

## Power Latching Relay EW80

- 1 pole 80A, 1 form A (NO) contact
- Polarized bistable (latching) with 1 or 2 coils
- Shunt implementation optional
- Various terminal configurations

### Typical applications

Electricity meters, pre-paid power meters, Lighting control



### Approvals

UL E58304

### Contact Data

Contact arrangement	1 form A (NO)
Rated voltage	250VAC
Max. switching voltage	440VAC
Rated current	80A
Breaking capacity max.	20kVA
Contact material	AgSnO <sub>2</sub>
Initial voltage drop	≤80mV @ 80A
Frequency of operation with/without load	360/3600h <sup>-1</sup>
Set/Reset time max., including bounce	30/30ms

### Contact ratings

Load	Cycles
<b>UL508</b>	
80A, 250VAC, resistive, 70°C	10 <sup>4</sup>
TV-20, 120VAC, 70°C	25x10 <sup>3</sup>
Mechanical endurance	10 <sup>6</sup>

### Coil Data

Magnetic system	polarized, bistable (latching)
Number of coils	1 or 2
Coil voltage range	5 to 24VDC
Min./Max. energization duration	100ms/1min at <10% duty factor

### Standard Single Coil Latching

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power W
B005	5	4	4	25	1.0
B006	6	4.8	4.8	36	1.0
B009	9	7.2	7.2	81	1.0
B012	12	9.6	9.6	144	1.0
B024	24	19.2	19.2	576	1.0

Coil version with 1.5 W on request

### Low Sensitivity Single coil Latching

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power W
BL09	9	7.2	7.2	54	1.5
BL12	12	9.6	9.6	96	1.5

### Coil Data (continued)

#### Low Sensitivity Single coil Latching

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power W
C012	12	9.6	9.6	72	2
C024	24	19.2	19.2	288	2

#### Low Sensitivity Dual Coil Latching

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power W
CL12	12	9.6	9.6	48	3
CL24	24	19.2	19.2	192	3

All figures are given for coil without preenergization, at ambient temperature +23°C  
Max. coil power: 130% of rated coil power  
Other coil voltages on request

### Coil operation

coil terminals	1 coil		2 coils		
	A1	A2	A1	A2	A3
Set	-	+	-	+	
Reset	+	-	-		+

Contact position not defined at delivery

### Insulation Data

Initial dielectric strength	
between open contacts	1500V <sub>rms</sub>
between contact and coil	4000V <sub>rms</sub>
Initial surge withstand voltage	
between contact and coil	10000V (1.2/50µs)
Clearance/creepage	
between contact and coil	≥6/9mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 175V

### Other Data

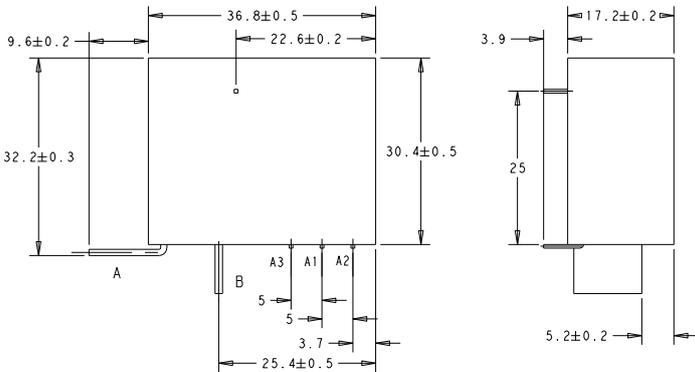
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

Ambient temperature	-40 to 70°C
Category of environmental protection	IEC 61810
	RT1 (dust protected)
Vibration resistance (functional)	1.5mm double amplitude <sup>1)</sup>
Shock resistance (functional)	50g
Shock resistance (destructive)	100g
Terminal type	Blades
Weight	40g
Packaging/unit	tray/25 pcs., box/ 200 pcs.

