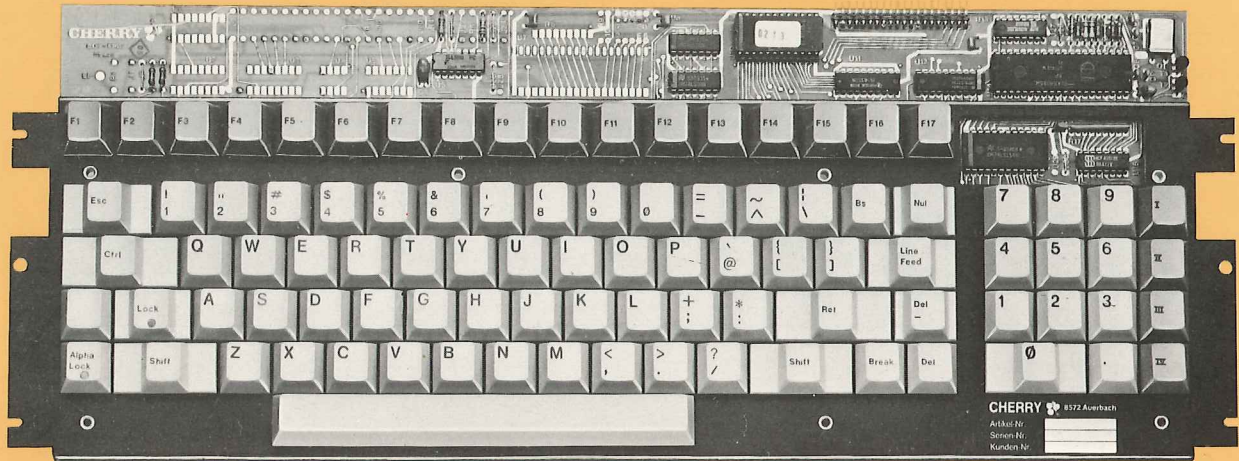


G 80-0312



Microprocessor based keyboard using the new MX keymodule consistent with the new ergonomic requirements including parallel and serial output



Standard Features

- Mechanical keymodules with gold crosspoint contacts (keymodule MX)
- Superlow-profile — 30 mm from enclosure base to center point at home row keycap top (3rd row)
- Dataoutput parallel or serial RS 232 C
- Full ASCII output code
- Keylayouts/codes for German, International and French version
- 4 mode operation
- Electronic latching, Alpha Lock
- n-key-rollover
- Automatic repeat after delay
- Single +5V power supply
- **Standard keycap colors: beige (code L6); ocher (code M6)**

G 80-0312 parallel / International

G 80-0347 parallel / German

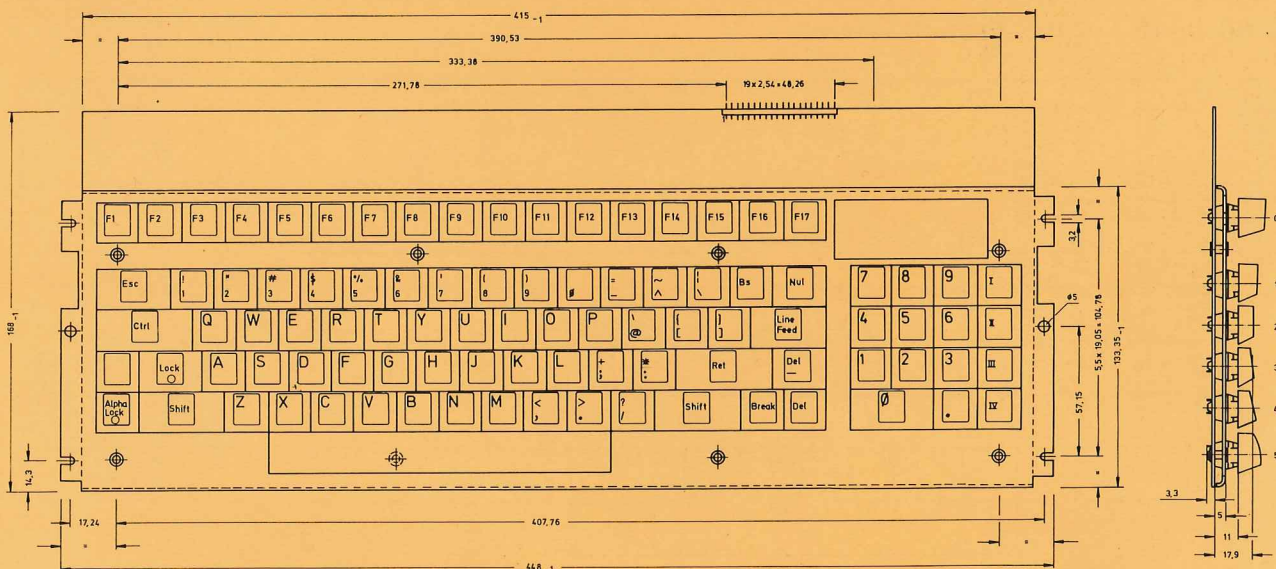
G 80-0348 parallel / French

G 80-0361 serial / International

G 80-0362 serial / German

G 80-0363 serial / French

Low profile housing is available for all versions (Part-No. G 99-0090).



