

Limit Alarms (with DC output) AE-UNIT

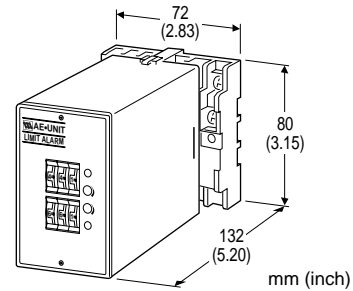
CT ALARM

MODEL AECT

MODEL & SUFFIX CODE SELECTION

AECT-□□□□□□□□

MODEL _____	
INPUT _____	
1 : 0 – 1A AC	
5 : 0 – 5A AC	
DC OUTPUT _____	
N : None	
Current	Voltage
A : 4 – 20mA DC	1 : 0 – 10mV DC
B : 2 – 10mA DC	2 : 0 – 100mV DC
C : 1 – 5mA DC	3 : 0 – 1V DC
D : 0 – 20mA DC	4 : 0 – 10V DC
E : 0 – 16mA DC	5 : 0 – 5V DC
F : 0 – 10mA DC	6 : 1 – 5V DC
G : 0 – 1mA DC	4W : -10 – +10V DC
Z : Specify current	5W : -5 – +5V DC
	0 : Specify voltage
SETPOINT 1 OUTPUT _____	
1 : Hi (coil energized at alarm)	
2 : Hi (coil de-energized at alarm)	
3 : Lo (coil energized at alarm)	
4 : Lo (coil de-energized at alarm)	
SETPOINT 2 OUTPUT _____	
1 : Hi (coil energized at alarm)	
2 : Hi (coil de-energized at alarm)	
3 : Lo (coil energized at alarm)	
4 : Lo (coil de-energized at alarm)	
ON DELAY TIME _____	
0 : 0.5 seconds	3 : 3 seconds
1 : 1 second	4 : 4 seconds
2 : 2 seconds	
POWER ON DELAY TIME _____	
1 : 1 second	4 : 4 seconds
2 : 2 seconds	5 : 5 seconds
3 : 3 seconds	
POWER INPUT _____	
AC Power	DC Power
B : 100V AC	G : 200V AC
C : 110V AC	H : 220V AC
D : 115V AC	J : 240V AC
F : 120V AC	S : 12V DC
	R : 24V DC
	V : 48V DC
	P : 110V DC



Functions & Features

- Providing SPDT relay outputs at preset AC current levels from a CT
- True RMS sensing
- Dual (Hi/Lo) trip
- Additional isolated DC output proportional to the input
- CT Protector provided for open-circuit protection
- Energized or de-energized coil at a tripped condition selectable
- Thumbwheel switch adjustments
- Relays can be powered 110V DC

ORDERING INFORMATION

Specify code number and variables.

- **Code number** (e.g. AECT-1A1111-B)
- **Special DC output range** (For codes Z & 0)

GENERAL SPECIFICATIONS

Construction: plug-in

Connection: M3.5 screw terminals

Housing material: flame-resistant resin (black)

Isolation: input to DC output to relay output to power

Input waveform: up to 15% of 3rd harmonic content

Zero/span adjustments: ±5% (front)

Setpoint adjustments: thumbwheel switches (front); 0 – 99% independently; 1% increments

Hysteresis (deadband) adjustments: thumbwheel switches (front); 0.5, 1 – 9% independently; 1% increments (SW position 0 = 0.5); [Lo SP + Hysteresis] ≤ 102

Front LEDs: red lights turn on when coils are energized.

INPUT & OUTPUT

■ **INPUT:** 0 – 1A AC or 0 – 5A AC

Frequency: 50 or 60 Hz

Input burden: 0.5VA maximum

Overload capacity: 500% of rating for 5 sec.,
120% continuous

Operational range: 0 – 100% of rating

■ **DC OUTPUT**

• **DC Current:** 0 – 20mA DC

Minimum span: 1mA

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 7V maximum

Output	Load Resistance
4 – 20mA	: 350 (Ω maximum)
2 – 10mA	: 700
1 – 5mA	: 1400
0 – 20mA	: 350
0 – 16mA	: 430
0 – 10mA	: 700
0 – 1mA	: 7000

• **DC Voltage:** -10 – +12V DC

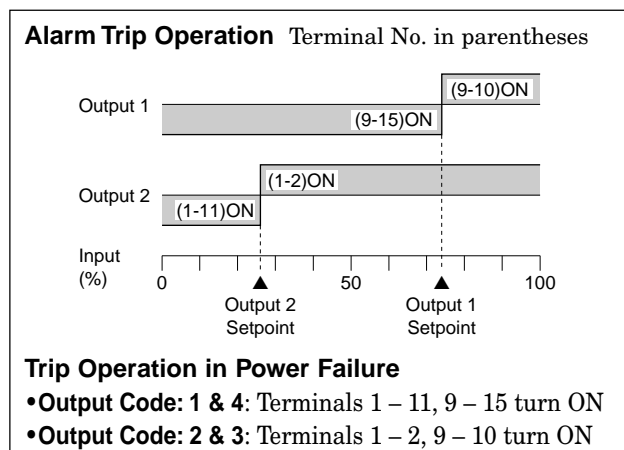
Minimum span: 5mV

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 1mA maximum; at $\geq 0.5V$

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 1000
0 – 10V	: 10k
0 – 5V	: 5000
1 – 5V	: 5000
-10 – +10V	: 10k
-5 – +5V	: 5000

■ **ALARM OUTPUT**



• **Relay Contact:** 120V AC @1A ($\cos\phi=1$)

240V AC @0.5A ($\cos\phi=1$)

30V DC @1A (resistive load)

electrical life 5×10^5 cycles (rate 30/min.)

