When the Generator measurement must be set for "3Ph 4W OD" (3-phase 4-wire Open delta)

Özgür Tosun - 2024-09-27 - easYgen-3000XT

3ph-4w-OD is used in special applications.
This quick introduction shall help you to understand where and when to use that setting.

As the description in the manual says...

> " *A generator system that is connected to the load through a 3-phase, 4-wire connection but have the device (easYgen) wired for a 3-phase, 3-wire installation [...*have the L2 phase grounded on the secondary side *..].*
>
> *In this application the device will be configured for* ***3-phase, 4-wire OD for correct power measurement.***"

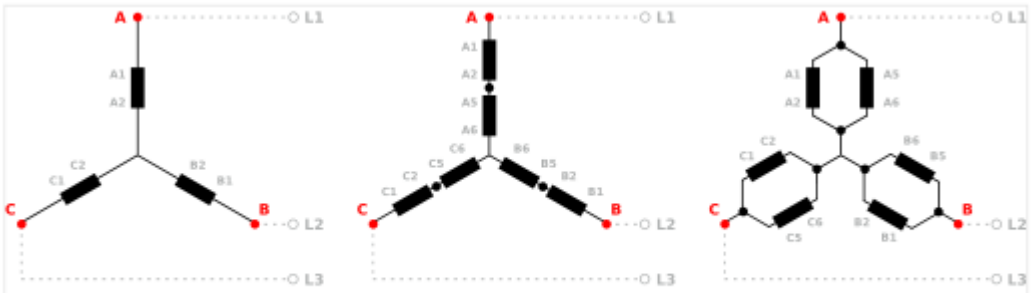


Fig. 26: Generator windings - 3Ph 4W OD

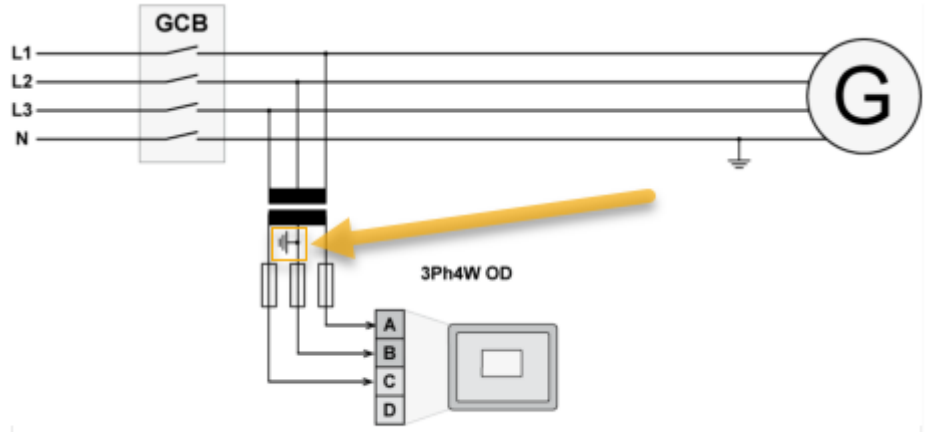


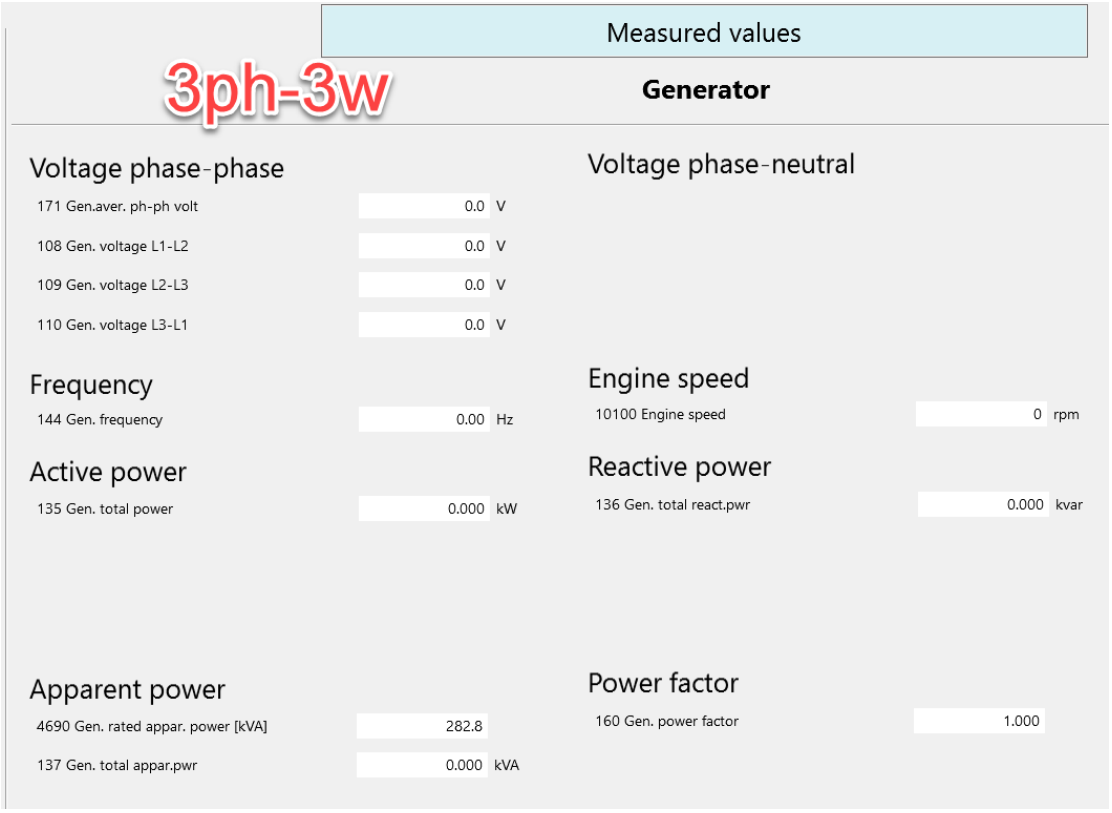
Fig. 27: Measuring inputs - 3Ph 4W OD

