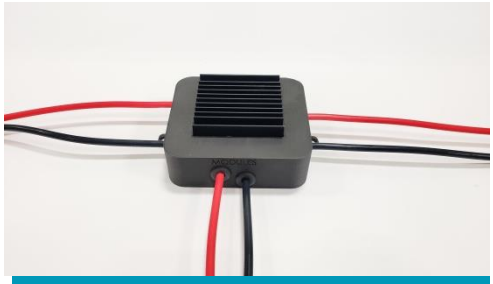
SWE SeaSafe Diode OR-ing Module-TVP Datasheet

SWE # 27290090



Specifications:

Reverse Voltage:
- **MAX: 1000 V DC**

Forward Voltage Drop:
- **Typical: 1.6 V DC**
- **Max: 2.3 V DC**

Max Forward Current:
- **60 A (Oil)**
- **60 A (Forced Air: 90 CFM)**
- **40 A (Static Air)**

Operating Temperature:
- **Max: 125 °C (Heatsink Temp)**

Module Dimensions:
- **Length: 3.9”**
- **Width : 3.4”**
- **Height (enclosure): 1.2”**
- **Height (incl. heatsink): 1.7”**
- **Wiring length: 24”**

Module Weight:
- **Typical: 1.5 lbs.**

Pressure Rating:
- **Pressure Tolerant to 6000 m (In oil-filled, pressure-balanced case)**

Connectors:
- **None: Flying Leads of 24 “**

Description

The SWE SeaSafe Diode OR-ing Module(s) provides an easy, pre-engineered method to electrically parallel connect strings of SWE SeaSafe Battery Modules into a SeaSafe Battery System.

Features

- Parallel *connects* SeaSafe Battery Module strings into a battery system
- Electrically *integrates* SeaSafe Battery Modules string Outputs into a single Discharge bus
  - Enables increased current and capacity with parallel SeaSafe Battery Modules
- Electrically *isolates* SeaSafe Battery Modules string charge Inputs into separate Charge busses for each string
  - Provides additional battery safety and reliability by preventing back-charge surge into module strings
  - Avails faster charge time for battery system via charging on multiple charge ports
- Pressure-tolerant in an oil-filled, pressure-equalized case to depths of 6000 meters
- Fits in oil-filled, pressure-balanced cases with SeaSafe Modules or into a 1-Atm pressure vessel.
- Supports High Voltage – up to 1000 V series String of SeaSafe Modules
  - Includes Transient Voltage Protection (TVP) for reliability against potentially damaging transient voltage spikes

Benefits

The Diode OR-ing Module is a simple and direct solution to the Parallel Integration and Isolation functional requirements of a SeaSafe Battery System.

Pros
- Pre-tested with SeaSafe systems
- Simplicity of use and architecture
- No power source required
- Proper electrical integration and isolation of SeaSafe Battery Module strings, with string length from 1 to 30+ Modules (<1000V)
- Transient Voltage Protection for improved reliability

Cons
- Slight voltage drop (diode) in string discharge voltage
- Some power dissipation loss due to heat in the diodes

