

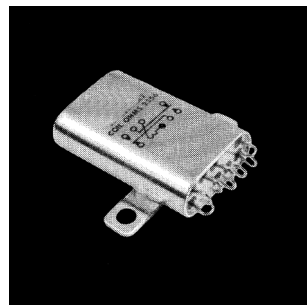
## Double Pole, Electrically Held, 2 Amps and Less (Continued)

### Crystal-Can Relays

Type 3SAE (2PDT)  
Type 3SAC (2PDT)

#### Product Facts

- Small lightweight crystal-can type
- 0.25 cubic inch, 0.60 ounces
- Power or low-level switching
- 20G to 2000 Hz vibration capability



The TE Connectivity line of crystal-can relays is backed by years of experience and millions of relays operating in the field.

#### Electrical Characteristics

**Contact Ratings** —  
DC resistive — 2 amps at 28 volts  
DC inductive — 1 amp at 28 volts,  
L/R < .025  
Low-level — 50  $\mu$ A at 50 mV  
Peak AC or DC  
AC resistive — 1.0 amp at 115 volts,  
case not grounded  
AC resistive — 0.25 amps at 115 volts,  
case grounded  
**Contact Resistance** —  
0.050 ohms max. initial;  
0.100 ohms max. after life test  
**Life** — 100,000 operations at rated  
load; 1,000,000 at low-level

#### Operating Characteristics

**Operate Time** — 6 ms max.  
**Release Time** — 5 ms max.  
**Contact Bounce** — 2.5 ms  
**Dielectric Strength** —  
1,000 volts rms at sea level;  
700 volts rms across contact gaps;  
350 volts rms at 70,000 feet  
**Insulation Resistance** —  
1,000 megohm min. except  
coil to case 500 min. at 125°C  
**Environmental Characteristics**  
**Vibration** — Depends upon mounting  
forms  
**Shock** — 50 G at 11 ms  
**Temperature** — -65°C to +125°C  
See page 1-46 for Mounting Forms,  
Terminals and Circuit Diagrams.

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CII Low Signal Relays

**Coil Table (All Values DC)\*  
Type 3SAE 330 mW Sensitivity: (Code 1)**

Coil Code Letter	Voltage Calibrated, CODE: 5				
	Coil Resistance at 25C (Ohms)	Suggested Source Volts†	Maximum Operate Volts at 25C	Release Voltage at 25C	
				Max	Min
A	22 ± 10%	3.9- 5.9	2.7	1.4	0.29
B	34 ± 10%	4.8- 7.4	3.3	1.7	0.36
C	53 ± 10%	6.2- 9.2	4.2	2.2	0.46
D	92 ± 10%	8.0-12.0	5.4	2.8	0.60
E	146 ± 10%	10.2-15.0	6.9	3.6	0.76
F	215 ± 10%	12.3-18.5	8.3	4.3	0.92
H	342 ± 10%	15.4-23.0	10.4	5.4	1.16
K	552 ± 10%	20.0-29.5	13.5	7.0	1.50
L	814 ± 10%	25.0-36.0	16.9	8.8	1.88
M	1180 ± 10%	30.0-43.0	20.5	10.6	2.28
N	1278 ± 15%	31.0-41.5	21.3	11.0	2.36
P	1800 ± 15%	38.0-49.0	25.8	13.3	2.86
R	2530 ± 15%	43.0-58.5	29.0	15.0	3.22
S	2950 ± 15%	50.0-63.0	34.0	17.5	3.77
T	5000 ± 20%	62.0-75.0	41.8	21.6	4.64
V	5170 ± 20%	68.0-76.0	46.0	25.4	5.12

**Coil Table (All Values DC)\*  
Type 3SAC 200 mW Sensitivity: (Code 2)**

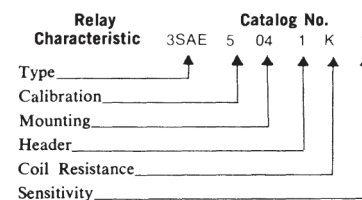
Coil Code Letter	Current Calibrated, CODE: 6				
	Coil Resistance at 25C (Ohms)	Maximum Operate Current at 25C (mA)	Maximum Continuous Current at 125C (mA)	Release Current at 25C (mA)	
				Max	Min
A	184 ± 10%	32.0	65.0	16.5	3.53
B	292 ± 10%	25.6	51.5	13.3	2.84
C	430 ± 10%	20.8	42.5	10.8	2.31
D	684 ± 10%	16.4	33.5	8.5	1.80
E	1104 ± 10%	13.2	26.5	6.9	1.46
F	1628 ± 10%	11.2	21.7	5.8	1.24
H	2360 ± 15%	9.4	16.8	4.9	1.04
K	2556 ± 15%	9.0	16.2	4.7	0.99
L	3600 ± 15%	7.7	13.5	4.1	0.86
M	5060 ± 15%	6.2	11.5	3.3	0.69
N	5900 ± 15%	6.2	10.5	3.3	0.71
P	10000 ± 20%	4.5	7.5	2.4	0.50
R	10340 ± 20%	4.8	7.4	2.5	0.54

\*Values listed are factory test and inspection values. User should allow for meter variations.  
†Applicable over the operating temperature range in circulating air.

