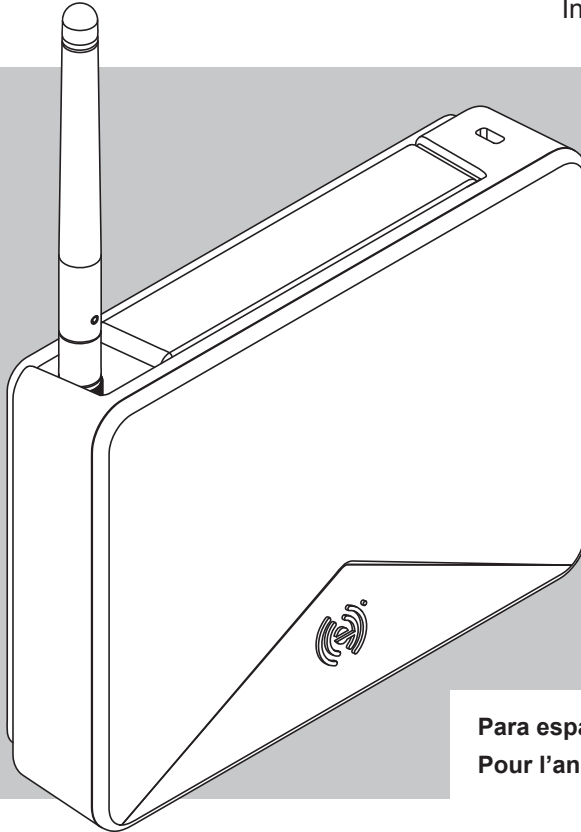**SCHLAGE**

Gateway

Model GWE

Installation Instructions
User Guide

Para español, pág. 16.
Pour l'anglais, voir la page 30.

For the latest Installation Instructions and User Guide for the ENGAGE Gateway and all other ENGAGE enabled devices, visit:

Para obtener las últimas Instrucciones de Instalación y la Guía del Usuario para la Gateway ENGAGE y otros dispositivos provistos por ENGAGE, visite el sitio:

Pour les instructions d'installation et le manuel de l'utilisateur les plus récents pour la Gateway d'ENGAGE et tous les autres dispositifs actionnés par ENGAGE, rendez-vous à l'adresse :

www.allegionengage.com

Table of Contents

General Architecture

The ENGAGE Gateway can work in two modes.

1. **RSI Mode**
   In this mode, the Gateway communicates with an access control panel (ACP) and alliance partner access control software to control the system. Power is supplied by the ACP power connector (12 or 24V) or the wall power supply. Data is supplied by either 2 or 4 wire RS-485 connection from the ACP.

2. **IP Mode**
   In this mode, the Gateway communicates with an IP-based host. Power is supplied by either POE on the Ethernet cable or the wall power supply that is included with the Gateway. Data is supplied over Ethernet.

Features

Power Status

Power status is indicated by the status LED located on the top face of the ENGAGE Gateway.

