

## Through Bore Slip Rings Type DHK

**Through bore slip rings**, also known as “**through hole slip rings**”, have a hollow shaft suitable for cable passages, ropes, shafts and other axial structures needed for the function of the rotating assembly.

The products are fully customizable: they are available from 2 to 350 rings with different diameter of the through bore from 3mm to 300mm, different flanges to fit them, shaft collars, ring gears or other features required.

**Through bore slip rings** use the best advanced brush technology with precious metal multi-contacting, they offer low electrical noise for high data rate field bus transmission, low contact pressure for long lifetime and they are maintenance free.

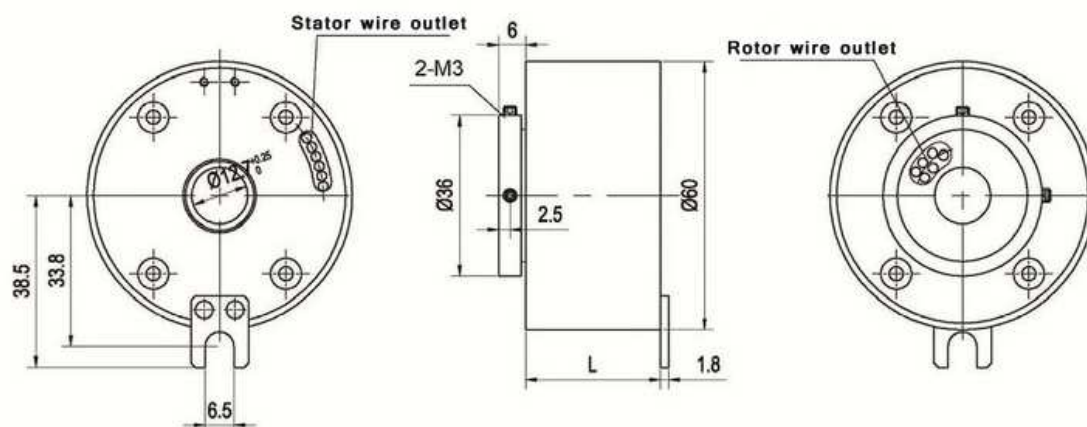
### Main Features

- **Number of rings:** from 2 to 350
- **Nominal current for each ring:** from 2A to 6000A
- **Through bore diameter:** from 3mm to 300 mm (*customizable*)
- **Protection degree:** IP51 (*customizable up to IP65*)
- **Rotating speed:** up to 250 RPM (*customizable for higher RPM*)
- **Housing material:** aluminium
- **Contacts material:** precious materials
- **Standard wire lead length:** 500mm (*customizable*)
- **Wire type:** Flexible, color-coded, silver-plated, Teflon® insulated
- **Working temperature:** -20°C to +80°C
- **Working humidity:** < 70%
- **Insulation strength:** 1500VAC@50Hz, 60S, 1mA; 500VAC@50Hz, 60s, 2mA
- **Insulation resistant:** 1000MΩ 500VDC; 500MΩ 500VDC for signal
- **Torque:** within 0.5N/m



## Standard Types

### DHK12 with through bore 12 mm



Item No.	Ring Numbers	2A Length	5A Length	10A Length	15A Length	20A Length
DHK012-6	6	27.4	28.6	30.4	33.4	36.4
DHK012-12	12	39.4	41.8	45.4	51.4	57.4
DHK012-18	18	51.4	55	60.4	69.4	-
DHK012-24	24	63.4	68.2	75.4	87.4	-
DHK012-30	30	75.4	81.4	-	-	-
DHK012-36	36	87.4	94.6	-	-	-
DHK012-42	42	99.4	-	-	-	-
DHK012-48	48	111.4	-	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor

10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).

