

response(sys, ref)

Finds the response of the given system to the given reference/input signal. These can be given as tf-objects, symbolics or just the name of the response-type.

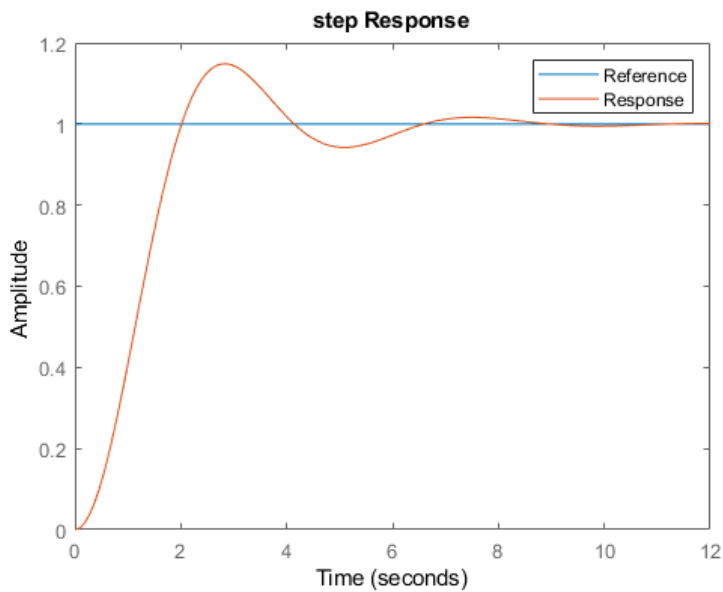
```
clear; s = tf('s'); syms t;  
sys = (s+2)/(s^3+2*s^2+3*s+2)
```

sys =

$$\frac{s + 2}{s^3 + 2 s^2 + 3 s + 2}$$

Continuous-time transfer function.

```
ELAB.response(sys, 'step')
```

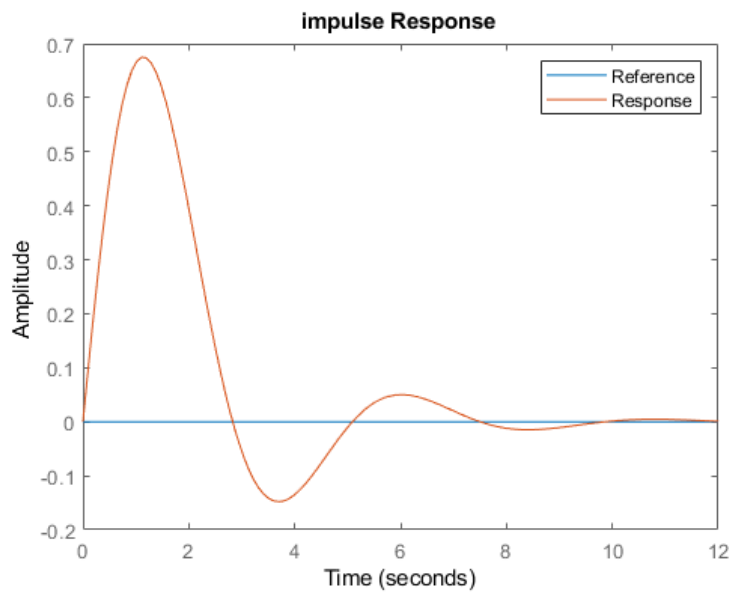


ans =

$$\frac{s + 2}{s^4 + 2 s^3 + 3 s^2 + 2 s}$$

Continuous-time transfer function.

```
ELAB.response(sys, 'impulse')
```

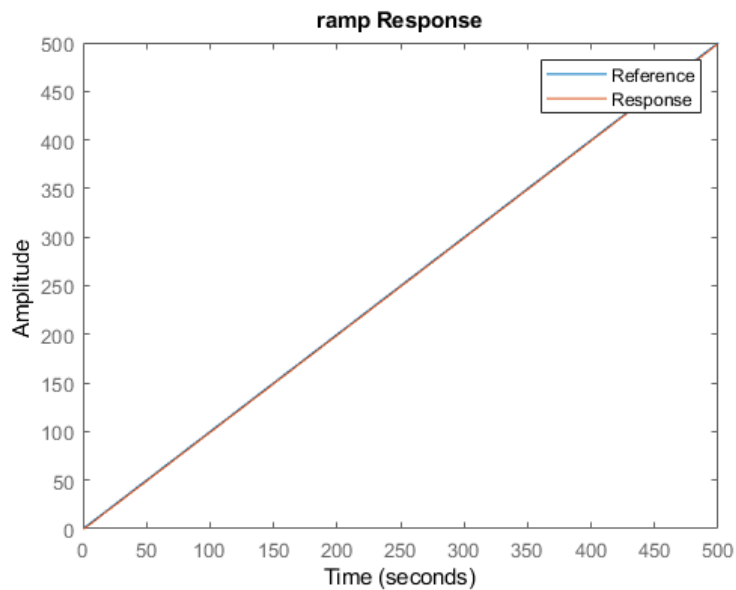


ans =

$$\frac{s + 2}{s^3 + 2s^2 + 3s + 2}$$

Continuous-time transfer function.

