

## ***Spot Mark Reader (SMR-2352H2-S)*** **INSTRUCTIONS**

SMR-2352H2-S reads 8 bits codes of Address Mark Plate SMG-2352S from a distance between 15mm and 35mm. SMR-2352H2-S outputs the code magnetized on SMG-2352S, when SMR-2352H2-S comes just over SMG-2352S and the data is held till next SMG-2352S comes. The output data can be reset by reset signal input.

### Specifications

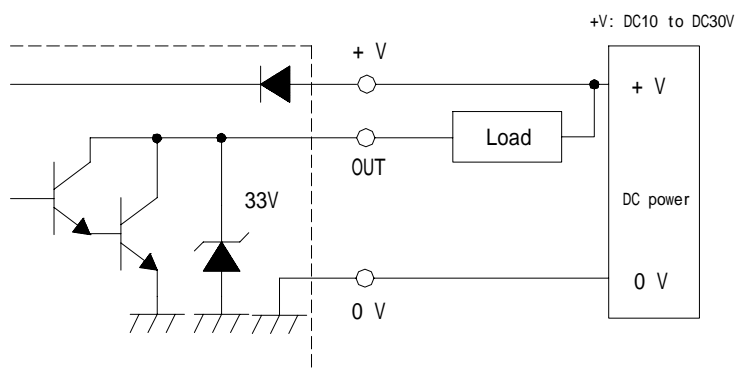
Supply Voltage	DC+10 to 30V ripple 2% max.
Power consumption	50mA max.
Target	Address Mark Plate (SMG-2352S)
Air gap	15mm to 35mm (Between detecting surface and magnet)
Response speed	2.5m/s max. (Max. AGV's traveling speed)
Traveling fluctuation	± 20mm max. (From center of SMG-2352S)
Data output	8 bits (parallel) 256 codes NPN transistor / Normally open Latched DC30V max. Sink current 50mA max. Response; 1ms max. Residual voltage; 2V max. (at sink current 50mA ON)
Clock output (Timing signal)	one shot (approx. 100ms) NPN transistor / Normally open DC30V max. Sink current 50mA max. Response; 1ms max. Residual voltage; 2V max. (at sink current 50mA, ON)
Reset input	When DC+10V to 30V is supplied 1ms and over, latched data output is reset
Operation environment	Temperature; between -10 and +60 Humidity; between 35 and 95%RH (Avoid dew condensation)
Storage environment	Temperature; between -20 and +70

Humidity; between 35 and 95%RH  
(Avoid dew condensation)

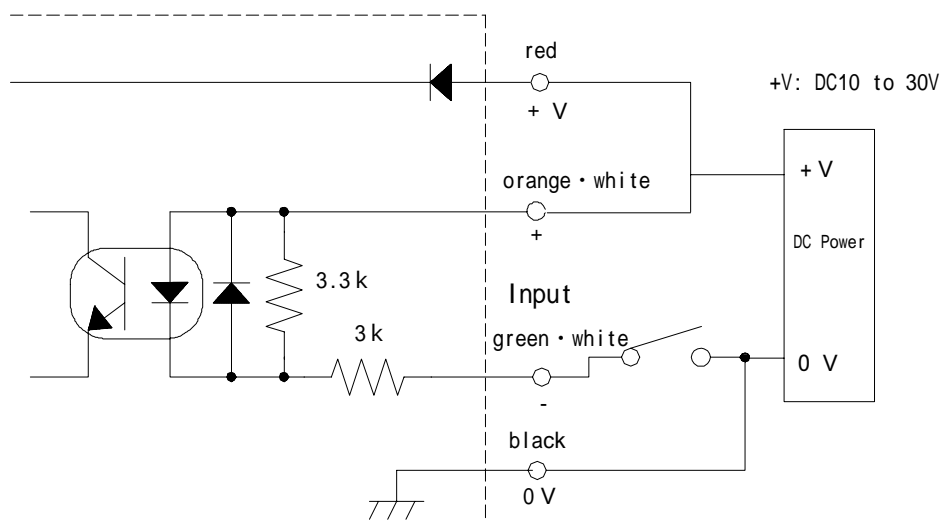
Protection IP-54 (IEC standard)  
 I/O cord 14 conductors shielded cord 9 approx. 1m length  
 Case Plastic resin (322 W x 38H x 12D)  
 Weight approx. 360g

