mindman Magnetic position sensor RLG Series CE UKCA

For your safety, please read the following before using.

① Suggest to connect, install, and set up by professional technicians.
② Avoid to use magnetically conductive components in working environment.
③ Avoid piston and magnet of cylinder spin to cause inaccurate.
④ Do not use corrosive or flammable gas or liquid with this product.
⑤ Do not drop, hit or allow excessive shock. Even if switch body appears undamaged, internal components may be broken and can cause malfunction.
⑥ Turn power off before connecting wiring. Wrong wiring or short circuit will damage and / or cause malfunction.
⑦ This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
⑧ Wiring for pressure sensor should avoid power source line and high voltage line. If use in the same circuit, noise may cause malfunction.
⑨ Sensors at end-of-life must be disposed of in accordance with E-Waste regulations of the country/region, NOT disposed of with regular garbage.

A. SPECIFICATIONS

MODEL	RLG-3N	RLG-3P
Measuring Range ※1	50 mm	
Switching Logic	Solid State Output, Normally Open / Normally Close Switchable	
Sensor Type	3 NPN Current Sinking	3 PNP Current Sourcing
Repeatability	≤ 0.01 mm	
Operating Voltage	5 ~30 V DC	
Switching Current ※2	150 mA max.	
Supply Voltage ※2	30 V DC	
Contact Rating ※2	4.5 W max.	
Current Consumption	20 mA @ 24 V DC max.	
Voltage Drop ※2	1.5 V max. (with resistive load)	
Leakage Current	0.01 mA max.	
Indicator	Yellow LED · Green LED · Red LED	
Lead Wire	Ø4 PVC - 26 AWG (0.15mm²) - 5 cores	
Operating Frequency	50 Hz	
Magnet Requirement ※3	40 ~ 1000 Gauss	
Temperature Range	-10 ~ 70 °C	
Shock ※4	50 G	
Vibration ※5	9 G	
Enclosure	IEC 60529 IP69	
Protection Circuit	Short-circuit，Power Source Reverse polarity，Surge Suppression	

NOTE

※ 1. The difference of magnetism, environment, and interference of magnetic field can cause the deviation of measurement.
※ 2. The standard is for each output.
※ 3. Measuring standard target : ø15.5 × ø8 × 5t (Anisotropy rubber magnet)
※ 4. Sin wave / X , Y , Z 3 directions / 3 times each direction / 11 ms each time.
※ 5. Double amplitude 1.5 mm / 10 Hz ~ 55 Hz ~ 10 Hz (Sweep 1 min) / X , Y , Z 3 directions / 1 hour each time.

B. ORDERING INFORMATION

R L G - 3 N - ☐

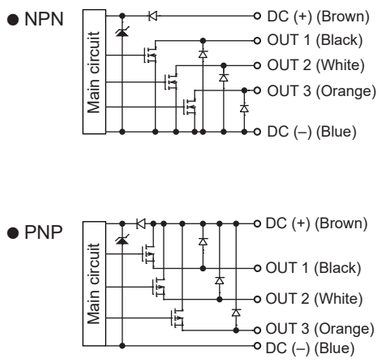
Output Specifications

3N : 3 NPN output
3P : 3 PNP output

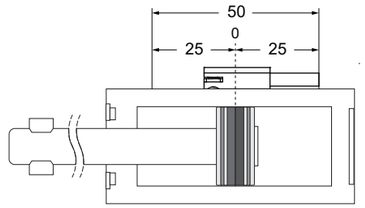
Cable Length / Connector

2M : L = 2000mm
QD : With M12, 5Pin male connector

C. OUTPUT CIRCUIT WIRING DIAGRAMS



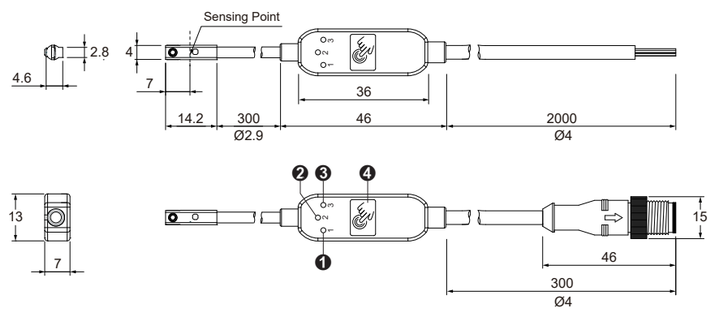
D. MEASURING RANGE



Best sensing point is at the central of measuring range (at 0).
The whole measuring range is 50 mm.

