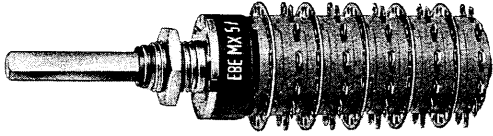
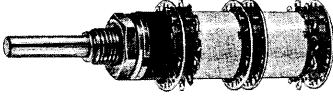
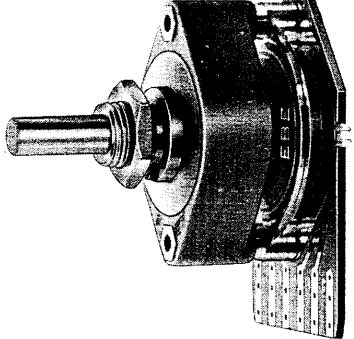
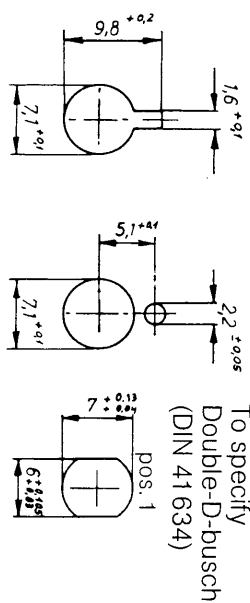
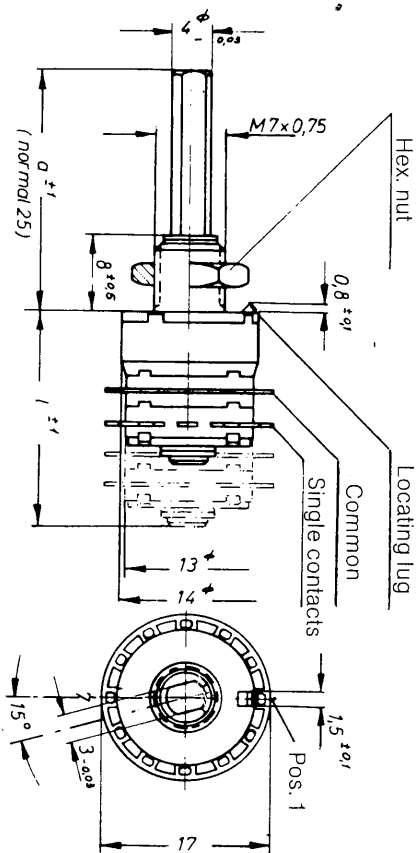