Communication Status

When the Gateway is configured to communicate with an RS-485 access control panel, the transmit and receive status is indicated with two LEDs, located on either side of the RS-485 connector.
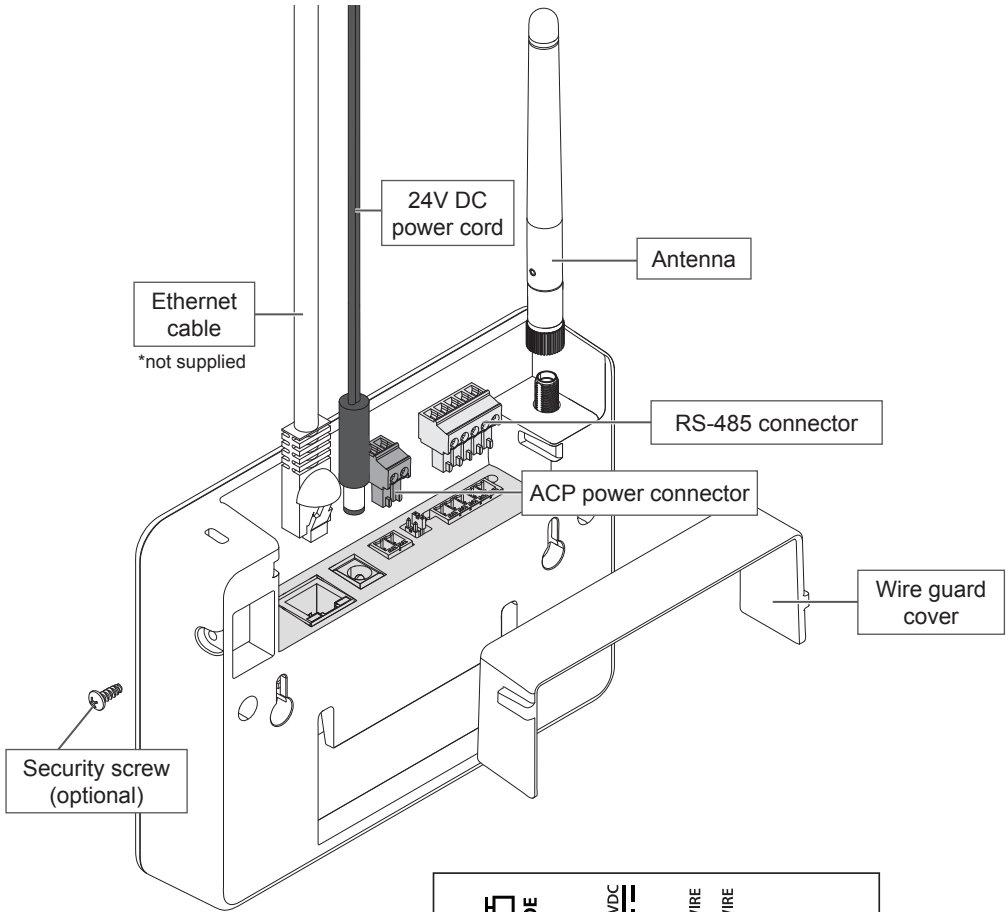
When the Gateway is configured to communicate with an IP-based host over Ethernet, the status of the LAN link is indicated on the Ethernet port of the Gateway.

Customer Service
1-877-671-7011   www.allegion.com/us

Port Guide

24V DC power cord

Antenna

Ethernet cable
*not supplied

RS-485 connector

ACP power connector

Wire guard cover

Security screw (optional)

IP/POE

12-24VDC
+ -

2 WIRE
4 WIRE

GND
Tx +
Rx +
Tx -
Rx -

Top View

Kensington lock slot

Factory Default Reset button

PoE/ Ethernet Port

ACP DC power input

RS-485 Port

Antenna

Power port
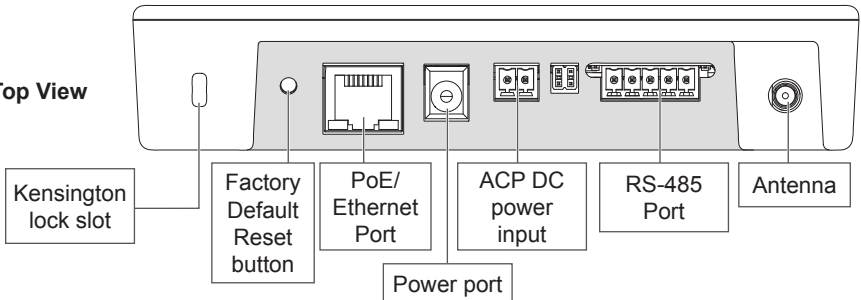
Installation Instructions

Quick Start Guide
1. Create an ENGAGE account at:
   https://portal.allegionengage.com/partner
   See "Create a new ENGAGE account" below.
   Do NOT use the mobile app to create your account.
2. Install locks.
3. Commission locks using the ENGAGE mobile application. See the User Guide that came with the lock.
4. Select installation location for the Gateway. See **Determine the location** on page **4.**
5. Mount and select a Gateway power option and wire Gateway to host or ACP. See **Mounting Options** on page **5** and **Typical Gateway to ACP wiring diagrams** on page **10.**
6. Commission the Gateway using the ENGAGE mobile application. See **Commission the Gateway on page 7.**
7. Confirm that the Gateway is communicating with access control host or access control panel. See **Host/Panel Communication with Gateway** on page **7.**
8. Link locks and Gateways. See **Linking Locks and Gateways** on page **7.**

Create a new ENGAGE account
An account is required to use the ENGAGE cloud-based web and mobile tools.

