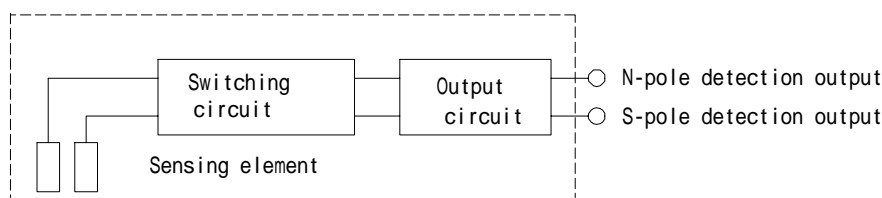


## ***SMR-100C Spot Mark Reader*** **INSTRUCTIONS**

### 1. Summary

SMR-100C is designed for reading Address Mark Magnet that will be installed at stopping position or at a branch of magnetic navigation type AGV. By accumulating each Address Mark Magnet, AGV recognizes its location on the track. SMR-100C detects SMG-100N (N-pole is up. /Yellow laminate) generating N-pole output and SMG-100S (S-pole is up. /Green laminate) generating S-pole output simultaneously.

#### SMR-100C



Address Mark Magnet (N-pole surface/SMG-100N)(S-pole surface/SMG-100S)

### Internal constructions

### 2. Specifications

Item	Content
Power supply	DC+10 V to +30V, ripple (p-p) 2% max.
Power consumption	15mA max.
Operation temperature	from -10 to +60
Operation humidity	from 35% to 95%RH (avoid dew condensation)
Storage temperature	from -20 to +70
Storage humidity	from 35% to 95%RH (avoid dew condensation)
Housing	IP-54 (IEC standard)
Operation Air gap	from 15 to 40mm (with SMG-100N , SMG-100S.) 1
Target Magnet	SMG-100N (N-pole upper surface) SMG-100S (S-pole upper surface)
Sensitivity	N-pole detection; 0.5mT ± 0.1mT and over (N-pole) 2 (S-pole of more than 8mT will influence the output.) S-pole detection; 0.5mT ± 0.1mT and over (S-pole) (N-pole of more than 8mT will influence the output.) at +25 DC+18V

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*SMR-100C Instructions (Ver. 001/March25, 2010)*

*SMR-100C-04D-ENO*

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Hysteresis		0.2mT max. (at +25 , DC+18V) 2
Stability	Power supply	± 0.1mT max. (fluctuation from DC+10V to +30V)
	Temperature	± 0.15mT max. (fluctuation from -10 to +60 )
Output	Circuit	NPN open collector (Normally open)
	Capacity	DC 30V max. sink current 100mA max (Residual voltage 1V max.)
Response		1ms max.
I/O cord		5 Cold & oil resistant cord 0.3mm <sup>2</sup>
	conductor color	Brown; DC+10 to 30V Blue; 0V Black; N-pole output White; S-pole output

1. SMR-100C detects an opposite polarity when the polarity is more than 8mT.
2. The value is measured by MACOME in-house apparatus.

