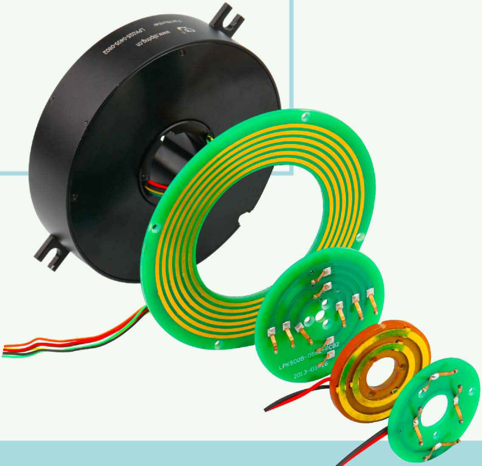
LPK Series

— Pancake Slip Rings


LPK0165-0405-0802
www.slipring.cn
LPK5006-0502-PCB2
2013-03-26

LPK series is a group of Pancake Slip Rings manufactured by JINPAT with the thickness as thin as 6mm. They are designed exclusively for rotation systems in which installing space is limited in height at vertical direction. Both separate and stand-alone pancake electrical slip rings are available. Reliable contact and ultra-low electrical noise of the light slip ring, together with a high rotating speed are the notable characteristics. They are proven to be of qualified products, secured by the full-fledged quality control center. Moreover, such pancake units for encoder are equipped with ready-made photoelectric encoders. Moreover, they can stand the wet calorific test. 360° rotating transmission without surge kind of interference or data package loss wins the customers' recognition.

Parameters

Electric & Electronic	
Current Rating	20A (max)
Voltage Rating	380VAC
Dielectric Strength	≥1000VDC@50Hz
Insulation	500MΩ@500VDC
Electrical Noise	70mΩ
Signal Compatible	Ethernet, USB, CANBUS, FireWire

Mechanical	
Working Speed	0~300RPM
Inner Diameter	820mm (max)
Contact	Precious Metal
Wire Size	AWG22#/14#/16#/17#/26#/28#/30#/32# Teflon®
Wire Length	Customizable

Environment	
Temperature	-20°C~+60°C
Humidity	60%RH
IP	IP54

Life
≥5 million turns

* Life test was done under JINPAT laboratory condition.

* For any request beyond specification above, please feel free to contact us.

Features & Advantages

- Transmitting analog / data signal, compatible with data bus protocol
- 360° continuous roatating transmission
- High rotating precision, reliable performance
- Low friction force, low contact resistance, no friction debris
- Small thickness, easy to install
- Optional circuits and current, custom solution
- Long service life
- Mass production, rapid delivery

Superior PCB board

Precise contact

Finish test

Accurate track width and distance

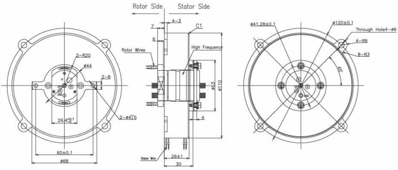
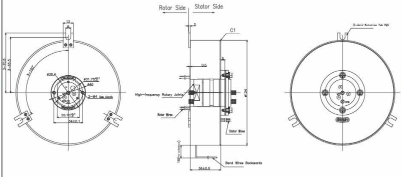
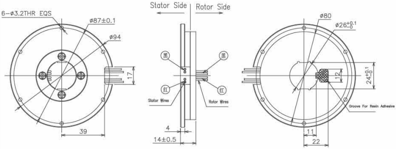
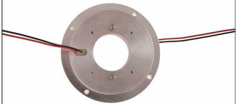
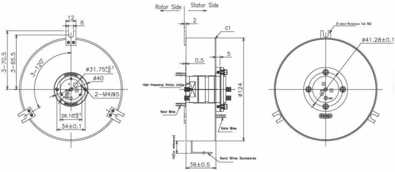
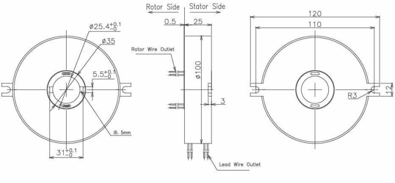
Application

