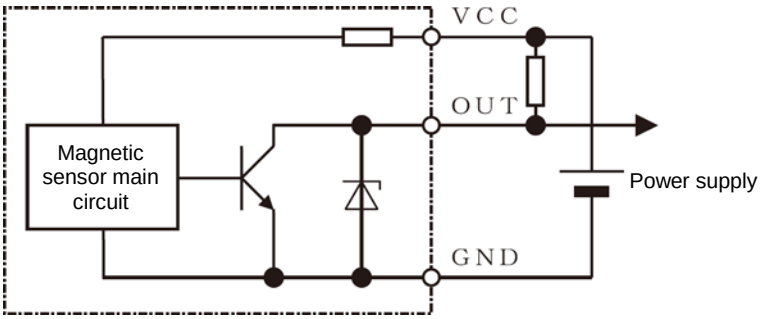
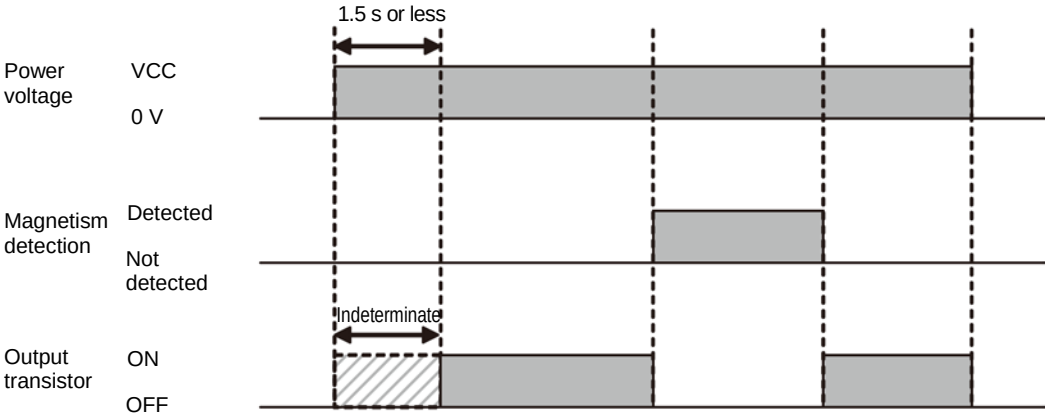
■ Output circuit diagram

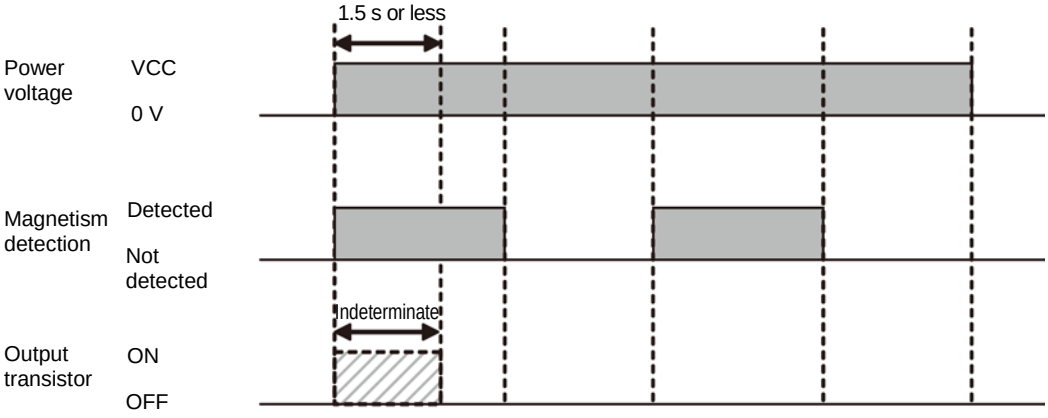


■ Operation chart

(1) In case the automatic adjustment of the detection range has been properly conducted when powering on the sensor



(2) In case the automatic adjustment of the detection range has failed when powering on the sensor



■ Precautions for use

<Sensor actions upon powering ON>

To compensate for the effects of ambient magnetism and temperature, the detection range is automatically adjusted when the sensor is powering ON. When powering ON the sensor, pay attention to the following items.