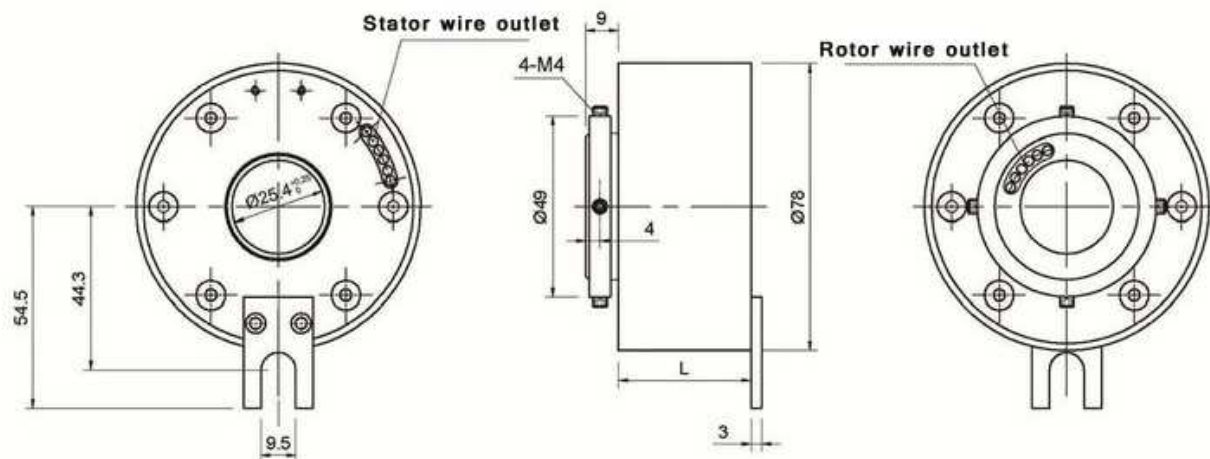
15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).

20A uses AWG14# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20) (mm):

$L = 15.4 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20$

## DHK25 with through bore 25mm



Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length
DHK025-6	6	33.4	34.6	36.4	39.4	42.4
DHK025-12	12	55.4	47.8	51.4	57.4	63.4
DHK025-18	18	57.4	61	66.4	75.4	84.4
DHK025-24	24	69.4	74.2	81.4	93.4	105.4
DHK025-30	30	81.4	87.4	-	-	-
DHK025-36	36	93.4	100.6	-	-	-
DHK025-42	42	105.4	113.8	-	-	-
DHK025-48	48	117.4	127	-	-	-

**Conductor Specification:** 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor

10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).

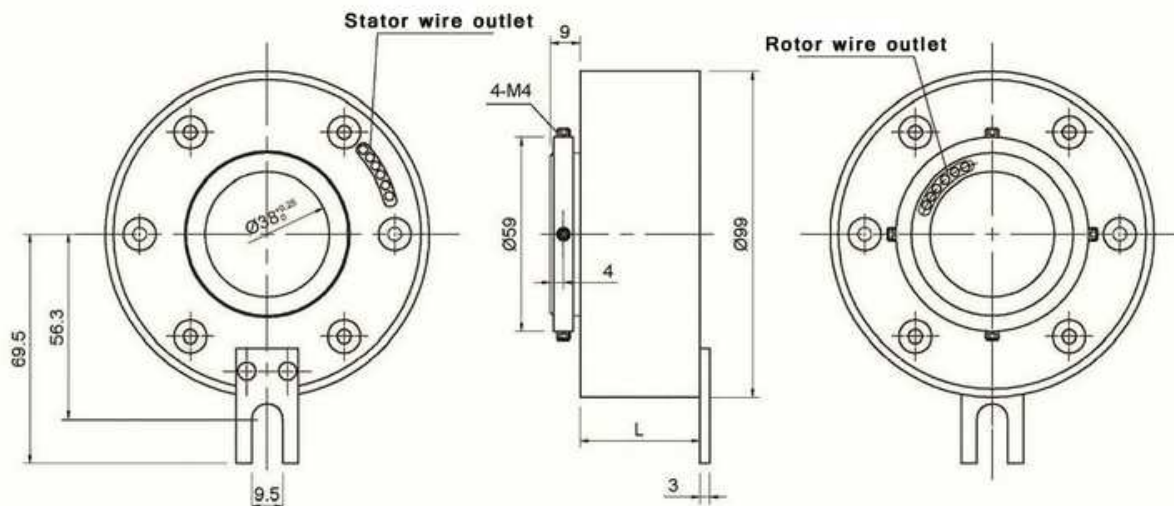
15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).

20A uses AWG14# color Teflon conductor.

**Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20) (mm):**

$$L = 21.4 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20$$

## DHK38 with through bore 38mm



Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length
DHK038-6	6	33.4	34.6	36.4	39.4	42.4
DHK038-12	12	45.4	47.8	51.4	57.4	63.4
DHK038-18	18	57.4	61	66.4	75.4	84.4
DHK038-24	24	69.4	74.2	81.4	93.4	105.4
DHK038-30	30	81.4	87.4	-	-	-
DHK038-36	36	93.4	100.6	-	-	-
DHK038-42	42	105.4	113.8	-	-	-
DHK038-48	48	117.4	127	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor

10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).