Create an ENGAGE account on the web at **http://portal.allegionengage.com/partner**

After creating a new account, you will receive a verification email. **You must click on the link in the message to verify your account.** This is required to keep your account active.

NOTE
For IP Mode: You have created an ENGAGE partner account. The alliance partner access control software provider will need to create a unique site for you and invite your account to have access to this site before you can add any devices. When logging into your account, if you have access to multiple sites you will be prompted to select the site in which you want to work.

Download the ENGAGE mobile application

WARNING
Do not create a new ENGAGE account from the ENGAGE mobile app. Navigate to **http://portal.allegionengage.com/partner** to set up your account, then sign into the app.

Search for "Allegion ENGAGE" on the App Store (iOS) to download.

Install and commission locks
Reference the Installation Instructions and User Guide that came with the lock. Documentation for all ENGAGE enabled devices can be found at **www.allegionengage.com**.

Determine the location
The Gateway communicates wirelessly using Bluetooth to ENGAGE enabled locks. Wireless signals are diminished by walls, distance, metal objects or barriers. Consider the following when placing the Gateway:
- Communication may be possible up to 100 feet (30.5 meters) when clear line-of-sight is available.
- Do not mount the locks and the Gateway on different floors. The signal may be degraded and functionality could be severely limited.
- Do not mount the Gateway on a metal surface. A separation of at least one inch must be maintained in all directions from any metal.
- Signal will not pass through metal walls or metal mesh in the walls (stucco).
- The Gateway wireless antenna should be vertically oriented.

Locations and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70 for U.S. and Canadian Electrical Code for Canada.
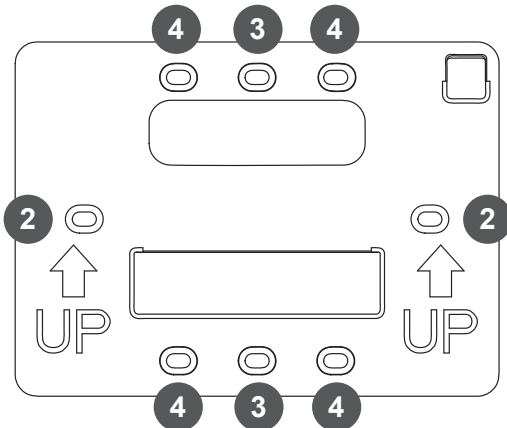
Mounting Options

1 Remove mounting plate from Gateway.

Slide mounting plate down to remove.
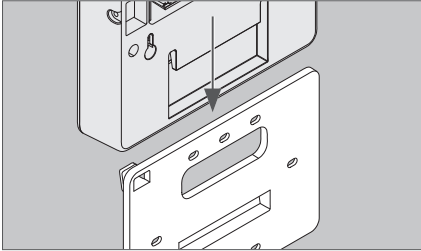
2 Choose mounting option.

There are four different mounting options.

1 **Desk mounting:** Does not require screws. Replace mounting plate, and place on flat surface, mounting plate down.

2 **Wall mounting:** Place the mounting plate against the wall in the desired location and mark the indicated holes with a pencil.

3 **Single gangbox mounting:** Place the mounting plate with the holes aligned with the screw holes in the gangbox.

4 **Double gangbox mounting:** Place the mounting plate with the holes aligned with the screw holes in the gangbox.

3 Route wires.

Route wires through top hole in mounting plate.
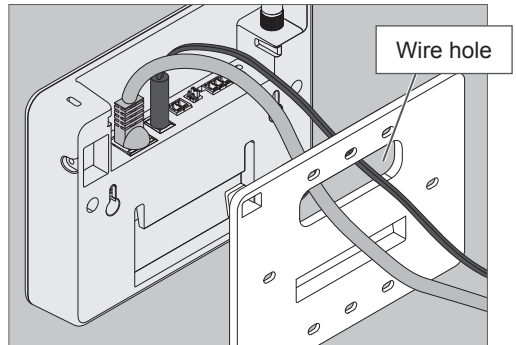
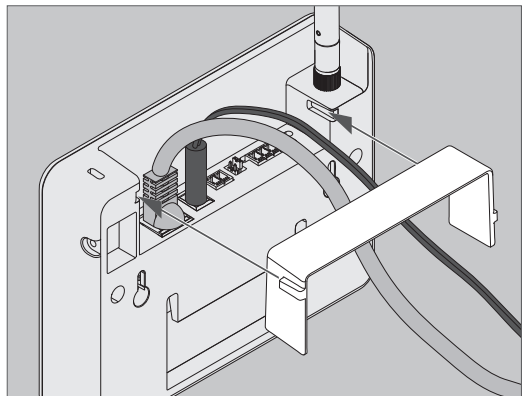
Wire hole