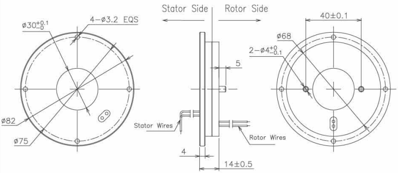
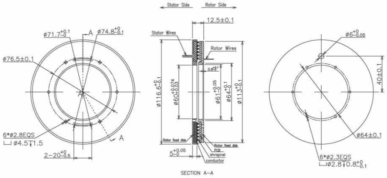
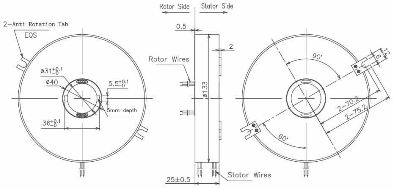
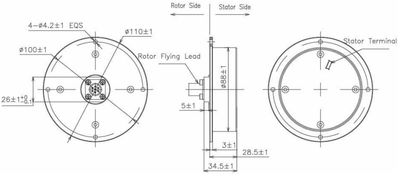
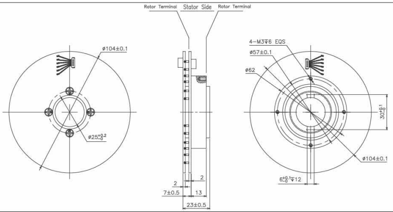
LED Showcase

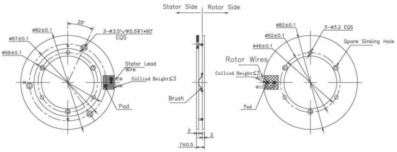
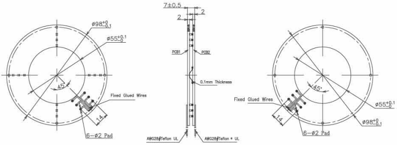
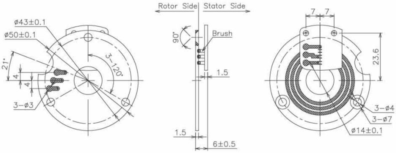
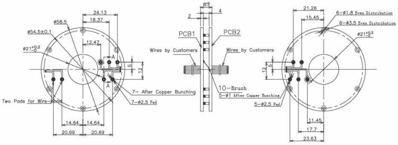
Ferris Wheel

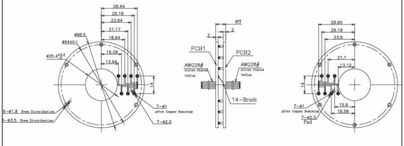
Gyroscope

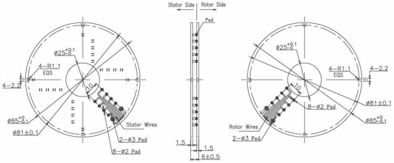
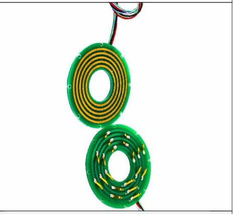
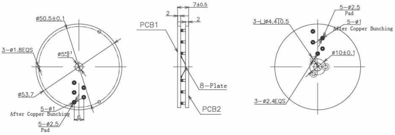
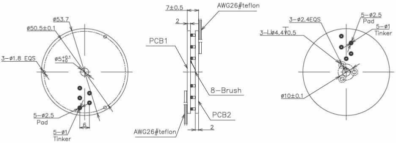
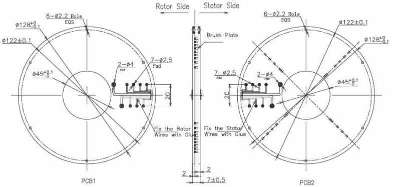
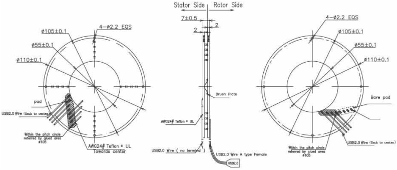
Revolving Door