In other words, you do actually have 3 phases plus neutral (3ph-4w) in your system, but easYgen is wired just 3ph-3w. And you still want to see every single measured phase on your display. If PT used, L2 needs to be grounded at the secondary side. Also the 3ph-4wOD setting is necessary to have correct power measurement (P. Q, S).

This is in principle just a calculation and hence a display difference of the measured values e.g. Volts and Currents etc.

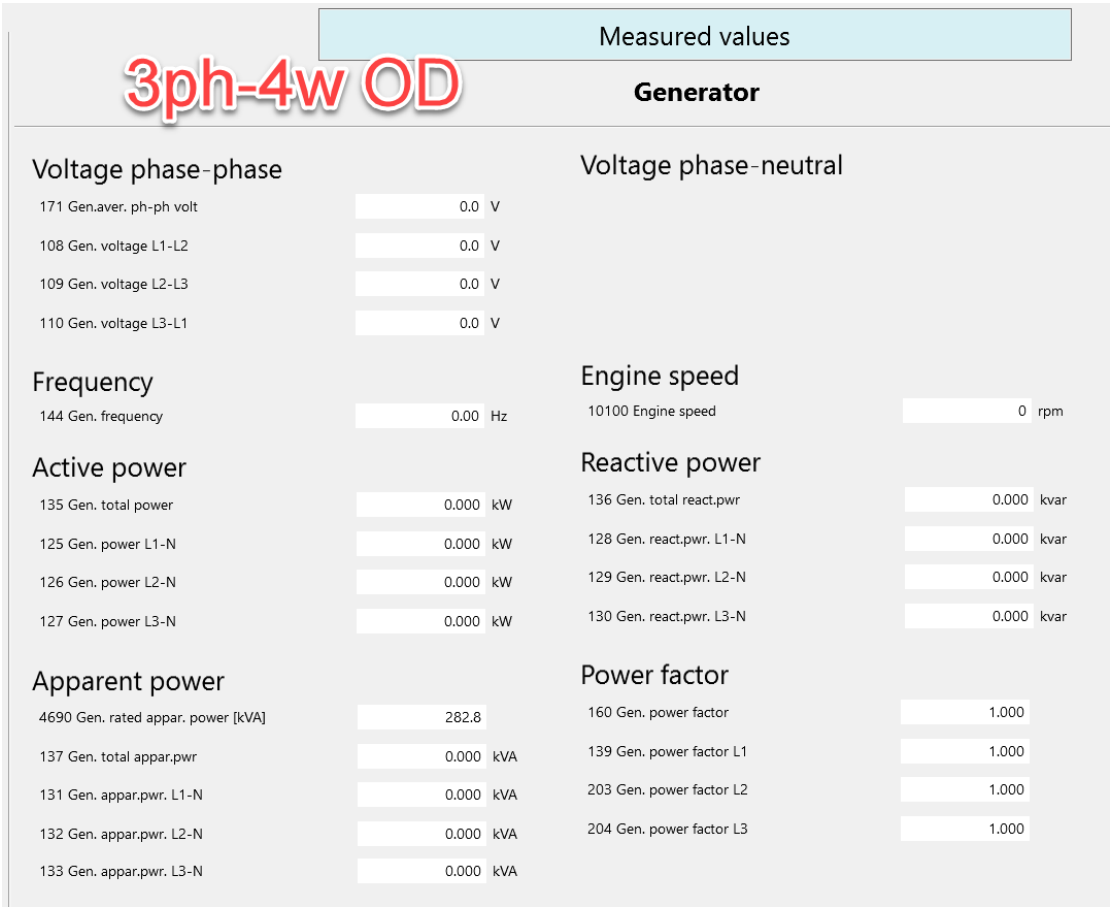
Normally a 3ph-3w setup provides the values as shown below:

-i.e. no ph-N values; and only one average value for the Active/Reactive/Appearent Power



But if the system does actually have 3ph-4w, but you wire only 3ph-3w to the easYgen, then you shall setup **3ph-4w-OD**, to get more calculated values and correct power measurement.

The display page changes to this...



- Tags
- Measurement
- Open Delta
- Wiring