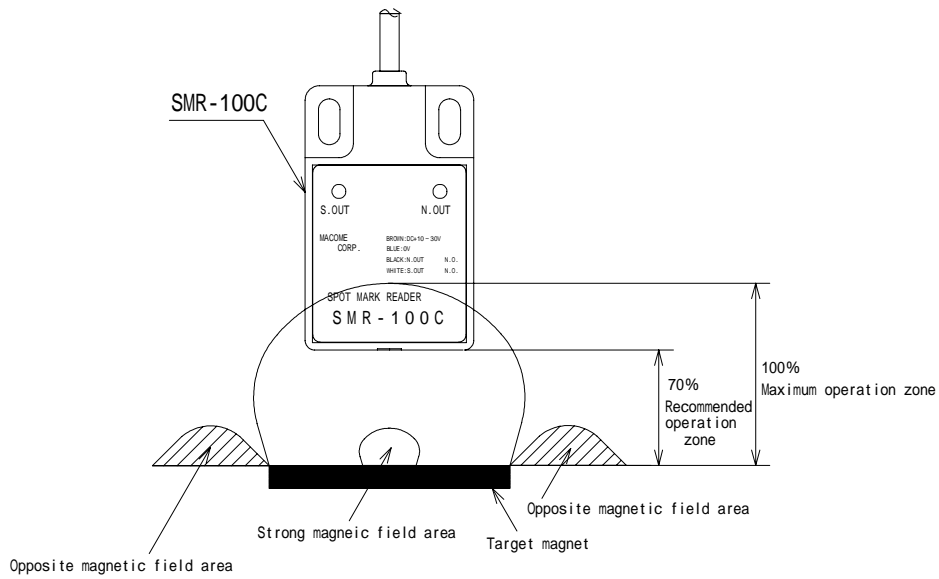
## Operation Air gap

Applicable operation zone with SMR-100N or S is 15 ~ 40mm.

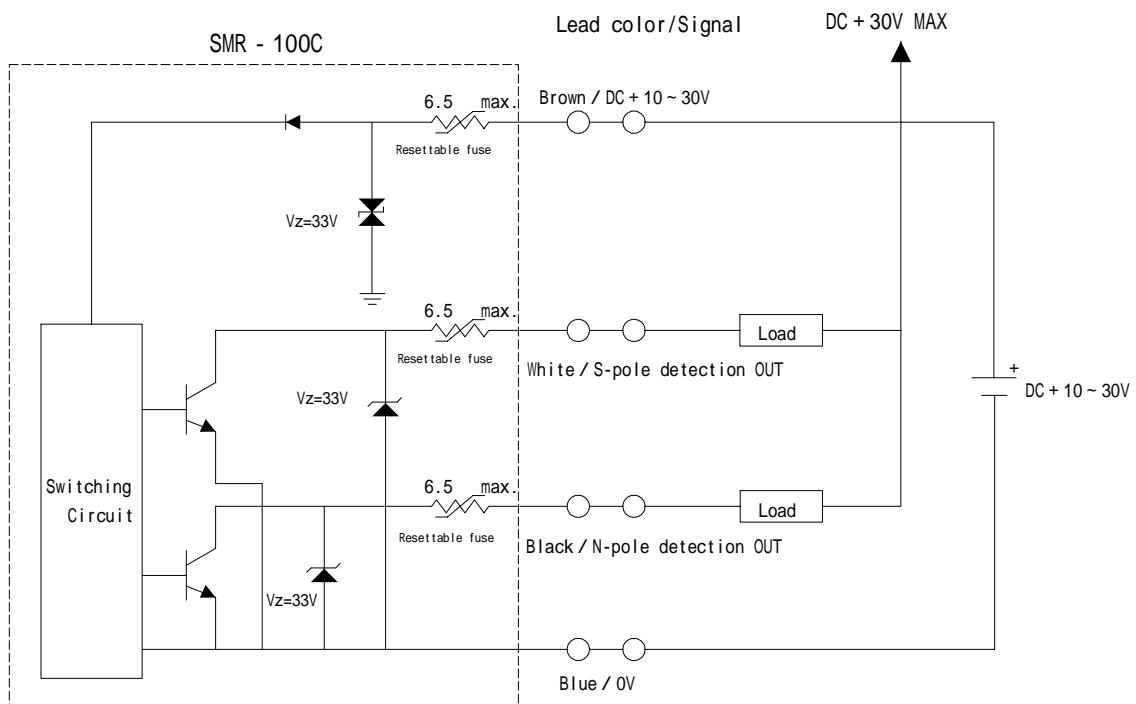
In case of mating with other magnet;

1. Operation air gap should be within 70% of the maximum operation zone.
2. Strong magnetic field area may exist in a center of the magnet and both N and S detection switch will operate in a strong magnetic field which is more than 8mT.
3. Opposite magnetic field also may exist at edges of the magnet.

