

Sparling Instruments, Inc.

Technical Specifications

RR770 Circular Chart Recorder Microprocessor Based



DESCRIPTION

The Sparling Model 770 recorder interfaces with all Sparling flowmeters. The Model 770 recorder is a multi-channel, 12" microprocessor-based, circular chart recorder. Its "one-pen" stylus printhead produces an analog trace and prints alphanumeric chart data on a blank heat-sensitive chart. The trace shares the *same time line* reference which the Model 770 prints. This eliminates the error caused by pen alignment offsets in conventional pen designs. Since the Model 770 prints the chart and generates the analog traces at the same time, there is no error due to variations in chart size caused by changes in temperature and humidity.

With microprocessor electronics and single printhead, the Model 770 recorder is easily configured by users to meet a variety of application requirements - from water treatment to food processing. In addition to printing informative, accurate chart records, the Model 770 recorder displays process variable values in selected engineering units.

STANDARD FEATURES

- **User Configurable** – means that users can set and/or alter operating parameters to fit their requirements, including type of input, without recalibration.

- **English Language Prompts** – coupled with simple keystroke sequences, make configuring the recorder easy and straightforward.
- **Operator Interface** – includes clear, brilliant alphanumeric displays; indicators; deviation bargraph; and keypad for visual and tactile interaction.
- **All-Purpose Chart** – blank chart eliminates the need for ordering and stocking several types of charts. And, users can design the chart to match specific applications.
- **"One-pen" Printer** – prints configurable alphanumeric chart data including time and trend lines. This automatically compensates for chart width variations caused by changes in the ambient relative humidity.
- **Time/Date** – real-time, clock, dates, time of printing (hour, minutes, date and year) and any operator changes in real time guard against unauthorized chart advancement.
- **18 Month Warranty**

OPTIONS:

- 24 VDC power supply shown in Table 6. (Required for propeller meters with 4-20mA output.)

SPARLING

DIAGNOSTICS

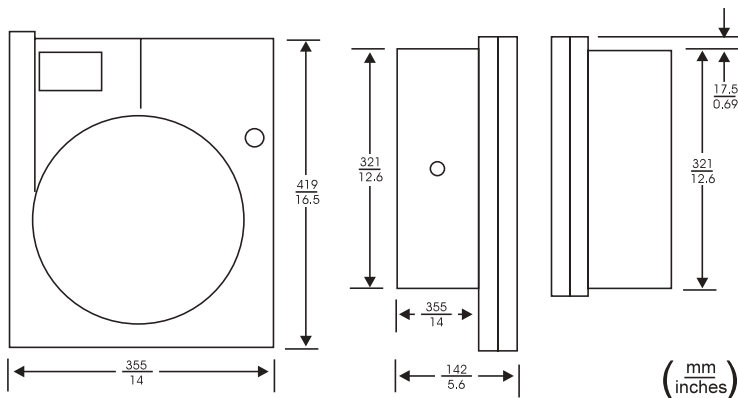
All Model 770 recorders include self-diagnostic systems that check critical operations and provide error messages to alert users about detected faults. Power-up self-diagnostics is a microprocessor controlled diagnostic program that runs tests on selected circuitry when the recorder is powered up. A "key" test allows a user to initiate, on demand, a self-diagnostic routine that checks the keypad and front panel displays.

CONSTRUCTION

The Model 770 recorder is housed in a molded case which can be panel or surface mounted. A glass or optional acrylic window, gasketed door protects internal components from harsh industrial environments while allowing easy access to the chart and operator interface. Circuitry is partitioned on printed circuit boards for ease of service. A NEMA 4X door is available as an option.

PROCESS INTERFACE

Power, input, and output wiring connect to terminations inside the case. Knockouts in the sides and bottom of the case accept conduit connections for convenient wire entry.



Specifications subject to change without notice.

MODEL 770 – STANDARD SPECIFICATIONS

Display:	1 digit
Accuracy:	± .02% of span
Resolution:	± .01% of span
Response time:	6 seconds full scale maximum
Sampling rate:	Input sampled 3 times per second up to 2, 3, 4 once every 2/3 seconds
Temperature limits:	32° – 122°F (0-50°C)
Digital Display:	40 character vacuum fluorescent. Integrator 9 digits Flow rate indicator 5 digits
Power requirements:	90 – 260 Vac 50/60 Hz
Charts:	12" diameter chart; calibrated width of 4" (100 mm)
Chart Speed:	From 1– 4096 hours per revolution 8 hours – 31 days
Inputs:	4-20 mAdc, 250 ohms
Optional Outputs:	Retransmitted totalizer pulse 4-20 mA 1-5 volts
Enclosure:	NEMA 3, NEMA 4X options
Weight:	13.2 lbs. (6 kgs)

HOW TO ORDER A MODEL 770 CHART RECORDER

Table 1 – Base Model Number

RR770 CIRCULAR CHART RECORDER, 12" with full 4" calibrated scale, glass window, 4-20 mAdc input, rate indicator and configured to specifications. 120-220 VAC power, programmable 8 hr. to 31 day rotation

Table 2 – Power

- 1 T/C, RTD, mV, 0-5 VDC, 4-20mA, Radimatic – 1 channel
- 2 T/C, RTD, mV, 0-5 VDC, 4-20mA, Radimatic – 2 channels
- 3 T/C, RTD, mV, 0-5 VDC, 4-20mA, Radimatic – 3 channels
- 4 T/C, RTD, mV, 0-5 VDC, 4-20mA, Radimatic – 4 channels

Table 3 – Input Channels

- 0 None
- 5 Scaled Pulse Output

Table 4 – External Interface & Pen Selection

- 0__ None
- 1__ Auxiliary 4-20 mA Output (Retransmitted 4-20)
- _0_ Standard Pen
- _1_ Abrasion Resistant Pen
- __0 None
- __1 2 Alarms / 2 Digital Inputs
- __4 1 Alarm / 1 Timer Output / 2 Digital Inputs

Table 5 – Software Options

- A Totalization (Input #1)
- E Totalization (Inputs #1 & #2)
- H Totalization (Inputs #1, #2, #3 & #4)
- K Totalization (Input #1) Plus Math
- L Totalization (Inputs #1 & #2) Plus Math
- M Totalization (Inputs #1, #2, #3 & #4) Plus Math

Table 6

- 0 None
- 1 24 VDC power supply for FT193 or FT194

RR770



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