

# Enabling DRM0 Response Mode for Zero Export Backstop in Queensland.

## For inverters with SetApp configuration

The AS/NZS 4777.2 standard (Grid Connection of Energy Systems via Inverters – Inverter Requirements) contains requirements related to grid stability and remote system control by the utility.

SolarEdge single phase inverters with DSP1 version 1.210.1053 and above and three phase inverters with DSP1 version 1.13.804 and above, when set to any Australia or New Zealand country setting, meet all mandatory requirements.

One of these requirements is demand response mode for zero export (DRM 0), which reduces export to grid to zero upon command from the utility as per the backstop requirements implemented in Queensland as of the 6<sup>th</sup> February 2023.

Meeting the requirements is done by connecting the TMAC GSD (external Generation Signaling Device) to the inverter power reduction interface (PRI).

(At the time of writing this application note the TMAC GSD is the only compliant device listed with Energy Queensland)

Product information regarding the TMAC GSD can be located here:

<https://www.tmacgroup.com.au/product/generation-signalling-device-gsd-aflc/>.



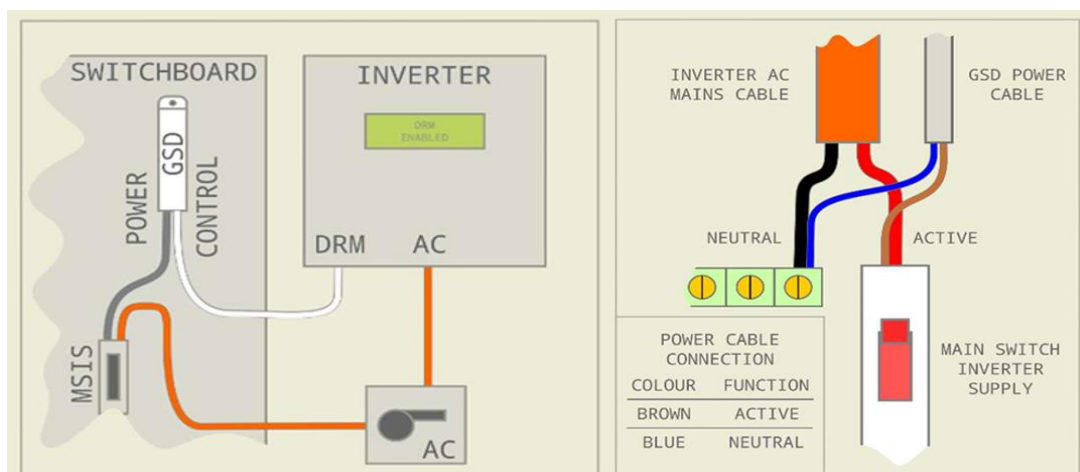
This application note explains how to connect the GSD to a SolarEdge inverter using the PRI and how to configure the system for DRM 0

## Wiring the TMAC GSD

The TMAC GSD is a pre-wired device that requires an AC supply, it is recommended by Energy Queensland that the supply comes from the inverter isolator inside the switchboard to ensure that both the device and the inverter are combined in isolation.

The TMAC GSD has two cables to connect, a power cable and a control cable. The power cable is used to supply mains power to the TMAC GSD and to receive signals from the electricity network. The control cable is connected to a special dedicated Demand Response Mode (DRM) connection terminal on the Inverter.

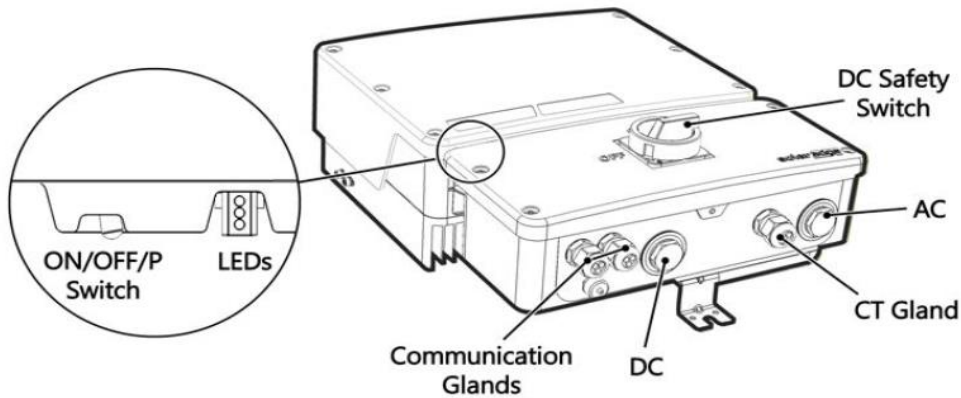
The TMAC GSD power cable supplies mains power to the TMAC GSD. The power cable is connected to the Main Switch Inverter Supply (MSIS) within the switchboard.



## Connecting the TMAC GSD

The TMAC GSD comes with a pre-fitted RJ45 terminal. The SolarEdge DRM connection is via the PRI port that does not mate with an RJ45 connector.

The TMAC GSD RJ45 connector needs to be removed and the cable passed in through the communication gland of the DCD to the communication board located in the inverter to be connected to its PRI port.

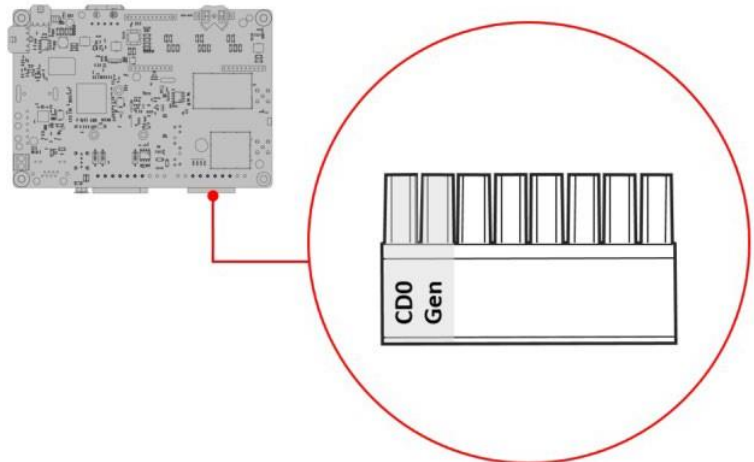


1. Power off the system and open the inverter cover, as explained in the inverter installation guide.
2. Pass the control cable from the TMAC GSD through the communication glands at the bottom of the inverter assembly.
3. Remove the connector from the PRI port on the communication board.
4. Connect the cable to the connector, as shown below, and insert the connector back into the port. The **YELLOW – PIN 5** connection to the **CD0** terminal and the **GREY – PIN 6** to the **Gen** terminal.

| CONNECTOR & ADAPTER PINOUTS |     |          |
|-----------------------------|-----|----------|
| COLOUR                      | PIN | FUNCTION |
| YELLOW                      | 5   | Ref Gen  |
| GREY                        | 6   | COMMON   |

| RJ45 CONNECTOR |                |
|----------------|----------------|
|                | PIN 5<br>PIN 6 |



5. Close the inverter cover and repower the system, as explained in the inverter installation guide.

## Configuring the DRM0 Backstop Function

1. Access SetApp.
2. From the **Commissioning** screen, select **Power Control > Power Reduction Interface (RRCR) Mode > DRM**.