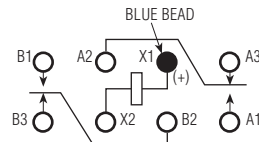


Double Pole, Electrically Held, 5 Amps and Less

HFW4A, HFW5A

HFW4A, HFW5A
Standard Half Size
High Performance Relay
Designed to
MIL-R-39016/6



Terminal View

Product Facts

- Hermetically sealed
- Up to 5 amps switching
- High shock & vibration ratings
- Optional terminals & mounting styles
- Excellent RF switching

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 (HFW4A)
5 to 26.5 Vdc (HFW5A)

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

Contact Ratings

Contact Load	Type	Operations Min.
4 A @ 28 Vdc (HFW4A)	Resistive	100,000
5 A @ 28 Vdc (HFW5A)	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

Double Pole, Electrically Held, 5 Amps and Less (Continued)

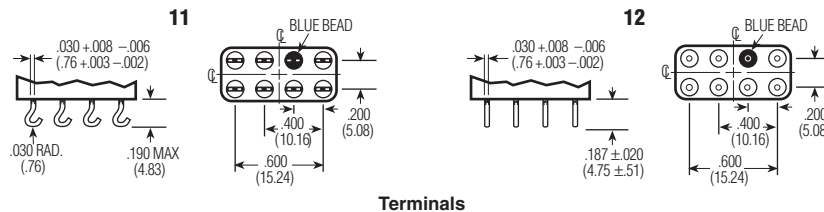
HFW4A, HFW5A (Continued)

Operating Characteristics

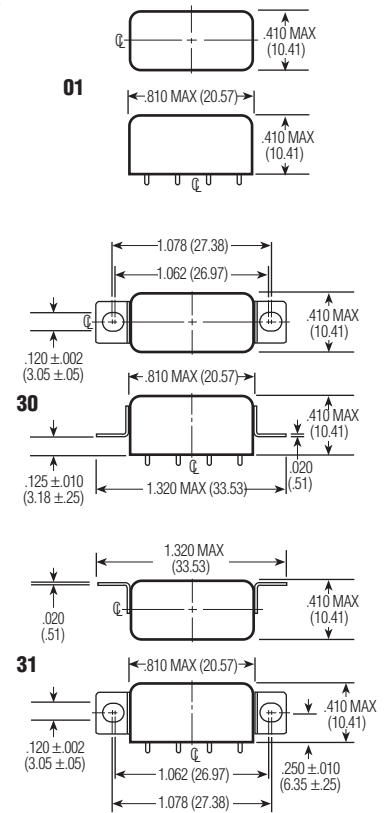
Timing —
 Operate Time — 4.0 ms max.
 Release Time — 4.0 ms max.
Contact Bounce — 2.0 ms max.
Dielectric Withstanding Voltage —
 Between Open Contacts —
 500 Vrms 60 Hz
 Between Adjacent Contacts —
 1000 Vrms 60 Hz
 Between Contacts & Coil —
 1000 Vrms 60 Hz
Insulation Resistance —
 10,000 megohms min. @ 500 Vdc

Environmental Characteristics

Temperature Range —
 -65°C to +125°C
Weight — 0.46 oz. (13 gms max.)
Vibration Resistance —
 20 G's, 10 to 2,000 Hz
Shock Resistance —
 100 G's, 6 ± 1 ms



Terminals



Mounting Styles

Standard Coil Data

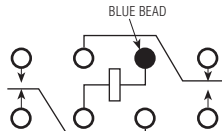
	Nom. Coil Voltage (Vdc)	Coil Resistance in Ohms ±10% @ 25°C	Pickup Voltage Vdc (Max.) @ 25°C	Pickup Voltage Vdc (Min.) @ 125°C	Drop-out Voltage Vdc (Min.) @ 25°C	Drop-out Voltage Vdc (Min.) @ -65°C	Nom. Coil Power (mW) @ 25°C	Max. Coil Voltage	Coil Desig.
HFW4A/HFW5A	5.0	27	2.7	3.8	0.29	0.21	926	6.0	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
Other	6-8	60	3.5	4.85	0.35	0.22	817	9.0	A
	12-15	320	6.8	9.42	0.68	0.44	570	21.0	B
HFW4A relays only)	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
HFW5A	12	30	K	00

