



MODEL 2416 MANUAL LOADING STATION

.... Utilizes analog signals to provide automatic or manual control of various devices.

FEATURES

- 3¹/₂ digit LED displays provides large, easy to read digital indication of both process variable and output signals.
- Digital indication of process variable in desired engineering units.
- *AUTO* to *MANUAL* bumpless transfer.
- *MANUAL* to *AUTO* field settable timed ramping.
- Isolated output.
- Pushbutton increase/decrease control in *MANUAL* mode.

DESCRIPTION

The Essex Model 2416 Manual Loading Station is a conservatively designed, reliable unit that provides a 4-20 mADC output which is directly proportional to a voltage or current input. Data conversion is very accurate, done via 12-bit A/D and D/A modules.

When in the *AUTO* mode, the output is directly proportional to the input, with the large upper digital display indicating the process variable and the small lower display indicating the percent output. Transfer from *AUTO* to *MANUAL* is bumpless with no change in the output. The output can then be increased or decreased via the *UP* and *DOWN* pushbuttons. Transfer from *MANUAL* to *AUTO* utilizes a field settable ramp time, or the output may be manually changed to match the input, via pushbuttons.

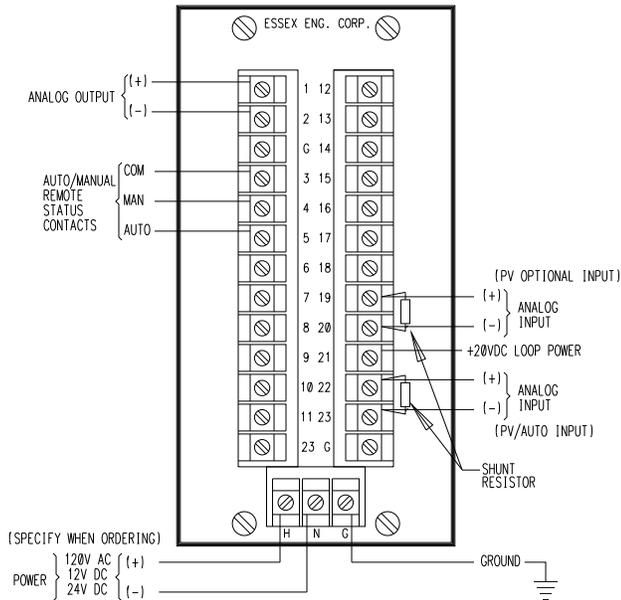
The unit contains several field selectable variables such as ramp time from 0.2 to 64 seconds for a zero to one hundred percent output change and zero

or non-zero reset on power up. Transferring between *AUTO* and *MANUAL* modes is accomplished via the *AUTO/MANUAL* pushbutton. Indicators are provided to display in which mode the controller is operating.

Also available in the unit are several optional features. They include *MANUAL ONLY*, which has no analog input, no *AUTO* mode capability, and both displays read the output; or *MANUAL ONLY WITH PV*, which is the same as the standard unit, but with no *AUTO* mode capability.



ELECTRICAL CONNECTIONS



MODEL 2416 SPECIFICATIONS

AMBIENT OPERATING TEMPERATURE RANGE
0 to 40 °C

POWER INPUT

120 VAC \pm 10% 15W max.
24 VDC \pm 10% 650 mADC max.
12 VDC \pm 10% 1200 mADC max.

ANALOG INPUTS (standard, except with Manual Only option)

4-20 mADC @ 250 Ω impedance
1-5 VDC @ 470K Ω impedance
Factory specials

CONTROL OUTPUTS

Isolated 4-20mADC @ 0-800 Ω LOAD
SPDT relay contact for AUTO/MANUAL status; 0.5A @ 120VAC

RAMP TIMING

0.2 to 64 seconds in 7 selectable steps for 0-100% output

INDICATORS

Process - 3-1/2 digit, 0.56" LED type display
Output - 3-1/2 digit, 0.3" LED type display

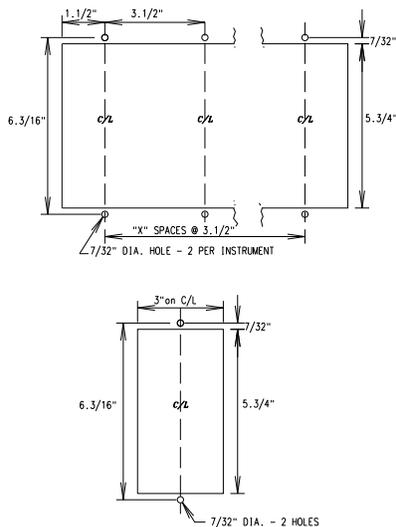
REPEATABILITY & ACCURACY

0.2% of span, \pm 1 of least significant digit

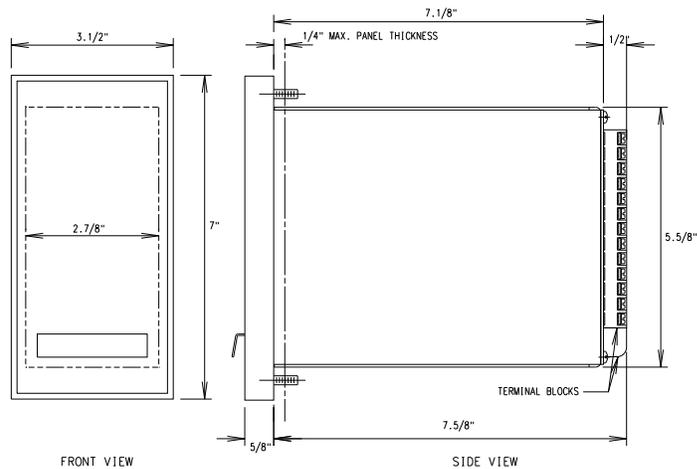
AVAILABLE OPTIONS

Manual only - Unit provides a 4-20 mADC output signal, using both readouts as OUTPUT display

Manual only with PV - Unit provides a 4-20 mADC output signal, using Process readout as PROCESS display and small readout as OUTPUT display



CUTOUT DIMENSIONS



OVERALL DIMENSIONS

REPRESENTED BY



ESSEX ENGINEERING CORPORATION

21 Industrial Drive • Ivyland, PA 18974 • 215-322-5880 • FAX 215-322-8368 • www.essexeng.com