

INSTALLATION GUIDE

HID

iCLASS SE® / multiCLASS SE®

13.56 MHz Contactless
R10E, RP10E, R15E, RP15E, R40E, RP40E, RK40E, RPK40E
R10MA, RP10MA, R15MA, RP15MA, R40MA, RP40MA, RPK40MA

PLT-01579, Rev. A.6



www.hidglobal.com/PLT-03687

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Supplied parts

- iCLASS SE/multiCLASS SE Reader (1)
- Installation Guide (1)
- 0.138-20 x 1.5" screws (2) - for installing the reader directly to a wall (no junction box)
- 0.138-32 x 0.375" screws (3) - for Imperial (US) junction box installation (2) and attaching the reader to the back plate (1)
- M3.5 x 12mm screws (2) - for Metric (EU etc) junction box installation
- 0.138-32 x 0.375" security screw (1) - alternative security screw for attaching the reader to the back plate
- 7-pin Terminal connectors (2 - only included with Terminal Strip models)

Recommended parts (not supplied)

- Cable, 5-9 conductor (Wiegand or Clock-and-Data), 4 conductor Twisted Pair Over-All Shield and UL approved, Belden3107A or equivalent (OSDP)
- Certified DC power supply
- Metal or plastic junction box
- Security tool HID 04-0001-03 (for anti-tamper screw)
- Drill with various bits for mounting hardware
- Mounting hardware
- Reader spacer when mounting on or near metal or metal junction boxes (refer to *How to Order Guide*)
- IP65 Mounting gasket, recommended for outdoor installation
- Junction box

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PLT-01579 A.6

Optional features

Open Collector Output - Controls an external device (5 VDC) operating in Host Mode only. Sink - 40mA / Source - 1mA.

Optical Tamper (enabled by default on most readers) - A configuration card may be necessary to activate the Optical Tamper. Once activated, when the mounting plate is removed, the optical tamper will sink to ground from its default 5VDC. Contact HID Technical Support for Optical Tamper options.

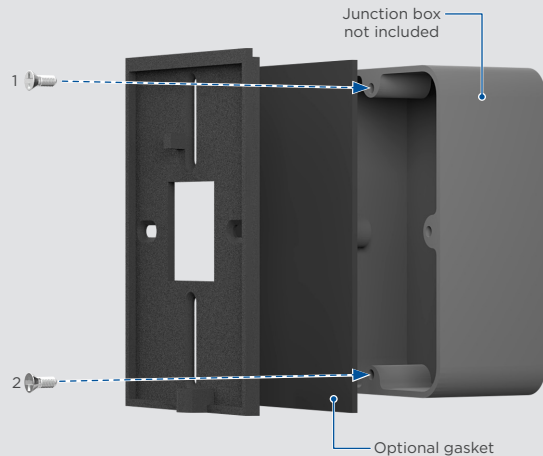
Configuration Cards - With the use of purchasable configuration cards, the reader can be modified to meet the specific requirements of an installation. Configuration options include; audio visual, CSN outputs and keypad outputs (keypad models only). Contact HID Technical Support for part number assistance to order a configuration card, if necessary.

Hold Input - when asserted, this line either buffers a card (default) or disables a card read until released, as configured.

1 Mount the backplate



ATTENTION
Observe precautions for handling
ELECTROSTATIC SENSITIVE DEVICES

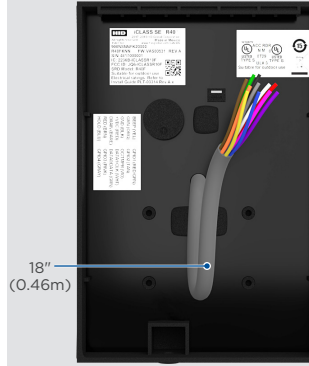


For Imperial (US):
Use supplied 0.138-32 x 0.375" screws

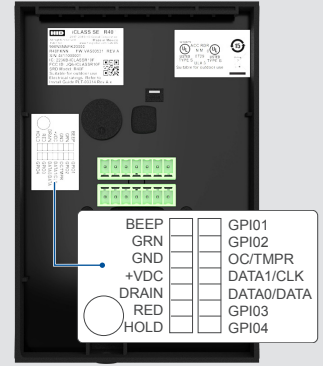
For Metric (EU etc):
Use supplied M3.5 x 12mm screws

