SECURE THE FUTURE

IMV

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 disastor.
Seismic Monitoring System "SW series" provide
the versatile models to be used widely.

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
- 3-direction non-directivity
- Earthquake Information Display
- Acceleration Alarm Contact Output
- Seismic Intensity·SI Value Alarm Contact Output
- Alarm External Reset
- Analogue Level Output
- Pickup Test
- Color Display
- History Report
- Alarm Buzzer
- Backup for Power Cut
- Extra Alarm Output
- FAULT Alarm
- Connection with External Display

SW-74SI NEW

Multi functional model equipped alarm output up to 10-step and SI value output

- Servo-Acceleration Vibration Pickup
- 3-direction non-directivity
- Acceleration Display
- Acceleration Alarm Contact Output
- Seismic Intensity·SI Value Alarm Contact Output
- Alarm External Reset
- Analogue Level Output
- Color Display
- History Report
- Alarm Buzzer
- Backup for Power Cut
- Extra Alarm Output
- FAULT Alarm
- Connection with External Display

The function displayed by gray color is excluded.

SW-72R NEW

Stand-alone type with built-in sensor and output of SI value

Standard Model

- Servo-Acceleration Vibration Pickup
- 3-direction non-directivity
- Earthquake Information Display
- Acceleration Alarm Contact Output
- Seismic Intensity·SI Value Alarm Contact Output
- Alarm External Reset
- Analogue Level Output
- Pickup Test
- Color Display
- History Report
- Alarm Buzzer
- Backup for Power Cut
- Extra Alarm Output
- FAULT Alarm
- Connection with External Display

The function displayed by gray color is excluded.

SW-74

Standard model available for up to 10-step seismic intensity scale

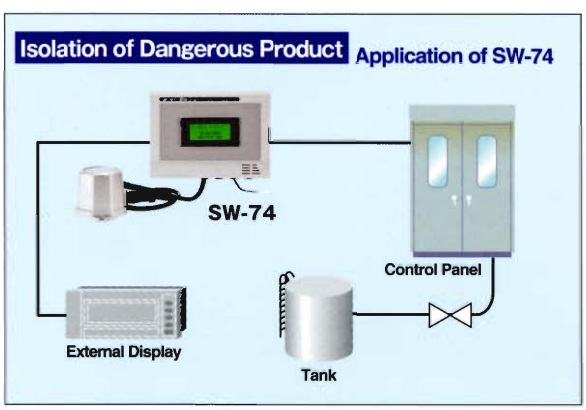
- Servo-Acceleration Vibration Pickup
- 3-direction non-directivity
- Earthquake Information Display
- Acceleration Alarm Contact Output
- Seismic Intensity·SI Value Alarm Contact Output
- Alarm External Reset
- Analogue Level Output
- Color Display
- History Report
- Alarm Buzzer
- Backup for Power Cut
- Extra Alarm Output
- FAULT Alarm
- Connection with External Display

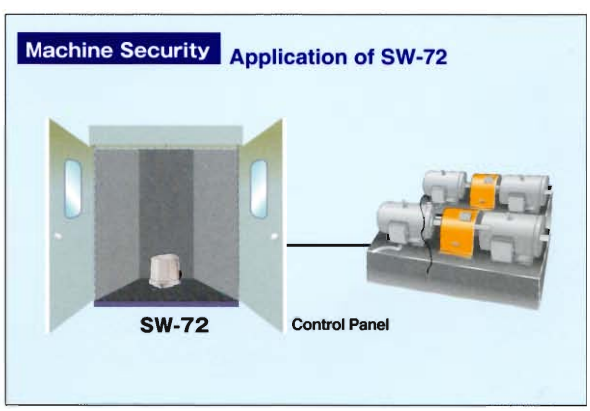
The function displayed by gray color is excluded.

