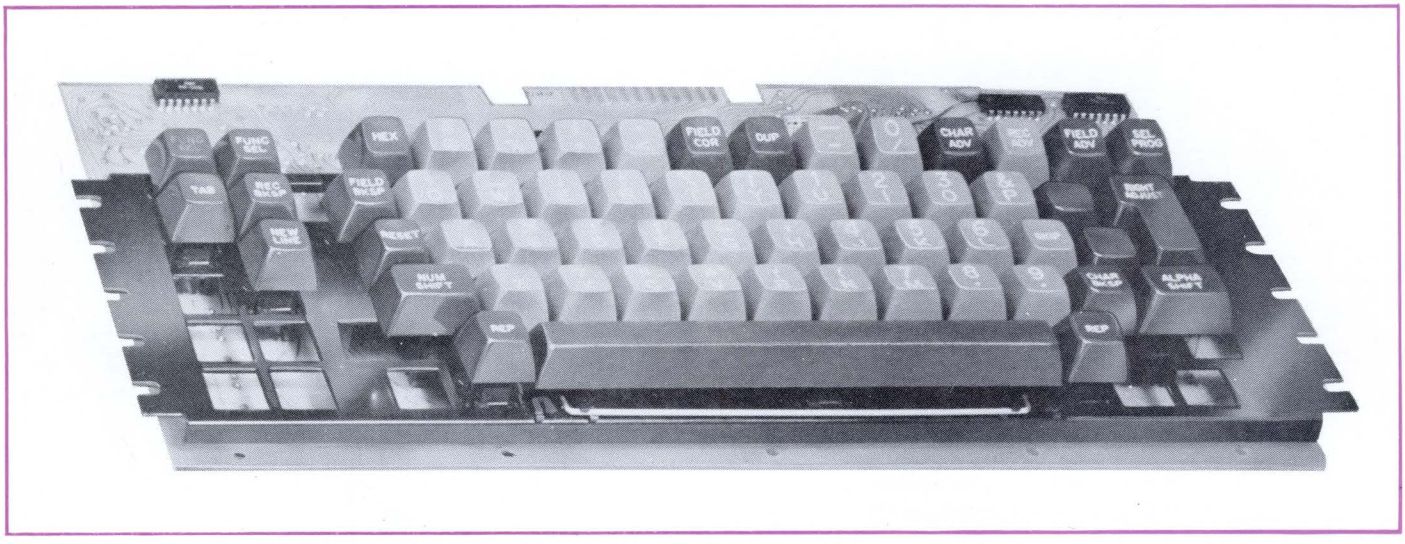
MICRO SWITCH

product sheet **58SD16-1**

DATA ENTRY KEYBOARD



The 58SD16-1 is a low profile, modestly priced, solid state keyboard, ideally suited for data entry systems, especially key-to-diskette ("floppy-disk"). The key array is similar to that used with the familiar IBM 3740 and features code compatibility. This keyboard more than meets the needs of the data entry market for long life and high reliability.

Every aspect of the keyboard is designed for operator acceptance, convenience, and for maximum throughput. This includes proven operating force displacement characteristics, key spacing, button shapes and legending. In addition, tactile feedback is provided on all keys. This tactile feedback is felt as an abrupt change in force at approximately the operating point of the switch. If tactile feel is not desired order listing 58SD16-2.

Six bit mono-mode encoding meets the basic data entry requirements. A six bit address code is generated by each data key. The alpha and numeric shift keys and both repeat keys provide level function outputs.

The 58SD16-1 or 58SD16-2 keyboard feature true N-key rollover. Data bits, set by a pulse from the down stroke as each key is depressed, are stored in the memory. When a second key is operated, new data is set into the memory even if the first key is still depressed. Thus, there is no possibility of missing a character or of transposing characters as a result of the order of key release. Any number of keys may be held depressed, then released in any sequence. This proven feature can reduce operator error by as much as 30%. For improved reliability the pulsed output is part of the solid state chip within each key.

The 58SD16-1 and 58SD16-2 keyboards incorporate the proven approach of MICRO SWITCH Hall effect solid state keys coupled to solid state encoding. High quality printed circuit boards, rigid steel mounting panels, and double-shot molded buttons are used to insure long trouble-free keyboard performance.

