## MICRO SWITCH

## product sheet 50SW11-50 DATA ENTRY KEYBOARD



The 50SW11-50 keyboard is ideally suited to various types of batch data entry applications, especially keypunch. This keyboard more than meets the needs of the data entry market for long life and high reliability. It can be easily modified for use with other data entry devices, such as key-to-tape or key-to-disc, by changing certain button legends. Key array is similar to that used with the familiar IBM System 3.
Six bit mono-mode encoding meets the basic data entry requirements. Five function keys are provided to identify the following functions: Alpha, Numeric, Multi-Punch, Error Reset, and Right Adjust. The last two are pulsed to facilitate system interface.
One-character storage holds the data bits at the output until the next key is depressed. This allows the system ample time to "read" the keyboard output.
The 50SW11-50 has our N-key rollover feature. Data bits, set by a pulse from the down stroke as each key is depressed, are stored in the MOS memory. When a second key is operated, new data is set into the memory even though the first key may still be depressed. Thus, there is no possibility of missing a character or of transposing characters as a result of the order of key release. With N-key rollover any number of keys may be held depressed, then released without the release sequence affecting the proper data entry sequence. This proven feature can reduce operator error by as much as $30 \%$. The pulsed output is part of the solid state chip within each key, rather than a pulse network of discrete components. Significantly improved keyboard reliability is the result.

The 50SW11-50 keyboard incorporates the proven approach of MICRO SWITCH Hall-effect solid state keys coupled to MOS encoding. High quality printed circuit boards, rigid stainless steel mounting hardware, and double-shot molded buttons are used to insure long trouble-free keyboard performance.
If the 50SW11-50 doesn't meet your exact requirements, we can supply prototype keyboards tailored to your needs through our PROM (programable read only memory). See the inserted designer's kit, or contact your nearest MICRO SWITCH branch office for complete information.

## features

## HIGH RELIABILITY AND LONG LIFE SIX BIT BINARY CODE

FAMILIAR KEYPUNCH ARRAY N-KEY ROLLOVER

"OFF-THE-SHELF AVAILABILITY" PROM CAPABILITY


ELECTRICAL DATA

| Power Requirements | +5 Volts DC $+5 \%$ @ 400 milli- <br> amps max. <br> -12 Volts DC $+20 \% ~ @ ~$ <br> amps max. <br> Keyboard ground @ 0 Volts <br> NOTE: Tolerances include ripple. |
| :--- | :--- |
| Data Key Outputs <br> (Positive Logic) | Logic " "0": +0.6 Volts DC max. <br> @ 1.6 milliamps (sinking). <br> Logic " $1 ":+2.55$ Volts DC min. <br> @ 0.12 milliamps max. (sourcing). <br> Timing: Data bits are held in <br> memory until the next key de- <br> pression. |


| Function Key Outputs | Key Unoperated: +0.4 Volts DC max. @ 3.2 milliamps (sinking). <br> Key Operated: +2.6 Volts DC min. @ 0.12 milliamps (sourcing). |
| :---: | :---: |
| Strobe Outputs | All keys in unoperated state: +0.6 Volts DC max. @ 1.6 milliamps (sinking) <br> Key Operated: +2.55 Volts DC min. @ 0.12 milliamps max. (sourcing) pulsed output. <br> Pulse Duration: 10 microseconds min. <br> Timing: Data bits are true prior to strobe pulse. |

## OUTPUT INTERFACE

Card-edge outputs with gold-plated terminals accept standard connectors such as: Cinch-Jones \#251-15-30-160 or equivalent.

## BUTTONS

MICRO SWITCH two-shot molded truncated buttons: Blue button with white legend stations: $10,22,23,24,36,37$, $38,50,51$, and 52.
Dark gray with white legend stations: $2,7,8,11,12,13$, $14,26,27,29,39,40,43,53$, and 54 . All remaining keys white with black legends. Space bar is white.

## KEY ROW OFFSET

3/8-3/16-3/8 inch.

## KEY SPACING

Keys are spaced on $3 / 4$ inch centers.

