

§DETECTOR §

STATIC

AC/DC DETECTOR

COMMON SPECIFICATION

■ USE

Small sized and multi-function electronic detector for controlling to cope with automation of electric power facility, labor and energy saving.

S-63 series is used for protection in various fields such as heavy current circuit measuring, reverse power of generator in shipping industry and frequency control and overload detection of motor.

Countermeasure against damage by input line surge and false operation is implemented.



■ TYPE NAME CONSTRUCTURE

(1)(2) - (3) - (4)(5) - (6)

(1) Series

Mark	Series name
S	Still detector

(2) Input

Mark	Input
A	AC current
V	AC voltage
F	Frequency
W	AC power
RW	AC reverse power
D	DC current/voltage

(3) Setting

Mark	Setting
H	Upper limit
L	Lower limit
HL	Upper/Lower limit
HH	Upper limit 2 steps
LL	Lower limit 2 steps

(4) Outer case

Mark	Dimension (depth × width × high)
63	120 × 110 × 112mm

(5) About period

Mark	W/ or w/o period
None	No period (immediate operation)
D	With definite period
I	With inverse period

(6) Circuit

Mark	Circuit
3	3-phase 3-wire

■ CONTACT CONSTRUCTION

() : input position /state

Setting	Contact state		
H (upper limit)			
L (lower limit)			
HL (upper/lower limit)			
HH (2 steps of upper limit)			
LL (2 steps of lower limit)			

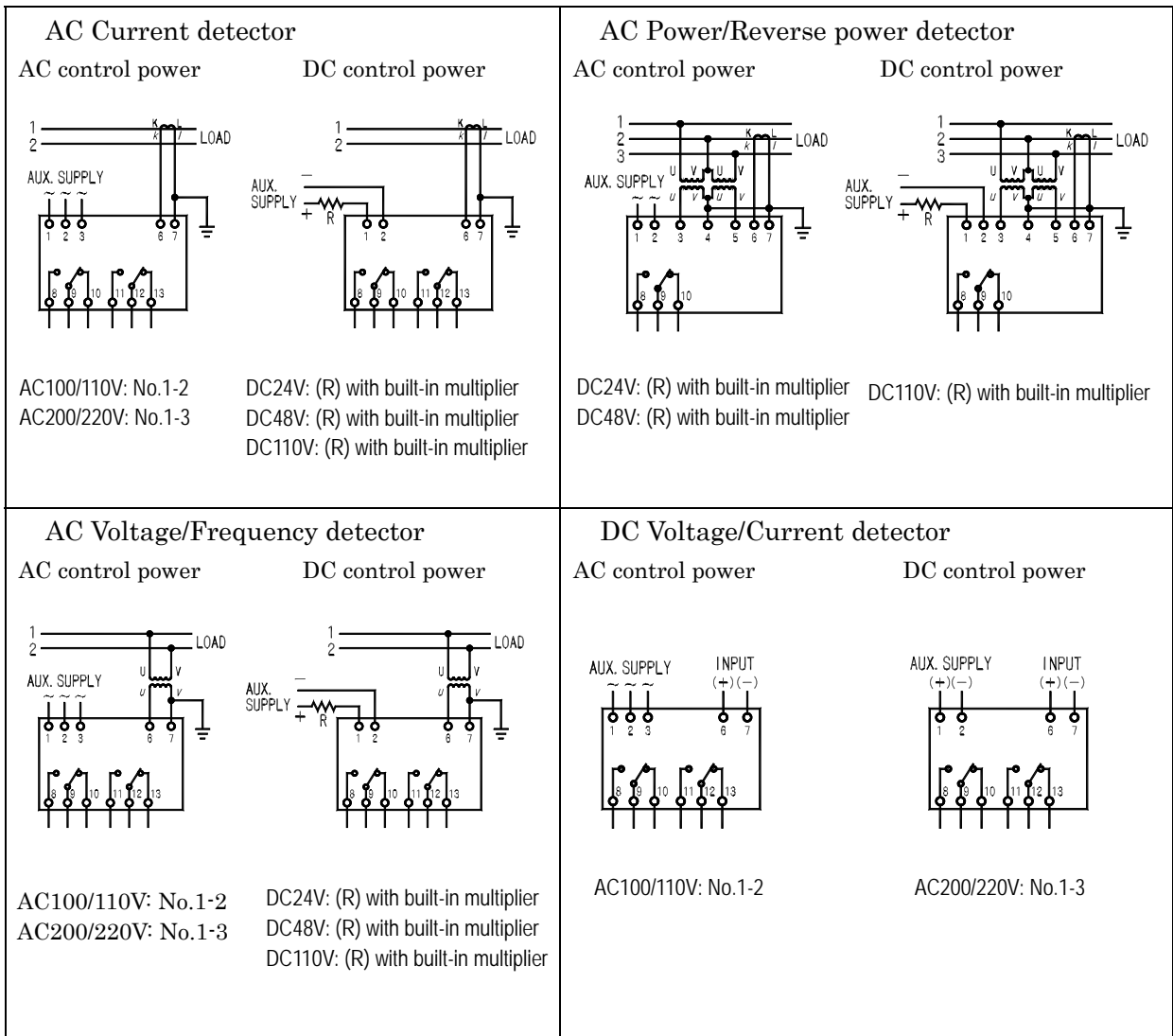
■ FEATURE

- ▶ High quality, high reliability and noise resistance design.
- ▶ Voltage or current detector has strong structure against distorted waveform.
- ▶ Detection operation can be confirmed with operation display.
- ▶ Definite time and inverse time can be integrated.
- ▶ Multi type with multi functioned to cope with various needs.

