

# LW097 Series

## Electrical Characteristics

• Total Resistance:	500Ω-5MΩ	• Rotational Life:	10,000 cycles min
• Residual Resistance:	<20Ω	• Slider Noise:	Less than 100MV
• Total Resistance Tolerance:	A B C D W	• Gang Error:	±4dB (-40~0dB)
• Voltage Proof Minute at:	300V AC	• Insulation Resistance:	100MΩ min. at 250V DC
• Power Rating:	B taper 0.05w Other taper 0.025w	• Maximum Operating Voltage:	B taper 50V AC; Other taper 25V AC

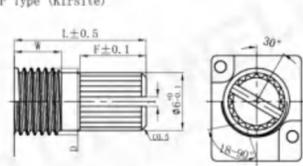
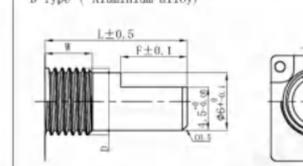
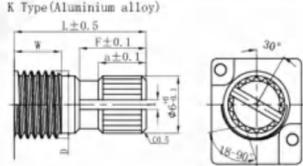
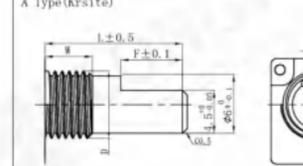
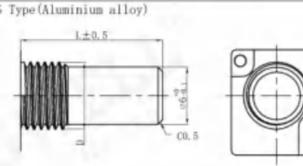
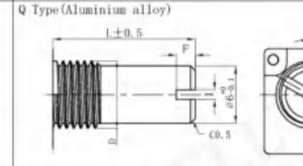
## Mechanical Structure

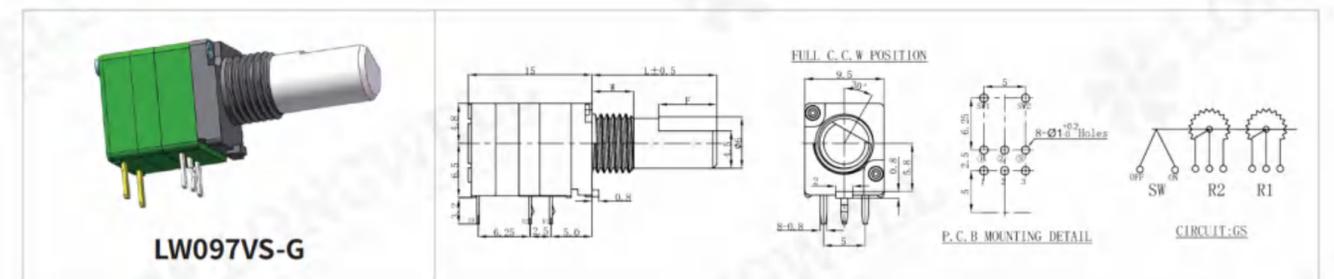
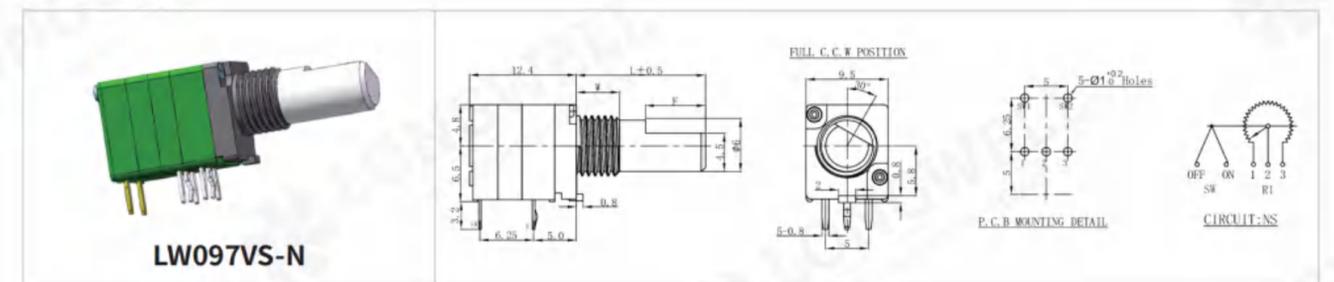
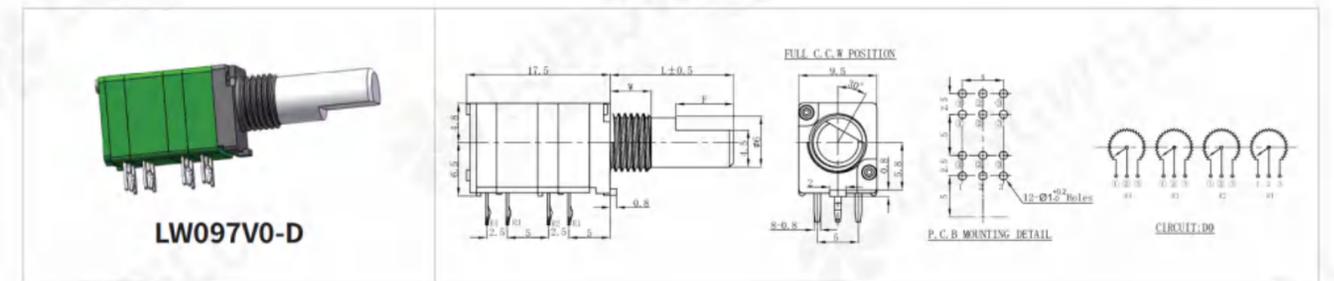
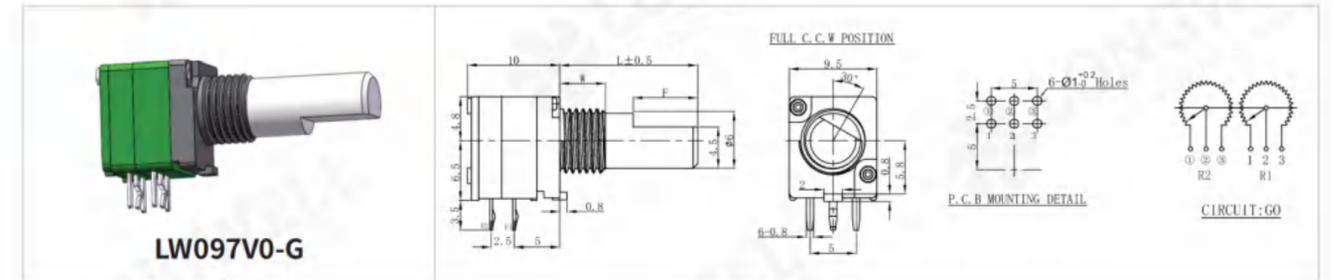
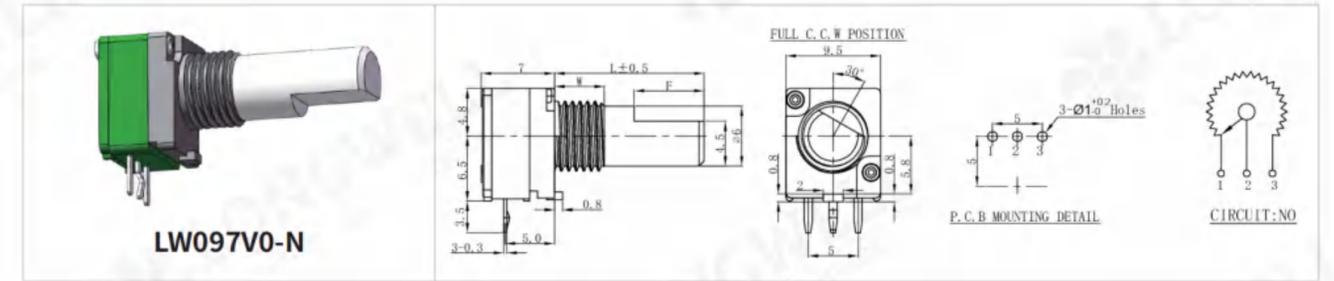
• Total Rotational Angle:	300°±10°	• Rotational Stopper Strength:	3Kgf.cm MAX
• Rotational Torque:	10~200gf.cm	• Push-pull Strength:	6kgf MAX

