

## TDEC-500

### ELECTRONIC CONTROL SYSTEM

The TDEC-500 is the latest state-of-the-art full authority microprocessor-based electronic control system for Twin Disc automatic transmission systems used in heavy duty, off-highway applications.



#### **FEATURES & BENEFITS:**


- Built-in-test (BIT) diagnostics
- Health and trend capability with fault isolation via user accessible fault and status codes for all operational modes
- Interactive command console and display
- Non-volatile memory and real time clock for expanded fault snapshot and duty cycle logging
- Increased fault tolerance
- More than a shift control, the TDEC-500 integrates the transmission, engine and other vehicle systems
- Faster shifts, rapid vehicle acceleration and precise control of vehicle speed
- Flexibility to tailor features and operation for optimum performance
- Optimized gearshift performance in oil field pressure pumping applications for precise control of the high-pressure piston pump and an optimized line test mode specifically developed for Twin Disc power shift transmission systems
- Highly configurable I/O for maximum flexibility and application integration

#### **APPLICATIONS:**

- Military Vehicles
- Oil Field Pressure Pumping Rigs
- Heavy-Duty Off-Road Vehicles
- ARFF Vehicles
- Railway
- Mobile Applications (e.g. pumping) using Twin Disc Power Shift Transmission Systems

#### **ENVIRONMENTAL STANDARD:**

- Tested to Twin Disc standard, which is based on SAE J1455 and includes: salt spray, temperature and humidity, immersion, pressure wash, vibration and mechanical shock
- EMC (radiated, conducted, electrical transients) standards include: SAE J1113, ISO 7637, EN 13309 and CISPR 25
- Complies with EU Directive 2009/19/EC
- RoHS compliant
- E-mark available

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Specifications subject to change without prior notice in the interest of continual product improvement.  
Contact your local Twin Disc representative for engineering specifications. Patent pending.

Scan QR code to see Twin Disc's entire Industrial product line.



### **TDEC-500 SPECIFICATIONS**

Processor:	Freescale 32 BIT MPC5554 132 MHz
Voltage:	12 VDC to 24 VDC nominal
Mounting orientation:	Unrestricted
Communications:	SAE J1939 data link and USB are standard
Protection Class:	IP 67

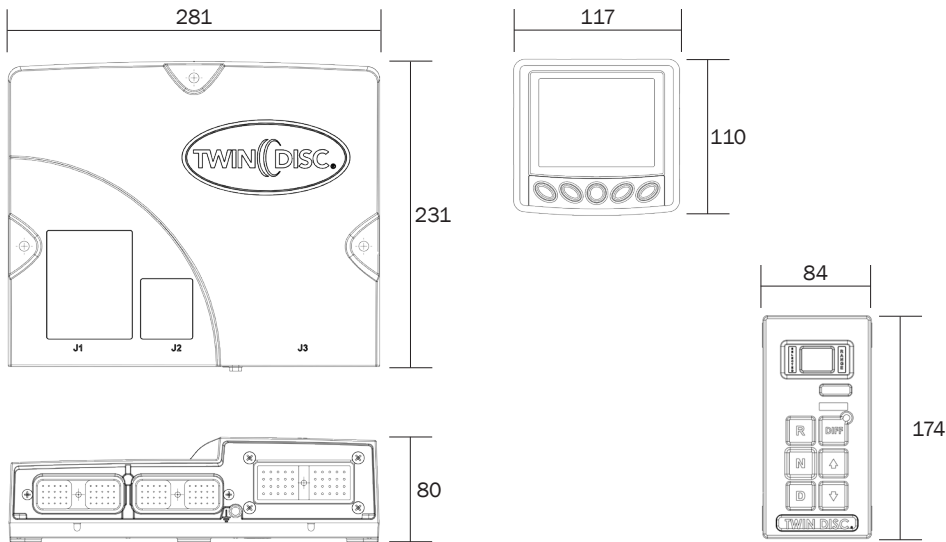
### **TDEC-500 DISPLAY SPECIFICATIONS**

Display:	3.8" (97 mm) QVGA (320 x 240 pixels) monochrome transreflective LCD with white LED dimming backlight
Viewing Angle:	+/- 55° horizontally; +45°/-60° vertically
Voltage:	6-36 VDC; reverse polarity protected
Operating Temperature:	-40°C to 85°C
Storage Temperature:	-40°C to 85°C
Mounting Orientation:	3.36" (85.3mm) opening
Communications:	Dual CANbus J1939
Protection Class:	IP 66 and 67

Pushbuttons provide access to control systems diagnostics

### **TDEC-500 RANGE SELECTOR SPECIFICATIONS**

Twin Disc offers a variety of options for range selectors, including push button J1939 selectors (shown) and discrete switch selectors with a lever or rotary switch.



Consult Twin Disc Applications Engineering for more information.

Twin Disc, Incorporated reminds users of these products that their safe operation depends on use in compliance with engineering information provided in our catalog. Users are also reminded that safe operation depends on proper installation, operation and routine maintenance and inspection under prevailing conditions. It is the responsibility of users (and not Twin Disc, Incorporated) to provide and install guards or safety devices which may be required by recognized safety standards or by the Occupational Safety and Health Act of 1970 and its subsequent provisions.

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For nearly a century, we've been putting horsepower to work by designing, engineering and manufacturing rugged-duty industrial products. Our products and our reputation are bolted to the most renowned engine manufacturers and equipment OEMs in the world. Our mission is to make your machines and vehicles more productive, more durable, more operator-friendly, more cost-effective. From design and installation consultation through after-sale support, Twin Disc and its distributors are committed to your business. No one knows more about managing horsepower in more ways than Twin Disc.

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