

## SPECIFICATIONS

1. Construction: All of the parts are on the printed circuit board in the steal case. The printed circuit board is constructed with electric parts etc. and has high reliance.
2. Contact output: Contact item (14L:start rev. detection (air motor) , 14:start rev. detection , 13:constant rev. detection , 12:over speed detection , SC:detector open)  
Contact capacity;AC100V/DC24V 0.5A
3. Source: DC100V , 2.2W (Operation limit;DC90~110V)
4. Measuring tolerance:  $\pm 1.0\%$  at F. S.
5. Circumstance temp:  $-15\sim 70^{\circ}\text{C}$
6. Case surface: BC plate

FILE: MSP-19013

5	DATE	19. 8. 23	SCALE	1/1	3rd ANGLE PROJECTION	TITLE	TYPE SPR-P06DIL	DWG. NO.	MSP-19013-1S	1
4	APPROVED	K. Ohtsuka	CHECKED	K. Ohtsuka	DRAWN					
3										
2										
1	REVISION	BY	明陽電機株式会社 MEIYO ELECTRIC CO., LTD							

## OPERATION MANUAL

### 1. General:

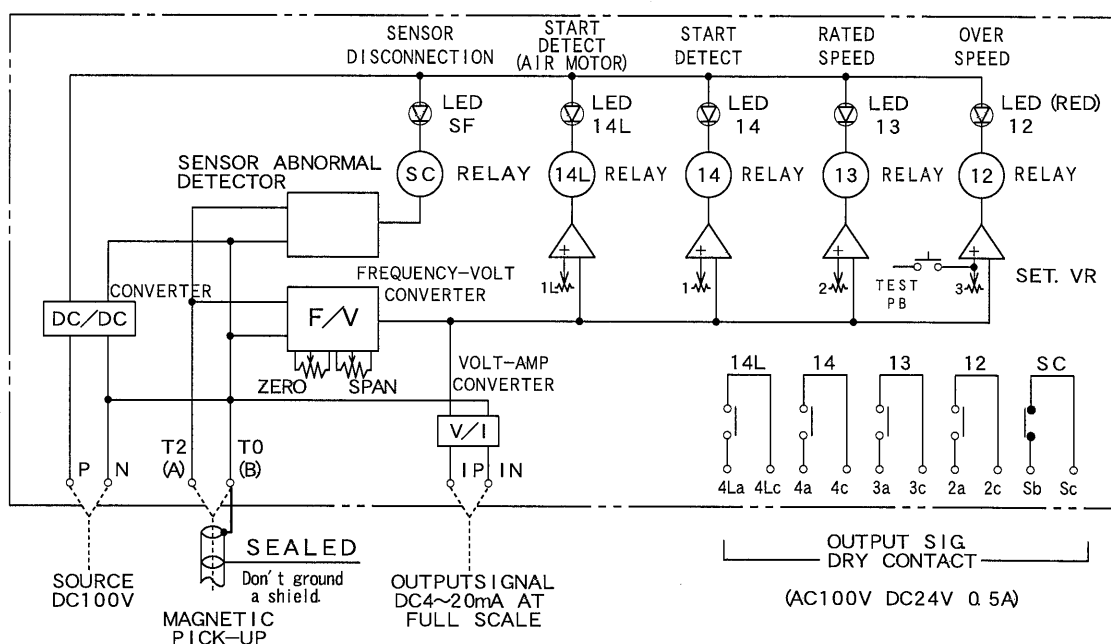
One speed relay detects 4 positions of revolution and detector open. And, it allows connecting revolution indicator.

### 2. Operation:

- Speed detection: Input signal is number of frequency pulse from the magnetic revolution detector set on an engine.
- Signal converting, amplification: To detect frequency which is in proportion to revolution and convert to DC voltage which is in proportion to frequency by frequency-voltage converter. To amplify this DC voltage, after take off ripple, and output as current signal.
- Comparison with basic voltage: The output relay works and LED lights on at input signal becomes higher than basic voltage.

### 3. Adjustment:

- To turn the adjustment volume to CCW, operating point down. To turn the adjustment volume to CW, operating point up.
- Keep an engine revolution at operating point. Turn the adjustment volume slowly from high position to low position and stop at LED lights on and fit it.



## OPERATION MANUAL

- Fix this device in a panel. Connect wires of electric source after confirm the pole.
- Supply DC source after took off ripple (less than 2Vp-p).
- Short all of the terminals before do insulation test. Don't put over DC500V.
- Don't do dielectric strength test.
- Do the test by test push button at constant engine revolution.
- Open the terminals, which are not used.
- Use a sealed wire cable for connecting from revolution detector to this device. Connect sealed line to the terminal of "T0 (B)". Un-connection or miss-connection causes miss-functions.
- Don't connect sealed line to the earth of the hull, junction boxes, panels or devices and keep isolated from them by isolator for example vinyl tape. Loosing this matter, it causes device error or fire.
- Don't move the zero and span adjustment volume. They are pre-adjusted.

<div style="writing-mode: vertical-rl; transform: rotate(180deg);">FILE #MSP-19013</div>	5	DATE	' 19 . 8 . 23	SCALE	1/1	3rd ANGLE PROJECTION	TITLE
	4	APPROVED	K. Ohts	CHECKED	Photo	DRAWN	TYPE SPR-P06D1L
	3						SPEED RELAY
	2						
	1	REVISION	BY	明陽電機株式会社 MEIYO ELECTRIC CO., LTD			DWG. NO.
							MSP-19013-1S
							2