## Switch characteristics

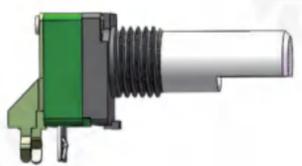
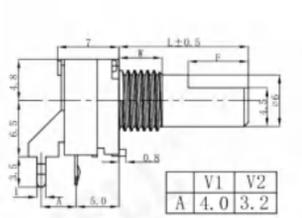
• Switch Contact Resistance:	50mΩMax	• Switch Rotational Angle:	50°±10°
• Switch Rated Power:	12V DC 0.5A	• Switch Action:	500gf.cm below
• Switch Life:	15,000 cycles	• Switch Action:	500±200gf

## Shaft Type and Lengths Metal shaft

<p>F Type (Kirsite)</p> 	<p>D Type (Aluminium alloy)</p> 	<p>W=5</p> <table border="1"> <tr><td>L</td><td>10</td><td>12</td><td>15</td><td>20</td><td>25</td></tr> <tr><td>F</td><td>4</td><td>5</td><td>8</td><td>12</td><td>15</td></tr> <tr><td>a</td><td>3</td><td>4</td><td>7</td><td>11</td><td>13</td></tr> </table>	L	10	12	15	20	25	F	4	5	8	12	15	a	3	4	7	11	13
L	10		12	15	20	25														
F	4	5	8	12	15															
a	3	4	7	11	13															
<p>K Type (Aluminium alloy)</p> 	<p>A Type (Krsite)</p> 	<p>W=7</p> <table border="1"> <tr><td>L</td><td>12</td><td>15</td><td>20</td><td>25</td></tr> <tr><td>F</td><td>4</td><td>7</td><td>12</td><td>15</td></tr> <tr><td>a</td><td>3</td><td>6</td><td>10</td><td>13</td></tr> </table>	L	12	15	20	25	F	4	7	12	15	a	3	6	10	13			
L	12		15	20	25															
F	4	7	12	15																
a	3	6	10	13																
<p>G Type (Aluminium alloy)</p> 	<p>Q Type (Aluminium alloy)</p> 	<p>W=10</p> <table border="1"> <tr><td>L</td><td>15</td><td>20</td><td>25</td><td>30</td></tr> <tr><td>F</td><td>4</td><td>7</td><td>12</td><td>15</td></tr> <tr><td>a</td><td>3</td><td>6</td><td>10</td><td>13</td></tr> </table>	L	15	20	25	30	F	4	7	12	15	a	3	6	10	13			
L	15		20	25	30															
F	4	7	12	15																
a	3	6	10	13																
		<table border="1"> <tr> <td>W</td> <td>1</td> <td>2.5</td> <td>5</td> <td>7</td> <td>10</td> <td>15</td> </tr> <tr> <td>D</td> <td>φ7</td> <td>M7*0.75P</td> <td>M9*0.75P</td> <td colspan="3"></td> </tr> </table>	W	1	2.5	5	7	10	15	D	φ7	M7*0.75P	M9*0.75P							
W	1	2.5	5	7	10	15														
D	φ7	M7*0.75P	M9*0.75P																	

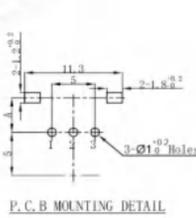


**LW097V0-NX**

FULL C.C.W POSITION

V1	V2
A	4.0 3.2

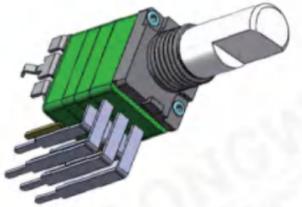
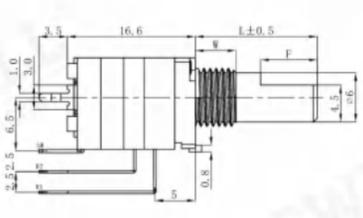


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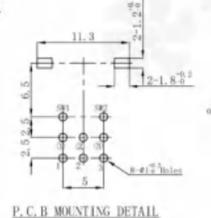


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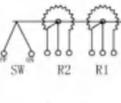
**LW097HS-G**

FULL C.C.W POSITION

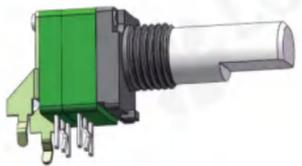
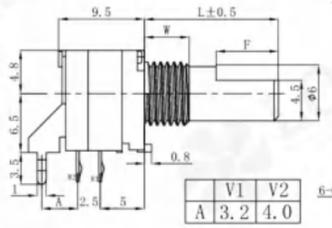


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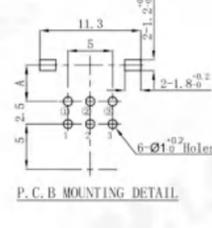
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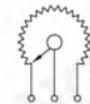



FULL C.C.W POSITION

V1	V2
A	3.2 4.0

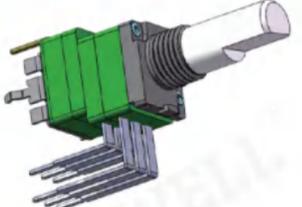
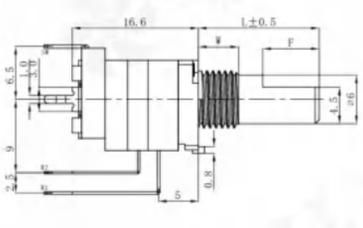


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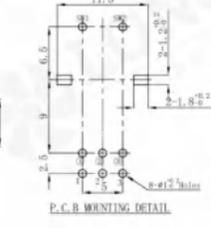


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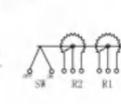
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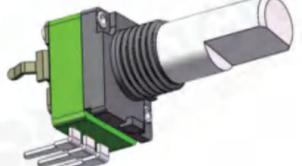
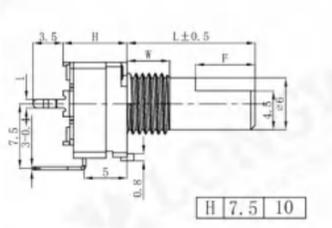


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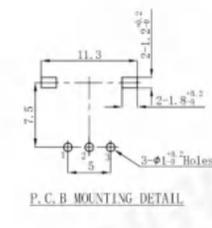
CIRCUIT-GS

**LW097H0-N**

FULL C.C.W POSITION

H	7.5 10
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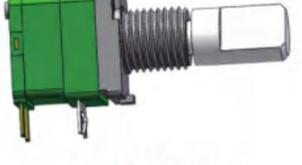
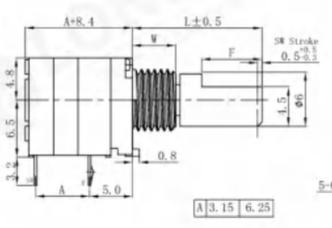


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CIRCUIT-NO

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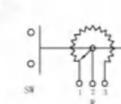



FULL C.C.W POSITION

A	3.15 6.25
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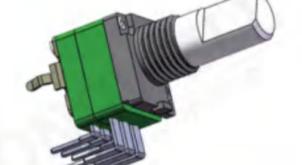
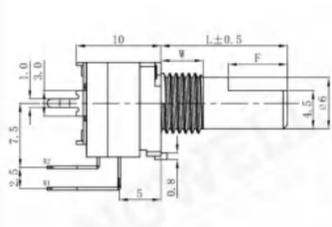


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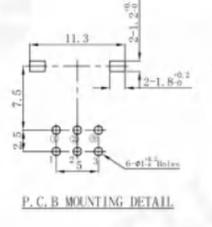


CIRCUIT-NS

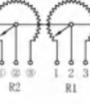
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FULL C.C.W POSITION

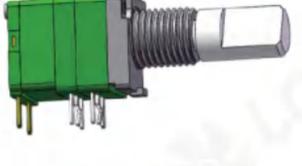
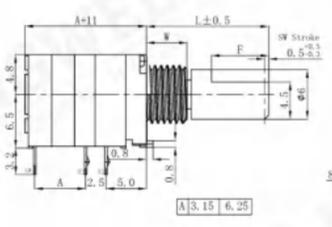


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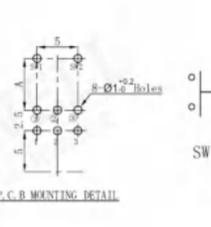
CIRCUIT-GO

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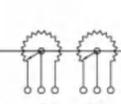



