HID® Signo™ Reader

13.56 MHZ/125 kHz/2.4 GHz Contactless and Keypad Readers

SRD Models: 20, 20K, 40, 40K

Installation Guide

PLT-03704, Rev. A.3

Supplied parts

- HID Signo Reader (1)
- Installation Guide (1)
- Flat head/countersunk 0.138-20 x 1.5" self–tapping screws (2) – for installing the reader directly to a wall (no junction box)
- Flat head/countersunk 0.138-32 x 0.375" machine screws (3) – for Imperial (US) junction box installation (2) and attaching the reader to the mounting plate (1)
- Flat head/countersunk M3.5 x 12mm machine screws (2) – for Metric (EU etc) junction box installation
- Flat head/countersunk 0.138-32 x 0.375" security screw (1) – alternative anti-tamper screw for attaching the reader to the mounting plate
- 5-pin terminal connectors, terminal strip models only (2)

Recommended parts (not supplied)

- Cable, 5-10 conductor (Wiegand or Clock-and-Data), 4 conductor Twisted Pair Over-All Shield and UL approved, Belden 3107A or equivalent (OSDP)
- Certified LPS 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 the *Reader and Credentials How to Order Guide* (PLT-02630) for available options and part numbers
- Junction box

Specifications

	20	20K	40	40K
INPUT VOLTAGE (V DC)	12V DC			
CURRENT				
STANDBY AVG[1]	60 mA	65 mA	65 mA	70 mA
MAX AVG[2]	70 mA	75 mA	75 mA	80 mA
PEAK[3]	250 mA	250 mA	250 mA	250 mA
OPERATING TEMPERATURE	-30° F to 150° F (-35° C to 66° C)			
CABLE LENGTH	**Communication Lines** **Wiegand** = 500 ft - 18 AWG (152 m) 300 ft - 20 AWG (91 m) **RS-485** = Max bus length: 4,000 ft - 24 AWG (1,219 m) Max length between nodes: 1,640 ft - 24 AWG (500m)			
REGULATORY REF NUMBER	20	20K	40	40K
FREQUENCY	BLE: 2.4–2.480 GHz, HF: 13.56 MHz, LF: 125 kHz			
FCC IDS	JQ6-SIGNO20	JQ6-SIGNO20K	JQ6-SIGNO40	JQ6-SIGNO40K
IC IDS	2236B-SIGNO20	2236B-SIGNO20K	2236B-SIGNO40	2236B-SIGNO40K

1 Standby AVG - RMS current draw without a card in the RF field.
2 Maximum AVG - RMS current draw during continuous card reads. Not evaluated by UL.
3 Peak - highest instantaneous current draw during RF communication.

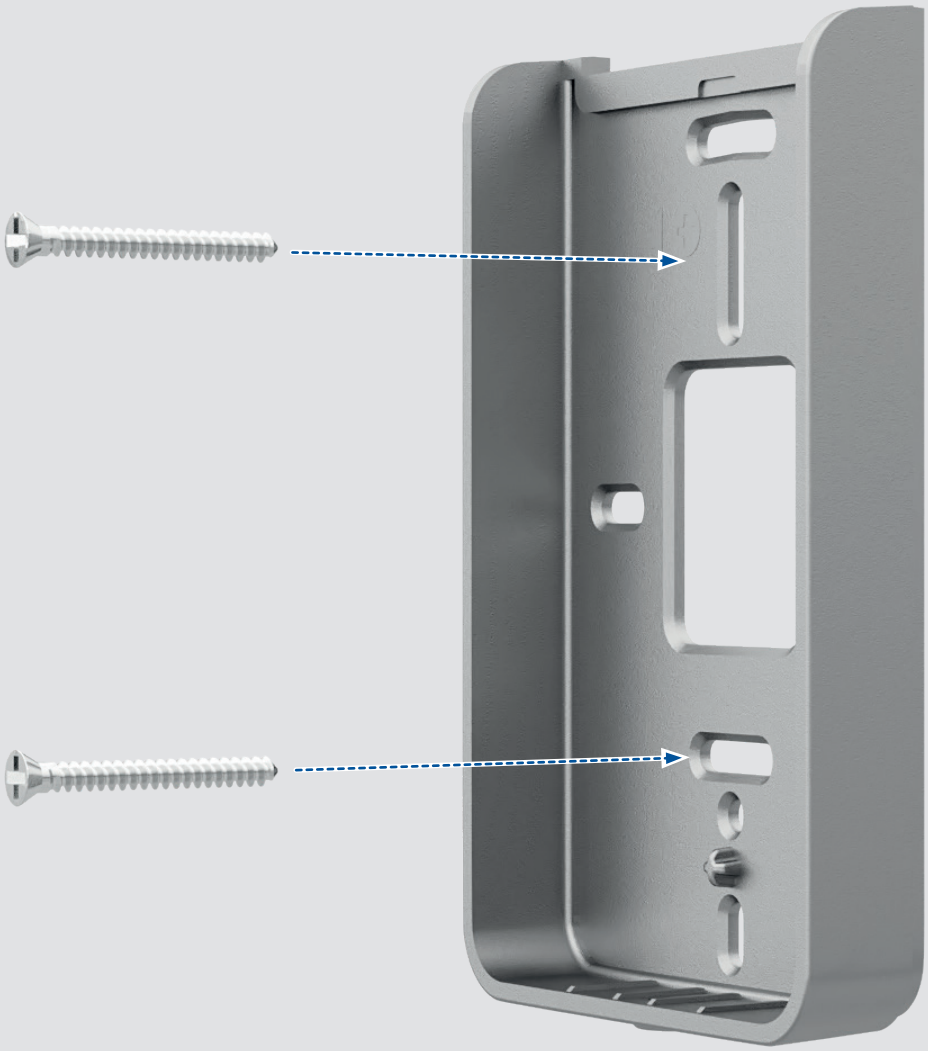
Optional features

Tamper – Enabled by default and activated when the mounting plate is removed. The tamper is normally closed and changes to open circuit between Tamper 1 and Tamper 2 control lines. Tamper 1 and Tamper 2 control lines are interchangeable. Either of these lines can be connected with the reader ground line to reduce the number of cable cores required in the reader cable. Tamper 1 and Tamper 2 are rated 0–12VDC at 100mA.

