



HALF SIZE CRYSTAL CAN RELAY 2 AMPERE DPDT

Series
I 2K

Product Description

A complete series of half crystal can hermetically sealed relays manufactured and qualified to the referenced Military specification. The leading relay design in military and commercial application is represented in Hi-G Italia I2K series relay. The product advanced design provides superior performance in the environmental and operational requirements of today's sophisticated equipment. Volume production coupled with continuing qualification programs, ensure product consistency and the highest degree of reliability. The following construction features ensure the highest reliability in extreme environments:

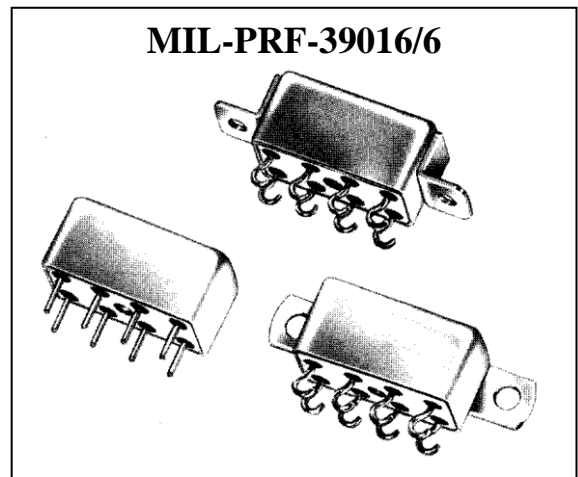
- All welded relay construction
- Cleaning and sealing techniques ensures maximum internal cleanliness
- Low level to 2 amperes switching
- 2 form C, DPDT contacts, special metal alloy with gold plating
- Frame, armature designs and force / mass ratio provides exceptional immunity to shock and vibration.

Series Type

- I2K 2 form C, DPDT

Environmental and Physical Specifications

| | |
|------------------------|----------------------------|
| Temperature (Ambient) | - 65°C to + 125°C |
| Shock | 100 g, 6 ms. |
| Vibration (sinusoidal) | 30 g, 10 to 3000 Hz |
| Acceleration | 50 g |
| Sealing | All welded, Hermetic |
| Weight | 0,46 oz. (13,0 grams) max. |



Electrical Characteristics (over the Temperature range. Unless otherwise noted)

| | | | | |
|--|---|--|--|--------------------|
| Coil Data | See Typical Characteristics chart | | | |
| Contact Rating | Contact Load | Type 1 | Type 2 | Cycles min. |
| (Note: All ratings with grounded case) | Low Level | 10 to 50 μ A / 10 to 50 mV | 10 to 50 μ A / 10 to 50 mV | 1.000.000 |
| | Resistive | 2 A / 28 Vdc 0,3 A / 115 Vac, 60 and 400 Hz | 2 A / 28 Vdc 0,1 A / 115 Vac, 60 and 400 Hz | 100.000 100.000 |
| | Overload | 4 A / 28 Vdc | 4 A / 28 Vdc | 100 |
| | Inductive Lamp | 0,75 A / 28 Vdc (200 mH) 0,16 A / 28 Vdc | 0,50 A / 28 Vdc (200 mH) 0,16 A / 28 Vdc | 100.000 100.000 |
| Contact Resistance | 0,05 Ω max. initial, 0,1 Ω max. after life high level, 0,15 Ω max. after low level | | | |
| Operate Time | 4,0 ms. max. at 25°C | | | |
| Release Time | 4,0 ms. max. at 25°C | | | |
| Contact Bounce | 2,0 ms. max. at 25°C | | | |
| Contact Stabilisation Time | 2,0 ms. max. at 25°C | | | |
| Dielectric Strength | 1.000 Vrms min., 60 Hz, all points, 500 Vrms min. between open contacts and coil to case, at sea level | | 350 Vrms min., 60 Hz, all points at 70.000 ft. | |
| Insulation Resistance | 10.000 M Ω min. all points at 500 Vdc | | | |
| Intercontact Capacitance | 2,5 pF between contacts | | | |
| Sensitivity | 250 mW at pick-up, 1 W typical at nominal rated coil voltage, at 25°C | | | |



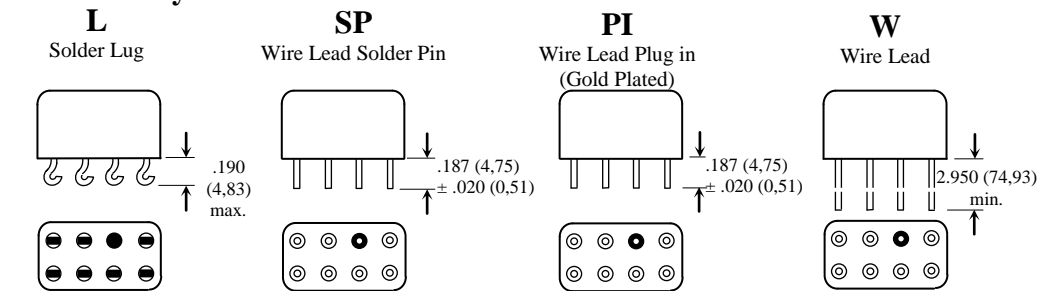
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Typical Characteristics (over the Temperature range. Unless otherwise noted)

