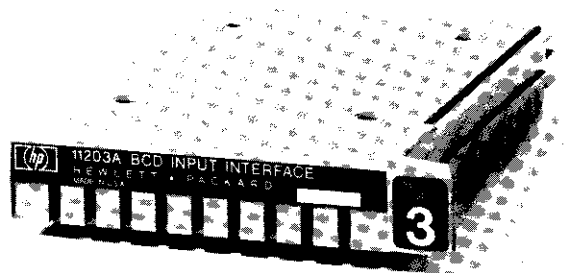
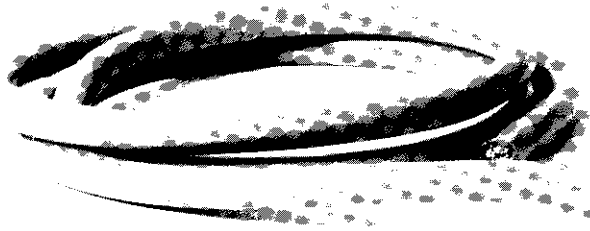


TECHNICAL DATA JUNE 1972



DESCRIPTION

The 11203A BCD Input Card provides the 9800 series calculators with an interface to a variety of instruments having parallel Binary Coded Decimal outputs. Direct interfaces are possible to a large number of Hewlett-Packard Digital Voltmeters, Frequency Counters, and other instruments.

When used with the proper Peripheral Control ROM (the 11264A ROM for the Model 10, for example) the 11203A BCD Input Card has capacity for up to nine digits of data, with function, range, sign, and overload condition.

SPECIFICATIONS

Levels:

Levels are standard (control lines) or low power (data lines) transistor-transistor logic

with binary "1" state high ($> +2.4$ volts) and binary "0" state low (< 0.5 volts) on all lines. The card may be specially wired for inverted levels.

Format:

Data is serialized on the card into a sixteen character sequence as follows: Function, delimiter, mantissa sign, nine digits of data, exponent sign, overload, exponent, delimiter.

- The first delimiter separates function and data into separate registers.
- The second delimiter terminates the entry sequence.
- Overload condition sets the most significant exponent digit to eight and sets exponent sign positive.
- Unused data lines must be connected for zeroes.

Codes:

Data — 1248 Binary Coded decimal weighting; codes 0 through nine decimal are entered as numbers. Codes 14 or 15 decimal are accepted and entered as decimal point if they occur in a data digit.

Exponent — 1248 Binary Coded decimal weighting; codes 0 through 9 decimal only.

Function — Same as exponent.

Mantissa sign — One binary bit, "0" gives positive mantissa, "1" gives negative mantissa.

Exponent Sign — One binary bit, "0" gives positive exponent, "1" gives negative exponent unless overload condition exists.

Overload — One binary bit, "1" gives overload condition.

Control:

Control is through three control lines.

- Control 1 — Normal control line; leading edge should initiate the measurement, and the trailing edge is triggered by the Flag returning low from the BCD source.
- Control 2 — A negative going command from the 11203A signals the BCD source to initiate a measurement; can be used if the BCD source returns FLAG high to recognize control command.
- Flag — Returned low by the BCD source to signal that measurement is complete and that data is ready.

The sense of these lines may be inverted by programming on the card. Polarity information refers to standard card only.

Since the 11203A BCD Input Card does not have storage, it is necessary that data be held stable for the duration of the serialization process. This time varies with the calculator and the user should consult the operating manual for safe times.

It is necessary that the calculator initiate each measurement by providing a sample command.

Select Code:

Set at factory to channel (select) code 3, but may be switched to any code between 1 and 9 inclusive by means of a switch on the printed circuit card.

Power:

Powered from the calculator.

Temperature:

0°C to 45°C Ambient.

Dimensions:

Card Cage 4 3/4" (12.06 cm) x 6 1/4" (15.87 cm) with a six-foot (1.82 M) cable unterminated.

Options:

The 11203A BCD Input Card may be connected without additional circuitry to many BCD sources. Special options are available at extra cost for plug-to-plug interconnection with the following -hp- instruments:

- 5326/27 A,B,C Universal Counters — Option A01
- 5300A Counter System — Option A02
- 3480A/B Digital Voltmeter — Option A03
- 3450A Digital Voltmeter — Option A04
- 3480A/B Digital Voltmeter/3485A Scanning Unit — Option A06
(requires 11202A option A05 for 3485A control.)

In addition, the 11202A Option A04 will allow remote control of the 3484A Multi-function Unit.

For more information, call your local HP Sales Office or **East** (201) 265-5000 • **Midwest** (312) 677-0400 • **South** (404) 436-6181 • **West** (213) 877-1282. Or write: **Hewlett-Packard, Calculator Products Division**, P.O. Box 301, Loveland, Colorado 80537. In **Europe**: P.O. Box 85, CH-1217 Meyrin 2, Geneva, Switzerland; **Canada**: 275 Hymus Boulevard, Pointe Claire, 730, Quebec; **Japan**: YHP, 1-59-1, Yoyogi, Shibuya-Ku, Tokyo, 151; Other areas of the world: **HP International**, 3200 Hillview Ave., Palo Alto, California 94304.