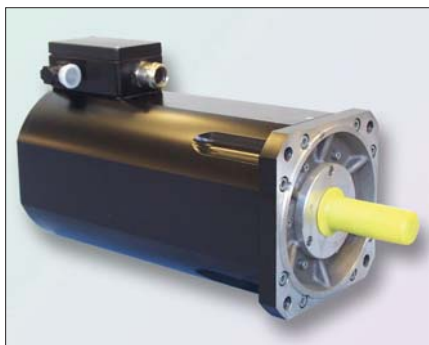
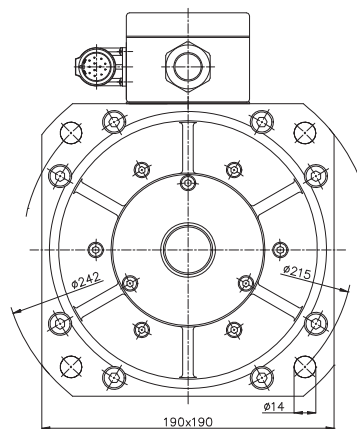
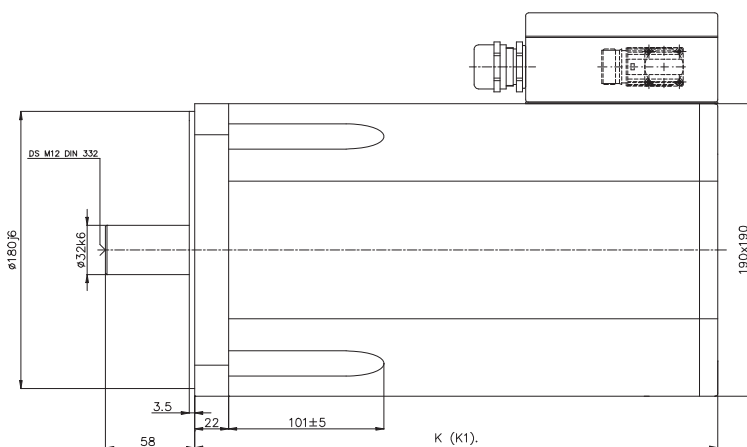
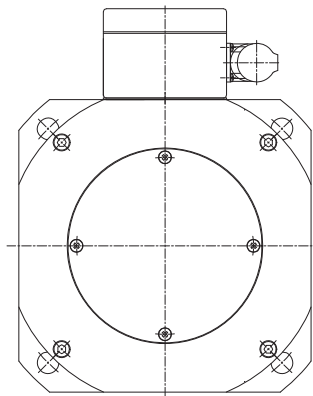


- Typ
Type
Typ
- M 25
- M 40
- M 50
- M 71
- M 90**
- F 50
- F 63
- F 80
- F 100
- W 25
- W 40
- W 50
- W 71
- W 90
- ML 40
- ML 50
- ML 71
- ML 90
- MA 40
- MA 50
- ME
- FE



M 904
M 906



TYP SERVOMOTORU	MOTOR TYPE	MOTORTYP	M 904	M 906
K (bez brzdy)	K (without brake)	K (ohne Bremse)	340	415
K1 (s brzdou)	K1 (with brake)	K1 (mit Bremse)	390	465

◆ Brzda ◆ Brake ◆ Bremse ◆

SERVOMOTOR	M ₀ [Nm]	BINDER	M _B [Nm]	t _{1max} [ms]	t _{2max} [ms]	U _{1DC} [V]	n _{max} [min ⁻¹]	J [kg.m ² .10 ⁻³]	m [kg]
M 904 - B	35	16-32	90	45	24	3500	0,6	3,7	
M 906 - B	55								

M_B - brzdný moment / holding torque / Haltemoment;

J - moment setrvačnosti / moment of inertia / Trägheitsmoment;

m - hmotnost / weight / Gewicht;

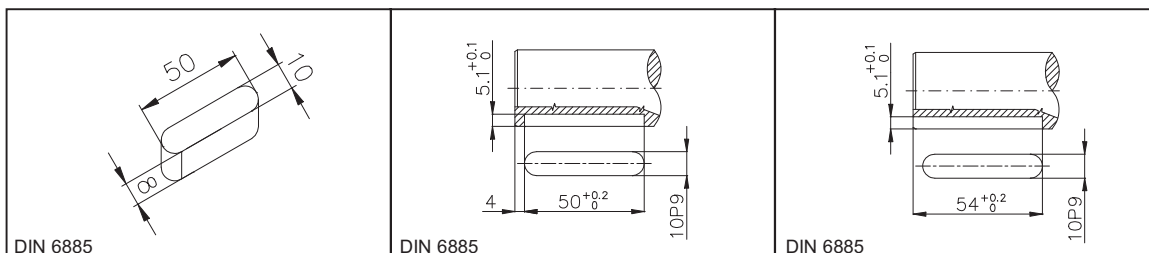
n_{MAX} - max. otáčky / max. speed / max. Drehzahl;

t_{1MAX} - max. čas sepnutí (odbrždění) / max. time of switching-on (brake release) / max. Einschaltzeit (Lösung der Bremse);

