

DC-Tachogenerators

Precious Metal Commutation

Series 2225

		2225 U 4,3 G9		
EMF constant	k_E	4,3		mV/rpm
		41,1		mV/rad/s
Tolerance of EMF constant		± 1		%
Load resistance	$R_L \geq$	25		k Ω
Recommended max. speed:				
– for continuous operation	$n_{e \max.}$	5 000		rpm
Current, max. recommended		limited by the load resistance		
Terminal resistance	R	260		Ω
Ripple, peak-peak, typical		7		%
Ripple, frequency, cycles		10		per turn
Linearity, without load ...				
between 500 rpm and 5 000 rpm	\pm	0,2		%
Reversion error	\pm	0,2		%
Temperature coefficient of EMF		0,02		%/°C
Temperature coefficient of armature resistance		0,4		%/°C
Rotor inductance	L	7 000		μ H
Rotor inertia	J	1,65		gcm ²
Commutator segments		5		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 3 000 rpm (3 mm from bearing)		1,5	8	8
– axial at 3 000 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		45	61	61
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:

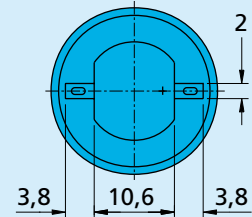
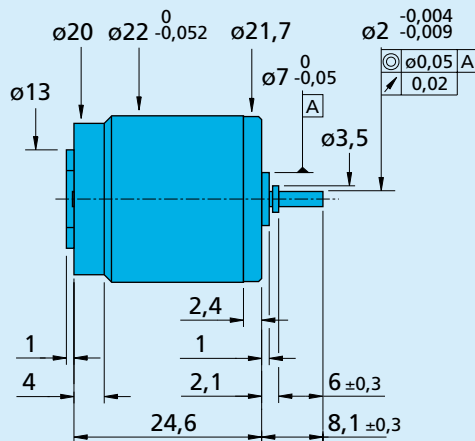
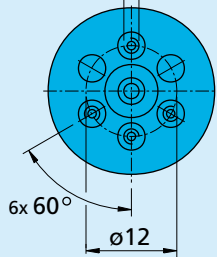
- excellent commutation signal
- linear speed/back-EMF characteristics
- high efficiency
- low armature inertia
- smooth running
- extreme low starting friction – even after long standstill

Dimensional drawings

Orientation with respect to generator terminals not defined



4x $\oplus \varnothing 0,3 \text{ A}$ M2 4 deep



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