



## G80-2500

# Comfort Keyboard for IBM\* 3270 Terminal Families.

\* IBM is the registered trademark of the IBM Corporation.





## **Main Advantages**

- Compatibel to IBM\* 3270 terminal families.
- Serial interface.
- The layout is designed according to the IBM\* original.
- High price/performance ratio achieved by:
   specific application of high quality materials,
   UL approved.
  - automated manufacturing procedures with integrated test stations.
  - most modern Quality Control system defined by DIN ISO 9001.

- performance of failure methods such as FMEA
- fulfillment of the latest ergonomic requirements which for example meet ZH 1/618.
- 4mm full-travel keyswitches.
- Cherry MX keys with »Gold Crosspoint« contacts.
- Reliability:  $MCBF = 1 \times 10^9$  operations. MTBF = 80.000 hours.
- Long life expectancy of individual keys: > 50 x 10<sup>6</sup> operations.

- Fatigue-free operation with minimal risk of multiple actuation, enabled by ergonomic »Cylindrical« key set.
- "Deep Dish" sculptured keys for F and J index finger locations and a dimple on the 5 in the numeric pad for quick and accurate homing when touch-typing.
- 2-shot moulded keycaps are non-reflecting and easy to clean.
- Wear resistant keycap legends.

• Safety:





• RFI/EMI:

FCC Part 15 Subpart J Class B

Post Vfg. 1046 / 1984 (VDE 0871, Klasse B)





## **Important Features**

- Mechanical keymodules with »Gold Crosspoint« contacts.
- Separate cursor and numeric pads as well as twin-rows of function keys.
- Synchronous data format.
- N-key-rollover.
- Linear feel. Additional versions (Soft tactile feedback, tactile »click«) upon request.
- Available key layouts: US-English, German and French. Additional versions upon request.
- Electromagnetic compatibility (EMC)
- ESD (in compliance with IEC 801-2): 15 kV.
- RFI / EMI: Post-Vfg. 1046 / 1984 (VDE 0871 Class B)
  - FCC Part 15, Subpart J, Class B.

## **Electrical Data**

#### Power supply:

 $+5V \pm 5\%$  (optional + 12V), typically 200 mAmp.

#### Interface

Bidirecional, synchronised serial. The keyboard communicates via clock and data line with the system.

#### Data format

Data transfer to and from keyboard via data line. Data transfer format: 11 bits, 1 start bits (LOW), 8 data bits (lowest first), 1 parity bit (parity odd) and 1 stop bit (HIGH).

#### Data output:

Open collector TTL.

## Key buffer:

5 Byte FIFO.

## Keyboard input sequence:

N-key-rollover.

#### Codes:

Parameters programmable from system whether key generates a code upon closing only or upon closing as well as opening.

#### **Autorepeat function:**

Parameters are programmable through system. The repeat frequency can be programmed from 2-30 Hz. Repeat delay can be programmed from 0.25-1 sec.

#### Reset function

The keyboard generates an automatic reset function.

#### Keyboard self-diagnostic test:

After POWER ON and on request.

Preparation of specifications on the components including their technical data is performed due to internal Cherry tests in accordance with approved rules only.

#### Notes for end users:

With respect to the variety of appliactions we suggest to consult an expert due to product modifications.

## **Mechanical Data**

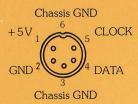
Total travel: 4-0,4 mm. Pretravel:  $2\pm0,6$  mm. Operating force:  $60\pm20$  cN. Storage temperature:  $-40^{\circ}$  C ( $-40^{\circ}$  F) to  $+70^{\circ}$  C ( $+158^{\circ}$  F). Operating temperature:  $-10^{\circ}$  C ( $+32^{\circ}$  F) to  $+70^{\circ}$  C ( $+158^{\circ}$  F).

## Pin Assignment

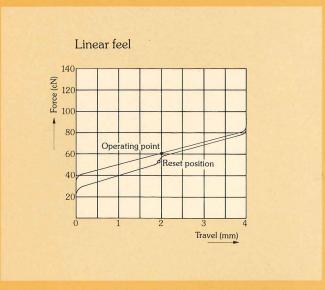
| Pin | Assignment |  |  |  |
|-----|------------|--|--|--|
| 1   | Vcc        |  |  |  |
| 2   | GND        |  |  |  |
| 3   | Shielding  |  |  |  |
| 4   | DATA       |  |  |  |
| 5   | CLOCK      |  |  |  |
| 6   | Shielding  |  |  |  |
|     |            |  |  |  |
|     |            |  |  |  |

## **Keyboard Cable**

2 m shielded and coiled cable, pebble-grey with 5-pole DIN plug 240°.



