

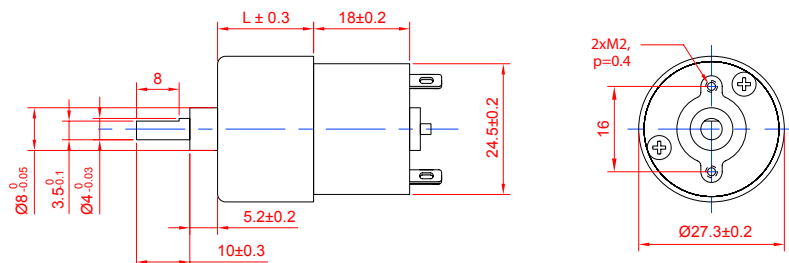
SPUR GEAR DC MOTORS

Ø 27 mm to 43 mm
0.25 W to 13 W



SDC2718	Ø27 mm	carbon brushes	0.25W	Page 3
SDC2730	Ø27 mm	carbon brushes	0.75W	Page 4
SD3039	Ø30 mm	carbon brushes	4W	Page 5
SDC3729	Ø37 mm	carbon brushes	3W	Page 6
SD3729	Ø37 mm	carbon brushes	3W	Page 7
SD3757	Ø37 mm	carbon brushes	13W	Page 8
SDS4360	Ø43 mm	carbon brushes	13W	Page 9
Encoder	6/14 counts per revolution 2 channels			Page 10

SDC2718 Ø27 mm carbon brushes 0.25 W



MODEL NO. DESIGNATIONS

SDC2718 - VOLTAGE - RATIO

Example: SDC2718-12-10

GEAR MOTOR DATA

Reduction	10:1	15:1	21:1	30:1	44:1	60:1	77:1	100:1	112:1	150:1	170:1	200:1	250:1	320:1	360:1	500:1	700:1	800:1	900:1	1150:1
Nominal torque 12 V (mNm)	5	6	9	12	17	23	30	38	43	44	50	59	74	94	106	118	147	147	147	147
Nominal speed 12 V (rpm)	390	260	180	130	88	65	51	39	35	25	22	19	15	12	10.5	7.5	5.6	5	4.9	4
Length (mm)	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	37	37	37	37	37
Weight (g)	62	63	63	64	64	64	64	65	65	65	65	65	65	65	65	66	66	66	66	66

GEAR MOTOR FEATURES AND STANDARD DATA

	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	- 40...+60 °C
Backlash no load (degrees)	≤ 2°	
Radial load 10 mm from gear flange (N)	≤ 2.9	
Shaft axial load (N)	≤ 1.96	
Shaft press fit force max. (N)	≤ 19.6	
Radial play (mm)	≤ 0.05	
Thrust play (mm)	≤ 0.3	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

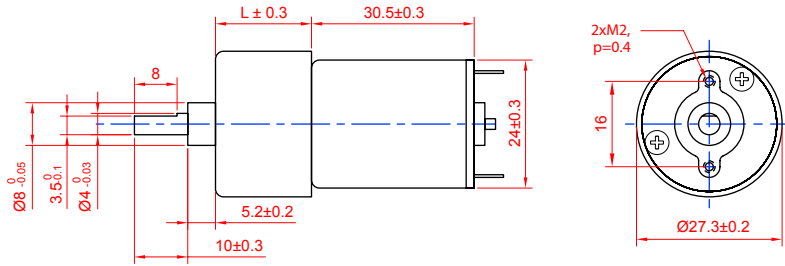
MOTOR DATA

Nominal voltage (V)	12V
No load speed (rpm)	5200
No load current (mA)	≤ 30
Nominal speed (rpm)	4000
Nominal torque (mNm)	0.59
Nominal current (mA)	≤ 60
Stall torque mNm)	3.3
Starting current (A)	0.18
Output (W)	0.25
Length (mm)	18
Weight (g)	29

GEAR HEAD DATA

Reduction	10:1	15:1	21:1	30:1	44:1	60:1	77:1	100:1	112:1	150:1	170:1	200:1	250:1	320:1	360:1	500:1	700:1	800:1	900:1	1150:1
Max. continuous torque (mNm)	29	39	39	59	59	78	78	98	98	118	118	118	118	118	118	147	147	147	147	147
Intermittently permissible torque (mNm)	88	118	118	177	177	235	235	294	294	353	353	353	353	353	353	441	441	441	441	441
Efficiency %	81	73	73	65	65	65	65	65	65	50	50	50	50	50	50	40	40	40	40	40
Length L (mm)	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	19.3	19.3	19.3	19.3	19.3
Weight (g)	33	34	34	35	35	35	35	36	36	36	36	36	36	36	36	37	37	37	37	37