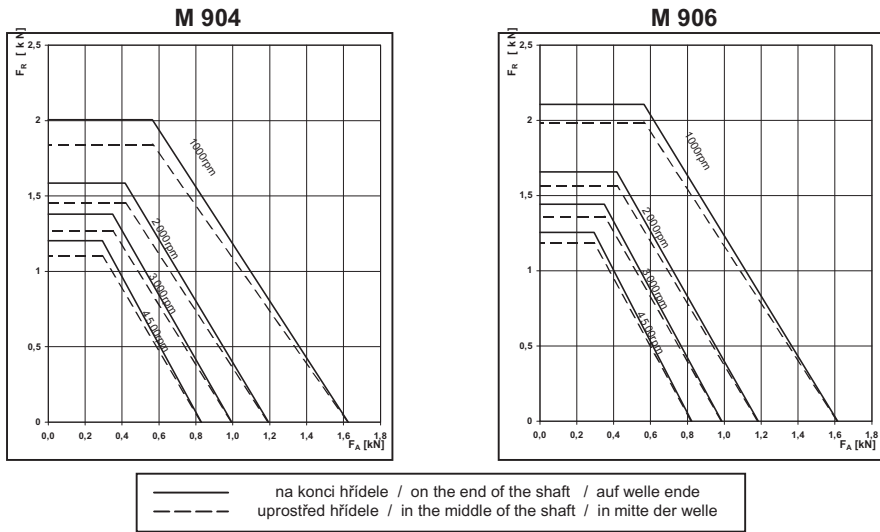
t_{2MAX} - max. čas rozepnutí / max. time of switching-off / max. Ausschaltzeit;

U_{1DC} - jmenovité napětí / rated voltage / Eingangsspannung;

