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REVISIONS

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P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	INITIAL DRAWN	04NOV2019	RV	MB

Electrical Characteristics

Contact Arrangement

2 Form C (DPDT)

Contact Material

Stationary —
Hardened silver alloy
Moveable —
Gold plated hardened silver alloy

Contact Resistance

Before Life — 50 milliohms max.
(measured at 10 mA @ 6 Vdc)
After Life — 100 milliohms max.
(measured @ 2 A @ 28 Vdc)

Mechanical Life Expectancy

50 million operations

Coil Voltage

5 to 48 Vdc (HFW)
6 to 26.5 Vdc (HMB)
5 to 36 Vdc (HMS)

Coil Power

1.4 watts max. @ 25°C

Duty Cycle

Continuous

Pick-up Voltage

Approximately

50% of nominal coil voltage

Pick-up Sensitivity @ 25°C

145 to 260 mW (HFW)
325 mW (HMB)
100 to 125 mW (HMS)

Standard Coil Data

	Nom. Coil Voltage (Vdc)	Coil Resistance in Ohms ±10% @ 25°C	Pickup Voltage Vdc (Max.) @ 25°C	Pickup Voltage Vdc (Min.) @ 125°C	Drop-out Voltage Vdc (Min.) @ 25°C	Drop-out Voltage Vdc (Min.) @ -65°C	Nom. Coil Power (mW) @ 25°C	Max. Coil Voltage	Coil Desig.
HFW	5.0	27	2.7	3.8	0.29	0.21	926	6.0	L
	6.0	40	3.2	4.5	0.35	0.25	900	7.5	F
	12.0	160	6.4	9.0	0.7	0.5	900	15.0	G
	26.5	700	13.5	18.0	1.5	1.0	1003	32.0	K
HMB	6.0	40	3.6	4.8	0.35	0.25	900	7.5	F
	12.0	160	7.2	9.6	0.7	0.5	900	15.0	G
	26.5	700	15.0	20.0	1.5	1.0	1003	32.0	K
	HMS	5.0	47	2.2	3.2	0.21	0.12	532	7.0
6.0		75	2.75	4.0	0.27	0.17	480	9.0	S002
12.0		310	5.6	8.0	0.55	0.35	465	20.0	S003
26.5		1,030	11.4	16.5	1.1	0.7	682	35.0	S004
	30.0	1,620	14.3	21.0	1.4	0.9	556	44.0	S005
	36.0	2,640	18.0	26.0	1.8	1.1	491	56.0	S006
Other	6-8	60	3.5	4.85	0.35	0.22	817	9.0	A
(avail. for HFW relays only)	12-15	320	6.8	9.42	0.68	0.44	570	21.0	B
	18.0	520	9.5	13.16	0.95	0.62	623	27.0	J
	26.5-32	1,250	14.0	19.4	1.5	0.98	684	42.0	D
	40.0	2,700	21.3	29.5	2.1	1.37	593	61.0	H
	48.0	3,500	25.5	35.3	2.5	1.63	658	70.0	E

Specifying a Part Number Example: Type Terminals Mountings Coils Features

HFW 12 30 K 00 (n/a HMS)

Contact Ratings

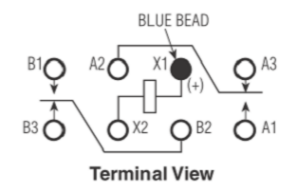
Contact Load	Type	Operations Min.
2 A @ 28 Vdc	Resistive	100,000
0.75 A @ 28 Vdc	Inductive (200mH)	100,000
0.1 A @ 115 Vac, 60 Hz & 400 Hz	Resistive	100,000
0.3 A @ 115 Vac, 60 Hz & 400 Hz	Resistive	100,000
0.1 A @ 28 Vdc	Intermediate	50,000
0.160 A @ 28 Vdc	Lamp	100,000
30 µA @ 50 mVdc	Low Level	1,000,000

RF Performance

Frequency (MHz)	RF Losses (dB)	VSWR	Isolation (dB)
100	0.1	1.17:1	40
500	0.3	1.19:1	28
1000	0.4	1.19:1	23

HFW Standard Half Size High Performance Relay

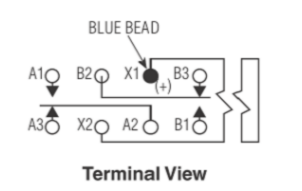
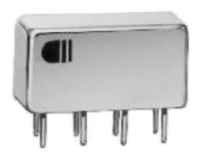
Qualified to MIL-R-39016/6



- Product Facts**
- Hermetically sealed
 - Up to 2 amps switching
 - High shock & vibration ratings
 - Optional terminals & mounting styles
 - Excellent RF switching

