

## cmpr\_simple\_2\_1.xbe

### Attributes

```
xbe name=cmpr_simple_2_1 evaluate=yes
# if x1 > x2, y = high, else low
# (reverse if flag_inverting=1)
Jacobian: variable
input_vars: x1 x2
output_vars: y
aux_vars:
iparms: flag_invert=0
sparms:
rparms:
+ y_low=0
+ y_high=1
stparms:
igparms:
outparms: x1 x2 y
```

### Description

cmpr\_simple\_2\_1.xbe is a comparator with the following behaviour.

- (a) `flag_invert = 0`:  
     $y = y_{\text{high}}$     if  $x1 > x2$ ,  
     $= y_{\text{low}}$         if  $x1 < x2$ .
- (b) `flag_invert = 1`:  
     $y = y_{\text{high}}$     if  $x1 < x2$ ,  
     $= y_{\text{low}}$         if  $x1 > x2$ .

This element should be used only when the simulation time step is small enough to capture the output transitions with good resolution.