

# Two-phase 60mm Square Stepping Motors

Two-phase 60mm square stepping motors have been added to the "STEP SYN H" series.

**NEW**

## 1. Compact·High Torque

The 60mm square size motors offer the torque equivalent to that of motors sized in 86 dia. housing. (comparison based on our products.)

## 2. Low Noise

Lower noise has been realized by an optimum structure design employed for the motors.

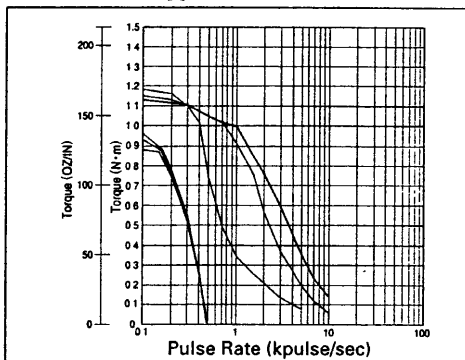
## 3. Simple Wiring

This type of motors equipped with a connector promises easier system design.

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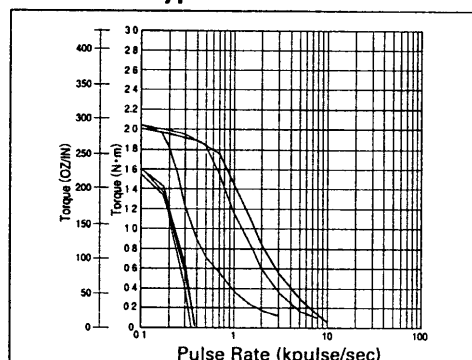
| Type No.                    | Step angle<br>(Degree) | Voltage<br>(V) | Current<br>(A/phase) | Resistance<br>( $\Omega$ /phase) | Inductance<br>(mH/phase) | Holding torque<br>(N·m(OZ·IN)) | Rotor inertia<br>(kg·m <sup>2</sup> ) | Weight<br>(g) |
|-----------------------------|------------------------|----------------|----------------------|----------------------------------|--------------------------|--------------------------------|---------------------------------------|---------------|
| Single shaft (double shaft) |                        |                |                      |                                  |                          |                                |                                       |               |
| 103H7822-0140 (0110)        | 1.8                    | 8              | 1                    | 8                                | 14                       | 1.17 {165}                     | $0.4 \times 10^{-4}$                  | 770           |
| 103H7822-0440 (0410)        | 1.8                    | 4              | 2                    | 2                                | 3.6                      | 1.17 {165}                     | $0.4 \times 10^{-4}$                  | 770           |
| 103H7822-0740 (0710)        | 1.8                    | 2.74           | 3                    | 0.92                             | 1.38                     | 1.17 {165}                     | $0.4 \times 10^{-4}$                  | 770           |
| 103H7823-0140 (0110)        | 1.8                    | 10.4           | 1                    | 10.4                             | 21.7                     | 2.1 {300}                      | $0.84 \times 10^{-4}$                 | 1340          |
| 103H7823-0440 (0410)        | 1.8                    | 5.2            | 2                    | 2.6                              | 5.6                      | 2.1 {300}                      | $0.84 \times 10^{-4}$                 | 1340          |
| 103H7823-0740 (0710)        | 1.8                    | 3.6            | 3                    | 1.2                              | 2.4                      | 2.1 {300}                      | $0.84 \times 10^{-4}$                 | 1340          |

103H7822 type Performance



Drive circuit SLA-7026M  
Drive voltage 24VDC  
Exciting current Two-phase excitation -0110:1A/phase (Ave.)  
-0410:2A/phase (Ave.) -0710:A/phase (Ave.)  
Load inertia  $J_L: 2.6 \times 10^{-4} \text{ kg·m}^2$