FULL C.C.W POSITION

A	3.15 6.25
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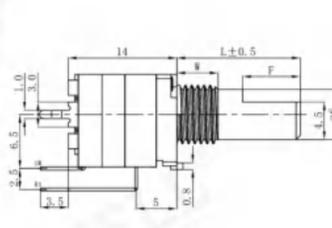


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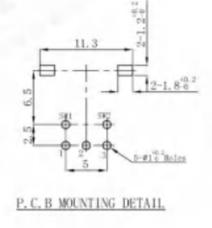


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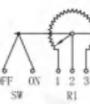
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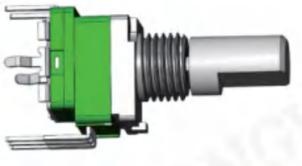
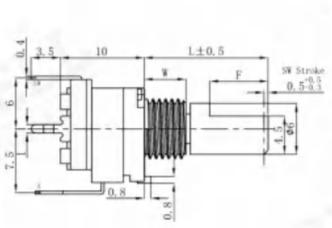


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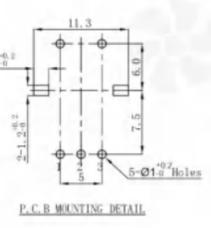


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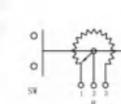
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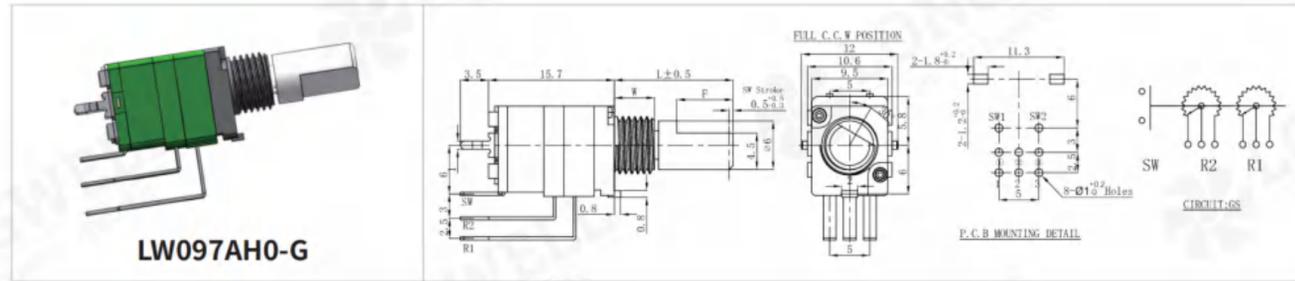
FULL C.C.W POSITION



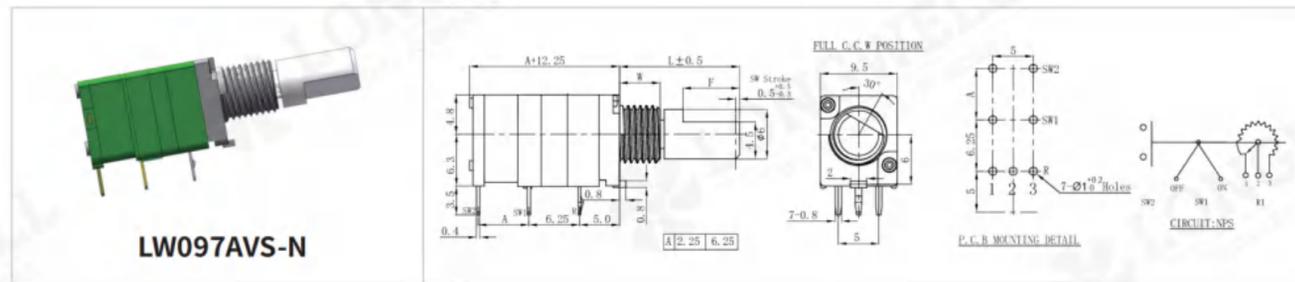
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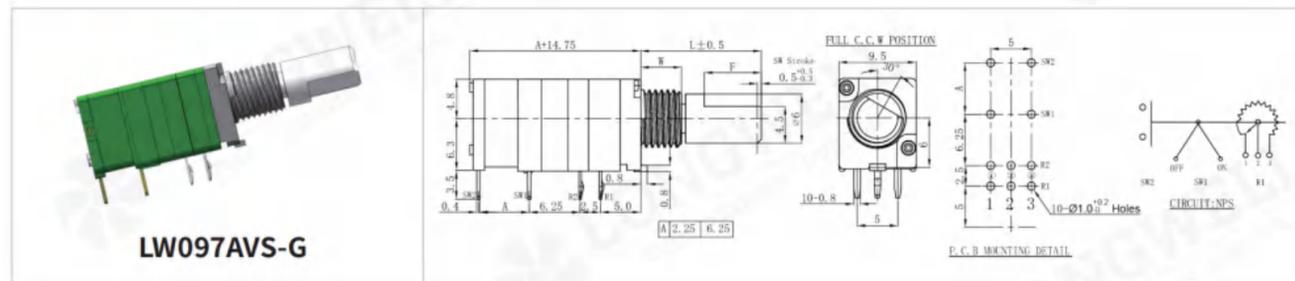
CIRCUIT-NS



LW097AH0-G



LW097AVS-N



LW097AVS-G

## LW0972 Series

### Electrical Characteristics

- Total Resistance: 500Ω-5MΩ
- Residual Resistance: <20Ω
- Total Resistance Tolerance: A B C D W
- Power Rating: B taper 0.05w  
Other taper 0.025w
- Voltage Proof Minute at: 300V AC
- Rotational Life: 10,000 cycles min
- Slider Noise: Less than 100MV
- Insulation Resistance: 100MΩ min. at 250V DC
- Maximum Operating Voltage: B taper 50V AC;  
Other taper 25V AC

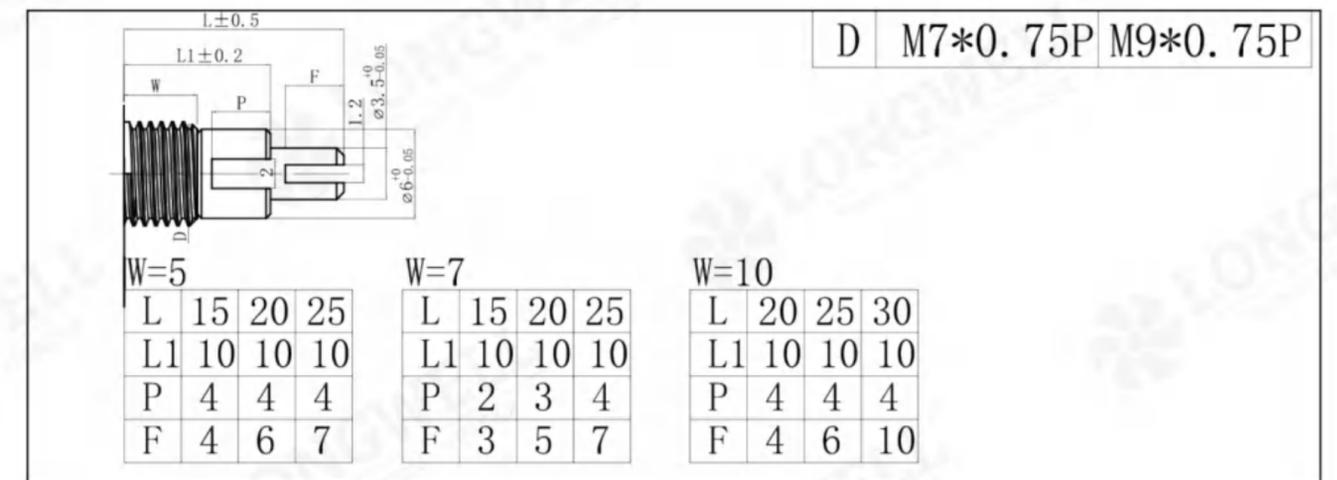
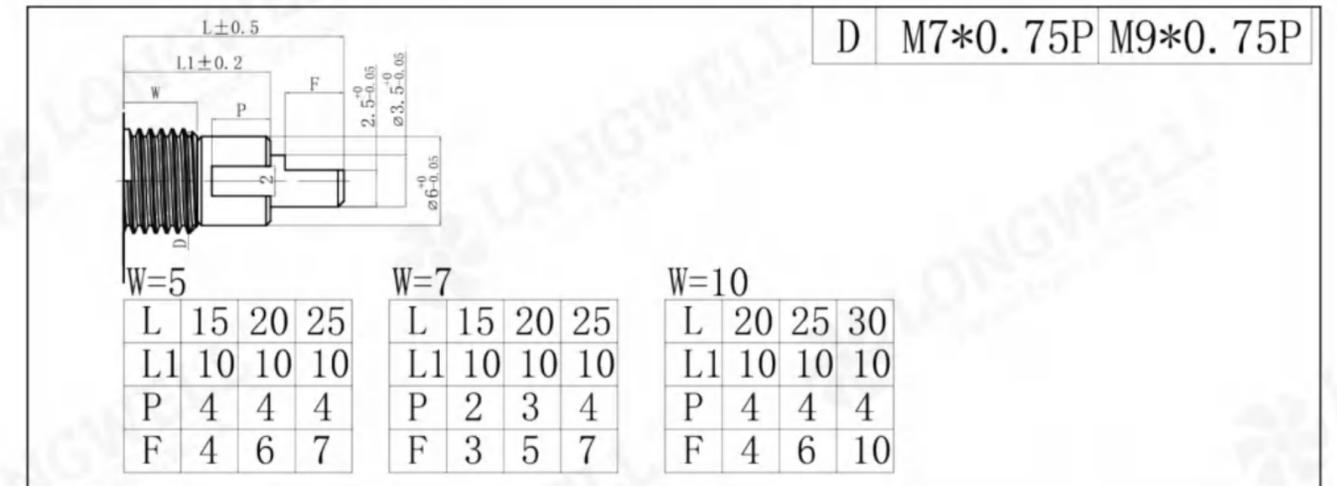
### Mecanical Structure

