

About this guide

This guide describes how to connect and mount the IDX-5000 Multipurpose RFID Reader. To install the IDX-5000 Multipurpose RFID Reader as part of a solution, refer to the following guides:

- *IDX-5000 Multipurpose RFID Reader Installation Guide, 8200-2697-79*
- *IDX-5000 Multipurpose RFID Reader Information Sheet, 8200-2697-78*

Technical support

For product bulletins and updates to documentation, if you are a Johnson Controls employee or Johnson Controls subcontractor, visit <http://sensormatictechsupport.jci.com>. If you are a business partner, visit <http://www.globalpartneredge.com>.

QR code

To access the IDX-5000 Multipurpose RFID Reader POS Installation Guide, scan the QR code.

Figure 1: QR code



Document link: <https://docs.jci.com/sensormatic/IDX-5000-IG>

About the product

The IDX-5000 Multipurpose RFID reader kit includes contents for the following part numbers:

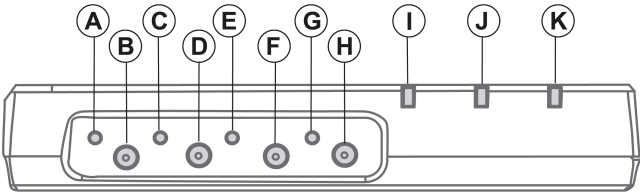
- IDX5-N: For use in the US, Canada, and other countries that follow US regulations exactly. This kit includes a universal power supply with a US power cord and a USB cable.
- IDX5-E: For use in the EU. This kit includes a USB cable and a universal power supply. Order a power cord separately.
- IDX5-W: This kit includes a USB cable and a universal power supply. Order a power cord separately.

Connecting an antenna to the reader

1. Use a screw-on RP-SMA connector to connect the antenna cable to an available RF output port.
2. To secure the connection, tighten the SMA connector using an SMA torque wrench to 1 N-m or 8.85 lb-in. A loose connection can compromise the performance of the reader.

Important: To avoid permanent damage to the reader and cable, do not over-tighten the SMA connector.

Figure 2: RF connectors and power input connectors on the reader

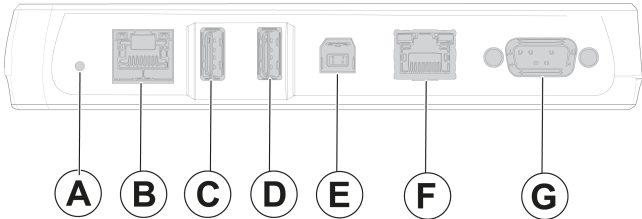


Callout	Component	Callout	Component
A	Port 4 status LED	G	Port 1 status LED
B	RF Port 4	H	RF Port 1
C	Port 3 status LED	I	Tag LED
D	RF Port 3	J	Status LED
E	Port 2 status LED	K	Power LED
F	RF Port 2		

Digital connections

For information on the connections on the IDX-5000 Multipurpose RFID Reader, see [Figure 3](#).

Figure 3: Digital end panel connectors



Callout	Component	Description
A	Configuration access switch	To restore the reader to a factory default configuration file, use a thin object such as a straightened paper clip to press the recessed configuration access switch. Press and hold the switch for 10 seconds until the Status LED turns green, and then release the switch. Within 10 seconds, press and release the switch again to confirm the update. The LED turns off, the default settings load, and the reader reboots.
B	Ethernet + PoE/48VDC	10/100/1000 Mbit Ethernet + PoE, or 48 VDC only for non-Ethernet installs • Full power Sensormatic power supplies: 25 W 802.3at PoE supply and 48 V, 30 W brick supply (for non-Ethernet installs) • Reduced power, reduced capability (customer provided): 13 W 802.3af PoE supply
C and D	USB A host port	The USB host ports support USB devices such as flash drives
E	USB B device port	The port implements Ethernet over USB using the USB NCM interface, supported by later versions of Microsoft® Windows®, and Linux®
F	RS-485 port	RS-485 port for connection to Sensormatic RS-485 devices
G	GPIO/RS-232 port	This port allows the reader to control LEDs, buzzers, receive input from switches and to communicate using RS-232. Details are provided by Sensormatic separately.

Powering the reader

An Ethernet-connected reader is powered by either a PoE-equipped Ethernet switch or a Sensormatic PoE-Midspan supply. A USB-only reader is powered with the Sensormatic 48VDC RJ45 supply.

Access for configuration

The IDX-5000 only supports firmware upgrades and remote setup using the Sensormatic Device Manager over an internet connection. Coordinate with the Sensormatic Professional Services team to configure the IDX-5000 when it is online.

LED definitions

For information on the IDX-5000 Multipurpose RFID Reader LEDs, see [Table 1](#). For the location of the LEDs on the reader, see [Figure 2](#).

