

# Flat DC-Micromotors

## Precious Metal Commutation

### 3 mNm

### Series 2607 ... SR

	2607 T	006 SR	012 SR	024 SR	
1 Nominal voltage	$U_N$	6	12	24	V
2 Terminal resistance	R	8,2	36,5	128	$\Omega$
3 Output power	$P_{2 \text{ max.}}$	1,08	0,97	1,1	W
4 Efficiency, max.	$\eta_{\text{ max.}}$	81	80	81	%
5 No-load speed	$n_0$	6 600	5 900	6 200	rpm
6 No-load current (with shaft $\varnothing$ 1,5 mm)	$I_0$	0,007	0,004	0,002	A
7 Stall torque	$M_H$	6,26	6,21	6,77	mNm
8 Friction torque	$M_R$	0,06	0,07	0,07	mNm
9 Speed constant	$k_n$	1 111	500	261	rpm/V
10 Back-EMF constant	$k_E$	0,9	2	3,83	mV/rpm
11 Torque constant	$k_M$	8,59	19,09	36,54	mNm/A
12 Current constant	$k_i$	0,116	0,052	0,027	A/mNm
13 Slope of n-M curve	$\Delta n / \Delta M$	1 055	957	917	rpm/mNm
14 Rotor inductance	L	465	2 200	8 400	$\mu\text{H}$
15 Mechanical time constant	$\tau_m$	7,5	6,8	6,5	ms
16 Rotor inertia	J	0,68	0,68	0,68	$\text{gcm}^2$
17 Angular acceleration	$\alpha_{\text{ max.}}$	92	92	100	$\cdot 10^3 \text{ rad/s}^2$
18 Thermal resistance	$R_{\text{th} 1} / R_{\text{th} 2}$	2,7 / 24,45			K/W
19 Thermal time constant	$\tau_{w1} / \tau_{w2}$	1,8 / 163			s
20 Operating temperature range:					
– motor		-25 ... +80			$^{\circ}\text{C}$
– rotor, max. permissible		+100			$^{\circ}\text{C}$
21 Shaft bearings		sintered bearings	ball bearings, preloaded		
22 Shaft load max.:		(standard)	(optional version)		
– with shaft diameter		1,5	1,5		mm
– radial at 3 000 rpm (3 mm from bearing)		1,2	5		N
– axial at 3 000 rpm		0,2	0,5		N
– axial at standstill		20	10		N
23 Shaft play					
– radial	$\leq$	0,03	0,015		mm
– axial	$\leq$	0,2	0,2		mm
24 Housing material		plastic			
25 Weight		16,1			g
26 Direction of rotation		clockwise, viewed from the front face			
<b>Recommended values - mathematically independent of each other</b>					
27 Speed up to	$n_{e \text{ max.}}$	5 500	5 500	5 500	rpm
28 Torque up to	$M_{e \text{ max.}}$	3	3	3	mNm