- Total Rotational Angle: 300°±10°
- Rotational Torque: 10~200gf.cm
- Rotational Stopper Strength: 3Kgf.cm MAX
- Push-pull Strength: 6kgf MAX

### Switch characteristics

- Switch Contact Resistance: 50mΩMax
- Switch Rated Power: 12V DC 0.5A
- Switch Life: 15,000 cycles
- Switch Rotational Angle: 50°±10°
- Switch Action: 500gf.cm below
- Switch Action: 500±200gf

### Shaft Type and Lengths Metal shaft



L ± 0.5		D M7*0.75P M9*0.75P	
L1 ± 0.2		F	
W		P	
a		18 TEETH	
W=5		W=7	
L	15	20	25
L1	10	10	10
P	4	4	4
F	4	6	7
a	3	5	6
W=10		W=10	
L	20	25	30
L1	15	15	15
P	4	4	4
F	4	6	10
a	3	5	9

## LW092 Series

### Electrical Characteristics

• Total Resistance:	500Ω-5MΩ	• Rotational Life:	10,000 cycles min
• Residual Resistance:	<20Ω	• Slider Noise:	Less than 100MV
• Total Resistance Tolerance:	A B C D W	• Gang Error:	≤±3dB (-40~0dB)
• Voltage Proof Minute at:	300V AC	• Insulation Resistance:	100MΩ Min. at 250V DC
• Power Rating:	B taper 0.05w Other taper 0.025w	• Maximum Operating Voltage:	B taper 50V AC; Other taper 25V AC

### Mecanical Structure

• Total Rotational Angle:	300°±10°	• Rotational Stopper Strength:	3Kgf.cm MAX
• Rotational Torque:	10~200gf.cm	• Push-pull Strength:	6kgf MAX

### Switch characteristics

• Switch Contact Resistance:	50mΩMax	• Switch Rotational Angle:	50°±10°
• Switch Rated Power:	12V DC 0.5A	• Switch Action:	500gf.cm below
• Switch Life:	10,000 cycles		

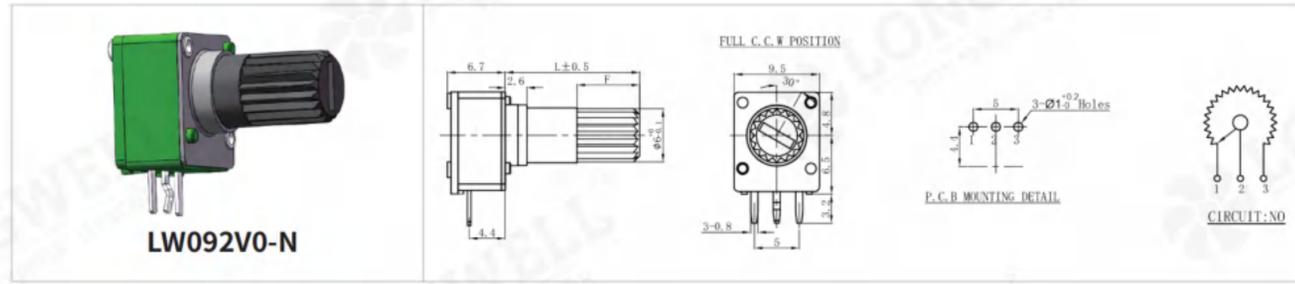
### Shaft Type and Lengths Metal shaft

<p>Y Type</p> <table border="1"> <tr><td>L</td><td>10</td><td>15</td><td>20</td></tr> <tr><td>F</td><td>7</td><td>7</td><td>12</td></tr> </table>	L	10	15	20	F	7	7	12	<p>X Type</p> <table border="1"> <tr><td>L</td><td>10</td><td>15</td><td>20</td></tr> <tr><td>F</td><td>7</td><td>7</td><td>12</td></tr> </table>	L	10	15	20	F	7	7	12	<p>T Type</p> <table border="1"> <tr><td>L</td><td>10</td><td>15</td><td>20</td></tr> <tr><td>F</td><td>7</td><td>7</td><td>12</td></tr> </table>	L	10	15	20	F	7	7	12
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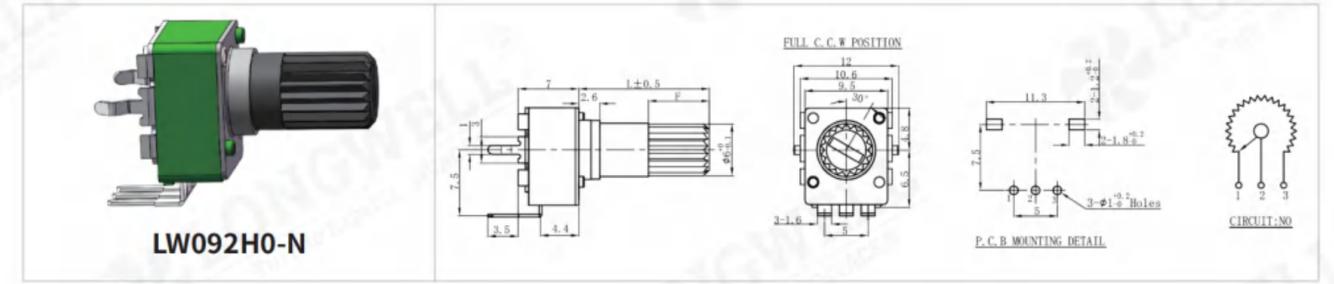
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**LW0972VS-G**

