal to the last control block value and the accumulated jog or ramp increment. After the ramp timeout, the display shows the most recent value of the I/A Series control block.

The duration of the ramp key depression determines how much and at what rate selected variables are ramped. Variables are ramped at an increasing rate depending on length of time the ramp key is depressed.

DIN Panel Mounting

The Panel Display Station mounts in a standard one-half DIN panel cutout (see Dimensions - Nominal) with or without an Auto/Manual Station (see PSS 21H-1C3 B4).

Control Software

Operation of the Panel Display Station requires configuration of Integrated Control Software.

The earth ground and signal common may be isolated from each other, when required, by removal of a pair of jumpers.

FUNCTIONAL SPECIFICATIONS

Operating Controls

- RAMP UP (Δ)
 - Moves selected variable towards Upper Range Value (URV)
 - Ramp Rate*
 - Jog 0.1%, full scale (0 to 100%) 12 seconds nominal
 - Ramp Values*
 - Clamped to -2 to +102% of scale
 - Ramp Timeout*
 - Range 0.1 to 25.5 seconds, setability 0.1 seconds
- RAMP DOWN (∇)
 - Moves selected variable towards Lower Range Value (LRV)
 - Ramp Rate*
 - Jog 0.1%, full scale (0 to 100%) 12 seconds nominal
 - Ramp Values*
 - Clamped to -2 to +102% of scale
 - Ramp Timeout*
 - Range 0.1 to 25.5 seconds, setability 0.1 seconds

Operating Controls (Cont.)

- REMOTE/LOCAL SELECT (R/L)
 - Selects Remote/Local mode of operation
- SELECTOR (SEL) SWITCH
 - Selects which column's value is displayed on the Selected Value display with its engineering units label and its Selected Tag.

Operating Indicators

- COLUMN DISPLAYS
 - Type*
 - Vacuum Fluorescent Display
 - Number*
 - 3
 - Segments*
 - 50 bars plus top and bottom arrow
 - Presentation*
 - Full bar or “tick”
 - Range*
 - 2 to +102% of scale
 - Refresh Rate*
 - 50 times per second

FUNCTIONAL SPECIFICATIONS (Cont.)

Operating Indicators (Cont.)

ALPHANUMERIC DISPLAYS

Number

2

Number of Characters

9 each

UPPER DISPLAY

Selected Tag, 9 character for loop tag

LOWER DISPLAY

Selected Value, 5 characters for numeric representation of value, 4 characters for units label

Number of Segments per Character

14

Character Set

A to Z, 0 to 9, space dot @ < > ? = * + , - / ° “

Operating Indicators (Cont.)

ERROR (E) INDICATOR

Indicates, when flashing, a failure of the Fieldbus

REMOTE/LOCAL (RL) INDICATOR

Indicates state of Panel Display Station

POWER REQUIREMENTS

Input Voltage

100, 120, 220, or 240 V ac, +10 to -15%,

47 to 63 Hz, selected by screw terminal jumpers

Consumption

10 W (typical)

Heat Dissipation

6 W (maximum)

ENVIRONMENTAL SPECIFICATIONS

Operating

TEMPERATURE

0 to 60°C (32 to 140°F)

RELATIVE HUMIDITY

5 to 95% (Noncondensing)

ALTITUDE

-300 to +3 000 m (-1 000 to +10 000 ft)

Storage

TEMPERATURE

-40 to +85°C (-40 to +185°F)

RELATIVE HUMIDITY

5 to 95% (Noncondensing)

ALTITUDE

-300 to +12 000 m (-1 000 to +40 000 ft)

Contamination

Class G1 (Mild) as defined in ISA Standard, S71.04

PHYSICAL SPECIFICATIONS

Mounting

Standard one-half DIN panel (see Dimensions-Nominal)

Mass

3 kg (6.6 lb)

Termination Connections

POWER

3 screw-clamp terminals

FIELDBUS

12 screw-clamp terminals

Distance--Panel Display

Last display in series, up to 9 m (30 ft) from mounting structure

Panel Display Station to Control Processor

Connects to Control Processor via Extended Fieldbus (Optionally Redundant)

