

Report for Brushless Motor Testing Data Sheet

ies No: BL7584- IE	P 4						
o. Testing Item			Tested Values				
Nominal voltage	$\mathbf{U_{N}}$	24				V	
Terminal resistance, phase to phase	R	2.1				Ω	
Output power	P _{2max}	63.39				W	
Efficiency		65				%	
No-load speed	n _o	5880				rpm	
No-load current	I_o	0.44				A	
Stall torque	$\mathbf{M}_{\mathbf{H}}$	411.81				mNm	ı
Friction torque	MF	16.49				mNm	1
Speed constant	k _n	254.81				rpm/\	V
Back-EMF constant	k_{E}	3.92				mV/rp	m
Torque constant	$\mathbf{k}_{\mathbf{M}}$	37.48				mNm/	Ά
Current constant	$\mathbf{k_{I}}$	0.03				A/mN	m
Slope of n-M curve	Δn/ΔM	14.28				rpm/m m	ıN
Mechanical time constant	$ au_{ exttt{m}}$	85.05				ms	
Rotor inertia	J	568.82				gcm ²	2
Angular acceleration	$\alpha_{ ext{max}}$	7.24				10 ³ rad	/s ²
Sensor		Hall Sensor					
Driver		DR24					
Weight		1250 g					
Operating temperature range		-30~+85					
Commutation		Electronically commutation					
Ball Bearing		NMB					
Housing material		Aluminum, black anodized					
Magnet material		Sintered Nd-Fe-B					
Direction of rotation		Electronically reversible					
The Operatin	g Data Fo	or η max of	Customer's	s Specificati	ons		
Output Power	P _{2opt}	40.57				W	
Efficiency	η_{opt}	65				%	
Speed	n _{opt}	4703				rpm	
	Testing Item Nominal voltage Terminal resistance, phase to phase Output power Efficiency No-load speed No-load current Stall torque Friction torque Speed constant Back-EMF constant Torque constant Current constant Slope of n-M curve Mechanical time constant Rotor inertia Angular acceleration Sensor Driver Weight Operating temperature range Commutation Ball Bearing Housing material Direction of rotation The Operatin Output Power Efficiency	Testing Item Nominal voltage Terminal resistance, phase to phase Output power Efficiency No-load speed No-load speed No-load current Io Stall torque MF Friction torque Speed constant Back-EMF constant Current constant Current constant K ₁ Slope of n-M curve Mechanical time constant Rotor inertia J Angular acceleration Sensor Driver Weight Operating temperature range Commutation Ball Bearing Housing material Magnet material Direction of rotation The Operating Data Formst to the page of	Testing Item U _N 24 Terminal resistance, phase to phase R 2.1 Output power P _{2max} 63.39 Efficiency η _{max} 65 No-load speed η _o 5880 No-load current I _o 0.44 Stall torque M _H 411.81 Friction torque MF 16.49 Speed constant k _n 254.81 Back-EMF constant k _m 37.48 Current constant k _I 0.03 Slope of n-M curve An/AM 14.28 Mechanical time constant τ _m 85.05 Rotor inertia J 568.82 Angular acceleration α _{max} 7.24 Sensor Driver Weight Operating temperature range Commutation Ball Bearing Housing material Magnet material Direction of rotation The Operating Data For η max of Output Power P _{2opt} 40.57 Efficiency η _{opt} 65	Testing Item	Testing Item	Testing Item	Testing Item

Note:

29 Load Current

30 Operating Torque

The ${\bf I_0}$ is pure current of motor in this data sheet that means it not included the driver's current.

 $\mathbf{M}_{\mathrm{opt}}$

2.64

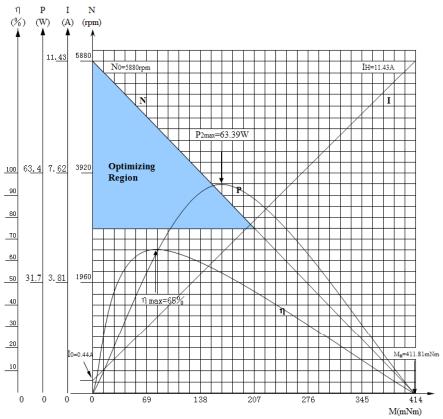
82.40



mNm



Operating Curve



Note:(1)The I_0 is pure current of motor in this curve drawing that means it not included the driver's current.

(2)We have suggested there has a optimizing region for this motor's operating as hatched in drawing.

Drawing