Options

(can be configured by customer)

COMPONENTS

U1,2,3	74 LS 161 A	R 10,12,13	10 K
U4	75 150 A	R 18-20	10 K
U5	74 LS 04	R 7	1 K
U6	74 LS 00	R 11,14	5 K6
U7	IM 6402	R 15,16	27 K
U 8,9	74 LS 08	R 8,17	10K network
U 10	2716 /1	C 1,3,4,11	0,1 µF
U 11	74 LS 373	C 2	10 µF
U 12	74 LS 374	C 5	47 nF
U 13	CD 4049 BE	C 6,7	120 pF
U 14	8035	C 8,9	22 pF
U 15	74 LS 154	C 10	2,2 µF
U 16	CD 4051 BE		
T1,2	2 N3904	S	AMP/ MODU II
D1-95	1N 4148		Nr 2- 825437-0
Q1	5,5296 MHz		
R 1,2	180 Ω		
R 3,5	2 K2		
R 4,6,9	10 K		

Code tables

- different code tables for each mode (Control, Shift, Unshift, Alpha)
- Data-sequence is equal in every mode
- Keynumbers in keycap layout are as per schematic

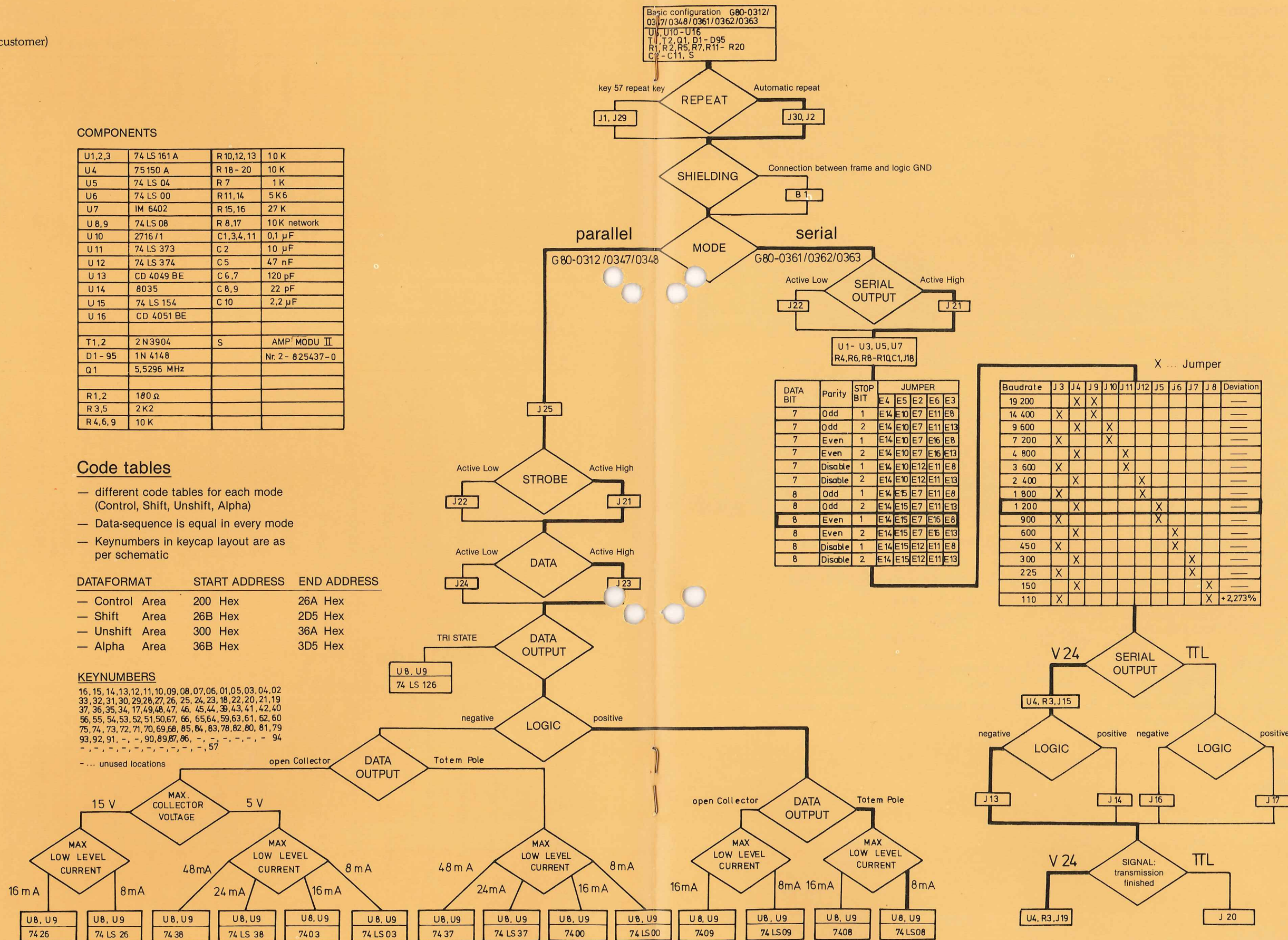
DATAFORMAT

	START ADDRESS	END ADDRESS
- Control Area	200 Hex	26A Hex
- Shift Area	26B Hex	2D5 Hex
- Unshift Area	300 Hex	36A Hex
- Alpha Area	36B Hex	3D5 Hex

KEYNUMBERS

16, 15, 14, 13, 12, 11, 10, 09, 08, 07, 06, 01, 05, 03, 04, 02
33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 18, 22, 20, 21, 19
37, 36, 35, 34, 17, 49, 48, 47, 46, 45, 44, 39, 43, 41, 42, 40
56, 55, 54, 53, 52, 51, 50, 67, 66, 65, 64, 59, 63, 61, 62, 60
75, 74, 73, 72, 71, 70, 69, 68, 85, 84, 83, 78, 82, 80, 81, 79
93, 92, 91, --, 90, 89, 87, 86, --, --, --, --, 94
--, --, --, --, --, 57

- ... unused locations



Connector pin assignment

Serial		Parallel	
Pin	Assignment	Pin	Assignment
1	+5V	1	+5V
2	GND	2	GND
3	*	3	BIT 7
4	*	4	BIT 6
5	*	5	BIT 5
6	*	6	BIT 4
7	*	7	BIT 3
8	*	8	BIT 2
9	*	9	BIT 1
10	*	10	Enable I (Data Bus)
11	*	11	STB
12	*	12	STB
13	*	13	Enable II (STB)
14	*	14	BIT 8
15	*	15	*
16	+12V	16	*
17	-12V	17	*
18	Serial output RS 232 C	18	*
19	*	19	*
20	*	20	*

* not used

Mechanical data

Total travel 4 — 0,4mm
 Pretravel 2 ± 0,6mm
 Movement differential —
 Actuating force 60 ± 20cN
 Lifetime 2 x 10⁷ operations

Connector

AMP Type II, No. 2-825437-0 or equivalent

Electrical data

Power supply: +5V/max. 200mA (± 12V required for serial versions)