Maximum switching voltage: 380V AC or 125V DC

Maximum switching power: 100VA or 30W

Minimum load: 5V DC @10mA

Mechanical life: 5×10^7 cycles

For maximum relay life with inductive loads, external protection is recommended.

INSTALLATION**Power input**

AC: operational voltage range: rating $\pm 10\%$,
50/60 ± 2 Hz, approx. 3VA

DC: operational voltage range: rating $\pm 10\%$, or
85 – 150V for 110V rating; ripple 10% p-p
max.; approx. 2W (80mA at 24V)

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90% RH (non-condensing)

Mounting: surface or DIN rail

Dimensions: W72×H80×D132 mm (2.83"×3.15"×5.20")

See General Spec. Sheet Figure A-1.

Weight: 450 g (0.99 lbs)

Terminal assignment: See General Spec. Sheet Figure B-4.

PERFORMANCE in percentage of span**DC output**

Accuracy: $\pm 0.3\%$

Response time: ≤ 0.7 seconds (0 – 90%)

Alarm output

Setpoint accuracy: $\pm 0.8\%$

Hysteresis setpoint accuracy: $\pm 0.3\%$

ON delay time accuracy: rating $\pm 20\%$ or 0.7 sec.,
whichever is greater.

Power ON delay time accuracy: rating $\pm 30\%$

Trip point repeatability: $\pm 0.05\%$

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

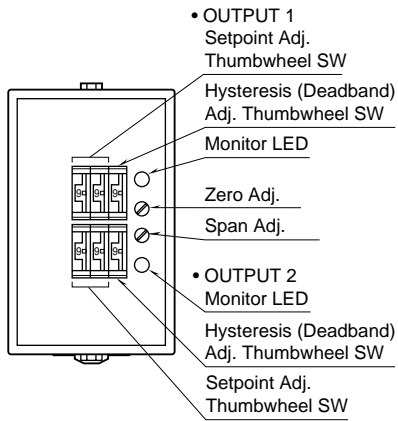
Line voltage effect: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100M\Omega$ with 500V DC

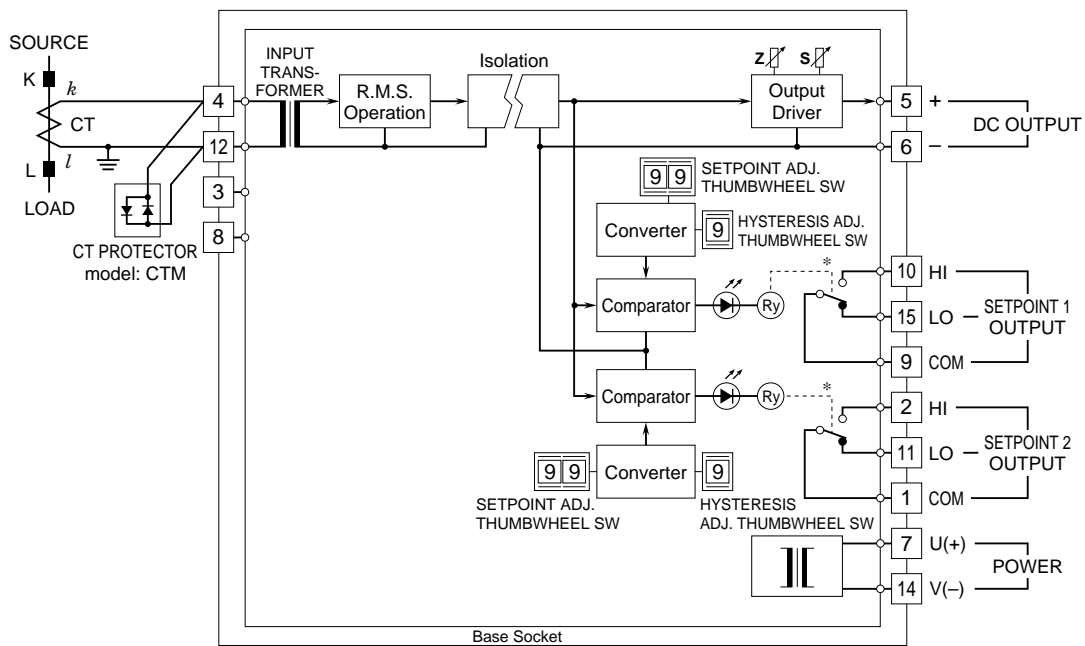
Dielectric strength: 2000V AC @1 minute

(input to DC output to alarm output 1 to
alarm output 2 to power to ground)

FRONT PANEL CONFIGURATION



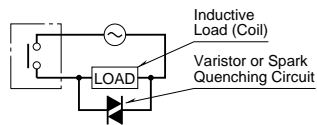
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Relay status for output codes "1" & "4", at power OFF.

Relay Protection

AC Powered



DC Powered

