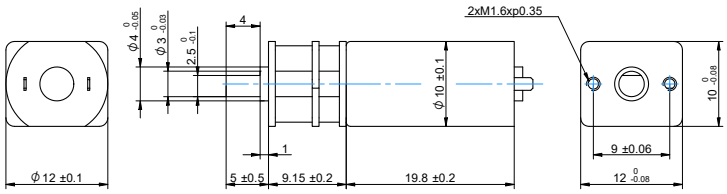
SDS1220 | □ 12 mm | 6 V | BRUSHED DC SPUR GEAR MOTOR

DRAWING (mm)



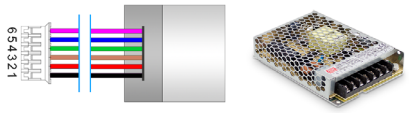
PHOTO

MODEL NO. DESIGNATION

SDS1220 - VOLTAGE - GEAR RATIO - F E

Example: SDS1220-6-10-FE

ACCESSORIES



● C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

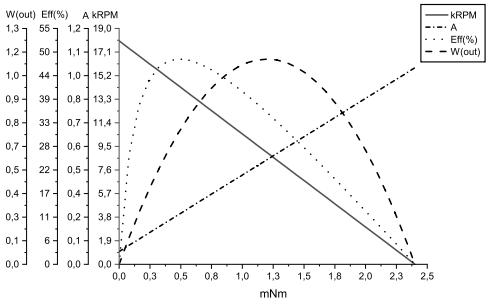
GEAR MOTOR DATA											C
Gear ratio		10:1	19:1	29:1	60:1	76:1	102:1	134:1	197:1	235:1	298:1	
Nominal torque | ^ gearbox limit	mNm	2.9	5.4	7.8	15	20	27	29	45	52	69	
Nominal speed	rpm	1500	780	510	250	200	150	110	76	64	50	
Peak torque	mNm	59	88	88	150	150	240	240	290	290	290	
Nominal power	W	0.46	0.44	0.42	0.39	0.39	0.39	0.33	0.33	0.33	0.33	
Gearbox efficiency	%	81	73	73	66	66	66	59	59	59	59	
Gearbox length | L	mm	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	9.15	
Weight	g	12	12	12	12	12	12	12	12	12	12	

OTHER GEAR MOTOR DATA			C
Service life	h	500	
Performance tolerances	%	±15	
Operating temperature	°C	-10 to 60	●
IP rating		IP20	
Manufacturing standard		ISO 9001 | ISO 14001 | TS 16949	
CE label | UL label		No | No	●

GEARBOX DATA			C
Backlash no load	°	≤ 1.5	
Radial load	N	≤ 3.9	
Shaft axial load	N	≤ 2	
Shaft press fit force max.	N	≤ 20	
Radial play[1]	mm	≤ 0.06	
Thrust play	mm	≤ 0.2	
Bearing type		Sleeve bearing	
Shaft material		Carbon steel AISI 1144	
Motor pinion material		Bronze	●
Motor pinion shape		Straight	
Material gear stage		Bronze, steel	●
Direction of rotation		CW or CCW by reversed V polarity	
Assembly front bell	mm	0.8	

BRUSHED DC MOTOR DATA			C
Nominal voltage	V	6	
No load speed	rpm	18000	
No load current	mA	≤ 65	
Nominal speed	rpm	15000	
Nominal torque	mNm	0.39	
Nominal current	mA	≤ 250	
Nominal power	W	0.61	
Stall torque	mNm	2.4	
Starting current	A	1	
Motor commutation		Prec.m.[3]	
Motor rotor		Iron	
Motor stator		Neody.[4]	
Varistor EMC	V	9 - 14	
Capacitor EMC	V	None	
Resistance	Ω	6.3	
Inductance	mH	1.2	
Insulation class		B	

BRUSHED DC MOTOR DATA GRAPH



NOTES

1. 5 mm from gear flange.
2. Contact us for information regardng gear stage material of a specific gear ratio.
3. Precious metal.
4. Neodymium.

MAGNETIC ENCODER DATA			C
Pulses per revolution		3 x 2	●
Channels		2	
Phase shift	°	90 ± (1/6)T	
Encoder rear cover material		None	
Sensor technical data		Refer externally to brand and part UTC-SK1816.	
Size	mm	Diameter 7 | Length 6	
Harness connector		JST ZHR-6 P=1.5-6P	●
Harness cable		AWG26 | UL1061	●
Harness length	mm	100	
Connection		BLK M- | RED M+ | BRN Vcc | GRN GND | BLU A | VIO B	
Supply voltage	V	Min. 5 | Max. 20	
Supply current	mA	Ref. 5 | Max. 10	
Open collector output		Requires external output resistors.	
Output current per channel	mA	-	

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