2 Wire the reader

Pigtail version



Terminal Strip version



PIGTAIL***	TERMINAL	DESCRIPTION
Yellow	P1-1	Beeper Input
Orange	P1-2	LED Input (GRN)
Black	P1-3	Ground (RTN)
Red	P1-4	+VDC
Drain	P1-5	Unused
Brown	P1-6	LED Input (RED)
Blue	P1-7	Hold Input
Red/Green	P2-7	GPI01/OSDP (RS485-FDX/HDX-A)
Tan	P2-6	GPI02/OSDP (RS485-FDX-HDX-B)
Violet	P2-5	*Open Collector Output/Tamper
White	P2-4	**Wiegand Data 1 / Clock
Green	P2-3	**Wiegand Data 0 / Data
Pink	P2-2	GPI03 (RS485-FDX-Z)
Gray	P2-1	GPI04 (RS485-FDX-Y)

* Tamper Output. When activated, output syncs to ground (default).

** Dependent upon reader configuration. See HTOG Wiegand and Clock-and-Data configurations for more information.

*** For 5 meter pigtail readers (PN: 9xxxxxLEKxxxxx), follow the wiring diagram on the reader.

Note: Previous iCLASS readers had reversed RS-485 wiring (P2-7 & P2-6 - A & B). When upgrading to an iCLASS SE reader, ensure proper connections as defined below.

Note: It's possible to reuse existing Wiegand wiring for OSDP, however, using simple stranded cable typical of Wiegand access control readers is usually not meeting the RS485 twisted pair recommendations.

Note: For OSDP cable lengths greater than 200ft. (61M) or EMF interference, install 120Ω +/- 2% resistor across RS-485 termination ends.

Note: Wiring the reader incorrectly may permanently damage the reader.

Note: With a keypad reader, operating as 26 bit emulation; upon power up you have 5 seconds to enter the facility code followed by #. If unsuccessful, the reader LED displays solid Red. Power-cycle the reader and retry entering the facility code.

The facility code needs to be manually entered as 3 digits (i.e. if facility code is 10 enter 0-1-0-#). **Note:** SE readers only use facility codes between 1-255, and there is no default facility code. Once the facility code has been entered, the LED will display Violet and then to a final Red. Then power-cycle the reader. **Note:** When using a keypad, if there are 2 short beeps after entering your PIN, the reader does not have a facility code configured yet. In this event, an Admin will need to be power-cycle the reader and enter the facility code before the reader will accept your PIN.

3 Secure the reader to the backplate



- Align the top of the reader with the top of the backplate.
- Align the bottom of reader with the bottom of the backplate.
- Secure the reader to the backplate using one of the supplied screws:

Security/non-tamper screw:
0.138-32 x 0.375" screw (supplied)

Non-security/standard screw: 0.138-32 x 0.375" screws (supplied)

4 Power and test the reader



Turn on the power. The reader should beep three times and the light bar should flash three times.

Test the reader with a card. The buzzer should beep and the LED should flash.

Specifications

PRODUCT	BASE PART NUMBER	INPUT VOLTAGE (VDC)	CURRENT¹			OPERATING TEMPERATURE⁵	
			STANDBY AVG²	MAX AVG³	PEAK⁴		
R10 ⁷	900N	5 - 16 VDC (12 VDC for RS-485)	60 mA	95 mA	200mA	-30°F to 150°F (-35°C to 65°C)	
RP10 ⁷	900P		75 mA	100 mA			
	900L		110 mA	135 mA			
	R15		910N	60 mA			95 mA
RP15 ⁷	910P		75 mA	100 mA			200mA
	910L		110 mA	135 mA			
R40 ⁷	920N	5.5 - 16 VDC (12 VDC for RS-485)	65 mA	95 mA	220mA		
RP40 ⁷	920P		85 mA	100 mA			
	920L		120 mA	145 mA			
	RK40		921N	85 mA			100 mA
RPK40 ⁷	921P		95 mA	105 mA			220mA
	921L		130 mA	155 mA			

PRODUCT	CABLE LENGTH⁵	REGULATORY REF NUMBER
R10⁷	Communication Lines Wiegand = 500 ft - 22 AWG (152 m) 300 ft - 24 AWG 91 m) RS-485 = Max bus length 4000 ft - 24 AWG (1,219 m) Max length between nodes: 1640 ft - 24 AWG (500m)	R10Ex _x x ₃
RP10⁷		RP10Ex _x x ₃
R15		R15Ex _x x ₃
RP15⁷		RP15Ex _x x ₃
R40⁷		R40Ex _x x ₃
RP40⁷		RP40Ex _x x ₃
RK40		RK40Ex _x x ₃
RPK40⁷		RPK40Ex _x x ₃

- 1 Communication protocols other than Wiegand or Clock & Data (for control panels), as well as credential interfaces over BLE (not applicable for 9xxL models), require an additional hardware module which increases current by 40 mA.