If the 58SD16-1 or 58SD16-2 doesn't meet your exact requirements, additional flexibility has been designed into the basic hardware. See page 4 for details.

features

DESIGNED TO MEET IBM'S 3740 KEY-TO-DISKETTE NEEDS

LOW PROFILE...Modern Panel Design

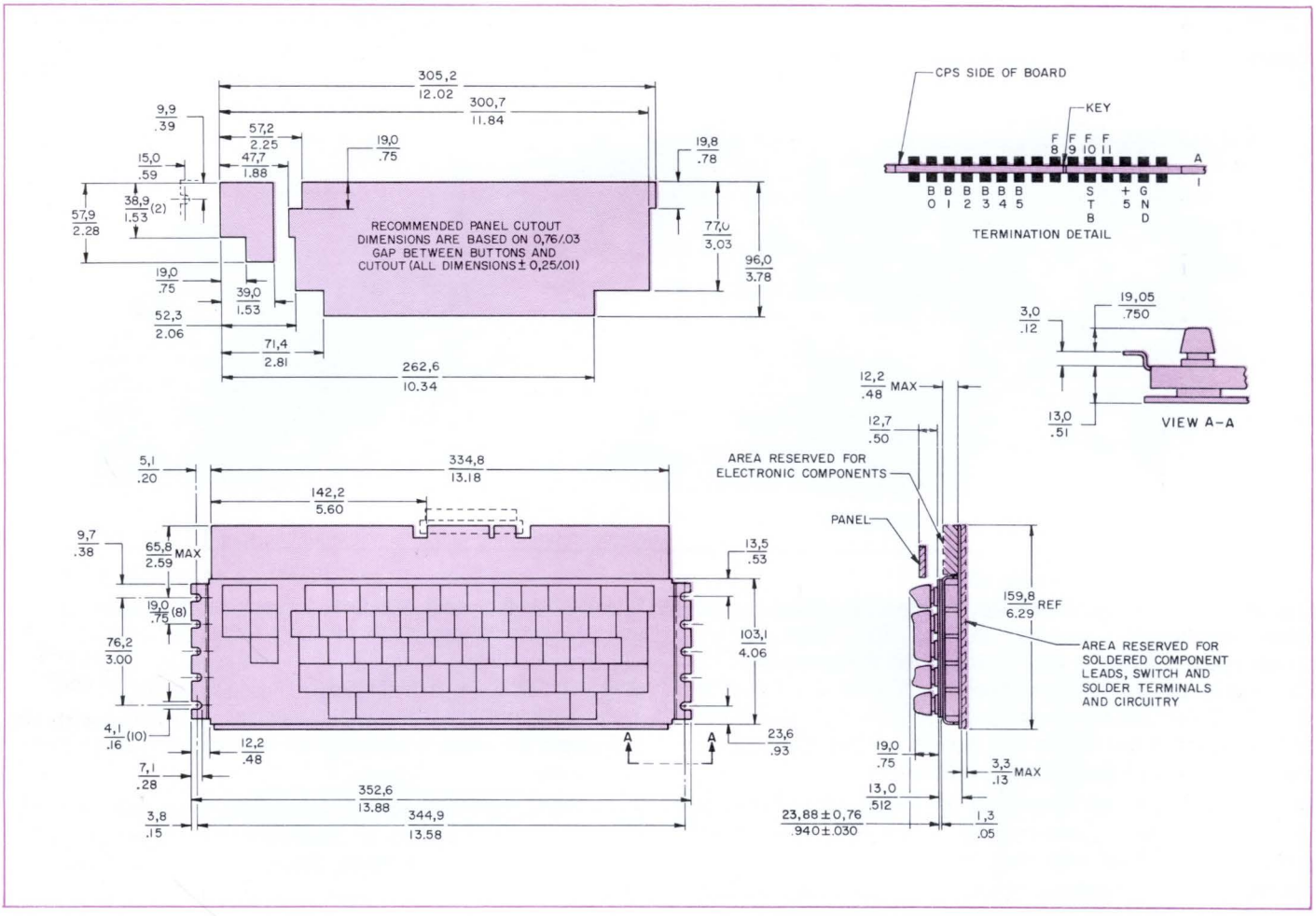
HALL EFFECT SOLID STATE KEYS COMBINED WITH SOLID STATE ENCODING...Gives Greater Reliability With Long Life

