Morningstar’s Relay Driver is a logic module which provides high level system control functions such as high/low voltage alarms, load control and generator start. The product controls four independent relay driver outputs by reading digital data inputs from Morningstar’s TriStar controller or by reading battery voltage when used in systems with other controllers.

**Typical Functions**

- **High and Low Alarm Contacts for Industrial Applications**
- **Load Control Including High Power Applications (pumps and large motors)**
- **Temperature Controlled Settings for Battery Fans or Cooling Vents**
- **Generator Start Functions**
- **Auxiliary AC Backup Charge Control**

**Data Control Input Options**

- **Connected to a TriStar Controller:**
  Battery voltage, charge/load current, battery temperature, TriStar heatsink temperature, PWM duty cycle, PV/load voltage, and all TriStar alarms or faults.
- **Used in Systems with Other Controllers:**
  Battery voltage, Relay Driver temperature, input voltages from other sources.

**Key Features and Benefits**

- **Cost Effective**
  The four channels provide up to four high level system control functions at a lower cost compared to other alarm and generator start packages.
- **High Reliability**
  Each channel has complete electronic protections for high reliability.
- **Flexibility**
  The system designer may choose the exact relay needed for each application including a wide range of current ratings and solid state, mechanical or mercury displacement relays.
- **Fully Programmable**
  It is easy to program the Relay Driver with the included PC software via serial RS-232 port connection. Data is stored in non-volatile memory. The Relay Driver is pre-programmed with four commonly used settings.
- **Advanced Generator Control**
  Provides flexible parameters to control one, two or three-wire generator schemes and complete control of preheat, crank, ignition and cool-down.
- **Industrial Design**
  Each relay driver output may be controlled directly by MODBUS commands via the RS-232 for use with PLC’s and other industrial hardware. Mounts to a DIN rail or a flat surface.
- **LED Indicators**
  Displays power and status of each channel as well as faults and data sampling intervals.
**RELAY DRIVER™ LOGIC MODULE ACCESSORY**

**TECHNICAL SPECIFICATIONS**

**Electrical**
- System Voltage: 12 to 48 Volts*
- Max. Channel Current: 750 mA
- Accuracy
  - Voltage: 2% ± 50 mV
  - Temperature: ± 2˚C
- Min. Operating Voltage: 8 Volts
- Max. Operating Voltage: 68 Volts
- Self-consumption: < 20 mA
- Temperature Sensor Range: –40˚C to +85˚C
- Transient Surge Protection: 1500 W / channel
- Comm. Ports (opto-isolated): (2) RJ-11 meter bus connections
  (1) 9-pin serial RS-232

*Voltage of user selected relays must be same as battery voltage

**Electronic Protections**
- Reverse Polarity Protection
- Short-Circuit Protection
- Overcurrent Protection
- Lightning and Transient Surge Protection

**Mechanical**
- Dimensions
  - Length: 16.3 cm / 6.4 inch
  - Width: 8.1 cm / 3.2 inch
  - Depth: 3.3 cm / 1.3 inch
- Weight: 0.2 kg / 0.4 lb
- Largest Wire: 1.0 to 0.25 mm²
  16 to 24 AWG
- Torque Terminals: 0.4 Nm / 3.5 in-lb
- Enclosure: Type 1, indoor rated
- DIN Rail Attachment: 35 mm standard

**Environmental**
- Operating Temperature: –40˚C to +45˚C
- Storage Temperature: –55˚C to +85˚C
- Humidity: 100% (NC)
- Tropicalization: Conformal coating on both sides of printed circuit board

**WARRANTY:** Five year warranty period. Contact Morningstar or your authorized distributor for complete terms.

**AUTHORIZED MORNINGSTAR DISTRIBUTOR:**

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