

Specifications

Specifications	SW-74	SW-74SI
Display Element	STN monochrome LCD with touch switch (back light color : Green/Orange/Red) (Replacement unnecessary)	
Display Contents	Indicated content switching (Acceleration+ Seismic intensity scale/Instrumental seismic intensity/SI value by internal setting)	
Earthquake monitor screen	Present time	Present time
Earthquake generation screen	Earthquake generation time, Max. acceleration, Seismic intensity scale, Alarm operation	Earthquake generation time, Maximum value
Alarm hold screen	Reset button (Whole reset of alarm/buzzer)	Reset button (Whole reset of alarm/buzzer)
Each setting screen	Trigger, Alarm, Date/time	Trigger, Alarm, Date/time
Maintenance screen	Pickup test, Earthquake history	Pickup test, Earthquake history
Extra Alarm		Alarm step : Upper7-step (ALM4~10) Individual setting (Acceleration/ Instrumental seismic intensity/ SI value Any setting is possible) Alarm setting value: 0.1~999.9 (Gal/Instrumental seismic intensity/Kine) (0.1 step, 0.0 is alarm operation OFF) (Seismic intensity scale alarm is set by Instrumental seismic intensity value) Alarm contact : 1a contact (photo MOS relay) Independent COM 2-point (ALM 1~5, ALM6~10, each 1-point) Contact rating : 200V-0.65A (AC/DC common, peak value)
Alarm & Buzzer	Upper 3-step (ALM1~3) Individual setting, buzzer 1-point Acceleration : 0.1~999.9Gal Setting interval : 0.1Gal, 0.0 is buzzer operation OFF	Upper 3-step (ALM1~3) Individual setting, buzzer 1-point Alarm setting value : 0.1~999.9 (Gal/Instrumental seismic intensity/Kine) 0.1 step, 0.0 is buzzer operation OFF (Seismic intensity scale alarm is set by Instrumental seismic intensity.)
Alarm & Buzzer Reset Method	a.External reset terminal (All step reset by no-voltage a contact) b. Automatic reset by built-in timer c. Reset button on the touch panel (Available on the alarm hold screen) 1~9999sec. (Setting interval: 1-sec, 0 is automatic reset OFF)	
Fault Alarm	[Power failure] 1a/1b contact switching type Contact rating: 2A 30VDC (Max. allowable voltage/current : 220VDC/2A)	[Power failure/System abnormal] 1a/1b contact switching type Contact rating: 2A 30VDC (Max. allowable voltage/current : 220VDC/2A)
Serial Output	For maintenance (conforms to RS232C): MC1 (Switching type with system screen control) For external display (conforms to RS422): MC2	
Back-up Unit	Backup time ≥ 10min (ready time), Charging time ≤ 48hrs (No function at the operation by optional power 24VDC)	
Mounting Method	Wall type	
Ambient Temperature	0~+50°C	
Humidity Range	10~85%RH	
Power Supply	100VAC ± 10%, ≤ 50VA 24VDC ± 10%, ≤ 35W (option)	100VAC ± 10%, ≤ 100VA 24VDC ± 10%, ≤ 70W (option)
Outer Dimensions	See the outside view	
Painted Color	Panel : Similar to Munsell 5GY8/0.5 Case : Munsell N6.0	
Weight	3kg approx.	

