



Standard Mini Relays

PART NUMBER	DESCRIPTION and Details ## double 87 terminal	Illustration and Dimensions, Drawing	Terminal Diagram; Circuit Diag.	VOLTAGE Nominal – Max. Operating Voltage	CONTACT MATERIAL T 87	MAXIMUM N.O. RESISTIVE LOAD Amps – Life cycles	OTHER LOADS: See Group # in LOAD TABLE
0 332 019 150	SPST, bracket, ##	①	A 1 S 1	12V – 15V	Hard Silver	40A – 200,000	6
0 332 019 151	SPST, ##	①	A 1 S 1	12V – 15V	Hard Silver	40A – 200,000	6
0 332 019 155	SPST, diode, bracket, ##	②	A 1 S 2	12V – 15V	Hard Silver	40A – 200,000	5
0 332 209 150	SPDT, bracket	②	A 2 S 4	12V – 15V	Hard Silver	40A – 200,000	7
0 332 209 151	SPDT	①	A 2 S 4	12V – 15V	Hard Silver	40A – 200,000	7
0 332 209 159	SPDT, resistor	①	A 2 S 5	12V – 15V	Hard Silver	40A – 200,000	7
0 332 209 161	SPDT, resistor, bracket	②	A 2 S 5	12V – 15V	Hard Silver	40A – 200,000	7
0 332 209 167	SPDT, resistor P	①	A 2 S 5	12V – 15V	Silver Nickel	30A – 250,000	8
0 332 209 168	SPDT P	①	A 2 S 4	12V – 15V	Hard Silver	30A – 250,000	8

P = Plated Terminals

PART NUMBER	PULL-IN VOLTAGE	DROP-OUT VOLTAGE	RESISTANCE		Nominal Operating Current
			No resistor, or with diode	With resistor	
0 332 019 150	≤ 8.0 V	1.0 – 5.0 V	85 ± 5 ohm		140 mA
0 332 019 151	≤ 8.0 V	1.0 – 5.0 V	85 ± 5 ohm		140 mA
0 332 019 155	≤ 8.0 V	1.0 – 5.0 V	85 ± 5 ohm		140 mA
0 332 209 150	≤ 8.0 V	1.0 – 5.0 V	85 ± 5 ohm		140 mA
0 332 209 151	≤ 8.0 V	1.0 – 5.0 V	85 ± 5 ohm		140 mA
0 332 209 159	≤ 8.0 V	1.0 – 5.0 V		75 ± 5 ohm	160 mA
0 332 209 161	≤ 8.0 V	1.0 – 5.0 V		75 ± 5 ohm	160 mA
0 332 209 167	≤ 8.0 V	1.2 – 5.5 V		75 ± 5 ohm	160 mA
0 332 209 168	≤ 7.0 V	0.5 – 4.0 V	65 ± 5 ohm		184 mA

LOAD and LIFE CYCLE TEST DATA for STANDARD MINI RELAYS

Contact testing conditions	Test Temp.	Relay Type	Load	Switching cycle
For STO (Silver Tin Oxide) contacts: Life cycles tested at 23°C, 13.5V	23°C	Standard	Lamp	2 Sec ON, 2 Sec OFF
For Hard Silver (AgCu2Ni) contacts: Life cycles tested at 23°C, 13.5V			Resistive	2 Sec ON, 2 Sec OFF
For Silver Nickel (AgNi20) contacts: Life cycles tested at 23°C, 13.5V			Motor	2 Sec ON, 2 Sec OFF

STANDARD MINI RELAY LOAD TABLE

LOAD GROUP	VOLTAGE	CONTACT POSITION	RESISTIVE LOAD		MOTOR LOAD		LAMP LOAD		INDUCTIVE LOAD	
			Continuous	Life Cycles	In rush/ Continuous	Life Cycles	Continuous	Life Cycles	Continuous/ Inductivity	Life Cycles
5	12V	NO	40A	200,000	50/25A	100,000	30A	100,000	15A/8mH	50,000
			30A	300,000			20A	200,000		
			10A	500,000			10A	500,000		
6	12V	NO	40A	200,000	50/25A	100,000	30A	100,000	24A/2mH	100,000
			30A	300,000			20A	200,000		
			10A	500,000			10A	500,000		
7	12V	NO	40A	200,000	50/25A	100,000	30A	100,000	24A/8mH	100,000
			30A	300,000			20A	200,000		
			10A	500,000			10A	500,000		
		NC	20A	250,000	N/A	N/A	10A	100,000	15A/8mH	100,000
8	12V	NO	30A	250,000	75/30A	100,000	30A	100,000	24A/8mH	100,000
			20A	300,000			20A	200,000		
			10A	500,000			10A	500,000		
		NC	20A	250,000	N/A	N/A	10A	100,000	15A/8mH	100,000

OPERATING CHARACTERISTICS		MECHANICAL CHARACTERISTICS		ENVIRONMENTAL CHARACTERISTICS	
Response Time	≤ 10 mS	Random Vibration Test	10 Hz ... 1000Hz for 4 h	Operating Temperature	–40°C to +85°C
Response Time, with Diode	≤ 15 mS	Sine Wave Vibration Test	10 Hz ... 200Hz, 2.5 G's for 4 h	Humidity Test	95% for 7 days
Contact Voltage Drop - New, at 10A	≤ 50 mV	Drop Test – All sides	1 meter	Salt Spray Test–All sides	144 hours
(12 V, at 10 A) - After life test	≤ 80 mV	Terminal Retention Force	> 110 N	Dust Test	8 hours
(24 V, at 10 A) - After life test	≤ 100 mV	Cover Retention Force	> 220 N		
Mechanical Life	> 1,000,000	Cover Crush Force	> 220 N		
Coil Inductance	≤ 250 mH				