"N" KEY ROLLOVER...Reduces Operator's Error By 30%

TACTILE FEEDBACK...Positive Key Operation

"PROM" CAPABILITY

MOUNTING DIMENSIONS [For Reference Only]



ELECTRICAL DATA

Power Requirements	+5 Volts DC ±5% at 400 milliamps max. Keyboard ground at 0 Volts NOTE: Tolerances include ripple.
Data Key (Positive Logic)	Logic "0": .4 Volts DC max. at 12 milliamps (sinking). Logic "1": +2.6 Volts DC min. at 0.12 milliamps max. (sourcing). Timing: Data bits are held in memory until the next key depression.
Function Key Outputs (Keys # 49, 60, 64, & 66)	Key Operated: +0.4 Volts DC max. at 3.2 milliamps (sinking.) Key Unoperated: +2.6 Volts DC min. at 0.12 milliamps (sourcing.)
Strobe Outputs	All keys in unoperated state: +0.6 Volts DC max. at 1.6 milliamps (sinking) Key Operated: +2.55 Volts DC min. at 0.12 milliamps max. (sourcing) pulsed output. Pulse Duration: 10 to 100 (microseconds) Timing: Data bits are true prior to strobe pulse.

TERMINATION

Card-edge outputs with gold-plated terminals accept standard connectors Cinch-Jones #251-15-30-160 or equivalent. No connector is furnished with this listing.

BUTTON STYLE

All buttons are sculptured except buttons: 1, 2, 16, 17, 29, 30, 33, 34, 35, 36, 37, 38, 39, 40, 44, 45, 49, and 60.
Stations: 64, and 66 are convex.
Stations: 41, 42, and 43 are non-sculptured, deep dish.
Stations: 29 and 45 are lower level buttons.

BUTTON ORIENTATION - Sloped

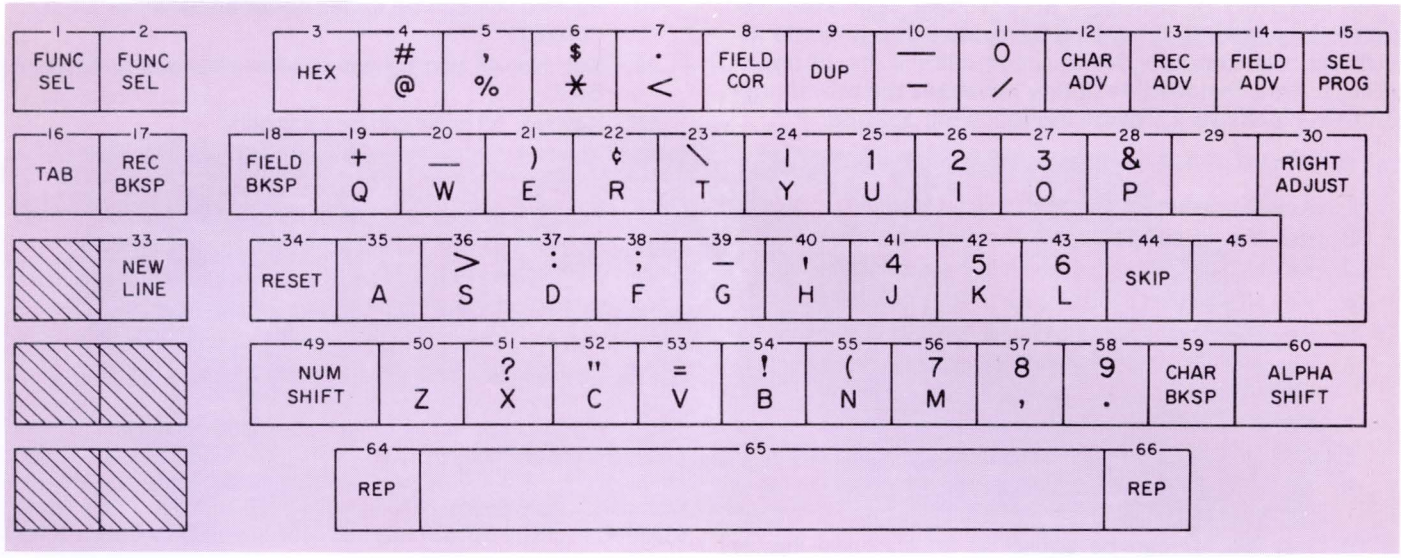
KEY ROW OFFSET - 3/8 - 3/16 - 3/8 inch.

