

NAG Fortran Library Routine Document

F06KLF

Note: before using this routine, please read the Users' Note for your implementation to check the interpretation of *bold italicised* terms and other implementation-dependent details.

1 Purpose

F06KLF finds the first element of the n element real vector x for which

$$|x_{k+1}| \leq tol \max(|x_1|, \dots, |x_k|)$$

and returns the index k via the function name. If no such k exists, then the value n is returned. If a negative value of tol is supplied, the value of *machine precision* is used in place of tol .

2 Specification

INTEGER FUNCTION F06KLF (N, X, INCX, TOL)

INTEGER N, INCX
double precision X(*), TOL

3 Description

None.

4 References

None.

5 Parameters

- | | | |
|----|--|--------------|
| 1: | N – INTEGER | <i>Input</i> |
| | <i>On entry:</i> n , the number of elements in x . | |
| 2: | X(*) – <i>double precision</i> array | <i>Input</i> |
| | <i>On entry:</i> the vector x . | |
| 3: | INCX – INTEGER | <i>Input</i> |
| | <i>On entry:</i> the increment in the subscripts of X between successive elements of x . | |
| | <i>Constraint:</i> INCX > 0. | |
| 4: | TOL – <i>double precision</i> | <i>Input</i> |
| | <i>On entry:</i> the value tol . | |

6 Error Indicators and Warnings

None.
