

Water Leak Alarm/Detector

61F-WLA/-GPN-V50

CSM_61F-WLA_61F-GPN-V50_DS_E_4_1


Flexible Setup according to Water Quality and Surrounding Wiring Conditions

- The operating resistance has a variable sensitivity from 0 to 50 k Ω , so the best set values can be made according to the predicted water leakage, degree of overflow, water quality, or surrounding wiring conditions.
- The power supplied to the Sensing Band is 24 VAC, so operation is stable because there is no electrode deterioration from electrical corrosion.
- A contact signal output enables monitoring from remote locations.



[Reference]

For detecting leakage of water with high resistivity, use K7L-U/-UD ultra high-sensitivity models.

 Refer to *Safety Precautions for Floatless Level Controllers*.

Ordering Information

Water Leak Alarm	61F-WLA
Water Leak Detector	61F-GPN-V50

When ordering, to complete the part number, be sure to specify the desired operating voltage.

Example: 61F-WLA [120/240 VAC]

_____ Desired supply voltage

Specifications

■ Ratings/Characteristics

Item	Water Leak Alarm	Water Leak Detector
Model	61F-WLA	61F-GPN-V50
Supply voltage	100/200, 110/220, 120/240 VAC	100, 110, 120, 200, 220, 240 VAC
Interelectrode voltage	24 VAC	
Operating current	3 mA (AC) max.	
Power consumption	8.0 VA max.	3.2 VA max.
Sensitivity	Variable (0 to 50 k Ω)	
Sensitivity error	Scale 0: 0 to 10 k Ω *1 Scale 50: 50 \pm 10 k Ω	
Contact ratings	3 A 250 VAC, SPDT cos ϕ =1 1 A 250 VAC, SPDT cos ϕ =0.4	3 A 250 VAC, DPDT cos ϕ =1 1 A 250 VAC, DPDT cos ϕ =0.4
Indicator	Provided (Power and Leak indicators)	Provided (Operation indicator)
Alarm buzzer	Provided	Not provided
Test switch	Provided	Not provided
Ambient temperature	-10 to 50°C	
Ambient humidity	45% to 85%	
Accessories	Hold-down clip PFC-N8 *2	

*1 The Detector may not operate around the setting value of "0." Adjust the sensitivity depending on the actual application.

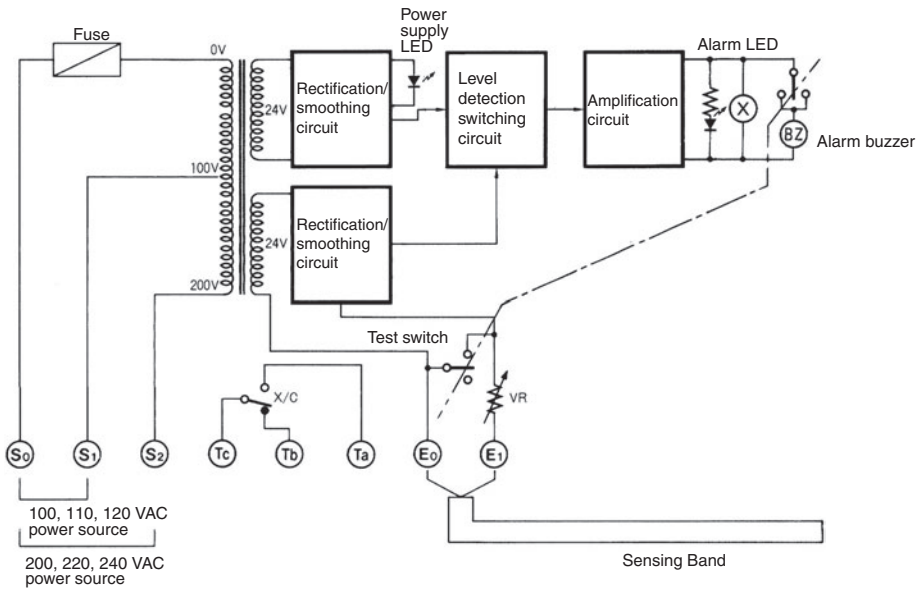
*2 Hold-down clip PFC-N8 is attached only 61F-GPN-V50.