Codes: ASCII-code in 4 modes (unshift, shift, control, alpha lock)

Data output parallel: 8 bit, positive logic, TTL-compatible (FAN OUT 10 LS-TTL), last key depressed is remembered

serial: V24 (RS 232 C) asynchronous, 1200 bd, 1 startbit — 8 databit — paritybit even — 1 stopbit

Strobe, $\overline{\text{Strobe}}$: positive logic, pulse width approx. 16µs, TTL-compatible (FAN OUT 10 LS-TTL)

Enable-Input: These inputs allow the strobe and data to be disabled/enabled.
 H-signal (or open) = ENABLE, L-signal = DISABLE
 Input load: Enable I = 8 LS-TTL
 Enable II = 2 LS-TTL

Shift Lock function: Depressing this key provides the Shift Lock function. Indicated by LED. This mode is maintained until a further depression of the key.

Alpha Lock function: Alpha Lock raises the Alpha keys to Shift level. Indicated by LED. Reset by second depression.

Priority of modes: Control key has priority over Shift- and Alpha Lock.

Automatic repeat function: 10 characters per second after 1 second delay

Keyboard operating sequence: n-key-rollover

Temperatures: Storage temperature: —40° C to +70° C
 Operating temperature: 0° C to +65° C

Options: Optional schematic available upon request

Standard-keyboards



G 80-0349 / -0350

Ultra-low profile, ASCII-coded keyboard, microprocessorbased, for unrestricted use in computer systems. Available with or without housing.



G 80-0312

Microprocessor based keyboard using the new MX keymodule. Consistent with the new ergonomic requirements. Universal use. Also available in housing.



G 80-0320

Multi-option-keyboard with free programmable funktion keys and separate cursor block. Universal use. Available with or without housing.



G 80-0413

IBM-compatible keyboard. Also suitable for general use in ASCII format. Available with housing and cable.



G 80-0418

Apple-compatible PC-keyboard with full ASCII-layout. String output possible. Available with housing and cable.

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