Brushless DC-motors

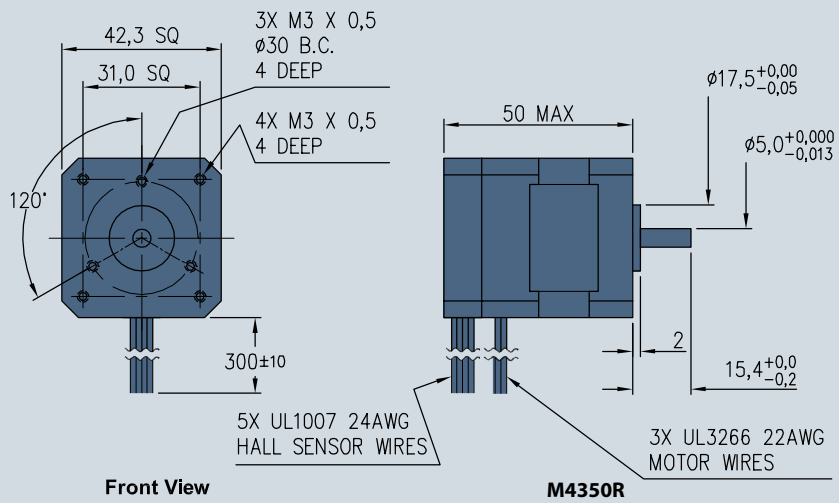
Electronic Commutation

118 mNm

For combination with:
Gearheads:
M42P

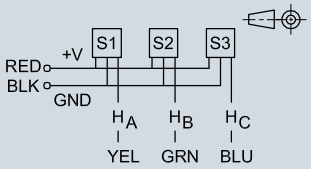
Series M4350R

		M4350R		24TB	
1	Nominal voltage	U_N		24	Volt
2	Terminal resistance, phase-phase	R	±20%	0,71	Ω
3	Output power	$P_{2\ max.}$		199,35	W
4	Efficiency	$\eta_{\ max.}$		82	%
5	No-load speed	n_o	±15%	7 500	rpm
6	No-load current max. (Ø 5 mm shaft)	I_o	±50%	0,29	A
7	Stall torque (theoretical)	M_H		1024,08	mNm
8	Friction torque, static	M_R		8,786	mNm
9	Speed constant	k_n		315	rpm/V
10	Back-EMF constant	k_E		3,173	mV/rpm
11	Torque constant	k_M		30,296	mNm/A
12	Current constant	k_I		0,033	A/mNm
13	Slope of n-M curve	$\Delta n/\Delta M$		7,3	rpm/mNm
14	Rotor inductance	L		458	µH
15	Mechanical time constant	τ_m		10,9	ms
16	Rotor inertia	J		140,9	gcm²
17	Angular acceleration	$\alpha_{\ max.}$		73	·10³rad/s²
18	Thermal resistance	$R_{th\ 1}$ / $R_{th\ 2}$	1,22 / 4,42		°C/W
19	Thermal time constant	$\tau_{\ w}$	1 000		s
20	Operating temperature range:				
	– ambient temperature range		– 25 to + 60		°C
	– winding, max. permissible		+ 130		°C
21	Shaft bearings		ball bearings, preloaded		
22	Shaft load max.:				
	– with shaft diameter		5		mm
	– radial		20		N
	– axial		10		N
					N
23	Shaft play:				
	– radial	≤	0,0200		mm
	– axial	≤	0,0800		mm
24	Housing material		aluminum end bells		
25	Weight		250		g
26	Direction of rotation		bi-directional		
Recommended values - mathematically independent of each other					
27	Speed up to	$n_{e\ max.}$		7 000	rpm
28	Torque up to	$M_{e\ max.}$		117,6	mNm
29	Current up to (thermal limits)	$I_{e\ max.}$		4,35	A

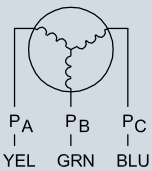


Front View

M4350R



Hall sensor connections
Note: Hall sensor power supply voltage +5 to +20VDC



Phase wire connections

How to Order a M4350R

Part number	Voltage	Description	Stocked Items
M4350R24TB000	24	Standard motor	X