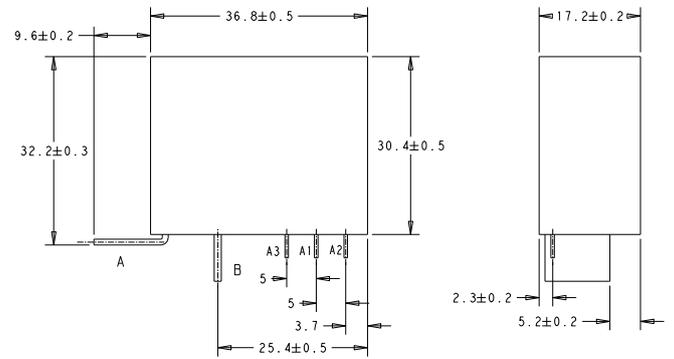
<sup>1)</sup> 10...55Hz

**Power Latching Relay EW80 (Continued)**

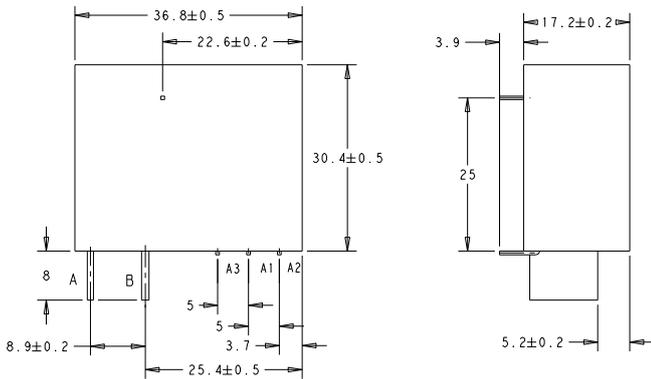
**Horizontal version, angled terminals, coil same side**



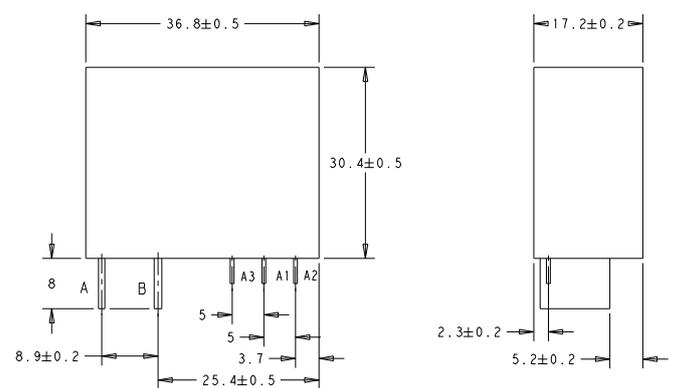
**Vertical version, angled terminals, coil same side**



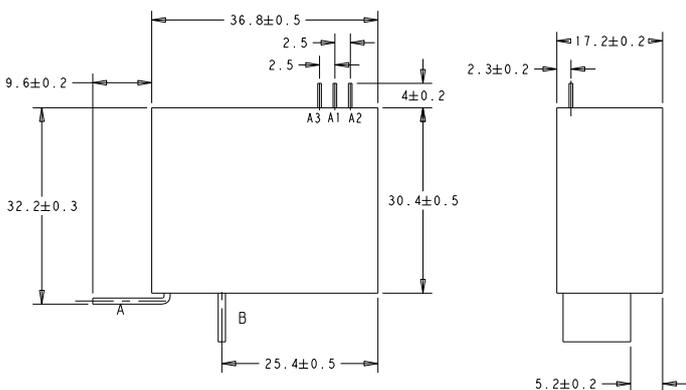
**Horizontal version, straight terminals, coil same side**



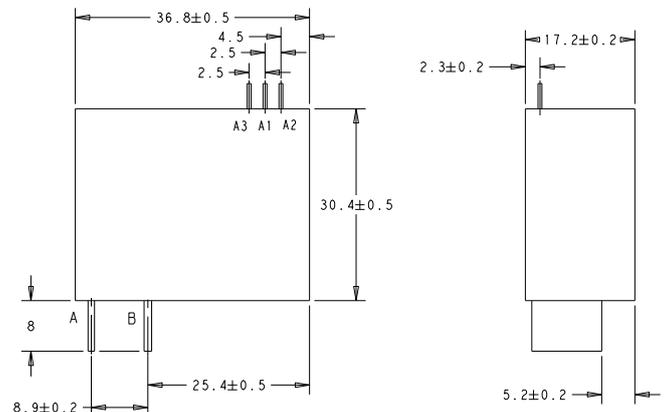
**Vertical version, straight terminals, coil same side**



**Vertical version, angled terminals, coil opposite side**



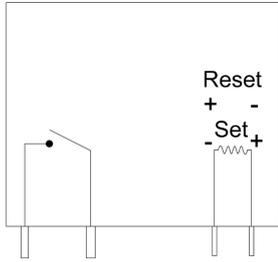
**Vertical version, straight terminals, coil opposite side**



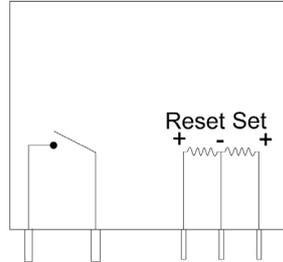
**Power Latching Relay EW80** (Continued)