Operation

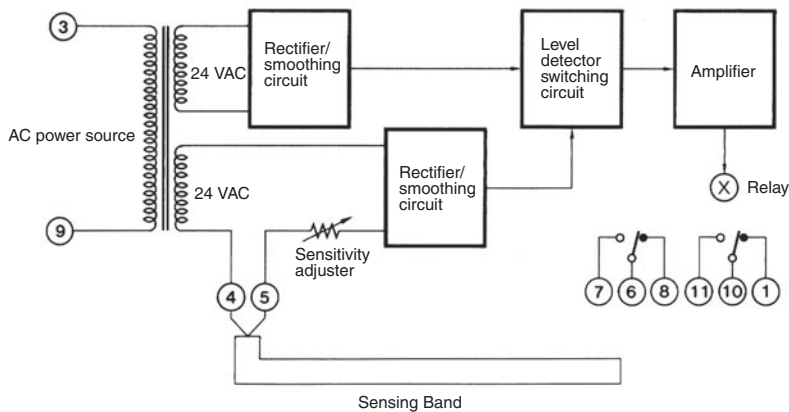
Internal Circuit

Connections

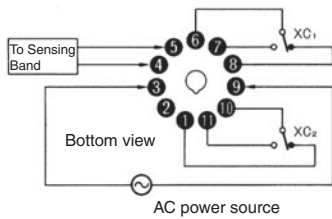
61F-WLA Water Leak Alarm



61F-GPN-V50 Water Leak Detector



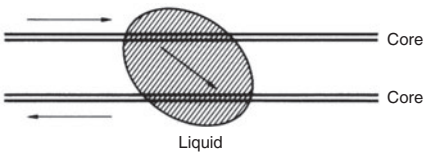
61F-GPN-V50 Water Leak Detector



Operating Principle

When the two conductive cores of the Sensing Band are contacted by a liquid, a weak alternating current (as small as 3 mA max.) flows across the cores. This current is amplified to operate a relay.

In practice, leakage will be detected if water drops are present between the core wire and the Electrode (F03-15 Sensing Band) or detecting section (F03-16PE Sensing Band). (Refer to the specifications on page 4)



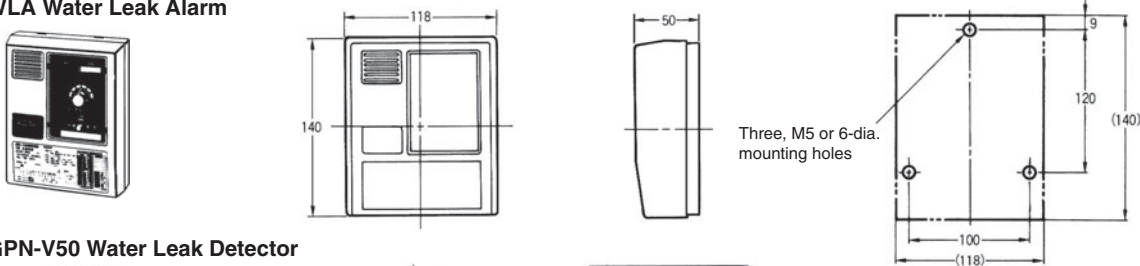
Sensing Band Protective Cover

Item	F03-25	F03-26PES
Appearance		
Suggested use		
Construction		
Comments	Secures the F03-15 Sensing Band to the floor surface. Attach the sticker on a smooth surface. To attach it on a concrete floor, use a concrete bonding agent.	Secures the F03-16PE Sensing Band to the floor surface. Attach the sticker on a smooth surface. To attach it on a concrete floor, use a concrete bonding agent.

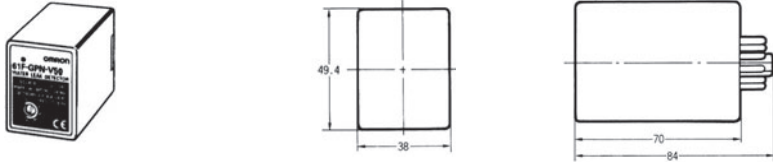
Dimensions

Note: All units are in millimeters unless otherwise indicated.

