TPI GPO - Helper block

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Simon STROBL
Product Director
imperix · in

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The TPI GPO helper block is a wrapper that simplifies the use of the [GPO block](#) with the [all-in-one programmable inverter](#) (TPI8032 22kW).

The TPI GPO helper block is available starting from [version 2024.2](#) of the SDK. The TPI8032 is **required** to use this driver. Please refer to its [datasheet](#) for more information on the location, numbering, and voltage levels of the GPOs.

Simulink GPO helper block

Signal specification

- The GPO pin is set if the input is >0
- The `sim` output signal is used in simulation and documented in [Simulation essentials with Simulink (PN135)](#).

Parameters

- `Device ID` selects which TPI to address when used in a multi-device configuration.
- `GPO bit` selects one pin to control.
- `Reset pin value to 0 in case of fault` acts when a fault is detected, for instance when an analog inputs exceeds a configured limit value.
- `Show simulation output port` defines if the simulation output port is displayed or not.
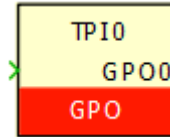

PLECS GPO helper block

Signal specification

- The GPO pin is set if the input is >0

- The target output ports (only visible at the atomic subsystem level) is used in simulation and documented in [Simulation essentials with PLECS (PN137)](#).

Parameters

- `Device ID` selects which TPI to address when used in a multi-device configuration.
- `GPO bit` selects one pin to control.
- `Optional reset` can be set to `Reset pin value to 0 in case of fault` to act when a fault is detected, for instance when an analog inputs exceeds a configured limit value.
- `Show simulation output port` defines if the simulation output port is displayed or not.

C++ functions

There are no C++ helper functions for the TPI. Please refer to the [generic GPO functions](#).