INCH-POUND

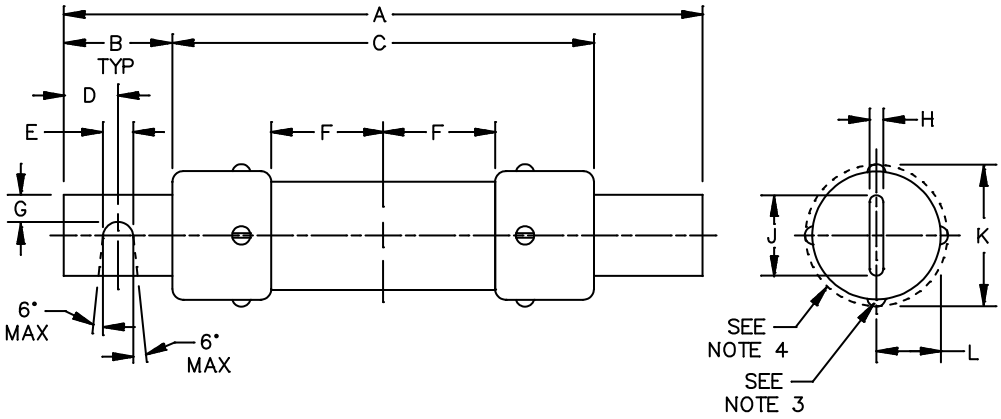
W-F-1814/61D
15 November 2013
SUPERSEDING
W-F-1814/61C
20 November 2009

FEDERAL SPECIFICATION SHEET

FUSE, CARTRIDGE, HIGH INTERRUPTING CAPACITY, CLASSES RK1 AND RK5 (CURRENT-LIMITING) 250 VOLTS, 401-600 AMPERES

The General Services Administration has authorized the use of this federal specification sheet by all federal agencies.

The complete requirements for procuring the fuses described herein shall consist of this document and the latest issue in effect of W-F-1814.



Ltr	Inches		mm		Ltr	Inches		mm	
	Min	Max	Min	Max		Min	Max	Min	Max
A	10.281	10.469	261.14	265.91	G	.719	.781	18.26	19.84
B	2.250	---	57.15	---	H	.245	.255	6.22	6.48
C	5.188	5.813	131.78	147.65	J	---	2.000	---	50.80
D	1.120	1.130	28.45	28.70	K	---	2.910	---	73.91
E	.525	.535	13.34	13.59	L	1.448	1.458	36.78	37.03
F	1.530	---	38.86	---					

FIGURE 1. Classes RK1 and RK5 fuses, 250 volts, 401-600 amperes.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Use of screw, pin, or rivet is optional.
4. The dashed line represents the limit of the maximum projection of a screw, rivet head, or the like.
5. Unless otherwise specified, tolerances are ±.02 (0.51 mm) for two-place decimals and ±.005 (0.13 mm) for three-place decimals.

FIGURE 1. Classes RK1 and RK5 fuses, 250 volts, 401-600 amperes - continued.

REQUIREMENTS:

Interface and physical dimensions: See figure 1.

Physical: - Nonrenewable.

Terminals: Knife blade type.

Material: Copper, or copper alloy.

Strength: 5 inch-pound torque between body and blades.

Body:

Insulating material: Fiber, ceramic, melamine-impregnated glass fiber, or other suitable material.

Electrical:

Voltage: 250 volts or less.

Frequency: 48 Hz to 60 Hz.

Current: See table I.

Current carrying capacity: 110 percent of rated current indefinitely with temperature rise not to exceed 50°C (90°F) above ambient on the body and 75°C (135°F) on the blades.

Overload interrupt:

Instantaneous: Shall interrupt within 2 hours at 135 percent of rated current and within 12 minutes at 200 percent of rated current.

Time delay: In addition to the above requirement, the fuse shall not interrupt 500 percent of rated current within 10 seconds.

Interrupting capacity rating: 200,000 amperes rms symmetrical at 250 volts, 48 to 60 Hz and a power factor of 20 percent or less. Closing angle shall be essentially at the zero of the voltage wave (maximum offset) or later, to produce start of arcing within 30 electrical degrees prior to system peak voltage.

Threshold ratio: 30 maximum for RK1; 65 maximum for RK5.

Peak let-thru current: See table II.

Maximum clearing I^2T: See table II.

Applicable fuseholder: Class R for blade type fuses in accordance with UL 4248-12.

Part or Identifying Number (PIN): The Government PIN shall consist of the prefix "WF1814/61-" followed by the PIN designation shown in table I.

TABLE I. Current rating and PIN designation.

Current in amperes	PIN designation			
	RK5		RK1	
	Instantaneous	Time delay	Instantaneous	Time delay
450	F5450	D5450	F1450	D1450
500	F5500	D5500	F1500	D1500
600	F5600	D5600	F1600	D1600

TABLE II. Peak let-thru and I^2T current.

	Between threshold and 50 kA		100 kA		200 kA	
	RK1	RK5	RK1	RK5	RK1	RK5
Maximum acceptable peak let-thru current (I_p x 10^3)	43	65	50	80	70	100
Maximum clearing I^2T (amperes squared seconds) (I^2T x 10^3)	3000	10000	3000	10000	4000	12000

Referenced documents. In addition to W-F-1814, this document references the following:

UL 4248-12

The margins of this specification sheet are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

MILITARY INTEREST:

Custodians:
- Army - CR
- Navy - EC
- Air Force - 85
- DLA - CC

Review activities:
- Army - AR, AT, CR4
- Navy - OS
- Air Force - 99
- NSA - NS

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FAS

Preparing activity:

DLA - CC

(Project 5920-2013-019)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.