

8 Analog Inputs, Standard

8-Pen plus 8 Flow Totalizer Capability

Choice of 2 Large Screens:

- 14-inch Color CRT
- 10.4-inch TFT LCD

Menu Selections without Programming:

- On-Command or Automatic Disk Storage
- On-Command Printer Option
- Library of Tag Names
- Input Scaling without Hardware Adjustments
- Trace Engineering Units & Ranges
- Password Protection

Multiple Trace Displays with Engineering Units for Strip Charts & Bar Graphs

Eliminates Maintenance Costs of Pens, Pen Arms & Paper

Data Backup Static RAM

90-hour Historical Data Storage

32-bit Microprocessor-based

Under/Over Range Signal & Alarm Displays

Front Panel Pushbutton Operation for all Functions, including:

- Data Scan
- Trace Select
- Pen Colors
- Mathematical Computations

Signal Conversion Rate = 1 Second

RS 232 Communications



Multi-Trace Recorder: LCD Display Model

OVERVIEW

The **Multi-Trace Recorder** combines the power of a high speed microprocessor with vivid color graphics displays to meet the data logging and report generation needs of even the most challenging unit operations.

The **Multi-Trace Recorder** provides the equivalent of an 8 pen recorder with 8 totalizers. Typically, one **Multi-Trace Recorder** will replace at least **two** circular chart recorders with the added benefit of clearly reading current or historical values.

The **Multi-Trace Recorder** eliminates the need for the mechanical calibration, maintenance, and the supply costs of circular and strip chart recorders. In addition, the **Multi-Trace Recorder** is fully operated via the front panel push buttons, with simple to use color menus for all functions: no onsite programming is required.

DISTRIBUTED BY: _____

APPLICATIONS & FEATURES

The **Multi-Trace Recorder** is an industrial instrument for the monitoring of analog inputs and derived variable calculations (including flow rates and energy usage).

Data is displayed on any of five user selectable color graphics. These graphics include single trace to four traces per display and one four trace with two bars. The data is trended in real time and provides 90 hours of continuous historical trends with the corresponding numerical values in engineering units. By pressing the appropriate arrow key, the operator can scan back and forward to any period in order to evaluate the performance of the process giving the time, date and value. The data is permanently stored on the 3.5 inch floppy disk for retrieval in the **Multi-Trace Recorder** or on a personal computer with an optional Data Viewer software package. One disk will store 15 days of data via the automatic save feature.

The **Multi-Trace Recorder** is supplied with rear access screw terminals for the analog signals. The initial setup is to select the range for each analog input from the calibration menu. Then the tag names are selected for each input, followed by the selection of pen number, pen color, totalizer enable/disable, and trace identification. The selection of a pen can be the analog input or a computed value such as a pressure compensation of steam flow, natural gas flow or energy usage. Square root extractors are built in for flow signals for use if required. The maximum number of instantaneous variables displayed per unit is eight (8), with eight totalizers.

The **Multi-Trace Recorder** can also be supplied with an optional direct-connected printer. The printer is enabled on command and will print text data of each analog input. This feature should be considered when a hard copy report is required for troubleshooting operations. The permanent records of the process will typically utilize the storage disk.

The economics of the **Multi-Trace Recorder** begin with the initial investment followed by the savings associated with the maintenance costs for charts, pens, pen arms and electronic receivers. The initial investment savings include less panel space and using one **Multi-Trace Recorder** as the replacement for at least two circular chart recorders. In many facilities such as steam generating plants, circular chart recorders are supplied as two or three pens with one or two totalizers. Instead, one **Multi-Trace Recorder** can be used, greatly reducing the installed costs. Improved productivity is expected as the operators have clear, easy-to-read instantaneous and historical graphics as tools for process optimization.

SUPPORT

Hays Cleveland has over nine decades of industrial instrumentation and control experience. This hands on experience includes the manufacture of circular and strip chart recorders, and has led to the development of the **Multi-Trace Recorder**. Applications assistance and service are available from the factory and our national and international network of technical representatives.

SPECIFICATIONS (FOR REVISION 2.2X SOFTWARE)

Model Display Selection: 14-inch CRT 10.4-inch TFT LCD	Model: D-100044-00-A01 D-100044-00-A02
Optional Packages: • Text Printer with Cable • RS-232 ASCII communications • Alarm Horn • Data Viewer Software	-B01 Standard -P/N 2018164 -C01
Signal Inputs	Eight (8): 1 - 5 vDC 4 - 20 maDC into 250 ohms
Number of Pens	Eight (8)
Integrator/Totalizers	Eight (8); selectable
Disk Storage	3.5-inch; 1.44-Mbyte; capacity of 15 days data per diskette; dust cover included
Overall Dimensions: CRT Screen (Model Option A01)	17.8" h x 17.8" w x 18" d (452mm x 452mm x 457mm) Panel Cutout = 16.2" h x 16.6" w (412mm x 422 mm)
LCD Screen (Model Option A02)	13.1" h x 12.1" w x 9" d (333 mm x 308 mm x 228 mm) Panel Cutout = 12.7" h x 11.7" w (323 mm x 297 mm)
Operating Ambient Temperature: CRT Version	-20 to 120F (-29 to 49C)
LCD Version	32 to 104F (0 to 40C)
AC Power: CRT Version LCD Version	120 V., 50/60 Hz., 240 W. 120 V., 50/60 Hz., 25 W.
Microprocessor	32-bit, 1-second scan rate; 10-second screen update
Operator Interface	Six (6) Front Panel Pushbuttons: Increase Decrease Fast Enter Acknowledge Silence
Menu Selections	Password Protection Input Ranges Calibration Pen Colors Trace Scales Trace Engineering Units Pen/Trace Select Computation Select Totalizer Enable/Disable Alarm Print Disk Storage & Retrieval

1903 South Congress Avenue

Boynton Beach FL 33426

Telephone: (561) 734-9400

Telefax: (561) 734-8060



1111 Brookpark Road

Cleveland OH 44109-5869

Telephone: (216) 398-4414

Telefax: (216) 398-8558