

## ■ Features

- Bi-directional output of attraction and repulsion is possible.
- Smooth motion without cogging enables high speed control.

## ■ Applications

- Amusement equipment



## ■ Specifications

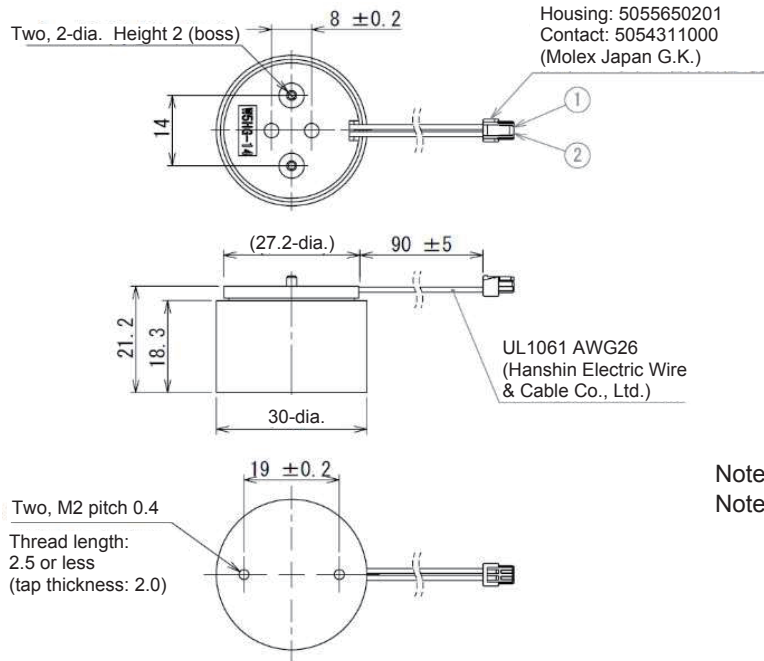
Item	Ratings / Performance
Coil resistance	11 $\Omega$ $\pm$ 10% at 20°C
Rated voltage	12 VDC
Operating cycle	25% intermittent energization, max. time to energize: 30 sec.
Insulation resistance	50 M $\Omega$ or more at 500 VDC megger (normal temperature and normal humidity)
Dielectric strength	500 VAC 50/60Hz for 1 minute (normal temperature and normal humidity) or 600 VAC for 1 sec.
Temperature rise	80°C or less (ambient temperature 40°C, 12 VDC, 25% intermittent energization)
Magnetic force (both attractive and repulsive directions)	4.00 N or more, 1.091 A at 5 mm stroke (initial value at 12 VDC, ambient temperature of 20°C)
Expected lifespan	5 million times or more (case vertical movement, stroke 5 mm)
Operation temperature range	0 to 55°C (at coil temperature of 120°C with no icing or condensation)
Storage temperature range	-10 to 60°C (with no icing or condensation)

Note 1. Attractive force value does not include the effect of case mass.

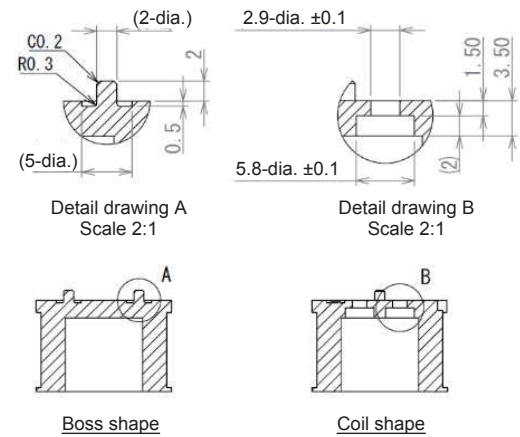
Note 2. Expected life is the number of times that the device is operated for 12 seconds and stopped for 12 seconds, with 20 ms ON/20 ms OFF as a single cycle.

Note 3. The performance in the above table is subject to installation in OMRON's switch products.

## External Dimension



\* The dimensional tolerance must be  $\pm 0.5$  unless otherwise specified.  
[Unit: mm]



Note 4. This figure shows the excited state (stroke 0 mm).

