



# Built-in servo type accelerometer seismic monitoring system (SW-72 / SW-72R)

## Specifications

Item	SW-72		SW-72R
Detecting method	Omni-directional, non-directivity detection by vector composed acceleration		
Built-in pickup	Force-balance servo type accelerometer		
Frequency range	0.3 to 10 Hz $\pm 10\%$		
Acceleration range	0 to 5000 gal (3-component vector product) NS / EW direction : $\pm 3000$ gal, UD direction : + 2000 to - 4000 gal		
SI value measurement	Measurement range		0.1 to 1500 Kine (3-component vector product)
	Period range	-	0.1 to 2.5 sec. $\pm 10\%$ (natural period 0.1 sec. step, figured out 25 of 1-freedom simulation filters)
	Damping		Can be set by 1 % step
Low pass filter	30 Hz ( $-3$ dB), 4th butterworth		
A / D converter	16 bit, 100 Hz sampling		
Display	7-segment LED, 4-digit display (xxx.x or xxxx)		
Alarm	Alarm step	Upper limit 3-step (ALM1-3) individual setting	Upper limit 3-step (ALM1-3) individual setting (acceleration / seismic intensity / SI value)
	Alarm setting Level	0.1-999.9 gal <sup>*1</sup> setting interval 0.1 step, 0.0 is alarm operation OFF	0.1 to 999.9 (gal / seismic intensity / Kine) 0.1step, alarm operation is OFF at 0.0
	Alarm contact	1a contact (photo MOS relay, COM common)	
	Contact rating	200 V - 0.65 A (AC / DC peak value)	
	Relay	Made by Panasonic PD1a type (AQY277A)	
Alarm reset method	a. Automatic reset by an internal timer 1-9999 sec. (setting interval : 1 sec., 0 is automatic reset OFF) b. External reset terminals (all steps reset by no-voltage a contact)		
DC output	DC4 - 20 mA, load resistance < 300 $\Omega$		DC4 - 20 mA, load resistance < 300 $\Omega$ , output content switching type (acceleration/ SI value / seismic scale by internal setting)
	Full scale : 10 to 3000 gal (setting interval : 1 gal)		Full scale value : settable optionally up to scale 7
Serial I/F	Communication with SW-74 (conforms to RS422) / For maintenance (conforms to RS232C)		Communication with SW-74SI (conforms to RS422) / For maintenance (conforms to RS232C)
Clock	Accuracy	< 70 ppm (daily error of 6 seconds)	
	Time calibration	$\pm 30$ sec. correction (external input of no-voltage a contact)	
Operational temperature range	0 to + 50 $^{\circ}\text{C}$		
Operational humidity range	10 to 100 %RH (non-condensing)		
Power supply	DC24 V $\pm 10\%$ less than 10 W <sup>*2</sup>		DC24 V $\pm 10\%$ less than 15 W <sup>*2</sup>
Structure	Waterproof (equivalent to IP67)		
Material	Aluminum die-casting		
Mass	Approx. 1.5 kg		
Mounting method	Installation on the ground (fixed by anchor)		
I / O cable	Waterproof connector One-touch lock connector (made by Nanaboshi Electric) NRW-2421PF11 (connector diameter : approx. 34.1 mm) Twisted cable with shielded (made by Fuji Electric Wire) FKEV-SB 0.3sqx10 pair (outer diameter : approx. 10.5 mm)		

\*1 Initial setting values are 80, 250, 400 gal

\*2 When connected with SW-74 (74SI), power is supplied from SW-74 (74SI)