Model	Outline drawing	Product
LPK000-0405-01E2	 Rotor Side Stator Side 4-3 7 6 C1 Rotor Wires High Frequency 2-R20 ø44 2-8 ø53 ø110 2-ø4↧5 26.4+0.1 -0 4 60±0.1 ø68 Stator Wire 26±1 30 ø41.28±0.1 ø120±0.1 Through Hole4-ø6 4-R6 8-R3 45°	
LPK000-0220-08S-E2	 Rotor Side Stator Side 12 2 C1 3-70.5 3-65.5 3-120° ø36.4 ø31.75+0.1 -0 ø40 2-M4 5mm depth 26.15+0.1 -0 34±0.1 0.5 5 High-frequency Rotary Joints Rotor Wires ø124 Stator Wires 15(For reference) 36±0.5 Bend Wires Backwards 3-Anti-Rotation Tab EQS	
LPK024-0207	 6-ø3.2THR EQS ø87±0.1 ø94 17 39 Stator Side Rotor Side Stator Wires Rotor Wires 4 14±0.5 ø80 ø26+0.1 -0 12 24+0.1 -0 Groove For Resin Adhesive 11 22	
LPK000-0410-08S-E2	 12 6 3-70.5 3-65.5 3-120° ø31.75+0.1 -0 ø40 2-M4深5 26.15+0.1 -0 34±0.1 Rotor Side Stator Side 2 C1 0.5 5 High-frequency Rotary Joints Rotor Wires ø124 Stator Wires 15(For reference) 36±0.5 Bend Wires Backwards 3-Anti-Rotation Tab EQS ø41.28±0.1	
LPK025-0405-0802	 ø25.4+0.1 -0 ø35 5.5+0.1 -0 深: 5mm 31+0.1 -0 Rotor Side Stator Side 0.5 25 Rotor Wire Outlet ø100 3 Lead Wire Outlet 120 110 R3 12	

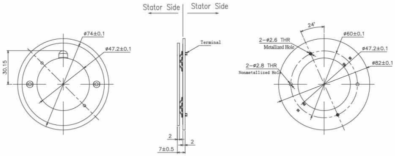
LPK030-0204	 Stator Side Rotor Side ø30+0.1 -0 4-ø3.2 EQS 40±0.1 ø68 2-ø4+0 -0.1 5 ø82 ø75 Stator Wires Rotor Wires 4 14±0.5	
LPK060-0803-04S	 Stator Side Rotor Side 12.5±0.1 ø71.7+0.1 -0 A ø74.8+0 -0.1 Stator Wires Rotor Wires ø6+0 -0.05 ø76.5±0.1 0.8+0.1 ø116.6+0 -0.1 ø60+0.074 +0.03 ø61+0.05 -0 ø64+0.1 -0 ø113+0 -0.1 40±0.1 6*ø2.8EQS ⌴ ø4.5↧1.5 2-20+0 -0.5 Stator fixed disk 5+0.05 -0 Rotor fixed disk PCB shrapnel conductor SECTION A-A ø64±0.1 6*ø2.3EQS ⌴ø2.8↧0.8+0 -0.1	
LPK031-0410-09S	 Rotor Side Stator Side 2-Anti-Rotation Tab EQS 0.5 2 Rotor Wires ø31+0.1 -0 ø40 5.5+0.1 -0 5mm depth 36+0.1 -0 ø133 90° 6 12 2-70.2 2-75.2 60° 25±0.5 Stator Wires	
LPK000-0602	 Rotor Side Stator Side 4-ø4.2±1 EQS ø110±1 Stator Terminal ø100±1 Rotor Flying Lead 26±1+0 -0.1 ø88±1 5±1 3±1 28.5±1 34.5±1	
LPK025-0602	 Rotor Terminal Stator Side Rotor Terminal ø104±0.1 4-M3↧6 EQS ø57±0.1 ø62 ø25+0.2 -0 30+0.1 -0 ø104±0.1 2 2 7±0.5 13 23±0.5 6+0.1 -0↧12	

