Limit Alarms (with DC output) *AE-UNIT*

PT ALARM

MODEL **AEPT**

MODEL & SUFFIX CODE SELECTION

AEPT–❑❑❑❑❑❑–❑

MODEL

INPUT
1 : 0 – 110V AC
2 : 0 – 220V AC
5 : 0 – 150V AC
6 : 0 – 300V 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

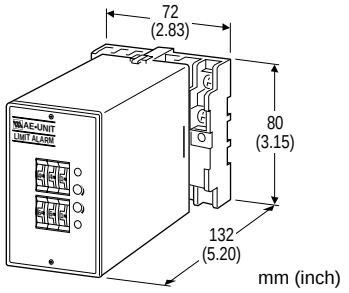
0 : 0.5 seconds	**3** : 3 seconds
1 : 1 second	**4** : 4 seconds
2 : 2 seconds	

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	**S** : 12V DC
C : 110V AC	**H** : 220V AC	**R** : 24V DC
D : 115V AC	**J** : 240V AC	**V** : 48V DC
F : 120V AC		**P** : 110V DC



Functions & Features

• Providing SPDT relay outputs at preset AC voltage levels from an AC voltage transformer • True RMS sensing • Dual (Hi/Lo) trip • Additional isolated DC output proportional to the input • 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. AEPT-621101-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 – 110V AC, 0 – 220V AC,
0 – 150V AC, 0 – 300V AC
Frequency: 50 or 60 Hz
Input burden: 0.5VA maximum
Overload capacity: 200% of rating for 1 minute,
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

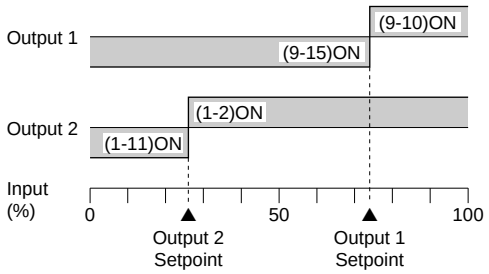
Output	Load Resistance
4 – 20mA	: 350 (Ω maximum)
2 – 10mA	: 700
1 – 5mA	: 1400
0 – 20mA	: 350
0 – 16mA	: 430
0 – 10mA	: 700
0 – 1mA	: 7000

•DC Voltage: -10 – +12V DC
Minimum span: 5mV
Zero suppression/elevation: max. 1.5 times span
Load resistance: output drive 1mA maximum; at ≥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

Alarm Trip Operation Terminal No. in parentheses



Trip Operation in Power Failure
•Output Code: 1 & 4: Terminals 1 – 11, 9 – 15 turn ON
•Output Code: 2 & 3: Terminals 1 – 2, 9 – 10 turn ON

•Relay Contact: 120V AC @1A (cosø=1)
240V AC @0.5A (cosø=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.

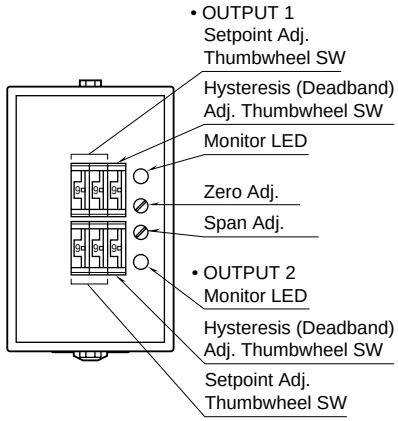
INSTALLATION

Power input
AC: operational voltage range: rating ±10%, 50/60 ±2 Hz, approx. 3VA
DC: operational voltage range: rating ±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-1.

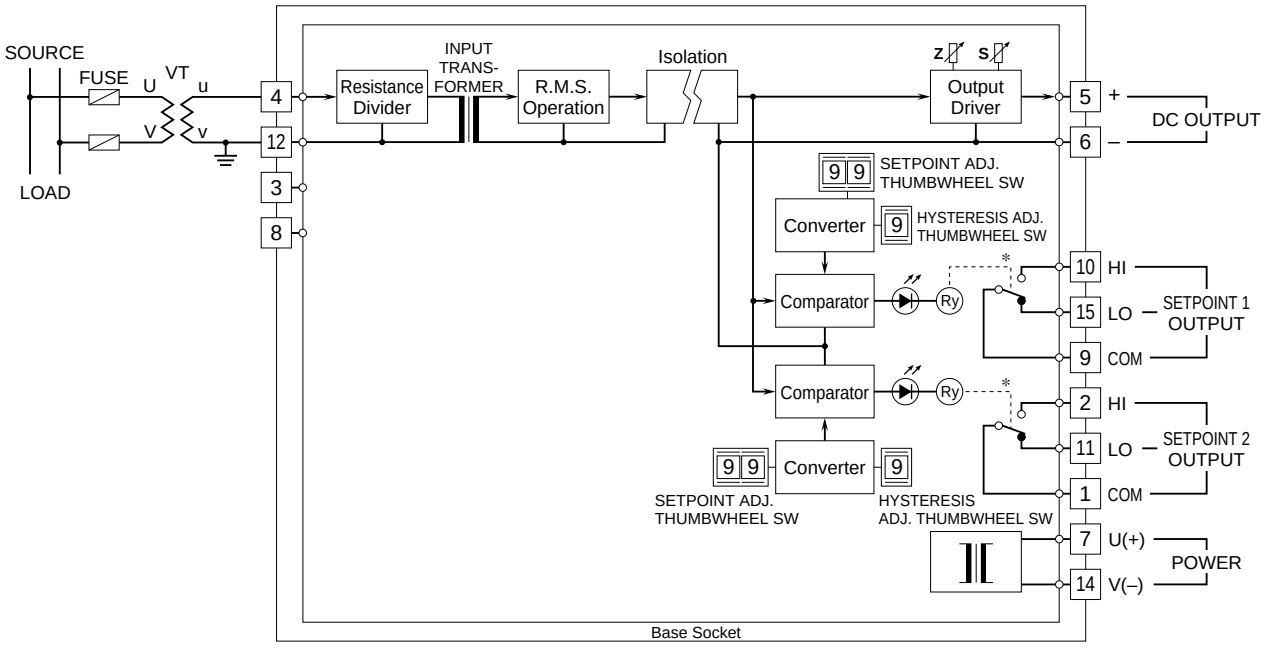
PERFORMANCE in percentage of span

DC output
Accuracy: ±0.2%
Response time: ≤0.9 seconds (0 – 90%)
Alarm output
Setpoint accuracy: ±0.7%
Hysteresis setpoint accuracy: ±0.3%
ON delay time accuracy: rating ±20% or 0.9 sec., whichever is greater.
Power ON delay time accuracy: rating ±30%
Trip point repeatability: ±0.05%
Temp. coefficient: ±0.015%/°C (±0.008%/°F)
Line voltage effect: ±0.1% over voltage range
Insulation resistance: ≥100MΩ 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



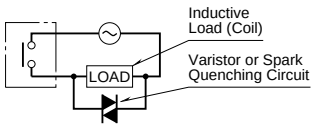
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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

■Relay Protection

•AC Powered



•DC Powered