

Water Leak Alarm/Detector

61F-WLA/GPN-V50

- Eliminate Problems Caused from Water Leakage
- 0 to 50 kΩ variable operating resistance to detect virtually any liquid.
- Two types available: Water Leak Alarm (61F-WLA) and plug-in Water Leak Detector (61F-GPN-V50).
- 24 VAC interelectrode voltage causes no electrolytic corrosion.
- Suggested applications include computer room, power plant, factory, library, warehouse, and basement use.
- Conforms to EMC/IEC Standards (61F-GPN-V50).
- Approved by UL/CSA (61F-GPN-V50)



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

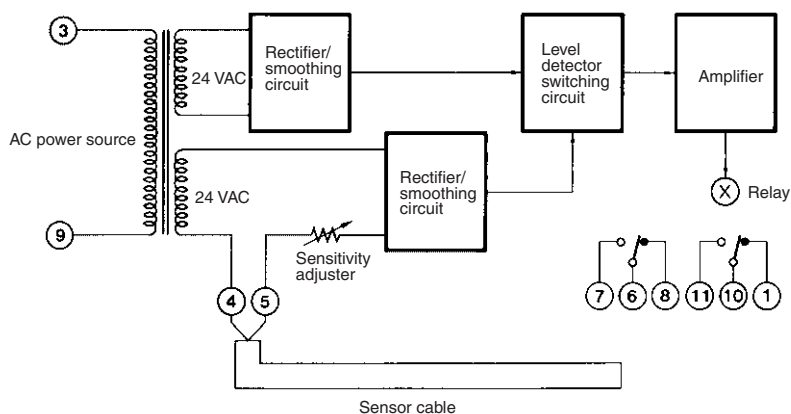
Item	Water Leak Alarm	Water Leak Detector
Model	61F-WLA	61F-GPN-V50
Supply voltage	100/200, 110/220, 120/240 VAC	100, 110, 120, 200, 220, 240 VAC
Interelectrode voltage	24 VAC	
Operating current	3 mA (AC) max.	
Power consumption	8.0 VA max.	3.2 VA max.
Sensitivity	Variable (0 to 50 kΩ)	
Error (against the scale)	Scale 0: 10 kΩ Scale 50: ±10 kΩ (see note 2)	Scale 0: 10 kΩ Scale 50: ±10 kΩ (see note 2)
Contact ratings	3 A 250 VAC, SPDT cosφ=1 1 A 250 VAC, SPDT cosφ=0.4	3 A 250 VAC, DPDT cosφ=1 1 A 250 VAC, DPDT cosφ=0.4
Indicator	Provided (Power and Leak indicators)	Provided (Operation indicator)
Alarm buzzer	Provided	Not provided
Test switch	Provided	Not provided
Ambient temperature	-10°C to 55°C	

- Note:**
1. For detecting leakage of water with high resistivity, use 61F-UHS or 61F-HSL ultra high-sensitivity models. (Refer to page 34.)
 2. The Detector may not operate around the setting value of "0." Adjust the sensitivity depending on the actual application.

Operation

Internal Circuit

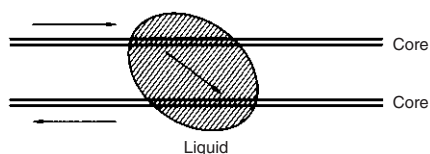
61F-GPN-V50 Water Leak Detector



Operating Principle

When the two conductive cores of the Sensor Cable 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 Sensor Cable) or ring section (F03-16PE Sensor Cable). (Refer to the specifications on page 72)