(1) For a period of 1.5 seconds after the sensor has been powered ON, the output transistor is forced to stay ON and does not output the detected state.
If the sensor powering ON is extremely slow, the output state of the output transistor may become indeterminate.

(2) Wherever possible, avoid the effect of magnetism when starting up the sensor. Otherwise, the detection range may fluctuate. When using the sensor, sufficiently check the characteristics.
Examples: Avoid driving solenoids and motors.
Keep magnets away when starting up the sensor.

(3) If the automatic adjustment has failed when powering ON the sensor due to the effects of magnetism in the vicinity of the sensor, the output transistor is held OFF. To release the state, retry the sensor powering ON with consideration of the effects of magnetism in the vicinity of the sensor so that the automatic adjustment can be properly conducted.

<Effects of metallic objects in the vicinity>

In case any magnetic metal is placed in the vicinity of the sensor, the detection range may become reduced or the automatic adjustment of the detection range may fail, resulting in the output transistor holding the state of being OFF. When using the sensor, sufficiently check the characteristics.

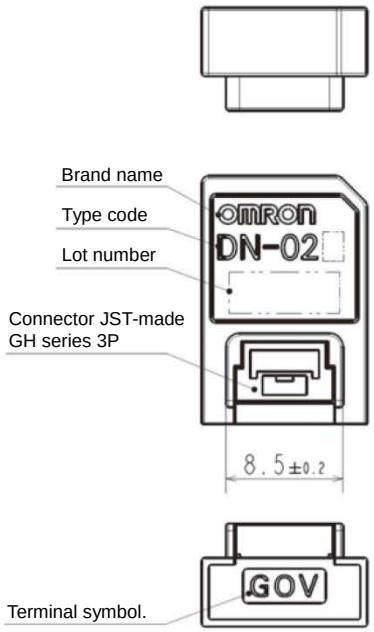
<Effects of magnetic noise>

The sensor may detect the magnetic noises of solenoids, motors, etc.
In that case, incorporate some design considerations, such as keeping the source of the magnetic noise away, or invalidating the sensor output when driving solenoids or motor.

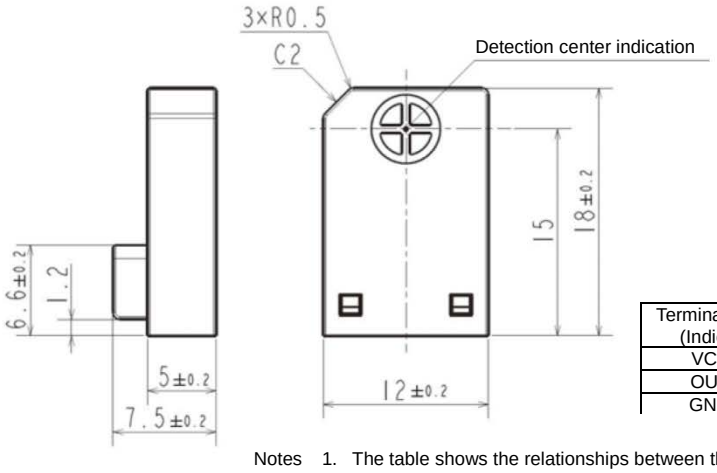
<Precautions on the environmental changes after powering ON>

If the metallic objects around the sensor have been magnetized due to a powerful magnet and, at the same time, the sensor has detected magnetism, the output transistor may keep the state of being OFF. To release the state, the sensor needs to be restarted. Some design considerations should be incorporated to reflect it.

