

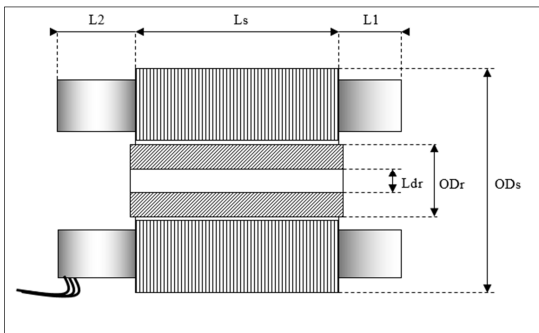
Motors and drives

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 ² |
| BM7094C01 | 114.8 | 68.6 | 94 | 25 | 36 | 38 | 6500 | 1.5E-03 |

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

MSSArtus_DCmotor_201801

Motors and drives

Brushless DC motor

Specifications

| | Symbol | Unit | BM7094C01 |
|---|------------|----------------|-----------|
| Size constants | | | |
| Continuous stall torque | T_c | Nm | 14.000 |
| Motor constant | K_m | Nm/ \sqrt{W} | 1.01130 |
| Cogging Torque (peak/peak) | Cogg | Nm | 0.2500 |
| Motor friction torque | T_f | Nm | 0.500 |
| Viscous friction torque | F_i | Nm/rad/s | 4.2E-03 |
| Max. winding temperature | | °C | 180 |
| Ultimate temperature rise/Watt | TPR | °C/W | 0.4 |
| Number of poles | 2p | - | 6 |
| Winding constants (alternate windings available) | | | |
| Terminal DC voltage | U_{dc} | V DC | 80 |
| Peak torque | T_p | Nm | 50.000 |
| Peak current | I_p | A | 340.00 |
| Torque Sensitivity Ph to N at max. current | K_t Ph/N | Nm/A | 0.08660 |
| Back EMF peak Ph to N | K_b Ph/N | V/(rad/s) | 0.08660 |
| Resistance Phase to neutral @ 25°C | R Ph/N | Ohm | 0.01 |
| Inductance Phase to neutral | L Ph/N | mH | 0.05 |
| No Load Speed | Ω_0 | Rpm | 5080 |
| Winding Connection | / | / | Star |
| Mechanical Time Constant | τ_m | ms | 2.16 |
| Electrical Time Constant | τ_e | ms | 4.09 |

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

Meggitt Sensing Systems

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

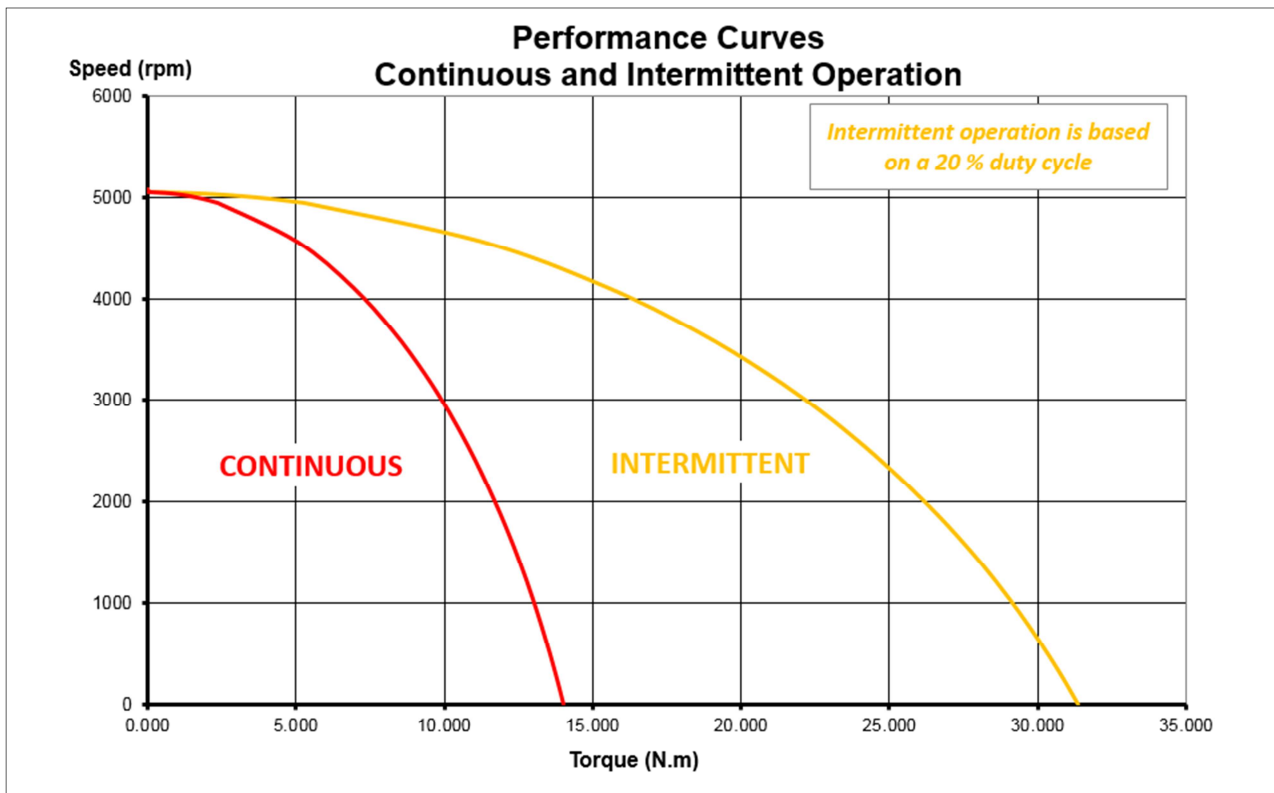
MSSArtus_DCmotor_201801

MEGGITT
 smart engineering for
 extreme environments

Motors and drives

Brushless DC motor

Performance curves



BM7094C01

Performance curves and TPR assume with housed motor mounted to (230 x 230 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

Meggitt Sensing Systems

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

MSSArtus_DCmotor_201801