## Force/Travel Diagram



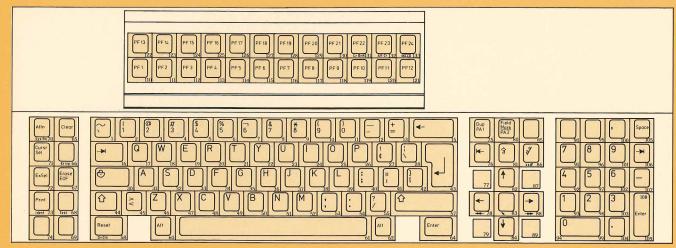
#### Codes

| Code     | S        |          |          |         |         |            |          |        |
|----------|----------|----------|----------|---------|---------|------------|----------|--------|
| Key      | Code     | Status   | Key      | Code    | Status  | Key        | Code     | Status |
| 1        | 0E       | AR       | 46       | 1A      | AR      | 91         | 6C       | М      |
| 2        | 16       | AR       | 47       | 22      | AR      | 92         | 6B       | M      |
| 3        | 1E       | AR       | 48       | 21      | AR      | 93         | 69       | M      |
| 4        | 26       | AR       | 49       | 2A      | AR      | 94         | 68       | M      |
| 5        | 25       | AR       | 50       | 32      | AR      | 95         | 77       | M      |
| 6        | 2E       | AR       | 51       | 31      | AR      | 96         | 75       | M      |
| 7        | 36       | AR       | 52       | 3A      | AR      | 97         | 73       | M      |
| 8        | 3D       | AR       | 53       | 41      | AR      | 98         | 72       | M      |
| 9        | 3E       | AR       | 54       | 49      | AR      | 99         | 70       | M      |
| 10       | 46       | AR       | 55       | 4A      | AR      | 100        | 7E       | M      |
| 11       | 45       | AR       | 56       | 51      | AR      | 101        | 7D       | M      |
| 12       | 4E       | AR       | 57       | 59      | M/B     | 102        | 74       | M      |
| 13       | 55       | AR       | 58       | 11      | M/B     | 103        | 7A       | M      |
| 14       | 5D       | AR       | 59       | -       | -       | 104        | 71       | M      |
| 15       | 66       | AR       | 60       | 19      | M/B     | 105        | 84       | M      |
| 16       | 0D       | AR       | 61       | 29      | AR      | 106        | 7C       | AR     |
| 17       | 15       | AR       | 62       | 39      | M/B     | 107        | 7B       | AR     |
| 18       | 1D       | AR       | 63       | -       | -       | 108        | 79       | M      |
| 19       | 24       | AR       | 64       | 58      | M/B     | 109        | 78       | M      |
| 20       | 2D       | AR       | 65       | 06      | M       | 110        | 07       | M      |
| 21       | 2C       | AR       | 66       | 0C      | M       | 111        | 0F       | M      |
| 22       | 35       | AR       | 67       | 0B      | M       | 112        | 17       | M      |
| 23       | 3C       | AR       | 68       | 0A      | M       | 113        | 1F       | M      |
| 24       | 43       | AR       | 69       | 09      | M       | 114        | 27       | M      |
| 25       | 44       | AR       | 70       | 05      | M       | 115        | 2F       | M      |
| 26       | 4D       | AR       | 71       | 04      | M       | 116        | 37       | M      |
| 27       | 54       | AR       | 72       | 03      | M       | 117        | 3F       | M      |
| 28       | 5B       | AR       | 73       | 83      | M       | 118        | 47       | M      |
| 29       | 5C       | AR       | 74       | 01      | M       | 119        | 4F       | M      |
| 30       | 14       | M/B      | 75       | 67      | M       | 120        | 56       | M      |
| 31       | 1C       | AR       | 76<br>77 | 64      | AR      | 121        | 5E       | M      |
| 32       | 1B       | AR       |          | -<br>61 | _<br>^D | 122        | 08       | M      |
| 33       | 23<br>2B | AR       | 78<br>79 | 61      | AR      | 123<br>124 | 10<br>18 | M<br>M |
| 34<br>35 | 34       | AR<br>AR | 80       | -<br>6Е | —<br>М  | 125        | 20       | M      |
| 36       | 33       | AR       | 81       | 65      | M       | 126        | 28       | M      |
| 37       | 3B       | AR       | 82       | 63      | AR      | 127        | 30       | M      |
| 38       | 42       | AR       | 83       | 62      | M       | 128        | 38       | M      |
| 39       | 42<br>4B | AR       | 84       | 60      | AR      | 129        | 40       | M      |
| 40       | 4C       | AR       | 85       | 6F      | M       | 130        | 48       | M      |
| 41       | 52       | AR       | 86       | 6D      | AR      | 131        | 50       | M      |
| 42       | 53       | AR       | 87       | -<br>-  | -<br>-  | 132        | 57       | M      |
| 43       | 5A       | AR       | 88       | 6A      | AR      | 133        | 5F       | M      |
| 44       | 12       | M/B      | 89       | -       | _       | 100        | 01       |        |
| 45       | 13       | AR       | 90       | 76      | M       |            |          |        |
| 10       | 10       | . 111    | 70       | , 0     | 1.1     |            |          |        |

