NAME

z - complex impedance

LIBRARY

Electrochemistry (**-libecx**, **-lecx**)

SYNOPSIS

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

DESCRIPTION

Compute the complex impedance for the element *e*.

Parameters:

- **real(dp), intent(in) :: p(:)**
  Parameters defining the element *e*
- **real(dp), intent(in) :: w(:)**
  Angular frequencies in rad.s-1
- **character(len=1), intent(in) ::** *e*
  Electrochemical element: R, C, L, Q, O, T, G
- **complex(dp), intent(out) :: zout(:)**
  Complex impedance in Ohms.
- **integer(int32), intent(out) ::** *errstat*
  Error status
- **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)