LPKS046-0205	 Stator Side Rotor Side 25° ø82±0.1 3-ø3.5⌵ø5.5↧1*90° EQS ø67±0.1 ø59±0.1 Stator Lead Wire Colliod Height≤3 Pad Brush 2 2 7±0.5 ø82±0.1 3-ø3.2 EQS ø52±0.1 ø46±0.1 Spare Sinking Hole Rotor Wires Colliod Height≤3 Pad	
LPKS055-0602	 ø98$^{+0}_{-0.1}$ ø55$^{+0.1}_{-0}$ 45° Fixed Glued Wires 14 6-ø2 Pad 7±0.5 2 2 PCB1 PCB2 0.1mm Thickness AWG28#Teflon UL AWG28#Teflon * UL 45° Fixed Glued Wires 14 ø55$^{+0.1}_{-0}$ ø98$^{+0}_{-0.1}$ 6-ø2 Pad	
LPKS014-0302	 Rotor Side Stator Side ø43±0.1 ø50±0.1 21° 4 4 3-120° 3-ø3 90° Brush 1.5 1.5 6±0.5 7 7 23.6 3-ø4 3-ø7 ø14±0.1	
LPKS025-0501	 24.13 18.37 ø58.5 ø54.5±0.1 12.47 ø21$^{+0.2}_{-0}$ A A 5 12 Two Pads for Wire-Bond 7- After Copper Bunching 7-ø2.5 Pad 14.64 14.64 20.69 20.69 8$^{+0}_{-1}$ 4 2 PCB1 PCB2 Wires by Customers Wires by Customers 10-Brush 5-ø1 After Copper Bunching 21.26 15.45 6-ø1.8 Even Distribution 6-ø3.5 Even Distribution ø21$^{+0.2}_{-0}$ 12 5 5-ø2.5 Pad 11.45 17.7 23.63	

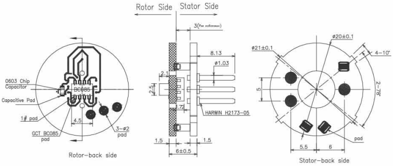
LPKS025-0701	 28.64 26.18 23.64 21.17 18.64 ø68.5 ø64±0.1 16.08 ø25.4$^{+0.2}_{-0}$ 13.64 14 6-ø1.8 Even Distribution 6-ø3.5 Even Distribution 7-ø1 After Copper Bunching 7-ø2.5 8$^{+0}_{-1}$ 2 2 PCB1 PCB2 AWG28# Silver Plated Teflon AWG28# Silver Plated Teflon 14-Brush 28.65 26.18 23.6 21.1 13.12 14 7-ø1 After Copper Bunching 7-ø2.5 Pad 15.9 18.58	