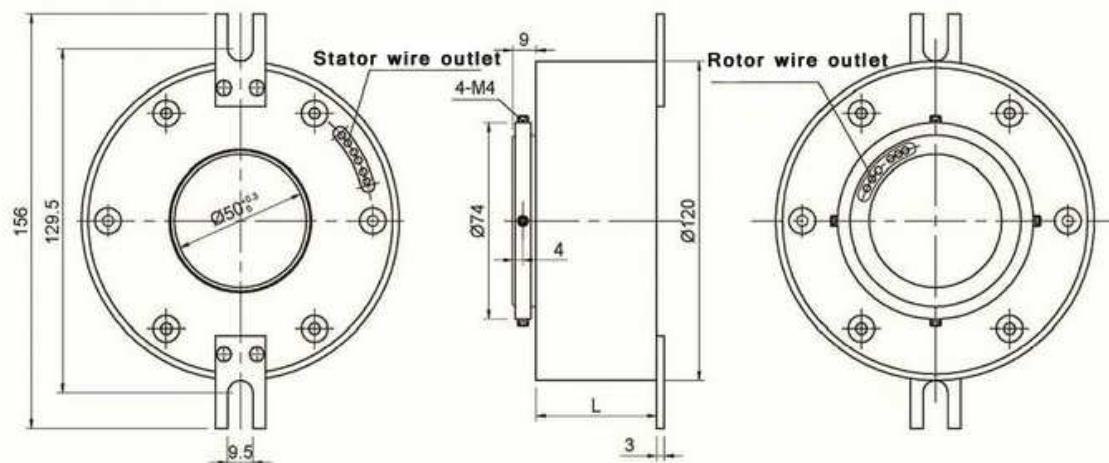
15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).

20A uses AWG14# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20) (mm):

$$L = 21.4 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20$$

## DHK50 with through bore 50mm



Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length	25A Length
DHK050-6	6	42.4	43.6	45.4	48.4	51.4	54.4
DHK050-12	12	54.4	56.8	60.4	66.4	72.4	78.4
DHK050-18	18	66.4	70	75.4	84.4	93.4	102.4
DHK050-24	24	78.4	83.2	90.4	102.4	114.4	126.4
DHK050-30	30	90.4	96.4	105.4	120.4	135.4	-
DHK050-36	36	102.4	109.6	120.4	138.4	156.4	-
DHK050-42	42	114.4	122.8	-	-	-	
DHK050-48	48	126.4	136	-	-	-	
DHK050-54	54	138.4	149.2	-	-	-	
DHK050-60	60	150.4	162.4	-	-	-	
DHK050-66	66	162.4	175.6	-	-	-	
DHK050-72	72	174.4	188.8	-	-	-	

**Conductor Specification:** 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor

10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).

15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).

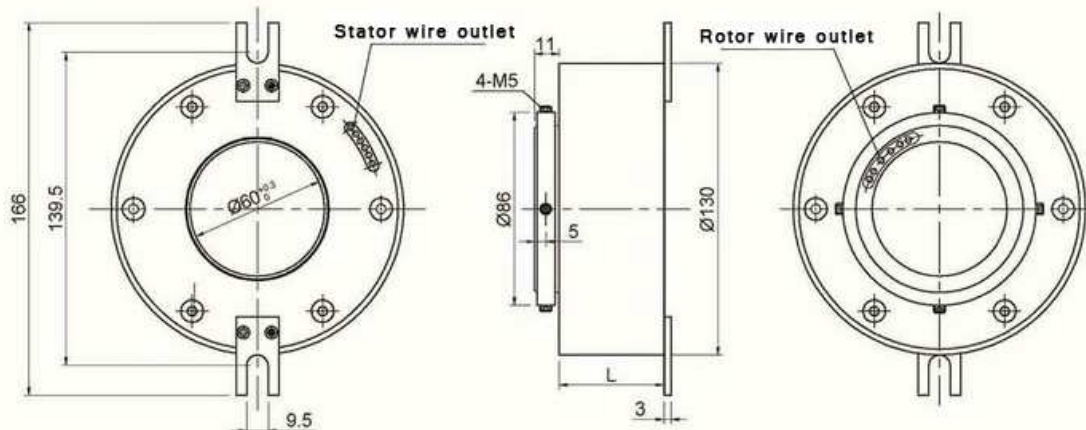
20A uses AWG14# color Teflon conductor (or AWG12# flexible color PVC insulated conductor).

25A uses AWG12# color Teflon conductor.

**Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20, n25) (mm):**

$$L = 30.4 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20 + 4 \cdot n25$$

## DHK60 with through bore 60mm



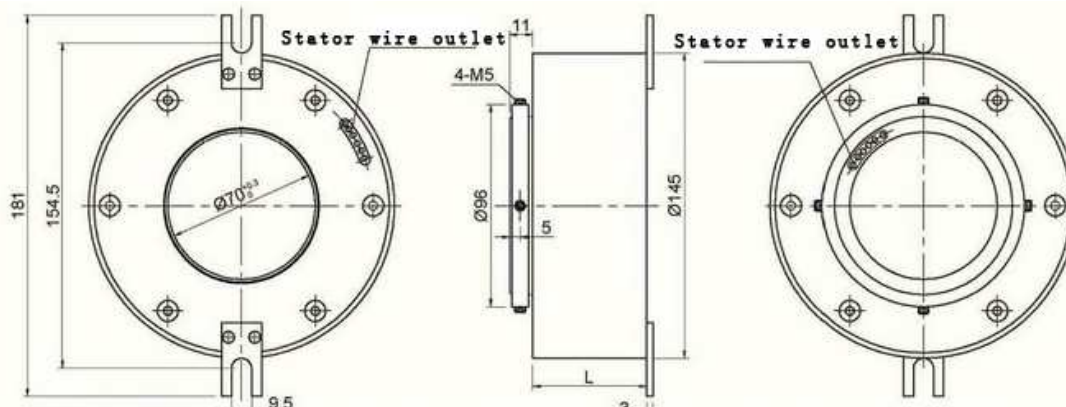
Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length	25A Length
DHK060-6	6	43.4	44.6	46.4	49.4	52.4	55.4
DHK060-12	12	55.4	57.8	61.4	67.4	73.4	79.4
DHK060-18	18	67.4	71	76.4	85.4	94.4	103.4
DHK060-24	24	79.4	84.2	91.4	103.4	115.4	127.4
DHK060-30	30	91.4	97.4	106.4	121.4	136.4	151.4
DHK060-36	36	103.4	110.6	121.4	139.4	157.4	175.4
DHK060-42	42	115.4	123.8	136.4	157.4	178.4	-
DHK060-48	48	127.4	137	151.4	175.4	199.4	-
DHK060-54	54	139.4	150.2	166.4	193.4	-	-
DHK060-60	60	151.4	163.4	181.4	211.4	-	-
DHK060-66	66	163.4	176.6	196.4	-	-	-
DHK060-72	72	175.4	189.8	211.4	-	-	-
DHK060-78	78	187.4	203	-	-	-	-
DHK060-84	84	199.4	216.2	-	-	-	-
DHK060-90	90	211.4	229.4	-	-	-	-
DHK060-96	96	223.4	242.6	-	-	-	-
DHK060-102	102	235.4	-	-	-	-	-
DHK060-108	108	247.4	-	-	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor  
 10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).  
 15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).  
 20A uses AWG14# color Teflon conductor (or AWG12# flexible color PVC insulated conductor).  
 25A uses AWG12# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20, n25) (mm):

$$L = 30.4 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20 + 4 \cdot n25$$