## WEIGHT

### 2.75 lbs . approx.

## PROM CAPABILITY

Provides quick turnaround prototypes for individual customer requirements.

CODE AND CHARACTER ASSIGNMENT


SIX BIT BINARY CODE

|  | BITS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| KEY <br> NO. | $\mathbf{5}$ | $\mathbf{4}$ | $\mathbf{3}$ | $\mathbf{2}$ | $\mathbf{1}$ | $\mathbf{0}$ |
| 2 | FUNCTION |  |  |  |  |  |
| 3 | 0 | 0 | 0 | 0 | 1 | 1 |
| 4 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5 | 0 | 0 | 0 | 1 | 0 | 1 |
| 6 | 0 | 0 | 0 | 1 | 1 | 0 |
| 7 | 0 | 0 | 0 | 1 | 1 | 1 |
| 8 | 0 | 0 | 1 | 0 | 0 | 0 |
| 9 | 0 | 0 | 1 | 0 | 0 | 1 |
| 10 | 0 | 0 | 1 | 0 | 1 | 0 |
| 11 | 0 | 0 | 1 | 0 | 1 | 1 |
| 12 | 0 | 0 | 1 | 1 | 0 | 0 |
| 13 | 0 | 0 | 1 | 1 | 0 | 1 |
| 14 | 0 | 0 | 1 | 1 | 1 | 0 |
| 16 | 0 | 1 | 0 | 0 | 0 | 0 |
| 17 | 0 | 1 | 0 | 0 | 0 | 1 |
| 18 | 0 | 1 | 0 | 0 | 1 | 0 |
| 19 | 0 | 1 | 0 | 0 | 1 | 1 |
| 20 | 0 | 1 | 0 | 1 | 0 | 0 |
| 21 | 0 | 1 | 0 | 1 | 0 | 1 |
| 22 | 0 | 1 | 0 | 1 | 1 | 0 |
| 23 | 0 | 1 | 0 | 1 | 1 | 1 |
| 24 | 0 | 1 | 1 | 0 | 0 | 0 |
| 25 | 0 | 1 | 1 | 0 | 0 | 1 |
| 26 | 0 | 1 | 1 | 0 | 1 | 0 |
| 27 |  |  | FUNCTION |  |  |  |
|  |  |  |  |  |  |  |


|  | KEY <br> NO. |  |  |  |  |  |  | $\mathbf{5}$ | $\mathbf{4}$ | $\mathbf{3}$ | $\mathbf{2}$ | $\mathbf{1}$ | $\mathbf{0}$ |
| :---: | :---: | :---: | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29 | FUNCTION |  |  |  |  |  |  |  |  |  |  |  |  |
| 30 | 0 | 1 | 1 | 1 | 1 | 0 |  |  |  |  |  |  |  |
| 31 | 0 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |  |  |  |
| 32 | 1 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |
| 33 | 1 | 0 | 0 | 0 | 0 | 1 |  |  |  |  |  |  |  |
| 34 | 1 | 0 | 0 | 0 | 1 | 0 |  |  |  |  |  |  |  |
| 35 | 1 | 0 | 0 | 0 | 1 | 1 |  |  |  |  |  |  |  |
| 36 | 1 | 0 | 0 | 1 | 0 | 0 |  |  |  |  |  |  |  |
| 37 | 1 | 0 | 0 | 1 | 0 | 1 |  |  |  |  |  |  |  |
| 38 | 1 | 0 | 0 | 1 | 1 | 0 |  |  |  |  |  |  |  |
| 39 | 1 | 0 | 0 | 1 | 1 | 1 |  |  |  |  |  |  |  |
| 40 | 1 | 0 | 1 | 0 | 0 | 0 |  |  |  |  |  |  |  |
| 43 | FUNCTION |  |  |  |  |  |  |  |  |  |  |  |  |
| 44 | 1 | 0 | 1 | 0 | 1 | 1 |  |  |  |  |  |  |  |
| 45 | 1 | 0 | 1 | 1 | 0 | 0 |  |  |  |  |  |  |  |
| 46 | 1 | 0 | 1 | 1 | 0 | 1 |  |  |  |  |  |  |  |
| 47 | 1 | 0 | 1 | 1 | 1 | 0 |  |  |  |  |  |  |  |
| 48 | 1 | 0 | 1 | 1 | 1 | 1 |  |  |  |  |  |  |  |
| 49 | 1 | 1 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |
| 50 | 1 | 1 | 0 | 0 | 0 | 1 |  |  |  |  |  |  |  |
| 51 | 1 | 1 | 0 | 0 | 1 | 0 |  |  |  |  |  |  |  |
| 52 | 1 | 1 | 0 | 0 | 1 | 1 |  |  |  |  |  |  |  |
| 53 | 1 | 1 | 0 | 1 | 0 | 0 |  |  |  |  |  |  |  |
| 54 | FUNCTION |  |  |  |  |  |  |  |  |  |  |  |  |
| 60 | 1 | 1 | 1 | 0 | 1 | 0 |  |  |  |  |  |  |  |

