LiNEGUARD

Line Nano Prox

Matrix Nano Keypad
(Coming soon)

Line Nano Keypad

Installation guide

13,56MHz & 2,4GHz (NFC/BLE) Proximity reader with RS485 (OSDP, SSCP) & TTL (Wiegand) protocols

UP

DOWN

Terminal		Description
D+	🔴	+VDC
D-	⚫	Ground (RTN)
W0	🟠	Wiegand 0 / Data
W1	🟡	Wiegand 1 / Clock
LV	⚪	LED 0
LR	🟣	LED 1 / D0 RS485 A
BZ	🟢	Buzzer / D1 RS485 B
TOR/GND	🔵	Tamper / Ground

── Wires

Several switches (☐) are located on the electronic board accessible from the back of the reader.

RS485/Wiegand: Defines whether the reader communicates with the access control unit using a RS485-based protocol (SSCP, OSDP V2) or TTL (Wiegand).

Address 0/1: Allows you to change the reader's addressing without software intervention. This is useful for easily assigning two readers to a door.

120R: LiNEGUARD readers include a 120Ω end-of-line resistor. This resistor can be disabled if the access control unit to which the reader is wired is equipped with one.

End of life

Do not dispose of this product with household waste. Take it to a WEEE collection point or an approved WEEE center to ensure its recycling.

A founding member of Recylum, find out more at www.recylum.com

Regulatory information

FDI Access, the manufacturer, declares under its sole responsibility that the readers in the LiNEGUARD range comply with the applicable Union harmonization legislation: RED directive 2014/53/UE from 05/22/2014

- Electro magnetic compliance (EMC): EN 301 489-3 V1.6.1
- Radio : EN 302 291-2 V1.1.1
- Sécurité : EN 50364 (07/2010) & EN 60950-1 (2006) + amendments
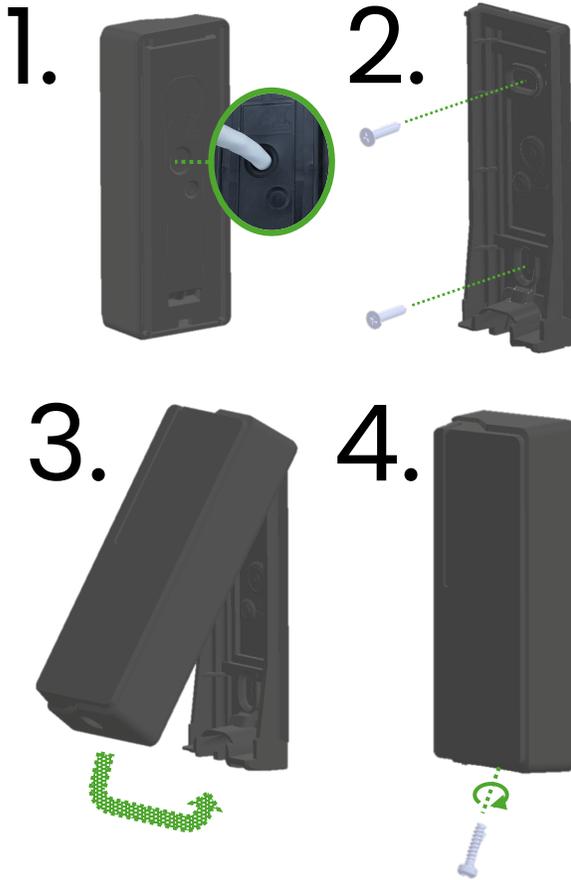
1. Using a Phillips screwdriver (smaller in diameter than the cable), pierce the flexible membrane on the back of the reader bracket.

⚠ To avoid compromising the membrane's watertightness, do not drill crosswise with a cutter. If two cables need to reach the reader, drill two holes in the membrane.

2. Screw the reader bracket on the wall, after first drilling the wall and inserting wall plugs. Select the used screws according to your wall mount.

⚠Screw diameters must be between 3 and 4 mm. All standard screw head and socket shapes are accepted.

3. After correctly wiring the reader (see page 4), swing the device onto its support. The notch at the top of the plastic insert fits into the upper part of the bracket.

4. Close the reader securely by pressing and tighten the fixing screw at the bottom of the device by hand only, using a T15 Torx screwdriver. Be careful to respect the angle of the screw (see figure 4).

⚠ Be careful not to exceed the tightening torque of 0.6Nm. Beyond this, there is a risk of failing the screw barrel of the base.

This installation procedure applies to LiNEGUARD readers from the Matrix Nano and Line Nano product lines.

The readers incorporate all the technologies offered by the LiNEGUARD range. They operate in four different modes:
- **CSN:** Reads the card serial number (CSN) of badges. This is an unsecured mode, but it allows the device to read any card from any manufacturer, complying with the ISO 14443 standard.
- **PRESET:** Keys pre-configured by FDI Access. More secure, the reader is ready-to-use.
- **CUSTOM:** Allows the user to configure their own security keys via the LiNEGUARD Studio software.
- **MOBILE:** Allows identification to be unlocked via smartphone (Bluetooth & Apple/Google Wallet).

Readers in CSN or PRESET mode have their own reference. CUSTOM or MOBILE modes are accessible by swiping a specific activation card in front of a reader in CSN or PRESET mode. For more information, contact our teams at sales@fdi-access.com.

POWER SUPPLY

Operating voltage	12VDC (Min: 7VDC / Max: 28VDC)	
	Line Nano Prox	**Line Nano Keypad**
Energy consumption (12V)	Low: 20 mA | 0,25 W Mid: 35 mA | 0,5 W High: 145 mA | 1,7 W	Low: 25mA | 0,25 W Mid: 35mA | 0,5 W High: 145 mA | 1,7 W

COMMUNICATIONS & PROTOCOLS

RS 485 (OSDP V2, SSCP)	4 wires (2x data wires & 2x power supply wires including GND) - 1000m max or 5 wires (2x data wires, 2x power supply wires & 1x GND wire) – 1000m max **It is essential to wire the same pair of wires for RS485 outputs A & B.**	
TTL (Wiegand - 26 to 58 bits)	Up to 8 wires– 100m max	
Wiring recommandations	Cross-section of 0.22mm² – Shielded pair cable to prevent signal interferences.	
Connection	Terminal stripe	

READING DISTANCES

MIFARE Classic	Up to 40 mm	
MIFARE Plus & DESfire	Up to 20 mm	
BLE	Up to 25m in open fields (depending on smartphone)	
NFC	Up to 40mm	

LEDS AND BUZZER

Line series	6 LEDs light signature – RGB 256	
Matrix series	25 LEDs Matrix light signature - RGB 256	
Buzzer	Adjustable in tone	
LEDs & buzzer customization	Via the LiNEGUARD Studio configuration software (available with license)	

PROTECTION

Tamper	Sensor detection	
Mechanical protection	IK10	IK08
Environment protection	IP65	
Operating temperature	-40° to +60°C | -40° to +140°F	

COMPATIBLE PRODUCTS

Controller	Every OSDP V2, SSCP or Wiegand controller. IPassan controller in 2Wires or RS485 FDI protocol.	
Chip compatibility	All 13.56MHz ISO 14443. ISO 15693 (CSN only).	

HARDWARE

Dimensions (h x w x d)	109,8 x 41,8 x 23,5 mm | 4.29 x 1.61 x 0.90 in	
Weight	91g | 3.21 oz	95g | 3.35 oz

Readers and their behaviors are configured using the LiNEGUARD Studio software, accessible by license at the following URL: www.studio.lineguard-access.com.