

K5-Mounting


TECHNICAL CHARACTERISTICS

Engineered for continuous duty in whatever position, at room temperature from -15°C to 50°C **with a torque load up to 0.5 Nm**, steady load, in both turning directions.

- **Box.** Made of die-cast zamak. Cover made of polycarbonate moulded-plastic. Mounting by three Ø3.2 mm holes at the output shaft side.
- **Gearset.** Spur gearset with superficial thermal treatment, which turn on rectified hardened steel shafts attached to the box. Last gearwheel is **oversized**.
- **Output shaft.** Steel shaft Ø4 mm and 10 mm useful length which turns on sintered bronze sleeve bearings.
- **Motor type:**
DC motors RF 500, 6 V.
- **Output shaft load:**
Axial direction, pull or push. 20 N ~ 2 Kg.
Radial direction, at 5 mm from flange. 10 N ~ 1 Kg.
- **Lubrication.** Mineral oil EP.
- **Weight.** With maximal number of stages 0.10 Kg.
- **OPTIONS.**
 - Twin output shaft, only D.C. motors.
 - Speed control units for D.C. motors.

WARNING. Impacts on the output shaft when engaging the load, could damage the gearbox.

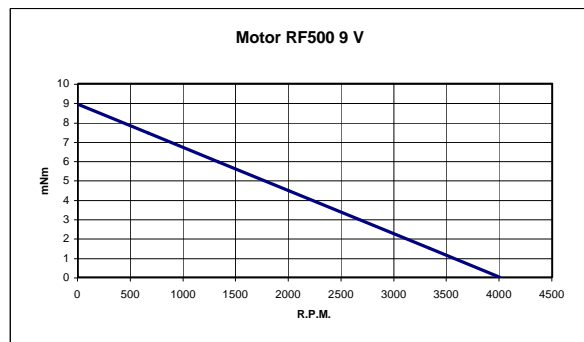
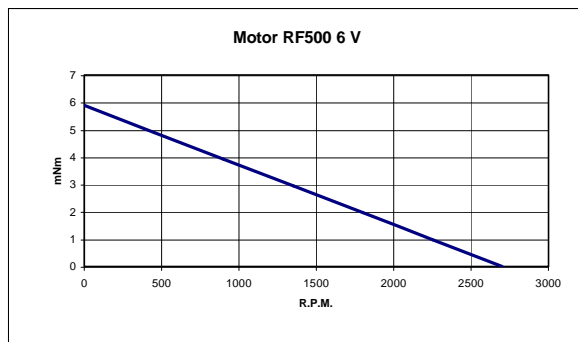
Your special requests are welcome.