HMB Bifilar Half Size High Performance Relay

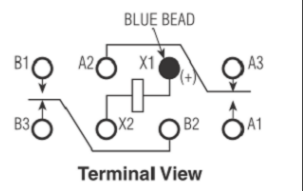
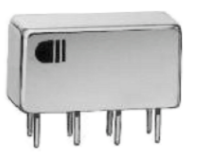
Qualified to MIL-R-39016/22



- Product Facts**
- Hermetically sealed
 - Up to 2 amps switching
 - High shock & vibration ratings
 - Optional terminals & mounting styles
 - Excellent RF switching

HMS Sensitive Half Size High Performance Relay

Qualified to MIL-R-39016/44



- Product Facts**
- Hermetically sealed
 - Up to 2 amps switching
 - High shock & vibration ratings
 - Optional terminals & mounting styles
 - Excellent RF switching

Operating Characteristics

Timing

Operate Time —
4.0 ms max. (HFW)
5.0 ms max. (HMB)
6.0 ms max. (HMS)
Release Time —
4.0 ms max. (HFW)
5.0 ms max. (HMB/HMS)

Contact Bounce

2.0 ms max.

Dielectric Withstanding Voltage

Between Open Contacts —
500 Vrms 60 Hz
Between Adjacent Contacts —
1000 Vrms 60 Hz
Between Contacts & Coil —
1000 Vrms 60 Hz

Insulation Resistance

10,000 megohms min. @ 500 Vdc

Environmental Characteristics

Temperature Range

-65°C to +125°C

Weight

0.46 oz. (13 gms max.)

Vibration Resistance

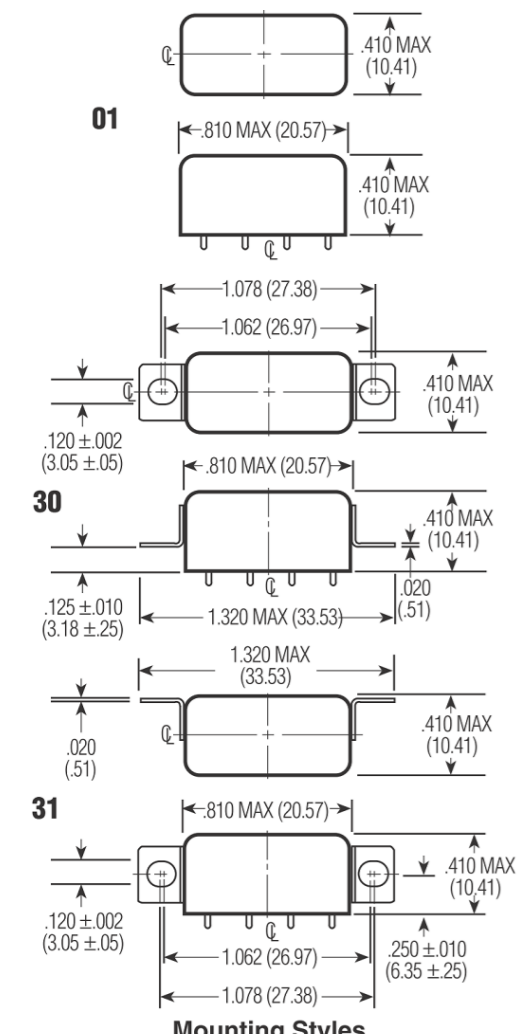
HFW/HMB/HMS —
Standard — 20 G's, 10 to 2,000 Hz
HFW/HMB —
QPL — 30 G's, 10 to 3,000 Hz
HMS —
QPL — 20 G's, 10 to 2,500 Hz

Shock Resistance

100 G's, 6 ± 1 ms
50 G's, 11 ± 1 ms (HMS)

QPL Approval

MIL-R-39016/6 (HFW)
MIL-R-39016/22 (HMB)
MIL-R-39016/44 (HMS)



ALL DIMENSIONS ARE IN INCHES(MM)

THIS DRAWING IS A CONTROLLED DOCUMENT.	
DIMENSIONS: INCHES	TOLERANCES UNLESS OTHERWISE SPECIFIED:
	0 PLC ± -
	1 PLC ± -
	2 PLC ± -
	3 PLC ± -
	4 PLC ± -
ANGLES ± -	
MATERIAL -	
FINISH -	

DWN RV	04NOV2019		NAME				
CHK RV	04NOV2019						
APVD MB	04NOV2019						
PRODUCT SPEC							
APPLICATION SPEC		SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO		
WEIGHT -		A3	-	C-HFW-HMB/S-SERIES	-		
CUSTOMER DRAWING		SCALE	N.T.S.	SHEET	1 OF 1	REV	A

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