

# SANMOTION F

## 2-Phase Stepping motor



High-Torque NEMA 34  
1.8° Stepping Motor  
New lineup

UL/CE Recognition

Class-F

IP40



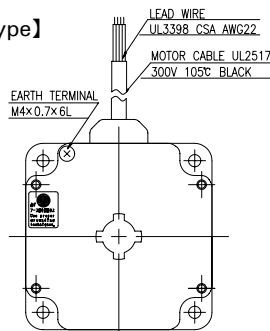
Standard  
UL1004  
EN60034-1  
EN60034-5

### Specifications (For Bipolar drive)

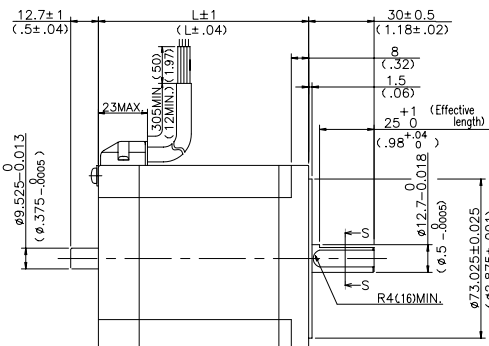
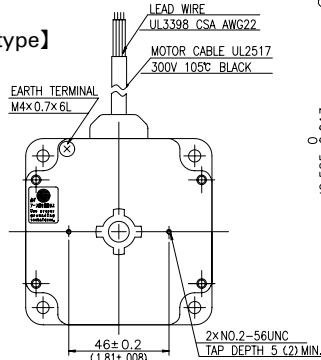
| Model        |              | Holding torque at 2-phase energization | Rated current | Winding resistance | Winding inductance | Rotor inertia                                            | Mass        |
|--------------|--------------|----------------------------------------|---------------|--------------------|--------------------|----------------------------------------------------------|-------------|
| Single shaft | Double shaft | N-m (oz-in) MIN.                       | A/phase       | Ω/phase            | mH/phase           | $\times 10^{-4}$ kg-m <sup>2</sup> (oz-in <sup>2</sup> ) | kg (lbs)    |
| SM2861-5052  | -5022        | 3.3(467.3)                             | 2             | 2.2                | 15                 | 1.48 (8.09)                                              | 1.75 (3.92) |
| SM2861-5152  | -5122        | 3.3(467.3)                             | 4             | 0.56               | 3.7                | 1.48 (8.09)                                              | 1.75 (3.92) |
| SM2861-5252  | -5222        | 3.3(467.3)                             | 6             | 0.29               | 1.7                | 1.48 (8.09)                                              | 1.75 (3.92) |
| SM2862-5052  | -5022        | 6.4(906.3)                             | 2             | 3.2                | 25                 | 3 (16.4)                                                 | 2.9 (6.5)   |
| SM2862-5152  | -5122        | 6.4(906.3)                             | 4             | 0.83               | 6.4                | 3 (16.4)                                                 | 2.9 (6.5)   |
| SM2862-5252  | -5222        | 6.4(906.3)                             | 6             | 0.36               | 2.8                | 3 (16.4)                                                 | 2.9 (6.5)   |
| SM2863-5052  | -5022        | 9 (1274.5)                             | 2             | 4                  | 32                 | 4.5 (24.6)                                               | 4 (8.96)    |
| SM2863-5152  | -5122        | 9 (1274.5)                             | 4             | 1                  | 7.9                | 4.5 (24.6)                                               | 4 (8.96)    |
| SM2863-5252  | -5222        | 9 (1274.5)                             | 6             | 0.46               | 3.8                | 4.5 (24.6)                                               | 4 (8.96)    |

### Dimensions

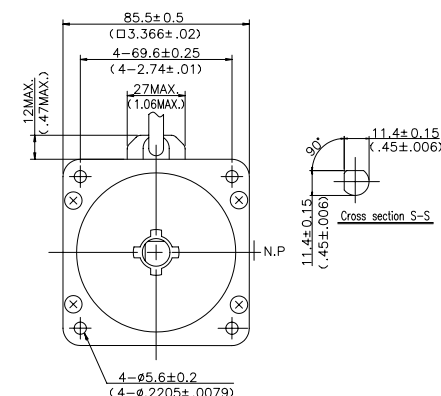
【Single shaft type】



【Double shaft type】



| Model        |              | Motor length |
|--------------|--------------|--------------|
| Single shaft | Double shaft | mm (inch)    |
| SM2861-5052  | -5022        | 66 (2.6)     |
| SM2861-5152  | -5122        | 66 (2.6)     |
| SM2861-5252  | -5222        | 66 (2.6)     |
| SM2862-5052  | -5022        | 96.5 (3.8)   |
| SM2862-5152  | -5122        | 96.5 (3.8)   |
| SM2862-5252  | -5222        | 96.5 (3.8)   |
| SM2863-5052  | -5022        | 127 (5)      |
| SM2863-5152  | -5122        | 127 (5)      |
| SM2863-5252  | -5222        | 127 (5)      |



## Pulse Rate-Torque Characteristics

### Common Driving Conditions

Sanyo standard circuit

Source voltage: 100VAC

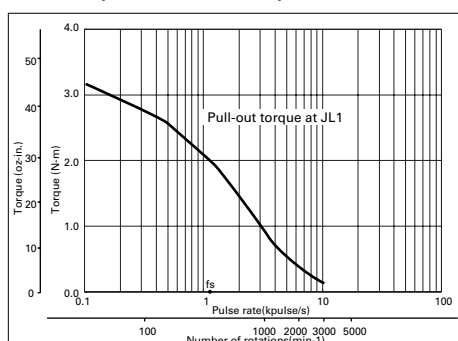
Driving method: 2-phase energization (full-step)