Specifications	SW-72	SW-72R
Detecting Method	Omni-directional non-directivity detection by vector product acceleration	
Frequency Range	0.3~10Hz (±10%)	
Acceleration Range	0~5000 Gal (3-component vector product) NS, EW direction : ±3000Gal, UD direction : +2000~-4000Gal	
Low Pass Filter	30Hz (-3dB), 4th butterworth	
SI Value Measuring Range		Measuring range : 0~1500 Kine (3-component vector value) Period range : 0.1~2.5 sec (±10%) (Natural period) 0.1 sec step, Calculation by 25 of 1-freedom simulation filter) Damping : 1% step any setting
A/D Converter	16bit, 100Hz sampling	
Indication	7-segment LED, 4-digit display (xxx.x or xxxx)	
Alarm Step	Upper limit 3-step (ALM1~3) individual setting	Upper limit 3-step (ALM1~3) individual setting (Acceleration/Instrumental seismic intensity/ SI value : Internal setting is possible)
Alarm Setting Value	Acceleration 0.1~999.9Gal *1 0.1 step, 0.0 is alarm operation OFF)	0.1~999.9 (Gal/Instrumental seismic intensity/Kine) 0.1 step, 0.0 is alarm operation OFF (Seismic intensity alarm scale is set by Instrumental seismic intensity.)
Alarm Contact	1a contact (Photo MOS relay, COM common) Contact rating 200V-0.65A (common for AC/DC, peak value) Relay : made by Panasonic, PD1a type (AQY277A)	
Alarm Reset Method	a. External reset terminal (All step reset by no-voltage a contact) b. Automatic reset by built-in timer 1~9999sec., Setting interval: 1-sec., 0 is automatic reset OFF	
DC Output	4~20mADC, Load resistance ≤ 300Ω Full scale : 10~3000Gal (Setting interval : 1Gal)	4~20mADC, Load resistance ≤ 300Ω Output content switching type (Acceleration/SI value/Seismic intensity scale by internal setting) Full scale value any setting
Serial I/F	Communication with SW-74 (Conforms to RS422)	Communication with SW-74SI (Conforms to RS422)
Clock	Accuracy: ≤ 70ppm (6sec/day)	
Time Correction Input	±30 sec correction (external input of no-voltage a contact)	
Ambient Temperature	0~+50°C	
Humidity Range	10~100%RH	
Power Supply	24VDC ± 10% *2	
Power Consumption	≤ 10W	≤ 15W
Outer Dimensions	See outside view	
Structure	Water-proof structure (IP67)	
Material	Aluminum die casting	
Painted Color	Silver metric	
Weight	4Kg	
Mounting Method	Installation on the ground (fixed with anchor)	
I/O Cable	Water-proof connector connected One-touch lock connector made by NANABOSHI ELECTRIC MFG NRW-2421PF11 (Outer diameter : 34.1mm approx.) Cable made by Fuji Electric Wire Industries Twisted cable (with shielded) FKEV-SB 0.3sqx10 pair Outer diameter : 10.5 mm approx.	

Built-in accelerometer	
Pickup model	VP-5511B/3
Conversion Method	Force balance servo type accelerometer
Detection Method	Horizontal 2-direction, Vertical 1-direction
Sensitivity	0.204V/(m/s ²) ±5%
Frequency Range	0~100Hz ±10% 0~30Hz ±3%
Natural Frequency	≥ 300Hz
Max. Measuring Acceleration	NS, EW direction : ±29.4m/s ² UD direction : -39.2~+19.6m/s ²
Linearity	0.3% full scale

*1 Initial setting value at factory shipping is 80,250,400 Gal
*2 When connected with SW-74 (74SI), power is supplied from SW-74 (74SI).

Combination of unit : SW-74 × SW-72, SW-74SI × SW-72R



Seismic Monitoring System

SW Series

The prevention of the secondary disaster by earthquake starts from the accurate measurement of earthquake. The installation of seismic monitoring system in the public area and plant is increased to prevent from the secondary disaster. Seismic Monitoring System "SW series" provide the versatile models to be used widely.

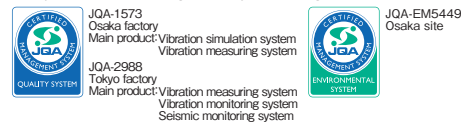


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IMV CORPORATION

Seismic Monitoring System "SW series" use the high resolution servo acceleration pickup which can detect the minute earthquake. Many models from standard to high-grade type are provided.

High-Grade Model

Servo-Acceleration Vibration Pickup	Color Display	SW-74SI
3-direction non-directivity	History Report	Multi functional model equipped alarm output up to 10-step and SI value output
Earthquake Information Display	Alarm Buzzer	
Acceleration Alarm Contact Output	Backup for Power Cut	
Seismic Intensity-SI Value Alarm Contact Output	Extra Alarm Output	
Alarm External Reset	FAULT Alarm	
Analogue Level Output	Connection with External Display	
Pickup Test		



Servo-Acceleration Vibration Pickup	Color Display	SW-72R
3-direction non-directivity	History Report	Stand-alone type with built-in sensor and alarm output of SI value
Acceleration Display	Alarm Buzzer	
Acceleration Alarm Contact Output	Backup for Power Cut	
Seismic Intensity-SI Value Alarm Contact Output	Extra Alarm Output	
Alarm External Reset	FAULT Alarm	
Analogue Level Output	Connection with External Display	
Pickup Test		



The functions displayed by gray colour are excluded.

