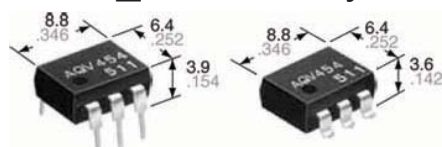




# Relays & Solenoids

## NAIS\_PCB Relays

Detailed product specifications are available on: [us.100y.com.tw](http://us.100y.com.tw)



### FEATURES

#### 1. Form B (Normally-closed) type

Has been realized thanks to the built-in MOSFET processed by our proprietary method, DSD (Double-diffused and Selective Doping) method.

#### 2. Controls low-level analog signals

PhotoMOS relays feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion.

#### 3. High sensitivity, low ON resistance

Can control a maximum 0.15 A load current with a 5 mA input current. Low ON resistance of 16 Ω (AQV454). Stable operation because there are no metallic contact parts.

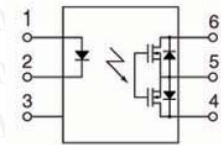
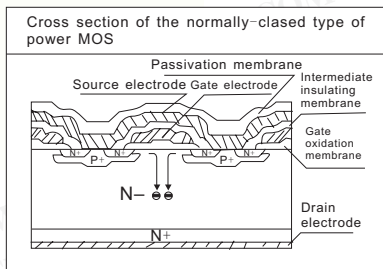
**6. Low thermal electromotive force** (Approx. 1 μV) (Basic insulation)

**7. Reinforced insulation 5,000 V type also available.**

More than 0.4 mm .016 inch internal insulation distance between inputs and outputs. Conforms to IEC950 (reinforced insulation).

### TYPICAL APPLICATIONS

- Security equipment
- High-speed inspection machines
- Measuring instruments
- Telephone equipment
- Sensors



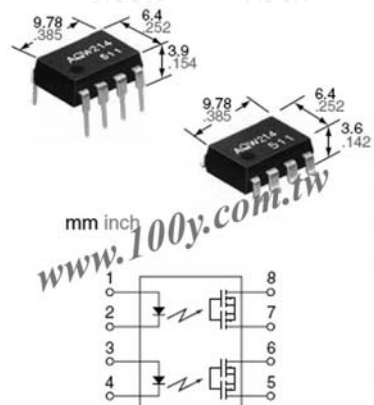
#### 4. Controls various types of load such as relays, motors, lamps and solenoids.

#### 5. Eliminates the need for a power supply to drive the power MOSFET

A power supply used to drive the power MOSFET is unnecessary because of the built-in optoelectronic device. This results in easy circuit design and small PC board area.



Part No.	Product No.	Manufacturer	Description	Contact Arrangement	Contact Rating	Coil Voltage	Recognized Safety	Type
47387	AQV453	NAIS	NAIS_HE PhotoMOS RELAY	1 Form B	250V / 200 mA	250V	UL(E43149),C-UL	AQV453
47390	AQV454	NAIS	NAIS_HE PhotoMOS RELAY	1 Form B	400V / 150 mA	400V	UL(E43149),C-UL	AQV454
47391	AQV454H	NAIS	NAIS_HE PhotoMOS RELAY	1 Form B	400V / 150 mA	400V	UL(E43149),C-UL,BSI	AQV454H



### FEATURES

#### 1. Compact 8-pin DIP size

The device comes in a compact (W) 6.4 × (L) 9.78 × (H) 3.9 mm (.252×(L) .385×(H) .154 inch, 8-pin DIP size (through hole terminal type).

#### 2. Applicable for 2 Form A use as well as two independent 1 Form A use

#### 3. Controls low-level analog signals

PhotoMOS relays feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion.

#### 4. High sensitivity, high speed response

Can control a maximum 0.13 A load current with a 5 mA input current. Fast operation speed of 310 μs (typical). (AQW214)

#### 5. Low-level off state leakage current

The SSR has an off state leakage current of several milliamperes whereas the PhotoMOS relays has typ. 100 pA even with the rated load voltage of 400 V (AQW214).

