

# High Voltage Vacuum Relay

## Features

### Physical:

- SPST, normally closed
- Smaller, low-power actuator
- High current carry rating
- Low current leakage at 8kV
- Vacuum dielectric for power switching low current loads
- Meets requirements of MIL-R-83725, QPL versions available
- Meets IEC 62D and ANSI requirements for cardiac defibrillator devices

### Environmental:

- -55°C to 125°C
- 30G shock, 10G vibration

### Power Rating:

- 12 Amp carry at 8kVdc
- 5kV at 32MHz

### Coil Voltage & Power:

- See table



Preliminary Specifications.  
Subject to change.

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TITLE

**High Voltage Vacuum Relay**

PREP. BY	Sterling Altobell	
CHKD. BY		
ENG APRVL		

DWG NO.		
<b>K47B</b>		
CAGE CODE	SCALE	SHEET
18741		1 of 6

## General Specifications

### Physical Data

	Units	K47B
Contact Arrangement		SPST-NC
Form		B
Dimensions		See drawing
Weight, Maximum	oz	0.9

### Environmental Data

Shock, 11ms ½ sine (operating)	$g_{peak}$	30
Vibration, 55-1000 Hz	$g_{peak}$	10
Operating Temperature Range	°C	-55 to +125

### Electrical Data

Test Voltage	kV peak	9
Rated Operating Voltage		
dc or 60 Hz	$kV_{peak}$	8
2.5 MHz	$kV_{peak}$	7.5
16 MHz	$kV_{peak}$	7
32 MHz	$kV_{peak}$	5
Continuous Current Carry, Maximum		
dc or 60 Hz	A RMS	12
2.5 MHz	A RMS	10
16 MHz	A RMS	5
32 MHz	A RMS	3
Coil Hi-Pot	V RMS	500
Contact Capacitance		
Between Open Contacts	pH	1.2
Open Contacts to Ground	pH	1.2
Contact Resistance	$m\Omega$	0.030
Mechanical Life	cycles	2000000
<b>Mechanical Data</b>		
Operate Time <sup>1</sup> , Maximum	ms	10
Release Time, Maximum	ms	10

1. Operate Time, Release Time, and Contact Bounce are all measured with the relay stabilized at 25 C and operated with nominal coil voltage. Operate Time includes bounce. For normally closed relays, operate time refers to opening of the relay (i.e. operating the coil) and release time to closing the relay



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## K47B

THIRD ANGLE PROJECTION



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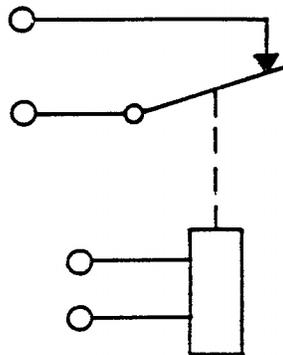
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2 of 6

### Coil & Electronics Data

	Units	K47B234 K47B232	K47B334 K47B332
Coil Voltage, Nominal	Vdc	12	26.5
Pickup Voltage, Maximum	Vdc	8	16
Drop-Out Voltage	Vdc	.5-5	1-10
Coil Resistance	$\Omega$	230	920

### Schematic



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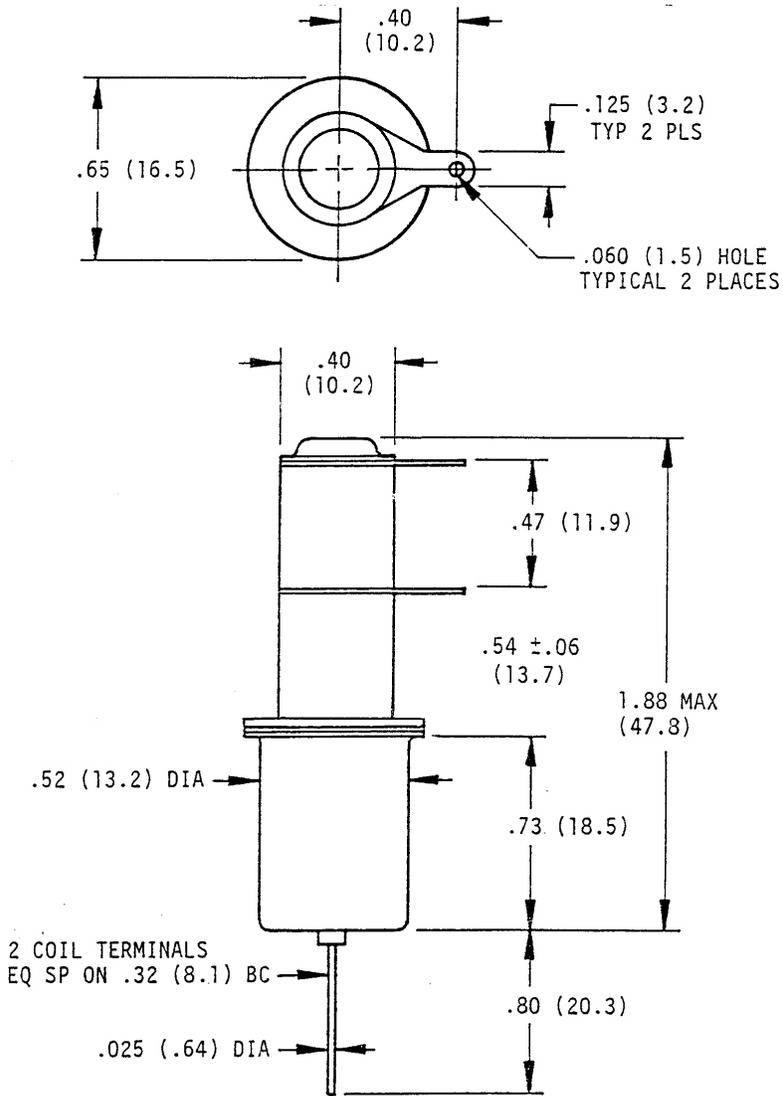
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SHEET  
 3 of 6

