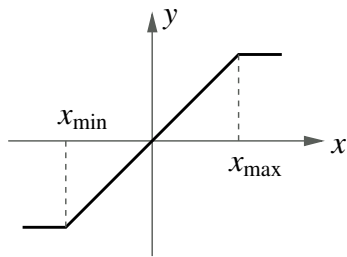# limiter.xbe

Attributes

```
xbe name=limiter evaluate=yes
Jacobian: variable
input_vars: x
output_vars: y
aux_vars:
iparms:
sparms:
rparms: xmin=-1 xmax=1
stparms:
igparms:
outparms: x y
```

Description

$\texttt{limiter.xbe}$ limits the value of the output variable $\texttt{y}$ if the input variable $\texttt{x}$ is outside a certain range. Specifically,

$$
\begin{aligned}
\texttt{y} \quad &= \texttt{xmin} && \text{if } \texttt{x} < \texttt{xmin}, \\
&= \texttt{xmax} && \text{if } \texttt{x} > \texttt{xmax}, \\
&= \texttt{x} && \text{otherwise.}
\end{aligned}
$$

The input-output relation is shown in the figure. Note that there are no restrictions on $\texttt{xmin}$ and $\texttt{xmax}$ except $\texttt{xmin} < \texttt{xmax}$.