SDC2730 Ø27 mm carbon brushes 0.75 W



MODEL NO. DESIGNATIONS



GEAR MOTOR DATA

Reduction	10:1	15:1	21:1	30:1	44:1	60:1	77:1	100:1	112:1	150:1	170:1	200:1	250:1	320:1	360:1	500:1	700:1	800:1	900:1	1150:1
Nominal torque 12 V (mNm)	16	22	31	39	57	78	78	98	98	118	118	118	118	118	118	147	147	147	147	147
Nominal speed 12 V (rpm)	340	230	160	110	80	59	46	36	33	21.5	20	18	14.5	12	10.5	7.5	5.7	5.1	4.5	3.7
Nominal torque 24 V (mNm)	15	21	29	37	54	74	78	98	98	118	118	118	118	118	118	147	147	147	147	147
Nominal speed 24 V (rpm)	325	220	153	105	77	56	44	34	33	22	20	18.0	14.5	11.5	10.5	7.5	5.6	5.0	4.5	3.6
Length (mm)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	50	50	50	50	50
Weight (g)	75	76	76	77	77	77	77	78	78	78	78	78	78	78	78	79	79	79	79	79

GEAR MOTOR FEATURES AND STANDARD DATA

	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	-40...+60 °C
Backlash no load (degrees)	≤2°	
Radial load 10 mm from gear flange (N)	≤2.9	
Shaft axial load (N)	≤2	
Shaft press fit force max. (N)	≤19.6	
Radial play (mm)	≤0.05	
Thrust play (mm)	≤0.3	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

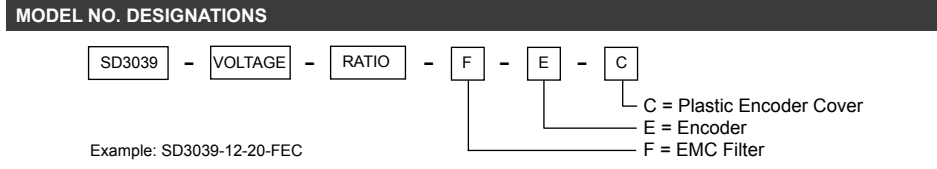
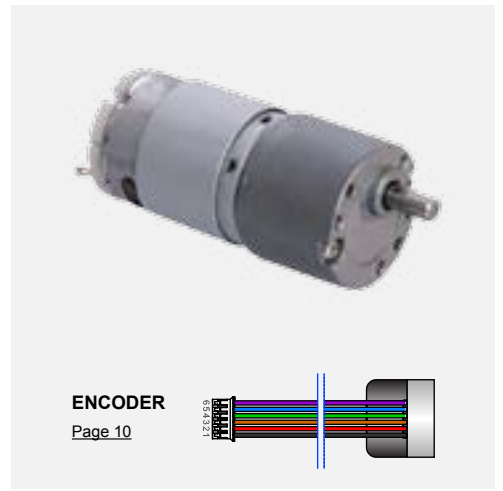
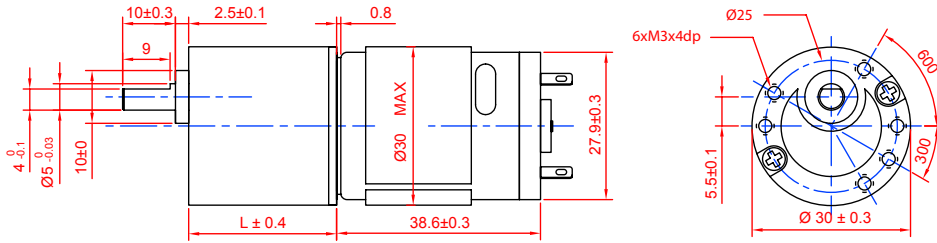
MOTOR DATA

	12V	24V
Nominal voltage (V)	12V	24V
No load speed (rpm)	4500	4500
No load current (mA)	≤ 50	≤ 30
Nominal speed (rpm)	3560	3400
Nominal torque (mNm)	2	1.9
Nominal current (mA)	≤ 150	≤ 65
Stall torque mNm)	8.6	9.4
Starting current (A)	0.42	0.24
Output (W)	0.75	0.68
Length (mm)	30.5	30.5
Weight (g)	42	42