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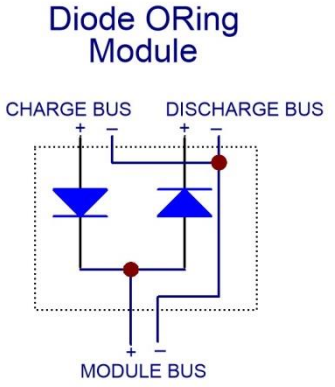
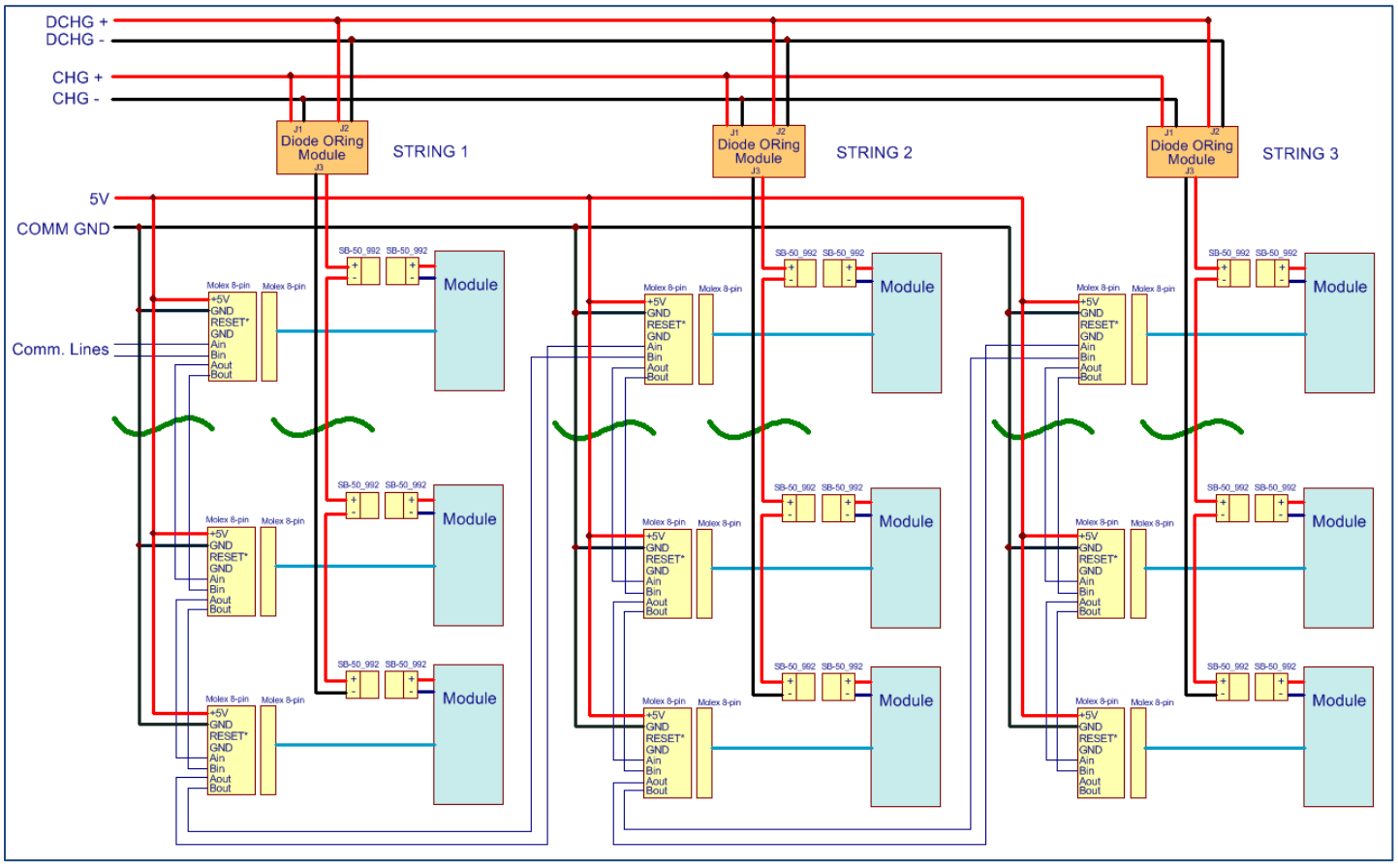


PINOUT:

•	**LEADs**	**RED**	**BLK**
•	**CHARGE BUS**	**CHG +**	**CHG -**
•	**DISCHARGE BUS**	**DCHG +**	**DCHG -**
•	**MODULE BUS**	**MODULE +**	**MODULE -**

(Simple Schematic: Does not show included TVP)

Example Use Case Battery System Diagram:



Mechanical Specifications: