

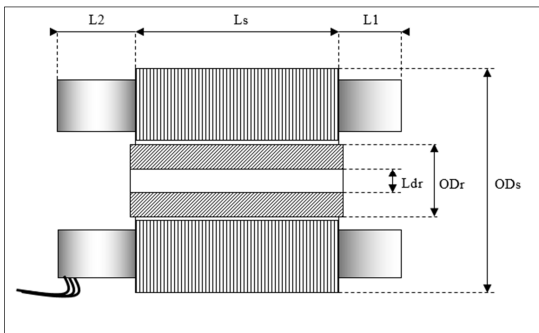
## Motors and drives

# Brushless DC motor



Extensive range of electric motors, from a few Watts to more than 200 kW. These motors are intended to fit on-board aerospace, defence, and other demanding environments. They are available as a line replaceable unit (housed) or frameless that can be integrated by the customer.

### General outline



Outside dia. Stator (ODs)  
 Outside dia. Rotor (ODr)  
 Stack lamination length (Ls)  
 End turns length (L1)  
 End turns length wires output side (L2)  
 Inside dia. Rotor (Ldr)

Model	ODs	ODr	Ls	L1	L2	Ldr	Weight	Rotor inertia
	mm	mm	mm	mm	mm	mm	g	Kg.m <sup>2</sup>
<b>BM5848C01</b>	101.6	57.5	48	20	25	22.22	700	3.6E-04

### Key features

- Low maintenance
- High power density
- Excellent fluid compatibility
- Customised designs
- Lightweight

### Applications

- Fans
- Pumps
- Servo-controlled actuators
- Utilities

### Contact

#### Artus

37 Ch. Du Champ des Martyrs  
 BP 20009  
 49241 Avrillé Cedex  
 France  
 Tel: +33 (0) 241 336 340  
 artus.sales@meggitt.com  
 www.meggittpower.com

## Meggitt Sensing Systems

Our product competencies and services:  
 Avionics displays | Inertial sensors | Ignition systems |  
 Performance Sensing | **Power & Motion** | Sensing & Monitoring

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## Motors and drives

# Brushless DC motor

### Specifications

	Symbol	Unit	BM5848C01
<b>Size constants</b>			
Continuous stall torque	$T_c$	Nm	5.100
Motor constant	$K_m$	Nm/ $\sqrt{W}$	0.50349
Cogging Torque (peak/peak)	Cogg	Nm	0.8000
Motor friction torque	$T_f$	Nm	0.052
Viscous friction torque	$F_i$	Nm/rad/s	8.5E-05
Max. winding temperature		°C	180
Ultimate temperature rise/Watt	TPR	°C/W	0.65
Number of poles	2p	-	6
<b>Winding constants (alternate windings available)</b>			
Terminal DC voltage	$U_{dc}$	V DC	260
Peak torque	$T_p$	Nm	20.000
Peak current	$I_p$	A	90.00
Torque Sensitivity Ph to N at max. current	$K_t$ Ph/N	Nm/A	0.13000
Back EMF peak Ph to N	$K_b$ Ph/N	V/(rad/s)	0.13000
Resistance Phase to neutral @ 25°C	R Ph/N	Ohm	0.10
Inductance Phase to neutral	L Ph/N	mH	0.30
No Load Speed	$\Omega_0$	Rpm	11015
Winding Connection	/	/	Star
Mechanical Time Constant	$\tau_m$	ms	2.12
Electrical Time Constant	$\tau_e$	ms	3.00

Note: Due to continuous process improvement, specifications are subject to change without notice

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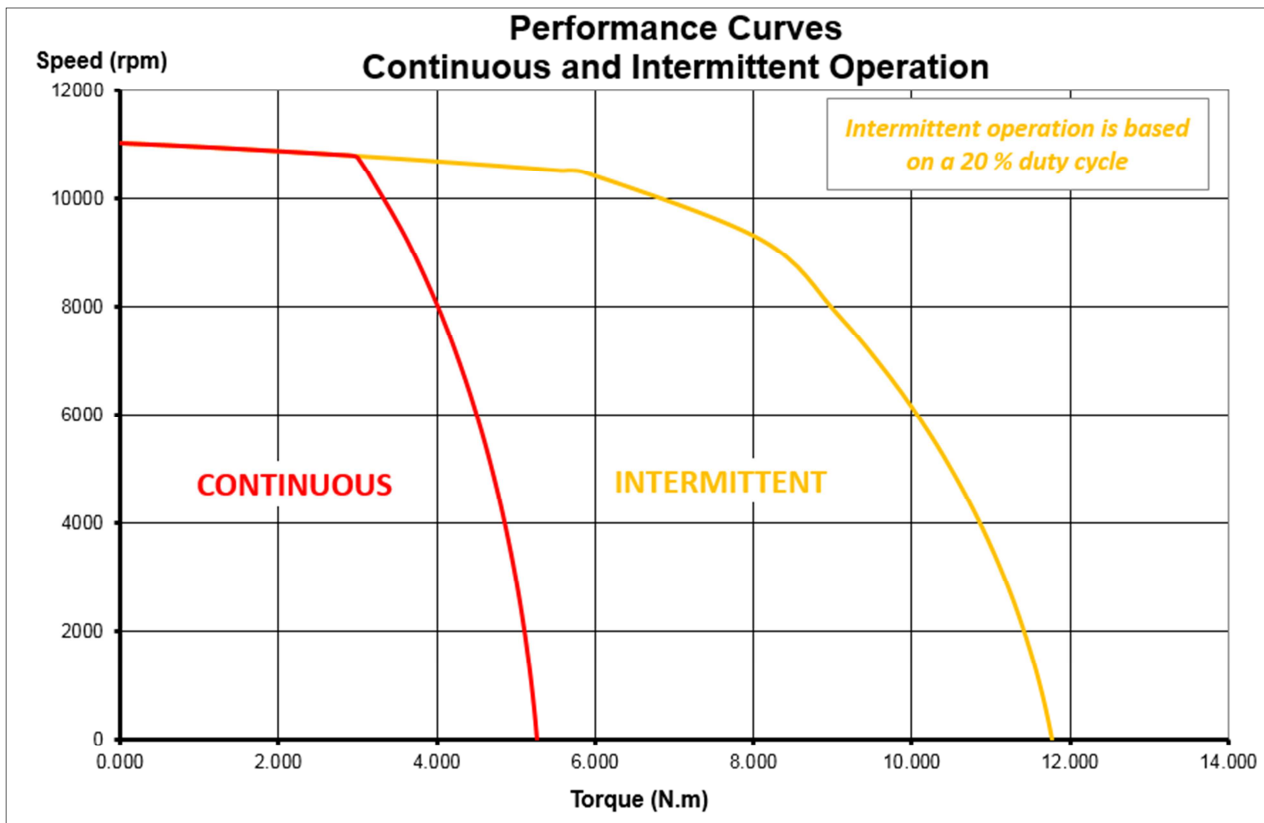
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 smart engineering for  
 extreme environments

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## Performance curves



### BM5848C01

Performance curves and TPR assume with housed motor mounted to (200 x 200 x 6) mm

#### Notes:

1. Typical electrical specification at 25 °C
2. Many other custom mechanical options are available – for assistance please contact our applications engineer
3. Many other winding options are available - for assistance please contact our applications engineer
4. Housed or frameless designs are available

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