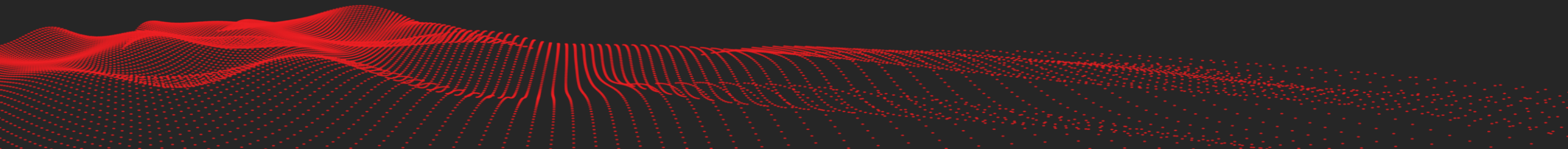
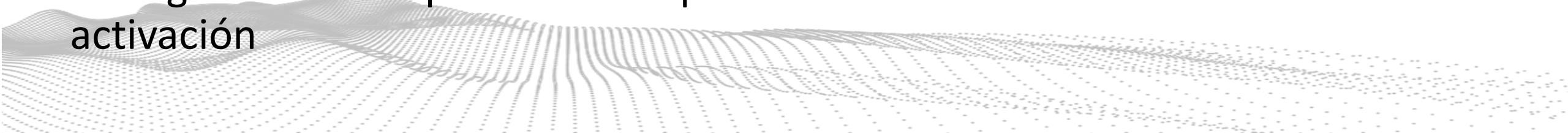


MODBUS TCP/IP

Guia

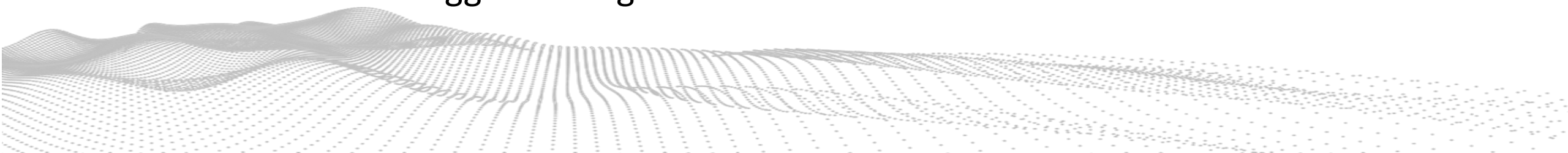


Contenido

- Generalidades
 - Como es Modbus con el Gateway CLSS
 - Que y donde debo comprar
 - Como obtengo mi funcionalidad Modbus
 - Como y donde activo la funcionalidad Modbus CLSS
 - Instalando la funcionalidad Modbus en el Gateway
 - Configurando mi Gateway CLSS para leer modbus
 - Lectura de Modulo 4-20 mA
 - Configuraciones importantes después de la activación
- 

Generalidades

- La licencia una vez comprada es vitalicia en la vida útil del Gateway
- 1 Gateway CLSS puede soportar hasta 10 FCAP's
- La tabla de registros viene en el manual del Gateway CLSS en la página 44
- Soporta hasta 2 Modbus clientes/masters
- Solo es soportado usando una IP estática
- En el puerto J4 se puede tener en paralelo la conexión a Internet y la supervisión del cliente Modbus
- Para activar la licencia en el Gateway de CLSS se necesita internet
- Si no se requiere tener monitoreo puede solo trabajar la funcionalidad Modbus sin tener conexión de internet.
- No tiene visibilidad de valores Análogos, pero si puede reaccionar con base a los Triggers configurados en el Panel



Como es Modbus con el Gateway CLSS

Ahora Modbus será una herramienta que será funcional a través del Gateway de CLSS esto nos ayudara a unificar todas las soluciones en una tarjeta

Que y donde debo comprar

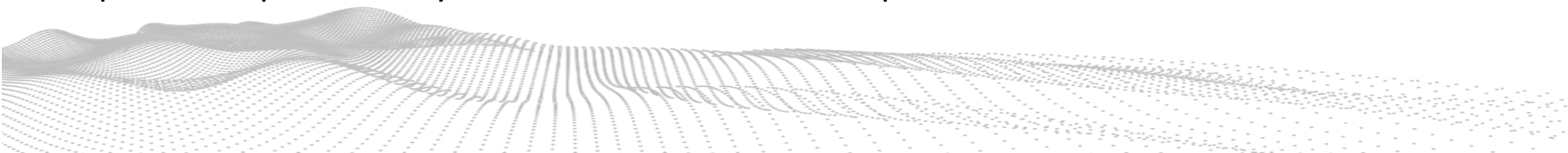
¿Que necesito para tener Modbus a través del Gateway CLSS?