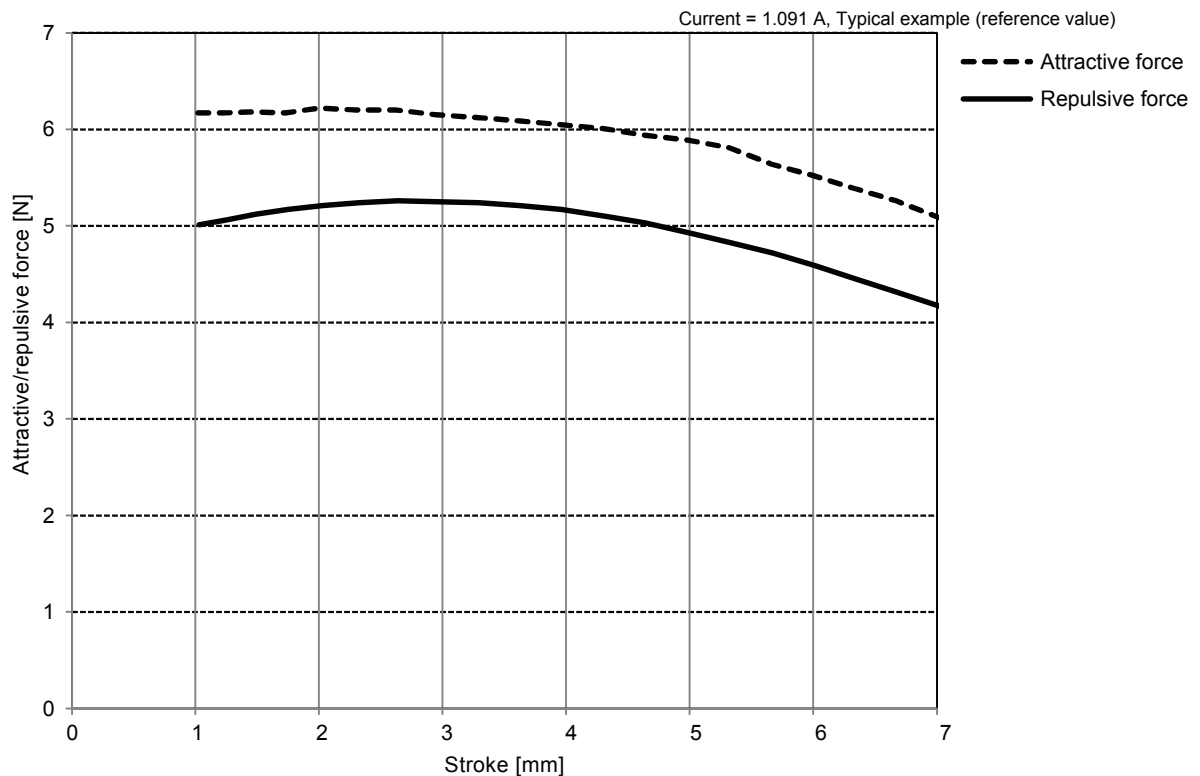
Note 5. The relationship between housing terminal numbers and harness colors is shown below.

Terminal number	Terminal symbol		Harness color
	Repulsion	Attraction	
1	+	-	White
2	-	+	Black

Note 6. Connectors compatible with the housing must be 5055670271 and 5055680271 (manufactured by Molex Japan G.K.).

## Engineering Data

### Attractive and repulsive force characteristic graphs



Note 7: Measured by placing this product vertically, fixing the bobbin, and driving the case.

Note 8: Arrows in the graph indicate the case drive direction during measurement.

Note 9: Magnetic screws are used to secure the bobbin.

Note 10: The above graph does not include the effect of case mass.

## ■ Precautions for Use

1. Precautions
  - Do not insert or remove connectors while the power is ON to avoid risk of electric shock.
  - Do not touch moving parts while the power is ON to avoid risk of injury.
  - Do not touch the product while it is energized or for a while after it is energized. Doing so may result in burns.
  - Continuous energization or repetitive operation under overload conditions will cause the product to become hot, so provide an appropriate interval for cooling down.
  - Do not subject the product to impact such as dropping, as this may cause malfunction.
  - Do not disassemble the fixing case and the movable coil. Doing so may result in product failure.
2. Precautions for assembly
  - When performing assembly work, be careful not to apply excessive force that may bend the harness.
  - Be careful not to get the harness caught during installation.
3. Input Line
  - The product does not have a built-in fuse. In case of mechanical trouble, there is a risk of smoke or fire, so take safety measures such as inserting a fuse in the input line.
4. Prevention of Circuit Element Destruction
 

When the product is released from use, a surge voltage may occur, destroying the circuit elements. Therefore, we recommend that you install a protection circuit.
5. Magnetic Generation
 

When energized, the coil generates magnetism. When using the product near computer screens or other parts that may be affected by magnetism, make sure that there is no magnetic influence.
6. External Magnetic Circuit
 

When the product is energized, magnetism is generated from the coil and a magnetic circuit is formed. The product is operated by this magnetic circuit. In cases where attached parts, etc. are entirely composed of magnetic materials, note that a magnetic circuit will be formed externally, which may cause malfunctions due to reduced pull force or other reasons.
7. Vibration
 

The strength of vibration is greatly affected by the surrounding installation environment. Please carefully consider the installation environment before use.
8. Arrangement of Fixing Case and Movable Coil
 

Arrange the fixing case and movable coil so that they are not misaligned with each other.  
Any misalignment during standby or operation may cause a decrease in the number of life cycles, operation failure, or damage.
9. Storage
 

Even if the product is stored within the temperature range described in the "Specifications" section, corrosion or failure may occur due to the surrounding environment if the product is stored for an extended period of time.
10. Others
  - Do not use the product in locations where it is directly exposed to water or other liquids. Doing so may cause product failure.
  - Be sure to check the mounting structure and durability performance depending on the mounting condition before use.

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