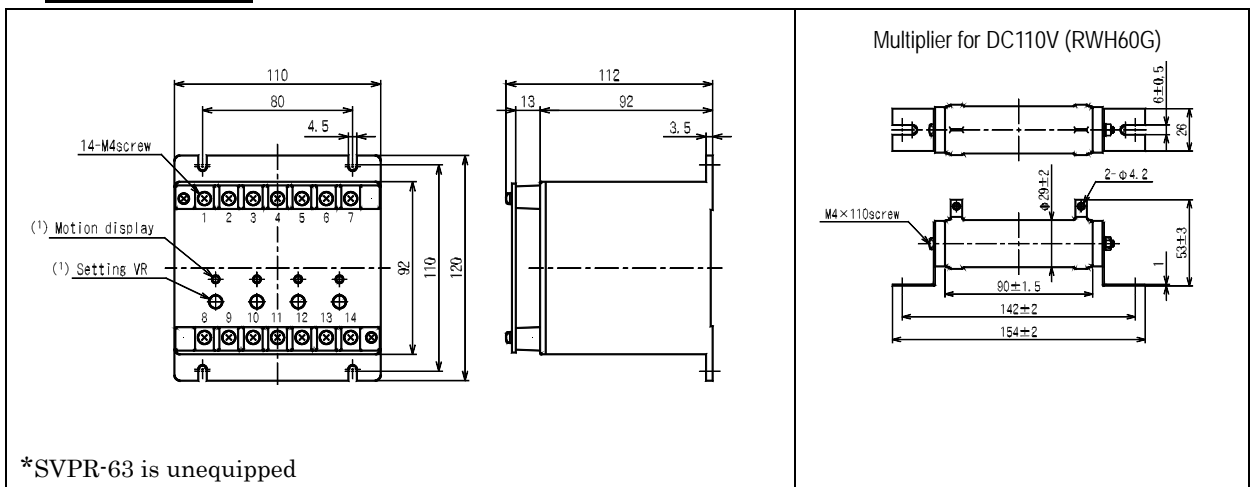
■ COMMON STANDARD SPECIFICATION

Item	Specification	
Setting stability	Operation value: % against max. input value. Frequency is Hz. Operation time: % against max. setting value.	
Error of operating value setting	% against setting range when setting range is 1/3 of max. input or more: $\pm 5\%$ % against max. input value when setting range is below 1/3 of max. input: $\pm 1.5\%$ (However frequency is according to individual specification.)	
Operating time setting error	% against max. setting time.	
Temperature influence	Error at 23 ± 20 change (%) . (Permissible limit is same as setting stability counterpart)	
Control power voltage influence	AC: Error at $\pm 15\%$ change of rating voltage DC: Error at $\pm 20\%$ change of rating voltage (Permissible limit is same as setting stability counterpart)	
Frequency influence	Error at 45-65Hz change.	
Waveform influence	Error against waveform including 3 rd harmonics 15%	
Operating time (detector w/ time limit is excluded).	0.3 sec. or less	H type: 90 110% of operating time.
		L type: 110 90% of operating time.
Reset time	0.3 sec. or less	H type: 110 90% of operating time.
		L type: 90 110% of operating time.
Contact system	1C contact for each	
Contact capacity	AC200V, 5A (resistance load) DC30V, 5A (resistance load)	
Relay type	NTI relay (manufactured by Panasonic Electric Works Co., Ltd.)	
Overvoltage strength	AC	2 times (10 sec.), 1.2 times (continuation) of rating voltage.
	DC	According to individual specification.
Overcurrent strength	AC	40 times (1 sec.), 1.2 times (continuation) of rating current.
	DC	According to individual specification.
Control power voltage strength	AC	2 times (10 sec.), 1.2 times (continuation) of rating voltage.
	DC	1.3 times (continuation) of rating voltage.
Insulation resistance	DC500V 50M	or more between electric circuit and outer case.
	DC500V 20M	or more between input, control power supply and contact
Withstand voltage	AC2, 000V (50/60Hz)	1 min. between electric circuit and outer case.
	AC1, 500V (standard) or AC2, 000V (50/60Hz)	1 min. between input, control power supply and contact.
Impulse withstand voltage	4.5kV 1.2 \times 50 μ s between electric circuit and outer case, positive/negative polarity.	
vibration (false operation)	Frequency: 16.7Hz, peak to peak: 1mm, 10 min. each for X, Y and Z directions.	
Shock	False operation: 98m/s ² , endurance: 294m/s ² , 2 times each for X, Y and Z directions.	
External color	Black (Munsell N 1.5)	
Mass	1kg or less	
Operating temperature/humidity range	-10-50 , 40-85% RH	
Storage temperature range	-30 ~ 60	
Altitude	1000m or less	

