Power Latching Relay EW60

- **1 pole 67A, 1 form A (NO) contact**
- **Polarized bistable (latching) with 1 or 2 coils**
- **NEMA 410-2015, 16A, 347VAC, electronics ballast; 20A branch circuit**
- **552A inrush, 2.1ms**

Typical applications
Lighting control, bus actuator, power distribution, circuit protection, inverter, charging station

Approvals

UL E58304

Contact Data

Contact arrangement	1 form A (NO)
Rated voltage	277VAC
Max. switching voltage	480VAC
Rated current	67A
Breaking capacity max.	15kVA
Contact material	$AgSnO_2$
Initial contact resistance	≤1mΩ @ 3A, 12V
Frequency of operation with/without load	with load = 360 cycles/hour without load = 3600 cycles/hour
Set/Reset time max., including bounce	20/20ms

Contact ratings

Type	Load	Cycles
UL508		
NO	60A, 250VAC, resistive, 70°C	10 x 10^3 1)
NO	60A, 277VAC, general use, 85°C	6 x 10^3
NO	120VAC, 1.5HP, 85°C	100 x 10^3
NO	16 or 20A, 277VAC, electronic ballast, 70°C	50 x 10^3
NO	16A, 347VAC electronic ballast, 70°C	30 x 10^3
NO	16A, 120VAC, electronic ballast, 85°C	50 x 10^3
NO	20A, 347VAC, standard ballast, 85°C	100 X 10^3
NO	480VAC, 5A, standard ballast, 85°C	50 x 10^3
NO	480VAC, 5A, tungsten, 85°C	50 x 10^3
NO	480VAC, 1/2 HP motor, 85°C	50 x 10^3
NO	64A, 240VAC, 85°C	10 x 10^3 1)

1) internal test

Coil Data

Magnetic system	polarized, bistable (latching)
Number of coils	1 or 2
Coil voltage range	5 to 24 VDC
Min./Max. energization duration	100ms/1min at <10% duty factor
Mechanical endurance, DC coil	1000X10^3 Cycles

Coil versions, bistable, DC coil

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power W
bistable 1 coil					
BL05	5	4	4	16.7	1.5
BL06	6	4.8	4.8	24	1.5
BL09	9	7.2	7.2	54	1.5
BL12	12	9.6	9.6	96	1.5
BL24	24	19.2	19.2	384	1.5
bistable 2 coils					
CL05	5	4	4	8.3	3/3
CL06	6	4.8	4.8	12	3/3
CL09	9	7.2	7.2	27	3/3
CL12	12	9.6	9.6	48	3/3
CL24	24	19.2	19.2	192	3/3

All figures are given for coil without pre-energization, at ambient temperature +23°C
Other coil voltages on request

Coil operation

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

Contact position not defined at delivery

Insulation Data

Initial dielectric strength	
between open contacts	1500V_{rms}
between contact and coil	4000V_{rms}
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

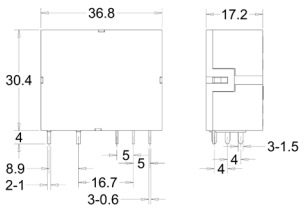
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	-40 to +85°C
Category of environmental protection	
IEC 61810	RTI (dust protected)
Vibration resistance (functional)	1.5mm double amplitude[1)]
Shock resistance (functional)	500 m/s2
Shock resistance (destructive)	1000 m/s2
Terminal type	PCB Mounting
Weight	appr. 37.5g
IEC 60068-2-20	260°C±5°C, 10s±1s
Packaging/unit	200pcs/carton

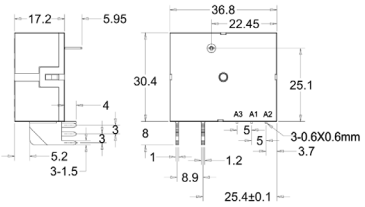
1) 10...55Hz

Dimensions

Vertical mounting type



Horizontal mounting type



Note: In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm;

10-2024, Rev. 1024
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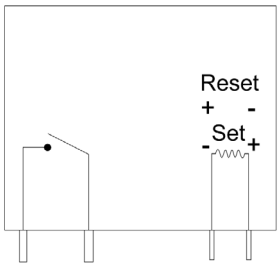
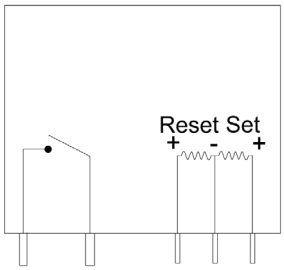
Power Latching Relay EW60 (Continued)

Wire Connection drawing

Bi-stable 1 coil:

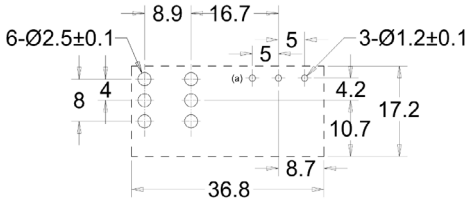


Bi-stable 2 coils:

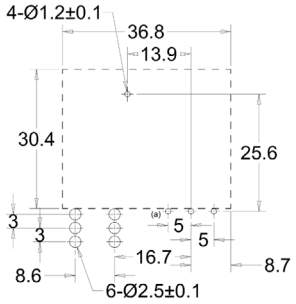


PCB Drilling (Copper Side)

Vertical mounting type:



Horizontal mounting type:



Note: In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm;
(a) For Bi-stable 1 coil type, it is without this hole;

Product code structure

Typical product code: **EW 6 0 -1 A 3 -B L12 D 0 4**

Type (product family)

Version - Current class / Model
- **6** EW60 Series

Version - Orientation and PerformanceClass
- **0** vertical (Bottom-right), standard performance
- **1** horizontal (Bottom-right), standard performance

Number of Contact Poles
- **1** 1 pole

Contact configuration
- **A** form A (NO Contact)

Contact material
- **3** $AgSnO_2$

Coil version
- **B** bistable 1 coil
- **C** bistable 2 coils

Coil voltage
- **L05** Low Sensitivity, 5V.
- **L06** Low Sensitivity, 6V.
- **L09** Low Sensitivity, 9V.
- **L12** Low Sensitivity, 12V.
- **L24** Low Sensitivity, 24V.

Category of Protection
- **D** RTI (dust proof)

Mechanical feature
- **0** standard

Terminals
- **4** pcb terminals

Product code	Design	Coil	Contact material	Part Number
EW60-1A3-BL05D04,00000	Vertical	5V Bistable, 1 Coils 1.5W	$AgSnO_2$	2071366-8
EW60-1A3-BL12D04	Vertical	12V Bistable, 1 Coil, 1.5W	$AgSnO_2$	2071366-1
EW60-1A3-CL12D04	Vertical	12V Bistable, 2 Coils 3W	$AgSnO_2$	2071366-2
EW60-1A3-BL24D04	Vertical	24V Bistable, 1 Coil 1.5W	$AgSnO_2$	2071366-3
EW60-1A3-CL24D04	Vertical	24V Bistable, 2 Coils 3W	$AgSnO_2$	2071366-4
EW61-1A3-CL12D04,00000	Horizontal	12V Bistable, 2 Coils 3W	$AgSnO_2$	2071366-5

Other types on request