			DC MOTORS Series: RF500					
			6 V			9 V		
Ratio $i = X:1$	Nº Stages	Torque factor	No load speed Vo (r.p.m.)	Nominal speed Vn (r.p.m.)	Nominal torque (mNm)	No load speed Vo (r.p.m.)	Nominal speed Vn (r.p.m.)	Nominal torque (mNm)
4,8	2	3,89	563	454	4,39	844	681	6,61
5,6	2	4,50	486	392	5,08	729	589	7,65
6,0	2	4,86	450	363	5,49	675	545	8,26
6,7	2	5,40	405	327	6,10	608	491	9,18
8,3	2	6,75	324	262	7,63	486	392	11,47
10,0	2	8,10	270	218	9,15	405	327	13,77
12,0	2	9,72	225	182	10,98	338	273	16,52
12,5	2	10,13	216	174	11,44	324	262	17,21
16,7	3	12,15	162	131	13,73	243	196	20,65
20,0	3	14,58	135	109	16,48	203	164	24,79
25,0	3	18,23	108	87	20,59	162	131	30,98
30,0	3	21,87	90	73	24,71	135	109	37,18
33,3	3	24,30	81	65	27,46	122	98	41,31
40,0	3	29,16	68	55	32,95	101	82	49,57
50,0	3	36,45	54	44	41,19	81	65	61,97
60,0	3	43,74	45	36	49,43	68	55	74,36
62,5	3	45,56	43	35	51,49	65	52	77,46
83,3	4	54,67	32	26	61,78	49	39	92,95
100,0	4	65,61	27	22	74,14	41	33	111,54
120,0	4	78,73	23	18	88,97	34	27	133,84
125,0	4	82,01	22	17	92,67	32	26	139,42
150,0	4	98,42	18	15	111,21	27	22	167,31
166,7	4	109,35	16	13	123,57	24	20	185,89
200,0	4	131,22	14	11	148,28	20	16	223,07
250,0	4	164,03	11	9	185,35	16	13	278,84
300,0	4	196,83	9	7	222,42	14	11	334,61
500,0	5	295,25	5	4,4	333,63	8	7	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Ex torque max. 0,5 N.m </div>
600,0	5	354,29	5	3,6	400,35	7	5	
1.000,0	5	590,49	3	2,2	Ex torque max.	4	3,3	
1.200,0	5	708,59	2,3	1,8		3,4	2,7	
1.500,0	5	885,74	1,8	1		2,7	2	
2.500,0	6	1328,60	1	1,1 min		2	1,3	
3.000,0	6	1594,32	1,1 min	1,4 min		1	1,1	
5.208,0	6	2767,74	1,9 min	2,4 min		1,3 min	1,6 min	
6.000,0	6	3188,65	2,2 min	2,7 min		1,5 min	1,8 min	
7.500,0	6	3985,81	2,8 min	3,4 min		1,8 min	2,3 min	
12.500,0	7	5978,71	4,6 min	5,7 min		3,1 min	3,8 min	
15.000,0	7	7174,45	5,5 min	6,9 min		3,7 min	4,6 min	
30.000,0	7	14348,91	11,1 min	13,7 min	7,4 min	9,2 min		

WARNING: The load might reduce final speed up to 40%.

NO LOAD SPEED/NOMINAL TORQUE
 Motor RF500-6 V= 2.700 r.p.m./1,13 mNm.
 Motor RF500-9 V= 4.050 r.p.m./1,7 mNm.

CURVES

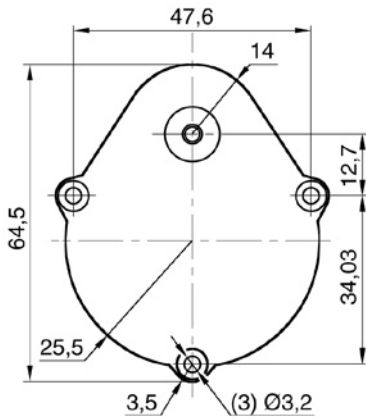


GEARBOX TIPS:

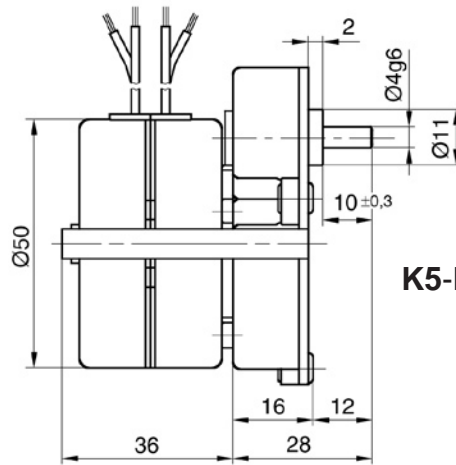
Noise. Noise level depends on load symmetry, location (avoid acoustic resonance), and rotation speed; the lower the speed on the input shaft (motor), the lower the noise.

Load torque. Overloading of the output shaft will reduce the gearbox life.

Ex Exceeds maximal admissible torque

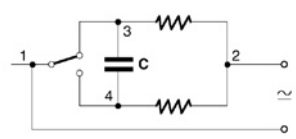


K5-Mounting

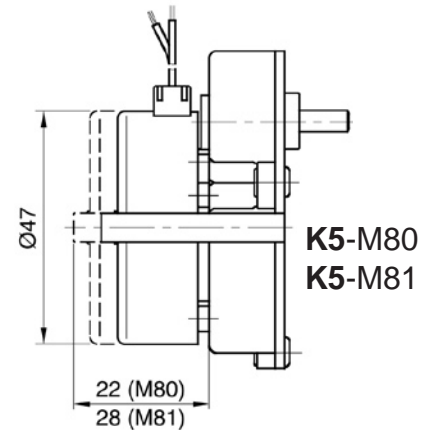


K5-M52

Wiring diagram



V.- Hz.	C		Wire colours		
	µF	V.T	②	③	④
50/60					
110	0,47	250	blue	orange	violet
230	0,12	630	red	orange	violet



K5-M80
K5-M81


TECHNICAL CHARACTERISTICS

Engineered for continuous duty in whatever position, at room temperature from -15°C to 50°C with a torque load up to 0.5 Nm, steady load, in both turning directions.