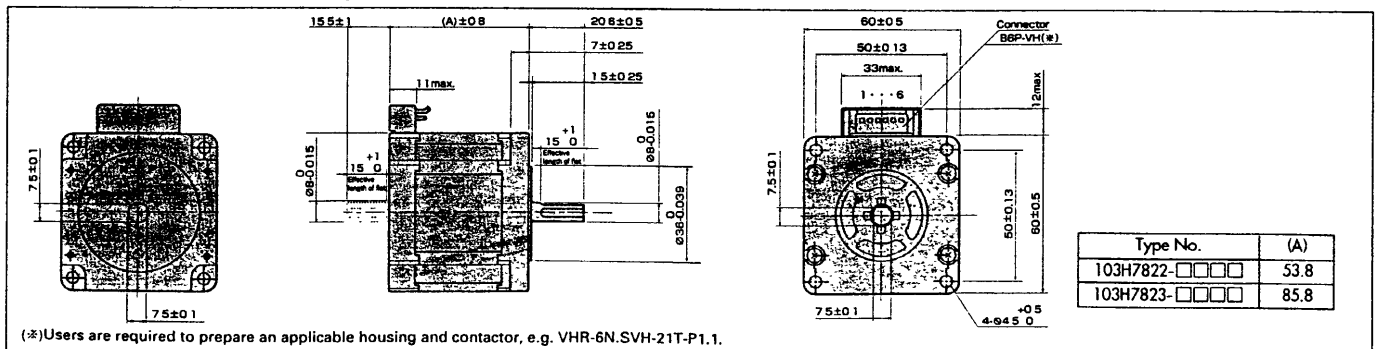
103H7823 type Performance



Drive circuit SLA-7026M  
Drive voltage 24VDC  
Exciting current Two-phase excitation -0110:1A/phase (Ave.)  
-0710:A/phase (Ave.)  
Load inertia  $J_L: 7.4 \times 10^{-4} \text{ kg·m}^2$

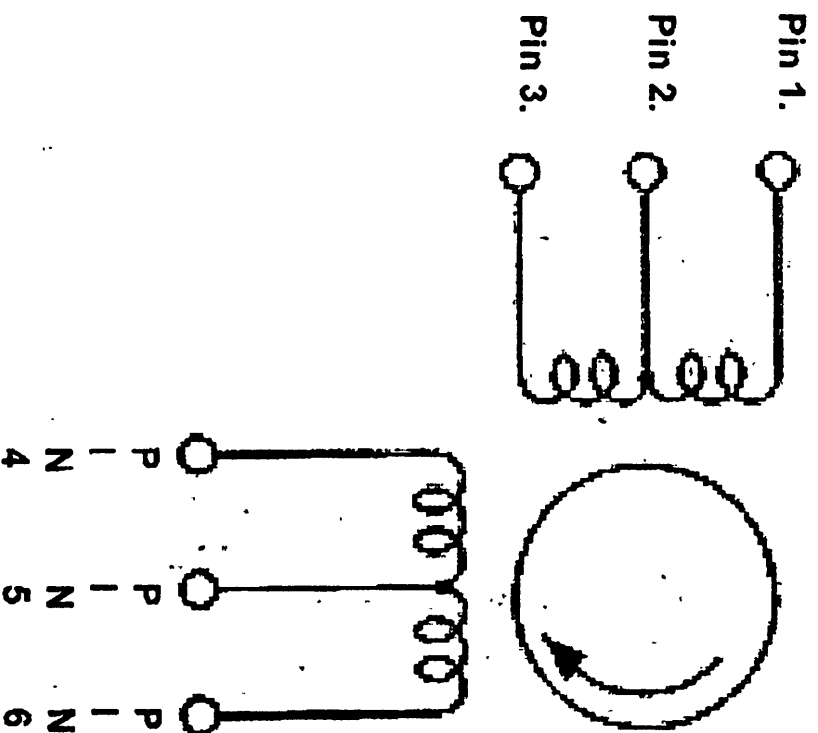
—0140 Pull-out torque  
—0140 Pull-in torque  
—0440 Pull-out torque  
—0440 Pull-in torque  
—0740 Pull-out torque  
—0740 Pull-in torque

### Dimensions (in millimeters)



**SANYO DENKI**

# Pin - Out Connections for the 103H78XX-XXXX Series of Sanyo Denki Motors



|      |   | Lead wire colors |       |       |       |       |
|------|---|------------------|-------|-------|-------|-------|
|      |   | Pins 2+5         | Pin 4 | Pin 3 | Pin 6 | Pin 1 |
| Step | 1 | ⊕                | ⊖     | ⊖     |       |       |
|      | 2 | ⊕                |       | ⊖     | ⊖     |       |
|      | 3 | ⊕                |       |       | ⊖     | ⊖     |
|      | 4 | ⊕                | ⊖     |       |       | ⊖     |