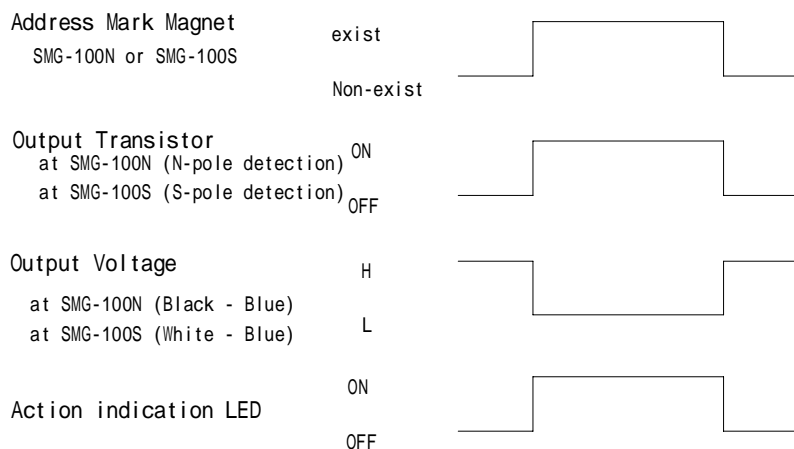
Arrange proper operation air gap in case of mating with other magnets.



### 3. Wiring

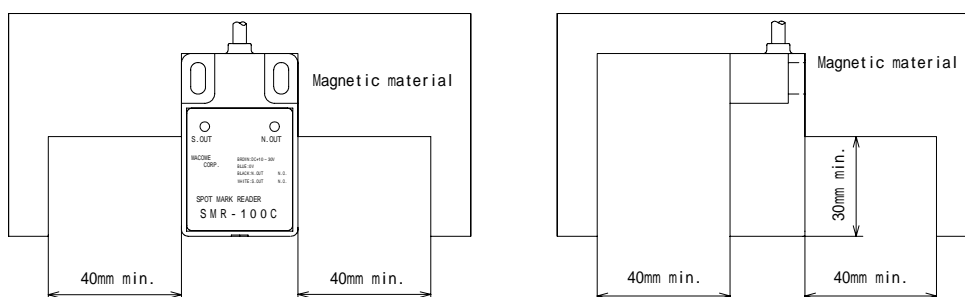


Output time chart

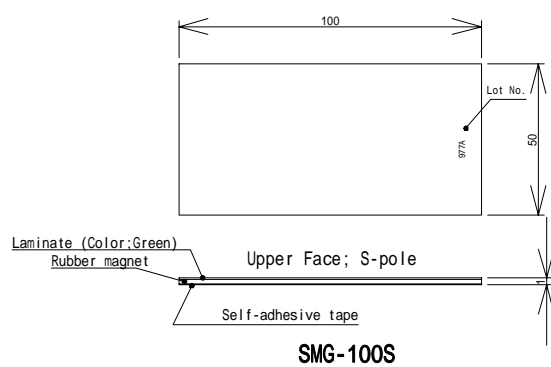
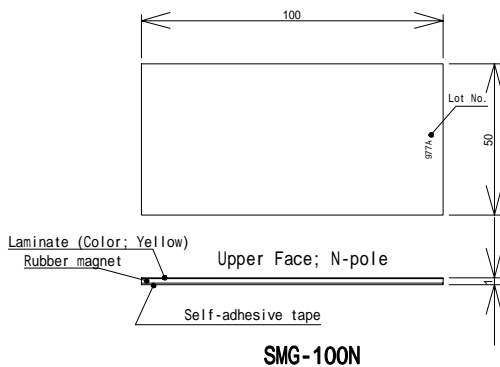
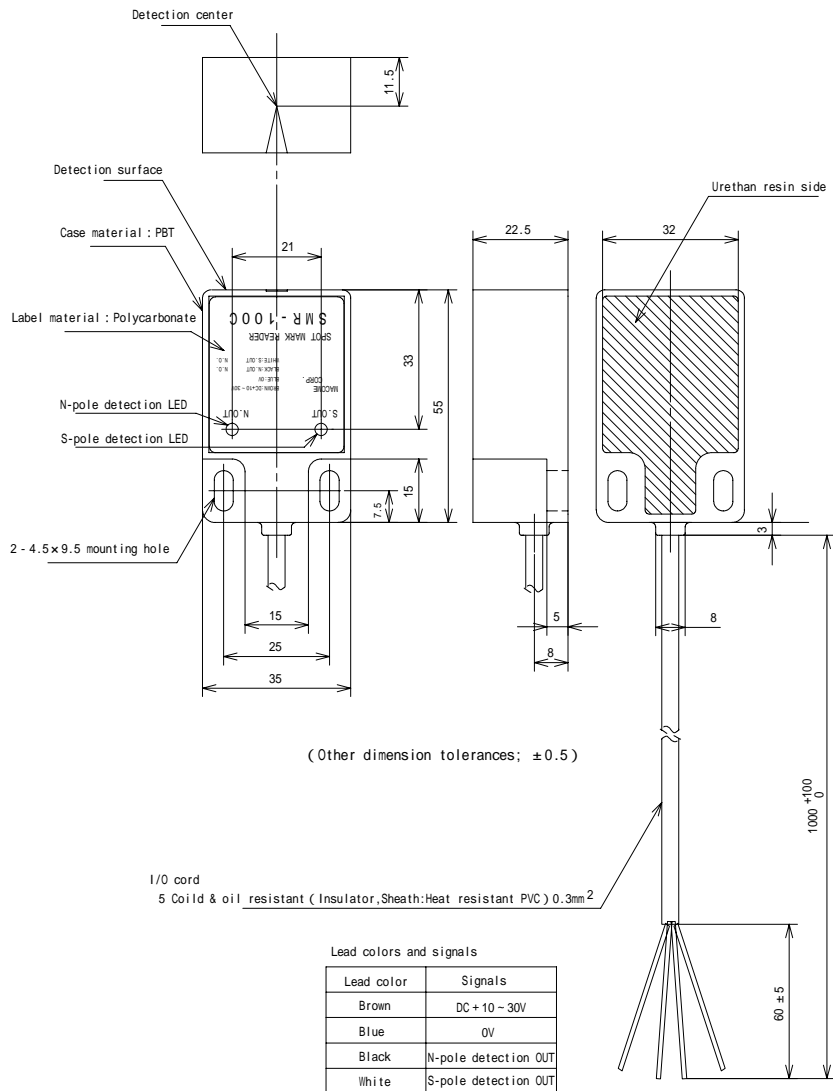