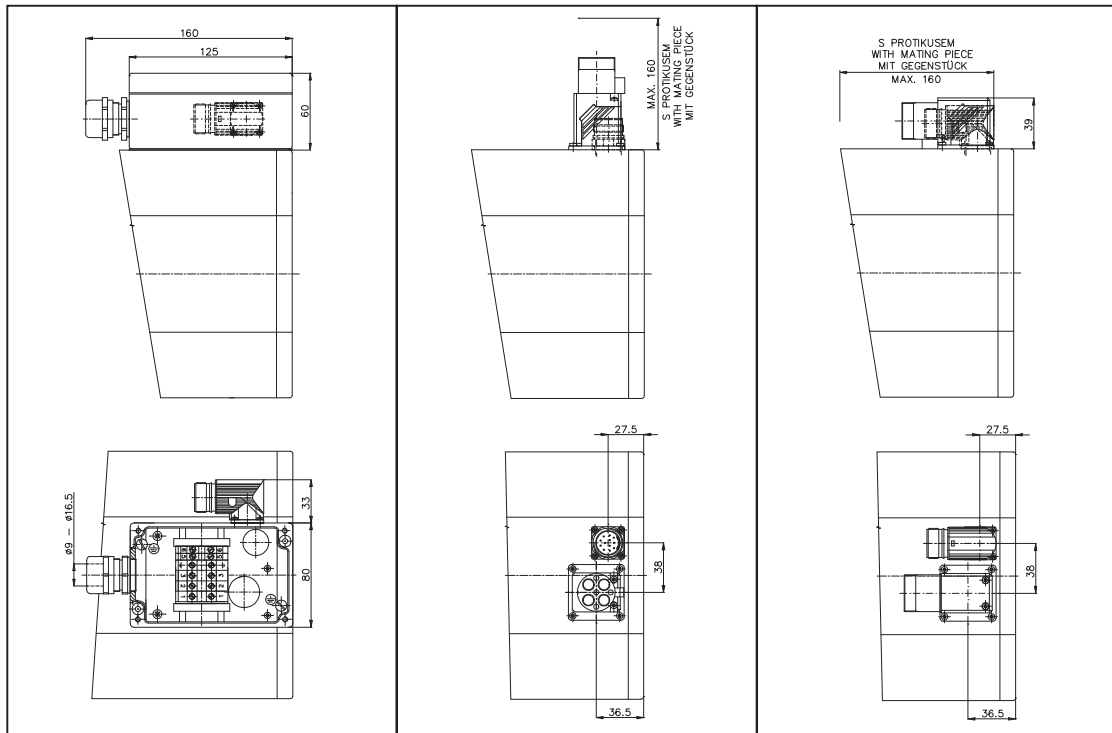
◆ Hřídel ◆ Shaft ◆ Welle ◆



◆ Radiální a axiální zatížení volného konce ◆ Radial and axial shaft load capacity ◆
 ◆ Zulässige Radial- und Axialbelastungen der Wellenenden ◆



◆ Konektory ◆ Connectors ◆ Stecker ◆



Motorový konektor Power connector Motorstecker	Signální konektor Signal connector Signalstecker	Svorkovnice Terminal box Klemme
<ul style="list-style-type: none"> 1 U 2 V 3 W 4 Brzda / Brake / Bremse 6 Brzda / Brake / Bremse ⊥ GND <p>Strana pájení protikusu konektoru Ansicht Gegenstecker-Lötseite View from solder side of mating plugs</p>	<ul style="list-style-type: none"> 1 S1 2 S3 3 S4 4 S2 5 R1 6 R2 7,8 Teplotní spínač Termoswitch Temroschalter <p>Strana pájení protikusu konektoru Ansicht Gegenstecker-Lötseite View from solder side of mating plugs</p>	<ul style="list-style-type: none"> 1 U 2 V 3 W 4 GND 5 Brzda / Brake / Bremse 6 Brzda / Brake / Bremse

Typ Type Typ
M 25
M 40
M 50
M 71
M 90
F 50
F 63
F 80
F 100
W 25
W 40
W 50
W 71
W 90
ML 40
ML 50
ML 71
ML 90
MA 40
MA 50
ME
FE

Typ Type Typ	M 25	M 40	M 50	M 71	M 90	F 50	F 63	F 80	F 100	W 25	W 40
	W 50	W 71	W 90	ML 40	ML 50	ML 71	ML 90	MA 40	MA 50	ME	FE

