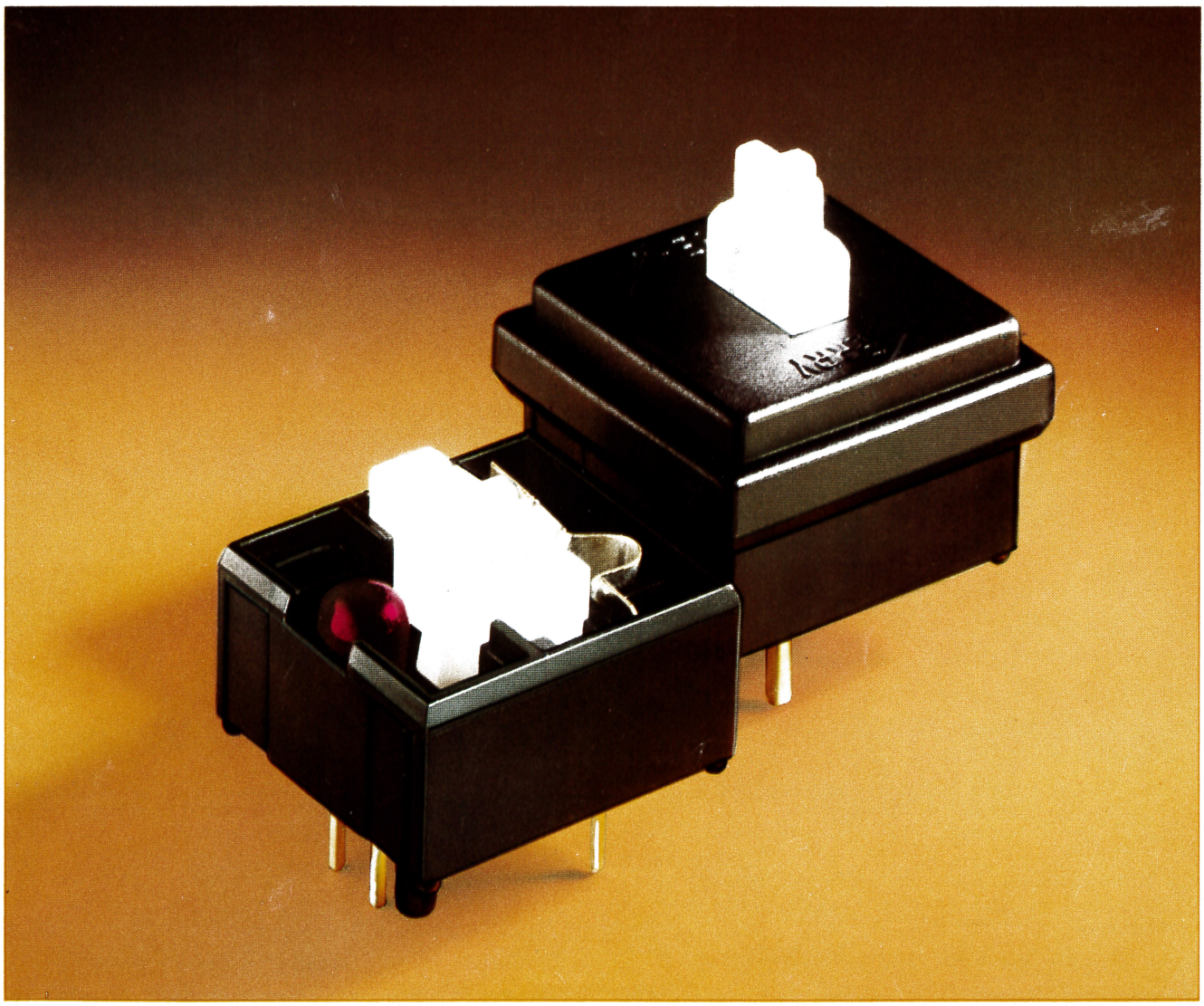
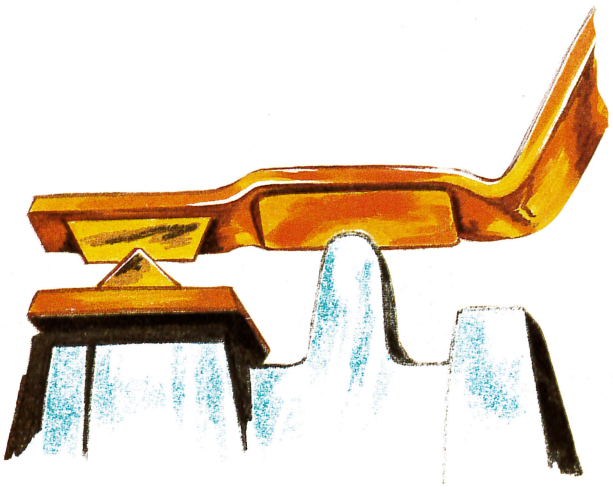
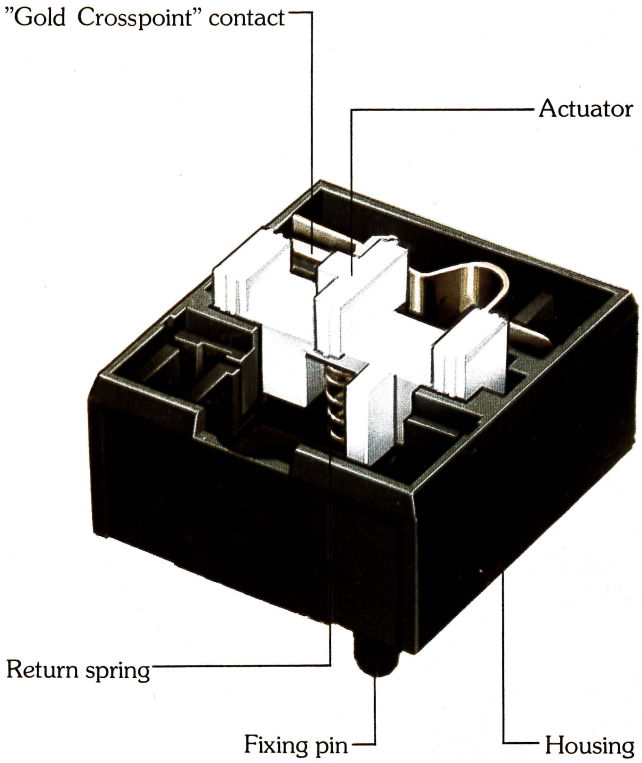
CHERRY