LPKS025-085-0205-08S	 Stator Side Rotor Side Pad ø25+0.1 -0 4-R1.1 EQS 4-2.2 10 ø85+0 -0.1 ø81±0.1 Stator Wires 2-ø3 Pad 8-ø2 Pad Rotor Wires 1.5 1.5 6±0.5	
LPKS005-0502	 ø50.5±0.1 3-ø1.8EQS ø5+0.1 -0 ø53.7 5-ø1 After Copper Bunching 5-ø2.5 Pad 7±0.5 2 2 PCB1 8-Plate PCB2 3-⌴ø4.4⊤0.5 5-ø2.5 Pad 5-ø1 After Copper Bunching ø10±0.1 3-ø2.4EQS	LPKS005-0502-PCB2 2013-03-26
LPKS005-0502	 ø53.7 ø50.5±0.1 3-ø1.8 EQS ø5+0.1 -0 5-ø2.5 Pad 5-ø1 Tinker 6 7±0.5 2 AWG26#teflon PCB1 8-Brush PCB2 AWG26#teflon 2 3-ø2.4EQS 3-⌴ø4.4⊤0.5 5-ø2.5 Pad 5-ø1 Tinker ø10±0.1	LPKS005-0502-PCB2 2013-03-26
LPKS045-0210-07S	 Rotor Side Stator Side 6-ø2.2 Hole EQS ø128+0 -0.1 ø122±0.1 ø45+0.1 -0 2-ø4 Pad 7-ø2.5 Pad 20 Fix the Rotor Wires with Glue Brush Plate Fix the Stator Wires with Glue 2 2 7±0.5 PCB1 PCB2	
LPKS055-0402-U2	 ø105±0.1 4-ø2.2 EQS ø55±0.1 ø110±0.1 pad USB2.0 Wire (Back to center) Within the pitch circle referred by glued area ø105 AWG24# Teflon * UL Towards center Stator Side Rotor Side 7±0.5 2 2 Brush Plate AWG24# Teflon * UL USB2.0 Wire (no terminal) USB2.0 Wire A type Female USB2.0 Bare pad USB2.0 Wire (Back to center)	

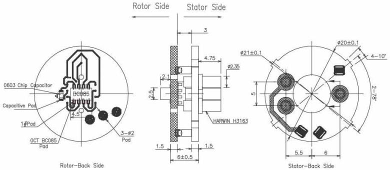
LPKS047-0201


Stator Side
Stator Side
ø74±0.1
ø47.2±0.1
30.15
Terminal
2
2
7±0.5
24°
2-ø2.6 THR
Metallized Hole
2-ø2.8 THR
Nonmetallized Hole
ø60±0.1
ø47.2±0.1
ø82±0.1

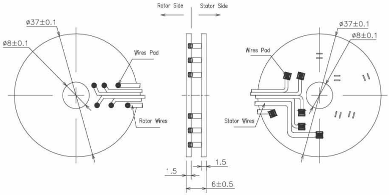
LPKS000-0202-1S-PIN


Rotor Side
Stator Side
3(For reference)
0603 Chip Capacitor
Capacitive Pad
1# pad
GCT BC085 pad
BC085
4.5
3-ø2 pad
Rotor-back side
8.13
ø1.03
2.1
2.5
1.72
HARWIN H2173-05
1.5
1.5
6±0.5
ø21±0.1
ø20±0.1
4-10°
2-78°
5
5.5
6
pad
Stator-back side

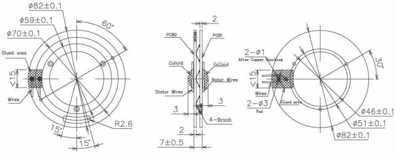
LPKS000-0202-1S-SOCKET

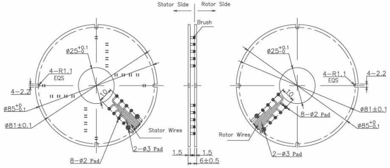
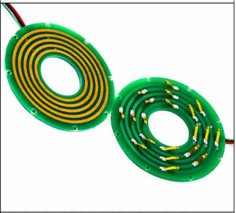
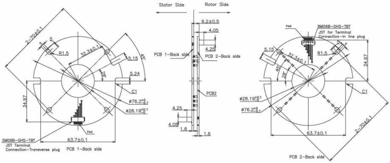
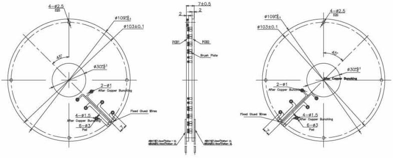
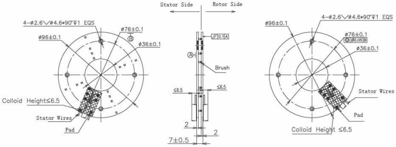
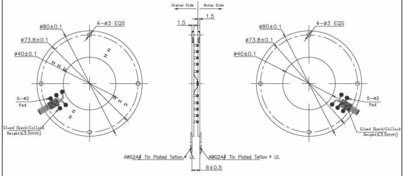

