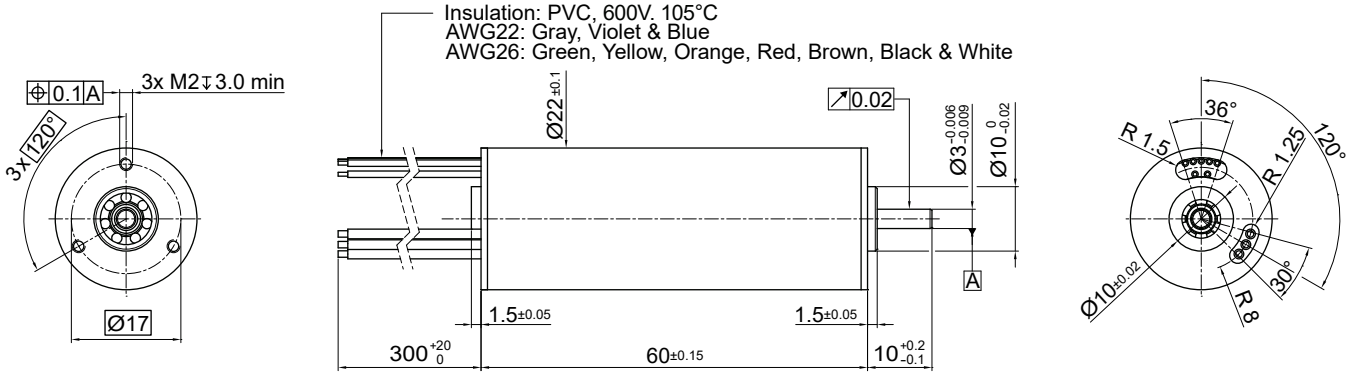
22ECT60 Ultra EC™

Ø 22 mm • 4-pole • 86 W



Dimensions in mm.

Electrical Data		Symbol	22ECT60-10B-xxx.01			Unit
			9	15	21	
1	Nominal Voltage	U_N	24	24	24	Volt
2	Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3	No-Load Speed	n_0	20,370	12,350	9,180	rpm
4	Typical No-Load Current	I_0	370	170	115	mA
5	Max Continuous Mechanical Power (@25°C)	P_{max}	86	86	86	W
6	Max Continuous Current	$I_{e\,max}$	5.9	3.6	2.6	A
7	Max Continuous Torque	$M_{e\,max}$	65.9 (9.34)	66.9 (9.48)	64.3 (9.11)	mNm (oz-in)
8	Back EMF Constant	k_E	1.16	1.97	2.72	V/1000 rpm
9	Torque Constant	k_M	11.1	18.8	26.0	mNm/A
10	Motor Regulation	R/k^2	1.5	1.5	1.6	10^3/Nms
11	Motor Regulation	$k/R^{½}$	25.5 (3.6)	26 (3.7)	25 (3.5)	mNm/W^{½} (oz-in/W^{½})
12	Internal Resistance - phase to phase	R_l	0.19	0.52	1.08	ohms
13	Line to Line Resistance at Connectors	R_L	0.22	0.55	1.11	ohms
14	Inductance Phase to Phase	L	0.02	0.06	0.12	mH
15	Mechanical Time Constant	τ_m	1.3	1.3	1.4	ms
16	Electrical Time Constant	τ_e	0.12	0.12	0.11	ms

General Data				
17	Maximum Motor Speed	n_{max}	20,000	rpm
18	Ambient Working Temperature Range	-	-30 to + 100 (-22 to + 212)	°C (°F)
19	Ambient Storage Temperature Range	-	-40 to + 100 (-40 to + 212)	°C (°F)
20	Ball Bearings Preload	-	6.8	N
21	Axial Static Force w/o Shaft Support (max)	-	45.0	N
22	Maximum Winding Temperature	-	125 (257)	°C (°F)
23	Thermal Resistance	R_{th}	2.0 / 8.8	°C/W
24	Thermal Time Constant	τ_w	980	s
25	Weight	-	123 (4.34)	g (oz)
26	Rotor Inertia	J	8.71	g-cm^2
27	Hall Sensor Electrical Phasing*	-	120	Electrical °

*Available without hall sensor

Wire	Description
Gray	Phase 1
Violet	Phase 2
Blue	Phase 3
Green	3.5 to 24V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3
Black	NTC 10 kohm
White	NTC 10 kohm
with hall effect sensor	