Unit : mm

E. DIMENSIONS



No.	Content
❶	Output 1 Indicator (Yellow)
❷	Output 2 Indicator (Green)
❸	Output 3 Indicator (Red)
❹	Setting Button

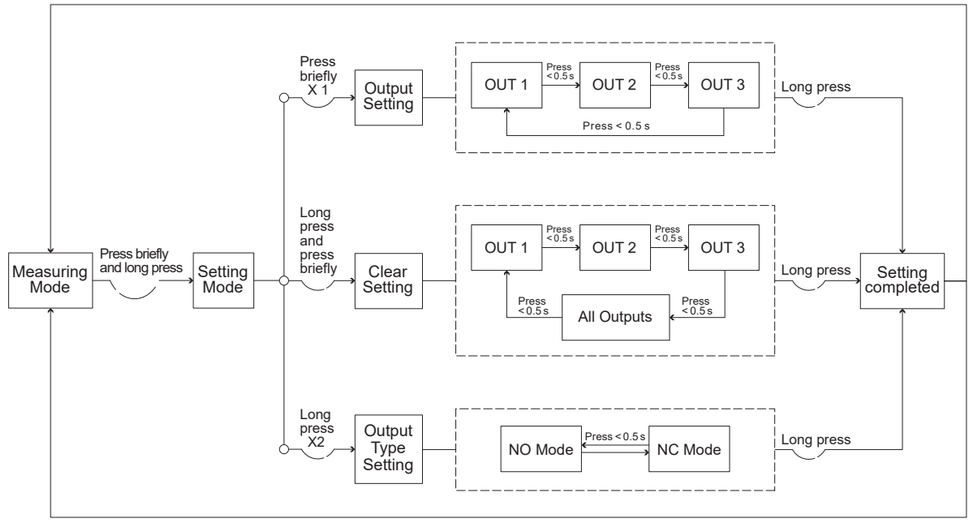
M125 QD PINOUT



(1) Brown (+)
(2) White(OUT2)
(3) Blue (–)
(4) Black(OUT1)
(5) Orange(OUT3)

Unit : mm

F. OPERATING PROCEDURES



G. LED INDICATOR DESCRIPTION

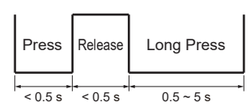
Item \ Indicator		Normal Open (NO) Mode			Normal Close (NC) Mode		
		1 : Yellow	2 : Green	3 : Red	1 : Yellow	2 : Green	3 : Red
Setting mode		☼	☼	☼	☼	☼	☼
Enter clear setting		●	☼	—	●	☼	—
Enter output type setting		●	—	☼	●	—	☼
Select the output type (NO/NC)		☼	—	☼	—	☼	—
Output ON	1	●	—	—	—	●	●
	2	—	●	—	●	—	●
	3	—	—	●	●	●	—

NOTE : ☼ : LED flashing , ● : LED on , — : LED off

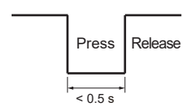
H. OPERATION DEFINITION

This sensor uses capacitive setting button which is based on press times and press period to operate.