HON-CGW-MBB—Gateway

50160636-001- Cerradura y cable NUP-NUP

MODBUS-CGW—activación modbus para Gateway

250 Tokens (Branch)--si será para un cliente tuyo que requiera monitoreo también o simplemente para tener ya formada la estructura * opcional



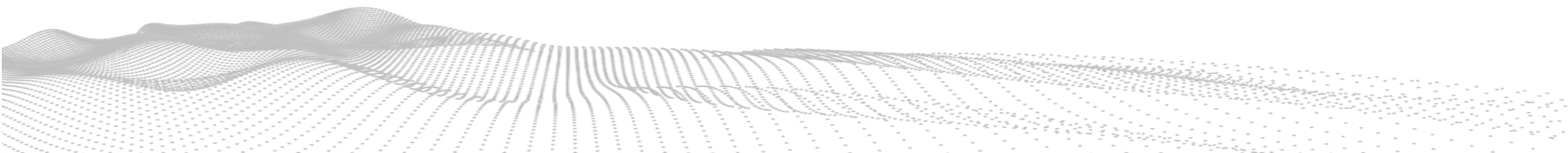
¿Una vez comprado como obtengo mi activación?

Una vez adquiridos los números de parte 2 de ellos son virtuales

MODBUS-CGW—activación modbus para Gateway

250 Tokens (Branch)--si será para un cliente tuyo que requiera monitoreo también o simplemente para tener ya formada la estructura * opcional

Estos deberán ser cargados por customer service en su portal principal o en algún branch previamente solicitud



Una vez cargado el item virtual lo encontraras en tu portal en la parte de Manage acces/ Features/Gateway/available subscriptions

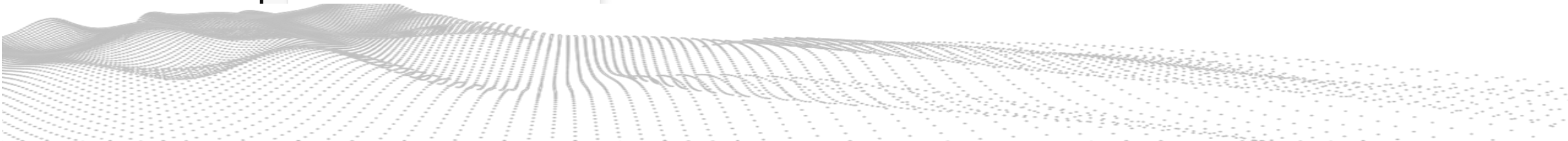
Manage Access

View and manage your Subscriptions and Features..

Subscriptions

Features

Panel	Available Subscriptions	Usage History	Renewal
Workstation	NAME	AVAILABLE FEATURES	T
Gateway	Modbus Service	1	7
	BACnet Service	0	C



Como y donde activo mi funcionalidad Modbus

Una vez teniendo la activación disponible en su portal, hay 2 caminos por tomar;

- 1.- crear un cliente en mi portal
- 2.- crear un cliente en el portal del Branch

El cliente debe existir ya que la activación Modbus necesita tener antes un Gateway Activo, es decir instalado como si fuese a ser para monitoreo solo para hacer la activación.

The screenshot shows the Honeywell Connected Life Safety Services portal. The header includes the Honeywell logo and 'Connected Life Safety Services'. The main navigation bar has a 'Honeywell LAR' dropdown and user information for 'Jona'. The main content area is titled 'Customer & Employee Management' and 'Manage your Customers and Employees'. On the left, there is a sidebar with icons for various functions. The main area has two tabs: 'My Customers' (highlighted in yellow) and 'My Employees'. Below the tabs, there is a table with columns 'NAME' and 'CUSTOMER ADDRESS'. The table contains one entry: 'Modbus Cliente 1' (highlighted in yellow) with the address 'V. Dr. Salvador Nava Martinez 3125, San Luis Potosi, 78260'. Above the table, there are buttons for 'EXPORT' and 'ADD NEW CUSTOMER' (highlighted in yellow). A search bar with the text 'Modbus' is also visible. At the bottom right of the table, it says '1 - 1 of 1' with navigation arrows.