JL1: 83.65 oz-in<sup>2</sup> (Uses rubber coupling)

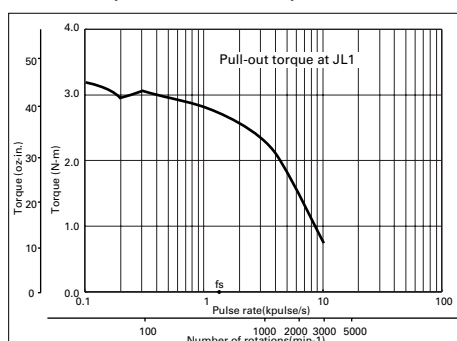
JL2: 240.6 oz-in<sup>2</sup> (Uses rubber coupling)

fs: No load maximum starting pulse rate

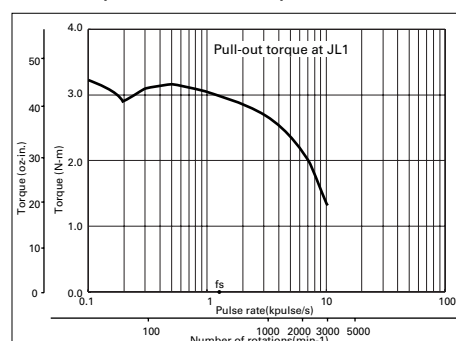
SM2861-5052(Single shaft)  
SM2861-5022(Double shaft)  
Input current: 2A/phase



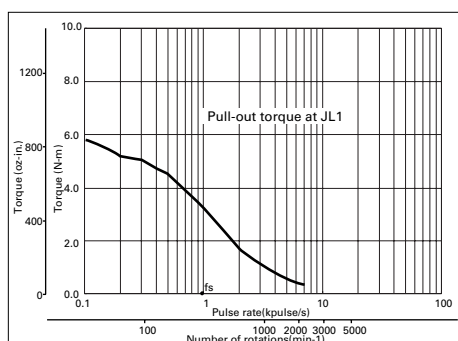
SM2861-5152(Single shaft)  
SM2861-5122(Double shaft)  
Input current: 4A/phase



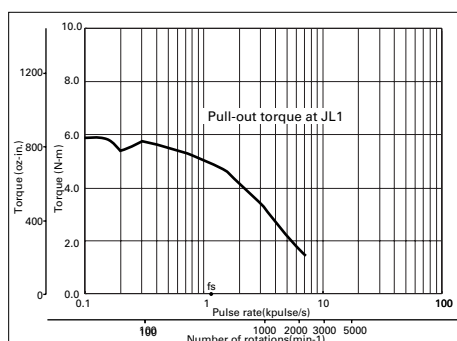
SM2861-5252(Single shaft)  
SM2861-5222(Double shaft)  
Input current: 6A/phase



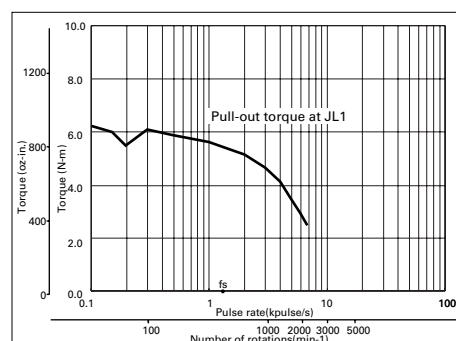
SM2862-5052(Single shaft)  
SM2862-5022(Double shaft)  
Input current: 2A/phase



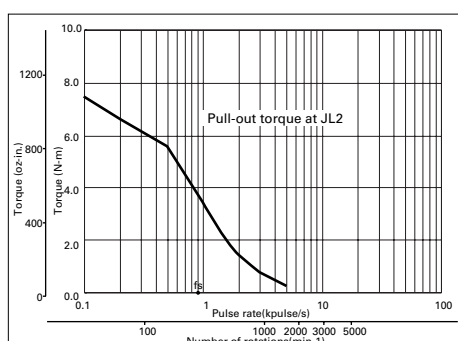
SM2862-5152(Single shaft)  
SM2862-5122(Double shaft)  
Input current: 4A/phase



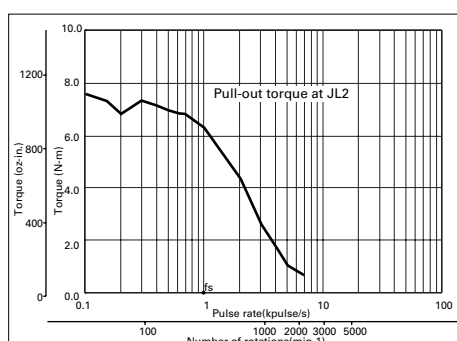
SM2862-5252(Single shaft)  
SM2862-5222(Double shaft)  
Input current: 6A/phase



SM2863-5052(Single shaft)  
SM2863-5022(Double shaft)  
Input current: 2A/phase



SM2863-5152(Single shaft)  
SM2863-5122(Double shaft)  
Input current: 4A/phase



SM2863-5252(Single shaft)  
SM2863-5222(Double shaft)  
Input current: 6A/phase

