

# Disc Couplings For Servo Motors

## Ultra High Torque Clamping (Double Disc)

Points of comparison between similar products | Max. Rotational Speed: 3,500~6,000rpm

Type	Parts	Material	Surface Treatment	Accessory
MCSLC	Main Body	Aluminum Diecast	Electroless Nickel Plating	Hex Socket Head Cap Screw
MCSLCLK	Disc	Stainless Steel	-	
MCSLCRK	Screw	SCM435	Black Oxide	

⊕ Tolerances for d1 and d2 are values before slit machining.

Standard Bore  
**MCSLC**

Keywayed Bore  
**MCSLCLK** (d1 Side Only)  
**MCSLCRK** (d2 Side Only)  
**MCSLCWK** (d1, d2 Both Sides)

Part Number	d1, d2 Selection (d1 ≤ d2)						d3	L	l	A	F	Clamp Screw		Unit Price				
	Type	D	⊕ Keywayed Bore Type is selectable for diameter 6 or larger									M	Tightening Torque (N·m)	MCSLC	MCSLCLK	MCSLCRK	MCSLCWK	
Clamping <b>MCSLC</b> <b>MCSLCLK</b> <b>MCSLCRK</b> <b>MCSLCWK</b>	16	*4 5 6							6.8	23.2	7	5	3	M2.5	1			
	20	*4 5 6 6.35 7 8							8.1	26	7.5	6.5	3.7					
	25	*5 6 6.35 7 8 9.53 10							10.4	30.2	9	8.5	4	M3	1.7			
	32	8 9.53 10 11 12 14							15	41	12.4	10	6			M4	2.5	
	40	8 9.53 10 11 12 14 15 16 18							19.5	47	15.5	13.1	7.8	M5	7			
	50	14 15 16 18 20 22 24							25	53	18	16.7	9	M6	12			

⊕ When d1, d2 is \*, use with load torque 50% or less than shown in the table to prevent slipping.

### Characteristic Values

Part Number	D	Allowable Torque (N·m)	Angular Misalignment (°)	Lateral Misalignment (mm)	Static Torsional Spring Constant (N·m/rad)	Max. Rotational Speed (r/min)	Moment of Inertia (kg·m <sup>2</sup> )	Allowable Axial Misalignment (mm)	Compensation Factor	Mass (g)
Type										
<b>MCSLC</b> <b>MCSLCLK</b> <b>MCSLCRK</b> <b>MCSLCWK</b>	16	0.9	2	0.15	450	6000	2.7x10 <sup>-7</sup>	±0.2	5~10	10
	20	1.3			700	5500	8.0x10 <sup>-7</sup>			16
	25	2.8			950	5000	2.5x10 <sup>-6</sup>			30
	32	5		1100	4000	6.6x10 <sup>-6</sup>	62			
	40	9		2800	3800	1.9x10 <sup>-5</sup>	110			
	50	16		3400	3500	5.0x10 <sup>-5</sup>	220			

⊕ The lateral, angular, and axial misalignment values shown are for each occurring individually. When multiple misalignments are occurring simultaneously, the allowable maximum value of each will be reduced to 1/2.

⊕ For the selection criteria and alignment procedures, see **P1061-1062**.

**Ordering Example**

Part Number - Shaft Bore Dia. d1 - Shaft Bore Dia. d2

**MCSLC40 - 10 - 15**

**MCSLCWK40 - 10 - 12**

**Alterations**

Part Number - Shaft Bore Dia. d1 (LDC) - Shaft Bore Dia. d2 (RDC)

**MCSLC40 - LDC9.5 - RDC10.5**

**MCSLCWK40 - 8 - 10 - KRH4**

⊕ Express service is not available.

Alterations	Shaft Bore Dia.	Keyway Width																																										
Spec.	<p>0.1mm Increment</p> <table border="1" style="font-size: x-small;"> <tr><th>D</th><th>LDC, RDC</th></tr> <tr><td>16</td><td>4~6</td></tr> <tr><td>20</td><td>4~8</td></tr> <tr><td>25</td><td>5~10</td></tr> <tr><td>32</td><td>8~14</td></tr> <tr><td>40</td><td>8~18</td></tr> <tr><td>50</td><td>14~24</td></tr> </table>	D	LDC, RDC	16	4~6	20	4~8	25	5~10	32	8~14	40	8~18	50	14~24	<p>Keyway Width (b) is changed as the table below.</p> <table border="1" style="font-size: x-small;"> <tr><th>Ordering Code</th><th>KLH4</th><th>KRH4</th></tr> <tr><td>Shaft Bore Dia. d1, d2</td><td>Reference Dia.</td><td>Tolerance</td><td>Reference Dia.</td><td>Tolerance</td></tr> <tr><td>8</td><td>2</td><td>±0.0125</td><td>1.0</td><td></td></tr> <tr><td>10</td><td>4</td><td>±0.0150</td><td>1.8</td><td></td></tr> <tr><td>12</td><td>5</td><td>±0.0150</td><td>2.3</td><td></td></tr> <tr><td>22</td><td>8</td><td>±0.0180</td><td>3.3</td><td>+0.2 0</td></tr> </table>	Ordering Code	KLH4	KRH4	Shaft Bore Dia. d1, d2	Reference Dia.	Tolerance	Reference Dia.	Tolerance	8	2	±0.0125	1.0		10	4	±0.0150	1.8		12	5	±0.0150	2.3		22	8	±0.0180	3.3	+0.2 0
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**Keyway Dimension**

Shaft Bore Dia. d1, d2	b		t		Key Nominal Dim. b×h
	Reference Dia.	Tolerance	Reference Dia.	Tolerance	
6~7.9	2	±0.0125	1.0	+0.1 0	2x2
8~10	3	±0.0125	1.4		3x3
10.1~12	4	±0.0150	1.8		4x4
12.1~17	5	±0.0150	2.3		5x5
17.1~22	6	±0.0150	2.8		6x6
22.1~24	8	±0.0180	3.3		+0.2 0