

DC-Gearmotors

with flat ironless rotor

30 mNm

Series 1512 ... SR

	1512 U	003 SR	006 SR	012 SR	
Nominal voltage	U_N	3	6	12	Volt
Terminal resistance	R	13,5	54,7	155	Ω
Output power	$P_{2\max}$	0,15	0,15	0,22	W
No-load speed (motor)	n_0	11 100	11 980	12 800	rpm
Speed constant	k_n	3 884	2 053	1 107	rpm/V
Back-EMF constant	k_E	0,257	0,487	0,903	mV/rpm
Torque constant	k_M	2,46	4,65	8,63	mNm/A
Current constant	k_i	0,407	0,215	0,116	A/mNm
Slope of n-M curve	$\Delta n/\Delta M$	21 330	24 135	19 947	rpm/mNm
Rotor inductance	L	275	1 157	3 550	μH
Rotor inertia	J	0,08	0,08	0,08	gcm^2

Housing material		plastic		
Geartrain material		metal		
Backlash, at no-load	\leq	4		$^\circ$
Bearings on output shaft		plastic / brass bearing		
Shaft load max.:				N
– radial (3 mm from bearing)	\leq	2		N
– axial	\leq	1		N
Shaft press fit force, max.	\leq	15		N
Shaft play:				
– radial (5 mm from mounting face)	\leq	0,08		mm
– axial	\leq	0,25		mm
Operating temperature range		- 30 ... + 80		$^\circ\text{C}$

Specifications

reduction ratio (rounded)	output speed up to n_{\max} rpm	weight with motor g	output torque		direction of rotation (reversible)	efficiency %
			continuous operation M_{\max} mNm	intermittent operation M_{\max} mNm		
6 : 1	779	6,9	1,4	3	=	81
13 : 1	372	7,0	2,8	5	\neq	73
39 : 1	129	7,2	7,0	10	=	60
112 : 1	45	7,4	19,8	30	\neq	59
324 : 1	15	7,7	30,0	50	=	53

