

Expressions

All number input fields accept expressions. Expressions can have:

- real numbers and integers
- the usual arithmetical operators and round brackets
- JavaScript Math constants and functions
- other named expressions

The expression names are identifiers with Latin and Greek characters, Arabic numbers, and the underscore character. All expression names must be defined, but recursion is not allowed.

Expression

name:

value:

Table

	<u>name</u>	expression	value
<input type="radio"/>	a	1	1
<input type="radio"/>	b	a+1	2
<input checked="" type="radio"/>	c	pi	3.1415927

The expression table can be sorted by name, expression, and value.


Validation

The input values must satisfy these constraints:

- all time steps and intervals must be integer and positive
- each item has capacity ≥ 0 , also for capacity profiles
- each item has grace period ≥ 0
- each failure mode has $100 \geq \text{bypass capacity} \geq 0$
- each failure mode has lifetime distribution shape > 0
- each failure mode has lifetime distribution scale > 0
- each failure mode has downtime distribution MTTR ≥ 0
- all network node geo-coordinates (latitude, longitude, and depth) are non-negative
- each network edge buffer has size $\geq \text{initial volume} \geq 0$.

The ARTIS user interface checks all input and signals any errors.

network



Item

name:

description:

unit:

capacity: model unit

grace period: (hour)

side: consumption production

Errors are indicated by a light yellow background. They propagate up the groups so that it's easy to spot them, also when groups are closed.

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