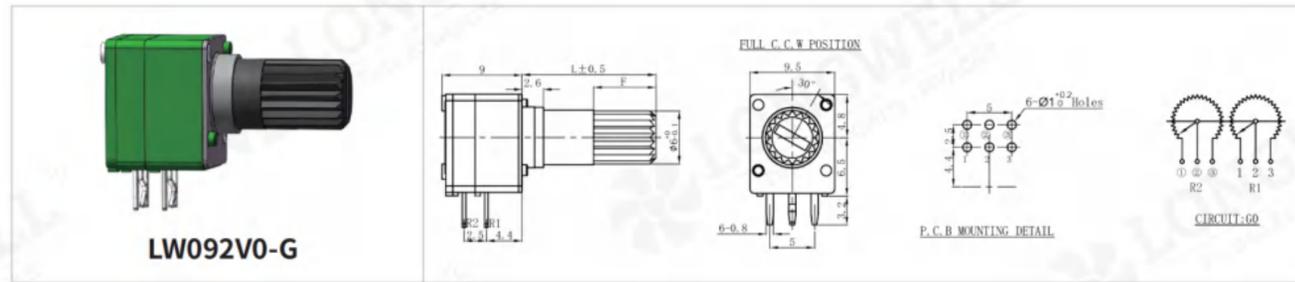
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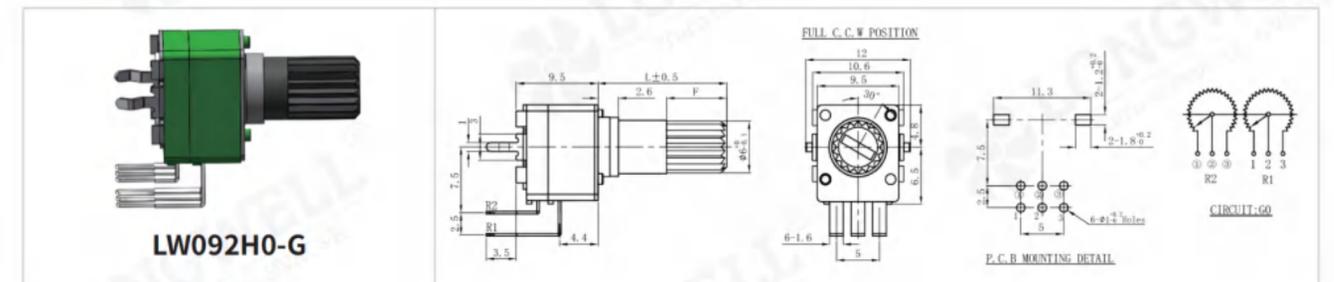
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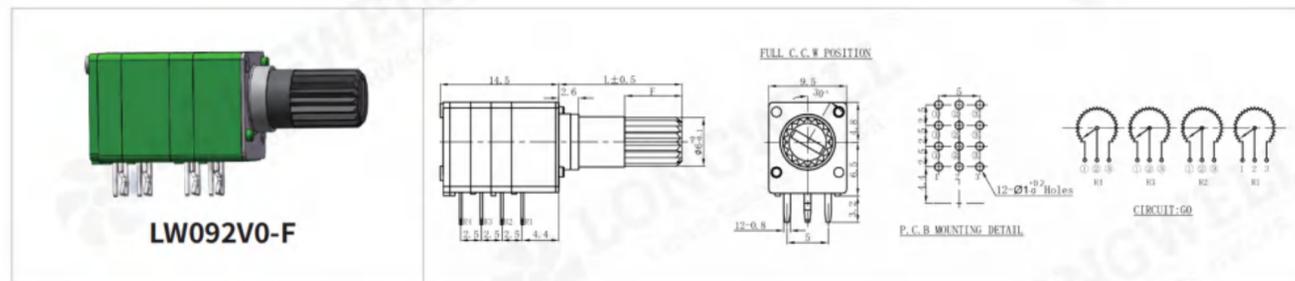
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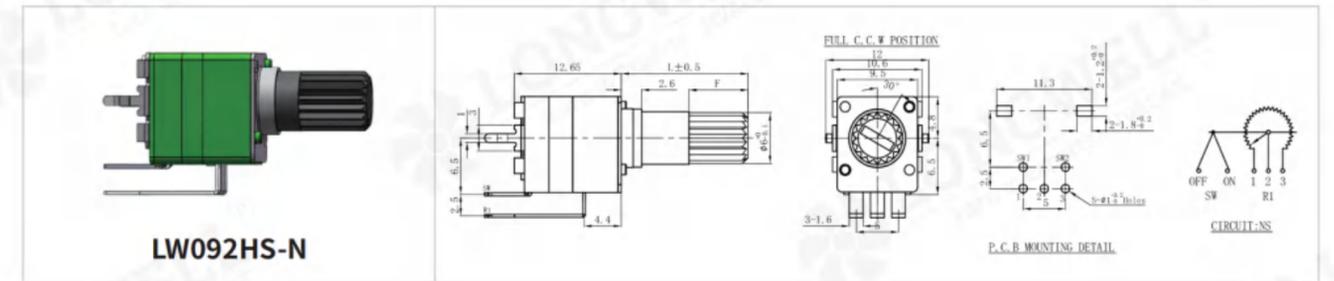
**LW092V0-G**



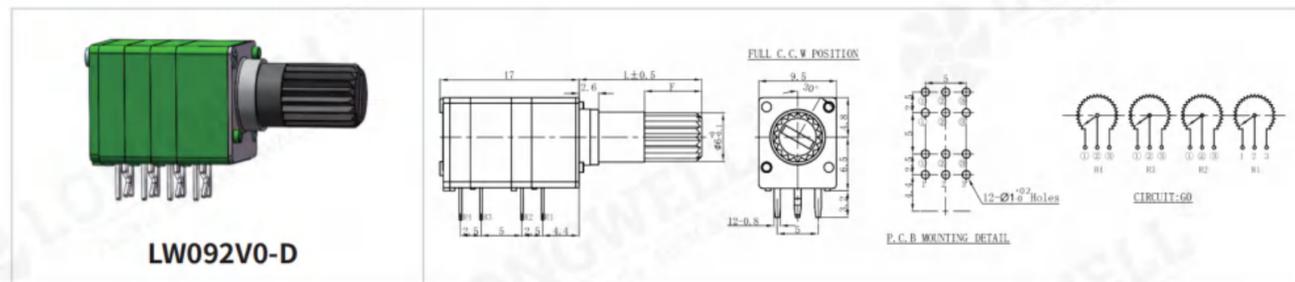
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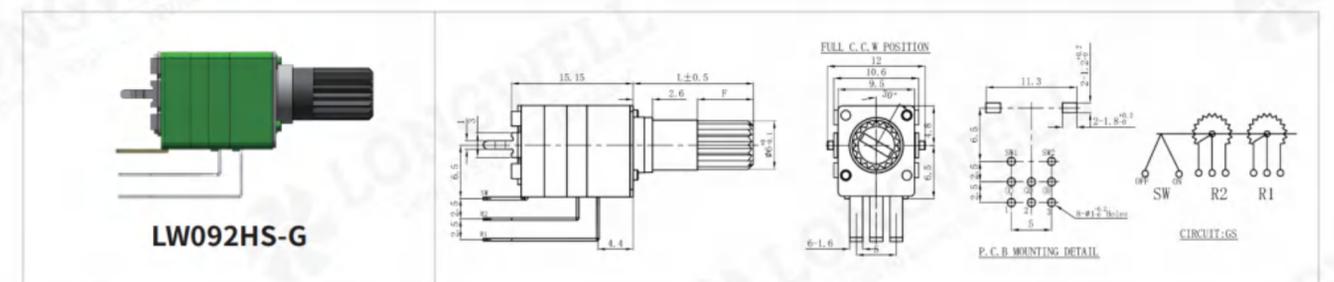
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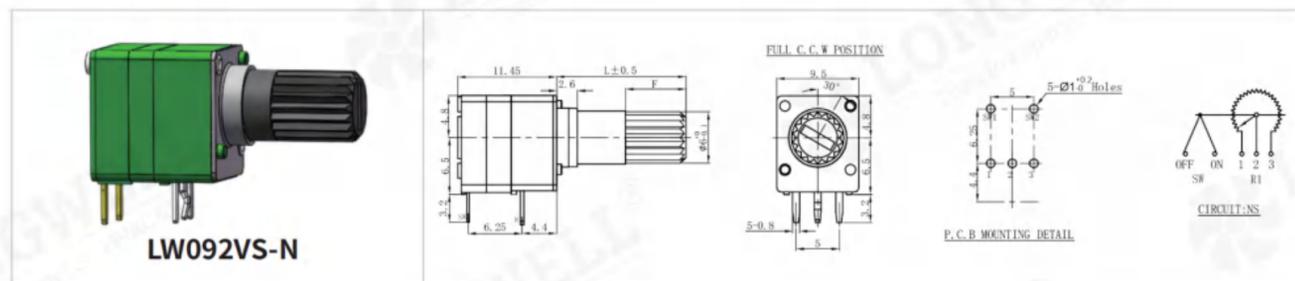
**LW092HS-N**