Internal circuit

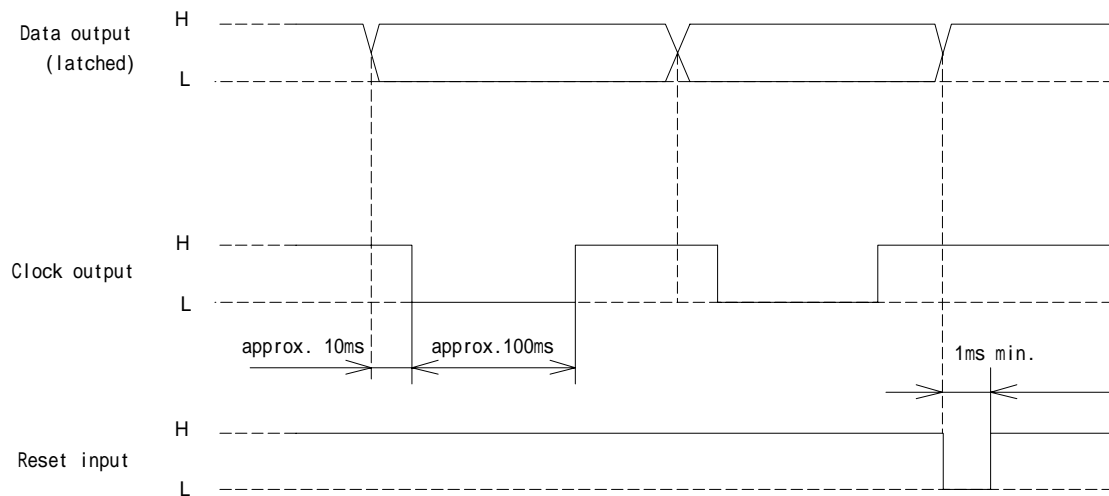
Output Circuit



Input circuit



**Output timing chart**

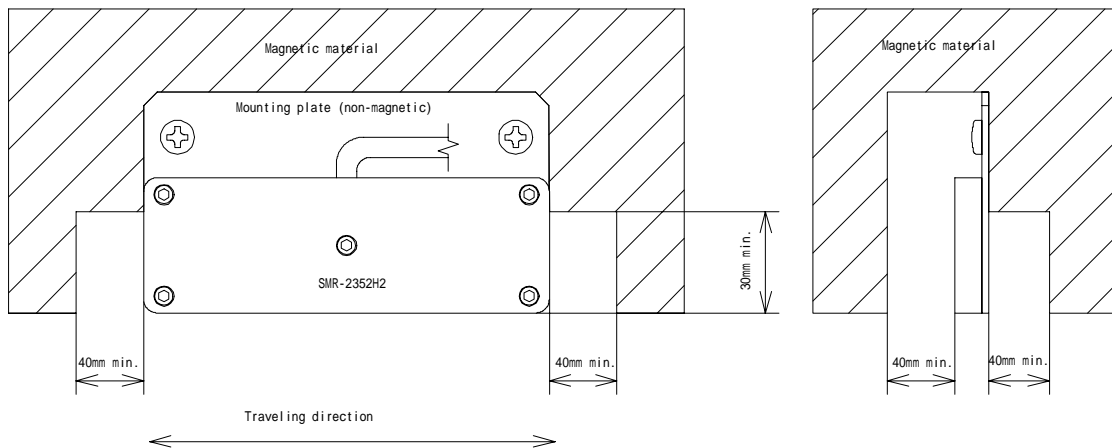


**Wiring**

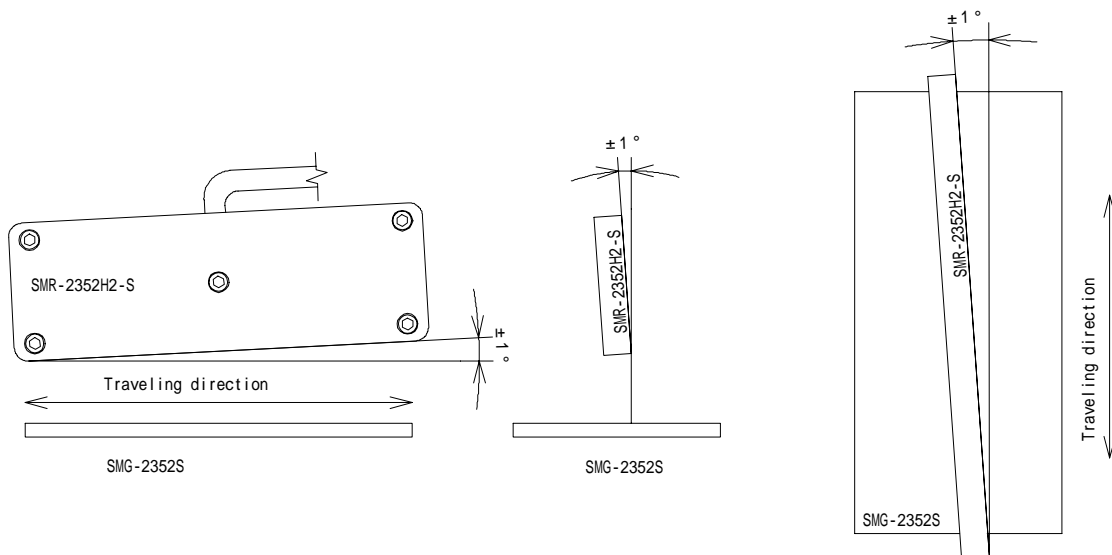
<u>Lead color</u>	<u>Signal</u>
Gray	Clock out
White	Data No.0 out
Brown	Data No.1 out
Pink	Data No.2 out
Orange	Data No.3 out
Yellow	Data No.4 out
Green	Data No.5 out
Blue	Data No.6 out
Purple	Data No.7 out
Blue · brown	NC
Orange · white	Reset input +
Green · white	Reset input -
Red	DC +V
Black	0V

**Mounting**

SMR-2352H2-S should be mounted on non-ferrous material such as stainless steel, aluminum, brass. Even non-ferrous stainless steel may have characteristic of magnetism when it is bent or shaving processed. In case of mounting it on ferrous material, following space is required around SMR-2352H2-S.