## DHK70 with through bore 70mm

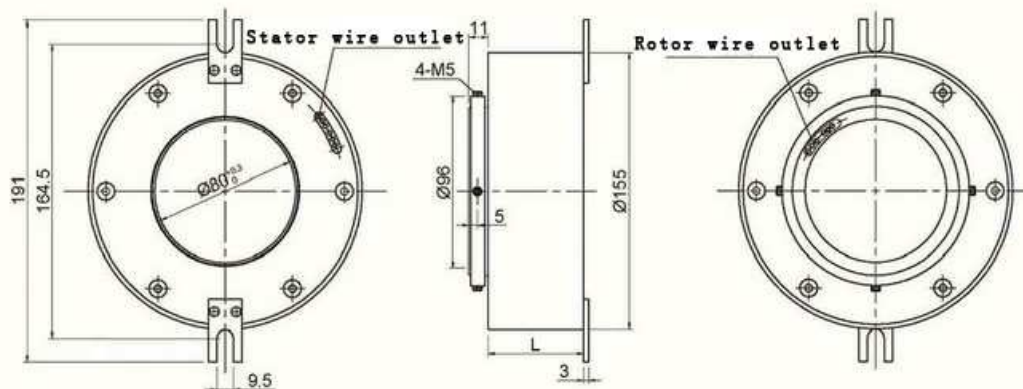


Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length	25A Length
DHK070-6	6	51	52.2	54	57	60	63
DHK070-12	12	63	65.4	69	75	81	87
DHK070-18	18	75	78.6	84	93	102	111
DHK070-24	24	87	91.8	99	111	123	135
DHK070-30	30	99	105	114	129	144	159
DHK070-36	36	111	118.2	129	147	165	183
DHK070-42	42	123	131.4	144	165	186	207
DHK070-48	48	135	144.6	159	183	207	231
DHK070-54	54	147	157.8	174	201	-	-
DHK070-60	60	159	171	189	219	-	-
DHK070-66	66	171	184.2	204	-	-	-
DHK070-72	72	183	197.4	219	-	-	-
DHK070-78	78	195	210.6	-	-	-	-
DHK070-84	84	207	223.8	-	-	-	-
DHK070-90	90	219	237	-	-	-	-
DHK070-96	96	231	250.2	-	-	-	-
DHK070-102	102	243	263.4	-	-	-	-
DHK070-108	108	255	276.6	-	-	-	-
DHK070-114	114	267	-	-	-	-	-
DHK070-120	120	279	-	-	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor  
 10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).  
 15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).  
 20A uses AWG14# color Teflon conductor (or AWG12# flexible color PVC insulated conductor).  
 25A uses AWG12# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20, n25) (mm):  
 $L = 39 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20 + 4 \cdot n25$

## DHK80 with through bore 80mm

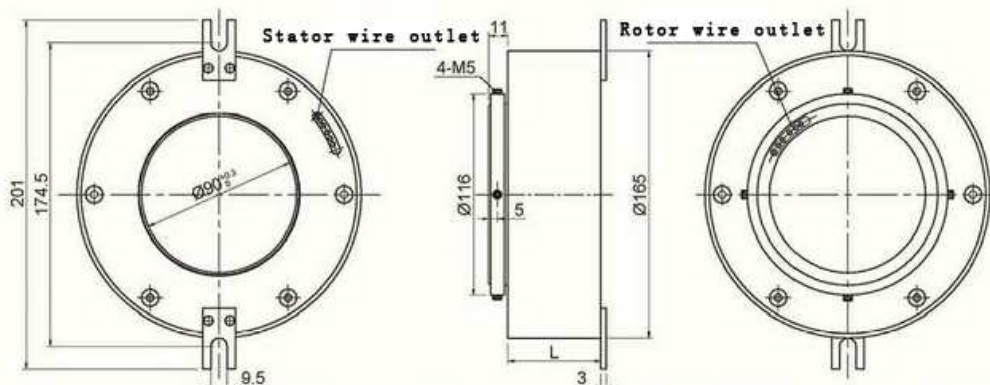


Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length	25A Length
DHK080-6	6	51	52.2	54	57	60	63
DHK080-12	12	63	65.4	69	75	81	87
DHK080-18	18	75	78.6	84	93	102	111
DHK080-24	24	87	91.8	99	111	123	135
DHK080-30	30	99	105	114	129	144	159
DHK080-36	36	111	118.2	129	147	165	183
DHK080-42	42	123	131.4	144	165	186	207
DHK080-48	48	135	144.6	159	183	207	231
DHK080-54	54	147	157.8	174	201	-	-
DHK080-60	60	159	171	189	219	-	-
DHK080-66	66	171	184.2	204	-	-	-
DHK080-72	72	183	197.4	219	-	-	-
DHK080-78	78	195	210.6	-	-	-	-
DHK080-84	84	207	223.8	-	-	-	-
DHK080-90	90	219	237	-	-	-	-
DHK080-96	96	231	250.2	-	-	-	-
DHK080-102	102	243	263.4	-	-	-	-
DHK080-108	108	255	276.6	-	-	-	-
DHK080-114	114	267	-	-	-	-	-
DHK080-120	120	279	-	-	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor  
 10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).  
 15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).  
 20A uses AWG14# color Teflon conductor (or AWG12# flexible color PVC insulated conductor).  
 25A uses AWG12# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20, n25) (mm):  
 $L=39+2*n2+2.2*n5+2.5*n10+3*n15+3.5*n20+4*n25$