Electrical Classification

Ordinary Locations

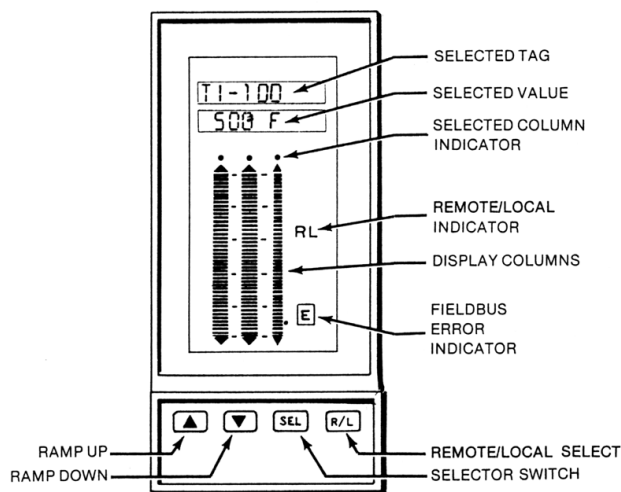
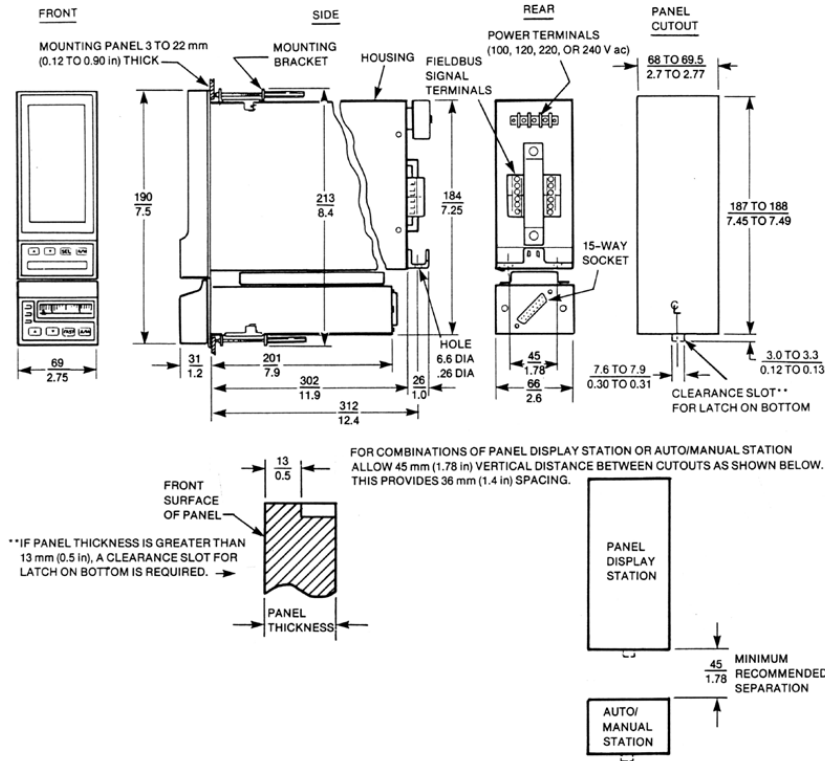


Figure 1. Panel Display Station

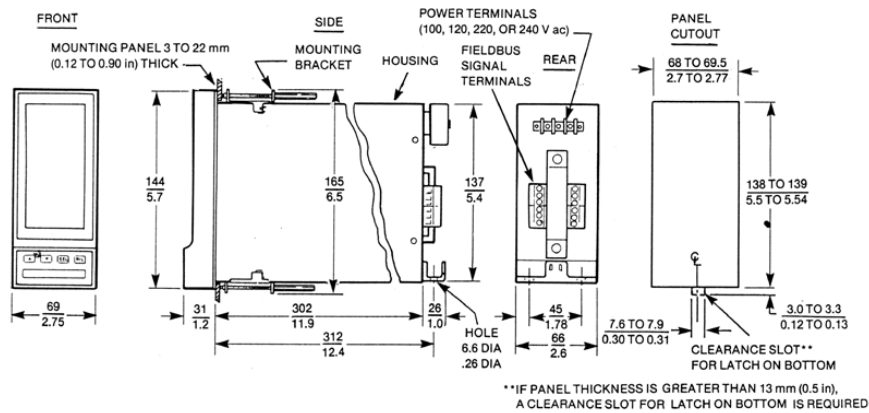
DIMENSIONS-NOMINAL

PANEL DISPLAY AND AUTO/MANUAL STATION - CLOSE COUPLED HOUSING MOUNTING

mm
in



PANEL DISPLAY STATION - HOUSING MOUNTING



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