KEY SPACING - Keys are spaced on 3/4 inch centers.

WEIGHT - 2.75 lbs. approx. without enclosure or connector.

DATA ENTRY KEYBOARD

CHARACTER ASSIGNMENT



NOTE: Keys #29 and 45 are locked to prevent actuation.

BUTTONS

The button colors for key stations 2, 3, 8, 9, 12, 14, 15, 16, 17, 18, 30, 33, 34, 49, 59, 60, 64, and 66 are charcoal gray with white legends.

The button colors for key stations 4, 5, 6, 7, 10, 11, 13, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 50, 51, 52, 53, 54, 55, 56, 57, and 58 are medium gray with white legends.

Key position 1 is charcoal gray with kelly green legend.

Key positions 29, 45, and 65 are charcoal gray with no legends.

CODE ASSIGNMENT

Six Bit Binary Code

KEY NO.	BITS 5	4	3	2	1	0
1	0	0	0	0	1	0
2	0	0	0	0	0	1
3	0	0	0	0	1	1
4	0	0	1	1	1	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	1	0	1	1	0	1
11	1	0	0	0	0	0
12	0	0	1	0	1	0
13	1	0	1	1	0	0
14	0	0	1	1	0	0
15	0	0	1	1	0	1
16	1	0	1	1	1	0
17	1	1	1	0	0	0
18	1	1	0	0	0	0
19	1	0	1	0	1	0
20	0	1	0	0	0	0

KEY NO.	BITS 5	4	3	2	1	0
21	1	1	1	1	1	0
22	0	1	0	0	0	1
23	0	1	0	0	1	0
24	0	1	0	0	1	1
25	1	0	0	0	0	1
26	1	0	0	0	1	0
27	1	0	0	0	1	1
28	0	1	0	1	0	0
29	1	1	1	0	0	1
30	1	1	0	1	0	1
33	1	1	0	1	1	0
34	1	1	0	0	1	0
35	1	1	1	0	1	0
36	0	1	0	1	0	1
37	1	1	1	1	0	1
38	1	1	1	1	1	1
39	0	1	0	1	1	0
40	0	1	0	1	1	1
41	1	0	0	1	0	0
42	1	0	0	1	0	1

KEY NO.	BITS 5	4	3	2	1	0
43	1	0	0	1	1	0
44	0	1	1	1	0	0
45	0	1	1	1	0	1
49	NUM SHIFT					F8
50	0	1	1	0	0	0
51	0	1	1	0	0	1
52	1	1	1	1	0	0
53	0	1	1	0	1	0
54	1	1	1	0	1	1
55	0	1	1	0	1	1
56	1	0	0	1	1	1
57	1	0	1	0	0	0
58	1	0	1	0	0	1
59	0	1	1	1	1	0
60	ALPHA SHIFT					F9
64	REPEAT					F10
65	0	1	1	1	1	1
66	REPEAT					F11

DATA ENTRY KEYBOARD

product sheet **58SD16-1**

STANDARD OPTIONS

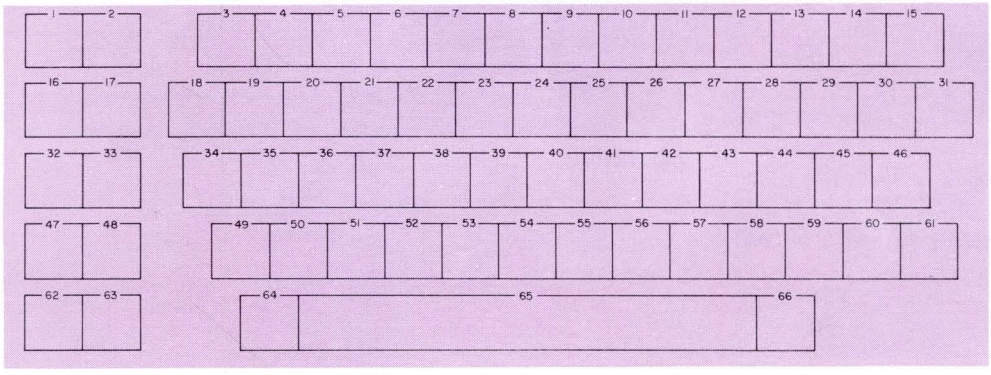
If the 58SD16-1 or 58SD16-2 do not meet your exact requirements, additional flexibility has been engineered into the printed circuit board to accomodate a maximum of 66 keys. This designed flexibility increases the overall layout to inexpensively provide the following options:

See OPTIONAL CODE ASSIGNMENT for code changes.

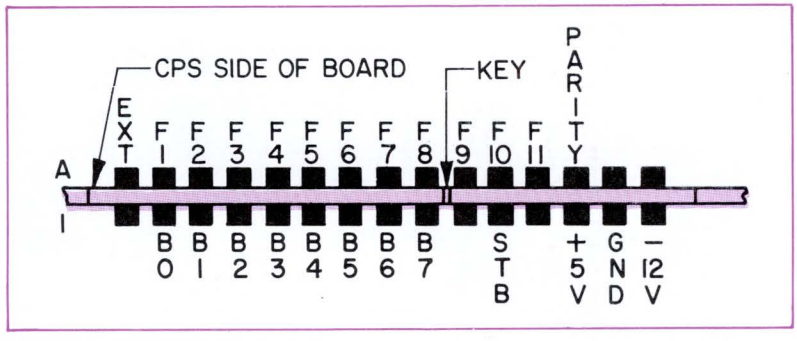
1. Key No. 3 can be changed to function (F1)
2. Key No. 15 can be changed to function (F2)
3. Key No. 18 can be changed to function (F1)
4. Key No. 30 can be changed to function (F2)
5. Key No. 31 can be added as a function F2 only
6. Key No. 32 can be added as an encoded key or a function (F6)
7. Key No. 33 can be changed to function (F4)
8. Key No. 34 can be changed to function (F5) or Bit 7
9. Key No. 46 can be added as an encoded key or a function (F2)
10. Key No. 47 can be added as an encoded key or function (F6)
11. Key No. 48 can be added as an encoded or a function (F7)
12. Key No. 49 can be encoded or changed to Bit 6 or Bit 7
13. Key No. 50 code can be changed
14. Key No. 59 can be encoded with two different codes
15. Key No. 60 can be changed to function (F9) or Bit 7
16. Key No. 61 can be added as a function F9 only
17. Key No. 62 can be added as an encoded key
18. Key No. 63 can be added as an encoded key
19. Key No. 64 can be changed to an encoded key
20. Key No. 66 can be changed to an encoded key.

Note: Whenever a key is designated Data Bit 6 or 7, it becomes a latched data bit. No output will be seen from these keys until a data key is depressed, while the designated key is held down. Data bits 6 and/or 7 are then strobed into the output latches along with bits 0 thru 5 for the data key depressed.

ALTERNATE ARRAY CAPABILITY



TERMINATION DETAIL [Including Options]



OPTIONAL CODE ASSIGNMENT

Key No.	Bits 5	4	3	2	1	0
32	1	1	0	1	1	1
46	1	0	1	0	1	1
47	0	0	0	1	0	0
48	0	0	1	0	1	1
49	0	0	0	0	0	0
50	1	1	0	0	1	1
50	0	1	1	1	1	0
59	1	1	0	0	1	1
60	1	1	0	0	1	1
60	0	1	1	1	1	0
62	1	1	0	0	0	1
63	1	1	1	0	1	0
64	0	0	1	1	1	1
66	1	0	1	1	1	1

PROM CAPABILITY

MICRO SWITCH can supply prototype keyboards tailored to your exact needs thru its PROM (programmable read-only memory) capability. PROM capability adds the following options:

1. Any 8 Bit code a customer might need
2. Even or odd parity
3. Any of the (11) function keys or external shift can act as a repeat enable key which will allow any encoded key on the keyboard to repeat.

Note: The addition of the PROM board will require -12 VDC at 70mA MAX. and +5 VDC at 750mA MAX.

ORDERING INFORMATION

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

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