

# U318F MOTOR

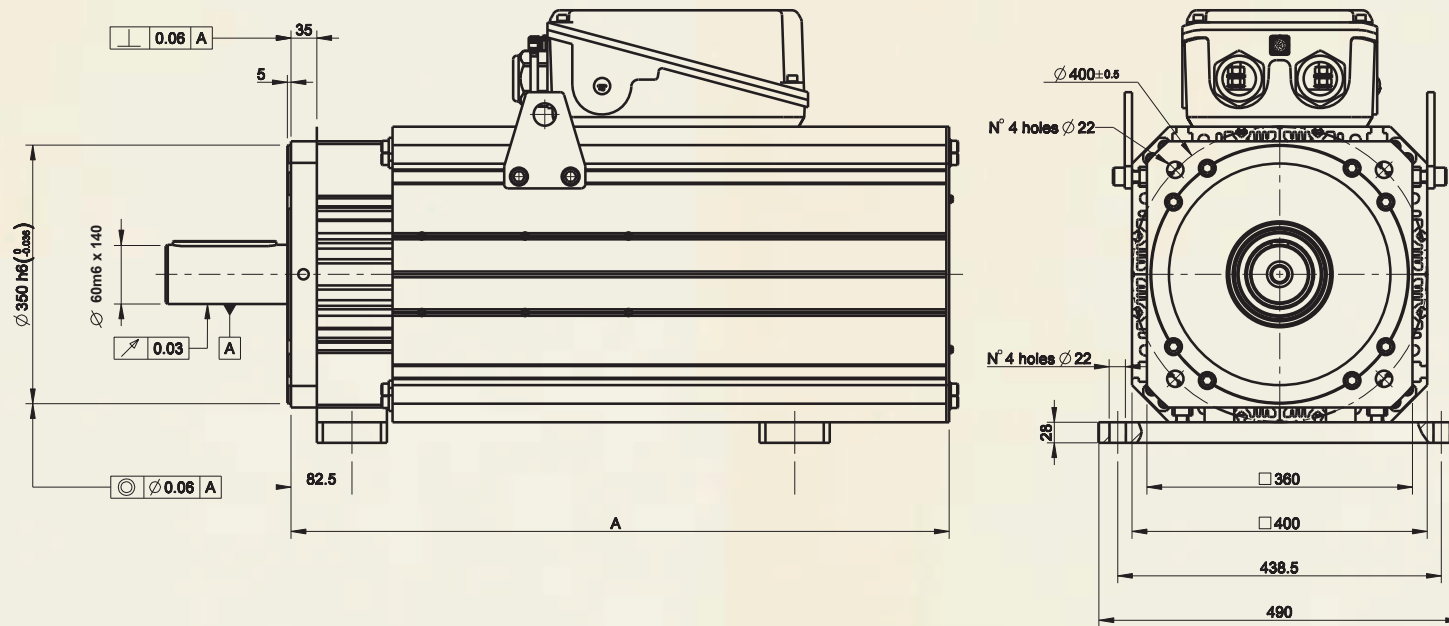
Servo Fan Cooling type F / For Inverter rated Voltage 380Vac to 480Vac