Una vez creado el cliente, como se comentó antes debemos hacer la instalación del Gateway y asociarlo al cliente como la instalación normal de un Gateway (ver documento de alta de Gateway) para esto usaremos la aplicación celular CLSS

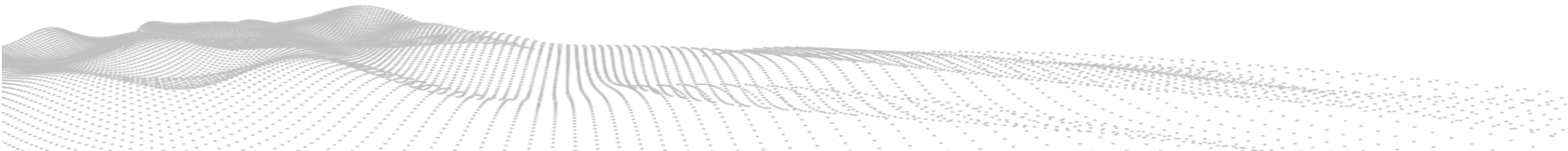


Siempre hay que verificar que el Firmware de nuestro Gateway CLSS esta en la ultima versión así como nuestro panel en la versión 27 en adelante

The screenshot shows the 'Settings' page for 'Honeywell Connected Life Safety Services'. The 'Gateway Management' section is active, displaying a table of installed gateways. The table includes columns for Gateway ID, Customer & Site Name, Current Firmware Version, and Connected Buildings & Panels. The first gateway is a 'Fixed Gateway' with ID 'OC: 19a41ca10c69', firmware '3.2.4.18', and no buildings/panels. The second is a 'Checkpoint Hub' with ID 'OC: e0f1a35b6937', firmware '3.0.3.132', and no buildings/panels. The third is a 'Fixed Gateway' with ID 'OC: d57825a65807', firmware '3.0.3.60', and one building/panel. The fourth is a 'Fixed Gateway' with ID 'OC: c2bb7d3a17eb', firmware '3.0.3.60', and one building/panel.

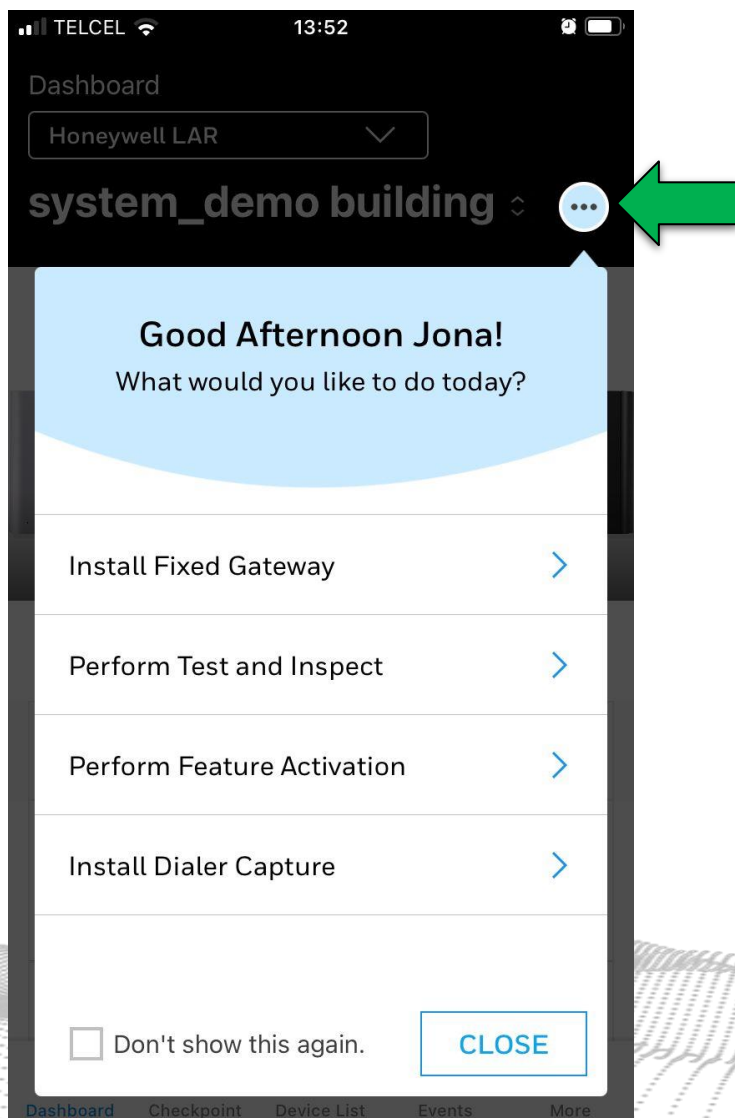
Gateway ID	Customer & Site Name	Current Firmware Version	Connected Buildings & Panels
OC: 19a41ca10c69 Fixed Gateway	N/A, N/A	3.2.4.18 Latest firmware installed	0 Buildings, 0 Panels
OC: e0f1a35b6937 Checkpoint Hub	N/A, N/A	3.0.3.132 update to 3.2.4.18	0 Buildings, 0 Panels
OC: d57825a65807 Fixed Gateway	Servicios y Suministros Panama, Servicios y Suministros Panama	3.0.3.60 update to 3.2.4.18	1 Buildings, 1 Panels
OC: c2bb7d3a17eb Fixed Gateway	Univision Digital, Edificio Corporativo	3.0.3.60 update to 3.2.4.18	1 Buildings, 1 Panels

