

NAG Library Routine Document

F06FLF

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

F06FLF returns the absolutely largest and absolutely smallest elements of a real vector.

2 Specification

```
SUBROUTINE F06FLF(N, X, INCX, XMAX, XMIN)
  INTEGER          N, INCX
  double precision X(*), XMAX, XMIN
```

3 Description

F06FLF returns the values $x_{\max}$ and $x_{\min}$ given by

$$x_{\max} = \max_i |x_i|, \quad x_{\min} = \min_i |x_i|,$$

where x is an n element real vector. If $n < 1$, then $x_{\max}$ and $x_{\min}$ are returned as zero.

4 References

None.

5 Parameters

- | | | |
|----|---|---------------|
| 1: | N – INTEGER
<i>On entry:</i> n , the number of elements in x . | <i>Input</i> |
| 2: | X(*) – double precision array
Note: the dimension of the array X must be at least $1 + (N - 1) \text{INCX} $.
<i>On entry:</i> the incremented array X must contain the n element vector x . | <i>Input</i> |
| 3: | INCX – INTEGER
<i>On entry:</i> the increment in the subscripts of X between successive elements of x .
<i>Constraint:</i> $\text{INCX} > 0$. | <i>Input</i> |
| 4: | XMAX – double precision
<i>On exit:</i> the value $x_{\max} = \max_i x_i $. | <i>Output</i> |
| 5: | XMIN – double precision
<i>On exit:</i> the value $x_{\min} = \min_i x_i $. | <i>Output</i> |

6 Error Indicators and Warnings

None.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

None.