Standard Model

Servo-Acceleration Vibration Pickup	Color Display	SW-74
3-direction non-directivity	History Report	Standard model available for up to 10-step seismic intensity scale display
Earthquake Information Display	Alarm Buzzer	
Acceleration Alarm Contact Output	Backup for Power Cut	
Seismic Intensity-SI Value Alarm Contact Output	Extra Alarm Output	
Alarm External Reset	FAULT [Power failure]	
Analogue Level Output	Connection with External Display	
Pickup Test		

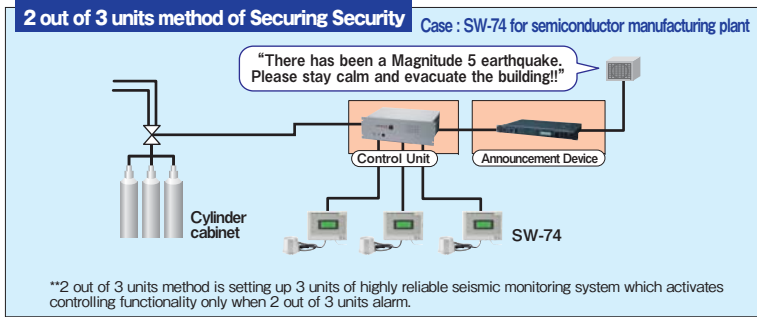
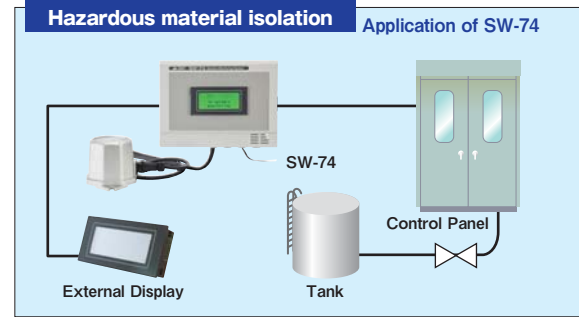


Servo-Acceleration Vibration Pickup	Color Display	SW-72
3-direction non-directivity	History Report	Stand-alone model to take out acceleration alarm.
Earthquake Information Display	Alarm Buzzer	
Acceleration Alarm Contact Output	Backup for Power Cut	
Seismic Intensity-SI Value Alarm Contact Output	Extra Alarm Output	
Alarm External Reset	FAULT Alarm	
Analogue Level Output	Connection with External Display	
Pickup Test		

