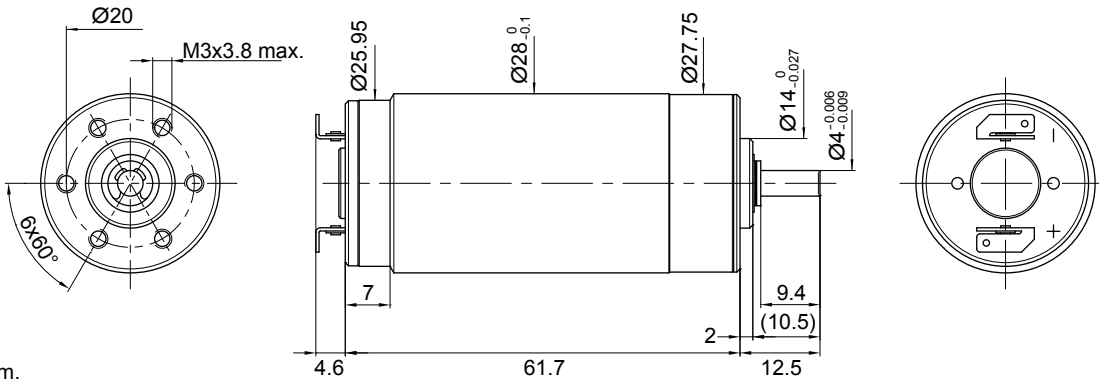


28DT12

Ø 28 mm • Graphite-Copper commutation • 41 mNm



Dimensions in mm.

Electrical Data	Symbol	28DT12 .... 1				Unit
		222P	219P	222E	219E	
1 Nominal Voltage	V	12	15	24	28	Volt
2 No-Load Speed	$n_0$	6,840	7,100	6,851	6,870	rpm
3 No-Load Current	$I_0$	210.0	180.0	110.0	90.0	mA
4 Terminal Resistance	R	1.9	2.9	6.2	9.9	$\Omega$
5 Output Power	$P_{2max}$	24.0	24.0	27.0	24.0	W
6 Stall Torque	mNm	102 (14.45)	101 (14.31)	126 (17.85)	107 (15.16)	mNm (oz-in)
7 Efficiency	$\eta_{max}$	67	66	69	68	%
8 Max Continuous Speed	$n_{e max}$	9,000	9,000	9,000	9,000	rpm
9 Max Continuous Torque	$M_{e max}$	37 (5.1)	36 (5.1)	41 (5.81)	37 (5.24)	mNm (oz-in)
10 Max Continuous Current	$I_{e max}$	2.50	2.00	1.40	1.10	A
11 Back-EMF Constant	$k_E$	1.70	2.04	3.40	3.95	mV/rpm
12 Torque Constant	$k_M$	16.20	19.50	32.50	37.70	mNm/A
13 Motor Regulation	$R/k^2$	7.0	8.0	6.0	7.00	$10^3/Nms$
14 Friction Torque	$T_F$	3.4 (0.49)	3.4 (0.49)	3.4 (0.49)	3.4 (0.49)	mNm (oz-in)
15 Rotor Inductance	L	0.20	0.30	0.75	1.10	mH
16 Mechanical Time Constant	$\tau_m$	14.0	14.4	12.0	12.6	ms
17 Rotor Inertia	J	20.00	18.00	20.00	18.00	g-cm <sup>2</sup>

General Data				
18 Thermal Resistance (rotor/body)	$R_{th1}/R_{th2}$	3.5/8		$^{\circ}C/W$
19 Thermal Time Constant (rotor/stator)	$t_{w1}/t_{w2}$	18/630		S
20 Operating Temperature Range:	motor	-30°C to 85°C (-22°F to 185°F) 100°C (212°F)		$^{\circ}C (^{\circ}F)$
	rotor			$^{\circ}C (^{\circ}F)$
21 Shaft Load Max.: (5 mm. from bearing)	With sleeve bearings			
	-radial	8.0 (28.8)		N (oz)
22 Shaft Play:	-axial	500 (1798.5)		N (oz)
	-radial	<0.025 (0.001)		mm (inch)
23 Weight	-axial	0.15 (0.0059)		mm (inch)
	g	200 (7.06)		g (oz)

Execution Table

Gearbox	Single Shaft	Double Shaft for E9	HEDS
R32	4	106	103
R40	1	98	Upon Request