61F-WLA Water Leak Alarm



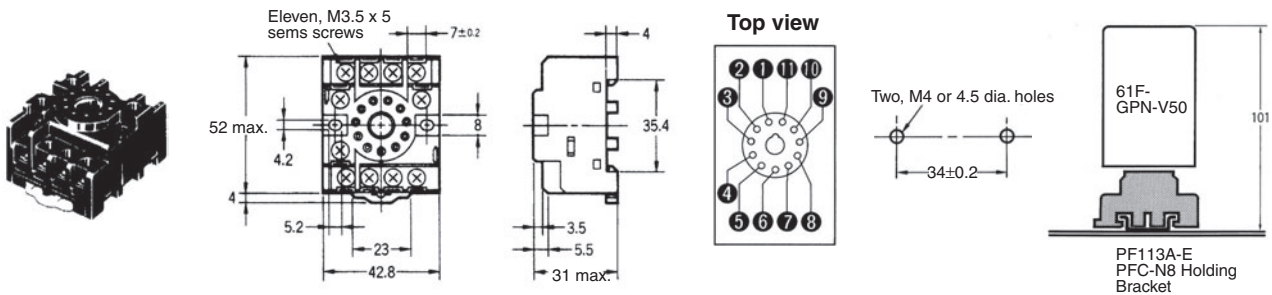
61F-GPN-V50 Water Leak Detector



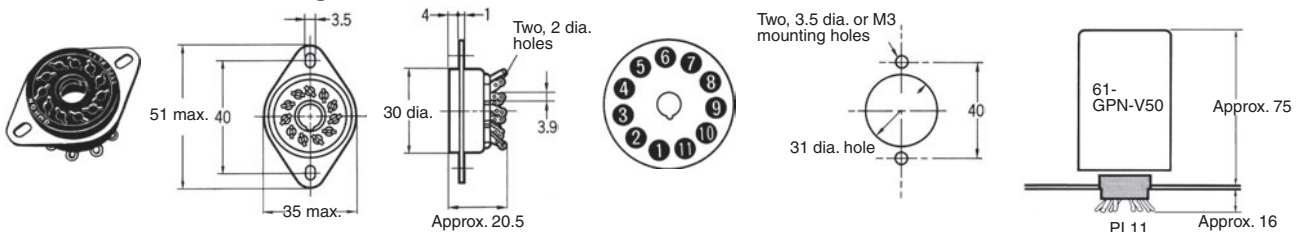
Accessories (Order Separately)

Connecting Sockets (for 61F-GPN-V50 Water Leak Detector)

PF113A-E Track-mounted Socket



PL11 Back-connecting Socket



Important: Install the Water Leak Detector socket with the keyway facing down.

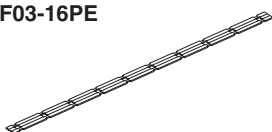
Sensing Band

F03-15

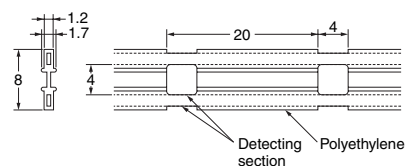
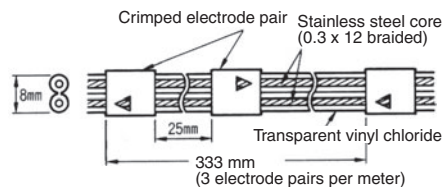


Sheath: Transparent vinyl chloride
Core: Stainless steel SUS304

F03-16PE



Sheath: Transparent vinyl chloride
Core: Stainless steel SUS316



Safety Precautions

WARNING

Do not touch the terminals while power is being supplied. Doing so may possibly result in electric shock. Make sure that the terminal cover is installed before using the product.



CAUTION

Do not attempt to disassemble, repair, or modify the product. Doing so may occasionally result in minor or moderate injury due to electric shock.



■ Precautions for Safe Use

- (1) Use only F03-15 or F03-16 Sensing Band. Other water conductors may cause the Water Leak Alarm/Detector to malfunction, or not operate at all because of mismatched sensitivity.
- (2) Place the Sensing Band at a location where water leakage is most likely to occur. For example, consider the following locations:
 - Under a raised floor; on the highest floor of a building; on the ceiling
 - In the vicinity of an air conditioner, or on the floor near a humidifier
 - On the floor near a feed-water pipe, conduit; hot-water pipe.
 - On top of a power, or control panel
- (3) Secure the Sensing Band so that they touch the floor surface or the wall near a pipe arrangement. Cover the Sensing Band with a F03-25 or F03-26 Protective Cover if they are installed at a location crowded with people. However, place the cover such a manner that water can easily reach the Sensing Band.
- (4) Keep the temperature at the installation site to within 55°C. Do not install the Water Leak Alarm/Detector/Sensing Band in the proximity of heat-generating equipment (such as that having a coil or wire winding). Also, do not use it in a highly humid location, or at a location that is subjected to corrosive gases. Do not place the Water Leak Alarm/Detector side-by-side with a high-capacity contactor that produces an inrush current when it operates, as such arrangement may cause chattering to occur, consequently causing a malfunction of the Water Leak Alarm/Detector.
- (5) Wiring distance of the Sensing Band varies depending on the water quality. When using IV cables, wire the Sensing Band to the length specified in the following table.
- (6) Mount the 61F-WLA Water Leak Alarm/Detector on a sturdy wall surface which is not subjected to vibration or shock. Do not use double-sided adhesive tape, otherwise, the Detector may detach when the adhesive tape deteriorates due to aging.
- (7) When wiring the Sensor on conductive objects like metal objects, use the F03-16.
- (8) When measuring insulation resistance, do not conduct a megger test between the electrode terminals.

IV Cable	Sensing Band
0 m	200 m
10 to 150 m	150 m
200 to 300 m	100 m
350 to 400 m	50 m

Note: IV cable: 2 mm²

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.

Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranty and Limitations of Liability

WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

LIMITATIONS OF LIABILITY

OMRON SHALL NOT BE RESPONSIBLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.

In no event shall the responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS REGARDING THE PRODUCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED, AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

Application Considerations

SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

Disclaimers

CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

ERRORS AND OMISSIONS

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

2010.3

In the interest of product improvement, specifications are subject to change without notice.

OMRON Corporation
Industrial Automation Company

<http://www.ia.omron.com/>

(c)Copyright OMRON Corporation 2010 All Right Reserved.