■ Exterior dimensions

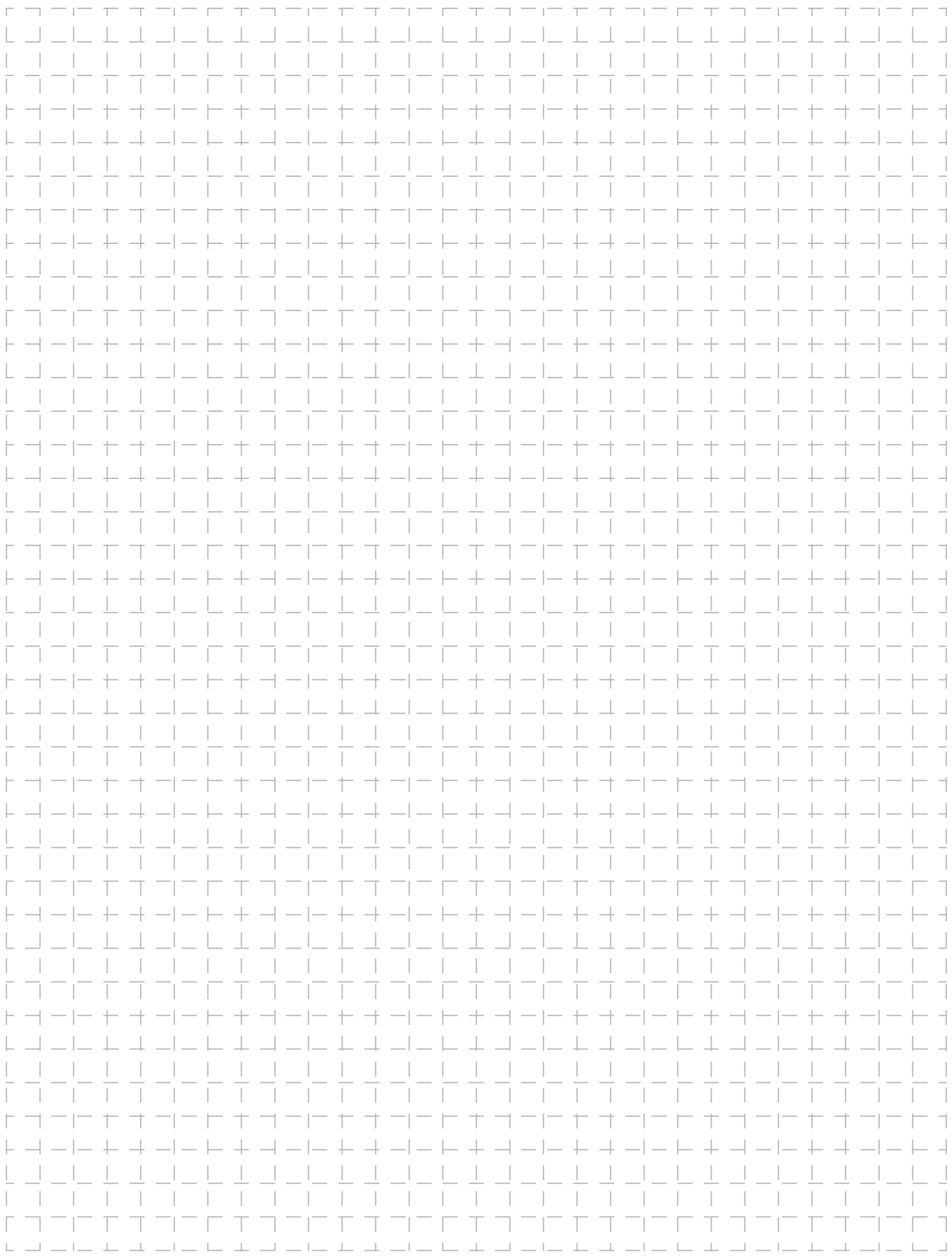


* Unless otherwise specified, the dimensional tolerance shall be IT16 [unit: mm].



Terminal symbol. (Indication)	Terminal No.
VCC (V)	1
OUT (O)	2
GND (G)	3

Notes
1. The table shows the relationships between the connector terminal symbols and terminal numbers.
2. The housing compatible with the connector shall be type GHR-03V-☐ made by JST Co., Ltd.



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