

DC-Tachogenerators

Precious Metal Commutation

Series 2233

		2233 U 007 G9	2233 U 011 G9	
EMF constant	k_E	7,0	11,0	mV/rpm
		66,9	105,1	mV/rad/s
Tolerance of EMF constant		± 1	± 1	%
Load resistance	$R_L \geq$	35	81	k Ω
Recommended max. speed:				
– for continuous operation	$n_{e \text{ max.}}$	5 000	3 000	rpm
Current, max. recommended		limited by the load resistance		
Terminal resistance	R	350	810	Ω
Ripple, peak-peak, typical		5	5	%
Ripple, frequency, cycles		14	14	per turn
Linearity, without load ...				
between 500 rpm and 5 000 rpm	\pm	0,2	0,2	%
Reversion error	\pm	0,2	0,2	%
Temperature coefficient of EMF		0,02	0,02	%/°C
Temperature coefficient of armature resistance		0,4	0,4	%/°C
Rotor inductance	L	15 000	30 000	μH
Rotor inertia	J	2,5	2,5	gcm ²
Commutator segments		7	7	gold alloy
Operating temperature range				
– standard		– 30 ... + 85		°C
– optional		– 30 ... + 125		°C
Shaft bearings		sintered bronze sleeves	ball bearings	ball bearings, preloaded
Shaft load max.:		(standard)	(optional)	(optional)
– with shaft diameter		2,0	2,0	2,0
– radial at 3000 rpm (3 mm from bearing)		1,2	8	8
– axial at 3000 rpm		0,2	0,8	0,8
– axial at standstill		20	10	10
Shaft play:				
– radial	\leq	0,03	0,015	0,015
– axial	\leq	0,2	0,2	0
Weight		61	61	g
Housing material		steel, zinc galvanized and passivated		
Direction of rotation		reversible		
Polarity		+ on plus pole if shaft is driven in clockwise direction		

Design

These tachogenerators feature the patented skew wound ironless rotors (System FAULHABER®).

Commutation system

Commutator and brushes are made of high quality gold alloy and provide a minimized but constant contact resistance as well as insensibility to changes in environment.

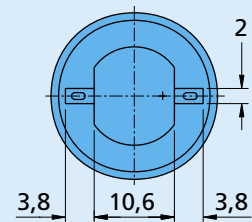
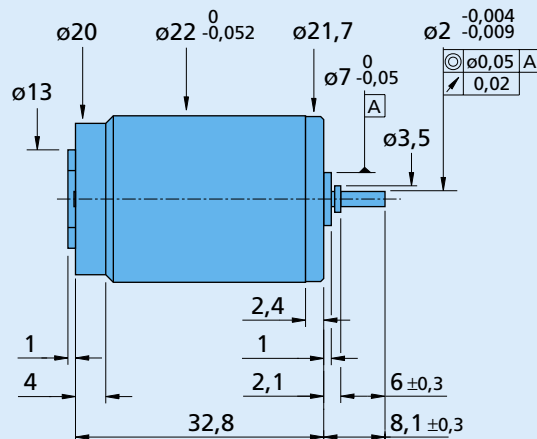
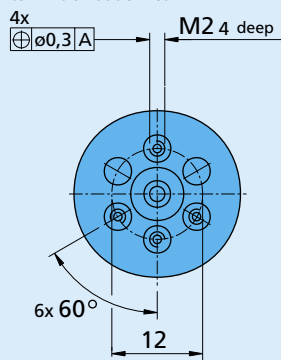
Advantages

This unique design exhibits the following advantages:

- excellent commutation signal
- linear speed/back-EMF characteristics
- high efficiency
- low armature inertia
- smooth running
- extreme low starting friction – even after long standstill

Dimensional drawings

Orientation with respect to generator terminals not defined



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