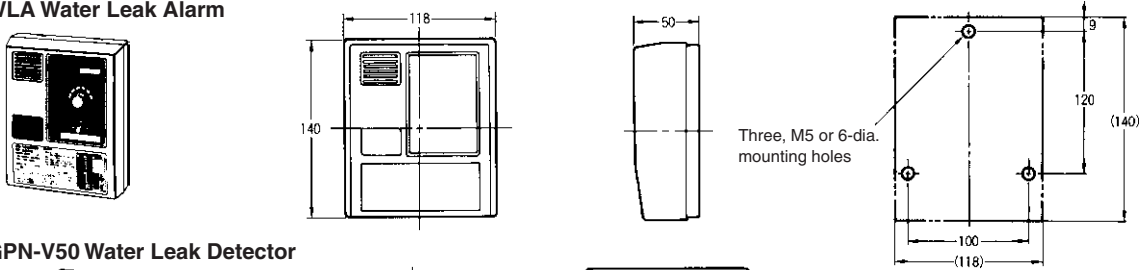
Sensor Cable Protective Cover

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

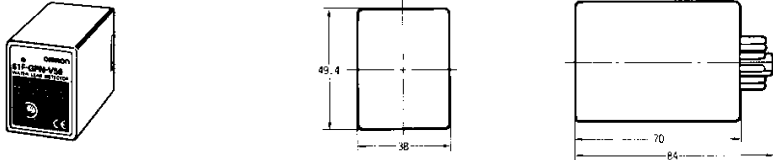
Dimensions

Note: All units are in millimeters unless otherwise indicated.

61F-WLA Water Leak Alarm



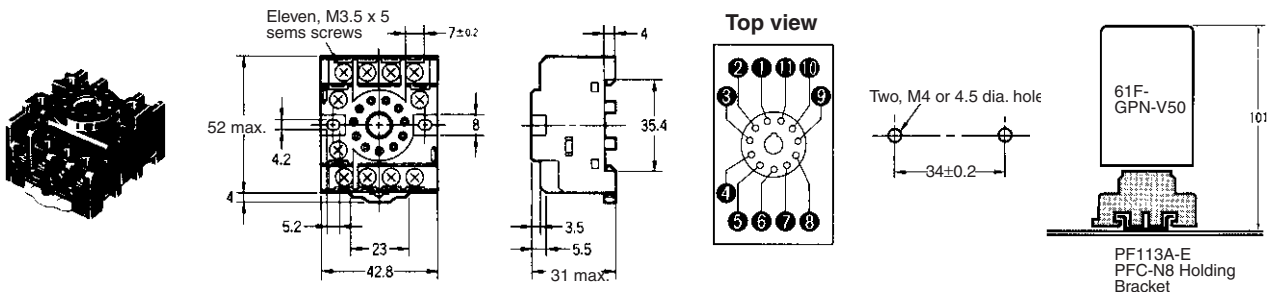
61F-GPN-V50 Water Leak Detector



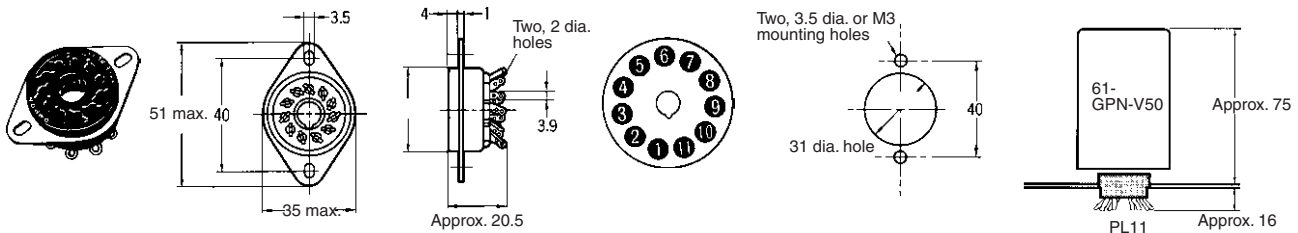
■ Accessories (Order Separately)

