

# Bailey<sup>®</sup> infi 90<sup>®</sup>

## Specification

### E96-117

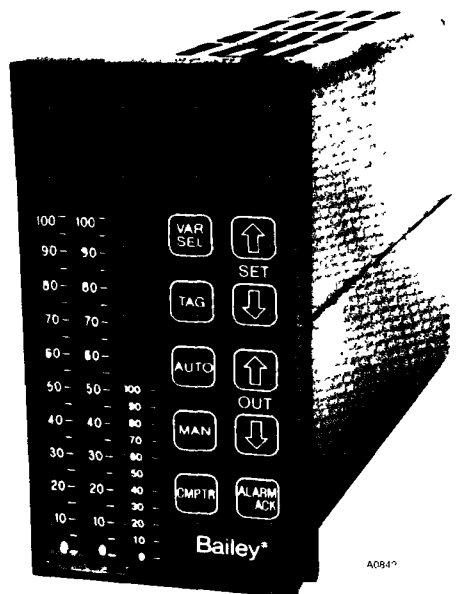
## Analog Control Station (IISAC01)

### Features

- One printed circuit board utilizing surface mount technology for increased reliability
- Sixty-four Analog Control Stations can be interfaced to one Multi-Function Processor (application dependent)
- Communication link speed 5K or 40K baud
- Gas plasma bar graphs provide greater resolution than a conventional LED display
- Eight character alphanumeric display
- Relay contacts are compatible with Universal and RW Type Electronic Drives
- Square root capability for analog input two
- The Analog Control Station can be configured for functional compatibility with the NDCS03

The Analog Control Station (SAC) provides process loop control and monitoring capabilities for a single loop. This station has manual control and bypass capability for control or 4 to 20 mA current outputs.

The SAC communicates with the infi 90<sup>®</sup> Multi-Function Processor (MFP) and with the NETWORK 90<sup>®</sup> Controller (COM) and Multi-Function Controller (MFC) modules.



## Description

The Analog Control Station (SAC) is a panel mounted operator interface station for the monitoring and control of one process output. The SAC circuit board incorporates advanced technologies including a custom display driver integrated circuit and surface mount technology. It also incorporates features for output backup of the control modules.

The faceplate assembly consists of an alphanumeric display, a bar graph, a reset switch, a bypass switch, ten push buttons, and ten annunciators. The eight character alphanumeric display indicates the process variable value, process variable alarm setpoint, control output, and error codes.

Three gas plasma bar graphs provide greater resolution than conventional LED displays. The process variable and setpoint bar graphs feature 0.5 percent resolution. The controlled output bar graph has one percent resolution.

## Operation

The SAC has four operating modes: a target Normal Stand A mode and Bypass. A Diagnostic mode is also provided. The station powers up in the target mode.

The SAC enters the Normal operating mode after successful initialization and upon establishing communication with the control module. The station assumes one of three station types (Basic, Cascade, or Ratio) dependent upon function code configuration. Basic Station allows the adjustment of the setpoint in automatic mode and adjustment of the control output in manual mode. An external signal controls the setpoint in a Cascade Station. The Ratio Station determines the setpoint from a reference variable (system parameter). These variables are determined by the function code configuration in the control module.

The station enters Stand A mode if communication is not established during initialization. Stand A mode allows the operator to gain the SAC output with the process prior to entering Bypass mode. The alphanumeric display shows the analog signal so that a target value can be set

for the output of manual controls desired. Then Bypass mode can be entered by enabling a switch accessible on the faceplate.

If communication failure occurs in the Normal mode, the SAC can be configured to enter Bypass mode automatically. The SAC provides manual control for the process output in Bypass mode. With the SAC in Bypass mode, the control module may be removed from the system for servicing without loss of manual control of the output.

## Related Equipment

Nomenclature	Name	Specification
NDCS03	Digital Control Station	C E93 902 1
NCOM02 NCOM03 NCOM04	Controller Modules	C E93 906
NMFC03 NMFC04 NMFC05	Multi-Function Controller Modules	C E93 906 1 C E93 906 12 C E93 906 13
MMFP01	Multi-Function Processor Module	C E96 201
NTCS02 NCS01 NKDS01 NKDS02 NKDS03 NKSL01 NKSE01	Terminal Unit Terminal Module Cable Station to Terminal Unit Cable Station to Terminal Unit with series connector Cable Station to Station series Cable MFC RS-422 to NTCS02 Terminal Unit Cable RS-422 serial link from the NTMF01 Terminal Unit to the NTCS02 Terminal Unit	C E93 911

## Specifications

<b>Electrical</b>	
<b>Power Requirements</b>	Reference 24 VDC at 0.46 mA nominal Power 1 watts nominal Normal Operating 21.6 to 27 VDC
<b>Accuracy</b>	1.3% of span
<b>Load</b>	700 ohms maximum
<b>Minimum Update Rate</b>	4 times second
<b>Maximum Bypass Transfer Time</b>	750 milliseconds
<b>Voltage</b>	1 VDC to 5 VDC nominal +0.25 VDC
<b>Manual/Auto Output</b>	19 VDC to 27 VDC
<b>Electric Drive</b>	100mA sink/source current 0.1 VDC voltage drop at maximum sink current
<b>Interface</b>	Serial data signal by direct cable connection through the Controller Terminal Unit (NTCS02) Maximum cable lengths for a single station 700 ft with system supplies Data changing will reduce this maximum length
<b>Miscellaneous</b>	
<b>Displays</b>	Three gas pressure bar graphs (201 segments for process variable and set point at 0.5% accuracy 100 segments for output at 1.0% accuracy) Eight character fourteen segment alphanumeric display
<b>Alarms</b>	PV High PV Low PV Deviation
<b>Bypass</b>	Selected with faceplate switch or automatic entry
<b>Size</b>	282 mm x 567 mm x 177 mm (72 mm x 144 mm x 450 mm)
<b>Mounting</b>	Flush panel mounting
<b>Communications</b>	RS-422 RS-485 Serial link (5k/40k baud) with the controlling module through the Terminal Unit
<b>Certification</b>	CSA certification pending
<b>Environmental</b>	
<b>Ambient Temperature</b>	0° to 70°C (32°F to 158°F)
<b>Humidity</b>	5% to 90% RH (+5%) up to 55°C (131°F) (noncondensing) 5% to 40% RH (+5%) at 70°C (158°F) noncondensing
<b>Atmospheric Pressure</b>	Sea level to 3 km (1.86 miles)
<b>Air Quality</b>	Noncorrosive

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