



Supplement to EPD0058: Extrapolation Rules

# SIRIUS

## Power Contactor, 3RT2.2, AC-3e/AC-3 with AC-Coil

Type II according to ISO 14021 including life cycle impact assessment (LCIA)  
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# Extrapolation Rules

The extrapolation rules have been defined as follows:

LCAs have been performed on several representative products in the range of 3RT2.2, AC-3e/AC-3 with AC-coil.

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of all variants in this range.

To extrapolate the impact from the reference product **3RT2025-1AP00** to another product from the range, apply the following extrapolation rules to each key environmental performance indicator (i) per life cycle stage:

$\text{MANUFACTURING}(i) = \text{Mass of (product)} / \text{Mass of (reference product)} * \text{manufacturing indicator (i) of the reference product}$

$\text{OPERATION}(i) = (P_p * 0,25 + P_{vp} * \cos \phi_p) * 0,5 \text{ W}^{-1} * \text{operation indicator (i) of the reference product}$

$P_p$ : Power loss [W] at AC in hot operating state per pole (product)

$P_{vp}$ : apparent holding power [VA] of magnet coil at AC at 50 Hz (product)

$\cos \phi_p$ : inductive power factor with the holding power of the coil at 50 Hz (product)

$\text{END OF LIFE}(i) = \text{Mass of (product)} / \text{Mass of (reference product)} * \text{end-of-life indicator (i) of the reference product}$

$\text{TOTAL}(i) = \sum \text{Life Cycle Stages}(i)$

## Data Sources:

Mass of product in the product catalog

Product specific electrical data in the technical data sheets

Key environmental performance indicators (i) in the EPD0058.01

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