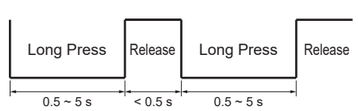
• Press briefly and long press setting button



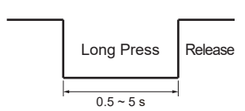
• Press setting button 1 time



• Long press setting button 2 times



• Long press setting button 0.5 ~ 5 s



I. OPERATION INSTRUCTION

Output Setting

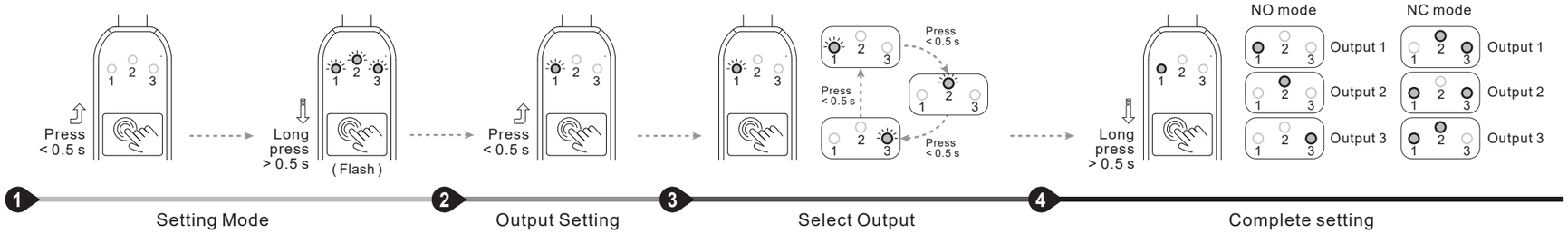
Step 1 : Press briefly and long press the setting button until 3 indicators flash simultaneously.

Step 2 : Press briefly the setting button, indicator 1 flashes to enter Output Setting.

Step 3 : Press briefly the setting button to set OUT 1, 2 or 3.

Step 4 : Move the piston to the desired position, then long press the setting button to complete the setting.

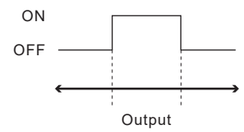
※ Set other outputs by repeating Step 1 to Step 4.



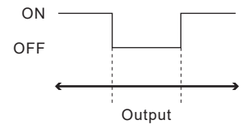
※ Note :

1. After 10 seconds of inactivity, the product returns to measuring mode automatically.
2. One output only can be set each time.
3. NO, NC mode description :

NO mode



NC mode



Clear Setting

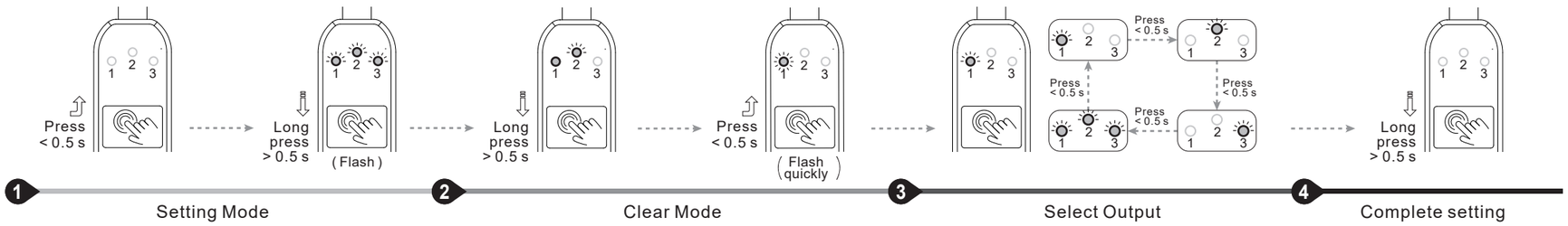
Step 1 : Press briefly and long press the setting button until 3 indicators flash simultaneously.

Step 2 : Long press the setting button, indicator 1 lights up and indicator 2 flashes. Then press briefly the setting button, indicator 1 flashes quickly to enter clear setting.

Step 3 : Press briefly to clear OUT 1, 2, 3 or all of them.

Step 4 : Choose the output needs to be cleared, then long press the setting button to complete the setting.

※ Clear other outputs by repeating Step 1 to Step 4.



Output Type Setting

Step 1 : Press briefly and long press the setting button until 3 indicators flash simultaneously.

Step 2 : Long press the setting button 2 times, indicator 1 lights up and indicator 3 flashes to enter output type setting.

Step 3 : Press briefly the setting button to select NO or NC mode. (NO mode : indicator 1 and 3 flash ; NC mode : indicator 2 flashes)

Step 4 : Long press the setting button to complete the setting.