GEAR HEAD DATA

Reduction	10:1	15:1	21:1	30:1	44:1	60:1	77:1	100:1	112:1	150:1	170:1	200:1	250:1	320:1	360:1	500:1	700:1	800:1	900:1	1150:1
Max. continous torque (mNm)	29	39	39	59	59	78	78	98	98	118	118	118	118	118	118	147	147	147	147	147
Intermittently permissible torque (mNm)	88	118	118	177	177	235	235	294	294	353	353	353	353	353	353	441	441	441	441	441
Efficiency %	81	73	73	65	65	65	65	65	65	50	50	50	50	50	50	40	40	40	40	40
Length L (mm)	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	19.3	19.3	19.3	19.3	19.3
Weight (g)	33	34	34	35	35	35	35	36	36	36	36	36	36	36	36	37	37	37	37	37

SD3039 Ø30 mm carbon brushes 4 W



GEAR MOTOR DATA

Reduction	20:1	30:1	36:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	400:1	500:1	600:1	810:1	900:1	1000:1
Nominal torque 12 V (mNm)	98	147	147	196	196	294	294	294	392	392	441	441	441	441	441	441	441	441	441	441
Nominal speed 12 V (rpm)	255	168	150	107	91	73	62	56	46.3	37.5	32	28.8	24	19.5	15.2	12.1	10.4	7.7	6.9	6.3
Nominal torque 24 V (mNm)	96	144	147	196	196	294	294	294	392	392	441	441	441	441	441	441	441	441	441	441
Nominal speed 24 V (rpm)	258	168	150	107	91	73	62	56	46.3	37.4	31.8	28.7	24	19.5	15.1	12.1	10.3	7.7	6.9	6.3
Length (mm)	62	62	62	62	62	62	62	62	67	67	67	67	67	67	67	67	67	67	67	67
Weight (g)	162	162	162	162	162	162	162	162	171	171	171	171	171	171	171	171	171	171	171	171

GEAR MOTOR FEATURES AND STANDARD DATA

	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magnetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	-40...+60 °C
Backlash no load (degrees)	≤ 2	
Radial load 10 mm from gear flange (N)	7.9	
Shaft axial load (N)	5.9	
Shaft press fit force max. (N)	≤ 98	
Radial play (mm)	≤ 0.05	
Thrust play (mm)	≤ 0.35	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

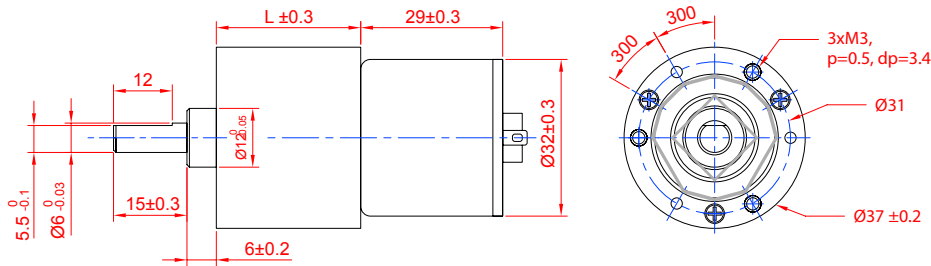
MOTOR DATA

Nominal voltage (V)	12V	24V
No load speed (rpm)	6500	6500
No load current (mA)	≤ 150	≤ 85
Nominal speed (rpm)	5290	5250
Nominal torque (mNm)	7.65	7.26
Nominal current (mA)	≤ 530	≤ 250
Stall torque mNm)	35.8	37
Starting current (A)	2.1	1
Output (W)	4.22	4
Length (mm)	38.6	38.6
Weight (g)	73	73

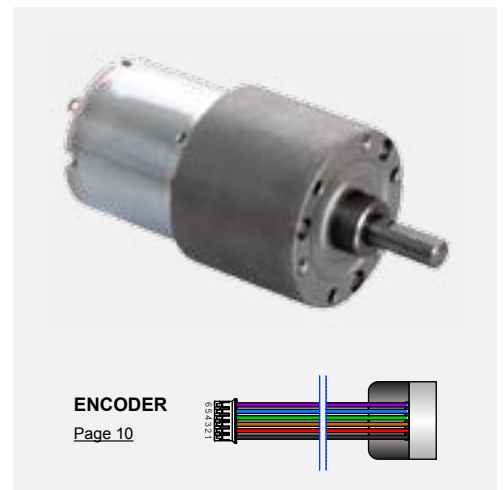
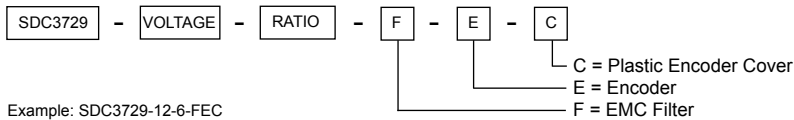
GEAR HEAD DATA