- **Box.** Made of die-cast zamak. Cover made of polycarbonate moulded-plastic. Mounting by three Ø3.2 mm holes at the output shaft side.
- **Gearset.** Spur gearset with superficial thermal treatment, which turn on rectified hardened steel shafts attached to the box. Last gearwheel is **oversized**.
- **Output shaft.** Steel shaft Ø4 mm and 10 mm useful length which turns on sintered bronze sleeve bearings.
- **Motors type:**
Synchronous motors M80 and M81 at 230 V-50 Hz. with single turning specified direction.
Synchronous motor M52 at 230 V-50 Hz. bidirectional.
- **Output shaft load:**
Axial direction, pull or push. 20 N ~ 2 Kg.
Radial direction, at 5 mm from flange. 10 N ~ 1 Kg.
- **Lubrication.** Mineral oil EP.
- **Weight.** With maximal number of stages 0.10 Kg.

WARNING. Impacts on the output shaft when engaging the load, could damage the gearbox.

Your special requests are welcome.

			SYNCHRONOUS MOTORS					
			M80		M81		M52	
Ratio i = X:1	Nº Stages	Torque factor	Nominal speed Vn (r.p.m.)	Nominal torque (mNm)	Nominal speed Vn (r.p.m.)	Nominal torque (mNm)	Nominal speed Vn (r.p.m.)	Nominal torque (mNm)
4,8	2	3,89	125	9,72	125	31,10	-	62,21
5,6	2	4,50	-	11,25	-	36,00	90	72,00
6,0	2	4,86	100	12,15	100	38,88	-	77,76
6,7	2	5,40	90	13,50	90	43,20	75	86,40
8,3	2	6,75	72	16,87	72	54,00	60	108,00
10,0	2	8,10	60	20,25	60	64,80	50	129,60
12,0	2	9,72	50	24,30	50	77,76	-	155,52
12,5	2	10,13	48	25,31	48	81,00	40	162,00
16,7	3	12,15	36	30,37	36	97,20	30	194,40
20,0	3	14,58	30	36,45	30	116,64	25	233,28
25,0	3	18,23	24	45,56	24	145,80	20	291,60
30,0	3	21,87	20	54,68	20	174,96	17	349,92
33,3	3	24,30	18	60,75	18	194,40	15	388,80
40,0	3	29,16	15	72,90	15	233,28	13	466,56
50,0	3	36,45	12	91,13	12	291,60	10	-
60,0	3	43,74	10	109,35	10	349,92	-	-
62,5	3	45,56	9,6	113,91	9,6	364,50	8	-
83,3	4	54,67	7	136,69	-	437,40	6	-
100,0	4	65,61	6	164,03	6	-	5	-
120,0	4	78,73	5	196,83	5	-	-	-
125,0	4	82,01	4,8	205,03	-	-	4	-
150,0	4	98,42	4	246,04	4	-	-	-
166,7	4	109,35	3,6	273,37	-	-	3	-
200,0	4	131,22	3	328,05	3	-	2,5	-
250,0	4	164,03	2,4	410,06	-	-	2	-
300,0	4	196,83	2	492,08	2	-	-	-
500,0	5	295,25	1,2	-	-	-	1	-
600,0	5	354,29	1	-	1	-	-	-
1.000,0	5	590,49	1,6 min	-	-	-	2 min	-
1.200,0	5	708,59	2 min	-	2 min	-	-	-
1.500,0	5	885,74	2,5 min	-	-	-	3 min	-
2.500,0	6	1328,60	4,2 min	-	-	-	5 min	-
3.000,0	6	1594,32	5 min	-	5 min	-	6 min	-
5.208,0	6	2767,74	8,7 min	-	-	-	10,4 min	-
6.000,0	6	3188,65	10 min	-	10 min	-	12 min	-
7.500,0	6	3985,81	12,5 min	-	-	-	15 min	-
12.500,0	7	5978,71	20,8 min	-	-	-	25 min	-
15.000,0	7	7174,45	25 min	-	25 min	-	30 min	-
30.000,0	7	14348,91	50 min	-	50 min	-	60 min	-

