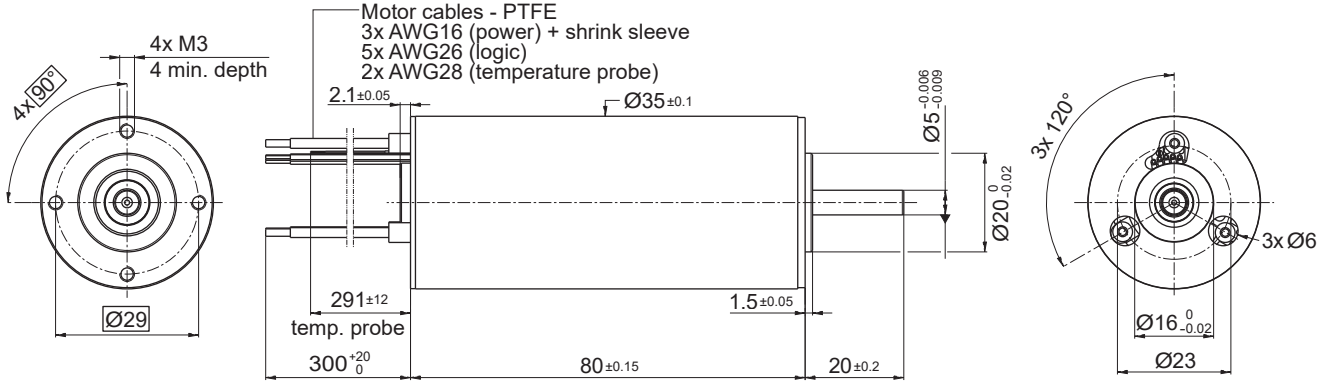


35ECS80 Ultra EC™

Ø 35 mm • 2-pole • 330 W



Dimensions in mm

Electrical Data	Symbol	35ECS80 10B-xxx.01			Unit
		8	11	14	
1 Nominal Voltage	$U_N$	24	36	48	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3 No Load Speed	$n_0$	27,000	29,500	31,100	rpm
4 Typical No Load Current	$I_0$	700	550	430	mA
5 Max. Continuous Mechanical Power (@25°C)	$P_{max}$	330	330	330	W
6 Max. Continuous Current	$I_{e,max}$	22.6	16.4	12.9	A
7 Max. Continuous Torque	$M_{e,max}$	193.4 (27.3)	193.1 (27.3)	193.1 (27.3)	mNm (oz-in)
8 Back EMF Constant	$k_E$	0.9	1.23	1.57	V/1000 rpm
9 Torque Constant	$k_M$	8.56	11.78	14.98	mNm/A
10 Motor Regulation	$R/k^2$	0.367	0.368	0.369	10 <sup>3</sup> /Nms
11 Motor Regulation	$k/R^{1/2}$	52.2 (7.37)	52.1 (7.37)	52.1 (7.37)	mNm/W <sup>1/2</sup> (oz-in/W <sup>1/2</sup> )
12 Internal Resistance - phase to phase	$R_l$	0.027	0.051	0.083	ohms
13 Line to Line Resistance at Connectors	$R_L$	0.039	0.063	0.095	ohms
14 Inductance Phase to Phase	$L$	0.017	0.03	0.047	mH
15 Mechanical Time Constant	$\tau_m$	1.2	1.2	1.2	ms
16 Electrical Time Constant	$\tau_e$	0.4	0.6	0.5	ms

General Data					
17 Maximum Motor Speed	$n_{max}$	40000			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	-	9			N
21 Axial Static Force w/o Shaft Support (max)	-	134			N
22 Maximum Winding Temperature	-	150 (302)			°C (°F)
23 Thermal Resistance	$R_{th}$	0.7/5.4			°C/W
24 Thermal Time Constant	$\tau_w$	1,822			s
25 Weight	-	440 (15.52)			g (oz)
26 Rotor Inertia	$J$	33			g-cm <sup>2</sup>
27 Hall Sensor Electrical Phasing*	-	120			Electrical °

\*Also available without Hall sensors

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