Rotor Side
Stator Side
3
0603 Chip Capacitor
Capacitive Pad
1#Pad
GCT BC085 Pad
BC085
4.5
3-ø2 Pad
Rotor-Back Side
4.75
ø2.35
2.1
2.5
HARWIN H3163
1.5
1.5
6±0.5
ø21±0.1
ø20±0.1
4-10°
2-78°
5
5.5
6
Stator-Back Side

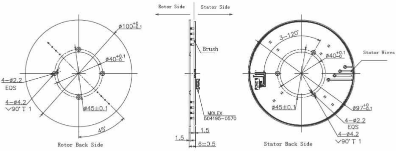
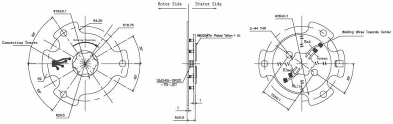
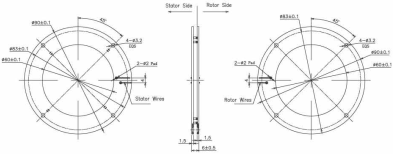
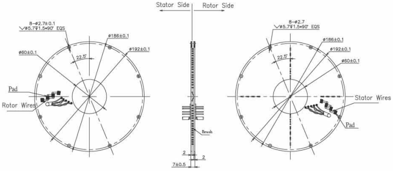
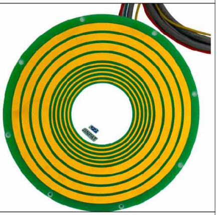
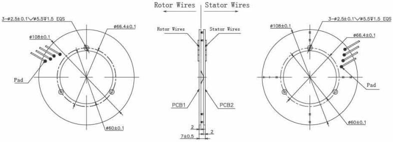
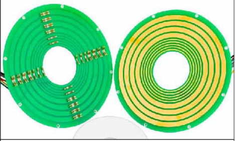
LPKS008-0204-0402

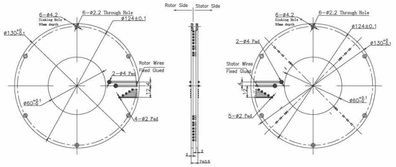
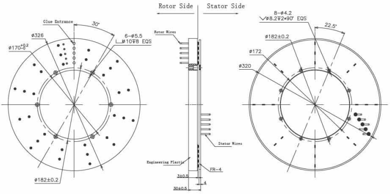
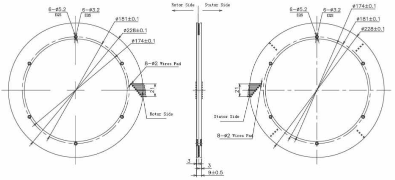
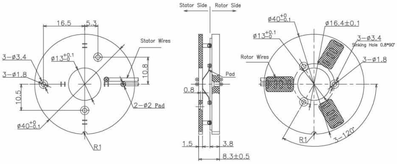
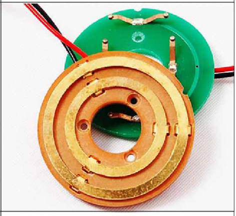
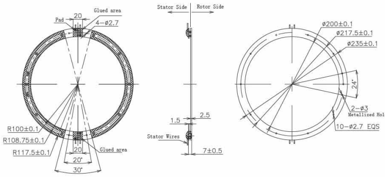
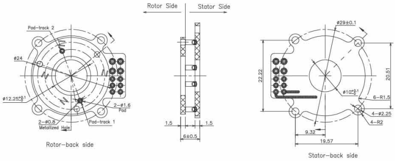

