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Find the *Faulhaber 2233F012S* at our website: *Click HERE*

FAULHABER

DC-Motors

Precious Metal Commutation

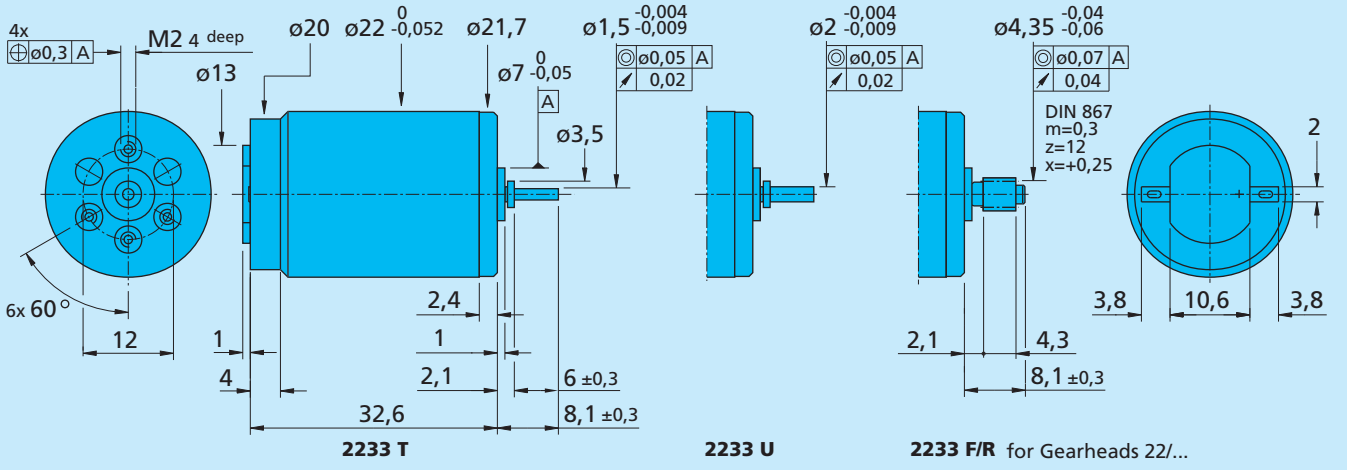
3 mNm

For combination with
Gearheads: 20/1, 22E, 22/2, 22/5, 22/6, 23/1, 38/3
Encoders: 5500, 5540
DC-Motor-Tacho Combinations: 2251 ... S

Series 2233 ... S

		2233 T	4,5 S	006 S	012 S	018 S	024 S	030 S	
1	Nominal voltage	U_N	4,5	6	12	18	24	30	Volt
2	Terminal resistance	R	1,3	2,9	9,7	25,0	57,0	105	Ω
3	Output power	$P_{2\ max.}$	3,85	3,06	3,66	3,18	2,47	2,08	W
4	Efficiency	$\eta_{max.}$	86	85	84	82	80	79	%
5	No-load speed	n_o	8 000	8 000	8 500	8 700	8 800	9 300	rpm
6	No-load current (with shaft ø 1,5 mm)	I_o	0,020	0,013	0,009	0,007	0,005	0,004	A
7	Stall torque	M_H	18,40	14,60	16,40	13,90	10,70	8,56	mNm
8	Friction torque	M_R	0,11	0,09	0,12	0,14	0,13	0,12	mNm
9	Speed constant	k_n	1 790	1 340	714	488	371	314	rpm/V
10	Back-EMF constant	k_E	0,559	0,745	1,400	2,050	2,690	3,180	mV/rpm
11	Torque constant	k_M	5,34	7,12	13,40	19,60	25,70	30,40	mNm/A
12	Current constant	k_I	0,187	0,141	0,075	0,051	0,039	0,033	A/mNm
13	Slope of n-M curve	Δn/ΔM	435	548	518	626	822	1 090	rpm/mNm
14	Rotor inductance	L	70	130	400	600	1 600	2 200	µH
15	Mechanical time constant	τ_m	12	11	12	14	11	12	ms
16	Rotor inertia	J	2,60	1,90	2,20	2,10	1,30	1,10	gcm²
17	Angular acceleration	$\alpha_{max.}$	70	76	74	65	84	81	·10³rad/s²
18	Thermal resistance	$R_{th\,1}$ / $R_{th\,2}$	4 / 27						K/W
19	Thermal time constant	τ_{w1} / τ_{w2}	4 / 660						s
20	Operating temperature range:								
	– motor		– 30 ... + 85 (optional – 55 ... + 125)						°C
	– rotor, max. permissible		+125						°C
21	Shaft bearings		sintered bronze sleeves		ball bearings		ball bearings, preloaded		
22	Shaft load max.:		(standard)		(optional)		(optional)		
	– with shaft diameter		1,5		2,0		2,0		mm
	– radial at 3 000 rpm (3 mm from bearing)		1,2		8		8		N
	– axial at 3 000 rpm		0,2		0,8		0,8		N
	– axial at standstill		20		10		10		N
23	Shaft play:								
	– radial	≤	0,03		0,015		0,015		mm
	– axial	≤	0,2		0,2		0		mm
24	Housing material		steel, zinc galvanized and passivated						
25	Weight		61						g
26	Direction of rotation		clockwise, viewed from the front face						
Recommended values - mathematically independent of each other									
27	Speed up to	$n_{e\ max.}$	8 000	8 000	8 000	8 000	8 000	8 000	rpm
28	Torque up to	$M_{e\ max.}$	3	3	3	3	3	3	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$	1,340	0,900	0,490	0,300	0,200	0,140	A

Orientation with respect to motor terminals not defined



2233 T **2233 U** **2233 F/R** for Gearheads 22/...

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How to Order a 2233 ... S

Part number	Voltage	Description	Stocked items
2233T4.5S	4.5	Standard motor	no
2233T006S	6	Standard motor	no
2233T012S	12	Standard motor	no
2233T018S	18	Standard motor	no
2233T024S	24	Standard motor	no
2233T030S	12	Standard motor	no
2233U4.5S	4.5	Standard motor with “U” shaft for 20/1 gearhead	no
2233U006S	6	Standard motor with “U” shaft for 20/1 gearhead	no
2233U012S	12	Standard motor with “U” shaft for 20/1 gearhead	no
2233U018S	18	Standard motor with “U” shaft for 20/1 gearhead	no
2233U024S	24	Standard motor with “U” shaft for 20/1 gearhead	no
2233U030S	12	Standard motor with “U” shaft for 20/1 gearhead	no
2233F4.5S	4.5	Standard motor with “F” shaft for all 22 series gearhead	no
2233F006S	6	Standard motor with “F” shaft for all 22 series gearhead	no
2233F012S	12	Standard motor with “F” shaft for all 22 series gearhead	no
2233F018S	18	Standard motor with “F” shaft for all 22 series gearhead	no
2233F024S	24	Standard motor with “F” shaft for all 22 series gearhead	no
2233F030S	12	Standard motor with “F” shaft for all 22 series gearhead	no
2233R4.5S	4.5	Standard motor with “F” shaft for all 22 series gearhead	no
2233R006S	6	Standard motor with “F” shaft for all 22 series gearhead	no
2233R012S	12	Standard motor with “F” shaft for all 22 series gearhead	no
2233R018S	18	Standard motor with “F” shaft for all 22 series gearhead	no
2233R024S	24	Standard motor with “F” shaft for all 22 series gearhead	no
2233R030S	12	Standard motor with “F” shaft for all 22 series gearhead	no

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