Reduction	20:1	30:1	36:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	400:1	500:1	600:1	810:1	900:1	1000:1
Max. continous torque (mNm)	98	147	147	196	196	294	294	294	392	392	441	441	441	441	441	441	441	441	441	441
Intermittently permissible torque (mNm)	294	441	441	588	588	883	883	883	1177	1177	1324	1324	1324	1324	1324	1324	1324	1324	1324	1324
Efficiency %	66	66	66	66	66	66	66	66	53	53	53	53	53	53	53	53	53	53	53	53
Length L (mm)	23	23	23	23	23	23	23	23	28	28	28	28	28	28	28	28	28	28	28	28
Weight (g)	89	89	89	89	89	89	89	89	98	98	98	98	98	98	98	98	98	98	98	98

SDC3729 Ø37 mm carbon brushes 3 W



MODEL NO. DESIGNATIONS



GEAR MOTOR DATA

Reduction	6:1	16:1	21:1	31:1	56:1	75:1	104:1	125:1	156:1	188:1	219:1	250:1	312:1	469:1	625:1	750:1	938:1	1875:1	3750:1	5625:1
Nominal torque 12 V (mNm)	29	69	90	121	218	261	362	435	543	588	588	588	588	588	588	588	588	588	588	588
Nominal speed 12 V (rpm)	800	310	245	155	90	67	49	41	33	28	24	21.5	17.6	12.3	9.1	7.8	6.3	3.2	1.6	1
Nominal torque 24 V (mNm)	30	71	94	125	225	270	374	450	561	588	588	588	588	588	588	588	588	588	588	588
Nominal speed 24 V (rpm)	780	308	240	150	87	65	48	40	32	27	23.5	21.5	17.5	12	9	7.8	6.2	3.2	1.6	1
Length (mm)	51	54	54	56	56	59	59	59	59	59	61	61	61	61	61	64	64	64	66	66
Weight (g)	172	178	178	184	184	192	192	192	192	192	196	196	196	196	196	203	203	203	206	206

GEAR MOTOR FEATURES AND STANDARD DATA

	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	-40...+60 °C
Backlash no load (degrees)	≤ 2°	
Radial load 10 mm from gear flange (N)	≤ 9.81	
Shaft axial load (N)	≤ 6.9	
Shaft press fit force max. (N)	≤ 49	
Radial play (mm)	≤ 0.05	
Thrust play (mm)	≤ 0.35	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

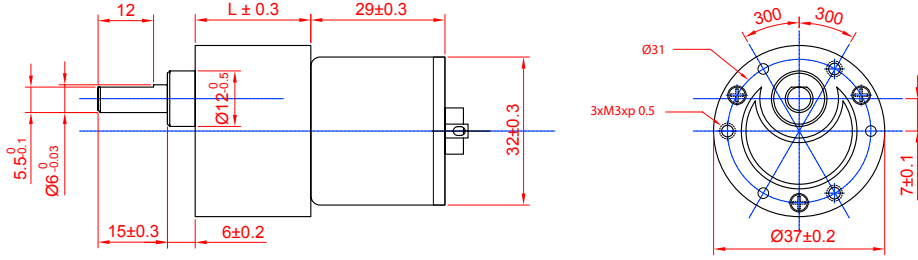
MOTOR DATA

	12V	24V
Nominal voltage (V)	12V	24V
No load speed (rpm)	6200	6200
No load current (mA)	≤ 120	≤ 60
Nominal speed (rpm)	5100	5000
Nominal torque (mNm)	5.9	6.1
Nominal current (mA)	≤ 470	≤ 210
Stall torque mNm)	33	31
Starting current (A)	2	0.9
Output (W)	3.14	3.17
Length (mm)	29	29
Weight (g)	75	75

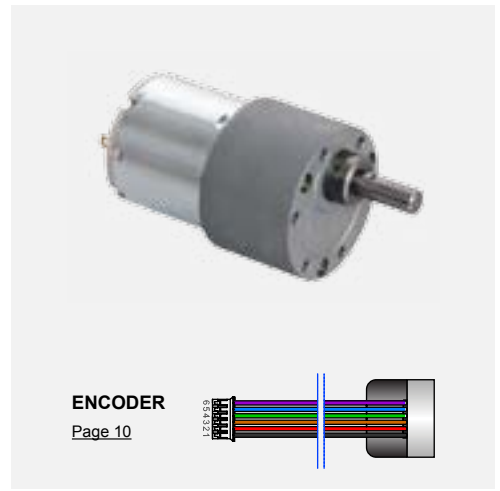
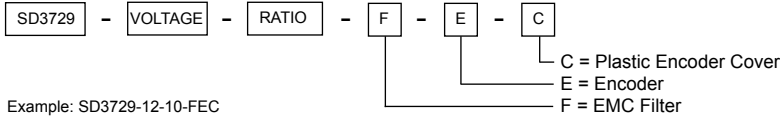
GEAR HEAD DATA