Technical data of servomotors

TYPE OF THE MOTOR			M904F	M904H	M904I	M904J	M904K	M904K	M904L	M904N	M904P	M906H
Voltage of intermediate circuit of converter	U_{DC}	V	330	330	560	560	330	560	560	560	560	330
S STANDSTILL VALUES												
Standstill torque	M_0	Nm	35	35	35	35	35	35	35	35	35	55
Standstill current	I_0	A	47,0	35,3	23,5	21,2	30,2	30,2	17,6	14,1	10,6	55,4
Torque constant	k_M	Nm/A	0,744	0,992	1,488	1,654	1,158	1,158	1,985	2,480	3,300	0,992
N RATED VALUES OF THE MOTOR												
Rated voltage	U_{NMOT}	V	143	129	285	213	149	219	257	245	226	129
Rated torque	M_N	Nm	24,7	28,1	24,7	28,1	28,1	24,7	28,1	29,9	31,6	37,9
Rated current	I_N	A	34,7	29,2	17,3	17,5	25,0	22,3	14,6	12,3	9,7	39,3
Rated speed	n_N	min ⁻¹	3000	2000	3000	2000	2000	3000	2000	1500	1000	2000
Rated power output	P_N	W	7762	5893	7762	5893	5893	7762	5893	4689	3306	7929
Voltage constant	K_E	Vmin/1000	45	60	90	100	70	70	120	150	200	60
Voltage constant	k_e	Vs/rad	0,430	0,573	0,859	0,955	0,668	0,668	1,146	1,432	1,910	0,573
Ü OVERLOADING CAPACITY AT RATED SPEED												
Overloading capacity at rated speed	$M_Ü$	Nm	68,0	81,4	48,4	91,1	70,2	91,4	66,9	72,3	80,8	131,8
Max. overloading capacity at rated speed	$M_Ü/M_N$	-	2,75	2,90	1,96	3,24	2,49	3,70	2,38	2,42	2,56	3,48
VALUES OF THE MOTOR AT MAX. SUPPLY VOLTAGE U_1												
Max MAX. VALUES OF THE MOTOR												
Max. torque	M_{max}	Nm	105	105	105	105	105	105	105	105	105	181
Max. current	I_{max}	A	179	140	93	84	120	120	68	56	42	181
Max. speed	n_{mech}	min ⁻¹	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
C LIMIT POINT												
Current	I_C	A	179	140	93	84,0	120,0	120,0	68,0	56	42	181
Breakdown torque	M_C	Nm	100,67	101,86	101,3	101,5	102,0	99,6	102,2	102,85	103,51	166,34
Speed	n_C	min ⁻¹	2264	1640	1952	1820	1577	2819	1485	1122	777	1654
Nutz MAX. UTILIZABLE PARAMETERS FOR S1												
Max. utilizable speed	n_{nutz}	min ⁻¹	4055	2998	3503	3154	2586	4596	2597	2050	1499	3031
Max. utilizable torque	M_{nutz}	Nm	21,09	24,71	22,98	24,2	26,1	19,2	26,1	27,97	29,86	29,02
Max. utilizable power output	P_{nutz}	W	8955	7759	8431	7987	7076	9256	7095	6004	4687	9210
O NO-LOAD RUNNING (I and M = 0)												
No-load speed	n_0	min ⁻¹	4222	3167	3667	3300	2714	4714	2750	2200	1650	3167
TECHNICAL FEATURES												
Number of poles	p	-	6	6	6	6	6	6	6	6	6	6
Resistance of winding	R_{L-V}	Ω	0,05	0,10	0,218	0,24	0,13	0,13	0,35	0,534	1,10	0,06
Inductance of winding	L_{L-V}	mH	1,2	2,1	4,6	5,37	2,35	2,35	8,10	13,13	24,73	1,63
Moment of inertia	J	kgm ² /1000	5,48	5,2	5,2	5,2	5,48	5,48	5,48	5,2	5,2	8,13
Mass	m	kg	34	33	33	33	34	34	34	33	33	45,5
Axial load	F_A	N	417	564	473	564	417	417	417	764	764	418
Radial load	F_R	N	1454	1994	1735	1994	1454	1454	1454	2525	2525	1564
Average speed	n_{mit}	min ⁻¹	2000	1000	1500	1000	2000	2000	2000	500	500	2000
MECHANICAL VALUES OF THE MOTOR												
Static friction torque	M_f	Nm	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,46
Damping constant	k_D	Nm.min.10 ⁻⁵	15	15	15	15	15	15	15	15	15	23
Mechanical time constant	T_m	ms	0,76	0,79	0,71	0,68	0,78	0,78	0,73	0,67	0,79	0,71
THERMAL VALUES OF THE MOTOR												
Thermal resistance (winding–ambient atm.)	$R_{th(RU)}$	K/W	0,23	0,28	0,23	0,30	0,29	0,23	0,30	0,33	0,33	0,25
Thermal resistance (frame–ambient atm.)	$R_{th(GU)}$	K/W	0,19	0,23	0,19	0,24	0,23	0,19	0,24	0,27	0,26	0,20
Thermal time constant	T_{th}	min	80,4	97,8	79,0	103,5	99,1	79,9	101,7	113,5	111,9	115,7
COOLER												
Quantity of water	Q_W	dm ³ .min ⁻¹	-	-	-	-	-	-	-	-	-	-
Rated pressure of water	p_N	kPa	-	-	-	-	-	-	-	-	-	-
Quantity of air	Q_L	dm ³ .s ⁻¹	-	-	-	-	-	-	-	-	-	-

Typ Type Typ	M 25	M 40	M 50	M 71	M 90	F 50	F 63	F 80	F 100	W 25	W 40
	W 50	W 71	W 90	ML 40	ML 50	ML 71	ML 90	MA 40	MA 50	ME	FE