ELAB.response(sys, 'ramp')

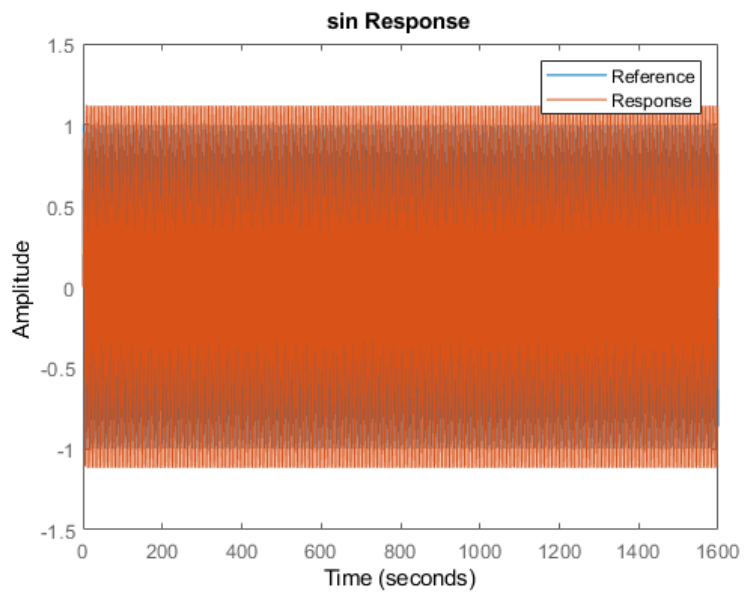


ans =

$$\frac{s + 2}{s^5 + 2s^4 + 3s^3 + 2s^2}$$

Continuous-time transfer function.

ELAB.response(sys, 'sin')

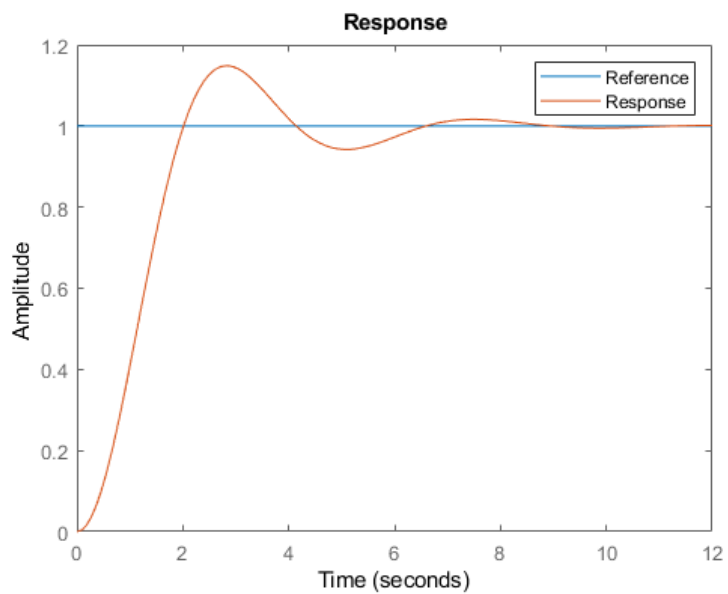


ans =

$$\frac{s + 2}{s^5 + 2s^4 + 4s^3 + 4s^2 + 3s + 2}$$

Continuous-time transfer function.

```
ELAB.response(sys, 1/s)
```



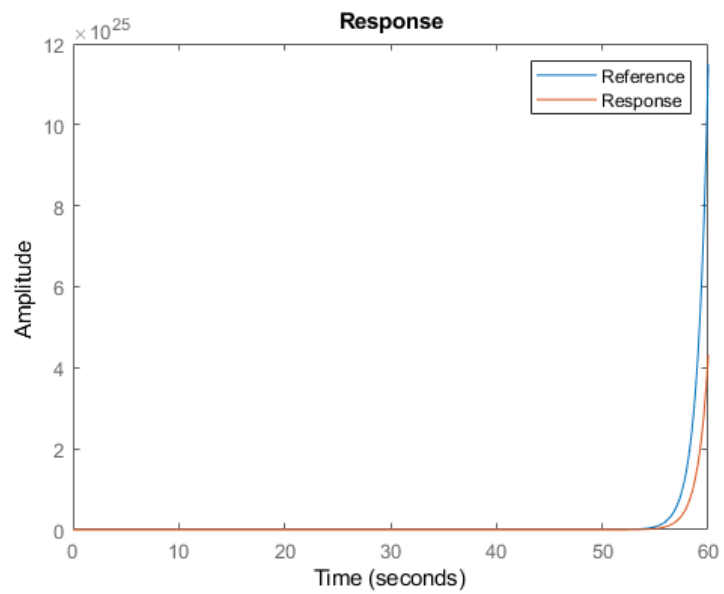
ans =

$$\frac{s + 2}{s^4 + 2s^3 + 3s^2 + 2s}$$

Continuous-time transfer function.

```
ELAB.response(sys, exp(t))
```

Converting symbolic to tf-object.



ans =

$$\frac{s + 2}{s^4 + s^3 + s^2 - s - 2}$$

Continuous-time transfer function.