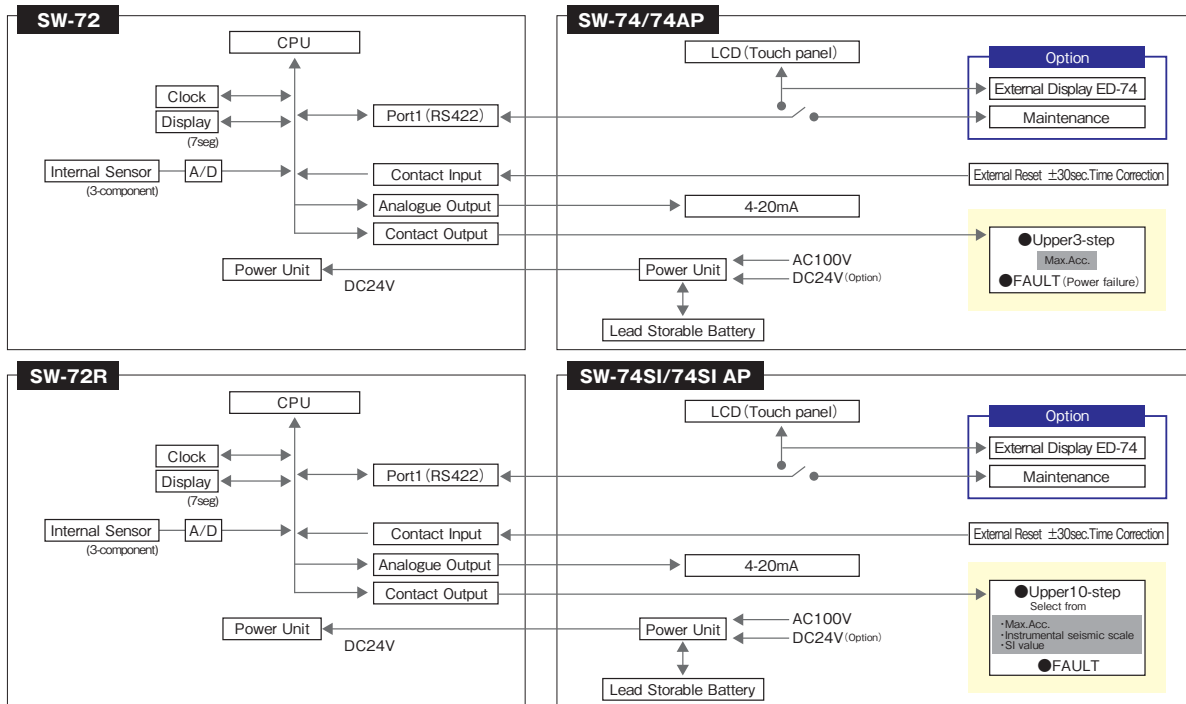


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Application



Block Diagram



Features

Status is indicated by backlight color. The severity level can be distinguished from far way.



Touch panel type is operable by intuition



Direct operation makes speedy confirm.

System Calibration Service



Calibration system is composed of a compact electrodynamic horizontal table PET-03 and an amplifier with oscillator PET-OA. It can simulate earthquake and enables an easy calibration test.

Easy fixing



U-shaped fixing hole makes easy anchor positioning for seismic pickup and fixing.

Water-proof type



IP67 water proof compliant structure enables installation at rainy or dusty places.

History Report Screen



History up to 50 are saved.

Safety and high accuracy



This is the most advanced of all electrical types. Servo sensors can detect acceleration from 0 Hz. Three units of the servo type sensors are equipped in a seismometer to detect accelerations in 3-axis.

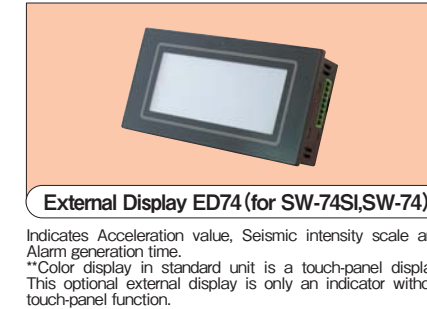
Compact design



By locating pick-up port at a lower place and rounding off the corners, we are able avoid impact to cables from outside.

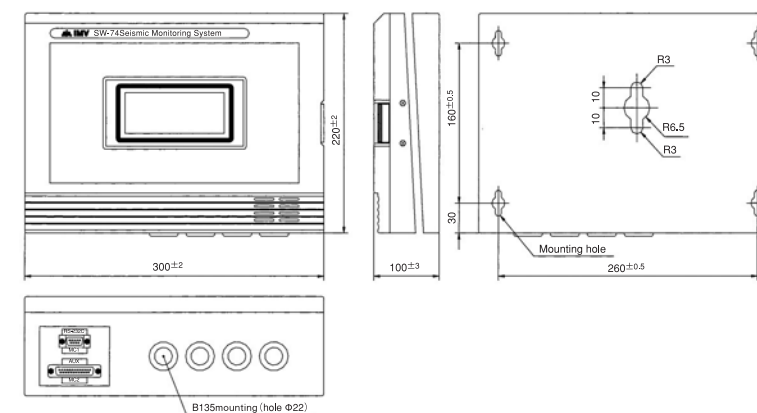
Options

Options to expand the function are provided.



Outer Dimensions

SW-74/SW-74SI (unit:mm)



SW-72/SW-72R