Page 3

## ordering information

Contact your nearest MICRO SWITCH Branch Office and a Field Engineer will be glad to work with you in satisfying your keyboard requirements: proper selection, pricing, and delivery scheduling. These experienced keyboard experts will provide sound and practical answers to your needs.

## . . . in the East

Boston Office
Bedford, Massachusetts 01730 4 Preston Court 617/275-2440

Hartford, Connecticut 06101 90 Brainard Road 203/549-3800
New York Office Elmsford, New York 10523 570 Taxter Road 914/592-3200

Philadelphia Office Blue Bell, Pennsylvania 19422 Merion-Towle House 1777 Walton Road 215/643-5820
Rochester, New York 14623 100 Metro Park 716/461-1600

Syracuse Office
Liverpool, New York 13088 7485 Henry Clay Boulevard 315/451-4000

Westfield, N.J. 07090 574 Springfield Avenue 201/233-9200

## . . . thru Mid-America

Chicago Office
Skokie, Illinois 60076
Suite 100
4849 West Golf Road 312/478-9266
Cleveland, Ohio 44103
1001 East 55th Street
216/881-0300
In Pittsburgh, PA: 412/391-9490
Davenport, Iowa 52807
3435 Spring Street
319/355-6456
In Omaha, NB: 402/393-8300
Kansas City, M0: 816/358-4200
Dayton, Ohio 45404
2314 Stanley Avenue
513/461-4480
In Cincinnati, OH: 606/628-1073
Indianapolis, IN: 317/639-2123
Detroit Office
Southfield, Michigan 48075
17515 W. Nine Mile Road
313/424-3569
In Grand Rapids, MI: 800/482-7273
Toledo, OH: 419/242-8683
Milwaukee, Wisconsin 53222
2979 North Mayfair Road 414/771-6300
Minneapolis, Minnesota 55435
Twin City Branch
7400 Metro Blvd.
612/830-3516
St. Louis Office
Creve Coeur, Missouri 63141
10000 Old Olive Street Road 314/991-4100

## . . . down South

Atlanta, Georgia 30329
6 West Druid Hills Drive, N.E. 404/321-2565
In Orlando, FL: 305/894-3i31
Dallas, Texas 75240
14350 Proton Road
214/661-5459
In Fort Worth, TX: 817/263-2311
Houston, TX: 713/785-3200
Memphis, Tennessee 38131
2005 Nonconnah Boulevard
901/396-6222
In Wichita, KS: 316/522-3435

## . . . out West

Denver Office
Englewood, Colorado 80110
7825 E. Prentice Avenue
303/771-2340
In Salt Lake City, UT: 801/487-0681
Los Angeles, California 90040
6620 Telegraph Road -
213/726-6132
In Arizona 800/423-4022
San Francisco Office
San Jose, California 95110
Suite 380
2025 Gateway Place
408/998-3131
Seattle Office
Mercer Island, Washington 98040
9555 S.E. 36th Street
206/233-2010
In Portland, OR: 503/235-8411