ø37±0.1
ø8±0.1
Wires Pad
Rotor Wires
Rotor Side
Stator Side
1.5
1.5
6±0.5
ø37±0.1
ø8±0.1
Wires Pad
Stator Wires

LPKS-0205


ø82±0.1
ø59±0.1
ø70±0.1
60°
Glued area
<15
Wires
R2.6
15°
15°
PCB2
PCB1
2
Colloid
Colloid
Rotor Wires
Stator Wires
3
3
4-Brush
2
7±0.5
2-ø1
After Copper Sinking
30°
<15
Wires
2-ø3
Pad
Glued area
ø46±0.1
ø51±0.1
ø82±0.1

LPKS025-085-0205-08S	 Stator Side Rotor Side Brush ø25+0.1 -0 4-R1.1 EQS 4-2.2 ø85+0 -0.1 ø81±0.1 10 Stator Wires 2-ø3 Pad 8-ø2 Pad 1.5 1.5 6±0.5 Rotor Wires	
LPKS028-02S-U2	 Stator Side Rotor Side 2-70±0.1 5 3 R1.5 32.3±0.1 5.15 45° 28° 5.24 C1 34.97 ø76.2+0 -0.1 ø28.19+0.1 -0 Pad SM06B-GHS-TBT JST Terminal Connection-Transverse plug 63.7±0.1 PCB 1-Back side 6.2±0.5 4.05 4.25 PCB 1-Back side PCB 2-Back side PCB2 4.25 4.05 1.6 1.6 BM06B-GHS-TBT JST for Terminal Connection-In line plug PCB 2-Back side	
LPKS030-0410-0202	 4-ø2.5 EQS ø109+0 -0.1 ø103±0.1 45° ø30+0.1 -0 2-ø1 After Copper Bunching Fixed Glued Wires 4-ø1.5 After Copper Bunching 6-ø3 Pad 7 7±0.5 2 2 PCB1 PCB2 Brush Plate	
LPKS036-0202-04S	 Stator Side Rotor Side 4-ø2.6⌵ø4.6*90°↧1 EQS ø76±0.1 B ø96±0.1 ø36±0.1 Colloid Height≤6.5 Stator Wires Pad // 0.1 A A Brush ≤6.5 ≤6.5 2 2 7±0.5 ◎ ø0.05 B Stator Wires Pad Colloid Height ≤6.5	
LPKS040-0501	 Stator Side Rotor Side 1.5 1.5 ø80±0.1 4-ø3 EQS ø73.8±0.1 ø40±0.1 5-ø2 Pad Glued Skech(Colloid Height≤3.5mm) AWG24# Tin Plated Teflon ® UL AWG24# Tin Plated Teflon ® UL 6±0.5	

LPKS040-0405	 Rotor Side Stator Side ø100$^{+0}_{-0.1}$ ø40$^{+0.1}_{-0}$ 4−ø2.2 EQS 4−ø4.2 ⌵90° T 1 ø45±0.1 45° Rotor Back Side Brush MOLEX 504195−0570 1.5 1.5 6±0.5 3−120° ø40$^{+0.1}_{-0}$ Stator Wires ø45±0.1 ø97$^{+0}_{-0.1}$ 4−ø2.2 EQS 4−ø4.2 ⌵90° T 1 Stator Back Side	
LPKS013-0402	 ø16±0.1 R4.25 R18.75 Connecting Traces Rotating Direction 55° 35° 30° 55° R2 R26.5 Rotor Side Stator Side AWG28 Tin Plated Teflon ＋ UL SM04B−SRSS −TB−JST 1 1 5±0.5 ø36±0.1 2−ø4 THR Welding Wires Towards Center Red Green Black White 35° 19±0.1	
LPKS060-0201	 ø90±0.1 45° ø83±0.1 4−ø3.2 EQS ø60±0.1 2−ø2 Pad 4 Stator Wires Stator Side Rotor Side 1.5 1.5 6±0.5 ø83±0.1 45° 4−ø3.2 EQS ø90±0.1 2−ø2 Pad ø60±0.1 4 Rotor Wires	
LPKS060-0412-E2	 8−ø2.7±0.1 ⌵ø5.7↧1.5•90° EQS ø186±0.1 ø192±0.1 ø60±0.1 22.5° Pad Rotor Wires Stator Side Rotor Side Brush 2 2 7±0.5 8−ø2.7 ⌵ø5.7↧1.5•90° EQS ø186±0.1 ø192±0.1 22.5° ø60±0.1 Stator Wires Pad	
LPKS060-0402	 3−ø2.5±0.1⌵ø5.5↧1.5 EQS ø66.4±0.1 ø108±0.1 Pad ø60±0.1 Rotor Wires Stator Wires Rotor Wires Stator Wires PCB1 PCB2 2 2 7±0.5 ø108±0.1 3−ø2.5±0.1⌵ø5.5↧1.5 EQS ø66.4±0.1 Pad ø60±0.1	