### Ordering Instructions

**Example:** The relay selected in this example is a 2PDT crystal-can relay, voltage calibrated, two-hole side bracket mounting solder hook header, 552 ohms coil resistance, and 330 mW sensitivity. By choos-

ing the proper code for each of these relay characteristics, the catalog number is identified as 3SAE5041K1. The letter R following sensitivity code indicates relay received 5000 operation miss-test. Ex. 3SAE5041K1R.



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**Mounting Forms (3SAC, 3SAE)**

(Vibration note with each form is acceleration from 55 to 2000 Hz)

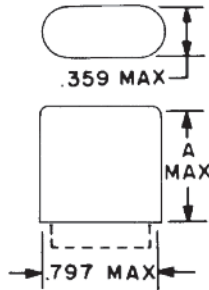
All dimensions in inches

TOLERANCES (unless otherwise specified)	
Hundredths	±0.020
Thousandths	±0.005

**No Mount**

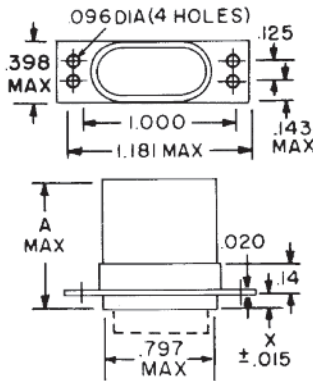
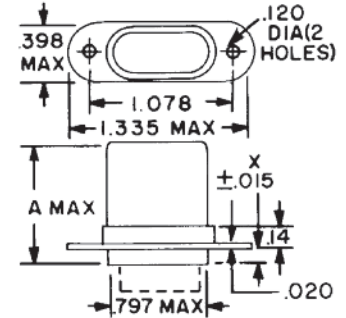
Mounting Code	A Dim. (Max)	Vibration*	Relay Type
00	0.875	20g	3SAE
00	1.187	15g	3SAC

\* Assumes relay securely held by potting or other means.



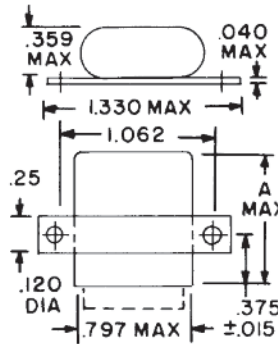
**Flange Mount, 2 in-line holes**

Mounting Code	A Dim. (Max)	X Dim.	Vibration	Relay Type
13	0.875	0.125	15g	3SAE
13	1.187	0.125	10g	3SAC
14	0.875	0.375	20g	3SAE
14	1.187	0.455	15g	3SAC



**Four-hole Flange**

Mounting Code	A Dim. (Max)	X Dim.	Vibration	Relay Type
01	0.875	0.125	15g	3SAE
01	1.187	0.125	10g	3SAC
02	0.875	0.375	20g	3SAE
02	1.187	0.455	15g	3SAC

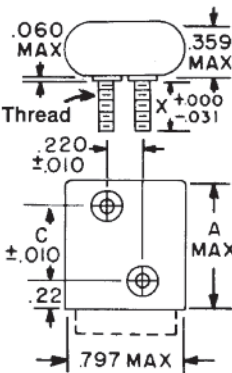


**Two-hole Side Bracket**

Mounting Code	A Dim. (Max)	Vibration	Relay Type
04	0.875	20g	3SAE
04	1.187	15g	3SAC

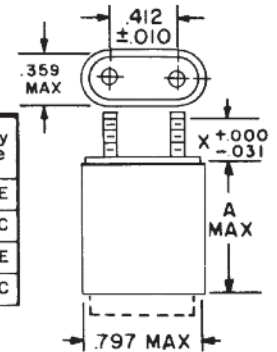
**Side Studs**

Mounting Code	A Dim. (Max)	C Dim.	X Dim.	Vibration	Relay Type
07	0.875	0.488	0.375	20g	3SAE
07	1.187	0.800	0.375	15g	3SAC
08	0.875	0.488	0.250	20g	3SAE
08	1.187	0.800	0.250	15g	3SAC

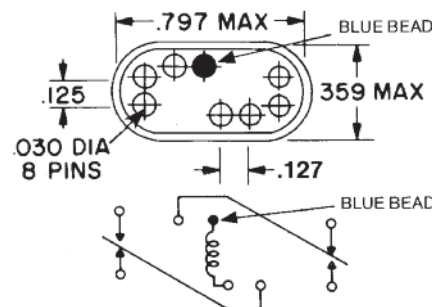


**Top Studs**

Mounting Code	A Dim. (Max)	X Dim.	Vibration	Relay Type
10	0.940	0.375	20g	3SAE
10	1.252	0.375	15g	3SAC
11	0.940	0.250	20g	3SAE
11	1.252	0.250	15g	3SAC



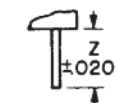
**Header and Connection Diagrams**



**Header Types**

Type	Z Dim.	Header Code
Solder hook	0.19	2
Straight pin (socket or PCB type)	0.19	4
Straight pin	2.99	8

CODE: 1



CODES: 4, 8