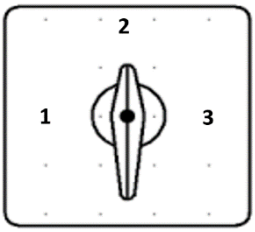
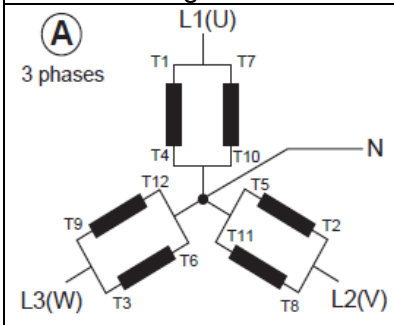
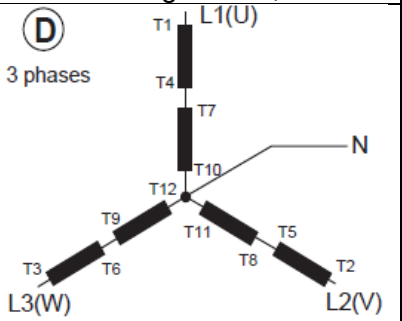
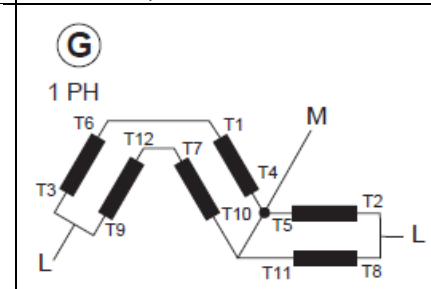
D350 DIGITAL AUTOMATIC VOLTAGE REGULATOR

TECHNICAL NOTE

Date: 31/03/2021
Software: EasyReg Advanced - All versions
Hardware: D350
Firmware: All versions

This Technical note shows how to use the D350 to manage three different voltages with a contactor

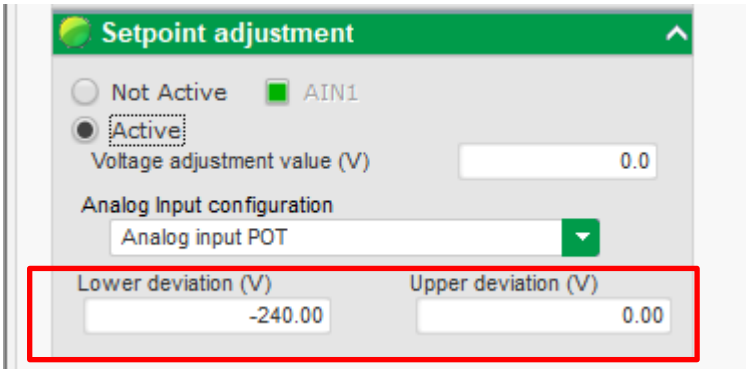


1) Star parallel - 3 phase sensing - 240V/60Hz	2) Star Series - 3 phase sensing - 480V, 60Hz	3) Zig-zag - single phase - 240V, 60Hz
		

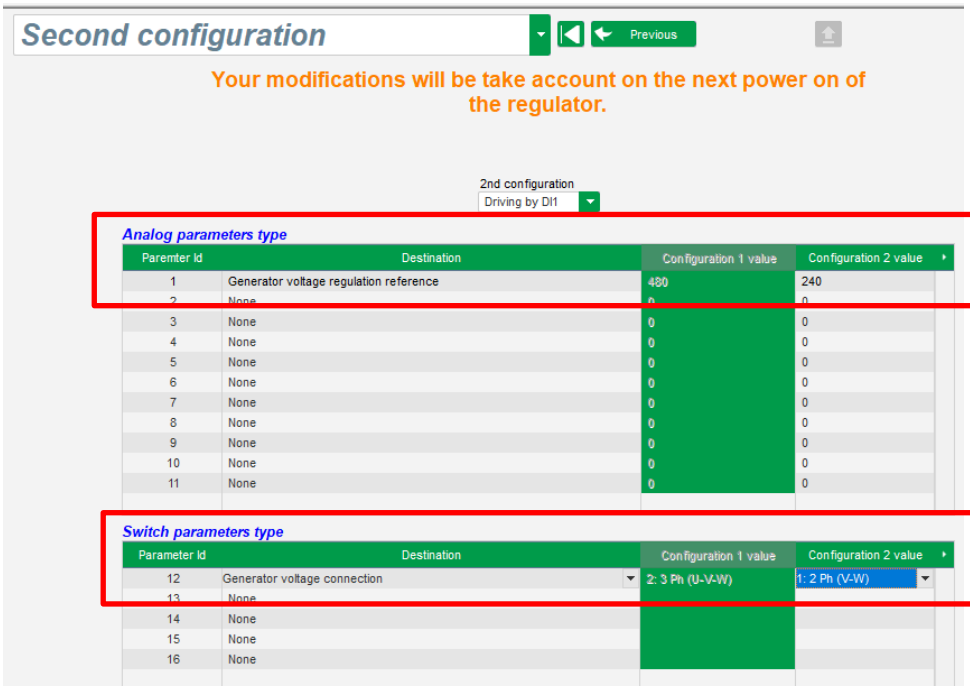
1) Configuration of the D350 with 3 steps

a. Default voltage sensing

b. Analog input is configured in potentiometer mode to manage switching from star-parallel to star-series connections



c. Second configuration to manage the zig-zag connection



2) Working principle

a. In Star-parallel operation mode, a strap **must be connected** between AI1 and 0V of the D350. Consequently the voltage regulation setpoint is 480V -240V=240V as expected
b. In Star-Series operation mode, the strap on AI1-0V **must be open** so the voltage setpoint becomes 480V-0V=480V as expected
c. Finally in Zigzag mode, the strap on AI1 must be open and DI1 must be connected to 0V (enabled). Consequently the D350 will switch to single phase sensing with voltage setpoint at 240V.

NB1: This procedure can be also adapted for applications using an external potentiometer instead of the use of a strap.
NB2: the voltage references given above can be adjusted according to the considered applications