**6. Low-level thermal electromotive force** (Approx. 1 μV)

**7. Eliminates the need for a counter electromotive force protection diode in the drive circuits on the input side**

**8. Stable ON resistance.**

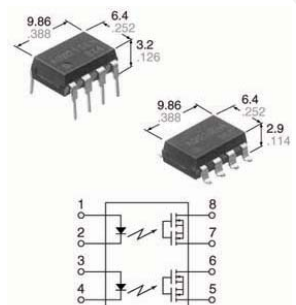
**9. Eliminates the need for a power supply to drive the power MOSFET**

### TYPICAL APPLICATIONS

- High-speed inspection machines
- Telephones equipment
- Computer



Part No.	Product No.	Manufacturer	Description	Contact Arrangement	Contact Rating	Coil Voltage	Recognized Safety	Outline L*W*H	Type
47216	AQW210	NAIS	NAIS_GU PhotoMOS Relay	2 Form A	350V / 120mA	350V	UL(E43149),C-UL	(W) 6.4 × (L) 9.78 × (H) 3.9 mm	AQW210
47212	AQW212	NAIS	NAIS_GU PhotoMOS Relay	2 Form A	60V / 500mA	60V	UL(E43149),C-UL	(W) 6.4 × (L) 9.78 × (H) 3.9 mm	AQW212
47217	AQW214	NAIS	NAIS_GU PhotoMOS Relay	2 Form A	400V / 100mA	400V	UL(E43149),C-UL	(W) 6.4 × (L) 9.78 × (H) 3.9 mm	AQW214
47214	AQW215	NAIS	NAIS_GU PhotoMOS Relay	2 Form A	100V / 300mA	100 V	UL(E43149),C-UL	(W) 6.4 × (L) 9.78 × (H) 3.9 mm	AQW215
47218	AQW216	NAIS	NAIS_GU PhotoMOS Relay	2 Form A	600V / 40mA	600V	UL(E43149),C-UL	(W) 6.4 × (L) 9.78 × (H) 3.9 mm	AQW216
47215	AQW217	NAIS	NAIS_GU PhotoMOS Relay	2 Form A	200V / 160mA	200V	UL(E43149),C-UL	(W) 6.4 × (L) 9.78 × (H) 3.9 mm	AQW217



### FEATURES

#### 1. Reinforced insulation 5,000 V type

More than 0.4 mm internal insulation distance between inputs and outputs. Con-forms to EN41003, EN60950 (reinforced insulation).

#### 2. Compact 8-pin DIP size

The device comes in a compact (W) 6.4 × (L) 9.86 × (H) 3.2 mm (.252 × (L) .388 × (H) .126 inch, 8-pin DIP size (through hole terminal type).

#### 3. Applicable for 2 Form A use as well as two independent 1 Form A use

#### 4. Controls low-level analog signals

PhotoMOS relays feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion.

#### 5. High sensitivity, high speed response.

Can control a maximum 0.14 A load current with a 5 mA input current. Fast operation speed of 0.5 ms (typical). (AQW210EH)

#### 6. Low-level off state leakage current

### TYPICAL APPLICATIONS

- Modem
- Telephone equipment
- Security equipment
- Sensors



Part No.	Product No.	Manufacturer	Description	Contact Arrangement	Contact Rating	Coil Voltage	Recognized Safety	Outline L*W*H	Type
47291	AQW210EH	NAIS	NAIS_GU-E PhotoMOS RELAY	2 Form A	350V / 120mA	350V	UL(E43149),C-UL,BSI	(W) 6.4 × (L) 9.86 × (H) 3.2 mm	AQW210EH
47290	AQW212EH	NAIS	NAIS_GU-E PhotoMOS RELAY	2 Form A	60V / 500mA	60V	UL,C-UL,BSI	(W) 6.4 × (L) 9.86 × (H) 3.2 mm	AQW212EH
47292	AQW214EH	NAIS	NAIS_GU-E PhotoMOS RELAY	2 Form A	400V / 100mA	400V	UL(E43149),C-UL,BSI	(W) 6.4 × (L) 9.86 × (H) 3.2 mm	AQW214EH



T E L : Taiwan : 886-3-5753170  
 F A X : Taiwan : 886-3-5753172  
 E-mail : Taiwan : [us\\_sale@100y.com.tw](mailto:us_sale@100y.com.tw)

Shenzhen : 86-755-83298787  
 Shenzhen : 86-755-83640655  
 Shenzhen : 100y@163.com

Shanghai : 86-21-54151736  
 Shanghai : 86-21-64605107  
 Shanghai : 100y-1@163.com