Rotary Wafer Switches

<p>Ordering Code (example)</p> <p>MX 2 / 4 x 5 u, T = 12, with stop</p> <p>① ② ③ ④ ⑤ ⑥ ⑦</p> <p>Ag DAP/PPO -</p> <p>⑧ ⑨ ⑩</p>	 <p>MY: 12 mm diameter MX: 17 mm diameter GX: 25,5 mm diameter</p>  <p>MY with spacers and dummy wafer</p>																																																											
<p>① Switch type</p>	<p>MY MX GX</p>			<p>CBS</p>																																																								
<p>Dimension [mm] Drawing page</p>	<p>12 ϕ 17 ϕ 25,5 ϕ</p> <p>12 12 12</p>			<p>30,5 x 49 13</p>																																																								
<p>② Wafer (s) per switch max.</p>	<p>4 6 10</p>			<p>3</p>																																																								
<p>③ Pole (s) per switch max.</p>	<p>6 12 20</p>			<p>3</p>																																																								
<p>④ No of positions (limited by stops) max. per wafer</p>	<table border="1"> <tr> <td>1 x 10</td> <td>1 x 12</td> <td>1 x 6</td> <td>1 x 10</td> <td>1 x 12</td> <td>1 x 6</td> <td>1 x 12</td> <td>1 x 6</td> <td>1 x 10</td> <td>1 x 12</td> <td>1 x 16</td> <td>1 x 20</td> <td>1 x 23</td> <td>1 x 31</td> </tr> <tr> <td>2 x 5</td> <td>2 x 6</td> <td>2 x 3</td> <td>2 x 5</td> <td>2 x 6</td> <td>2 x 3</td> <td>2 x 6</td> <td>2 x 3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>3 x 4</td> <td>3 x 2</td> <td></td> <td>3 x 4</td> <td>3 x 2</td> <td>3 x 4</td> <td>3 x 2</td> <td></td> <td></td> <td></td> <td>on request only</td> <td>only without or with fixed stops</td> <td>(1 x 24 only without stops)</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>4 x 3</td> <td>4 x 2</td> <td>4 x 3</td> <td>4 x 2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>(1 x 32 only without stops)</td> </tr> </table>			1 x 10	1 x 12	1 x 6	1 x 10	1 x 12	1 x 6	1 x 12	1 x 6	1 x 10	1 x 12	1 x 16	1 x 20	1 x 23	1 x 31	2 x 5	2 x 6	2 x 3	2 x 5	2 x 6	2 x 3	2 x 6	2 x 3								3 x 4	3 x 2		3 x 4	3 x 2	3 x 4	3 x 2				on request only	only without or with fixed stops	(1 x 24 only without stops)					4 x 3	4 x 2	4 x 3	4 x 2						(1 x 32 only without stops)	
1 x 10	1 x 12	1 x 6	1 x 10	1 x 12	1 x 6	1 x 12	1 x 6	1 x 10	1 x 12	1 x 16	1 x 20	1 x 23	1 x 31																																															
2 x 5	2 x 6	2 x 3	2 x 5	2 x 6	2 x 3	2 x 6	2 x 3																																																					
	3 x 4	3 x 2		3 x 4	3 x 2	3 x 4	3 x 2				on request only	only without or with fixed stops	(1 x 24 only without stops)																																															
				4 x 3	4 x 2	4 x 3	4 x 2						(1 x 32 only without stops)																																															
<p>⑤ Contacts u = nonshorting (others see below) k = shorting</p>	<table border="1"> <tr> <td>u</td> <td>u</td> <td>over dummy contacts</td> <td>u</td> <td>u</td> <td>over dummy contacts</td> <td>u</td> <td>over dummy contacts</td> <td>b, bk</td> <td>b, bk</td> <td>b, bk</td> <td>b, bk</td> <td>b, bk</td> <td>b, bk</td> </tr> <tr> <td>k</td> <td>k</td> <td></td> <td>k</td> <td>k</td> <td></td> <td>k</td> <td></td> <td>g, gk</td> <td>g, gk</td> <td></td> <td></td> <td>g, gk</td> <td>g, gk</td> </tr> </table>			u	u	over dummy contacts	u	u	over dummy contacts	u	over dummy contacts	b, bk	b, bk	b, bk	b, bk	b, bk	b, bk	k	k		k	k		k		g, gk	g, gk			g, gk	g, gk																													
u	u	over dummy contacts	u	u	over dummy contacts	u	over dummy contacts	b, bk	b, bk	b, bk	b, bk	b, bk	b, bk																																															
k	k		k	k		k		g, gk	g, gk			g, gk	g, gk																																															
<p>⑥ Indexing</p>	<table border="1"> <tr> <td>T = 10 (36°)</td> <td>T = 12 (30°)</td> <td>T = 6 (60°)</td> <td>T = 10 (36°)</td> <td>T = 12 (30°)</td> <td>T = 6 (60°)</td> <td>T = 12 (30°)</td> <td>T = 6 (60°)</td> <td>T = 10 (36°)</td> <td>T = 12 (30°)</td> <td>T = 16 (22,5°)</td> <td>T = 20 (18°)</td> <td>T = 24 (15°)</td> <td>T = 32 (11,25°)</td> </tr> </table>			T = 10 (36°)	T = 12 (30°)	T = 6 (60°)	T = 10 (36°)	T = 12 (30°)	T = 6 (60°)	T = 12 (30°)	T = 6 (60°)	T = 10 (36°)	T = 12 (30°)	T = 16 (22,5°)	T = 20 (18°)	T = 24 (15°)	T = 32 (11,25°)																																											
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<p>⑦ Stops (with or without)</p>	<p>Fixed (factory fitted to order)</p>			<p>Adjustable</p>																																																								
<p>⑧ Contact material</p>	<p>Ag + gold flash Au (5 μm) + gold flash only T = 12/6: Au (1 μm) + gold flash</p>			<p>Au</p>																																																								
<p>⑨ Insulating material Stator Rotor</p>	<p>DAP Noryl</p>			<p>Epoxy paper</p>																																																								
<p>⑩ Please specify special features</p>				<p>A: Solder and plug connection B: Pins for PCB C: Pins for Mini Wire Wrap D: For ribbon cable (on request)</p>																																																								
<p>Resistive load max. [VA]</p>	<p>Ag: 5 Au: 3 Ag: 10 Au: 6 Ag: 15 Au: 10</p>			<p>3</p>																																																								
<p>Current switching max. carrying [A]</p>	<p>Ag: 0,2 Au: 0,1 Ag: 0,5 Au: 0,25 Ag: 0,5 Au: 0,25</p> <p>1,5 2</p>			<p>0,1 1</p>																																																								
<p>Voltage switching max. [V]</p>	<p>Ag: 115 \cong Ag: 60 \cong Ag: 115 \cong Ag: 60 \cong Ag: 125 \cong Ag: 60 \cong</p>			<p>60 \cong</p>																																																								
<p>Initial contact resistance [m Ω]</p>	<p>Ag: \leq 20 Ag: \leq 25 Ag: \leq 20 Ag: \leq 25 Ag: \leq 20 Ag: \leq 25</p>			<p>\leq 110</p>																																																								
<p>Proof voltage contacts frame [V_{eff}]</p>	<p>700 900 1000</p> <p>800 1000 1300</p>			<p>500 700</p>																																																								
<p>Insulation resistance [Ω]</p>	<p>\cong 1 x 10¹¹ \cong 1 x 10¹¹ \cong 1 x 10¹¹</p>			<p>\cong 5 x 10¹⁰</p>																																																								
<p>Life [Cycles]</p>	<p>\cong 25 000 \cong 25 000 \cong 25 000</p>			<p>\cong 25 000</p>																																																								
<p>Temperature range [°C]</p>	<p>-40°...+85° -40°...+85° -40°...+85°</p>			<p>-40°...+85°</p>																																																								
<p>Stop strength max. [Nm]</p>	<p>0,5 0,7 1,25</p>			<p>1,5</p>																																																								
<p>Operating torque with 1 wafer [Nm]</p>	<p>0,03 0,035 0,06</p>			<p>0,09</p>																																																								
<p>Special features</p>																																																												
<p>⑤ Alternative contact arrangements b = binary code bk = binary compl. code g = gray code gk = gray code compl. hd = hexadecimal</p>	<p>Mounting bush water sealed Binary and binary complement coded on two wafers, Spacers between wafers (T = 12) Special cut-out of contactrings</p>		<p>Same as MY, plus Dual concentric shaft MXR: First or last position biased to next MXS: Push to turn feature S40MX: Key operated switch</p>		<p>Same as MY plus Dual concentric shaft</p>																																																							
<p>Type MZ is a combination of a MX mechanism and MY wafers, only T = 12 (30°)</p>		<p>Mounting bush water sealed Additional attached std. BS wafers (page 5) With diodes for decoupling Dual concentric shaft Pins for P.C.B. or Mini Wire Wrap</p>																																																										