Keymodule M8

Two basic Versions and a Host of Keycap Styles for Keyboard Design.







Main Advantages

- The M 8 keymodule represents the culmination of our many years of experience in design and production of keymodules with exceptional performance.
- "Gold Crosspoint" contacts, a configuration that has proven itself in practice millions of times over.
- High life expectation: $> 10 \times 10^6$ operations.
- Precise switching for high functional reliability.
- Fatigue-free operation with no risk of multiple actuation.
- Your choice of linear feel or tactile feedback at actuation.
- Extremely low profile, 2.5 mm full-travel keyswitches.
- Keymodule body covered or uncovered.
- Optionally available with LEDs.
- 6-mm or 12-mm standard keycaps, as well as a large range of special versions.
- Cost-effective keyboard assembly: keymodules are mounted directly onto the P.C. board.
- All plastics used are UL-registered.
- We provide you with support at no extra charge for finding problem solutions, project planning and production.
- We guarantee fast delivery and flexible disposition.
- Special-purpose versions are possible.
- Available through our worldwide network of agents and distributors.
- The Cherry M 8.
  A new generation keymodule "Made in Germany".

Important Features

- 2.5-mm full-travel keyswitches.
- 19.05-mm standard spacing, 16 mm on request.
- Keymodules with linear feel or tactile feedback upon actuation, also available to comply West German Postal Service specifications.
- Contact versions:
  Single-pole
  Double-pole
  Double-pole with defined switching characteristic.
- Extremely low profile.
- Low initial contact resistance of 200 milliohms max. (typically 25 m).
- Variety of contact materials for different electrical requirements.
- Direct mounting to P.C. board using fixing pins.
- Option of angled stems for "stepped" keyboard design.
- Optional LEDs for status indications.

Typical Applications

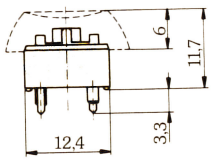
- Office machines
- Telephone keysets
- Portable computers
- Measurement and control equipment
- Medical equipment
- Musical instruments

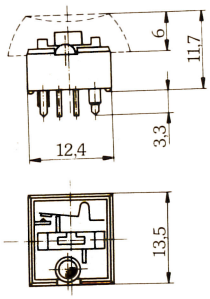
Technical Specifications

	M81	M82	M84
Materials: Plastic parts		Thermoplastics, UL-registered	
Contacts	AuAg26Ni3	AgPd30	AuAg10
Springs		Stainless steel	
Storage temperatur range		−40° C to +70° C	
Operating temperature range		−10° C to +70° C	
Relative humidity		5% to 95%, noncondensing	
Solderability		Suitable for solder bath method in acc. with DIN 40046 Sheet 18	

