

NAME**z** - complex impedance**LIBRARY**Electrochemistry (**-libecx**, **-lecx**)**SYNOPSIS**

```
subroutine z(p, w, zout, e, errstat, errmsg)
```

DESCRIPTIONCompute the complex impedance for the element *e*.

Parameters:

o real(dp), intent(in) :: p(:)Parameters defining the element *e***o real(dp), intent(in) :: w(:)**

Angular frequencies in rad.s-1

o character(len=1), intent(in) :: e

Electrochemical element: R, C, L, Q, O, T, G

o complex(dp), intent(out) :: zout(:)

Complex impedance in Ohms.

o integer(int32), intent(out) :: errstat

Error status

o character(len=:), intent(out), pointer :: errmsg

Error message

Z_R(*w*) = $R = p(1)$ **Z_C**(*w*) = $-j/(Cw) = -j/(p(1)*w)$ **Z_L**(*w*) = $jLw = j*j*p(1)*w$ **RETURN VALUE**

None

EXAMPLE

Calling:

```
call z(p, w, zout, e, errstat, errmsg)
```

SEE ALSO**ecx**(3)