NAG C Library Function Document

nag_zrscl (f06kec)

1 Purpose

nag_zrscl (f06kec) scales the entries of a complex vector by the reciprocal of a real, non-zero scalar.

2 Specification

```
#include <nag.h>
#include <nagf06.h>
```

```
void nag_zrscl (Integer n, double alpha, Complex x[], Integer incx)
```

3 Description

nag_zrscl (f06kec) performs the operation

$$x \leftarrow \frac{1}{\alpha}x$$

where x is an n element complex vector and α is a real non-zero scalar.

4 References

None.

5 Arguments

1: **n** – Integer *Input*

On entry: n, the number of elements in x.

2: **alpha** – double *Input*

On entry: the scalar α.

Constraint: **alpha** $\neq 0$.

3: **x**[dim] – Complex *Input/Output*

Note: the dimension, *dim*, of the array **x** must be at least $1 + (\mathbf{n} - 1)\mathbf{incx}$.

On entry: the vector x.

On exit: the vector $\frac{1}{\alpha}x$.

4: **incx** – Integer *Input*

On entry: the increment in the subscripts of **x** between successive elements of x.

Constraint: **incx** > 0.

6 Error Indicators and Warnings

None.