



**Compact size,  
1 Form A 35A/48A/90A  
power relays  
for solar inverter**

**HE RELAYS  
PV Type**

### FEATURES

#### 1. High capacity and compact size

High capacity control possible (35A/48A/90A type)

35A/48A type: L: 33 × W: 38 × H: 36.3mm L: 1.299 × W: 1.496 × H: 1.429inch

90A type: L: 33 × W: 38 × H: 38.8mm L: 1.299 × W: 1.496 × H: 1.528inch

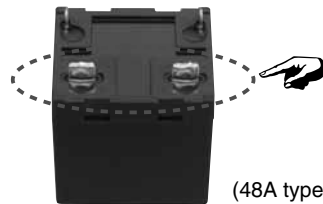
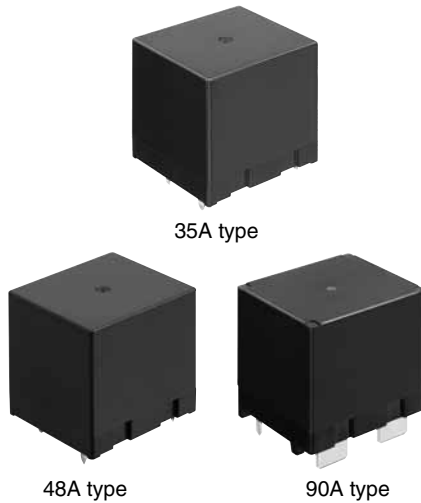
Due to improved conduction efficiency, wide terminal blades are used (for 48A and 90A type)

#### 3. Contributes to energy saving in devices thanks to reduced coil hold voltage

Coil hold voltage can be reduced down 40% of the nominal coil voltage (ambient temperature 20°C 68°F) This is equal to operating power of approximately 310mW.

\*Coil hold voltage is the coil voltage after 100ms following application of the nominal coil voltage.

#### 4. High insulation and 10,000V surge breakdown voltage (between contacts and coil)



**RoHS compliant**

Protective construction: Flux-resistant type

#### 2. Contact GAP

Compliant with European photovoltaic standard VDE0126

Compliant with EN61810-1 2.5kW surge breakdown voltage (between contacts)

35A/48A type: 2.5mm .098inch

90A type: 3.0mm .118inch

### TYPICAL APPLICATIONS

- Inverter (Solar and industrial)
- UPS
- Stationary charging stand

## ORDERING INFORMATION

HE 1a N - [ ] - DC [ ] - [ ]

Contact arrangement

1a: 1 Form A (Single side stable type)

Pick-up voltage

N: 70% of nominal voltage

Terminals

P: PC board terminal type / Blade terminal type

W: Wide blade terminal type

Coil voltage (DC)

6, 9, 12, 24V

Type, contact material and switching capacity

Y5: PV type, AgNi type (1 Form A 48A)

Y6: PV type, AgNi type (1 Form A 90A)

H18: PV type, AgSnO<sub>2</sub> type (1 Form A 35A)

## TYPES

Type	Nominal coil voltage	Contact arrangement	Part No.
35A*	6V DC	1 Form A	HE1aN-P-DC6V-H18
	9V DC		HE1aN-P-DC9V-H18
	12V DC		HE1aN-P-DC12V-H18
	24V DC		HE1aN-P-DC24V-H18
48A	6V DC		HE1aN-P-DC6V-Y5
	9V DC		HE1aN-P-DC9V-Y5
	12V DC		HE1aN-P-DC12V-Y5
	24V DC		HE1aN-P-DC24V-Y5
90A	6V DC		HE1aN-W-DC6V-Y6
	9V DC		HE1aN-W-DC9V-Y6
	12V DC		HE1aN-W-DC12V-Y6
	24V DC		HE1aN-W-DC24V-Y6

Standard packing: Carton: 25 pcs.; Case: 100 pcs.

\*35A 6V, 12V and 24V DC type: Certified by UL/C-UL (35A 9V type: Certified by UL/C-UL and VDE)

## RATING

### 1. Coil data

Nominal coil voltage	Pick-up voltage (at 20°C 68°F) (Initial)	Drop-out voltage (at 20°C 68°F) (Initial)	Nominal operating current [±10%] (at 20°C 68°F)	Coil resistance [±10%] (at 20°C 68°F)	Nominal operating power	Max. applied voltage (at 20°C 68°F)
6V DC	70%V or less of nominal voltage	10%V or more of nominal voltage	320mA	18.8Ω	1,920mW	110%V of nominal voltage
9V DC			213mA	42.2Ω		
12V DC			160mA	75.0Ω		
24V DC			80mA	300.0Ω		