Motor Type U3			1835F		1870F		18100F	
Rated Speed	nM	[rpm]	1000	2000	1000	2000	1000	2000
Stall Torque 2)	Md0	[Nm]	500		1000		1270	
Current @ Stall Torque 2)	Id0	[A]	88	176	176	352	251	504
Number of Poles	2p		12					
<b>Nominal Rating</b>								
Rated Torque 2)	MdN	[Nm]	520	420	890	790	1150	900
Rated Current 2)	IdN	[A]	92	148	157	278	228	357
Rated Power 2)	PdN	[kW]	54	88	93	165	120	188
Voltage Constant 3)	Ke	[V/1000rpm]	390	195	390	195	347	173
Torque Constant 3)	Kt	[Nm/A]	6,45	3,23	6,45	3,23	5,74	2,86
Torque Constant @ 130°C 3)	Ki100	[Nm/A]	5,68	2,84	5,68	2,84	5,05	2,52
Winding Resistance 3)	Ru-v	[Ω]	0,16	0,042	0,066	0,017	0,037	0,009
Winding Inductance 3)	Lu-v	[mH]	2,2	0,55	1,1	0,28	0,65	0,16
Derating Temp. Coeff. Of Back EMF	Dke/Dt	[%/°C]	-0,09					
Nominal Voltage	Vn	[V]	409	400	404	398	358	351
Minimum Flow Rate	Flow	[L/min]	n.a.					
Losses	Loss	[kW]	2,68	2,82	4,42	4,56	5,05	4,95
Efficiency	Eff	[%]	95	94	94	94	95	95
Knee Speed @ 380Vac	nknee1	[rpm]	926	1900	940	1908	1062	2165
Knee Speed @ 480Vac	nknee2	[rpm]	1178	2407	1193	2415	1346	2739
Knee Speed 380Vac and Mmax	nknee3	[rpm]	795	1658	816	1681	917	1900
Knee Speed 480Vac and Mmax	nknee4	[rpm]	1023	2114	1046	2139	1173	2414
<b>Maximum Values</b>								
Max. Torque	Mmax	[Nm]	1300		2500		3500	
Max. Current (peak value)	I <sub>max</sub>	[A]	252	504	484	969	762	1529
Max. Saturation Speed @ 380Vac	n <sub>max1</sub>	[rpm]	974	1949	974	1949	1095	2197
Max. Saturation Speed @ 480Vac	n <sub>max2</sub>	[rpm]	1231	2462	1231	2462	1383	2775
Max. Mechanical Speed	n <sub>max</sub>	[rpm]	4000					
<b>Mechanical Data</b>								
Inertia	J <sub>m</sub>	[Kgcm <sup>2</sup> ]	2820		5340		7010	
Mass	M	[Kg]	320		380		460	
Total Length	A	[mm]	700		892		1020	
Connection Box	Type		D					
Shaft dimension 8)	∅DxL	[mm]	60m6 x 140					
Shaft dimension 9)	∅DxL	[mm]	60m6 x 140		80m6 x 170		90m6 x 170	
<b>Technical Data of the holding brake</b>								
Holding Torque	M <sub>Br</sub>	[Nm]	n.a.					
Rated Voltage (±10%)	U <sub>Br</sub>	[Vdc]	n.a.					
Rated Current 2)	I <sub>Br</sub>	[A]	n.a.					
Mass	M <sub>Br</sub>	[Kg]	n.a.					
Inertia	J <sub>Br</sub>	[Kgcm <sup>2</sup> ]	n.a.					
Additional motor length	L <sub>enght</sub>	[mm]	n.a.					

## Test Condition

1) Motor tested in horizontal position in free still air, ambient temperature 30°C; 2) Motor flanged (T<sub>flange</sub> = 30°C), to use on baseplate derate -30% of the Md0; 3) Typical data tolerance +/- 10%; 4) Not available in S1 duty and DT100°C; 5) Treshold of built in PTC 130°C; 6) KTY84-130; 7) Chopper frequency 8kHz; 8) DIN748-1 - Simultaneous transmission of a torque and a corresponding known bending moment (column b); 9) DIN748-1 - Simultaneous transmission of torque and an unknown bending moment (column c)

### Technical Drawing



#### Total Length

Type	A (mm)
18035F	700
18070F	892
18100F	1020

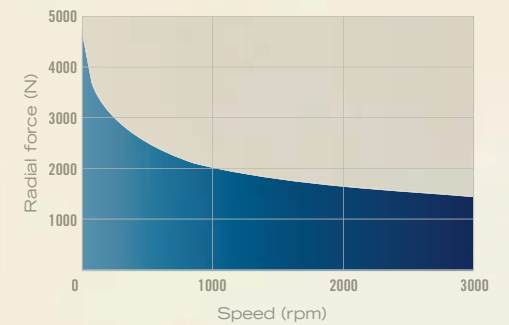
#### Connections

CONNECTION BOX / TYPE	D
Dimension (a x b x c) mm	353 x 264.5 x 157.5

Note: exit shaft dimensions to be defined according to the key options

#### Max. Radial Load

applicable in the middle of the shaft extension



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