TiltWatch RFID Tilt Indicator Overview

When you are serious about “This End Up”, a tilt indicator holds handlers accountable for keeping goods positioned correctly. SpotSee indicators typically reduce damage resulting from mishandling by 40 – 60%. With the addition of RFID technology, the TiltWatch® RFID alerts you if your product has been tipped and allows you to capture that data in your warehouse or shipping management systems.

Extend the Power of your RFID System with Tilt Monitoring

RFID technology systems have been in place for inventory tracking for years. TiltWatch RFID enabled condition monitoring indicators allow you to extend the power of your RFID system by integrating handling conditions into your systems. When goods pass through an RFID gate, you will know if the package has been exposed to potentially damaging conditions.

Converting indicator state into electronic form allows you to eliminate the need for visual inspection of indicators upon receipt which speeds the receiving process.

TiltWatch RFID delivers the benefits of a SpotSee monitoring program – damage reduction, supply chain process refinement and cost reductions – plus an electronic record of where issues are occurring. With data, its is possible to identify trouble spots in the supply chain and implement process changes to improve outcomes.

TiltWatch RFID indicators are passive RFID (battery free) devices that can be read with any standard UHF reader.

Benefits:

- Acts as a visual deterrent to mishandling
- Expands the utility of RFID with damage monitoring
- Reduces receiving times and isolates items that need inspection
- Helps identify trouble spots in the supply chain – from production to transportation to storage

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Key Specifications	
Monitoring Range	Single plane
Tolerance	85° at 20°C / 68°F, 1 ATM
Operating Temperature and Humidity	-40°C to 60°C /-40°F to 140°F 5-99% RH, non-condensing
RFID Type	ISO 18000-6 / EPC Gen 2 / Passive
Adhesive	2 mil high-tack acrylic
Adhesive Shelf Life	2 years
Composition	Rigid polystyrene housing with non-magnetic steel indicator
Dimensions	2.92 in x 2.37 in x 0.21 in 74.27 mm x 60.31 mm x 5.29 mm
Weight	~14.17 g
Installation	Pressure-sensitive adhesive or holes to accommodate screws, nails or staples
Customization	Private logo available Minimum quanitity applies

Product Description	Part Number
TiltWatch RFID	24101RFID
TiltWatch Companion Labels (200 labels per roll)	26102
TiltWatch Companion Labels (500 labels per roll)	26103
TiltWatch Multilingual Companion Label: English, Spanish, French, German (200 labels per roll)	26119
TiltWatch Multilingual Companion Label: English, Japanese, Korean, Chinese (200 labels per roll)	26120

Reading TiltWatch RFID:

Configure the reader to read address 0x21(33) in the standard EPC memory bank.

```
// 1. Select EPC memory bank (bank 1)
      x.MemoryBank = MemoryBank.Epc;

// 2. Point to address 21h in EPC memory bank
      x.WordPointer = 33;

// 3. Say how many bits to read
      x.WordCount = 1;

// 4. Do the actual read operation settings.
      Report.OptimizedReadOps.Add(x);
```

If this bit is **8104**, the indicator has been triggered.
If the bit is **8114**, the indicator has not triggered.