

SERVO MOTOR – 142UDC300BFAEA165240-JSHJ

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HIGH INERTIA



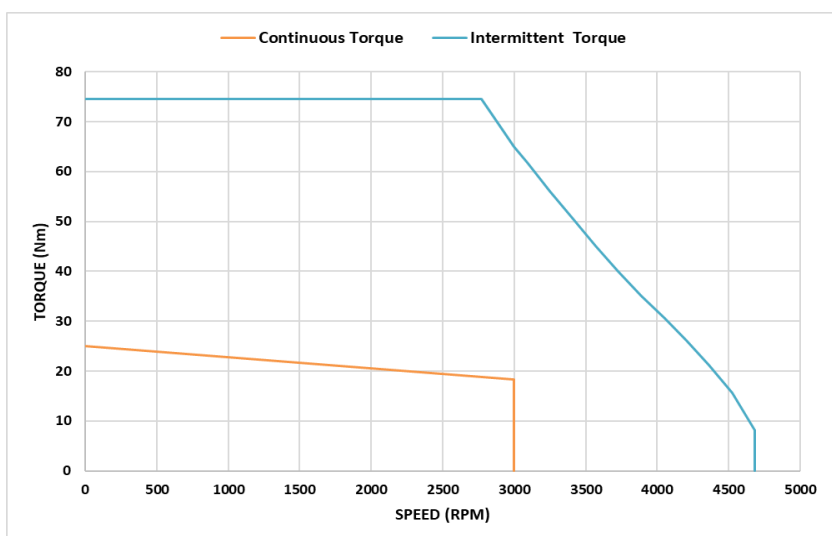
Definition

| Type | Unimotor HD | |
|----------------------------|----------------------|---|
| Motor frame size (mm) | 142 | |
| Voltage (Vdc) | U | 430V |
| Magnet type | D | High Dynamic |
| Frame Length | C | |
| Speed (min ⁻¹) | 30 | 3000 |
| Brake | 0 | Unbraked |
| Connection type | B | PWR RA Rotatable T1 & SIG RA Rotatable T1 |
| Output shaft | F | Key and half key supplied separately |
| Feedback device code | AE | Resolver (Size 52) |
| Inertia & thermistor | A - JSHJ | PTC thermistor + High inertia |
| PCD | 165 | 165 (FF 165/130) |
| Shaft Diameter | 240 | 24j6 x 50 |
| Fan Box | - | |
| Insulation class | F | |
| UL Motor / UL Stator | UL Motor / UL Stator | |

Motor Characteristics

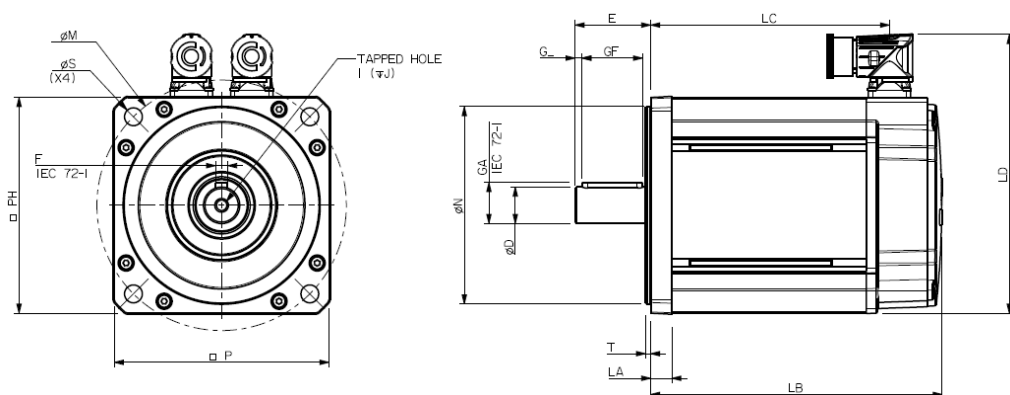
| | | | |
|-----------------------------------|------|--|------|
| Motor Ambient Temperature (°C) | 40 | Drive Fsw (kHz) | 12 |
| Motor Stall Torque (Nm) | 25 | Stall Current (A) | 16.0 |
| Rated Torque (Nm) | 18.4 | Nominal Current (A) | 12.8 |
| Motor Peak Torque (Nm) | 75 | Max Current for Peak Torque at Stall (A) | 61.3 |
| Rated Power (kW) | 5.8 | Kt (Nm/A) @cold | 1.6 |
| Winding Thermal Time Constant (s) | 245 | Ke (V/kmin-1) @cold | 98 |
| Number of Poles | 10 | R (ph-ph) (Ohm) @Hot | 0.53 |
| Maximum Cogging (Nm) | 0.38 | L (ph-ph) (mH) | 7.45 |
| Inertia (kg.cm ²) | 40.1 | Weight (kg) | 16.6 |
| Ingress Protection Level (IP) | IP65 | R (ph-ph) at ambient temperature (Ohm) | 0.39 |

Torque / Speed Graph



Motor Dimensions (mm)

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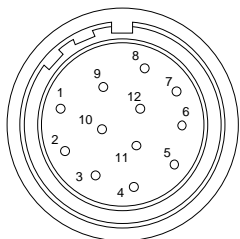


| | | |
|----|--------------------------|-----------|
| LB | Total length | 247 |
| LC | Power connector position | 212.5 |
| LA | Flange thickness | 14 |
| T | Register Length | 3.4 |
| N | Register Diameter | 130 |
| LD | Overall height | 183.5 |
| P | Flange Square | 142 |
| S | Fixing Hole Diameter | 12 |
| M | Fixing hole PCD | 165 |
| PH | Motor Housing Width | 142 |
| D | Shaft Diameter | 24j6 |
| E | Flange to Shaft End | 50 |
| GA | Key Height | 27 |
| GF | Key Length | 40 |
| G | Key to Shaft End | 4.6 |
| F | Key Width | 8 |
| I | Tapped Hole Thread Size | M8 x 1.25 |
| J | Tapped Hole Depth | 20 |
| | Mounting Bolt | M10 |

Connectors

Signal connection: AE - Resolver (Size 52)

Power connection: Size 1 – Type B



| Pin | Function | Pin | Function |
|-----|----------|------|------------|
| 1 | EXCIT | 7 | Thermistor |
| 2 | EXCIT/ | 8 | Thermistor |
| 3 | COS | 9 | |
| 4 | COS/ | 10 | |
| 5 | SIN | 11 | |
| 6 | SIN/ | 12 | |
| | | Body | Screen |

| Pin | Colour | Function |
|-----|--------------|-------------|
| 1 | ORANGE | PHASE U (R) |
| 2 | RED | PHASE V (S) |
| 3 | GREEN/YELLOW | EARTH |
| 4 | YELLOW | PHASE W (T) |
| 5 | | |
| 6 | | |
| 7 | Body | Screen |