2 Standby AVG - RMS current draw without a card in the RF field.

3 Maximum AVG - RMS current draw during continuous card reads. Not evaluated by UL.
- 4 Peak - highest instantaneous current draw during RF communication.

5 When configured for Bluetooth Operating Range is -13° F to 150° F (-25° C to 65° C)

6 Wiegand Cable Lengths: 100ft (30.5 m) 22 AWG @ 5 - 6.4 VDC 500ft (152m) 22 AWG @ 6.5 - 16 VDC

7 Mobile Enabled Products, see specifications below.
- UL Reference Number Deciphering
x₁ Reader Colors: K = Black
x₂ Wiring: N = Pigtail
T = Terminal
5 = 5 meter
Pigtail
N = No Module
R = RS-485
(OSDP)
L = Indala Prox
B = Bluetooth

x₃ Communication:

BTSmart specifications

OPERATING TEMPERATURE	FREQUENCY	FCC & IC IDS
-15° F to 150° F (-25° C to 65° C)	2.4 - 2.480 GHz	FCC-ID: JQ6-ICLASSBTM IC-ID: 2236B-ICLASSBTM

The final product, containing the modular transmitter must be labeled with its own FCC ID and IC ID. If the FCC & IC ID is not visible, when the module is installed inside another device, then the final assembly label must contain the FCC and IC ID numbers with a statement such as follows: "Contains Transmitter Module with FCC ID JQ6-ICLASSBTM and IC ID 2236B-ICLASSBTM".

Regulatory

The final product, containing the modular transmitter must be labeled with its own FCC ID and IC ID. If the FCC & IC ID is not visible, when the module is installed inside another device, then the final assembly label must contain the FCC and IC ID numbers with a statement such as follows: "Contains Transmitter Module with FCC ID JQ6-ICLASSBTM and IC ID 2236B-ICLASSBTM".

UL

Connect only to a Listed Access Control / Burglary power-limited power supply. These readers are intended to be used with listed (UL294) control equipment. Suitable for outdoor use. Only Wiegand and RS-485 communications have been evaluated by UL.

UL 294 Performance Levels

MODEL #	ACCESS CONTROL LINE SECURITY LEVEL	DESTRUCTIVE ATTACK LEVEL	ENDURANCE LEVEL	STAND-BY POWER LEVEL	CONDITIONS
R10 / RP10 / R15 / RP15 / R40 / RP40 / RK40 / RPK40	Level I	Level I	Level IV	Level I	

FCC

This device complies with part 15 of the FCC Rules. 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. CAUTION: Any changes or modifications to this device not explicitly approved by the manufacturer could void your authority to operate this equipment. Indala Prox products RP10EL, RP15EL, RP30EL, RP40EL and RPK40EL are certified for FCC, Canada Radio Certification and CE Marking only.

Canada Radio Certification

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CE Marking

HID Global hereby declares that these proximity readers are in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. Por el presente, HID Global declara que estos lectores de proximidad cumplen con los requisitos esenciales y otras disposiciones relevantes de la Directiva 2014/53/EU. HID Global déclare par la présente que ces lecteurs à proximité sont conformes aux exigences essentielles et aux autres stipulations pertinentes de la Directive 2014/53/EU. A HID Global, por meio deste, declara que estes leitores de proximidade estão em conformidade com as exigências essenciais e outras condições da diretiva 2014/53/EU. HID Global bestätigt hiermit, dass die Leser die wesentlichen Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/53/EU erfüllen. HID Global dichiara che i lettori di prossimità sono conformi ai requisiti essenziali e ad altre misure rilevanti come previsto dalla Direttiva europea 2014/53/EU. Download copies of the Radio Equipment Directive Declaration of Conformity (DoC) at: http://www.hidglobal.com/certifications

Taiwan

According to "Administrative Regulations on Low Power Radio Waves Radiated Devices" Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to a approved low power radio-frequency devices. The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