**LW092V0-D**



**LW092HS-G**



**LW092VS-N**

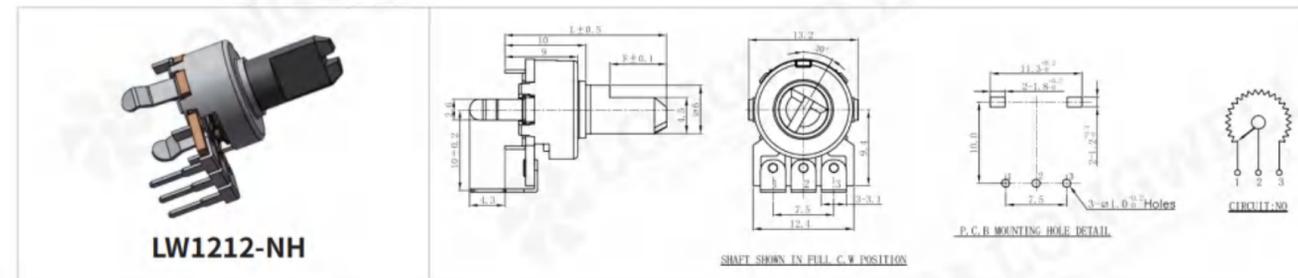
# LW12 Series

## Electrical Characteristics

• Total Resistance:	500Ω-5MΩ	• Slider Noise:	Less than 100MV
• Residual Resistance:	<20Ω	• Gang Error:	≤±4dB (-40~0dB)
• Total Resistance Tolerance:	A B C D W	• Insulation Resistance:	100MΩ min. at 250V DC
• Power Rating:	B taper 0.05w Other taper 0.025w	• Maximum Operating Voltage:	B taper 50V AC; Other taper 25V AC
• Voltage Proof Minute at:	300V AC		

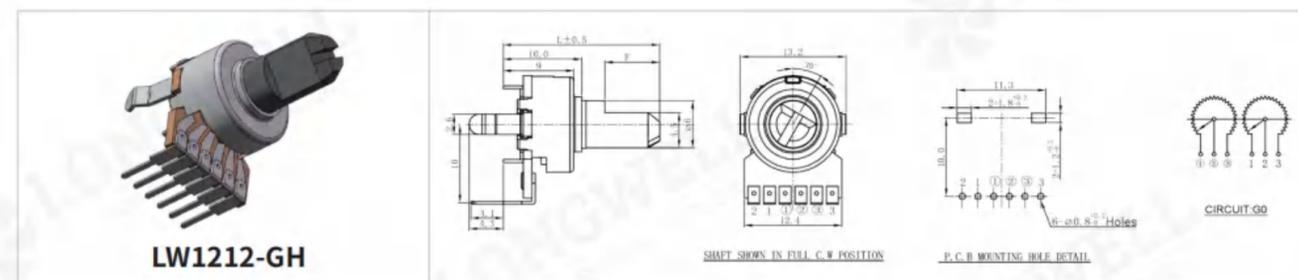
## Mecanical Structure Itemsspecification

• Total Rotational Angle:	300°±10°	• Rotational Stopper Strength:	3Kgf.cm MAX
• Rotational Torque:	10~200gf.cm	• Push-pull Strength:	6kgf MAX
• Rotational Life:	10,000 cycles min		



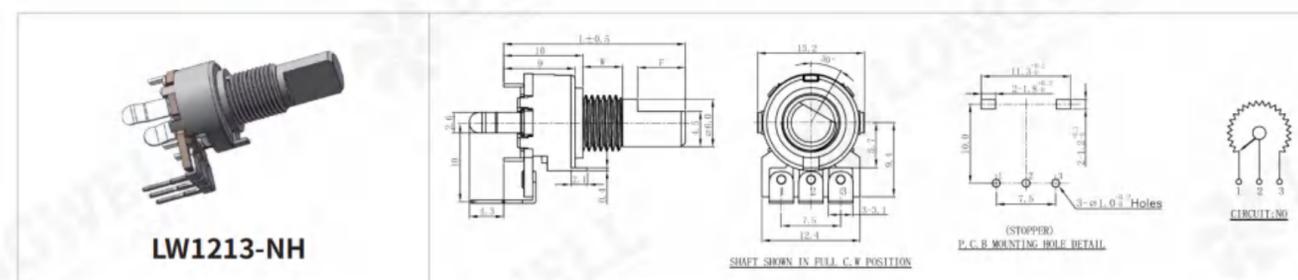
**LW1212-NH**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, and CIRCUIT-50.



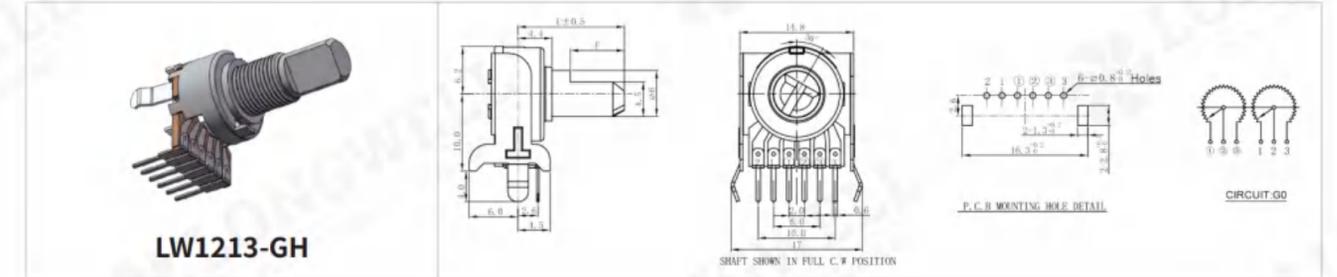
**LW1212-GH**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, and CIRCUIT-50.



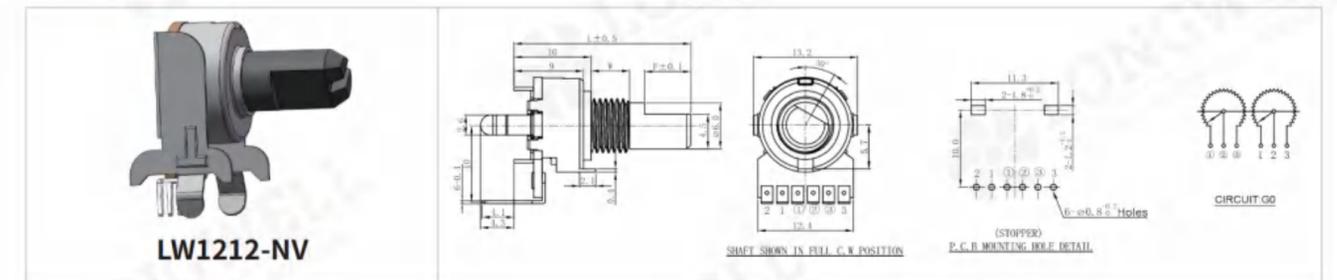
**LW1213-NH**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, (STOPPER), and CIRCUIT-50.



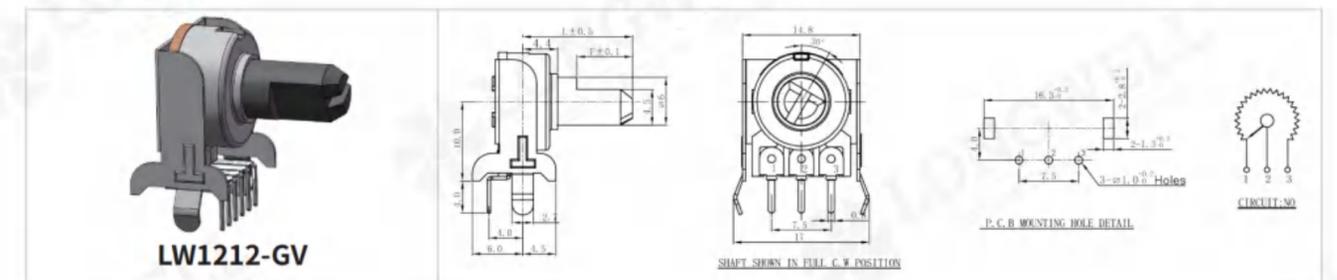
**LW1213-GH**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, and CIRCUIT-50.



