

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

Justin Schneider - 2026-07-27 - [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.**"*

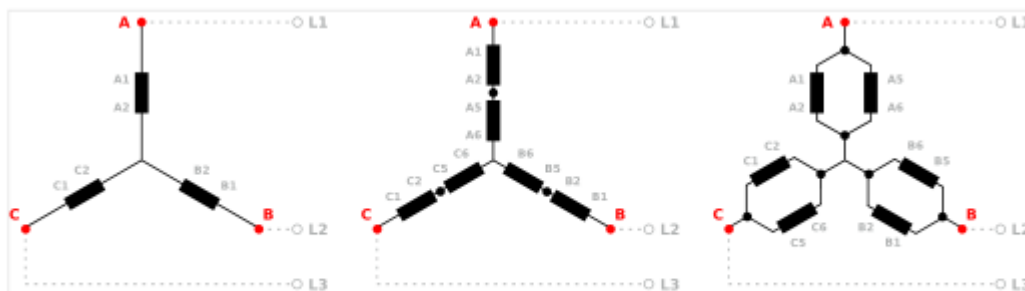


Fig. 26: Generator windings - 3Ph 4W OD

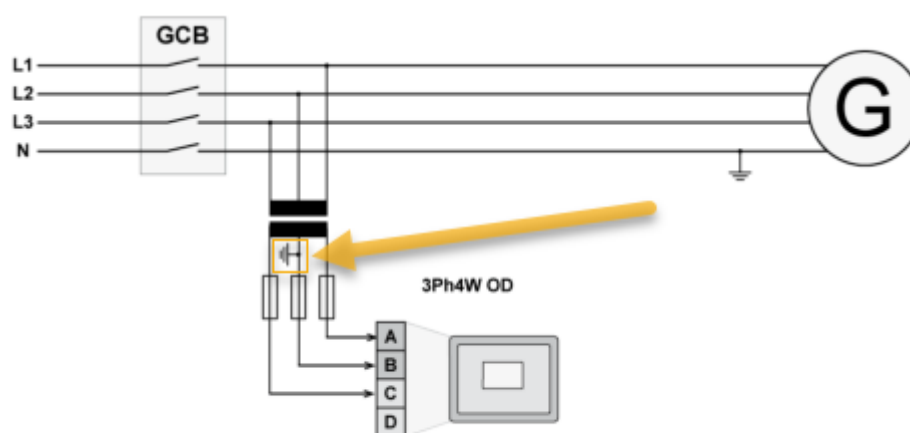


Fig. 27: Measuring inputs - 3Ph 4W OD

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

3ph-3w

Measured values

Generator

Voltage phase-phase

171 Gen. aver. ph-ph volt0.0 V

108 Gen. voltage L1-L20.0 V

109 Gen. voltage L2-L30.0 V

110 Gen. voltage L3-L10.0 V

Frequency

144 Gen. frequency0.00 Hz

Active power

135 Gen. total power0.000 kW

Apparent power

4690 Gen. rated appar. power [kVA]282.8

137 Gen. total appar.pwr0.000 kVA

Voltage phase-neutral

Engine speed

10100 Engine speed0 rpm

Reactive power

136 Gen. total react.pwr0.000 kvar

Power factor

160 Gen. power factor1.000

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...

3ph-4w OD

Measured values

Generator

Voltage phase-phase

171 Gen. aver. ph-ph volt	0.0	V
108 Gen. voltage L1-L2	0.0	V
109 Gen. voltage L2-L3	0.0	V
110 Gen. voltage L3-L1	0.0	V

Frequency

144 Gen. frequency	0.00	Hz
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Active power

135 Gen. total power	0.000	kW
125 Gen. power L1-N	0.000	kW
126 Gen. power L2-N	0.000	kW
127 Gen. power L3-N	0.000	kW

Apparent power

4690 Gen. rated appar. power [kVA]	282.8	
137 Gen. total appar.pwr	0.000	kVA
131 Gen. appar.pwr. L1-N	0.000	kVA
132 Gen. appar.pwr. L2-N	0.000	kVA
133 Gen. appar.pwr. L3-N	0.000	kVA

Voltage phase-neutral

Engine speed

10100 Engine speed	0	rpm
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Reactive power

136 Gen. total react.pwr	0.000	kvar
128 Gen. react.pwr. L1-N	0.000	kvar
129 Gen. react.pwr. L2-N	0.000	kvar
130 Gen. react.pwr. L3-N	0.000	kvar

Power factor

160 Gen. power factor	1.000	
139 Gen. power factor L1	1.000	
203 Gen. power factor L2	1.000	
204 Gen. power factor L3	1.000	