LPKS060-0210-05S	 Rotor Side Stator Side 6-ø4.2 Sinking Hole 90mm depth 6-ø2.2 Through Hole ø124±0.1 ø130$^{+0}_{-0.1}$ Rotor Wires Fixed Glued 2-ø4 Pad 12.4 ø60$^{+0.1}_{-0}$ 4-ø2 Pad 2 2 7±0.5 6-ø4.2 Sinking Hole 90mm depth 6-ø2.2 Through Hole ø124±0.1 2-ø4 Pad ø130$^{+0}_{-0.1}$ Stator Wires Fixed Glued 4 12 ø60$^{+0.1}_{-0}$ 5-ø2 Pad	
LPKS170-0515	 Rotor Side Stator Side Glue Entrance 30° ø326 6-ø5.5 ⌴ø10↧8 EQS ø170$^{+0.2}_{-0}$ ø182±0.2 Rotor Wires Stator Wires Engineering Plastic FR-4 3±0.5 4 30±0.5 8-ø4.2 ⌵ø8.2↧2*90° EQS 22.5° ø182±0.2 ø172 ø320	
LPKS174-0802	 6-ø5.2 EQS 6-ø3.2 EQS ø181±0.1 ø228±0.1 ø174±0.1 8-ø2 Wires Pad 21 Rotor Side Rotor Side Stator Side 3 3 9±0.5 6-ø5.2 EQS 6-ø3.2 EQS ø174±0.1 ø181±0.1 ø228±0.1 21 Stator Side 8-ø2 Wires Pad	
LPKS013-02S	 16.5 5.3 Stator Wires 3-ø3.4 ø13$^{+0.1}_{-0}$ 3-ø1.8 10.8 10.5 2-ø2 Pad ø40$^{+0}_{-0.1}$ R1 Stator Side Rotor Side Pad 0.8 1.5 3.8 8.3±0.5 ø40$^{+0}_{-0.1}$ ø16.4±0.1 ø13$^{+0.1}_{-0}$ 3-ø3.4 Sinking Hole 0.8*90° Rotor Wires 3-ø1.8 R1 3-120°	
LPKS200-0206	 Glued area Pad 20 4-ø2.7 R100±0.1 R108.75±0.1 R117.5±0.1 20 Glued area 20° 30° Stator Side Rotor Side 1.5 2.5 Stator Wires 7±0.5 ø200±0.1 ø217.5±0.1 ø235±0.1 24° 2-ø3 Metallized Hole 10-ø2.7 EQS	
LPKS010-02S	 Pad-track 2 ø24 ø12.25$^{+0.1}_{-0}$ 2-ø1.6 Pad 2-ø0.8 Metallized Hole Pad-track 1 Rotor-back side Rotor Side Stator Side 1.5 1.5 6±0.5 ø29±0.1 22.22 20.51 ø10$^{+0.1}_{-0}$ 6-R1.5 4-ø2.25 4-R2 9.32 19.57 Stator-back side	

* The specification above might be subject to change prior to notice

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