**Wire Connection drawing**

**Bi-stable 1 coil:**

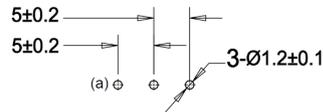


**Bi-stable 2 coils:**



**PCB Drilling (Copper Side)**

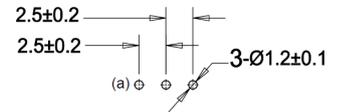
**Coil same side type**



(a) For Bi-stable 1 coil type, it is without this hole;

**PCB Drilling (COPPER SIDE)**

**Coil opposite side type**



(a) For Bi-stable 1 coil type, it is without this hole;

**PCB Drilling (COPPER SIDE)**

**Product code structure**

Typical product code

**EW 8 0 1 A 3 B 012 D 0 0**

**Type (product family)**

**Version - Current class / Model**

- 6 60A
- 8 80A

**Version - Orientation and PerformanceClass**

- 0 vertical (Bottom-right), standard performance
- 1 horizontal (Bottom-Right), standard performance
- 2 vertical (Up-right), standard performance
- 3 horizontal (Up-Right), standard performance

**Number of Contact Poles**

- 1 1 pole

**Contact configuration**

- A form A (NO Contact)

**Contact material**

- 3 AgSnO

**Coil version**

- B bistable 1 coil
- C bistable 2 coils

**Coil voltage**

- 005 5V
- 006 6V
- 009 9V
- 012 12V
- 015 15V
- 024 24V
- nnn coil voltage; e.g. 012 (12V) for standard coil
- Lnn coil voltage; e.g. 12 (12V) for „Low Sensitivity“ 1 coil version (1.5W) for EW80, 2 coil 3W

**Category of Protection**

- D RTI (dust proof)

**Mechanical feature**

- 0 standard
- 1 magnetic shield

**Terminals**

- 0 angled contact terminals
- 1 angled contact terminals with hole
- 2 straight contact terminals
- 3 hard connection contact terminals
- 4 pcb terminals

**Variant**

- 9999 optional 5 digit identifier for customised variant
- 1 - reverse coil polarity
- 2 - Shunt (if any, value)
- 3 - customized wires, busbars, etc

**Power Latching Relay EW80** (Continued)

Product code	Design	Coil	Coil Terminals	Contact term.	Part Number
EW80-1A3-B009D00	Vertical	9V Bistable, 1 Coil, 1W	Straight, same side with Contact Terminal	Angled	2071352-1
EW80-1A3-B012D00		12V Bistable, 1 Coil, 1W			2071352-2
EW80-1A3-B024D00		24V Bistable, 1 Coil, 1W			2071352-3
EW80-1A3-C009D00		9V Bistable, 2 Coil, 2W			2071352-4
EW80-1A3-C012D00		12V Bistable, 2 Coil, 2W			2071352-5
EW80-1A3-C024D00		24V Bistable, 2 Coil, 2W			2071352-6
EW82-1A3-B009D00		9V Bistable, 1 Coil, 1W	Straight, opposite side with Contact Terminal		2071352-7
EW82-1A3-B012D00		12V Bistable, 1 Coil, 1W			2071352-8
EW82-1A3-B024D00		24V Bistable, 1 Coil, 1W			2071352-9
EW82-1A3-C009D00		9V Bistable, 2 Coil, 2W			1-2071352-0
EW82-1A3-C012D00		12V Bistable, 2 Coil, 2W			1-2071352-1
EW82-1A3-C024D00		24V Bistable, 2 Coil, 2W			1-2071352-2
EW80-1A3-B009D02		9V Bistable, 1 Coil, 1W	Straight, same side with Contact Terminal	Straight	2071349-1
EW80-1A3-B012D02		12V Bistable, 1 Coil, 1W			2071349-2
EW80-1A3-B024D02		24V Bistable, 1 Coil, 1W			2071349-3
EW80-1A3-C009D02		9V Bistable, 2 Coil, 2W			2071349-4
EW80-1A3-C012D02		12V Bistable, 2 Coil, 2W			2071349-5
EW80-1A3-C024D02		24V Bistable, 2 Coil, 2W			2071349-6
EW82-1A3-B009D02		9V Bistable, 1 Coil, 1W	Straight, opposite side with Contact Terminal		2071349-7
EW82-1A3-B012D02		12V Bistable, 1 Coil, 1W			2071349-8
EW82-1A3-B024D02		24V Bistable, 1 Coil, 1W			2071349-9
EW82-1A3-C009D02		9V Bistable, 2 Coil, 2W			1-2071349-0
EW82-1A3-C012D02		12V Bistable, 2 Coil, 2W			1-2071349-1
EW82-1A3-C024D02		24V Bistable, 2 Coil, 2W			1-2071349-2

Other types on request

This list represents the most common types and does not show all variants covered by this data sheet.