■ CONNECTION DIAGRAM



■ DIMENTIONOAN





SA-H-63
(120 × 110 × 112mm/0.7kg)

■ SPECIFICATION

Product	Type name	Setting method					Rating current	Setting range example (VR changeable)	Frequency	Operating time (VR changeable)	Control power	Operation display	Notes
		H	L	HL	HH	LL							
AC current	SA- <input type="checkbox"/> - 63						5A (consumption VA:1VA)	0.5-5A 2.5-5A	50/60Hz	-	AC110/220V (50/60Hz) 2.5VA or less DC24V (3W) DC48V (5W) *DC110V (10W)	Specify	*When control power is DC 110V, multiplier is externally equipped.
	SA- <input type="checkbox"/> - 63D (w/definite time)					0.25-2.5A 1.5-4A		0.5-5sec. 0.5-10sec. 0.5-50sec.		with			
	SA- <input type="checkbox"/> - 63I (w/inverse time)					2-5A		1-5sec. 5-13sec. 10-50sec.		with			

• Operating time at 40ms or less is also manufacturable by designation.

AC current	SV- <input type="checkbox"/> - 63						150V or 300V (consumption VA:1VA)	50/60Hz	*1	-	AC110/220V (50/60Hz) 2.5VA or less DC24V (3W) DC48V (5W) *2 DC110V (10W)	Specify	*2 When control power is DC 110V, multiplier is externally equipped.
	SV- <input type="checkbox"/> - 63D (w/definite time)					0.5-5sec. 0.5-10sec. 0.5-50sec.				with			
Frequency	SF- <input type="checkbox"/> - 63					110V or 220V (consumption VA:1VA)	50Hz or 60Hz	46-50Hz 50-54Hz 42-50Hz 50-58Hz 56-60Hz 60-64Hz 52-60Hz 60-68Hz	-	0.5-5sec. 0.5-10sec. 0.5-50sec.	Specify	with	
	SF- <input type="checkbox"/> - 63D (w/inverse time)												

• Operating time at 40ms or less is also manufacturable by designation for voltage detector.

• 3-phase detector type is also manufacturable for voltage detector.

*1 Setting range example

150V	100-140V 80-120V 60-100V	300V	200-180V 160-240V 120-200V
	120-140V 110-130V 100-120V 90-110V 80-100V		240-280V 330-260V 200-240V 180-220V 160-200V

Product	Type name	Setting method		Rating current				Setting range example (VR changeable)	Operating time (VR changeable)	Control power	Operation display	Notes				
		H	L	power	voltage	current	frequency									
3-phase power	SW- □ - 63- 3			1kW or 2kW	110V or 220V (consumption VA 1VA)	5A (consumption VA 1VA)	50/60 Hz	10-100% 50-90% 5-50% 2-20%	-	AC110V (2.5VA) (50/60Hz) AC220V (2.5VA) (50/60Hz) DC24V (3W) DC48V (5W) *DC110V (10W)	Specify	*When control power is DC 110V, multiplier is externally equipped.				
3-phase reverse power	SRW - H - 63 - 3															
3-phase power	SW- □ - 63D- 3 (w/definite time)														0.5-5sec. 0.5-10sec. 0.5-50sec.	with
3-phase reverse power	SRW - H - 63D - 3 (w/definite time) SRW - H - 63I - 3 (w/inverse time)														1-20%	0.5-10sec. 0.5-20sec.

- 3-phase balance type 1-wattmeter method.

Product	Type name	Setting method						Setting range example (VR changeable)	Continuous withstand over input	Input resistance	Operating time (VR changeable)	Control power	Operation display
		H	L	HL	HH	LL							
DC voltage or DC current	SD- □ - 63						DC4-20mA 0.2-1A 1-5A DC5-10mA 10-60mA 20-100mA DC0.2-1V	± 10V ± 10V ± 10V ± 250V	10 60mV 60mV 100k 100k 500k	-	AC110/220V (50/60Hz) 2.5VA (50/60Hz) DC12V (3W) DC24V (3W) DC48V (3W) DC110V (5W)	specify	
	SD- □ - 63D (w/definite time)						1-5V 5-15V 10-30V 30-70V 50-150V	± 250V ± 250V ± 250V ± 250V ± 250V	500k 500k 500k 500k 500k	0.5-5sec. 0.5-10sec. 0.5-50sec.		with	

- Setting range and operation time of each product is changeable by specification.