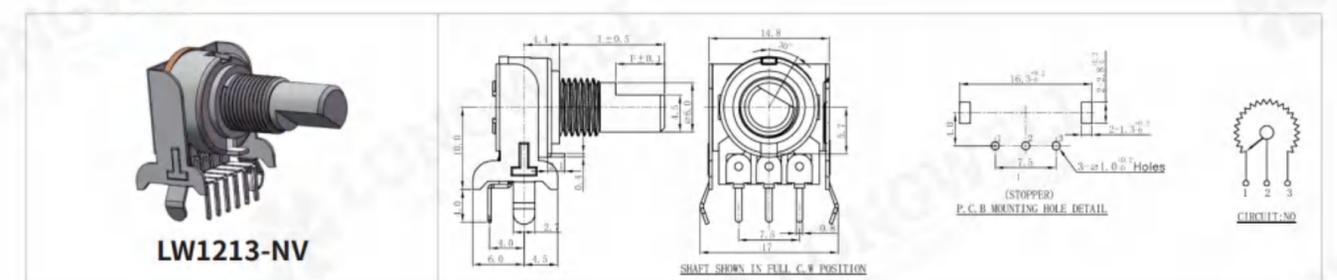
**LW1212-NV**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, (STOPPER), and CIRCUIT-50.



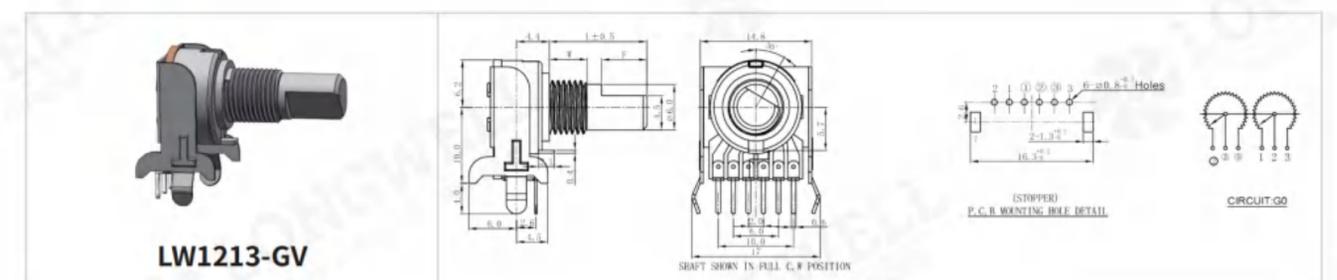
**LW1212-GV**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, and CIRCUIT-50.



**LW1213-NV**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, (STOPPER), and CIRCUIT-50.



**LW1213-GV**

Technical drawings include: 3D perspective view, shaft in full C.W position, P.C.B mounting hole detail, and circuit diagram. Dimensions include 10±0.12, 1.0, 10, 1±0.5, 9, 13.2, 30°, 7.5, 3-3.1, 12.4, 11.3, 2-1.8, 2.1, 2.2, 7.5, 3-ø1.0, 3 Holes, (STOPPER), and CIRCUIT-50.





### Shaft Type and Lengths

<p>F Type (Kirsite)</p>	<p>F Type (Kirsite)</p>																						
<p>D Type (Aluminium alloy)</p>	<p>K Type (Aluminium alloy)</p>																						
<p>A Type (Kirsite)</p>	<table border="1"> <tr> <td>W=5</td> <td>W=7</td> </tr> <tr> <td>L 10 12 15 20 25</td> <td>L 12 15 20 25</td> </tr> <tr> <td>F 4 5 8 12 15</td> <td>F 4 7 12 15</td> </tr> <tr> <td>a 3 4 7 11 13</td> <td>a 3 6 10 13</td> </tr> </table> <table border="1"> <tr> <td>W</td> <td>1</td> <td>2.5</td> <td>5</td> <td>7</td> <td>10</td> <td>15</td> </tr> <tr> <td>D</td> <td>φ7</td> <td>M7×0.75P</td> <td>M9×0.75P</td> <td></td> <td></td> <td></td> </tr> </table>	W=5	W=7	L 10 12 15 20 25	L 12 15 20 25	F 4 5 8 12 15	F 4 7 12 15	a 3 4 7 11 13	a 3 6 10 13	W	1	2.5	5	7	10	15	D	φ7	M7×0.75P	M9×0.75P			
W=5	W=7																						
L 10 12 15 20 25	L 12 15 20 25																						
F 4 5 8 12 15	F 4 7 12 15																						
a 3 4 7 11 13	a 3 6 10 13																						
W	1	2.5	5	7	10	15																	
D	φ7	M7×0.75P	M9×0.75P																				

**LW11**

Circuit Diagram

### LW12(5Pin) Series

**LW12-H1**

SWITCH SHOWN IN FULL C & W POSITION  
P.C.B. MOUNTING HOLE DETAIL  
Switch Contact Status

**LW12-H2**

SWITCH SHOWN IN FULL C & W POSITION  
P.C.B. MOUNTING HOLE DETAIL  
Switch Contact Status

**LW12-V1**

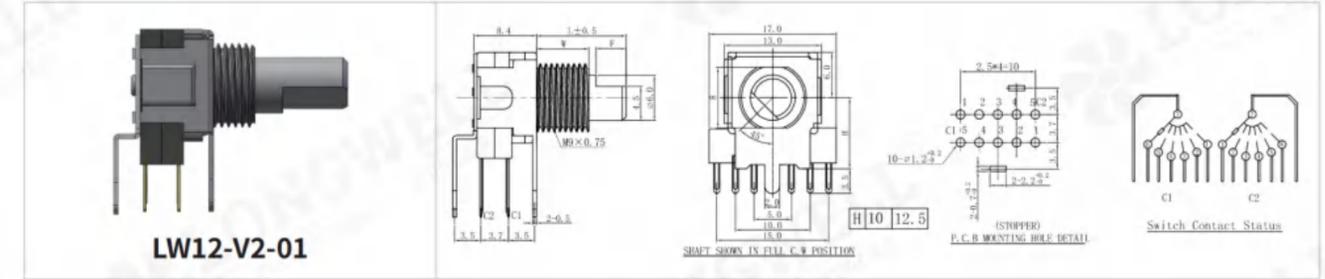
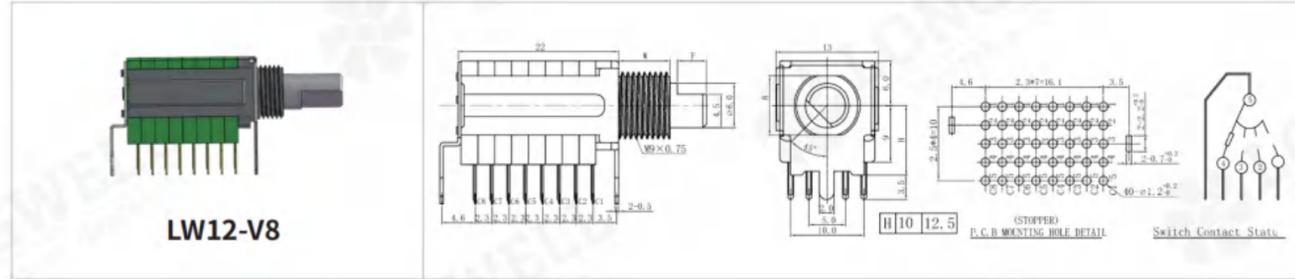
SWITCH SHOWN IN FULL C & W POSITION  
P.C.B. MOUNTING HOLE DETAIL  
Switch Contact Status

