Active UHF Tag
i-Q350 WAM (Reefer) - Preliminary

IDENTEC SOLUTIONS

The i-Q350 series of tags is IDENTEC SOLUTIONS' newest generation of Intelligent Long Range® (ILR®) active RFID tags.

ILR provides highly accurate, real-time data collection without human intervention in wireless applications such as:

- identification
- tracking and tracing
- localization and
- measurements monitoring.

Using advanced UHF radio frequency technology, i-Q350 WAM tags transmit and receive data at distances of up to 30 meters (100 feet) from a handheld device or up to 500 meters (1,640 feet) from a fixed interrogator.

The new tag includes a serial interface which communicates to container refrigeration units. The tag auto detects the type of the controller and monitors the status information.

Also, LEDs support visual signalization during search, locate and alarms. The i-Q350 Reefer tag operates in the 850 – 928 MHz UHF band.

Features

Benefits

- 500 meters (1,650 ft) read/write range — Allows automated identification, tracking and tracing of assets and people without human intervention.

- 32 kBytes memory — Stores user and process information.

- RS232 Interface — Allows communication through a RS 232 interface.

- UHF operating frequencies — Allows low-power, long communication range and high data transmission rates with minimal interference due to local conditions.

- Up to 4 bi-color LEDs — Provides visual identification of an addressed tag ("pick by light") and informs about tag's status.

- 3 years typical battery lifetime — Delivers long-time maintenance-free operation, without battery replacement.

- Push Button — Allows a status checking of the tag via LEDs.

- Communication on demand only — Eliminates RF flooding through software-controlled read/write operations.

- Beacon capability — Tags do not have to be "woken"—they transmit automatically the controller and status information at a configurable ping rate.

- Non-line-of-sight data transmission — Allows tags to be buried while transmitting for improved tracking/locating efficiency.

- Low reader infrastructure cost — Economical choice for tracking assets with active RFID technology.

INTELLIGENT LONG RANGE

IDENTEC SOLUTIONS

IDENTEC SOLUTIONS is a leading global supplier of innovative RFID systems (Radio Frequency Identification) with communication ranges of up to 500 m.

With its unique Intelligent Long Range® (ILR®) technology, IDENTEC SOLUTIONS offers innovative and economical solutions for automated data gathering, identification, tracking and localization of objects.

The product series OIS offers automatic ID-Systems of different technologies suitable for the demanding environment in industry and logistics. OIS tags have up to 32 kBytes of memory and are heat-resistant up to 235 °C.

To learn more about how ILR® technology can increase efficiency of your business, contact IDENTEC SOLUTIONS or visit our website at www.identecsolutions.com.

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This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Technical Specifications

Performance

Read rate	Up to 100 tags/s (Collect Tag Identification Code only)

Communication

Read/write range to i-PORT M350	Up to 500 m (1,650 feet) @ free air
Operating frequency	850 – 928 MHz
Data rate	19,200 – 500,000 kbits/s
Sensitivity	-105 dBm, depending on data rate
Maximum transmission power	10 mW, depending on national regulations

Electrical

Power source	1 × AA Lithium batteries (replaceable)
Expected battery life	Typical 3 years
Battery monitoring	Yes

Data

Data retention	> 10 years without power
Write cycles	100,000 writes to a tag
Memory size	32 kBytes
Identification code	48 bits fixed ID (32 bits user ID+ 8 bits tag type + 8 bits manufacturer ID)

Environmental

Operating temperature	−40 to +85 °C (−40 to +185 ºF)
Humidity	10 to 90 % relative humidity at 30 °C (+86 ºF)
Shock	50 G, 3 times DIN IEC 68-2-27
	Multiple drops to concrete from 1 m (3 ft)
Vibration	5 G, 20 sine wave cycles, 5 to 150 Hz, DIN IEC 68-2-6
	5 G, noise 5 to 1000 Hz, 30 minutes DIN IEC 68-2-64

Physical

Dimensions	135 × 50 × 26 mm (5.3 × 1.9 × 1.0 in.)
Enclosure	Plastic (ASA/Luran® S)
Weight	110 g (3.88 ounces)
Enclosure rating	IP 65

WARNING: Changes or modifications not expressly approved by manufacturer could void the user's authority to operate the equipment

Contents subject to change without notice.