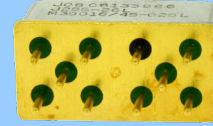


## HALF-SIZE CRYSTAL CAN MAGNETIC-LATCHING MILITARY RELAY DPDT



SERIES	RELAY TYPE
255	Commercial magnetic-latching DPDT half-size crystal can relay
J255	Magnetic-Latching DPDT half-size crystal can relay qualified to MIL-PRF-39016/45

### DESCRIPTION

The Series J255 / 255 is an industry-standard, half-size, latching crystal can relay. It has a wide range of switching capabilities ranging from low level to 2 amps. The Series J255 / 255 latching relay configuration is double-pole double-throw (DPDT), so the relay offers excellent switching density and versatility

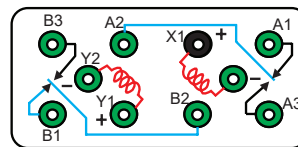
### The J255 / 255 features:

- Low level to 2 amps
- Wide range of switching capabilities
- Smallest relay package capable of switching 2 amps
- Modernized assembly process
- Qualified to MIL-PRF-39016/45 (J255 only)

### Teledyne Relays' Series J255/255 offers:

- All welded construction.
- Wire leads, gold-plated or solder-coated
- Matched seal for superior hermeticity
- Gold-plated contact assembly
- Advanced cleaning techniques

### SCHEMATIC (Note 4)



**J255 / 255**

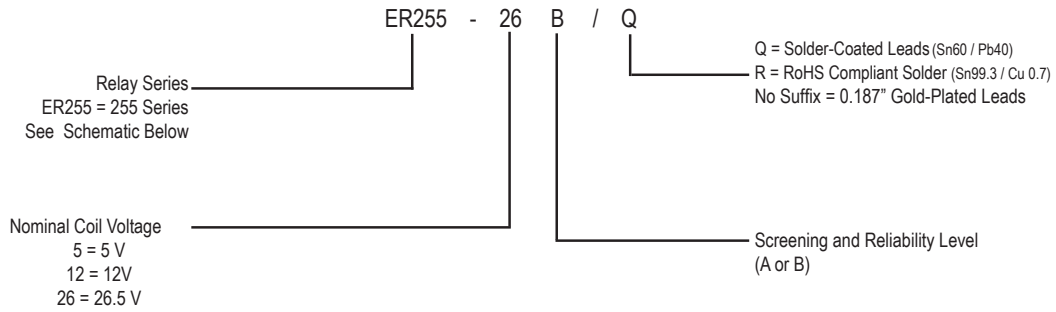
(Shown with coil X last energized)

### ENVIRONMENTAL AND PHYSICAL SPECIFICATIONS

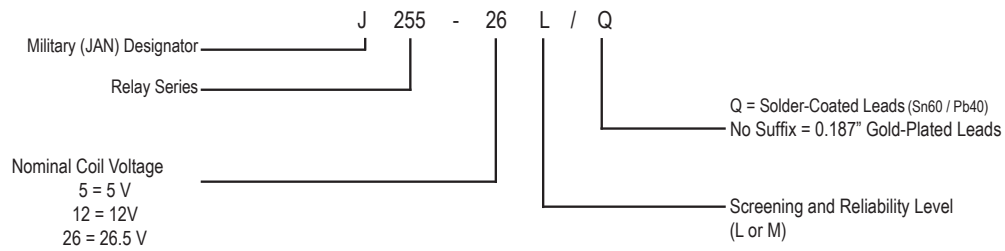
<b>Temperature</b> (Ambient)	-65°C to +125°C
<b>Vibration</b> (Note 1)	30 g's 10 to 2500 Hz
<b>Shock</b> (Note 1)	100 g's, 6ms half sine
<b>Enclosure</b>	Hermetically sealed
<b>Weight</b>	0.46 oz. (13g) max.
<b>Reflow Temperature</b>	260°C max. temp. 1 min. max

**Part Numbering System (Note 5 & 6)**

**T<sup>2</sup>R Established Reliability Relays**



**Military Qualified (JAN) Relays**



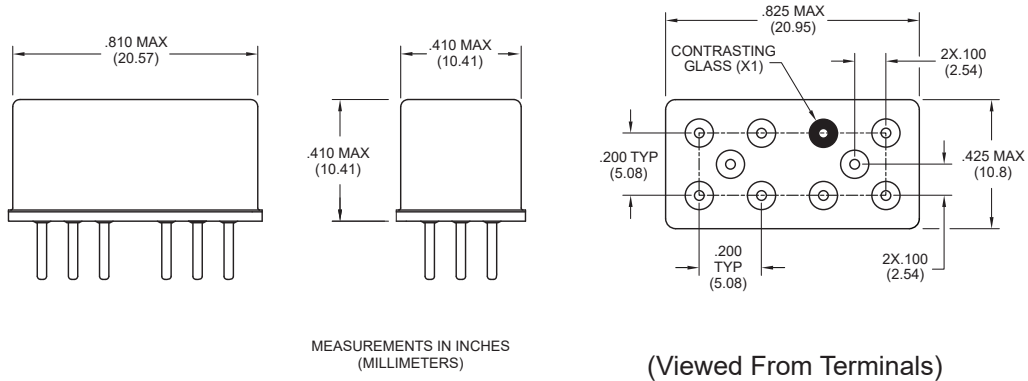
**GENERAL ELECTRICAL SPECIFICATIONS (-65°C to +125°C unless otherwise noted) (Notes 2 & 3)**