Ex torque max. 0,5 Nm

Ex torque max. 0,5 Nm

Ex

GEARBOX TIPS:

Noise. Noise level depends on load symmetry, location (avoid acoustic resonance), and rotation speed; the lower the speed on the input shaft (motor), the lower the noise.

Load torque. Overloading of the output shaft will reduce the gearbox life.

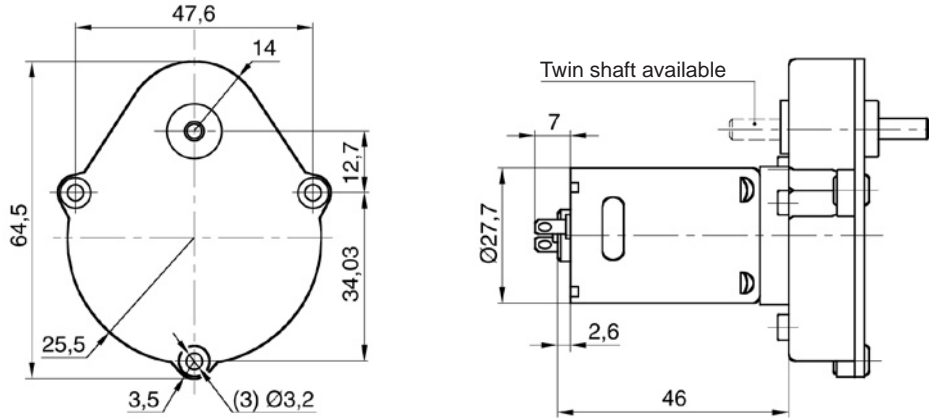
NO LOAD SPEED/NOMINAL TORQUE

Motor **M80**= 600 r.p.m./2,5 mNm.

Motor **M81**= 600 r.p.m./8 mNm.

Motor **M52**= 500 r.p.m./16 mNm.

Exceeds maximal admissible torque



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- **Gearset.** Spur gearset with superficial thermal treatment, which turn on rectified hardened steel shafts attached to the box. Last gearwheel is **oversized**.
- **Output shaft.** Steel shaft $\text{Ø}4$ mm and 10 mm useful length which turns on sintered bronze sleeve bearings.
- **Motor type:**
DC motors 28.41, at 12 or 24 V.
- **Output shaft load:**
Axial direction, pull or push. 20 N ~ 2 Kg.
Radial direction, at 5 mm from flange. 10 N ~ 1 Kg.
- **Lubrication.** Mineral oil EP.
- **Weight.** With maximal number of stages 0.10 Kg.
- **OPTIONS.**
 - Twin output shaft, only D.C. motors.
 - Speed control units for D.C. motors.

WARNING. Impacts on the output shaft when engaging the load, could damage the gearbox.

Your special requests are welcome.