Dimensions

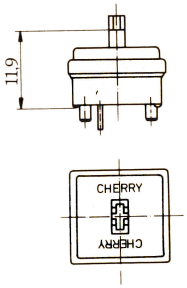
Uncovered keymodule



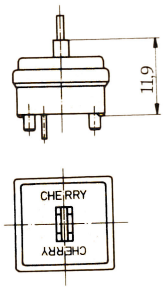


LED version

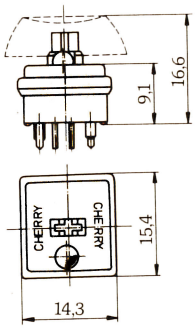
Covered keymodule



6 mm keycap



12 mm keycap



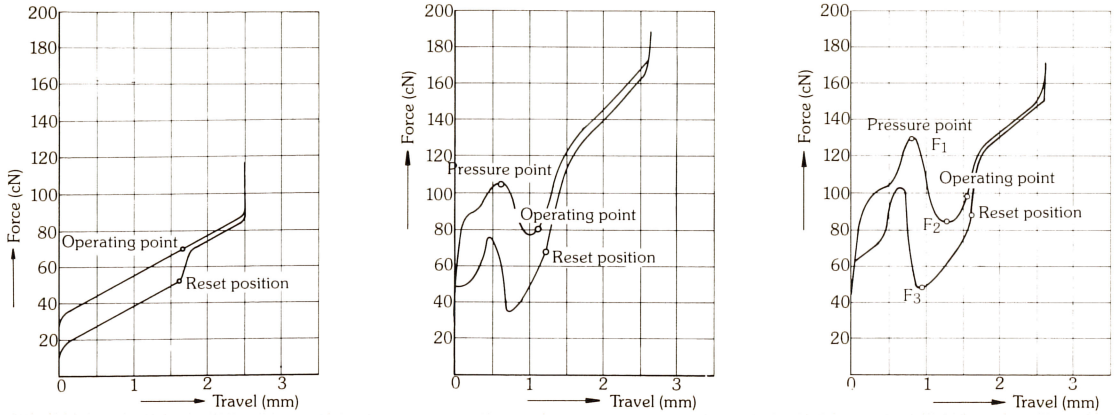
LED version
6 mm keycap

	Keyswitch with linear feel	Keyswitch with tactile feedback	Keyswitch with tactile feedback in compliance with W. German Postal Service specifications
Total travel	$2.5^{+0.2\,mm}_{-0.3\,mm}$	$2.5^{+0.2\,mm}_{-0.3\,mm}$	$2.5^{+0.2\,mm}_{-0.3\,mm}$
Pretravel	1.6 ± 0.6 mm	–	1.4 ± 0.6 mm
Operating force	70 ± 20 cN	70 ± 20 cN	–
Force required to overcome pressure point	–	105 ± 30 cN	max. 140 cN

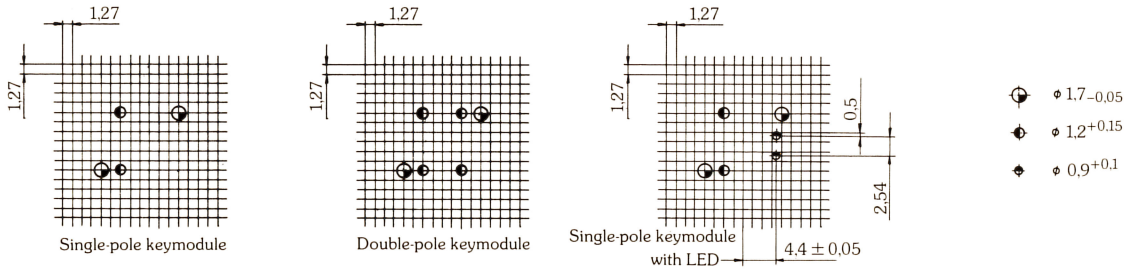
Electrical Specifications

	M81	M82	M84
Voltage	28 V AC/DC	60 V AC/DC	12 V AC/DC max.
Current	100 mA	100 mA	10 mA max.
Dielectric strength		500 V/50 Hz/1 min.	
Life expectancy w/o electrical load		≧ 10×10^6 operations	
Life expectancy at load of 1.5 V, 1 mA		≧ 10×10^6 operations	
Initial contact resistance		≦ 200 m	max. (25 m Ω typ.)
Insulation resistance at 100 V		When new and after rated life expectancy: 100 M Ω	
Capacitance at 1 MHz		< 0,5 pF	
Bounce time at operating speed of 0.4 m/sec.		≦ 5 ms	