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

PF113A-E Track-mounted Socket



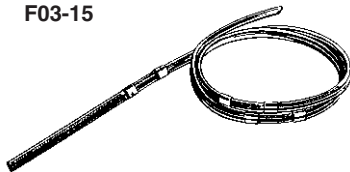
PL11 Back-connecting Socket



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

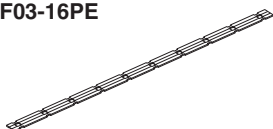
Sensor Cable

F03-15

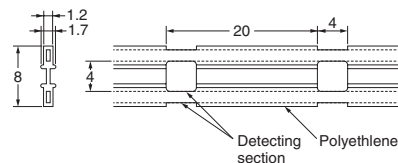
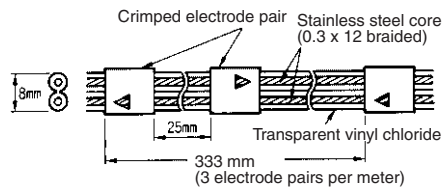


Sheath: Transparent vinyl chloride
Core: Stainless steel SUS304

F03-16PE



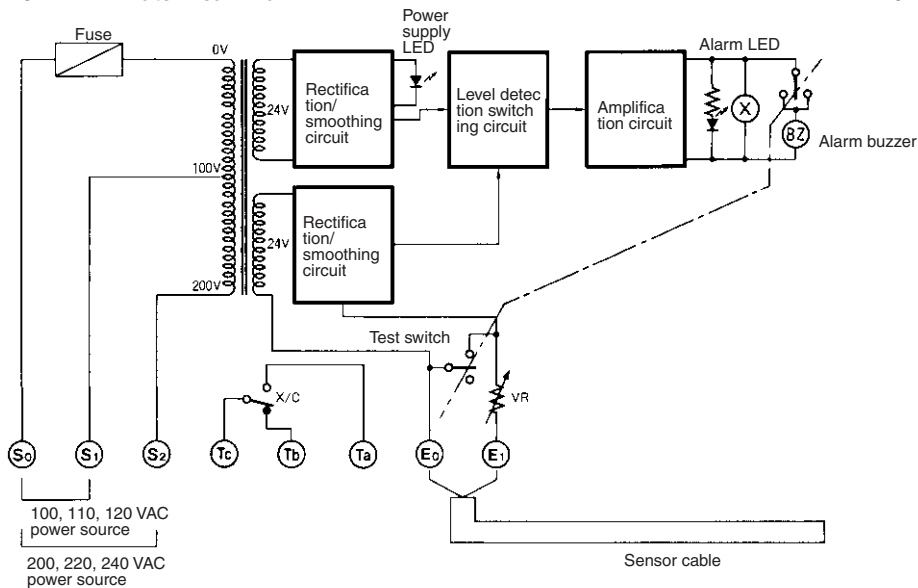
Sheath: Transparent vinyl chloride
Core: Stainless steel SUS316



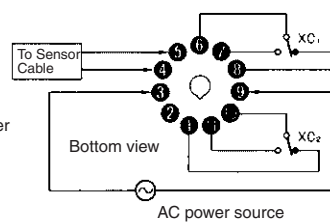
Installation

Connections

61F-WLA Water Leak Alarm



61F-GPN-V50 Water Leak Detector



■ 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 Sensor Cable. Other water conductors may cause the Water Leak Alarm/Detector to malfunction, or not operate at all because of mismatched sensitivity.
- (2) Place the Sensor Cable 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 Sensor Cable so that they touch the floor surface or the wall near a pipe arrangement. Cover the Sensor Cable 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 Sensor Cable.
- (4) Keep the temperature at the installation site to within 55°C. Do not install the Water Leak Alarm/Detector/Sensor cable 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 Sensor Cable varies depending on the water quality. When using IV cables, wire the Sensor Cable 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	Sensor Cable
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

Warranty and Application Considerations

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

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WARRANTY

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Application Considerations

Application Considerations

BASIC CONSIDERATIONS

At OMRON, we are constantly working to improve the quality and reliability of our products. SSRs, however, use semiconductors, which are prone to malfunction. Be sure to use SSRs within their rated values. Use the SSRs only in systems that are designed with redundancies, flame protection, countermeasures to prevent operation errors, and other countermeasures to prevent accidents involving human life or fires.

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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.

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- 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.

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Disclaimers

Disclaimers

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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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

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