c UL us
(10A and 80A types)
*20A type: only UL (Recognized)

**200A type has been added.
High Capacity of Max.
1,000 V DC Cut-off Possible**

EP RELAYS (AEP)

10A PC board type

10A TM type

20A TM type

80A type

200A type

300A type

RoHS compliant

Protective construction: Sealed capsule type

FEATURES

1. High-voltage, high-current control capable
1,000V DC switching has been achieved thanks to a sealed construction with mixed hydrogen gas and the magnetic arc motion through use of a permanent magnet.

2. Compact & Low Operating Sound
By using a capsule contact mechanism that is enclosed with hydrogen gas, high-capacity cutoff is possible even with a tiny contact gap. There is little operating sound, which does not change even when large currents are cut off.

3. Arc space unnecessary
The enclosure box can be made smaller thanks to an arc-space-free construction from which the arc will not get out.

4. Safety
Since the contacts are enclosed in a sealed capsule structure, the arc will not get out, which ensures safety.

5. High contact reliability
The contact part is hermetically sealed with H_2 mixed gas, hence the contact resistance remains stable regardless of the ambient conditions.

6. Mounting direction is not specified
The weight of the movable parts is light, and also the restoring force is large, hence the relay is relatively unaffected by gravity.

7. Wide selection of models available
Types include PC board type (10A), TM type (10A and 20A), Lead wire type (200A) and Connector type (80A and 300A).

8. Standard compliance
The 10A, 20A, 80A type is UL/C-UL standard certified.

TYPICAL APPLICATIONS

1. Photovoltaic power generation systems
2. Cogeneration systems
3. Construction machinery
4. Welding equipment
5. Battery charge and discharge control
6. AGV (Automatic guided vehicle) (Unmanned transport carts)
7. Inverter control
8. Elevator, etc.

ORDERING INFORMATION

AEP □ □ **0** □ □

EP Relay

Contact arrangement
1: 1 Form A
3: 1 Form A PC board type*1
5: 1 Form A TM type*2

Contact rating
1: 10A
2: 20A
7: 200A
8: 80A
9: 300A

Coil voltage
12: 12V DC
24: 24V DC
48: 48V DC*1
X0: 100V DC*1

Notes: *1. 10A type only
*2. 10A and 20A types only
10A and 80A types are UL/C-UL recognized.
20A type is UL recognized.

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TYPES

Type	Nominal coil voltage	Contact arrangement	Part No.
10A PC board type	12V DC	1 Form A	AEP31012
10A TM type			AEP51012
20A TM type			AEP52012
80A Connector type*1			AEP18012
200A Lead wire type*2			AEP17012
300A Connector type*1			AEP19012
10A PC board type	24V DC		AEP31024
10A TM type			AEP51024
20A TM type			AEP52024
80A Connector type*1			AEP18024
200A Lead wire type*2			AEP17024
300A Connector type*1			AEP19024
10A PC board type	48V DC		AEP31048
10A TM type			AEP51048
10A PC board type	100V DC		AEP310X0
10A TM type			AEP510X0

Standard packing: 10A: Carton: 25 pcs.; Case: 100 pcs.
20A: Carton: 25 pcs.; Case: 50 pcs.
80A: Carton: 1 pc.; Case: 20 pcs.
200A: Carton: 1 pc.; Case: 10 pcs.
300A: Carton: 1 pc.; Case: 5 pcs.

Notes: *1. One female connector lead wire for connecting is packaged with the 80A and 300A connector types.
-Specifications: Housing: Yazaki 7283-1020 (light gray); Lead wire: 0.5 mm² dia. and 300±10 mm 11.811±.394 inch length
Lead wire coating color: Pin No. 1: white; Pin No. 2: green
*2. Two dedicated M6 bolts is packaged with the 200A type.

RATING

1. Coil data

Type	Nominal coil voltage	Pick-up voltage (at 20°C 68°F)	Drop-out voltage (at 20°C 68°F)	Nominal coil current [±10%] (at 20°C 68°F)	Nominal operating power (Nominal voltage applied to the coil, at 20°C 68°F)	Max. applied voltage
10A	12V DC	75%V or less of nominal voltage (Initial)	8.3%V or more of nominal voltage (Initial)	0.103A	1.24W	133%V of nominal voltage
20A			4.17%V or more of nominal voltage (Initial)	0.327A	3.9W	
80A			8.3%V or more of nominal voltage (Initial)	0.353A	4.2W	
200A			8.3%V or more of nominal voltage (Initial)	0.5A	6W	
300A			16.7%V or more of nominal voltage (Initial)	3.3A	When input: 40 W max. (0.1 sec. from time of input) When retained: 4 W max.	
10A	24V DC		8.3%V or more of nominal voltage (Initial)	0.052A	1.24W	
20A			4.17%V or more of nominal voltage (Initial)	0.163A	3.9W	
80A			8.3%V or more of nominal voltage (Initial)	0.176A	4.2W	
200A			8.3%V or more of nominal voltage (Initial)	0.25A	6W	
300A			16.7%V or more of nominal voltage (Initial)	1.85A	When input: 45 W max. (0.1 sec. from time of input) When retained: 4 W max.	
10A	48V DC		8.3%V or more of nominal voltage (Initial)	0.026A	1.24W	
10A	100V DC			0.012A		

Notes: 1. When using a DC power supply, use one that provides a current capacity leeway of at least 150% of the nominal coil current.
2. The 300A type has a built-in coil current switching circuit. After the nominal coil voltage is applied, it automatically switches in approximately 0.1 seconds.

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