**LW12-V2**

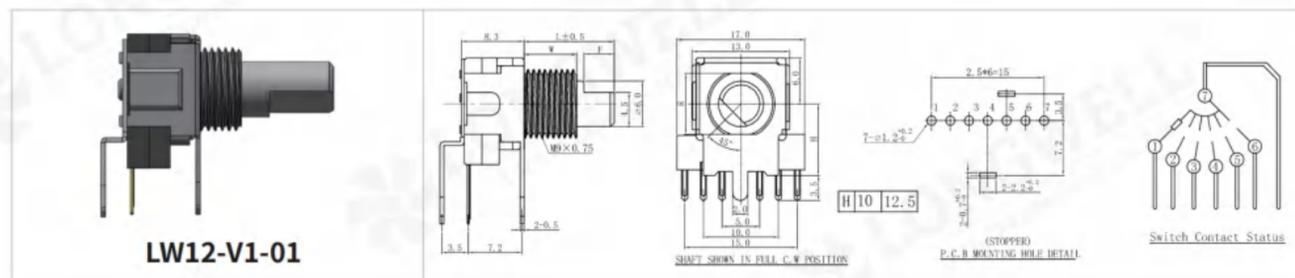
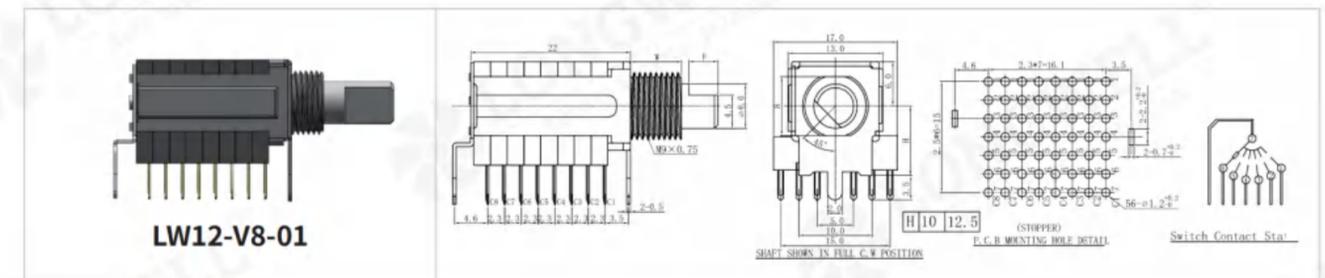
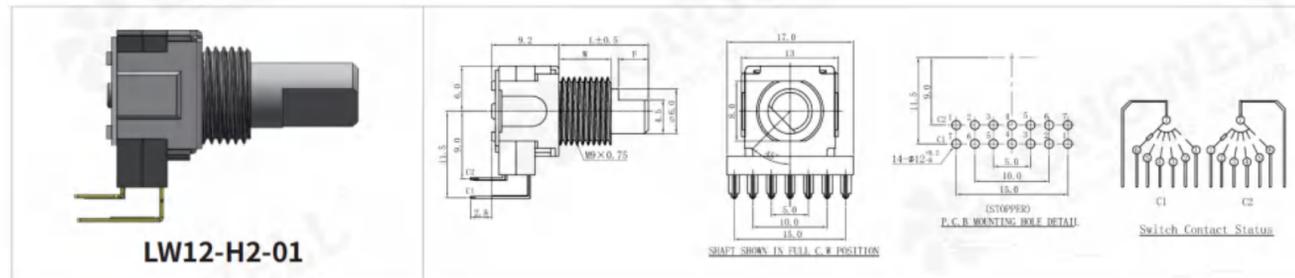
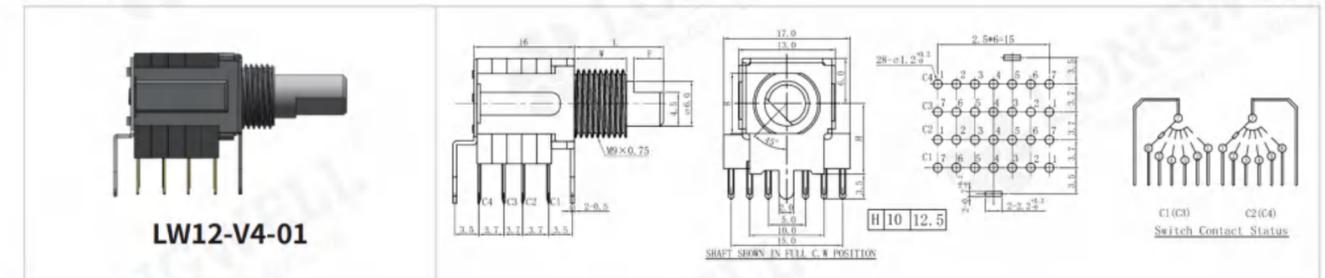
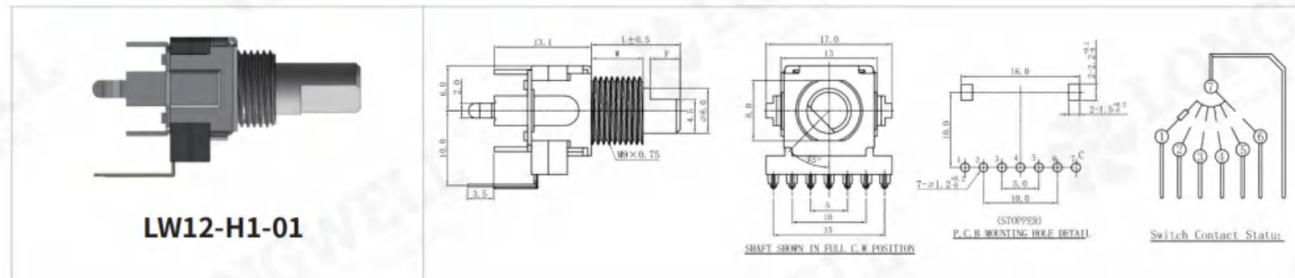
SWITCH SHOWN IN FULL C & W POSITION  
P.C.B. MOUNTING HOLE DETAIL  
Switch Contact Status

**LW12-V4**

SWITCH SHOWN IN FULL C & W POSITION  
P.C.B. MOUNTING HOLE DETAIL  
Switch Contact Status



## LW12(7Pin) Series



## LW16 Series

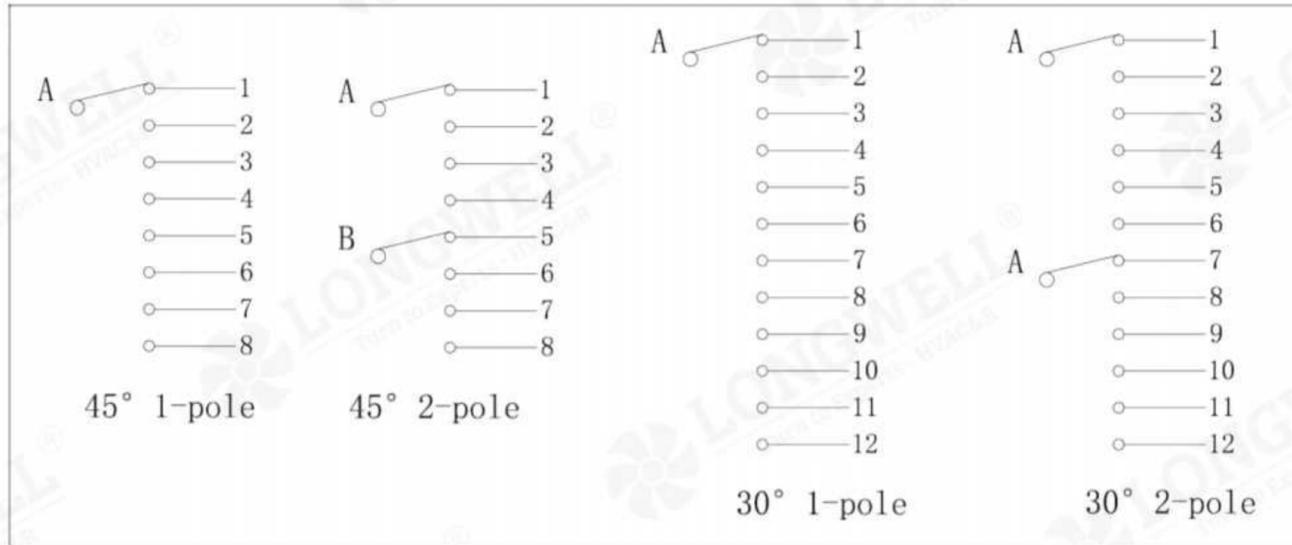
### Electrical Characteristics

- Power Rating: 0.3A 16V DC
- Initial Contact Resistance: 50mΩ
- Withstand Voltage: AC500V for 1 minute
- Temperature Range: -30°C~85°C
- Insulation Resistance: 100MΩ min. At 500V DC

### Mechanical Structure Item Specification

- Changeover Angle: 30°C~45°C
- Rotational Torque: 100~600gf.cm
- Rotational Stopper Strength: 5Kgf.cm Max
- Push-pull Strength: 5Kgf MAX
- Rotational Life: 10,000 cycles min

### Switch Contact Status



### Type of Shaft