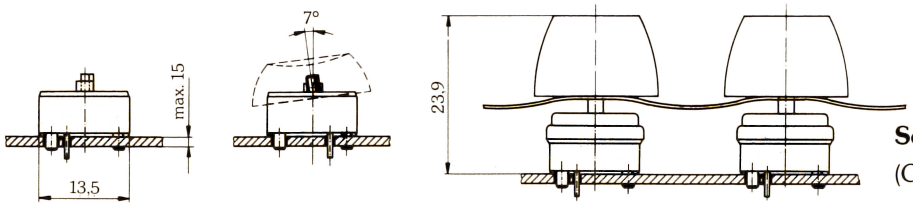
Force/Travel Diagram



P.C.B. Bore Hole Layout

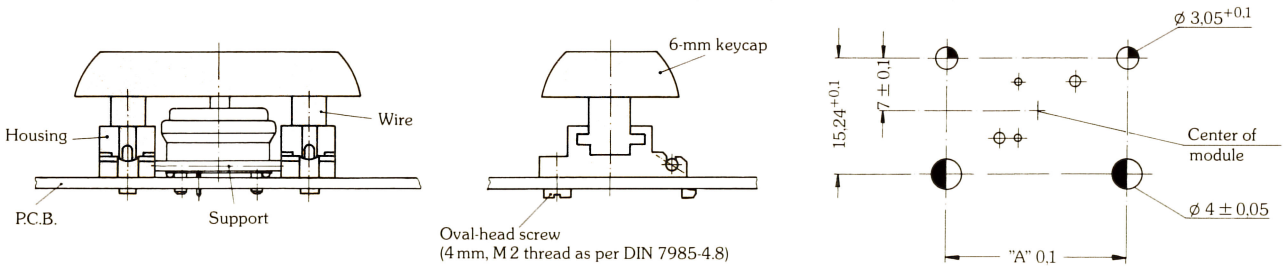


Keyboard Mounting



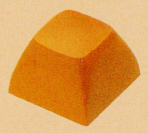
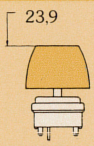
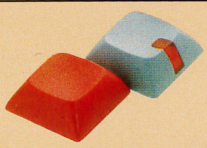
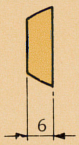
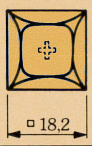
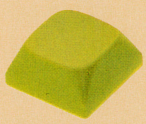
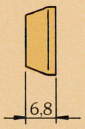
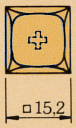
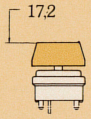
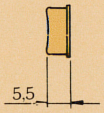
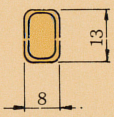
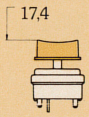
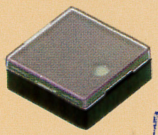
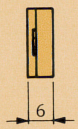
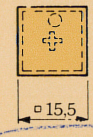
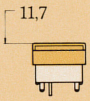
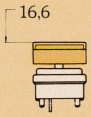
Sealed in compliance with IP 54.
(Covered 12-mm keycap only)

Spacebar Mechanism



Keycap format	1x2	1x2	1x3	1x3	1x8	1x8
Keycap height	6mm	6mm	6mm	6mm	6mm	6mm
Keymodule type	uncovered	covered	uncoverd	covered	uncovered	covered
"A" (mm)	23.8	23.8	38.1	38.1	114.3	114.3
Part no.	G99-0186	G99-0189	G99-1987	G99-0190	G99-0188	G99-0191

Keycaps

Type 1, 12 mm					
Type 2, 6 mm					
Type 3, 15.2 x 15.2 mm					
Type 4, 8 x 13 mm					
Type 5, for insertable legend					

Ordering Information

628-0972 / 628-0973

M81A-0100

Keymodule

Super Low-profile Series

Contact – Rating – Material

1	△	100 mA/28 V AuAg 26 Ni 3
2	△	100 mA/60 V AgPd 30
4	○	10 mA max./12 V max. AuAg 10

	Normally open	No. of contacts	Normally closed	Uncovered	Covered	Momentary contact switch	Tactile feedback	For spacebar	Operating force/ pressure point force cN
A	1			X		X			70 ± 20
							X		105 ± 30
B		1	X		X				85 ± 20
C	2			X		X			95 ± 35
							X		90 ± 35
D*	1	1	X*		X				85 ± 35
E	1				X	X			70 ± 20
							X		105 ± 30
F	2			X		X			95 ± 35
							X		90 ± 35
G	1		X		X			X	95 ± 35
H	1				X	X		X	95 ± 35
I		2	X		X				

Uncovered

Covered

Switching Characteristic

0	Linear feel
1	Tactile feedback
4	Tactile feedback in compl. w. W. German Postal Serv. specs.

Stem Type

1	Standard short; keycap types: 2,5
3	Standard short; keycap types: 2,5
5	Covered short; keycap types: 2, 3, 4, 5
6	Covered long; keycap type: 1
7	Short, angled 7°; keycap type: 2

LED

O	Without LED
R	Red LED
G	Green LED
Y	Yellow LED
S	Red LED super bright

Keycap 1 x 1, blank

O	w/o keycap
R	Red
G	Green
Y	Yellow
B	Blue
U	Grey
W	White
S	Black