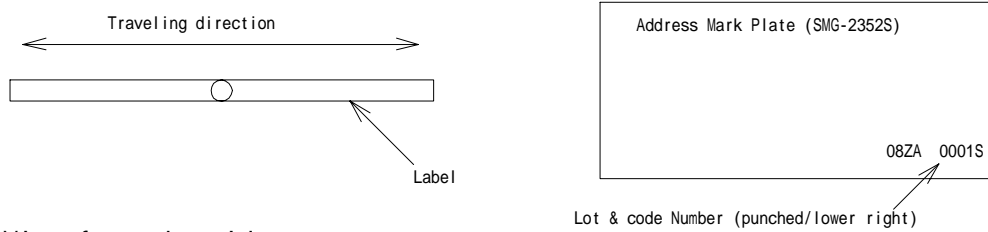


**Correlation between SMR-2352H2-S and SMG-2352S**

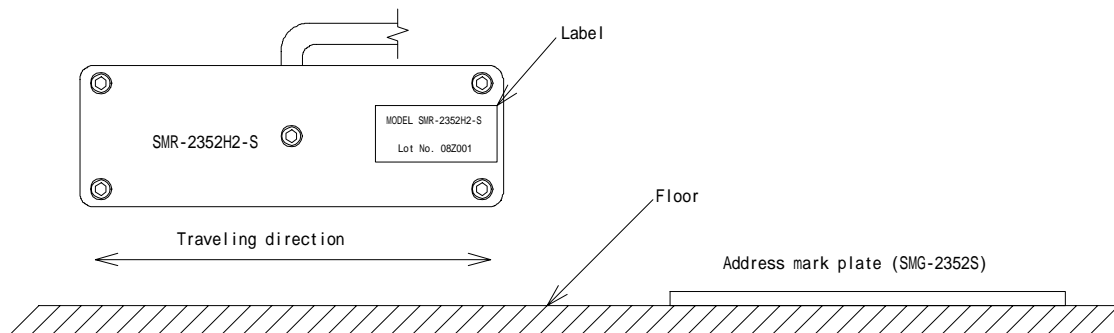


Traveling direction

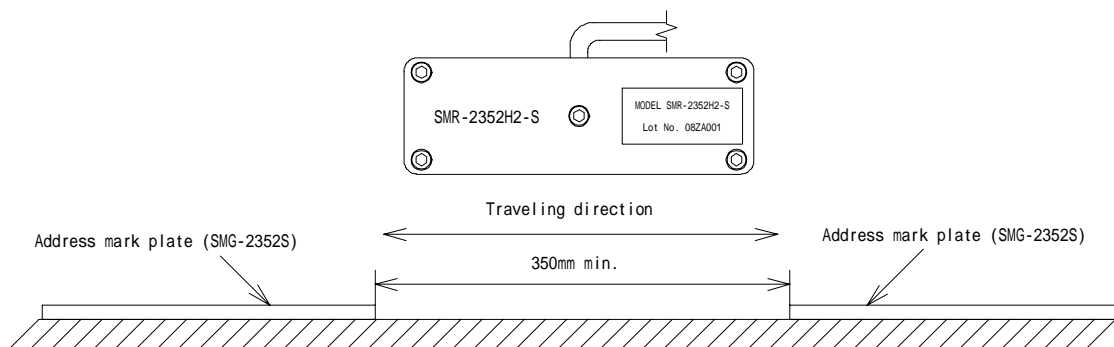
- View from the above



- View from the side



Minimum required space between each SMG-2352S

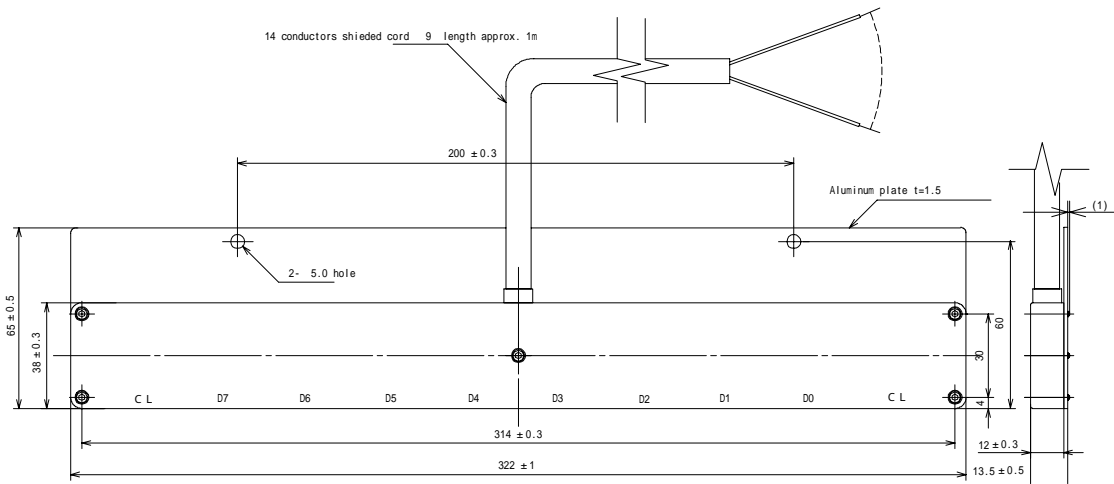


Data reading area

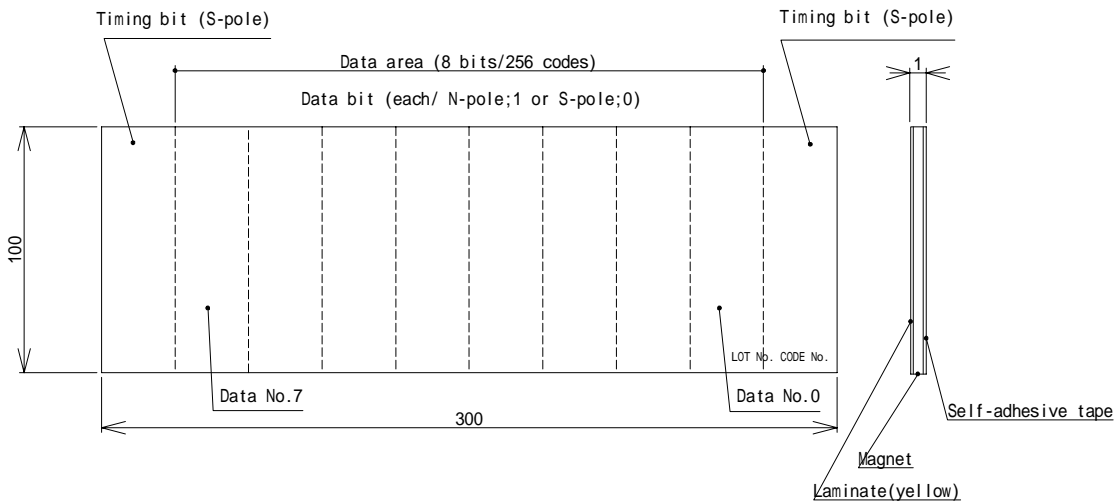
Cord of SMG-2352S is red and data and clock signal are generated when SMR-2352H2-S is directly above SMG-2352S. But the point is fluctuated according to code number about  $\pm 10\text{mm}$ . Therefore the clock signal can't be used as a stop instruction signal to AGV if AGV requires a precise positioning.

External dimensions

SMR-2352H2-S

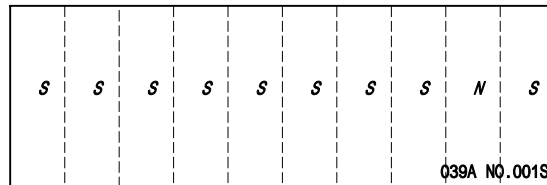


SMG-2352S Address Mark Magnet

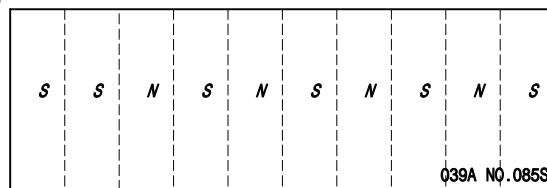


Example of Code Number (Magnetized pattern)

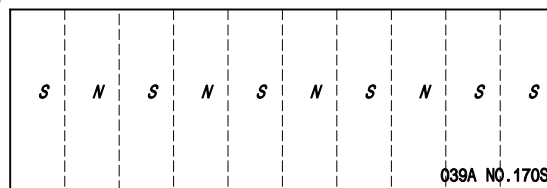
Code No. 001



Code No. 085



Code No. 170



**Notice**

- Don't wire I/O cable with other power cables.
- Strong tension or repeatable bending to head cable or I/O cable may cause snapping of wires.
- Don't use or stock where is filled with chemicals, salt, flammable gas, corrosion gas, acid or alkaline. Especially acetone solvent corrodes internal mold resin of SMR-2352H2-S and SMG-2352S.
- Keep SMR-2352H2-S away from water and oil.
- Don't install SMR-2352H2-S in vicinity of a magnet or magnetic flux generator such as a motor. The magnetic flux may induce misreading.
- More than 0.2s is required to stabilize signals after power is supplied to SMR-2352H2-S.

Warranty and service

1. Warranty period and warranty span

Goods are warranted (exchange or repair) return to factory basis against defects in workmanship and material for a period of one year from a date of delivery.

The damage caused by following reasons is out of the warranty.

- (1) Inappropriate installation and usage.
- (2) Abnormal effect from peripheral equipment.
- (3) Alternation or repair without us.
- (4) Force majeure.

The Induced damage is out of the warranty.

2. Scope of service

Prices on the price list are not including following fees. Consult us for the fees.

- (1) Adjustment, instruction and presence at installation.
- (2) Maintenance and repair.
- (3) Technical advice and training.

\* Specifications are subject to change without notice. \*