



HERMETIC RELAY 3PDT - 10 A | DC COIL

Series
2TN

Product Description

Force-balanced, three-pole changeover relay with an all-metal welded, hermetically sealed enclosure and internal coil transient suppression. Available with 6, 12 or 28 VDC coils, solder pins or solder hooks, and three mounting arrangements.

Construction Features

Contact arrangement: **3PDT (3 Form C)**

Operating position: any

Maximum weight: **28.2 g**

Body envelope: **20.6 × 20.6 mm max.; height 16.3 mm**



Environmental And Physical Specifications

Parameter	Z / Y mounting	X mounting
Operating temperature	-65 to +125 °C	-65 to +125 °C
Humidity	98% RH at 40 °C	98% RH at 40 °C
Low air pressure	4.39 kPa	4.39 kPa
Sinusoidal vibration	294 m/s ² ; 10-3000 Hz	196 m/s ² ; 10-3000 Hz
Shock acceleration	1960 m/s ²	980 m/s ²
Random vibration density	40 (m/s ²) ² /Hz	20 (m/s ²) ² /Hz
Steady-state acceleration	490 m/s ²	490 m/s ²
Leakage rate, maximum	1 × 10 ⁻³ Pa·cm ³ /s	1 × 10 ⁻³ Pa·cm ³ /s

Contact Ratings And Electrical Life

Load	28 VDC	115/200 VAC 400 Hz, 3-phase	Life, min. cycles
Resistive	10 A	10 A	50,000
Inductive	6 A	—	10,000
Inductive	—	8 A	20,000
Motor	4 A	—	50,000
Lamp	2 A	—	50,000



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Electrical Characteristics

Parameter	Initial	After life / testing
Contact resistance / voltage drop	10 mΩ max.	125 mV max.
Insulation resistance at 500 VDC	100 MΩ min.	50 MΩ min.
Dielectric strength: coil to case	1000 Vrms min.	750 Vrms min.
Dielectric strength: other insulation	1250 Vrms min.	1000 Vrms min.
Dielectric strength at low air pressure	250 Vrms min.	—
Operate / release time	7 ms max. / 7 ms max.	—

Coil Data

Coil code	Nominal VDC	Maximum VDC	Resistance at 25 °C, min.
1	6	7.3	15 Ω
2	12	14.5	70 Ω
3	28	29.0	360 Ω

Condition / voltage (VDC)	Code 1	Code 2	Code 3
Pick-up, max. / hold, max. / drop-out, min. at 25 °C	3.3 / 1.6 / 0.40	6.6 / 3.3 / 0.75	15.5 / 5.5 / 2.30
Pick-up, max. / hold, max. / drop-out, min. from -65 to +125 °C	4.5 / 2.3 / 0.25	9.0 / 4.5 / 0.50	20.0 / 7.0 / 1.50
Pick-up, max.: high-temperature test	5.5	9.9	21.0
Pick-up, max.: continuous electrical test	5.70	11.25	25.0

How To Order

2TN	A / B	Z / Y / X	1 / 2 / 3	A / B	S
Series	Terminal style	Mounting style	Coil code	Failure rate	Suppression

2TN: series • A: solder pins / B: solder hooks

Z: no mount / Y: raised vertical flange / X: horizontal flange

1: 6 VDC / 2: 12 VDC / 3: 28 VDC • S: internal coil suppression

HI-G failure-rate code	MIL level	Failure rate / 10,000 cycles
A	L	3.0%
B	M	1.0%

Example: 2TN-AY3B-S = solder pins, raised vertical flange, 28 VDC, requested failure-rate level M, internal suppression. Omit A/B when no failure-rate level is requested. Rated versions are subject to qualification and order confirmation.



HERMETIC RELAY

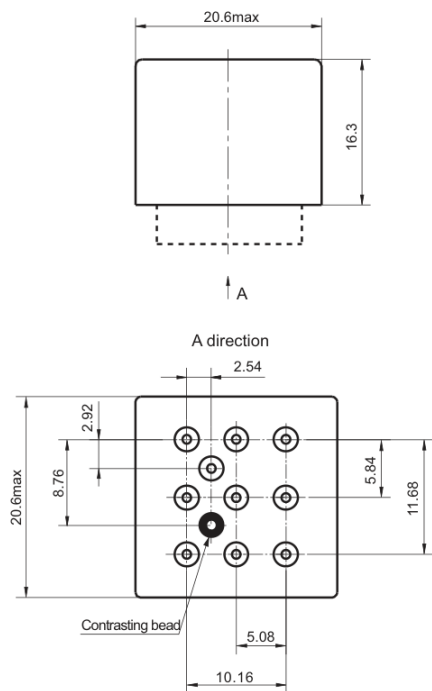
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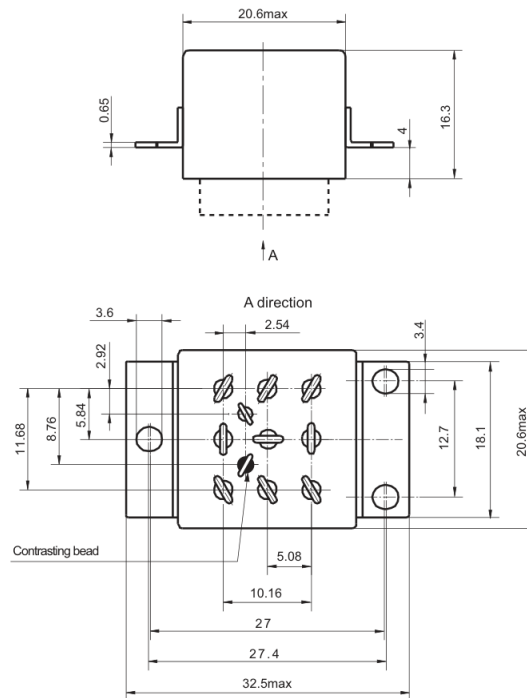
Terminal Styles, Mounting and Wiring

Dimensions in millimetres. Drawings show available mounting and terminal arrangements. Terminal orientation is defined by the contrasting bead; the wiring diagram is a bottom view.

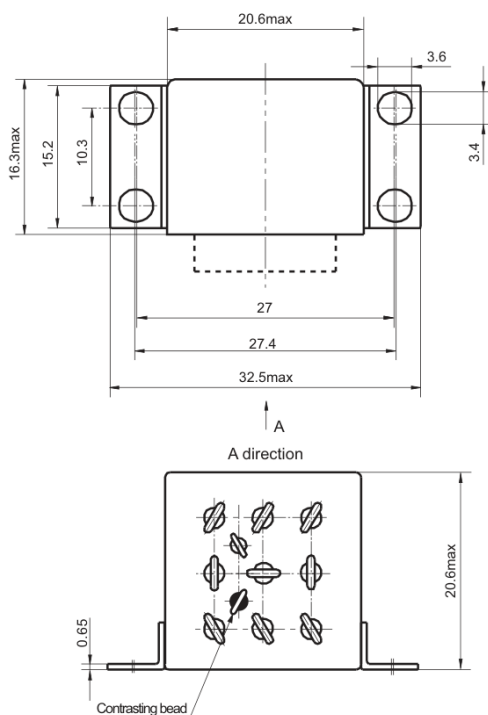
Z | No mounting flange



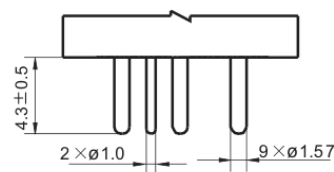
Y | Raised vertical flange



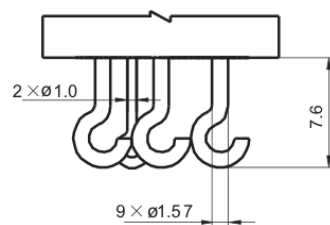
X | Horizontal flange



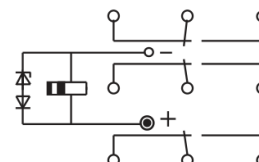
A | Solder pins



B | Solder hooks



Wiring | Bottom view





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MIL Configuration Cross-reference

Reference: **MIL-PRF-83536/22B with Amendment 1, 2 June 2004.**

The table matches nominal coil voltage, terminal type, mounting style and internal suppression. It identifies candidate configurations only: it does not establish full electrical or dimensional interchangeability, MIL qualification or a certified failure rate.

Failure-rate ordering: **A = L**; **B = M**. Columns identify the requested levels; qualification is subject to order confirmation.

HI-G P/N Level L (A)	MIL reference Level L	HI-G P/N Level M (B)	MIL reference Level M	VDC
2TN-AZ1A-S	M83536/22-001L	2TN-AZ1B-S	M83536/22-001M	6
2TN-BZ1A-S	M83536/22-002L	2TN-BZ1B-S	M83536/22-002M	6
2TN-AY1A-S	M83536/22-004L	2TN-AY1B-S	M83536/22-004M	6
2TN-BY1A-S	M83536/22-005L	2TN-BY1B-S	M83536/22-005M	6
2TN-AX1A-S	M83536/22-007L	2TN-AX1B-S	M83536/22-007M	6
2TN-BX1A-S	M83536/22-008L	2TN-BX1B-S	M83536/22-008M	6
2TN-AZ2A-S	M83536/22-009L	2TN-AZ2B-S	M83536/22-009M	12
2TN-BZ2A-S	M83536/22-010L	2TN-BZ2B-S	M83536/22-010M	12
2TN-AY2A-S	M83536/22-012L	2TN-AY2B-S	M83536/22-012M	12
2TN-BY2A-S	M83536/22-013L	2TN-BY2B-S	M83536/22-013M	12
2TN-AX2A-S	M83536/22-015L	2TN-AX2B-S	M83536/22-015M	12
2TN-BX2A-S	M83536/22-016L	2TN-BX2B-S	M83536/22-016M	12
2TN-AZ3A-S	M83536/22-017L	2TN-AZ3B-S	M83536/22-017M	28
2TN-BZ3A-S	M83536/22-018L	2TN-BZ3B-S	M83536/22-018M	28
2TN-AY3A-S	M83536/22-020L	2TN-AY3B-S	M83536/22-020M	28
2TN-BY3A-S	M83536/22-021L	2TN-BY3B-S	M83536/22-021M	28
2TN-AX3A-S	M83536/22-023L	2TN-AX3B-S	M83536/22-023M	28
2TN-BX3A-S	M83536/22-024L	2TN-BX3B-S	M83536/22-024M	28

MIL configurations without an assigned HI-G alternative	Reason
003, 006, 011, 014, 019, 022	Socket terminals
025	Socket terminals / track mounting
026-033	48 VDC coil