



**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

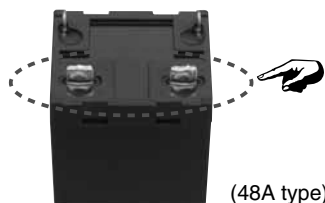
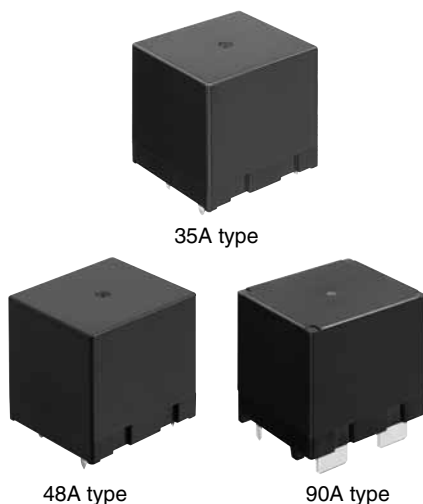
Due to improved conduction efficiency, wide terminal blades are used (for 48A and 90A type)

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, AgSnO₂ 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		