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

1 Mount the mounting plate

ATTENTION
Observe precautions for handling
ELECTROSTATIC SENSITIVE DEVICES



CAUTION: Install the reader on a flat, stable surface. Failure to do so may compromise the IP rating and/or tamper feature. If mounting on or near metal, a spacer is recommended for optimal read performance. Refer to the *Readers and Credentials How to Order Guide* (PLT-02630) for available options and part numbers.

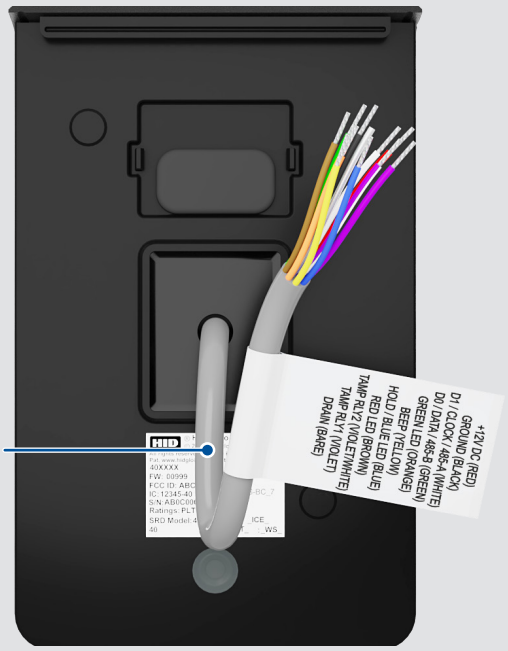
CAUTION: Use the supplied screws to ensure correct fitting and to avoid damaging the reader or mounting plate. HID is not responsible for damage due to use of unapproved mounting hardware.

For Imperial (US):
Use supplied flat head/countersunk 0.138-32 x 0.375” screws.

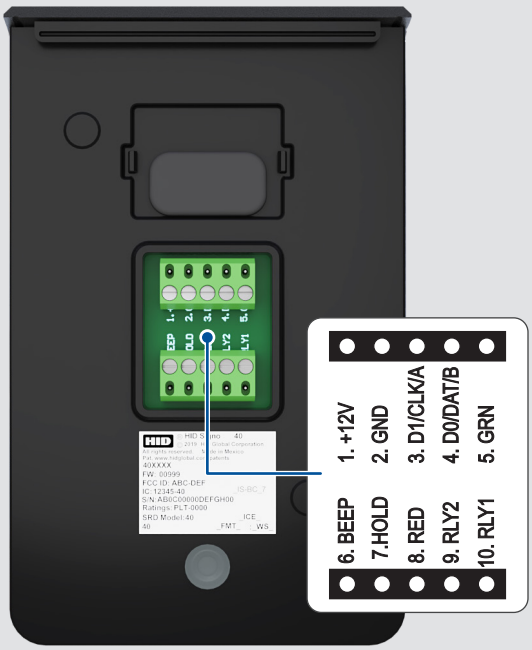
For Metric (EU etc):
Use supplied flat head/countersunk M3.5 x 12mm screws.

2 Wire the reader

Pigtail version



Terminal Strip version



PIGTAIL	TERMINAL	DESCRIPTION
Red	1	+VDC
Black	2	Ground (RTN)
White	3	Wiegand Data 1 / Clock / RS485-A*
Green	4	Wiegand Data 0 / Data / RS485-B*
Orange	5	LED Input (GRN)
Yellow	6	Beeper Input
Blue	7	Hold Input / LED Input (BLUE)*
Brown	8	LED Input (RED)
Violet/White	9	Tamper 2 (RLY2)
Violet	10	Tamper 1 (RLY1)
Bare	—	Drain (pigtail models only)

*Dependent upon reader configuration

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

Note: Previous iCLASS® readers had reversed RS-485 wiring (P2-7 & P2-6 - A & B). When upgrading to a HID Signo reader, ensure proper connections as defined above.

Note: Data 0 and Data 1 wires for Wiegand may be reused for OSDP. However, standard Wiegand cable may not meet RS485 twisted pair recommendations.

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

Note: For keypad configuration, with the keypad reader operating as 26 bit emulation, enter the facility code followed by # within five seconds of power-up. The facility code must be entered as three digits (i.e., for a facility code of 10 enter 0-1-0-#). If unsuccessful, the reader LED displays solid red. Power-cycle the reader and retry entering the facility code.

HID Signo readers use facility codes between 1-255, and no default is set. Once a facility code is entered, the reader LED displays violet, then solid red. Then, power-cycle the reader. If there are two short beeps after entering a PIN, the reader facility code is not configured. In this case, power-cycle the reader and retry entering the facility code.