

Product Overview

TES – Tote Empty Sensor

The Diamond Technologies Tote Empty Sensor system provides the ability to monitor totes or boxes traveling down a conveyor and determine if there is material in the container. This is extremely useful in warehouse and material handling systems where a product left in a box or tote can mean a customers' order is delayed or never reaches its intended destination.

The TES system can function on any belt or roller style conveyor and includes a tolerance setting to accommodate less than smooth running roller style conveyors. Objects as short as 2mm can be sensed and the system supports varying product lengths and widths. This provides, for example, the ability to sense envelopes at the bottom of a tote. The TES software interface also provides a calibration setting which allows the TES Sensors to be mounted at various heights above the conveyor. This provides flexibility for the user and allows the TES to fit into size constrained applications.

The TES system senses at a very fast rate which allows the system to sense objects as short as 50mm on a 200 ft/min conveyor. Utilizing the Diamond Technologies DT7000 controller, the TES system supports most major industrial networks including Ethernet IP, Modbus TCP/IP, Profibus, DeviceNET, CANopen, and EtherCAT. The TES system can also provide its output via a serial output or Digital output signal. The Digital output provides a "sense empty" or "sense not empty" output.

The TES system includes a NEMA 12 enclosure that houses the system controller. The enclosure also includes AC/DC power supply, circuit breaker, and terminal block wiring, as well as NEMA cord grips and key lock. Along with the system controller enclosure, Diamond Technologies can provide a full over head frame. The frame is produced out of quality rugged extruded aluminum to your specifications. We can accommodate varying conveyor widths and both floor and elevated mounting.

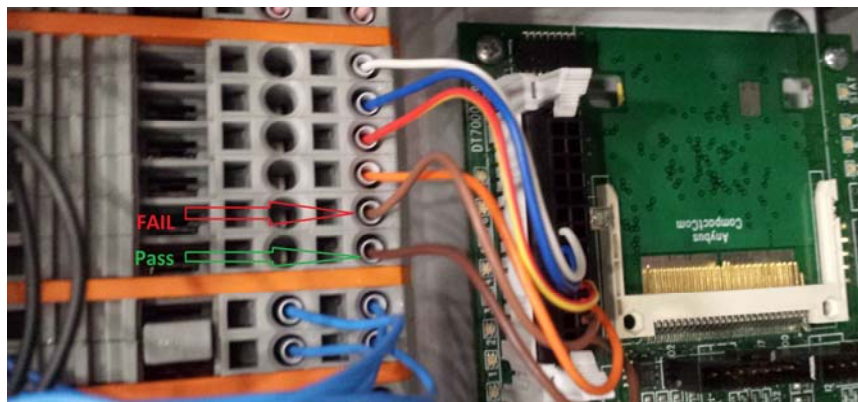
".....it's engineering and innovation done right. A truly clean, efficient, robust and cost effective solution"

-Controls Manager Major Industrial Conveyor supplier



Sensor Array

Digital Out for Sense Empty
Sense Not Empty



Technical Specifications

- Operating Temperature 0 Deg C to 70 Deg C
- Input Voltage
110VDC
- Input Current
2A
- 2mm object height maximum resolution
- Power and status LED indication
- 3 RS232/RS485 Communications Ports
- Baud rate: 9600 to 384k configurable
- Optional Fieldbus network port support
(contact factory for specific networks)
- 8 DI, 8 DO , 1 DO for Sense Empty, 1 DO Sense Not Empty
- Diagnostic interface via DB9 connection
- Tolerance and Calibration functions
- Metal NEMA 12 Enclosure
- Optional Analog I/O
- Mounting Brackets and cabling included
- Optional Conveyor mounting structure
- RoHS compliant

All TES systems include Industrial NEMA 12 enclosure with control module, configuration software interface, sensor network, trigger photo eye, and cabling.

Ordering Information

Part Number	Description
TES-100-24	Tote Empty Sensor system for 24" conveyor 8" parcel width
TES-101-24	Tote Empty Sensor system for 24" conveyor 6" parcel width
TES-102-24	Tote Empty Sensor system for 24" conveyor 4" parcel width

Accessories	Description
SCAN-FRAME	Overhead Aluminum conveyor framing



Company Information



Diamond Technologies provides solutions to your Business's Automation, Data Collection, Industrial Networking, and Remote Management challenges. Our customer base includes companies in many diverse industries and applications including electrical power equipment manufacturers, warehouse and distribution, discrete parts manufacturing, packaging systems, medical and biomedical equipment manufacturers, automatically guided vehicles and robotics, and consumer products manufacturers.

We pride ourselves on getting data where it needs to be and bringing innovative ideas to our customers.

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