SW-72

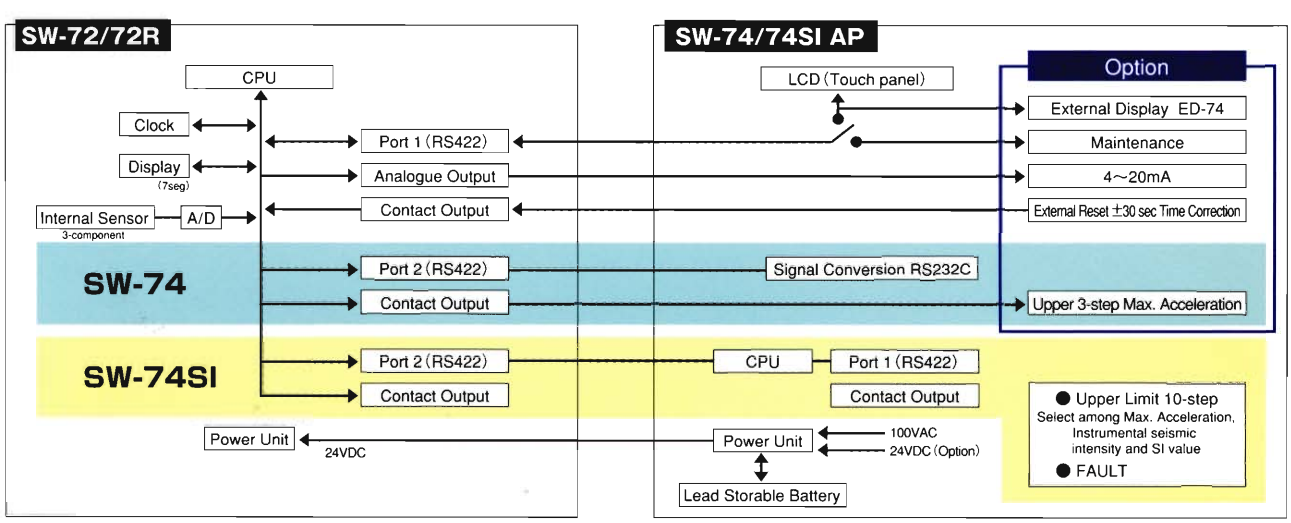
Stand-alone model to take out acceleration alarm.

Application





Block Diagram



Features

■ **Status is indicated by backlight color.**
The importance can be distinguished from far away.

■ **Touch panel type is operable by intuition**

Direct operation makes speedy confirm.

■ **Concentrated wiring enables the all wiring on front panel**

The terminal board concentrated on front panel makes wiring work without checking from rear panel.

■ **Easy fixing**

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

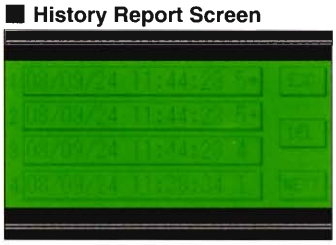
■ **Water-proof type**

Water-proof structure IP67 makes enable the installation on the place with rainy and dust.

■ **Available for IMV old model**

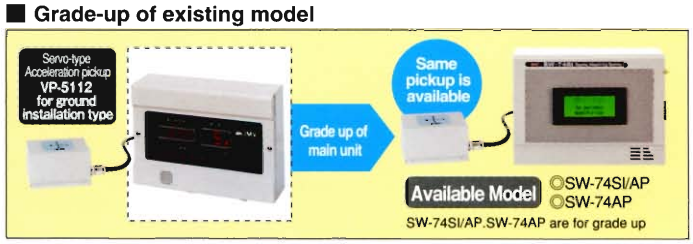
The dimension and position of fitting screw are the same as SW-90K, SW-90E.

■ **History Report Screen**



History up to 50 are saved.

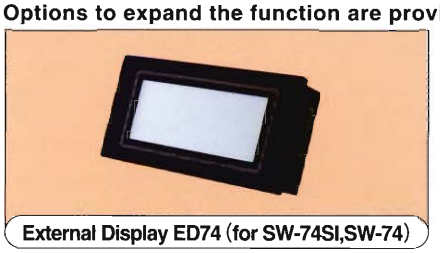
■ **Grade-up of existing model**



Existing pickup is available. Please contact with IMV in detail.

Options

Options to expand the function are provided.



External Display ED74 (for SW-74SI,SW-74)

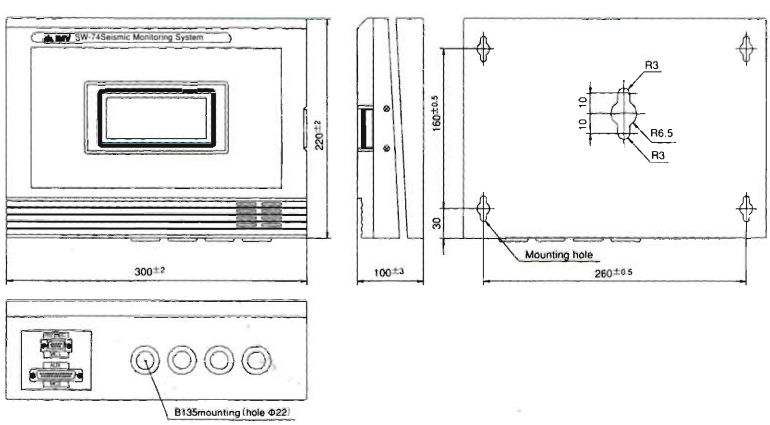
Indicates Acceleration value, Seismic intensity scale and Alarm generation time.

