



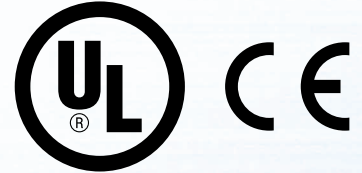
MOTION & CONTROL™

NSK

Low Profile MEGATORQUEMOTOR™ PN2012



High Speed, High Resolution and Low Profile!
UL Standard, CE Marking Conformed



Patent Pending



■ Features of Low Profile Megatorque Motor PN2012

1. Ultra Thin Design and Compact

The optimized magnetic field design provides twice the force density as NSK's original Motors within a compact 35 [mm] design.

2. Shortened Positioning Time

A new servo algorithm shortens the settling time to less than one-fifth of NSK's original Motors.

3. Built-in, Interchangeable, Highly Accurate Absolute Position Sensor

The low profile PN2 Model Motor incorporates an absolute position sensor with positioning accuracy of 90 [arc-sec] and requires no homing operations.

4. Compact Driver Unit

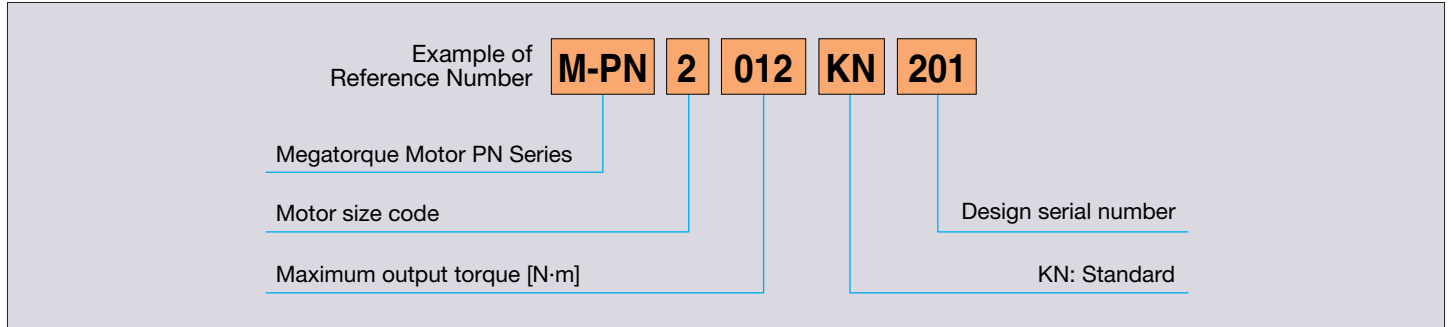
Combined with special module, the Driver Unit body is 65 [%] smaller than the original NSK Driver Unit. Internal program storage increased to 256 points.

Position Sensor Resolution of 2 621 440 [counts/rev]
Maximum Rotational Speed of 2 [s⁻¹]

Low Profile MEGATORQUEMOTOR™ PN2012

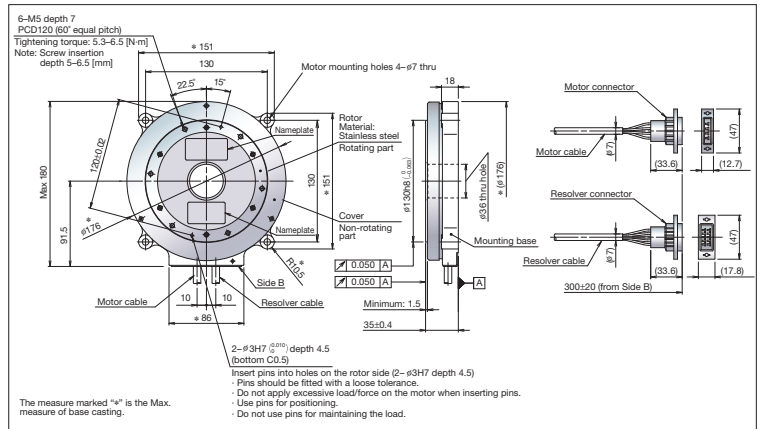
PN 2 Model Motor

Reference Number Coding



PN2012 Specifications

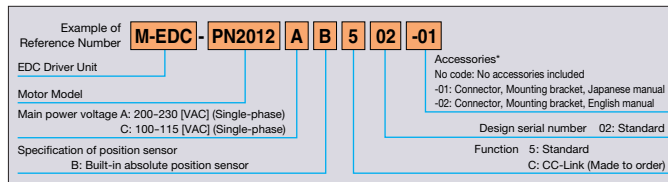
Functional item	Reference number	M-PN2012KN201
Motor outer diameter [mm]		∅176
Maximum output torque [N·m]		12
Rated output torque [N·m]		2
Motor height [mm]		35
Motor hollow diameter [mm]		∅36
Maximum rotational speed [s ⁻¹]		2
Resolution of position sensor [counts/rev]		2 621 440
Absolute positioning accuracy [arc-sec]		90 (interchangeable type, ambient temperature: 25 ± 5 [°C])
Repeatability [arc-sec]		±2
Allowable axial load [N]		1 000 (at 0 [N] radial load)
Allowable radial load [N]		300 (at 0 [N] axial load)
Allowable moment load [N·m]		20
Rotor's moment of inertia [kg·m ²]		0.0024
Recommended load's moment of inertia [kg·m ²]		0.02-0.24
Mass [kg]		3.7



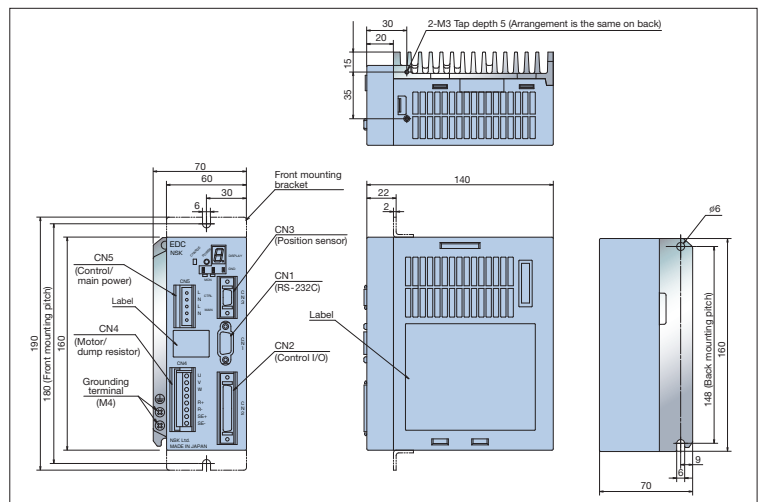
- Ambient temperature: 0-40 [°C], Humidity: 20-80 [%]; use indoors, free from dust, condensation, and corrosive gas. IP30 equivalent.
- For repeated operations within a range of 45 [°], rotate the motor at least 90 [°] once a day.

EDC Driver Unit

Reference Number Coding



- *Accessories
Accessories vary depending on the requested functions. For example, accessories for "5: Standard" Driver Unit are as follows.
1. CN2 connector (user side)
Connector: 54306-5019 (Molex)
Connector shell: 54331-0501 (Molex)
 2. CN5 connector (user side)
Connector: 231-305/026-000 (WAGO)
Wiring lever: 231-131 (WAGO)
 3. Driver Unit mounting bracket
 4. User's manual



For more information about NSK products, please contact: www.nsk.com