No. of wafers	1	2	3	4
l =	10	14	18	22

Standard shaft length a = 20 ± 0,5 mm
 Mounting bush water sealed:
 Bush length 6,5 mm; dimension l = + 0,5 mm.

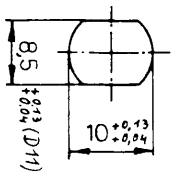
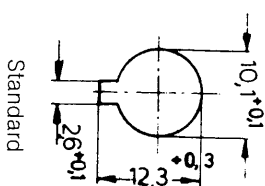
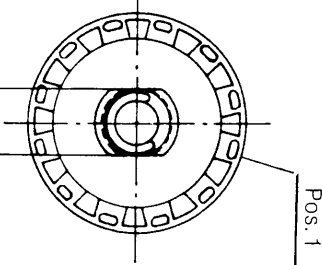
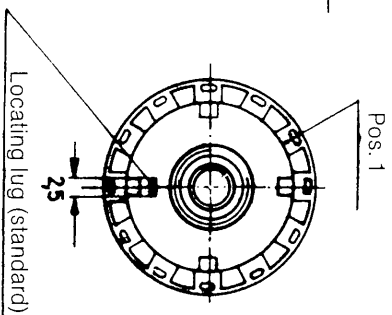
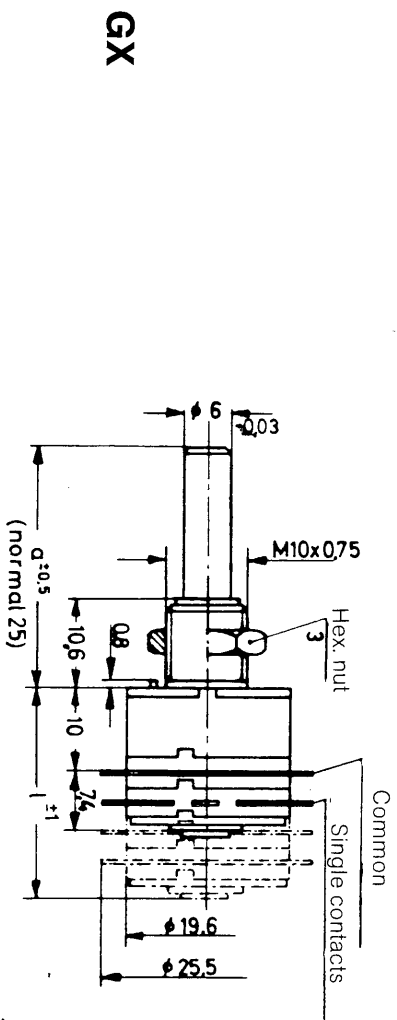


Mounting hole in panel

To specify
 Double-D-bush
 (DIN 41 634)
 pos. 1

No. of wafers	1	2	3	4	5	6
l =	16	22,5	29	35,5	42	48,5

Standard shaft length a = 25 ± 0,5 mm
 On request shaft 4 mm ϕ round.
 Mounting bush water sealed: Bush length 7 mm;
 shaft 4 mm ϕ round; mounting hole DIN 41 634.



No. of wafers	1	2	3	each add. wafer
l =	19	26	33,5	7,4

Standard shaft length a = 25 ± 0,5 mm
 Drawing for sealed bush on request.

Mounting hole

Standard contact arrangements