Technical data of servomotors

M906H	M906I	M906J	M906K	M906L	M906M	M906N	M906O	M906P	M906T	TYPE OF THE MOTOR
560	560	560	330	560	560	560	560	560	560	Voltage of intermediate circuit of converter U_{DC} V
S STANDSTILL VALUES										
55	55	55	55	55	55	55	55	55	55	Standstill torque M_0 Nm
55,4	37,0	33,3	47,5	47,5	27,7	22,2	18,5	13,3	6,7	Standstill current I_0 A
0,992	1,488	1,654	1,158	1,158	1,985	2,480	2,977	4,130	8,270	Torque constant k_M Nm/A
N RATED VALUES OF THE MOTOR										
188	278	308	148	217	253	239	290	271	284	Rated voltage $U_{N\ MOT}$ V
29,3	26,3	26,3	37,9	29,3	35,9	40,7	42,1	45,4	50,2	Rated torque M_N Nm
30,8	18,5	16,6	33,7	26,4	18,6	16,7	14,5	11,1	6,1	Rated current I_N A
3000	3000	3000	2000	3000	2000	1500	1500	1000	500	Rated speed n_N min ⁻¹
9200	8263	8263	7929	9200	7512	6386	6620	4758	2629	Rated power output P_N W
60	90	100	70	70	120	150	180	250	500	Voltage constant K_E Vmin/1000
0,573	0,859	0,955	0,668	0,668	1,146	1,432	1,719	2,390	4,770	Voltage constant k_e Vs/rad
Ü OVERLOADING CAPACITY AT RATED SPEED										
150,5	71,8	46,5	106,1	131,9	103,4	139,7	80,7	102,4	93,4	Overloading capacity at rated speed $M_{Ü}$ Nm
5,14	2,73	1,77	2,80	4,51	2,88	3,43	1,92	2,26	1,86	Max. overloading capacity at rated speed $M_{Ü}/M_N$ -
VALUES OF THE MOTOR AT MAX. SUPPLY VOLTAGE U_1										
										Max MAX. VALUES OF THE MOTOR
181	181	181	181	181	181	181	181	181	181	Max. torque M_{max} Nm
181	142	128	180	180	107	85	66	51	25	Max. current I_{max} A
4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	Max. speed n_{mech} min ⁻¹
										C LIMIT POINT
181	142	128	180	180	107	85	66	51	25	Current I_C A
155,12	163,97	165	168	158	168,37	169,24	172,13	174,66	178,1	Breakdown torque M_C Nm
2921	1922	1795	1485	2633	1425	1327	1001	716	328	Speed n_C min ⁻¹
										Nutz MAX. UTILIZABLE PARAMETERS FOR S1
5474	3599	3228	2612,09	4670,39	2653	2113	1721	1233	589	Max. utilizable speed n_{nutz} min ⁻¹
8,08	21	24,12	32,61	14,97	29,6	34,8	40,2	43,2	49,4	Max. utilizable torque M_{nutz} Nm
4629	7753	8154	8920	7319	8230	7697	7254	5580	3047	Max. utilizable power output P_{nutz} W
										Q NO-LOAD RUNNING (I and M = 0)
5500	3667	3300	2714	4714	2750	2200	1833	1320	660	No-load speed n_0 min ⁻¹
TECHNICAL FEATURES										
6	6	6	6	6	6	6	6	6	6	Number of poles p -
0,06	0,12	0,1247	0,066	0,066	0,207	0,43	0,457	0,80	3,26	Resistance of winding R_{L-V} Ω
1,63	3,12	3,65	1,77	1,77	5,515	6,3	12	21	77,53	Inductance of winding L_{L-V} mH
8,13	7,8	7,8	8,13	8,13	7,8	7,8	8,13	7,8	7,8	Moment of inertia J kgm ² /1000
45,5	45,5	45,5	45,5	45,5	45,5	45,5	45,5	45,5	45,5	Mass m kg
418	473	473	418	418	564	564	564	764	764	Axial load F_A N
1564	1829	1829	1564	1564	2109	2109	2109	2679	2679	Radial load F_R N
2000	1500	1500	2000	2000	1000	1000	1000	500	500	Average speed n_{mitt} min ⁻¹
										MECHANICAL VALUES OF THE MOTOR
0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	0,46	Static friction torque M_f Nm
23	23	23	23	23	23	23	23	23	23	Damping constant k_D Nm.min.10 ⁻⁵
0,71	0,63	0,53	0,60	0,60	0,62	0,82	0,63	0,55	0,56	Mechanical time constant T_m ms
										THERMAL VALUES OF THE MOTOR
0,20	0,21	0,22	0,26	0,21	0,27	0,25	0,28	0,32	0,31	Thermal resistance (winding-ambient atm.) $R_{th(RU)}$ K/W
0,16	0,17	0,18	0,21	0,17	0,22	0,20	0,23	0,26	0,25	Thermal resistance (frame-ambient atm.) $R_{th(GU)}$ K/W
94,1	100,1	102,2	123,8	97,3	125,9	115,4	131,3	149,3	147,6	Thermal time constant T_{th} min
										COOLER
-	-	-	-	-	-	-	-	-	-	Quantity of water Q_W dm ³ .min ⁻¹
-	-	-	-	-	-	-	-	-	-	Rated pressure of water p_N kPa
-	-	-	-	-	-	-	-	-	-	Quantity of air Q_L dm ³ .s ⁻¹