

Thin Profile DC-Micromotors

0,09 mNm

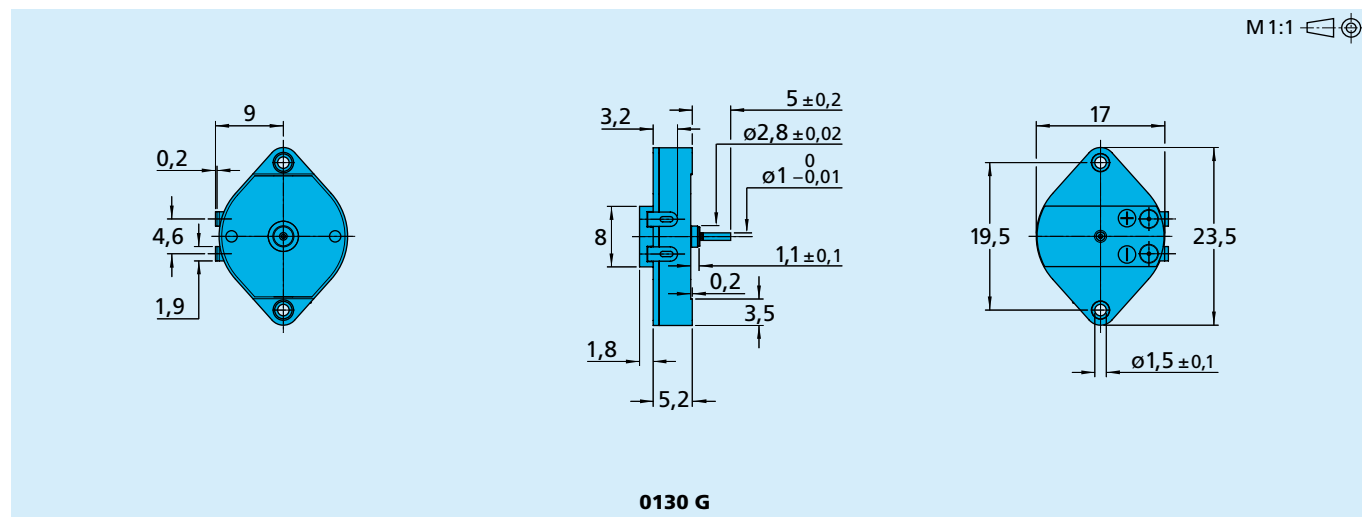
with flat ironless rotor

For combination with
Gearheads:
M13

Series 0130 ... SR

	0130 G	002 SR	003 SR	004 SR	006 SR	
Nominal voltage	U_N	2	3	4	6	Volt
Terminal resistance	R	16	26	54	133	Ω
Output power	$P_{2 \text{ max.}}$	0,036	0,058	0,046	0,034	W
Efficiency	$\eta_{\text{ max.}}$	26	33	29	22	%
No-load speed	n_o	10 000	11 100	10 700	9 200	rpm
No-load current (with shaft \varnothing 0,8 mm)	I_o	0,030	0,021	0,016	0,013	A
Stall torque	M_H	0,14	0,20	0,16	0,14	mNm
Friction torque	M_R	0,04	0,04	0,05	0,06	mNm
Speed constant	k_n	6 578	4 523	3 412	2 154	rpm/V
Back-EMF constant	k_E	0,15	0,22	0,29	0,46	mV/rpm
Torque constant	k_M	1,45	2,11	2,80	4,43	mNm/A
Current constant	k_i	0,69	0,47	0,36	0,23	A/mNm
Slope of n-M curve	$\Delta n / \Delta M$	72 520	55 705	65 832	64 624	rpm/mNm
Rotor inductance	L	440	1 100	1 400	3 200	μH
Mechanical time constant	τ_m	114	87	103	102	ms
Rotor inertia	J	0,15	0,15	0,15	0,15	gcm^2
Angular acceleration	$\alpha_{\text{ max.}}$	9	13	11	9	$\cdot 10^3 \text{ rad/s}^2$
Thermal resistance	$R_{\text{th} 1} / R_{\text{th} 2}$	14,5 / 27,7				K/W
Thermal time constant	τ_{w1} / τ_{w2}	2,8 / 7,2				s
Operating temperature range:						
– motor		– 20 ... + 65				$^{\circ}\text{C}$
– rotor, max. permissible		+ 80				$^{\circ}\text{C}$
Shaft bearings		plastic / brass bearing				
Shaft load max.:						
– with shaft diameter		0,6				mm
– radial at 3 000 rpm (3 mm from bearing)		0,5				N
– axial at 3 000 rpm		0,1				N
– axial at standstill		5				N
Shaft play:						
– radial	\leq	0,03				mm
– axial	\leq	0,1				mm
Housing material		plastic				
Weight		6,4				g
Direction of rotation		clockwise, viewed from the front face				
Recommended values - mathematically independent of each other						
Speed up to	$n_{e \text{ max.}}$	10 000	10 000	10 000	10 000	rpm
Torque up to	$M_{e \text{ max.}}$	0,09	0,09	0,09	0,09	mNm
Current up to (thermal limits)	$I_{e \text{ max.}}$	0,08	0,07	0,05	0,03	A

Note: Brush plate is loose and is only held in place by magnetic force.



0130 G