Double Pole, Electrically Held, 5 Amps and Less (Continued)

HFC4A, HFC5A
Commercial/Industrial
Half Size Relay



Terminal View

Electrical Characteristics

Contact Arrangement — 2 Form C (DPDT)
Contact Material — Stationary — Bifurcated hardened silver alloy
 Moveable — Gold plated hardened 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 — 10 million operations
Coil Voltage — 5 to 26.5 Vdc
Coil Power — 1.4 watts max. @ 25°C

Duty Cycle — Continuous

Pick-up Voltage — Approximately 60% of nominal coil voltage

Pick-up Sensitivity — 360 mW

Operating Characteristics

Timing — Operate Time — 6.0 ms max.
 Release Time — 6.0 ms max.

Dielectric Withstanding Voltage —

Between Open Contacts — 350 Vrms 60 Hz
 Between Adjacent Contacts — 500 Vrms 60 Hz
 Between Contacts and Coil — 500 Vrms 60 Hz

Insulation Resistance — 1,000 megohms min @ 500 Vdc

Environmental Characteristics

Temperature Range — -55°C to +85°C

Weight — 0.46 oz. (13 gms) max.

Vibration Resistance — 10 G's, 10 to 500 Hz

Shock Resistance — 30 G's, 6 ±1 ms

Product Facts

- Hermetically sealed
- Up to 5 amps switching
- Economical configuration
- Optional terminals & mounting styles

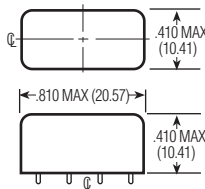
Contact Ratings

	Contact Load	Type	Operations Min.
HFC4A	4 A @ 28 Vdc	Resistive	100,000
HFC5A	5 A @ 28 Vdc	Resistive	100,000
	0.75 A @ 28 Vdc	Inductive (200 mH)	100,000
	0.3 A @ 115 Vac, 60 Hz & 400 Hz	Resistive	100,000

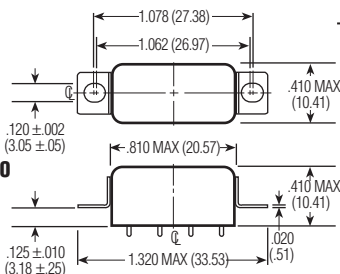
Standard Coil Data

Nom. Coil Voltage (Vdc)	Coil Resistance in Ohms ± 20% @ 25°C	Pickup Voltage Vdc (Max.) @ 25°C	Pickup Voltage Vdc (Max.) @ 85°C	Nom. Coil Power (W) @ 25°C	Max. Coil Voltage	Coil Desig.
5.0	27	3.0	3.7	.92	6.0	L
6.0	40	3.6	4.5	.90	7.5	F
12.0	160	7.2	8.9	.90	15.0	G
26.5	700	16.0	19.7	1.00	32.0	K

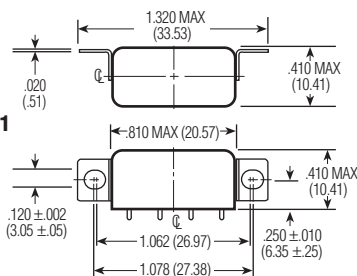
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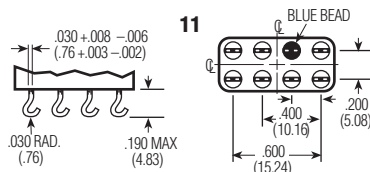


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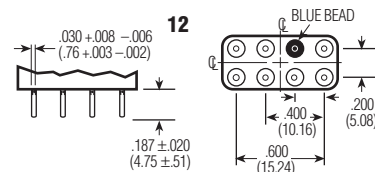


Mounting Styles

11



12



Terminals

Specifying a Part Number Example:

Type	Terminals	Mountings	Coils	Features
HFC5A	12	30	K	00