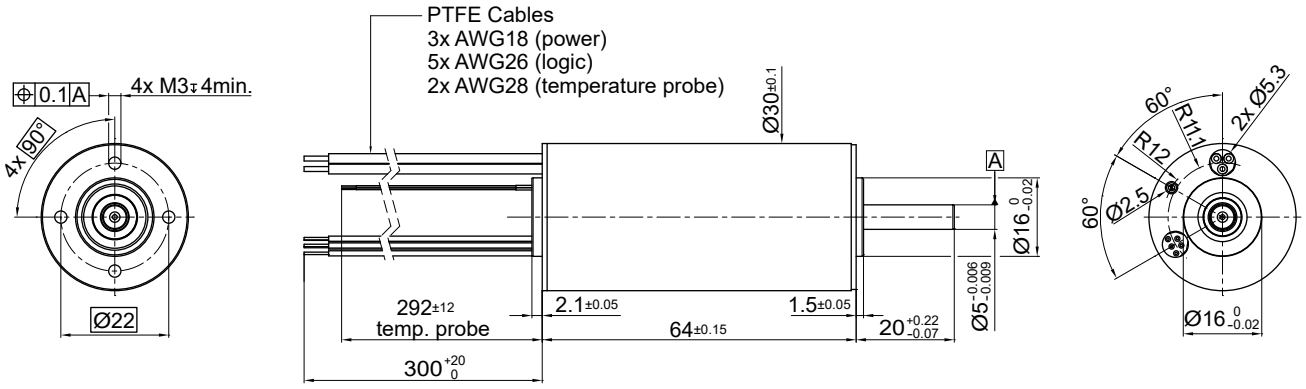
30ECT64 Ultra EC™

Ø 30 mm • 4-pole • 187 W



Dimensions in mm.

Electrical Data		Symbol	30ECT64-10B-xxx.01 4	7	11	14	Unit
1	Nominal Voltage	U_N	18	24	36	48	Volt
2	Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	Symmetrical	-
3	No-Load Speed	n_0	28,550	21,930	21,150	22,425	rpm
4	Typical No-Load Current	I_0	1,100	575	425	300	mA
5	Max Continuous Mechanical Power (@25°C)	P_{max}	187.0	187.0	187.0	187.0	W
6	Max Continuous Current	$I_{e\,max}$	22.8	12.9	8.1	6.5	A
7	Max Continuous Torque	$M_{e\,max}$	137 (19.40)	136 (19.26)	134 (18.98)	133 (18.84)	mNm (oz-in)
8	Back EMF Constant	k_E	0.63	1.10	1.74	2.14	V/1000 rpm
9	Torque Constant	k_M	6.0	10.5	16.6	20.5	mNm/A
10	Motor Regulation	R/k^2	0.55	0.57	0.59	0.60	10^3/Nms
11	Motor Regulation	$k/R^{½}$	42.5 (6.02)	41.8 (5.92)	41.3 (5.85)	40.8 (5.78)	mNm/W^{½} (oz-in/W^{½})
12	Internal Resistance - phase to phase	R_l	0.02	0.06	0.16	0.25	ohms
13	Line to Line Resistance at Connectors	R_L	0.04	0.08	0.18	0.27	ohms
14	Inductance Phase to Phase	L	0.01	0.02	0.04	0.06	mH
15	Mechanical Time Constant	τ_m	1.6	1.6	1.6	1.7	ms
16	Electrical Time Constant	τ_e	0.25	0.23	0.22	0.23	ms

General Data				
17	Maximum Motor Speed	n_{max}	30,000	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	-	13.5	N
21	Axial Static Force w/o Shaft Support (max)	-	134	N
22	Maximum Winding Temperature	-	150 (302)	°C (°F)
23	Thermal Resistance	R_{th}	0.9/7	°C/W
24	Thermal Time Constant	τ_w	1,327	s
25	Weight	-	263 (9.28)	g (oz)
26	Rotor Inertia	J	28.00	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	4 to 24V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3
White	NTC 10 kohm
White	NTC 10 kohm
with hall effect sensor	

