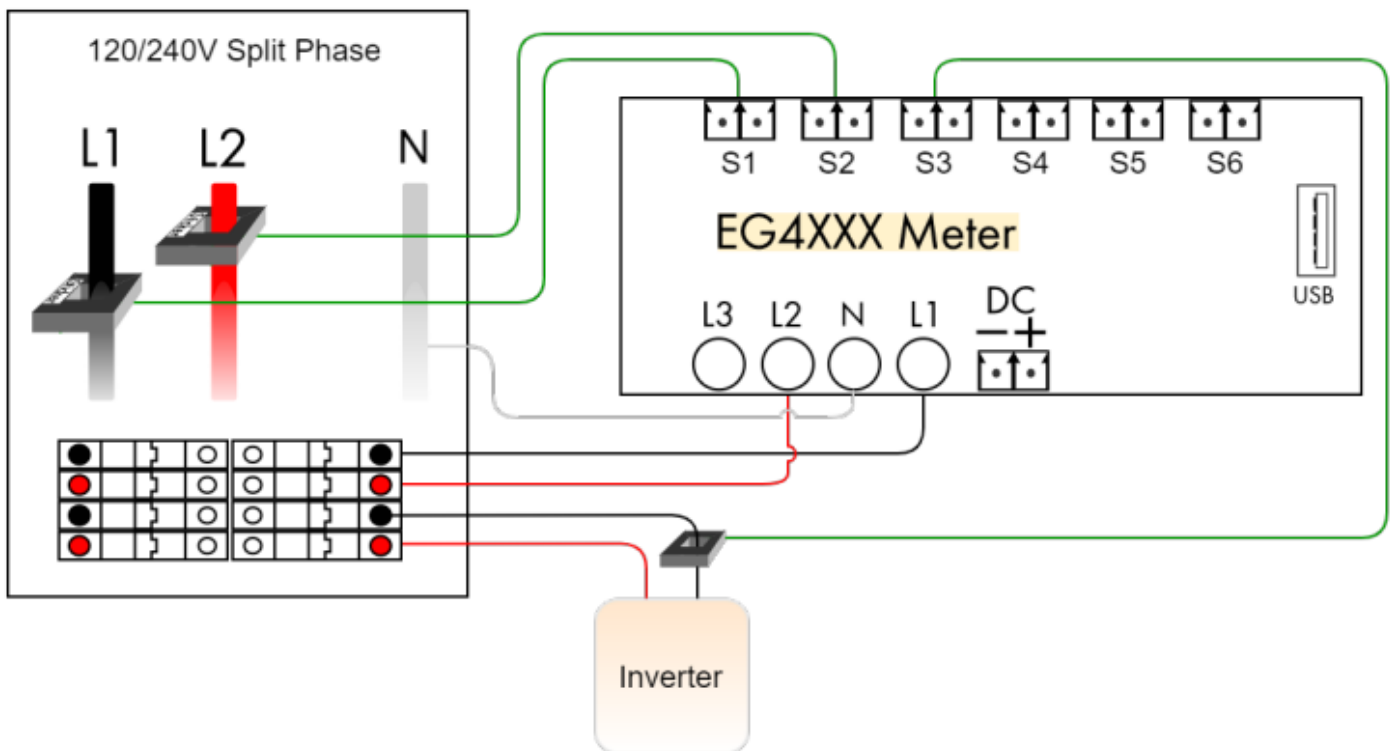# Standard split-phase backfed

Basic installation measuring power coming from a power utility (grid) and from a single-phase solar-system inverter

Registers:

Registers (3 of 64 in use):

Name:	Recorded value/formula:	
Grid	☒ = P∨ = S1 ∨ ✗ L1 ∨ ☒ ✚ S2 ∨ ✗ L2 ∨ ☒	Add Component
Solar	☒ = P∨ =+ S3 ∨ ✗ L1 ∨ ☒ ✚ −S3 ∨ ✗ L2 ∨ ☒	Add Component

Add Register

Totals and Virtual Registers:

Usage	= +∨ Grid ∨ ☒ +∨ Solar+ ∨ ☒	Add Register
Generation	= +∨ Solar ∨ ☒	Add Register
Battery	=	Add Register
Battery left	=	Add Register

Add Virtual Register

Notes:

- With a single-phase inverter, the current flowing at any given instant on leg L2 is the negative of the current flowing on leg L1. Hence, rather than using 2 CTs on the inverter, simply multiply the negated value of CT3 with L2 to calculate the power on that leg.
- The totaling rules indicate that total usage (consumption) is calculated as the sum of the power reported for register Grid and, the positive-only register Solar+. If the power reported for Solar is negative (indicating that the inverter is consuming power, e.g., during the night), then total usage is simply equal to the power reported for register Grid. It would be (slightly) wrong to define the Usage totaling rule as Grid + Solar because in this case, the inverter's consumption would be canceled out of the usage, giving a lower than real consumption figure.

Please visit kb.egauge.net for the most up-to-date documentation.