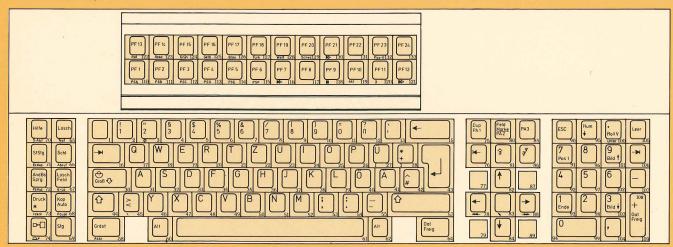
M = Make only; M/B = Make-Break; AR = Automatic Repeat Codes shown in hexadezimal.



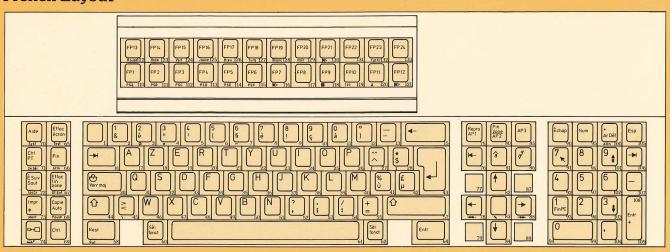
## **US-English Layout**



## **German Layout**



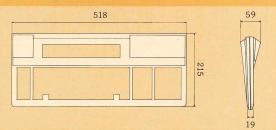
## **French Layout**



## **Ordering Code**

| US-English   | German       | French       |
|--------------|--------------|--------------|
| G80-2500 HAU | G80-2500 HAD | G80-2500 HAF |

## **Housing Dimensions**



## Housing



## Switch to the Future.

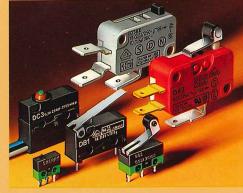
#### Keyboards of high technology and excellent quality.

With high switching reliability even for With high switching reliability even for speed typing. Standard or customized, intelligent or non-encoded versions. Connectable to all popular EDP systems. Modern design. Harmony in colours. Variety of sizes and heights. Ergonomic styling. With or without housing.

## Keymodules. For high technology

keyboards. M8, M9, MX. Keyswitches with exceptional performance. High switching reliability by »Gold Crosspoint« contacts. Low profile design. Excellent touch feeling. Variety of keycap styles and colours. Ideal for ergonomically designed keyboards.







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Available in many standard and customized codes. Thumbwheel, leverwheel or push versions. Gang assemblies. Solderpins, connectors or plain soldering. Stan-dard, miniature and subminiature sizes. Also illuminated by LEDs or lamps. Customized lettering and stop limitation is available

## Snap switches for the future.

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#### New generation digitisers.

Extraordinary precision, enhanced reso-lution, increased speed, improved shiel-ding, simple set-up and ease of use are the features of Cherry digitisers. The total digitiser package comes complete with stylus pen, cursor, power supply and comprehensive manual.

### Ready-to-use alphanumerical

desplays with excellent reading ability.
With absolute and continuous brightness of all letters. Stable displays picture. Big lettersize. Long life. With or without housing available.



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obeying every command.
For IBM\* PC XT, PC AT or compatible systems. Recognition capacity 2000 words. Speaker independent or dependent. Complete set includes speech board, microphone, microphone holder, "VoiceScribe TM", software and manual

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