Table 1: Reader LED definitions

LED	LED state	Description
Power	Solid green	The power is on and the unit is ready to use.
	Off	There is no power to the unit.
	Solid amber	The unit is powering on.
Status	Off	The reader is operational, and is not under LLRP management.
	Solid amber	The unit is powering on.
	Blinking amber	Software is downloading to the reader.
	Solid green	Normal run mode
	Solid red	The reader is detecting an error or self-test has failed.
Tag	Flashing green	The reader is reading a valid tag.
	Flashing amber	The reader reads a tag but is discarding it because the Received Signal Strength Indication (RSSI) is below the programmed threshold.
	Flashing red	Set the country of operation. The reader does not emit RF or read tags until this is set.
RF Status	Amber	The transmitter is active.
	Off	The transmitter is not active.
	Three amber blinks	The reader has established communication with a 1-Wire® device.
	Two amber blinks	The reader has lost communication with a 1-Wire device.

Mounting the reader

 **CAUTION**

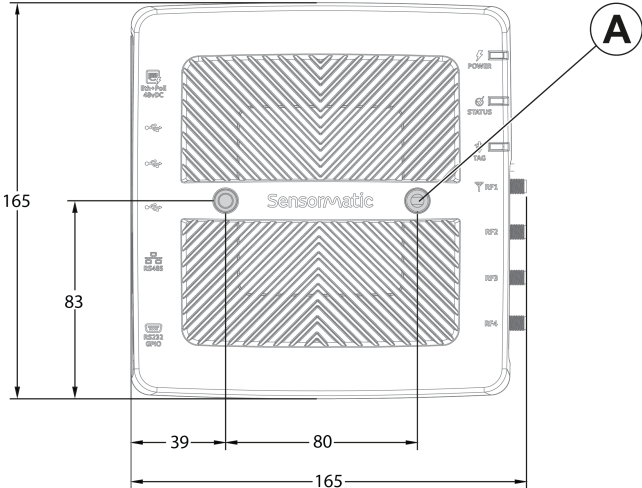
Observe the minimum bend radius specified for the associated antenna cable when the cable must change direction. A crushed or kinked antenna cable impairs reader performance.

1. Locate an area to mount the reader, and position the reader on the surface.

 **Note:** An ideal mounting surface continuously conducts heat away from the reader case.
2. Ensure that there is a minimum of 10 cm (4 in.) of clearance around all exposed reader surfaces for ventilation.
3. Mark the mounting holes on the surface. At the marked locations, drill two mounting holes.
4. Position the reader over the mounting holes, and secure the reader using self-tapping screws, 5810-5091-120.

 **Note:** The IDX-5000 RFID reader kit contains two screws. If these screws are unsuitable for your mounting scenario, source alternative screws.

Figure 4: Mounting hole dimensions, mm



Callout	Component
A	M4 or #10 pan head Phillips screw

Specifications

Table 2: Specifications

Specification	Value
Device electrical input	POE 802.3 30 W or Sensormatic DC Supply
Device electrical output	RF connector for approved antennas only, GPIO Ports
DC Power supply input	Max 100-240V 50/60 Hz 1.8A, IEC 320 3-Pin C14
DC Power supply output	DC 48V/620 mA
Product dimensions	16.4 cm (6.45 in.) x 16.5 cm (6.5 in.) x 2.7cm (1.1 in.)
Product weight	0.86 kg (1.9 lbs.)
Packaged dimensions	27.3 cm (10.75 in.) x 23.8 cm (9.38 in.) x 7.14 cm (2.81 in.)
Packaged weight	1.6 kg (3.5 lbs)



Power supply

Use only the power supplies and cords listed in [Table 3](#).

Table 3: Power cord numbers

Part number	Description	Power cords
2025-0653-01	PoE Midspan Supply, 802.3 at, 30 W, 1 port (for Ethernet applications)	No
5606-0155-01	Power supply, 48 V, 30 W, RJ45 (for USB-only applications)	No
0351-0547-01	NA: 125 V, US, 1-15/C7, 2 m (6 ft)	Yes
0351-0547-02	EU:250 V, CEE7/16-C7, ungrounded Euro plug, 2 m (6 ft)	Yes
0351-0547-03	UK:250 V, BS1363-C7, ungrounded UK plug, 2 m (6 ft)	Yes
0351-0547-04	Japan:125 V, 2.5 A, Japan-IEC, 2 m (6 ft)	Yes
0351-0547-07	Australia:250 V, AS3112-C7, 2 m (6 ft)	Yes
0351-0547-09	China:250 V, 2.5 A, China-IEC, 2 m (6 ft)	Yes

Environmental

- Operating temperature: 0°C to 50°C (32°F to 122°F)
- Storage temperature: -20°C to 85 °C (-4°F to 185°F)
- Relative humidity: 5% to 95%, non-condensing
- Use: This product is designed for commercial and industrial indoor use only.

Regulatory information

Declaration of conformity to EU Directives and GB Regulations



EU: Sensormatic USA LLC declares that this product is in compliance with Directive 2014/53/EU on radio equipment and Directive 2011/65/EU on the reduction of hazardous substances.