**Part Drawing**



**Dimensions in Inches**

(Dimensions in Parentheses are in Millimeters)

Tolerances Accepted as Noted

.xx = ± .03

.xxx = ± .010

∠ x° = ± 2°

DO NOT SCALE DWG.



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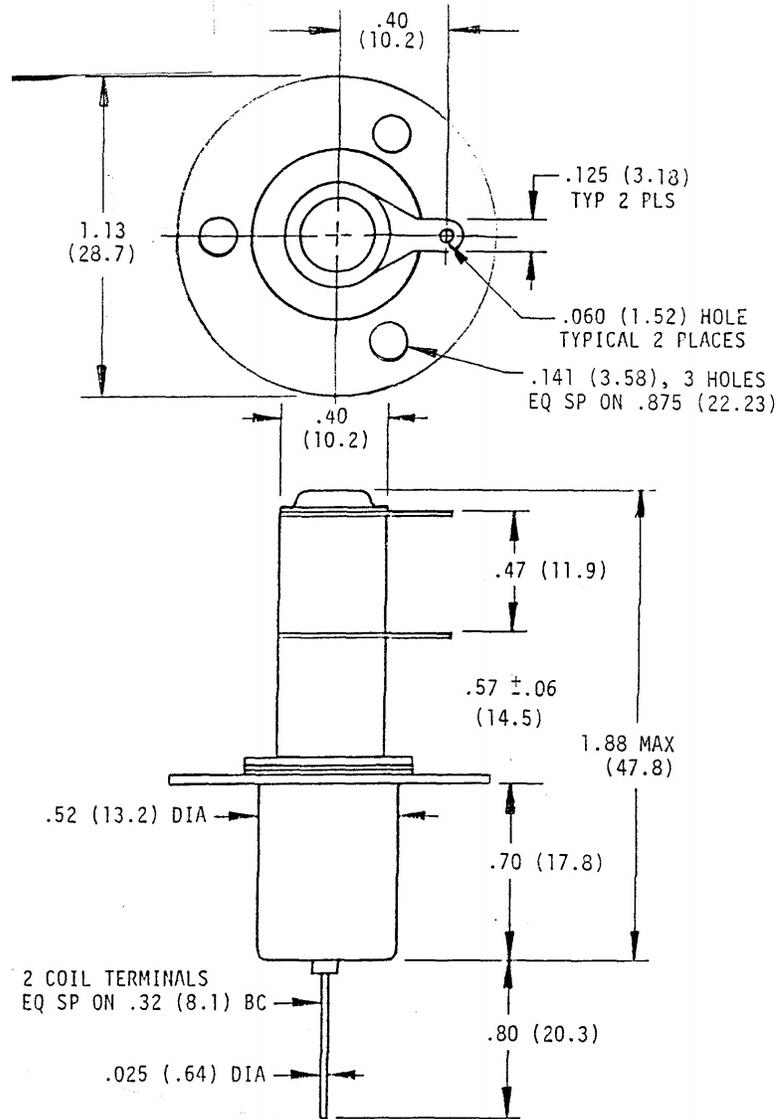
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4 of 6

**Part Drawing**



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5 of 6

REV.  
**F**

## Revisions

REV.	DESCRIPTION	DATE	APP.
A	Initial Concept	87/01/14	RG
B	Revised Pages 1 and 2	89/10/07	RG
C	Revised Pages 1, 2, 4, and 5	88/12/09	RG
D	Revised Pages 1, 2, 4, and 5	90/07/02	RG
E	New Template	99/04/15	JCM
F	Revised pages 1,2,3	99/12/14	SA



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6 of 6