IMPORTANT

Leave some slack when routing wires through mounting plate to avoid damaging wires.

4 Secure mounting plate.

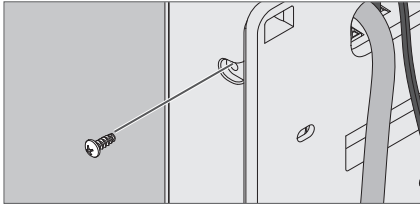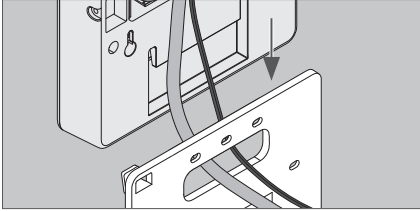Use #6 screws to secure mounting plate to wall or gangbox. Use the holes indicated on step 2.

5 Install wire cover.

Align the notches on the wire cover to the Gateway, then slide straight in. **Do not pinch wires!**

6 Slide Gateway onto mounting plate.

Taking care not to pinch wires, slide Gateway straight down until it is firmly seated on the mounting plate.

Install optional security screw for added security.

Power Options

The Gateway can be powered in three ways.
Use only 1 power option at a time!

1 Power over Ethernet (PoE)

Power is supplied through Ethernet port. Category 5e cabling required. Facility must have compatible powered Ethernet connection.

1a Plug powered Ethernet cable into Ethernet port.
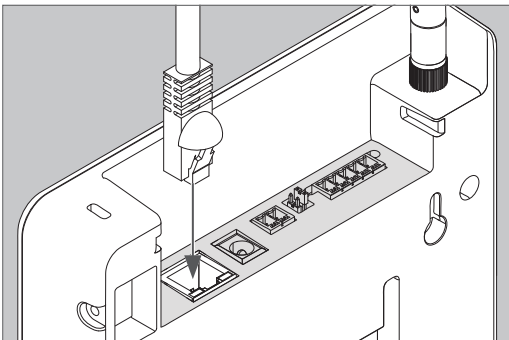
1b Check Gateway for LED indicator.

2 Supplied 24V power adapter

2a Plug power adapter into wall socket.
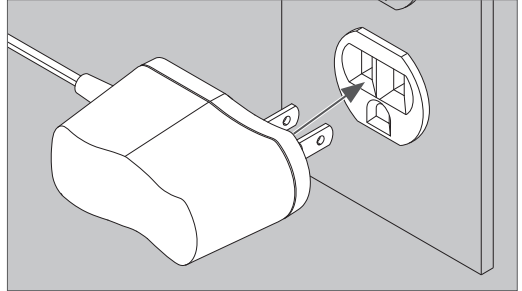
CAUTION

Use only Schlage supplied power supply.

2b Plug power cord into socket.
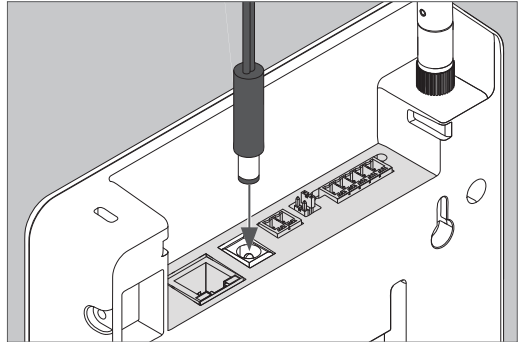
2c Check Gateway for LED indicator.

3 Using ACP 2-wire DC power input

Power is supplied by an access control panel or access control power supply. See next section for detailed instructions.