4. Mounting

SMR-100C should keep distance from magnetism generators such as a motor. Vicinity of magnetic material may cause SMR-100C inaccurate output. In case of mounting SMR-100C on magnetic material, keep distance from the material as follows.

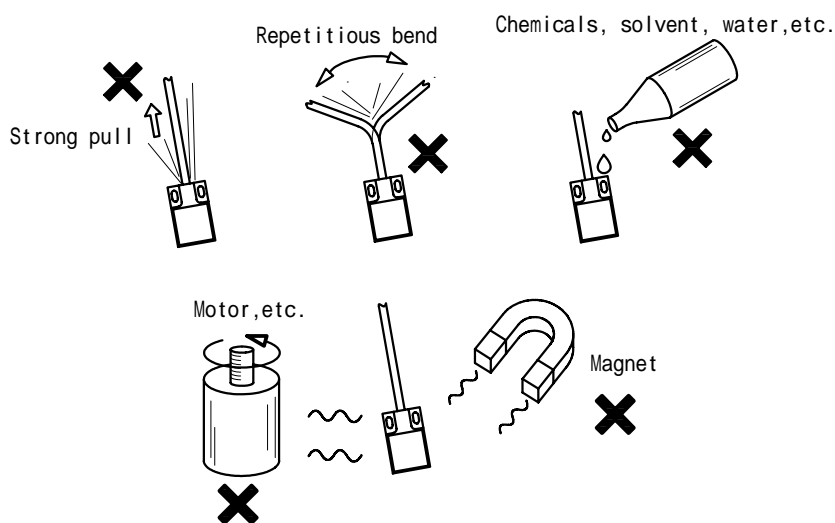


### 5. External Dimensions



## 6. Notices

- Wire the output cord separately from power line.
- Strong tension or repeatable bending to the output cord may cause snapping of wires.
- Keep away for water since the housing is neither water nor splash proof.
- Keep away from solvent chemicals (acetone, thinner) since a case or a cord may deformed by those substances.



## 7. Warranty

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.

## 8. Range 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. \*

		承認	作成
図番	SMR-100C-04D-ENO		
作成日	March 25, 2010		