Control Unit CU-5

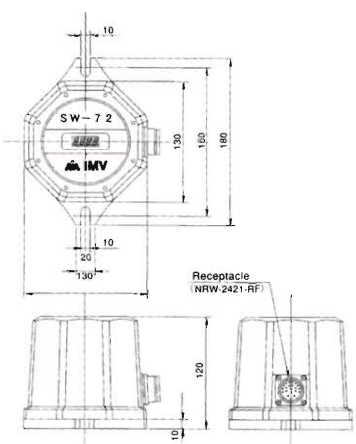
Takes out the alarm when 2-sets among 3-sets operate. It increases the reliability of control･cut-off alarm contact output for seismic monitor.

Outer Dimensions

■**SW-74/SW-74SI (unit:mm)**



■**SW-72/SW-72R**



Specifications

Specifications	SW-74	SW-74SI
Display Element	STN monochrome LCD with touch switch (back light color : Green/Orange/Red) 〈Replacement unnecessary〉 Life time of LCD : Average 50,000 hrs (at 25℃)	
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
Earthquake 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/ Seismic intensity scale/SI value Any setting is possible) Alarm setting value: 0.1~999.9 (Gal/Seismic intensity scale/Kine) (Setting interval 0.1Gal, 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) Used relay : Panasonic makes 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)	
Fault Alarm	—	1a/1b contact switching type Contact rating: 2A 30VDC (Max.allowable voltage/current : 220VDC/2A) Used relay : Panasonic makes TK relay (ATK102)
Alarm Buzzer	Acceleration : 0.1~999.9Gal (Gas/Seismic intensity/Kine) Setting interval : 0.1Gal,0.0 is buzzer operation OFF	Alarm setting value : 0.1~999.9 (Gal/Seismic intensity/Kine) Setting interval : 0.1Gal,0.0 is buzzer operation OFF (Seismic intensity scale alarm is set by Instrumental seismic intensity.)
Buzzer Reset Method	a.External reset terminal (Reset by no-voltage a contact) b.Automatic reset by built-in timer 1~9999sec, (Setting interval: 1-sec,0 is automatic reset OFF)	
Serial1	For external display/Maintenance (switching type) For external display (conforms to RS422) : MC2 For maintenance (conforms to RS232C) : MC1	
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℃	
Humidity Range	10~85%RH	
Power Supply	100VAC±10%, 1Φ, 50/60Hz 24VDC± 10% (option)	
Power Consumption	≦50VA (≦30W at 24VDC)	≦100VA (≦70W at 24VDC)
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	DC~10Hz (±10%)	
Acceleration Range	0.5~3000 Gal (3-component vector product)	
Low Pass Filter	30Hz (-3dB) , 4th butterworth	
SI Value Measuring Range	—	Measuring range : 0.1~1500 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 : 2~30% (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/Seismic intensity scale/SI value : Internal setting is possible)
Alarm Setting Level	Acceleration 0.1~999.9Gal※1 (Setting interval 0.1Gal, 0.0 is alarm operation OFF)	0.1~999.9 (Gal/Seismic intensity scale/Kine) (Setting interval 0.1 Gal, 0.0 is alarm operation OFF) (Seismic intensity alarm scale is set by Instrumental seismic intensity.)
Alarm Contact	1a contact (Photo MOS relay) Contact rating 200V-0.65A (common for AC/DC, peak value) Used relay : Panasonic makes PD1a type (AQY275A)	1a contact (Photo MOS relay, COM common) Contact rating 200V-0.65A (common for AC/DC, peak value) Used relay : Panasonic makes PD1a type (AQY275A)
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 0~300Ω Full scale : 10~3000Gal (Setting interval : 1Gal)	4~20mADC、Load 0~300Ω 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℃	
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 by anchor)	
I/O Cable	Water-proof connector connected Used cable : Fuji Electric Wire make Twisted cable (with shielded) FKEV-SB 0.3sq×10 pair Outer diameter : 10.5 mm approx.	

Built-in accelerometer

Pickup model	VP-5511B/3
Conversion Method	Servo-type acceleration type
Detection Method	Horizontal 2-direction, Vertical 1-direction
Sensitivity	0.204V/(m/s²) ±5%
Frequency Range	0.1~100Hz ±10% 0.1~30Hz ±3%
Natural Frequency	≧300Hz
Max. Measuring Acceleration	NS, EW direction : ±29.4m/s² UD direction : −39.2~+19.6m/s²
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

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