Commissioning and Linking

Commission the Gateway
1. Power the Gateway.
   The Gateway will go through a power on self-test. When the light on the Gateway turns solid red, it is ready to be commissioned.
2. Select "Connect" from the tab bar in the ENGAGE application.
3. Select the "+" icon in the upper right corner to look for available ENGAGE devices.
4. Select the ENGAGE Gateway.
5. Follow the commissioning wizard.
   Only select and populate the tab for the appropriate mode selection screen (RSI or IP).

**NOTE**

For IP Mode: You have created an ENGAGE partner account. The alliance partner access control software provider will need to create a unique site for you and invite your account to have access to this site before you can add any devices. When logging into your account, if you have access to multiple sites you will be prompted to select the site in which you want to work.

Host/Panel Communication with Gateway

The Gateway supports RSI and IP data connections.

IP Mode

To use the Gateway with an IP connection, use an Ethernet connection for data. Use alliance partner access control software to configure the Gateway. IP communication will depend on installation site and network topology. Schlage recommends that the Gateway is connected to a network behind a firewall.

RSI Mode

Connect ACP to Gateway using either 2 or 4 wire RS-485 connections. Use your ACP to configure the Gateway.

The Gateway has RS-485 communication status two LED indicators located near the RS-485 port. The green LED will flash when the Gateway detects RS-485 traffic. The red LED will flash when the Gateway is transmitting data back to the ACP.

See your access control software documentation for more information.

Linking Locks and Gateways

The linking process for an ENGAGE Gateway and ENGAGE enabled lock requires remote linking by the IP-based access control host or RSI-enabled access control panel. The steps to link will depend on the host configuration of the Gateway. See below for either IP Mode or RSI Mode link instructions

IP Mode
1. Confirm that both the Gateway and locks are commissioned into the same ENGAGE site.
2. Using IP-host commands, issue a scan request of the Gateway.
   Note: make sure that the ENGAGE mobile application is not connected to any locks during this scan request.
3. Using ENGAGE IP-host commands, issue a link creation command to the Gateway.
4. Wait for the link procedure to complete.
5. The Gateway will flash green three times after successful link. The lock should also indicate a successful link.

RSI Mode
1. Confirm that both Gateway and the locks are commissioned into the same ENGAGE partner-managed site.
2. Put the Gateway into link mode by having the ACP issue a set link command to the Gateway over the RSI protocol. The Gateway will start flashing, alternating red then blue while it is in link mode.
3. Put the desired lock into link mode. See page 8 for instructions.
4. The Gateway will flash green three times after successful link. The lock should also indicate a successful link.

Enter link mode for Schlage NDE-Series locks
1. Hold the interior lever.
2. While holding interior lever, apply a credential.
3. Wait until the lock begins to flash alternating red and green, then release the interior lever. It should take approximately 8 seconds to start flashing after the credential presentation.

Device Linking Responses

Model	Link Mode	Lights/Beeps
NDE80	Success	green flashes 4 beeps
	Fail	4 red flashes 4 beeps

If linking is unsuccessful:
1. Confirm that both devices have been commissioned on the same ENGAGE site.
2. Move the Gateway 1 to 2 feet (30 to 60 cm) in any convenient direction until all locks link successfully. If still not successful, move the Gateway closer to the locks and repeat the pre-installation test, or add more Gateways.

WARNING

The lock will not show up in the Connect screen of the ENGAGE mobile app after linking to the Gateway.

To reconnect to NDE, while holding the interior lever, apply a credential. Then release the lever. Refreshing the Connect screen in the app will connect to the lock for up to 30 seconds.

Gateway to Access Control Panel Connection

CAUTION

Disconnect the Access Control Panel power and batteries before wiring the Gateway to the panel.

WARNING

Because every Access Control Panel is different, always check the panel's instruction manual for appropriate interface wiring.

The EIA RS485 specification labels the data wires as "A" and "B", however, many RS485 products label their wires "+" and "-". Some products associate the "+" signal with "A", some with "B". Reversing polarity will not damage either RS485 device, it will just not communicate; if it does not work, switch the connections.
- The wires from the Access Control Panel must be a shielded twisted pair.
- For compliance with UL 294, product must be used with a UL 294 Listed Access Control Panel or unit, respectively.
- Must be used with a UL 294 Listed power-limited Power Supply capable of sourcing at least 250mA @ 12 or 24 VDC.
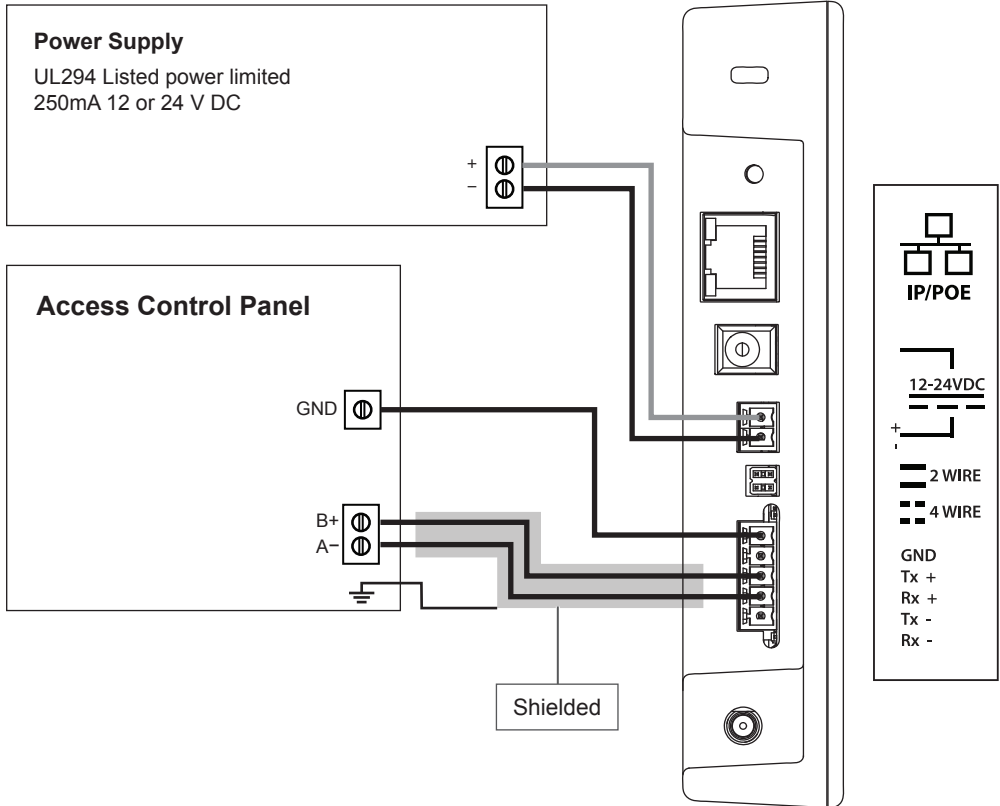
Access Control Panel Connections

Gateway Connector	Gateway	Access control panel signal	Description
Power	+	12 or 24 VDC	• Gateway inputs for 12 or 24 VDC power. • Draws 250mA max. • If the Access Control Panel (ACP) reader power outputs do not source enough current for the Gateway, use the ACP main regulated 12 VDC power supply or a separate UL294 Listed 12 or 24 VDC power-limited power supply. • Power input is non polarized.
	–	DC Ground	
RS485	Rx –	– Receive Data	• 4-Wire or 2-Wire bi-directional RS485 communication port for interface to Access Control Panels. • 2-Wire installation: Both 2|4 wire jumpers should be added. • 4 -Wire installation: Both 2|4 wire jumpers should be removed. • Refer to following pages for typical wiring diagrams.
	Tx –	– Transmit Data	
	Rx +	+ Receive Data	
	Tx +	+ Transmit Data	
	GND	Signal Ground	

Typical Gateway to ACP wiring diagrams

WARNING

The diagrams included show typical ACP to Gateway wiring. Refer to your ACP documentation for specific wiring information.