## DHK90 with through bore 90mm



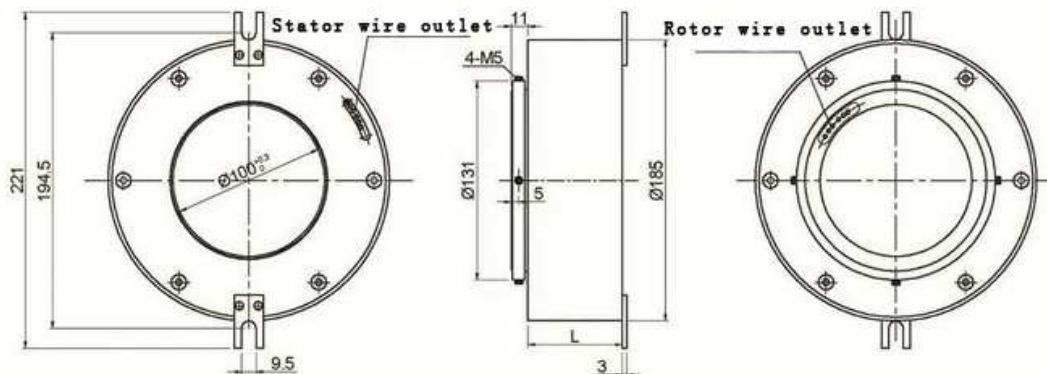
Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length	25A Length
DHK090-6	6	51	52.2	54	57	60	63
DHK090-12	12	63	65.4	69	75	81	87
DHK090-18	18	75	78.6	84	93	102	111
DHK090-24	24	87	91.8	99	111	123	135
DHK090-30	30	99	105	114	129	144	159
DHK090-36	36	111	118.2	129	147	165	183
DHK090-42	42	123	131.4	144	165	186	207
DHK090-48	48	135	144.6	159	183	207	231
DHK090-54	54	147	157.8	174	201	-	-
DHK090-60	60	159	171	189	219	-	-
DHK090-66	66	171	184.2	204	-	-	-
DHK090-72	72	183	197.4	219	-	-	-
DHK090-78	78	195	210.6	-	-	-	-
DHK090-84	84	207	223.8	-	-	-	-
DHK090-90	90	219	237	-	-	-	-
DHK090-96	96	231	250.2	-	-	-	-
DHK090-102	102	243	263.4	-	-	-	-
DHK090-108	108	255	276.6	-	-	-	-
DHK090-114	114	267	-	-	-	-	-
DHK090-120	120	279	-	-	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor  
 10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).  
 15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).  
 20A uses AWG14# color Teflon conductor (or AWG12# flexible color PVC insulated conductor).  
 25A uses AWG12# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20, n25) (mm):

$L = 39 + 2 \cdot n2 + 2.2 \cdot n5 + 2.5 \cdot n10 + 3 \cdot n15 + 3.5 \cdot n20 + 4 \cdot n25$

## DHK100 with through bore 100mm



Item No.	Ring Number	2A Length	5A Length	10A Length	15A Length	20A Length	25A Length
DHK100-6	6	59	60.2	62	65	68	71
DHK100-12	12	71	73.4	77	83	89	95
DHK100-18	18	83	86.6	92	101	110	119
DHK100-24	24	95	99.8	107	119	131	143
DHK100-30	30	107	114	122	137	152	167
DHK100-36	36	119	127.2	137	155	173	191
DHK100-42	42	131	140.4	152	173	194	215
DHK100-48	48	143	153.6	167	191	215	239
DHK100-54	54	155	166.8	182	209	236	263
DHK100-60	60	167	180	197	227	257	287
DHK100-66	66	179	193.2	212	245	-	-
DHK100-72	72	191	206.4	227	263	-	-
DHK100-78	78	203	219.6	242	-	-	-
DHK100-84	84	215	232.8	257	-	-	-
DHK100-90	90	227	246	272	-	-	-
DHK100-96	96	239	259.2	287	-	-	-
DHK100-102	102	251	272.4	-	-	-	-
DHK100-108	108	263	285.6	-	-	-	-
DHK100-114	114	275	-	-	-	-	-
DHK100-120	120	287	-	-	-	-	-

Conductor Specification: 2A with AWG26# color Teflon conductor, 5A with AWG22# color Teflon conductor  
 10A uses AWG18# color Teflon conductor (or AWG16# flexible color PVC insulated conductor).  
 15A uses AWG16# color Teflon conductor (or AWG14# flexible color PVC insulated conductor).  
 20A uses AWG14# color Teflon conductor (or AWG12# flexible color PVC insulated conductor).  
 25A uses AWG12# color Teflon conductor.

Length of product combinations with arbitrary number of channels (n2, n5, n10, n15, n20, n25) (mm):

$$L=47+2*n2+2.2*n5+2.5*n10+3*n15+3.5*n20+4*n25$$