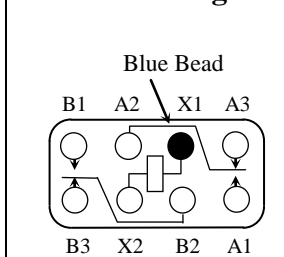
| Terminal Codes | | | | Mounting Styles | Load Rating | Coil Voltage (Vdc) | | DC Coil Resistance (Ω) $\pm 10\%$ at 25°C | Pick-up (Vdc) | | Drop-out (Vdc) | |
|----------------|----------------|----------------|---------------|-----------------|-------------|--------------------|------|---|---------------|------|----------------|------|
| Wire Lead (PI) | Solder Lug (L) | Wire Lead (SP) | Wire Lead (W) | | | Max. | Nom. | | Max. | Min. | Max. | Min. |
| 141 | 104 | 105 | 106 | B | Type 1 | 32,0 | 26,5 | 700 | 18,0 | 14,0 | 1,00 | |
| 142 | 107 | 125 | 108 | C | | | | | | | | |
| | 128 | | | D | | | | | | | | |
| | 129 | 109 | 110 | None | | | | | | | | |
| | 149 | | | E | | | | | | | | |
| 241 | 204 | 205 | 206 | B | Type 2 | 15,0 | 12,0 | 160 | 9,0 | 5,8 | 0,50 | |
| 242 | 207 | 225 | 208 | C | | | | | | | | |
| | 228 | | | D | | | | | | | | |
| | 229 | 209 | 210 | None | | | | | | | | |
| | 249 | | | E | | | | | | | | |
| 143 | 111 | 112 | 113 | B | Type 1 | 7,5 | 6,0 | 40 | 4,5 | 2,9 | 0,25 | |
| 144 | 114 | 126 | 115 | C | | | | | | | | |
| | 130 | 116 | 117 | None | | | | | | | | |
| | 150 | | | E | | | | | | | | |
| 243 | 211 | 212 | 213 | B | Type 2 | 6,0 | 5,0 | 27 | 3,8 | 2,4 | 0,21 | |
| 244 | 214 | 226 | 215 | C | | | | | | | | |
| | 230 | 216 | 217 | None | | | | | | | | |
| | 250 | | | E | | | | | | | | |
| 145 | 118 | 119 | 120 | B | Type 1 | 6,0 | 5,0 | 27 | 3,8 | 2,4 | 0,21 | |
| 146 | 121 | 127 | 122 | C | | | | | | | | |
| | 131 | 123 | 124 | None | | | | | | | | |
| | 151 | | | E | | | | | | | | |
| 245 | 218 | 219 | 220 | B | Type 2 | 6,0 | 5,0 | 27 | 3,8 | 2,4 | 0,21 | |
| 246 | 221 | 227 | 222 | C | | | | | | | | |
| | 231 | 223 | 224 | None | | | | | | | | |
| | 251 | | | E | | | | | | | | |
| 147 | 132 | 133 | 134 | B | Type 1 | 6,0 | 5,0 | 27 | 3,8 | 2,4 | 0,21 | |
| 148 | 135 | 136 | 137 | C | | | | | | | | |
| | 138 | 139 | 140 | None | | | | | | | | |
| | 152 | | | E | | | | | | | | |
| 247 | 232 | 233 | 234 | B | Type 2 | 6,0 | 5,0 | 27 | 3,8 | 2,4 | 0,21 | |
| 248 | 235 | 236 | 237 | C | | | | | | | | |
| | 238 | 239 | 240 | None | | | | | | | | |
| | 252 | | | E | | | | | | | | |

Terminal Styles



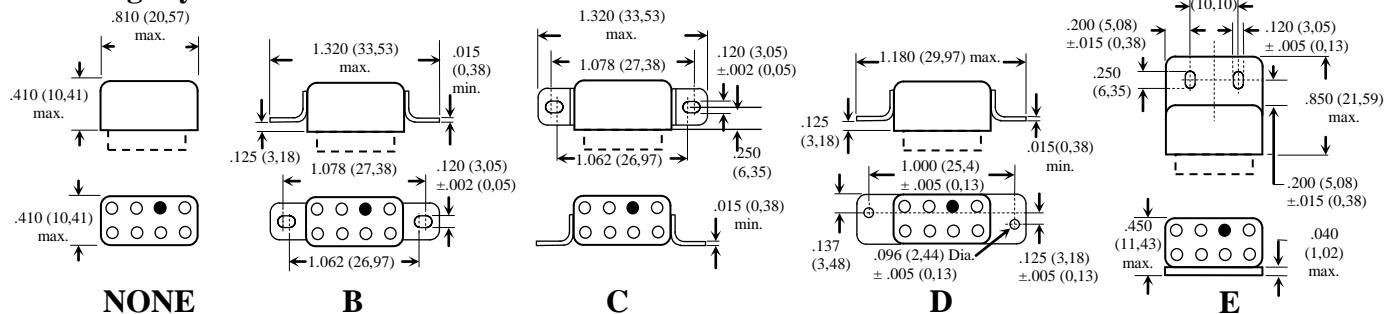
Note:
 - Dimensions are shown in inches (millimetres).
 - Terminal spacing is .200 (5,08). Terminal diameter is .030 (0,76) + .003 (0,08) - .002 (0,05)

Schematic Diagram



Note:
 - Schematic is viewed from terminals

Mounting Styles



Note: Dimensions are shown in inches (millimetres)

Note:

1 Failure Rate (Reliability Level)

| Military Suffix | Hi-G Suffix | FR % / 10,000 cycles |
|-----------------|-------------|----------------------|
| L | A | 3,0 |
| M | B | 1,0 |

How to Order, (Part Numbering System)

I 2K - 104 A

| | | |
|---------------|--|------------------------------------|
| Series | | |
| Terminal Code | | Reliability levels A or B (note 1) |