GB: Sensormatic USA LLC declares that this product is in compliance with the UK Radio Equipment Regulations 2017 and The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.

To access the EU and UK declaration of conformity, click on the following link: <https://docs.jci.com/Sensormatic/Declaration-of-Conformity>

Battery content

This product contains a non-rechargeable coin cell battery:

CR 2032 Lithium Coin Cell
Nominal Voltage: 3V
Nominal Capacity: 240 mAh
Net Weight: 2.9 g
Lithium Content: 0.065 g
Chemistry: Li/MnO2

Approved antennas

Table 4 lists the antennas that are approved for use with the IDX-5000 Multipurpose RFID Reader.

Table 4: Approved antennas

Manufacturer	Part number	Type	Gain (dBi)	Cable loss
Sensormatic	IDA-1000	Patch	4.5	N/A *
Sensormatic	IDA-3100	Patch	6	N/A *
Sensormatic	IDA-3300	Patch	7.21	N/A *
Sensormatic	IKDM-10XX	Patch	-8	3.5
Sensormatic	IDSM-1000/ IDSM-1100	Patch	6	N/A *
Keonn	Advantenna-CP11™	Patch	0.2	1.5
Keonn	Advantenna-p11™	Patch	3.6	1.5
Keonn	ADVANTENNA-P12	Patch	3.5	1.5
Keonn	Advantenna-SP11™	Patch	4.8	1.5
NeWave	NSSWave-N5	Patch	4.5	1.5
Sensormatic	UHIDX1901	Patch	6	N/A *

*The cable is permanently attached to this antenna.

The IDKM-1000 and the IDKM-1010 antennas are not approved for use in the following countries:

- Algeria
- Kuwait
- Costa Rica
- Egypt
- Chile
- Lebanon
- United Arab Emirates

The IDA-3100, IDSM-1000, and IDSM-1100 antennas are not approved for use in Russia and South Korea.

The following countries are restricted to low power:

- Ecuador
- Morocco
- Honduras
- Uruguay



Note: Refer to *IDX-5000 Multipurpose RFID Reader Information Sheet, 8200-2697-78* for a full list of countries that can use any of the approved antennas listed in [Table 4](#).

ISED ID: 3506A-IDX5000, MODEL: UHID2201

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with the Canadian ICES-003 Class B specifications. CAN ICES-003(B) / NMB-003(B).

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempt de licence. L'exploitation est autorisée aux deux conditions suivantes:

- L'appareil ne doit pas produire de brouillage.
- L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This radio transmitter 3506A-IDX5000 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed in [Table 4](#), with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio 3506A-IDX5000 a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne Listé dans Tableau 4 et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Under Innovation, Science and Economic Development regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that necessary for successful communication.

Conformément à la réglementation d'Innovation, Sciences et Développement économique Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Innovation, Sciences et Développement économique Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Antenna installation

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 34 cm (13.4 inches) between the radiator and any part of your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Cet équipement est conforme aux limites d'exposition aux radiations ISED CNR-102 établies pour un environnement non contrôlé. Une distance de séparation d'au moins 34 cm doivent être maintenue entre l'antenne de cet appareil et toutes les personnes. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

FCCID: BVCIDX5000

Regulatory Model: UHIDX2201

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.



Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and/or consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance 23 cm (9.1 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

For the State of California, U.S.A. only: Perchlorate Material - Special Handling May Apply. See <http://www.dtsc.ca.gov/hazardouswaste/perchlorate>. This product includes a real-time clock battery or coin cell battery that may contain perchlorate and may require special handling when recycled or disposed of in California.

MéxicoNOM 121: UHIDX2201

La operación de este equipo está sujeta a las siguientes dos condiciones:

- Es posible que este equipo o dispositivo no cause interferencia perjudicial y
- Este equipo debe aceptar cualquier interferencia, incluyendo la que pueda causar su propia operación no deseada.

EMC	47 CFR, Part 15
	ICES-003
	RSS-210
	NOM 121
	EN302 208
	EN301 489
Safety	UL/CSA/EN 62368-1

Equipment Modification Caution

Equipment changes or modifications not expressly approved by Sensormatic Electronics, LLC, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

Installation: Installation must be performed by a Sensormatic authorised install or service agent.

Service and repair: Servicing and repair must be performed by a Sensormatic authorised service or repair agent. This product has no user-repairable parts.

Restriction of Hazardous Substances Directive (RoHS)

All parts and components are manufactured in accordance to and to be compliant with the *DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment*.

WEEE directive



This label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling. For information on how to recycle this product, contact your sales or technical support contact.

Service

If a problem occurs while using the equipment, contact the facility Technical or Systems Support. If there is a problem with the equipment, contact Sensormatic Technical Support at <http://sensormaticsecurelogin.com>.

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For EU customers: All products at the end of their life must be returned to Sensormatic for recycling. For information on how to return the product, visit: <http://sensormatic.com/WhoWeAre/Eco-Initiatives.aspx>.