Reduction	6:1	16:1	21:1	31:1	56:1	75:1	104:1	125:1	156:1	188:1	219:1	250:1	312:1	469:1	625:1	750:1	938:1	1875:1	3750:1	5625:1
Max. continous torque (mNm)	98	196	196	294	392	490	490	588	588	588	588	588	588	588	588	588	588	588	588	588
Intermittently permissible torque (mNm)	294	588	588	883	1177	1471	1471	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765
Efficiency %	81	73	73	66	66	59	59	59	59	59	53	53	53	53	53	48	48	48	43	43
Length L (mm)	21.8	24.6	24.6	27.1	27.1	29.5	29.5	29.5	29.5	29.5	32	32	32	32	32	34.5	34.5	34.5	37	37
Weight (g)	97	103	103	109	109	117	117	117	117	117	121	121	121	121	121	128	128	128	131	131

SD3729 Ø37 mm carbon brushes 3 W



MODEL NO. DESIGNATIONS



ENCODER
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GEAR MOTOR DATA

Reduction	10:1	18:1	30:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	500:1	600:1	750:1	1000:1	1500:1	3000:1
Nominal torque 12 V (mNm)	48	78	129	195	234	292	350	389	418	522	588	588	588	588	588	588	588	588	588	588
Nominal speed 12 V (rpm)	490	270	168	100	84	67	57	51	42.5	34	29	26.0	22	19	11.2	9.5	8	6	4.1	2
Nominal torque 24 V (mNm)	49	80	134	201	242	302	362	403	432	540	588	588	588	588	588	588	588	588	588	588
Nominal speed 24 V (rpm)	480	250	160	98	83	65	56	50	41.5	33	28.5	26	22	19	11	9.3	7.9	5.9	4	2
Length (mm)	49	51	51	54	54	54	54	54	56	56	56	56	56	56	59	59	59	59	61	61
Weight (g)	161	168	168	175	175	175	175	175	181	181	181	181	181	181	187	187	187	187	195	195

GEAR MOTOR FEATURES AND STANDARD DATA

	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magnetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	-40...+60 °C
Backlash no load (degrees)	≤2°	
Radial load 10 mm from gear flange (N)	≤9.81	
Shaft axial load (N)	6.9	
Shaft press fit force max. (N)	≤196	
Radial play (mm)	≤0.05	
Thrust play (mm)	≤0.35	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

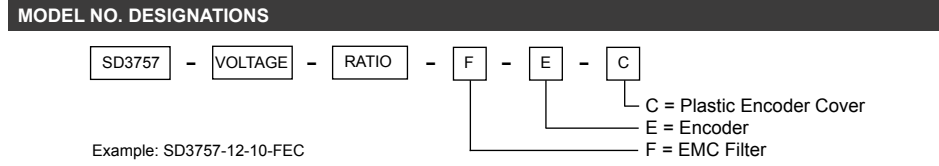
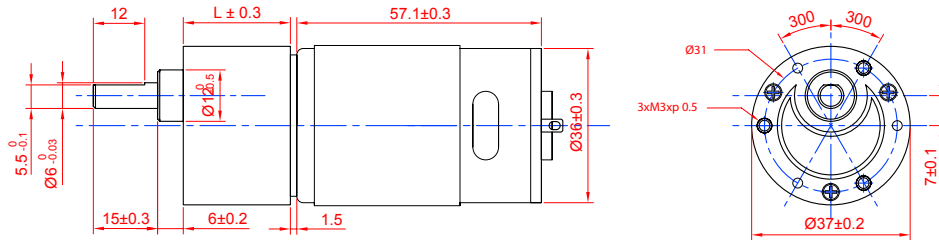
MOTOR DATA

	12V	24V
Nominal voltage (V)	12V	24V
No load speed (rpm)	6200	6200
No load current (mA)	≤ 120	≤ 60
Nominal speed (rpm)	5100	5000
Nominal torque (mNm)	5.9	6.1
Nominal current (mA)	≤ 470	≤ 210
Stall torque mNm	34	31
Starting current (A)	2	0.9
Output (W)	3.14	3.17
Length (mm)	29	29
Weight (g)	75	75

