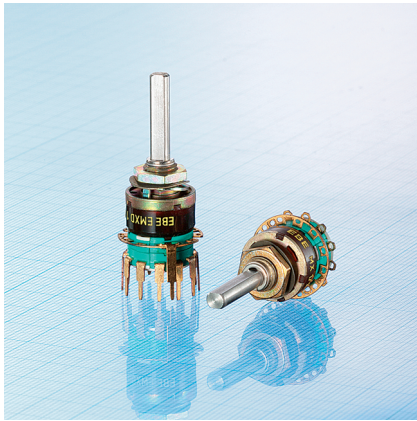


# Miniature Rotary Switch MX/MXD



Miniature switch with 1 to 6 wafers.

- Multi-wafer version for conventional wiring.
- Single-wafer switch EMXD for direct PCB soldering to PC boards.
- 1 to 4 circuits per wafer. Detent angle 30° or 60°.
- Adjustable stops.
- Special version watertight against front panel available.
- Version MX / EMX: Without or with fixed stops. Detent angle 30°, 36° or 60°
- Special designs on request.

## 1.0 Construction

1.1 Number of wafers max.	6 wafers
1.2 Switching combinations per wafer	—
Design B, detent angle 60°	1x6 to 1x2; 2x3 to 2x2; 3x2; 4x2
Design D, detent angle 36° (Typ MX/EMX)	1x6 to 1x2; 2x3 to 2x2; 3x2; 4x2
Design E, detent angle 30°	1x12 to 1x2; 2x6 to 2x2; 3x4 to 3x2; 4x3 to 4x2
1.3 Contacts	Soldering lugs, single-wafer switch, also pins
1.4 Mounting	Central mounting

## 2.0 Electrical Data

	Ag-version	AuNi-version
2.1 Switching power max.	10 VA/W	6 VA/W
2.2 Switching voltage max.	115 V–	60 V–
2.3 Switching current max.	0,5 A	0,25 A
2.4 Rest current max. at $\theta_u$ 20°C	2 A	1,5A
2.5 Test voltage		
between contacts	900 V	700 V
at 50 Hz		
contact/ground	1000 V	800 V
2.6 Life expectancy without power	$\geq 25\,000$ cycles	$\geq 25\,000$ cycles
2.7 Contact resistance initial value	$\leq 12\text{ m}\Omega$	$\leq 10\text{ m}\Omega$
2.8 Insulation resistance	$\geq 10^{11}\Omega$	$\geq 10^{11}\Omega$
2.9 Capacity between 2 contacts	$\sim 1\text{ pF}$	$\sim 1\text{ pF}$

## 3.0 Mechanical Data

3.1 Switching mode	Shorting or non-shorting
3.2 Stops	
MXD	Variable
MX/EMX	Fixed or without stop
3.3 Operating torque acc. to design	$\geq 3,5\text{ Ncm}$
3.4 Stop strength	$\geq 70\text{ Ncm}$
3.5 Fastening torque max.	$\geq 120\text{ Ncm}$
3.6 Dust protection	Sealed wafer

## 4.0 Other Data

4.1 Contact material	Ag or AuNi
4.2 Insulating material	
Wafer	Diallylphthalate, DAP; code DI
Rotor	Polycarbonate, PC
4.3 Soldering time and temperature max.	
	5 s at 260°C
	3 s at 350°C, manual soldering

The bold-typed data in the yellow order blocks remain unchanged.  
 Normal-typed data match the drawings and can be modified according to your wishes.  
 Blanks need to be completed according to the ordering details on the inside front cover.

### Dimensional Drawings · Dimensions in mm

Side view labels: M7x0.75, 6.4 ±0.5, a ±0.5 (normal 24), L ±1, Single contact, Common ring.

Top view labels: 1.5 ±0.1, Position 1, 17, 7, 3.0 ±0.3, 15°.

Mounting layout Standard: 1.6 ±0.1, 9.8 ±0.2, 7.1 ±0.1.

Mounting layout with adapter: 2.2 ±0.05, 5.1 ±0.1, 7.1 ±0.1.

Mounting layout acc. to DIN 41634: 7 ±0.13, 6 ±0.03.

Wafers	1	2	3	4	5	6
Length L	16	22,5	29	35,5	42	48,5

Order code: **MXD** - 1 - 2 - 3 - 24<sup>4</sup> - A<sup>5</sup> - 6 - 7 - **DI**8 - 9 - 1<sup>10</sup> - L<sup>11</sup>

MXD · Soldering lugs with variable stop

Side view labels: M7x0.75, SW10, Spring washer A7 DIN 137, Drawn turned, 35 ±0.5, 6.4 ±0.5, a ±0.5 (normal 24), L ±1, Common ring.

Top view labels: Position 1, Common ring contact, 17, 7, 3.0 ±0.3, 15°.

Mounting layout acc. to DIN 41634: 7 ±0.13, 6 ±0.03.

Order code: **EMXD** - 1 - 2 - 3 - 24<sup>4</sup> - A<sup>5</sup> - 6 - 7 - **DI**8 - 9 - 1<sup>10</sup> - P<sup>11</sup>

EMXD · PC-board version with variable stop

Side view labels: M7x0.75, SW10, Common ring, Single contact, O-Ring, O-Ring 10x1, 2, 6, 7 ±0.5, a ±0.5 (normal 25), L ±1, 13, 14.

Top view labels: Position 1, 17, 7, 6 ±0.04, 6 ±0.03.

Mounting layout acc. to DIN 41634: 7 ±0.13, 6 ±0.03.

Wafers	1	2	3	4	5	6
Length L	16,5	23	29,5	36	42,5	49

Order code: **MX** - 1 - 2 - 3 - 25<sup>4</sup> - A<sup>5</sup> - 6 - 7 - **DI**8 - 9 - 1<sup>10</sup> - 11 - **WD**13

MX · Watertight version

1 pole: 45°, 30°, 13x, 1 ±0.1.

2 poles: 7.05 ±0.1, 6.55, 4.05, 14x, 1 ±0.1.

3 poles: 45°, 120°, 15x, 1 ±0.1.

4 poles: 45°, 45°, 15, 18, 16x, 1 ±0.1.

Hole location diagrams – view from the frontside