BOSCH
Invented for life

Commercial Wireless ISW-EN5040-T High-power Repeater

▸ **Easy installation; no wires or programming required**

▸ **Supervision for low battery, loss of line power, tamper, and jams**

▸ **Expanded coverage by utilizing multiple repeaters**

▸ **Self-configuring**

▸ **Sophisticated signal management**

▸ **Exclusive wireless protocol ensures maximum performance and reliability**

The line-powered 900 MHz ISW-EN5040-T High-power Repeater receives, decodes, and re-transmits signals from Commercial Wireless platform transmitters. This technology uses diversity reception and advanced signal processing to reduce dead spots in transmission areas. Each repeater acts as a range expander for any transmission, allowing the installation to scale from smaller commercial sites to large campuses with several buildings. Each repeater includes an on-board, state-of-the-art lithium-ion back-up battery. The ISW-EN5040-T High-power Repeater includes a transformer.

An optional outdoor weatherproof enclosure (ISW-ACC640) is available for applications where the repeater is exposed to environmental elements.
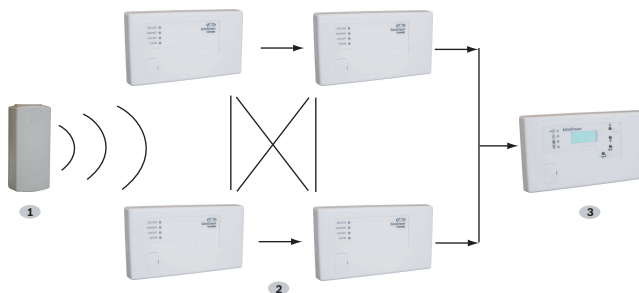
System Overview

Powered by Inovonics

The Commercial Wireless platform, powered by Inovonics wireless mesh network technology, ensures superior range, reliability, and scalability for commercial applications. Using a wide range of transmitters and repeaters, this proven technology provides flexibility and performance to meet the most stringent requirements. This exclusive protocol is available only on Commercial Wireless products.

Wireless 900 MHz Band

The Commercial Wireless platform sends redundant information on several multi-frequency channels within the FCC Part 15 900 MHz band, providing superior range and reliability. In comparison, systems that use a single frequency technology can only send information on one narrow band channel. Any interference within the band can cause missed signals. With wireless registration, it is easy to add this technology to any application.

Repeater Network

Use multiple repeaters to create a mesh network.

1. The transmitter sends a signal.
2. Repeaters receive the signal and re-broadcast it, allowing the user to extend the range of the RF system to cover large areas such as installations in campuses, sites with detached buildings, or multiple story complexes.
3. The receiver hears the signal from the repeaters and processes accordingly.

Functions

Installation

The installation is as easy as mounting the repeater and plugging it in. No wires or programming are required, although registration is recommended for a fully supervised system.

Supervision and Expansion

The repeater supervises for low battery, loss of line power, case tamper, and jam detection. An on-board lithium-ion battery:

- Provides backup without additional expense
- Offers up to 24 hours of continuous operation when line power is unavailable
- Reports power loss when programmed or supervised to a slave receiver

Installers can employ multiple repeaters in a micro-cellular network, providing coverage for applications including large campuses with multiple-story buildings.

Signal Management

The repeater incorporates sophisticated signal management, preventing ping-pong messages and maximizing reliability.

Certifications and Approvals

Region	Certification	
USA	UL	AMCX: Central Station Alarm Units (ANSI/UL 1610, ANSI/UL 1635), ANET: Holdup Alarm Units (UL 636), APAW: Police Station-connected Alarm Units (ANSI/UL 365, ANSI/UL 464), APOU: Proprietary Alarm Units (ANSI/UL 1076), NBSX: Household Burglar Alarm System Units (ANSI/UL 1023), NBSX7: Household Burglar Alarm System Units Certified for Canada (ULC/ORD-C1023)

Inovonics Wireless Corporation also holds the following approvals:

	FCC	Conforms to FCC Part 15 regulations

Installation/Configuration Notes

Compatibility Information

The ISW-EN5040-T High-power Repeater is compatible with the following products:

Receivers

ISW-EN4216R	LCD Receiver

Transmitters

ISW-EN1210	Universal Transmitter (Single-input)
ISW-EN1210EOL	Universal Transmitter with EOL Resistor
ISW-EN1210SK	Survey Transmitter
ISW-EN1210W	Door-Window Transmitter with Reed Switch
ISW-EN1215EOL	Universal Transmitter with Wall Tamper and EOL Resistor
ISW-EN1215WEOL	Door-Window Transmitter with Wall Tamper, Reed Switch, and EOL Resistor
ISW-EN1223D	Water-resistant Pendant Transmitter (Double-button)
ISW-EN1223S	Water-resistant Pendant Transmitter (Single-button)
ISW-EN1223SK	Survey Pendant Transmitter
ISW-EN1233D	Necklace Pendant Transmitter (Double-button)
ISW-EN1233S	Necklace Pendant Transmitter (Single-button)
ISW-EN1235D	Beltclip Pendant Transmitter (Double-button)
ISW-EN1235S	Beltclip Pendant Transmitter (Single-button)
ISW-EN1235DF	Fixed-location Transmitter (Double-button)
ISW-EN1235SF	Fixed-location Transmitter (Double-button)
ISW-EN1242	Smoke Detector-Transmitter
ISW-EN1247	Glass-break Sensor Transmitter
ISW-EN1249	Billtrap Transmitter
ISW-EN1260	PIR Motion Sensor-Transmitter (Commercial and High-end Domestic Applications)
ISW-EN1261HT	PIR Motion Sensor-Transmitter (High-traffic Areas)
ISW-EN1262	PIR Motion Sensor-Transmitter (Residential and Low-traffic Commercial Applications)
ISW-EN1265	PIR Motion Sensor-Transmitter (Ceiling-mount Applications)

Parts Included

Quant.	Component
1	ISW-EN5040-T Repeater
1	Hardware pack
1	Literature – Installation and Operation Manual

Technical Specifications

Electrical

Power Requirements:	14 VAC, 250 mA
Backup Battery	
Capacity:	3.7 VDC nominal, 2.15 mA
Life:	8 hours typical
Type:	Rechargeable lithium-ion battery

Environmental

Relative Humidity:	Up to 90%, non-condensing
Temperature (operating):	0°C to +60°C (+32°F to +140°F)

Mechanical

Material:	ABS
Closure:	Latching with optional screws for high security installations
Dimensions:	165 mm x 89 mm x 25 mm (6.5 in. x 3.5 in. x 1 in.)
Weight:	204 g (7.14 oz)

Reception/Transmission Characteristics

Frequency:	902 MHz to 928 MHz

Trademarks

Trademark names are used throughout this document. In most cases, these designations are claimed as trademarks or registered trademarks in one or more countries by their respective owners. Rather than placing a trademark symbol in every occurrence of a trademark name, Bosch Security Systems, Inc. uses the names only in an editorial fashion and to the benefit of the trademark owner with no intention of infringing the trademark.

Inovonics is a trademark of Inovonics Wireless Corporation.

Ordering Information

Commercial Wireless ISW-EN5040-T High-power Repeater Line-powered 900 MHz ISW-EN5040-T High-power Repeater	**ISW-EN5040-T**
Accessories	
Commercial Wireless ISW-ACC610 14 VAC, 20 VA Transformer Replacement transformer for the ISW-EN5040-T	**ISW-ACC610**
Commercial Wireless ISW-ACC640 Outdoor Plastic Enclosure Outdoor housing for the ISW-EN5040-T Repeater	**ISW-ACC640**
Commercial Wireless ISW-BAT850 Lithium Ion Battery Assembly Back-up battery for the ISW-EN5040-T Repeater	**ISW-BAT850**