<b>Contact Arrangement</b>	2 Form C (DPDT)		
<b>Contact Resistance</b>	Low Level: 0.05 Ω max. before life 0.15 Ω max after life High Level: 0.05 Ω max before life 0.10 Ω max after life		
<b>Contact Load Rating (DC)</b>	Resistive: 2 A / 28 V <sub>dc</sub> Inductive: 750 mA / 28 V <sub>dc</sub> (320mH) Lamp: 160 mA / 28 V <sub>dc</sub> (320mH) Low level: 10 to 50 μA @ 10 to 50 mV		
<b>Contact Load Rating (AC)</b>	Resistive: 150 mA / 115 V <sub>ac</sub> , 60 and 400 Hz (Case grounded)		
<b>Contact Life Ratings</b>	1,000,000 cycles (typical) at low level 100,000 cycles (typical) at 0.5 A / 28 V <sub>dc</sub> resistive 100,000 cycles min. at all other loads specified above		
<b>Contact Overload Rating</b>	4 A / 28 V <sub>dc</sub> Resistive (100 cycles min.)		
<b>Contact Bounce</b>	4.0 ms maximum		
<b>Operating Time</b>	3.0 ms maximum at nominal rated coil voltage		
<b>Minimum Operate Pulse</b>	9 ms at nominal rated coil voltage		
<b>Insulation Resistance</b>	1,000 MΩ min. between mutually isolated terminals		
<b>Dielectric Strength</b>	Between case, frame or enclosure and all contacts in the latched and non-latched positions	Sea Level 1,000 V <sub>rms</sub> (60Hz)	@ 70,000 ft 350 V <sub>rms</sub> (60Hz)
	Between case, frame or enclosure and coils	500 V <sub>rms</sub> (60Hz)	350 V <sub>rms</sub> (60Hz)
	Between all contacts and coils	1,000 V <sub>rms</sub> (60Hz)	350 V <sub>rms</sub> (60Hz)
	Between open contacts in the latched and non-latched positions	500 V <sub>rms</sub> (60Hz)	350 V <sub>rms</sub> (60Hz)
	Between coils	500 V <sub>rms</sub> (60Hz)	350 V <sub>rms</sub> (60Hz)
	Between contact poles	1,000 V <sub>rms</sub> (60Hz)	350 V <sub>rms</sub> (60Hz)

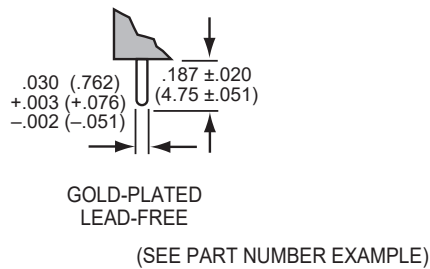
**DETAILED ELECTRICAL SPECIFICATIONS (-65°C to +125°C unless otherwise stated)(Notes 3)**

BASE PART NUMBERS		255-5	255-12	255-26
<b>Coil Voltage (V<sub>dc</sub>)</b>	<b>Nom.</b>	5.0	12.0	26.5
	<b>Max.</b>	6.7	16.0	32.0
<b>Latch and Reset Voltage (V<sub>dc</sub>)</b>	<b>Min.</b>	1.0	2.6	5.2
	<b>Max.</b>	3.8	9.0	18.0
<b>Coil Resistance (Ohms ±10%)</b>		45	254	1000

**OUTLINE DIMENSIONS (Note 7)**



**TERMINAL CONNECTIONS (Note 7)**



**NOTES:**

1. Relay contacts will exhibit no chatter in excess of 10  $\mu\text{s}$  or transfer in excess of 1  $\mu\text{s}$ .
2. "Typical" characteristics are based on available data and are best estimates. No on-going verification tests are performed.
3. Unless otherwise specified, parameters are initial values.
4. Indicated terminal is marked with a contrasting bead.
5. Unless otherwise specified, relays will be supplied with gold-plated leads.
6. The slash and characters appearing after the slash are not marked on the relay.
7. Dimensions are in inches. Metric equivalents in parentheses for reference only. Unless otherwise specified, tolerance is  $\pm .010$  (0.25mm).