GEAR HEAD DATA

Reduction	10:1	18:1	30:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	500:1	600:1	750:1	1000:1	1500:1	3000:1
Max. continuous torque (mNm)	98	98	196	294	294	392	392	588	588	588	588	588	588	588	588	588	588	588	588	588
Intermittently permissible torque (mNm)	294	294	588	883	883	1177	1177	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765
Efficiency %	81	73	73	66	66	66	66	66	59	59	59	59	59	59	53	53	53	53	48	48
Length L (mm)	19.5	22	22	24.5	24.5	24.5	24.5	24.5	27	27	27	27	27	27	29.5	29.5	29.5	29.5	32	32
Weight (g)	86	93	93	100	100	100	100	100	106	106	106	106	106	106	112	112	112	112	120	120

SD3757 Ø37 mm carbon brushes 13 W



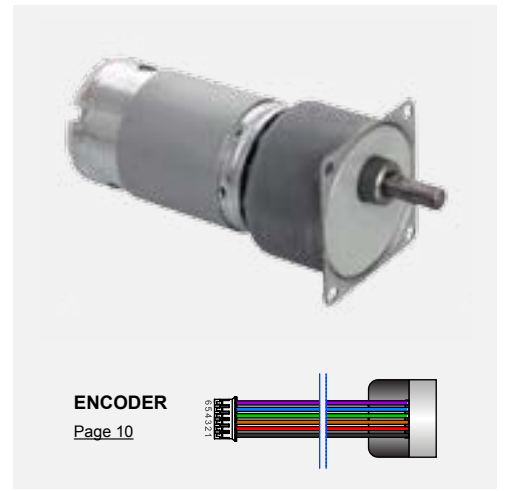
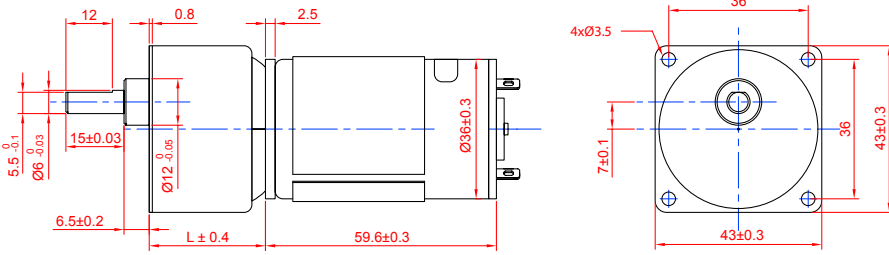
GEAR MOTOR DATA																				
Reduction	10:1	18:1	30:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	500:1	600:1	750:1	1000:1	1500:1	3000:1
Nominal torque 12 V (mNm)	98	98	196	294	294	392	392	588	588	588	588	588	588	588	588	588	588	588	588	588
Nominal speed 12 V (rpm)	528	313	185	109	95	76	63	55	47	36	31.5	29	22.5	19.5	11.5	9.8	8	5.9	3.9	2
Nominal torque 24 V (mNm)	98	98	196	294	294	392	392	588	588	588	588	588	588	588	588	588	588	588	588	588
Nominal speed 24 V (rpm)	532	315	186	111	69	77	64	55.5	48	36	32	29.5	23	20	11.8	9.9	8	6	4	2
Length (mm)	77	79	79	82	82	82	82	82	84	84	84	84	84	84	87	87	87	87	89	89
Weight (g)	306	313	313	320	320	320	320	320	326	326	326	326	326	326	332	332	332	332	340	340

GEAR MOTOR FEATURES AND STANDARD DATA		
	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	-40...+60°C
Backlash no load (degrees)	≤ 2°	
Radial load 10 mm from gear flange (N)	≤ 9.81	
Shaft axial load (N)	≤ 6.86	
Shaft press fit force max. (N)	≤ 196	
Radial play (mm)	≤ 0.05	
Thrust play (mm)	≤ 0.35	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

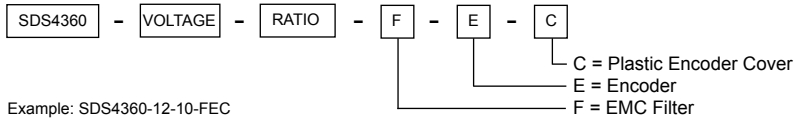
MOTOR DATA		
	12V	24V
Nominal voltage (V)	12V	24V
No load speed (rpm)	6000	6000
No load current (mA)	≤ 250	≤ 130
Nominal speed (rpm)	4930	5150
Nominal torque (mNm)	24.5	23.5
Nominal current (mA)	≤ 1600	≤ 750
Stall torque mNm)	180	189
Starting current (A)	9,7	5
Output (W)	12.8	12.7
Length (mm)	57.1	57.1
Weight (g)	220	220