Power Supply

UL294 Listed power limited
250mA 12 or 24 V DC

Access Control Panel

GND

B+
A−

Shielded

IP/POE
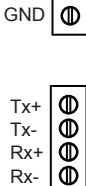
12-24VDC

2 WIRE
4 WIRE

GND
Tx +
Rx +
Tx -
Rx -

2 Wire Diagram

Power Supply

UL294 Listed power limited
250mA 12 or 24 V DC

+
−

Access Control Panel

GND

Tx+
Tx-
Rx+
Rx-

Remove jumper

Shielded

IP/POE

12-24VDC

+

2 WIRE

4 WIRE

GND
Tx +
Rx +
Tx -
Rx -
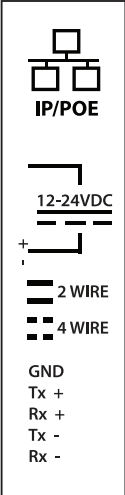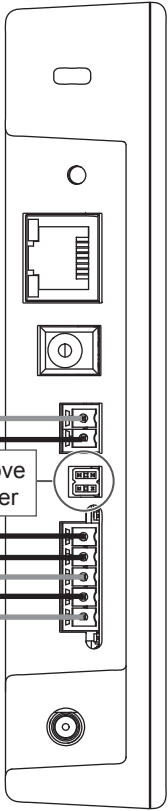
4 Wire Diagram

Cable/Wire Specifications

Application	Part number	AWG	Description	Max distance
DC Power Input	Belden 8760 or equivalent	18	2 Conductor	1000 Feet (305 meters)
RS485	Belden 9841 or 9842 or equivalent, or as specified by local electrical codes or the ACP provider	24	2 or 4 Conductor shielded	4000 Feet (1219 meters)

Factory Default Reset (FDR)

A Factory Default Reset (FDR) will return the ENGAGE Gateway settings to the original settings as shipped from the factory. A FDR removes configurations, databases, and requires the device to be recommissioned. A FDR will not remove the device from your ENGAGE account. If you wish to move the Gateway to a different ENGAGE site, you must also login to the other site and recommission after completing a FDR on the Gateway and deleting it from the previous site.

A   Press and hold the FDR button.

Hold the button until the Gateway Status LED flashes green two times and remains solid. After the indicator flashes twice, you may release the FDR button.
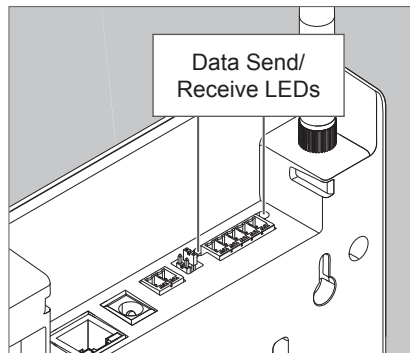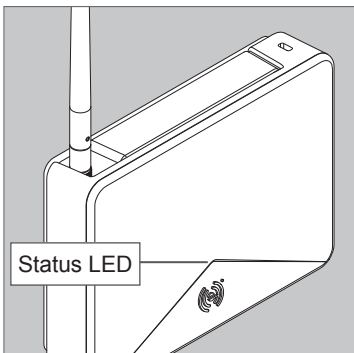

Factory Default Reset button
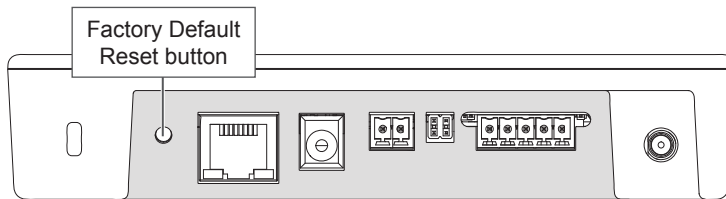
Top View

B   Wait for the Gateway to complete FDR.

After starting the FDR process the Gateway indicator will be solid green for a moment and reboot. The reboot process can take a few minutes. During the boot process the Gateway indicator will be solid amber. The Gateway will be in a factory default state when the indicator is solid red.

