

REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVAL
-	RELEASED	7/21/92	<i>[Signature]</i>

**SHEET REVISION STATUS**

SH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REV	--	--	--																	
SH	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REV																				

ORIGINATOR T. Perry/Paramax	DATE 6/23/92	FSC: 5945
APPROVED <i>[Signature]</i> S. Archer-Davies/Paramax	6/23/92	Relays, Electromagnetic, Hermetically Sealed, 2PDT (2C), Low Level to 1 Ampere, Internal Diode for Coil Transients, (TO-5 Enclosure)
CODE 311 APPROVAL P. Jones/GSFC	6/30/92	
CODE 311 SUPERVISORY APVL G. P. Kramer, Jr./GSFC	7/20/92	
ADDITIONAL APPROVAL		S-311-P-754/04

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
 GODDARD SPACE FLIGHT CENTER  
 GREENBELT, MARYLAND 20771

CAGE CODE: 25306 PAGE 1 OF 3

## GSFC DETAIL SPECIFICATION

RELAYS, ELECTROMAGNETIC, HERMETICALLY SEALED, 2PDT (2C), LOW LEVEL TO 1 AMPERE, INTERNAL DIODE FOR COIL TRANSIENTS (TO-5 ENCLOSURE)

The requirements for procuring the relays described herein shall consist of this specification and the current revision of GSFC S-311-P-754.

Table I. Part Numbers and characteristics.

GSFC Part Number	Similar to MIL Part Number	Terminal Type	Coil Voltage (Nominal)	Pickup Voltage (max.)	Dropout Voltage (min.)	DC Coil Resistance (ohms)
G311P754/04-001	M39016/15-077	Wire Leads	6.0 Vdc	3.5 Vdc	0.28 Vdc	98 ± 10%
G311P754/04-002	M39016/15-078	Wire Leads	9.0 Vdc	5.3 Vdc	0.54 Vdc	220 ± 10%
G311P754/04-003	M39016/15-079	Wire Leads	12.0 Vdc	7.0 Vdc	0.63 Vdc	390 ± 10%
G311P754/04-004	M39016/15-080	Wire Leads	18.0 Vdc	10.5 Vdc	0.91 Vdc	880 ± 10%
G311P754/04-005	M39016/15-081	Wire Leads	26.5 Vdc	14.2 Vdc	1.37 Vdc	1560 ± 10%

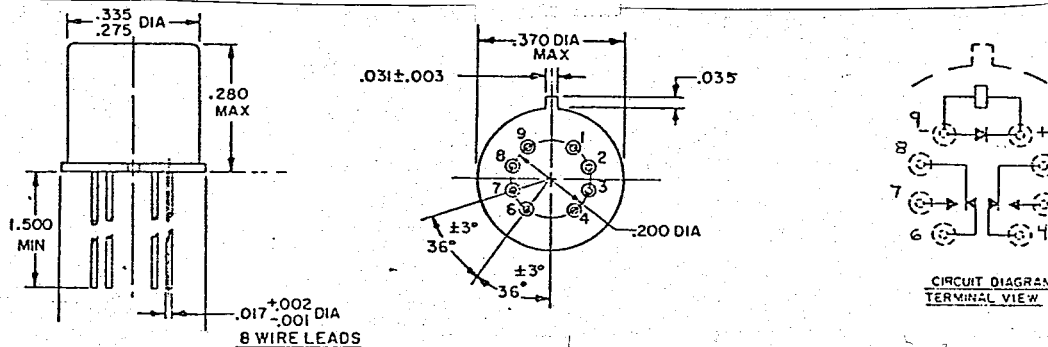


Figure 1. Configuration and circuit diagram.

**Notes:**

1. Relays must be provided with unpainted enclosures.
2. Terminal numbers in circuit diagram are for reference only

**REQUIREMENTS:**

Operating Temperature Range: -65°C to +125°C

Other: All requirements (contact ratings, life test requirements, environmental data, etc.) shall be as specified in MIL-R-39016/15 except as detailed or modified herein.

**Seal**

Fine leak test ..... 1 X 10<sup>-8</sup> cc/sec max.  
Gross leak test ..... not applicable

**Electrical measurements**

Insulation resistance ..... 5,000 Mohm min. @ 100 Vdc  
Dielectric strength ..... 500 V<sub>rms</sub>, 60 Hz  
Coil resistance ..... see Table I  
Pickup voltage ..... see Table I  
Dropout voltage ..... see Table I  
Contact resistance ..... 100 milliohms max.  
Operate time ..... 2 ms max.  
Release time ..... 4 ms max.  
Bounce time ..... 2 ms max.  
Coil transient suppression ..... applicable  
Neutral screen ..... not applicable

**Vibration**

Sinusoidal ..... 20 g (55 - 3000 Hz)  
Random ..... not applicable

High temperature soak ..... applicable  
High temperature run-in ..... not applicable  
Low temperature run-in ..... applicable  
Room temperature run-in ..... applicable

**Seal**

Fine leak test ..... 1 x 10<sup>-8</sup> cc/sec max.  
Gross leak test ..... applicable