			DC MOTORS Series: 28.41					
			12 V			24 V		
Ratio $i = X:1$	Nº Stages	Torque factor	No load speed V ₀ (r.p.m.)	Nominal speed V _n (r.p.m.)	Nominal torque (mNm)	No load speed V ₀ (r.p.m.)	Nominal speed V _n (r.p.m.)	Nominal torque (mNm)
4,8	2	3,89	1156	1031	15,55	1104	896	18,27
5,6	2	4,50	999	891	18,00	954	774	21,15
6,0	2	4,86	925	825	19,44	883	717	22,84
6,7	2	5,40	833	743	21,60	795	645	25,38
8,3	2	6,75	666	594	27,00	636	516	31,72
10,0	2	8,10	555	495	32,40	530	430	38,07
12,0	2	9,72	463	413	38,88	442	358	45,68
12,5	2	10,13	444	396	40,50	424	344	47,59
16,7	3	12,15	333	297	48,60	318	258	57,10
20,0	3	14,58	278	248	58,32	265	215	68,53
25,0	3	18,23	222	198	72,90	212	172	85,66
30,0	3	21,87	185	165	87,48	177	143	102,79
33,3	3	24,30	167	149	97,20	159	129	114,21
40,0	3	29,16	139	124	116,64	133	108	137,05
50,0	3	36,45	111	99	145,80	106	86	171,32
60,0	3	43,74	93	83	174,96	88	72	205,58
62,5	3	45,56	89	79	182,25	85	69	214,14
83,3	4	54,67	67	59	218,70	64	52	256,97
100,0	4	65,61	56	50	262,44	53	43	308,37
120,0	4	78,73	46	41	314,93	44	36	370,04
125,0	4	82,01	44	40	328,05	42	34	385,46
150,0	4	98,42	37	33	393,66	35	29	462,55
166,7	4	109,35	33	30	437,40	32	26	
200,0	4	131,22	28	25		27	22	
250,0	4	164,03	22	20		21	17	
300,0	4	196,83	19	17		18	14	
500,0	5	295,25	11	10		11	9	
600,0	5	354,29	9	8		9	7	
1.000,0	5	590,49	6	5		5	4,3	
1.200,0	5	708,59	5	4		4,4	3,6	
1.500,0	5	885,74	4	3		3,5	3	
2.500,0	6	1328,60	2,2	2		2	2	
3.000,0	6	1594,32	1,9	1,7		1,8	1	
5.208,0	6	2767,74	1	1,05 min		1	1,2 min	
6.000,0	6	3188,65	1,1 min	1,2 min		1,1 min	1,4 min	
7.500,0	6	3985,81	1,3 min	1,5 min		1,4 min	1,7 min	
12.500,0	7	5978,71	2,2 min	2,5 min		2,3 min	3,0 min	
15.000,0	7	7174,45	2,7 min	3,0 min		2,8 min	3,4 min	
30.000,0	7	14348,91	5,3 min	5,9 min		5,5 min	7,1 min	

Ex
torque
max.
0.5 Nm

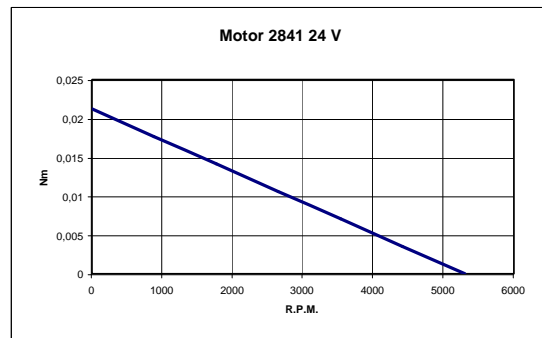
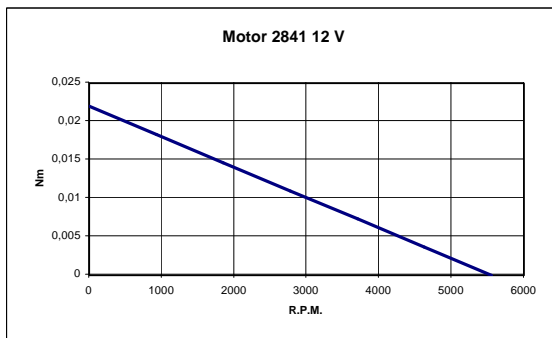
Ex
torque
max.
0.5 Nm

Ex
Exceeds maximal
admissible torque

WARNING: The load might reduce final speed up to 40%.

NO LOAD SPEED/NOMINAL TORQUE
 Motor 28.41-12 V= 5.550 r.p.m./4 mNm.
 Motor 28.41-24 V= 5.300 r.p.m./4,7 mNm.

CURVES



GEARBOX TIPS:

Noise. Noise level depends on load balance, location (avoid acoustic resonance), and rotation speed; the lower the speed on the input shaft (motor), the lower the noise.

Load torque. Overloading of the output shaft will reduce the gearbox life.