LED Indicator Guide

Status LED	Meaning	Type of LED User Interface
Solid amber	Gateway is booting up	State
Long flash amber, repeating	Gateway Wi-Fi access point is active	State
Fast flash x2, repeating for 1 minute	Factory default reset did not complete successfully	Status code
Fast flash x3, repeating for 1 minute	Power on self test failure	Status code
Solid blue	Gateway is commissioned, normal operation	State
Long flashing blue	Mobile application is connected to Gateway	State
Fast flash blue, repeating	Gateway is in link mode - connected and linking to new lock	State
Alternating long flashing blue and red	Gateway is in link mode - searching for new lock	State
Solid red	Factory Default State / Uncommissioned	State
Fast flash red x4	Linking to lock was not a success	Status code
Alternating green and red long flashes, repeat	Gateway is updating its firmware	State
Solid green	Gateway is in process of reseting to default settings	State
Fast flash green x2	Gateway will begin a factory default reset	Response to user action
Fast flash green x3	Linking to lock was a success FW upgrade succeeded	Status code

Status LED

Data Send/ Receive LEDs

Troubleshooting

Problem	Possible cause	Solution
The Gateway does not communicate with the Access Control Panel.	The RS-485 cable between the Gateway and the Access Control Panel may be damaged.	Replace the RS-485 cable between the Gateway and the Access Control Panel.
	The RS-485 signals between the Gateway and the Access Control Panel may be wired incorrectly.	Refer to Gateway wiring diagrams and ACP system documentation for proper wiring instructions.
	The RS-485 address of the Gateway may not match the RS-485 address assigned in the Access Control Panel.	Change the RS-485 address of the Gateway to match the RS-485 address assigned within the Access Control Panel.
	The 2|4 wire jumpers (P5) may be improperly installed for communication with Gateway 4-Wire or improperly removed for communication with RS-485 2-Wire.	Install the 2|4 wire jumpers when communicating with RS-485 2-Wire. Remove the 2|4 wire jumpers when communicating with RS-485 4-Wire. Refer to typical Gateway wiring diagrams.
The Gateway does not communicate with Wireless Access Point Modules (WAPMs)	The Gateway antenna may not be properly installed.	Ensure that the Gateway antenna is installed and properly seated.
	Wiring may cause interference with the antenna	Check to ensure that wiring is properly routed and the area around the antenna is clear of any wire. See wire routing diagrams for more information.
	The Gateway may not be linked to the lock	Link the Gateway to the lock. See **Linking Locks and Gateways** on page **7**.

Customer Service
1-877-671-7011   www.allegion.com/us

UL Statements

Environmental Ratings tested to: Ambient 0 and 49 C, 85% Humidity at 30 C.

UL294 Access Control Levels tested to:

Destructive Attack LV 1
Line Security LV 1
Endurance LV 4
Standby Power LV 4

The unit is intended to be installed within the Protected Area. The unit is not intended for connection to outside wiring, covered in Article 800 in NEC/NFPA 70.

The control unit must be powered by a Listed UL 294 Class 2 power limited power supply, or UL 294, UL294B Listed PSE/PoE Injector rated 48V dc nominal, with range of 37 - 57 V dc capable of providing 4 h of standby power. The minimum conductor gauge permitted to connect between the PoE PSE or power injector and the PD shall be 26 AWG.

Provided A/C adaptor not for use with UL 294 Listed Gateway.

ACP DC power input, RS485, PoE/Ethernet are Class 2.

Port	Voltage	Current
RS485 data terminal block	-7VDC to +12VDC	+/-100uA
RS485 power terminal block	+12VDC to +24VDC	0.25A
Barrel Plug	+24VDC	0.25A
PoE	+48VDC	58mA

Compliance with IEEE 802.3 (af) specifications was not verfied as part of UL 294 / UL 294 B.

The unit has been tested for compatibility with a UL 294 Listed, NDE-Series, Model NDE80 Schlage Engage Wireless Lock.

The IP Mode of the ENGAGE Gateway was not evaulated by UL to provide access control functions between the ACP and locks.

Locations and wiring methods shall be in ac cordance with the National Electrical Code, ANSI/NFPA 70 for U.S. and Canadian Electrical Code for Canada.

FCC Statement

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 communication. 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 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.
Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
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.

FCC Radiation Exposure Statement
To comply with FCC/IC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20 cm separation distance between the antenna and all persons.

Industry Canada Statement
Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

Industrie Canada Déclaration
Conformément à la réglementation d'Industrie 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 Industrie 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 (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Industry Canada Radiation Exposure Statement
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.

Industrie Canada l'exposition aux radiations
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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.