GEAR HEAD DATA																				
Reduction	10:1	18:1	30:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	500:1	600:1	750:1	1000:1	1500:1	3000:1
Max. continous torque (mNm)	98	98	196	294	294	392	392	588	588	588	588	588	588	588	588	588	588	588	588	588
Intermittently permissible torque (mNm)	294	294	588	883	883	1177	1177	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765	1765
Efficiency %	81	73	73	66	66	66	66	66	59	59	59	59	59	59	53	53	53	53	48	48
Length L (mm)	19.5	22	22	24.5	24.5	24.5	24.5	24.5	27	27	27	27	27	27	29.5	29.5	29.5	29.5	32	32
Weight (g)	86	93	93	100	100	100	100	100	106	106	106	106	106	106	112	112	112	112	120	120

SDS4360 Ø43 mm carbon brushes 13 W



MODEL NO. DESIGNATIONS



GEAR MOTOR DATA

Reduction	10:1	15:1	18:1	25:1	30:1	36:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	360:1	400:1	500:1
Nominal torque 12 V (mNm)	98	268	294	392	392	392	490	490	490	686	686	686	686	686	686	686	686	686	686	686
Nominal speed 12 V (rpm)	519	321	275	198	172	145	103	91	72.5	61	54	46	37	31	28.2	22.5	19.2	16	14.5	11.8
Nominal torque 24 V (mNm)	98	257	294	392	392	392	490	490	490	686	686	686	686	686	686	686	686	686	686	686
Nominal speed 24 V (rpm)	530	340	283	207	176	149	107	92	73	61	54	46	37	31	28.5	23	19.1	16.2	14.5	11.8
Length (mm)	84	86	86	86	86	86	89	89	89	89	89	89	89	91	91	91	91	91	91	91
Weight (g)	330	336	336	336	336	336	345	345	345	345	345	345	345	350	350	350	350	350	350	350

GEAR MOTOR FEATURES AND STANDARD DATA

	STANDARD	CUSTOMIZATION OPTIONS
Type	Spur gear brush dc motor	
Motor type	Iron core, commutation	Winding parameters
Motor terminals	Soldering ears	Wiring harnesses, cables and connectors
EMC filter	Yes	Yes
Gears	Straight teeth metal gears produced by milling process	Plastic
Motor pinion gear	Bakelite	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic encoder (to order as option)	Through shaft dimensions
Operating temperature	-10...+60 °C	-40...+60 °C
Backlash no load (degrees)	≤ 2°	
Radial load 10 mm from gear flange (N)	≤ 9.81	
Shaft axial load (N)	≤ 6.86	
Shaft press fit force max. (N)	≤ 196	
Radial play (mm)	≤ 0.05	
Thrust play (mm)	≤ 0.35	
Manufacturing quality standards	ISO 9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes

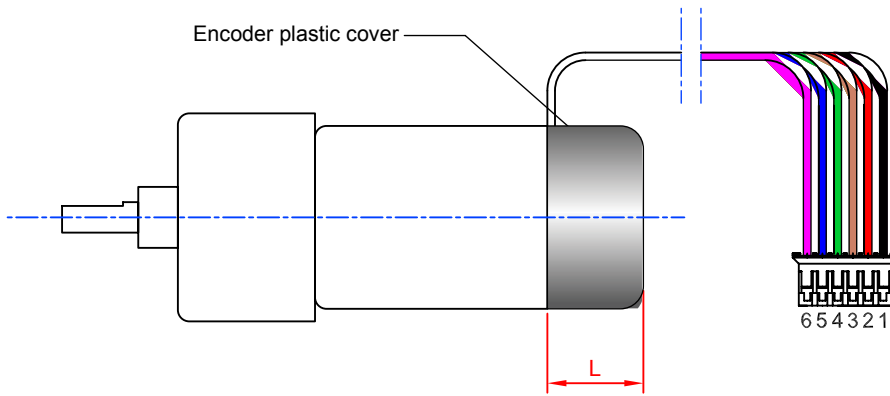
MOTOR DATA

	12V	24V
Nominal voltage (V)	12V	24V
No load speed (rpm)	6000	6000
No load current (mA)	≤ 250	≤ 130
Nominal speed (rpm)	4930	5150
Nominal torque (mNm)	24.5	23.5
Nominal current (mA)	≤ 1600	≤ 750
Stall torque mNm)	176	186
Starting current (A)	10	5
Output (W)	12.8	12.7
Length (mm)	59.6	59.6
Weight (g)	220	220