Korean KCC

항목	R10E, R15E, R30E, R40E, RK40E	RP10E, RP15E, RP30E, RP40E, RPK40E	Mobile Ready	
			R10MA, RK40MA	RP10MA
송신주파수	RFID:13.56 MHz	RFID:13.5607 MHz, LPD:125 KHz	RFID:13.56 MHz RFID: 2.40 - 2.48 GHz	RFID:13.56 MHz RFID: 2.40 - 2.48 GHz LPD:125 KHz
수신주파수	RFID:13.56 MHz	RFID:13.56 MHz, LPD:125 KHz	RFID:13.56 MHz RFID: 2.40 - 2.48 GHz	RFID:13.56 MHz RFID: 2.40 - 2.48 GHz LPD:125 KHz
출력	RFID: 10m에서 47.544mV이하	RFID: 10m에서 47.544mV 이하, LPD:3 m 거리에서 500 μV/m이하	HF RFID: 10m에서 3108.1 μV/m BLE RFID: 10m에서 EIRP -3.9 dBm/1 MHz	LF RFID: 10m에서 31.6 μV/m HF RFID: 10m에서 498.9 μV/m BLE RFID: 10m에서 EIRP -3.9 dBm/1 MHz
전원	DC 16.0V		DC 16.0V	
전파형식	A1D		A1D	
발진방식	X-tal	X-tal (13.56MHz) Resonator(125kHz)	X-tal (13.56 MHz & 2.4 GHz)	X-tal (13.56 MHz & 2.4 GHz) Resonator (125kHz)
변조방식	ASK	ASK(13.56MHz), FSK(125kHz)	HF: ASK, BLE: GFSK	LF:FSK, HF: ASK, BLE: GFSK

Russia

Дата изготовления указана на маркировке оборудования

Представитель в Российской Федерации	
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Адрес	140573, РФ, Московская обл., Озерский район, с. Бояркино
Контактное лицо	Л.Н. Голубова
Телефон	+7 495 223 6008
e-mail	local.declarant@gmail.com

Japan MIC

" この装置は総務省の型式指定を受けています。" (総務省指定番号は第AC-xxxxxx号です) 本製品は電波を使用したRFID 機器の読み取り・書き込み装置です。 そのため使用する用途・場所によっては、医療機器に影響を与える恐れがあります

Israel (Mobile Ready RP10)

יטוחלא הלעפע ווישרמ רוטפו "וישמ" כיסל לב וניה ורישכמב שומישה יטוחלא הלעפע ווישרמ רוטפו חוקלה, דבלב חוקלה לא ימצע שומישל "קוב תלועפ" קר רחא יבנט יוניש לב כו תושעל אלו, ורישכמה לש תירוקמה הנטואה תא פליחלה רוטא

Brazil

Compliance Statement

Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução 242/2000, e atende aos requisitos técnicos aplicados. Para maiores informações, consulte o site da ANATEL - www.anatel.gov.br This product is homologated at ANATEL according to procedure regulated by Resolution 242/2000, and it complies with the applicable technical requirements. For more information, consult ANATEL website - www.anatel.gov.br

RF Warning Statement

Per Article 6 of Resolution 506, equipment of restricted radiation must carry the following statement in a visible location: Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário. This equipment operates in secondary character, meaning it does not have the right of protection against harmful interference, even against those the same character, and it cannot cause any interference to systems operating in the primary character.

ICLASS Keypad Readers
FOTO SELO ANATEL
Fabricante: HID Global Corporation
Modelo: ICLASS SE R40E, multiCLASS RPK40E
Este produto está aprovada pela Anatel, de acordo com os procedimentos regulamentados pela Resolução nº 242/2000 e atende aos requisitos técnicos aplicados.



"Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário"

ICLASS Non-Keypad Readers
FOTO SELO ANATEL
Fabricante: HID Global Corporation
Modelo: ICLASS SE R10, multiCLASS RP10E, multiCLASS RP30E
Este produto está aprovada pela Anatel, de acordo com os procedimentos regulamentados pela Resolução nº 242/2000 e atende aos requisitos técnicos aplicados.



"Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário"

Mobile Ready Readers
FOTO SELO ANATEL
Fabricante: HID Global Corporation
Modelo: ICLASS SE RP10MA
Este produto está aprovada pela Anatel, de acordo com os procedimentos regulamentados pela Resolução nº 242/2000 e atende aos requisitos técnicos aplicados.



"Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário"

UAE (RP10MA)

TRA REGISTERED NO: ER42687/15
DEALER NO: DA37204/14

UAE (RP40MA)

TRA REGISTERED NO: ER426861/15
DEALER NO: DA37204/14

Singapore

Complies with IMDA Standards DB106440

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In addition, the following certifications apply to the BTSmart Module:

