

# *Synchronous Servomotors DBL/DBK*



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## Synchronous servo motors DBL/DBK

The synchronous servomotors of the series DBL/DBK are brushless three-phase motors for high quality servo-applications. The servomotors have Neodymium permanent magnets in the rotor. Because of standardised flange and shaft measurements the gear fitting is no problem.

### ◆ Feedback

The motors are equipped with two-pole hollow-shaft resolvers. As an alternative these motors are available with high resolution encoders. Retrofitting is not possible. The length of the motor depends on the feedback type.

### ◆ Holding Brake

The motor can be delivered with or without a built-in holding brake. Retrofitting is not possible. The motor length will increase with an installed brake.

### ◆ Safety

Coil temperature is supervised by temperature sensors and reported by potential free contacts.

### ◆ Short motors

The motors of the series DBK are very suitable for room-restricted installation areas.

### ◆ Compatibility

The DBL motors are compatible with the proven 6SMx7 motor series.

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## Features / Options



### Features

- ◆ neodymium magnets for highly dynamic function
- ◆ flange dimensions to IEC standard, fit j6, accuracy according to DIN 42955, tolerance class R
- ◆ vibration class N according to DIN ISO 2373
- ◆ insulation for 480V rated mains voltage (DBL1 : 230V)
- ◆ insulation material class F according to DIN 57530
- ◆ shaft end without a fitted-keyway
- ◆ Protection class IP 64
- ◆ Built-in Resolver
- ◆ DBL2...8 and DBK motors are UL Recognized

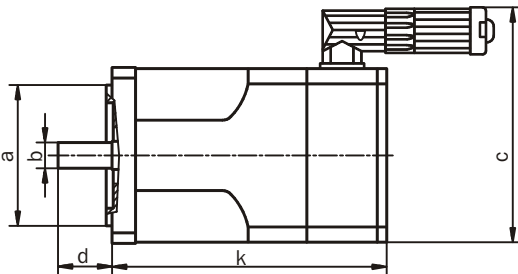
### Options

- ◆ holding break
- ◆ shaft with keyway
- ◆ radial shaft-sealing ring
- ◆ vertical mounting sockets for resolver and power connections
- ◆ built-in high resolution EnDat encoder
- ◆ second thermal protection contact

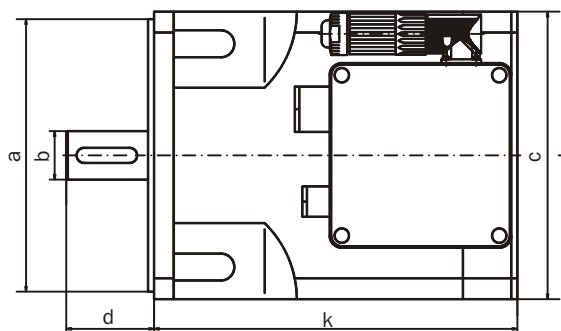


## Dimensions

DBL2...DBL6/DBK4...DBK7



DBL7/DBL8



	Mo/Nm	a/mm	b/mm	d/mm	c/mm	k/mm
DBL1	0,1...0,2	25	6	16	70	83...99
DBL2	0,4...0,8	40	9	20	90	122...152
DBL3	0,65...1,9	60	11	23	110	116...152
DBL3	2,5...3	60	14	30	110	170...188
DBL4	2,6...9,5	95	19	40	135	155...286
DBL5	10,5...22	130	24	50	155	220...305
DBL6	22...29	180	24	50	190	243...306
DBL7	26...40	180	32	58	190	240...298
DBL8	40...115	230	42	82	240	311...515

### Short motors

DBK4	1...1,6	95	14	30	135	90...105
DBK5	2,1...4,3	130	19	40	155	121...138
DBK6	3,5...7	180	19	40	190	126...143
DBK7	6,5...19,5	180	24	50	190	137...198

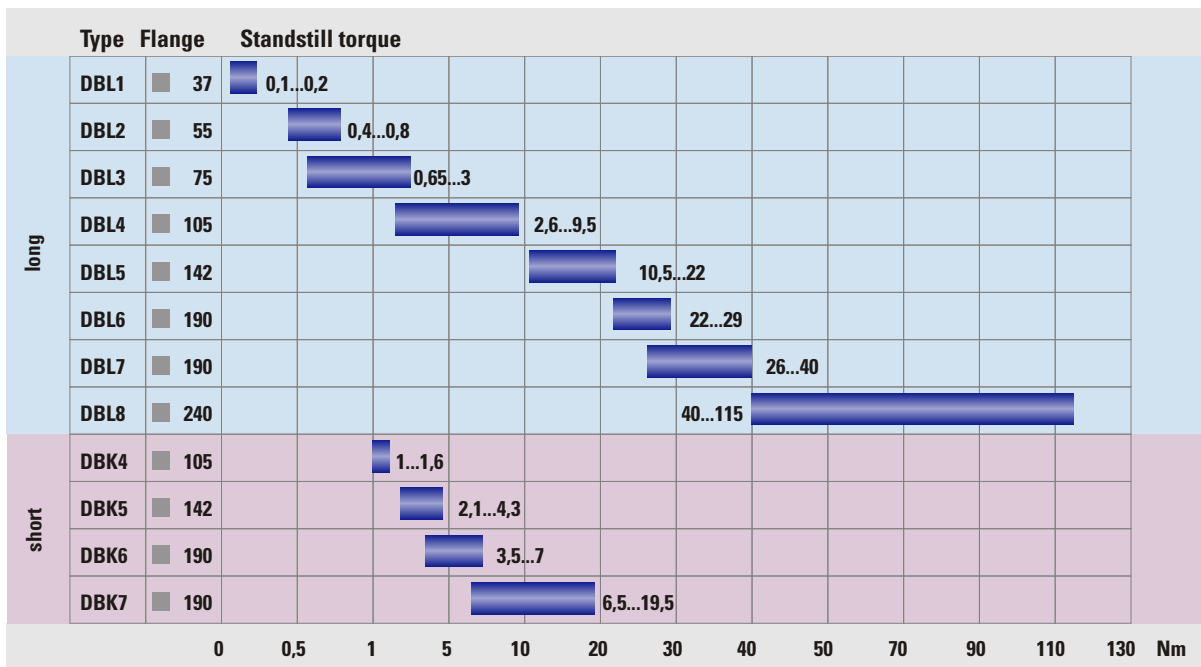
**Technical data**

Type	cont. torque at stall Mo[Nm]	cont. current at stall Io[A]	rated mains voltage Un[V AC]	rated speed n[1/min]	Motor inertia J[kg cm <sup>2</sup> ]
DBL1X00010	0,1	0,60	230	6000	0,06
DBL1X00020	0,2	0,97	230	6000	0,12
DBL2H00040	0,4	0,91	230/400	4500/6000	0,08
DBL2H00060	0,6	1,40	230/400	4500/6000	0,11
DBL2M00080	0,8	0,85	400	4500	0,13
DBL2H00080	0,8	1,49	230/400	4500/6000	0,13
DBL3N00065	0,65	0,65	400/480	3000/3600	0,5
DBL3H00065	0,65	1,06	230/400	3000/6000	0,5
DBL3N00130	1,3	1,00	400/480	3000/3600	0,8
DBL3H00130	1,3	1,67	230/400	3000/6000	0,8
DBL3M00190	1,9	1,42	400/480	3000/3600	1,0
DBL3H00250	2,5	3,00	230/400	3000/6000	1,4
DBL3N00300	3,0	2,08	400/480	3000/3600	1,7
DBL4N00260	2,6	1,9	400/480	3000/3600	2,1
DBL4H00260	2,6	3,0	230	3000	2,1
DBL4N00530	5,3	3,4	400/480	3000/3600	2,8
DBL4H00530	5,3	6,5	230	3000	2,8
DBL4N00750	7,5	4,0	400/480	3000/3600	4,3
DBL4H00750	7,5	9,3	230	3000	4,3
DBL4N00950	9,5	6,1	400/480	3000/3600	6,5
DBL5N01050	10,5	6,5	400/480	3000/3600	8,1
DBL5H01050	10,5	14,1	230	3000	8,1
DBL5N01350	13,5	8,7	400/480	3000/3600	9,1
DBL5H01350	13,5	17,4	230	3000	9,1
DBL5N01700	17,0	9,9	400/480	3000/3600	11,3
DBL5H01700	17,0	19,4	230	3000	11,3
DBL5N02200	22,0	12,8	400/480	3000/3600	13,1
DBL6N02200	22,0	15,0	400/480	3000/3600	25,1
DBL6N02900	29,0	16,2	400/480	3000/3600	38,2
DBL7N02600	26,0	17,0	400/480	3000/3600	97,4
DBL7N03200	32,0	20,0	400/480	3000/3600	114,1
DBL7N04000	40,0	23,9	400/480	3000/3600	139,4
DBL8N04000	40,0	21,8	400/480	3000/3600	71,1
DBL8N06800	68,0	35,8	400/480	3000/3600	113,6
DBL8L09300	93,0	33,1	400	2000	153
DBL8L11500	115,0	42,1	400	2000	190

**Short motors**

DBK4N00100	1,0	1,1	400/480	3000/3600	0,79
DBK4H00100	1,0	1,8	230	3000	0,79
DBK4N00160	1,6	1,1	400/480	3000/3600	1,28
DBK4H00160	1,6	2,1	230	3000	1,28
DBK5N00210	2,1	1,6	400/480	3000/3600	4,13
DBK5H00210	2,1	4,0	230	3000	4,13
DBK5N00430	4,3	3,0	400/480	3000/3600	5,78
DBK5H00430	4,3	5,2	230	3000	5,78
DBK6N00350	3,5	3,0	400/480	3000/3600	8
DBK6N00700	7,0	4,7	400/480	3000/3600	11,35
DBK7N00650	6,5	4,5	400/480	3000/3600	32,36
DBK7N01200	12,0	7,5	400/480	3000/3600	53,11
DBK7N01950	19,5	11,9	400/480	3000/3600	69,16

## The best motor for each drive





**SERVOSTAR® 200**



**SERVOSTAR® 300**



**SERVOSTAR® 400**



**SERVOSTAR® 600**

You'll find information to the drive series in the associated product brochures or on the internet at [www.DanaherMotion.net](http://www.DanaherMotion.net)



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