GEAR HEAD DATA

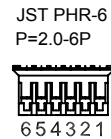
Reduction	10:1	15:1	18:1	25:1	30:1	36:1	50:1	60:1	75:1	90:1	100:1	120:1	150:1	180:1	200:1	250:1	300:1	360:1	400:1	500:1
Max. continous torque (mNm)	98	294	294	392	392	392	490	490	490	686	686	686	686	686	686	686	686	686	686	686
Intermittently permissible torque (mNm)	294	883	883	1177	1177	1177	1471	1471	1471	2059	2059	2059	2059	2059	2059	2059	2059	2059	2059	2059
Efficiency %	81	73	73	73	73	73	66	66	66	66	66	66	66	59	59	59	59	59	59	59
Length L (mm)	23.9	26.4	26.4	26.4	26.4	26.4	28.9	28.9	28.9	28.9	28.9	28.9	28.9	31.4	31.4	31.4	31.4	31.4	31.4	31.4
Weight (g)	110	116	116	116	116	116	125	125	125	125	125	125	125	130	130	130	130	130	130	130

Encoder 6/14 counts per revolution 2 channels

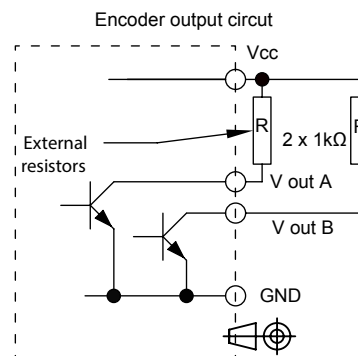
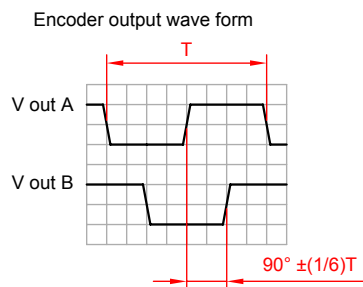


ENCODER FEATURES		
	STANDARD	CUSTOMIZATION OPTIONS
Type	Magnetic	Yes
Counts per revolution		Yes
Number of channels	2	1
Harness		Yes
Connector		Yes
Encoder rear cover	Black plastic	Yes
Operating temperature range	-10 to +60°C	
Manufacturing quality standard	ISO9001	
RoHS compliance	Yes	
CE label	No	Yes
UL approval	No	Yes
Open collector output (V out A, V out B)		

MOTOR AND ENCODER CONNECTION	
Motor -	1. Black
Motor +	2. Red
Vcc, Hall sensor	3. Brown
GND, Hall sensor	4. Green
V out A, Hall sensor	5. Blue
V out B, Hall sensor	6. Purple



ENCODER DATA							
Gear motor model	SDC2718	SDC2730	SD3039	SDC3729	SD3729	SD3757	SDS4360
Hall sensor	UTC KS1816	UTC KS1816	UTC KS1816	UTC KS1816	UTC KS1816	UTC KS1816	UTC KS1816
Number of encoder channels	2	2	2	2	2	2	2
Counts per revolution per channel (CPR)	6	6	6	14	14	14	14
Pulses per revolution per channel (PPR)	3	3	3	7	7	7	7
Encoder cable length (mm)	100	100	100	100	100	100	100
Wire gauge (AWG)	AWG24/UL1007	AWG24/UL1007	AWG24/UL1007	AWG24/UL1007	AWG24/UL1007	AWG24/UL1007	AWG24/UL1007
Cable conector	JST PHR-6 P=2.0-6P	JST PHR-6 P=2.0-6P	JST PHR-6 P=2.0-6P	JST PHR-6 P=2.0-6P	JST PHR-6 P=2.0-6P	JST PHR-6 P=2.0-6P	JST PHR-6 P=2.0-6P
Encoder plastic rear cover length L (mm)	12.6	12.6	12.6	14.3	14.3	13.5	13.5



ENCODER TEST DATA						
CHARACTERISTIC	SYMBOLS	TEST CONDITIONS	MIN	REF	MAX	UNITS
Supply voltage	Vcc	---	3.5	-	20	V
Output saturation voltage	Vce (sat)	Vcc = 14V ; Ic = 20m	-	300	700	mV
Output leakage current	Icex	Vce = 14V ; Vcc = 14	-	< 0.1	10	µA
Supply Current	Ice	Vcc = 20V Output open	-	5	10	mA
Output rise time	tr	Vcc = 14V; R = 820 Ohm; CL = 20pF	-	0.3	1.5	µS
Output fall time	tf	Vcc = 14V; R = 820 Ohm; CL = 20pF	-	0.3	1.5	µS
Phase shift	φ	---	90 ±(1/6)T			°