Instalando la funcionalidad Modbus en mi Gateway

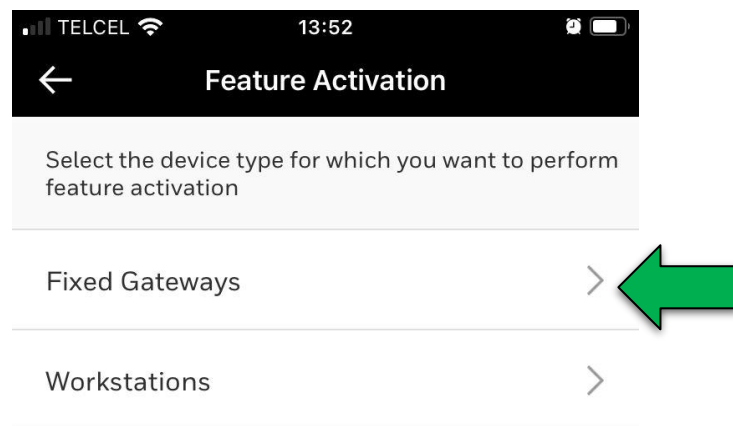


Una vez instalado el Gateway en un cliente del portal, debemos seguir los siguientes pasos para ligar la activación al Gateway

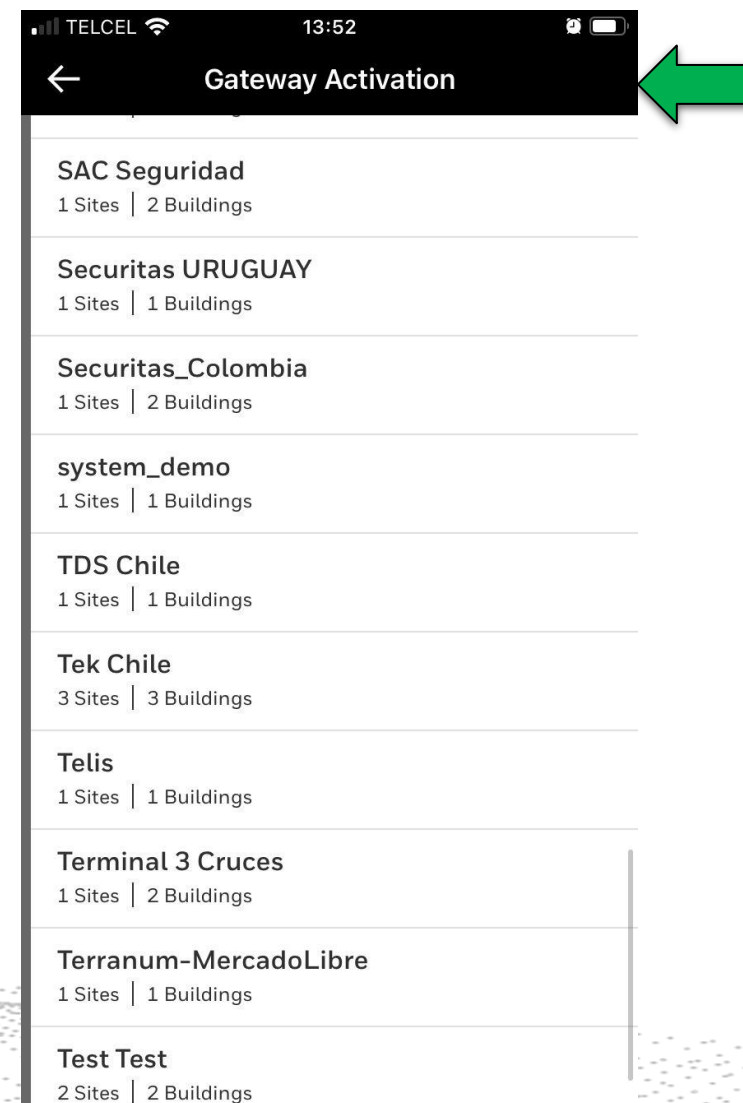
En la app de CLSS



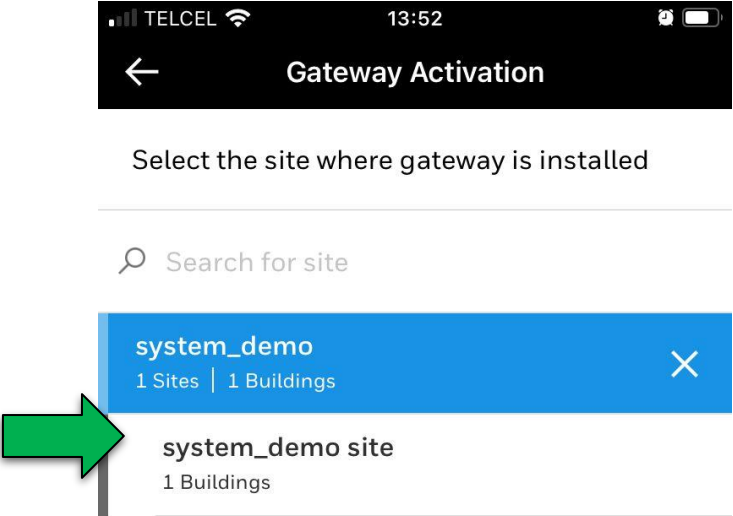
En la app de CLSS



En la app de CLSS



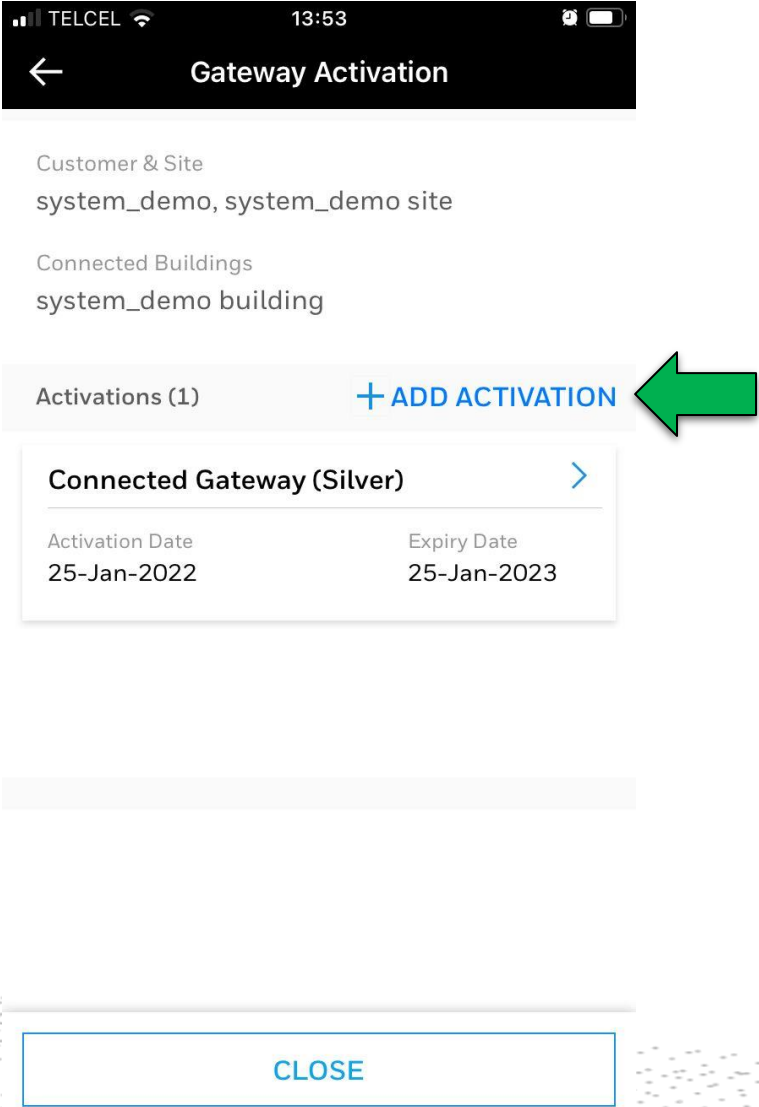
En la app de CLSS



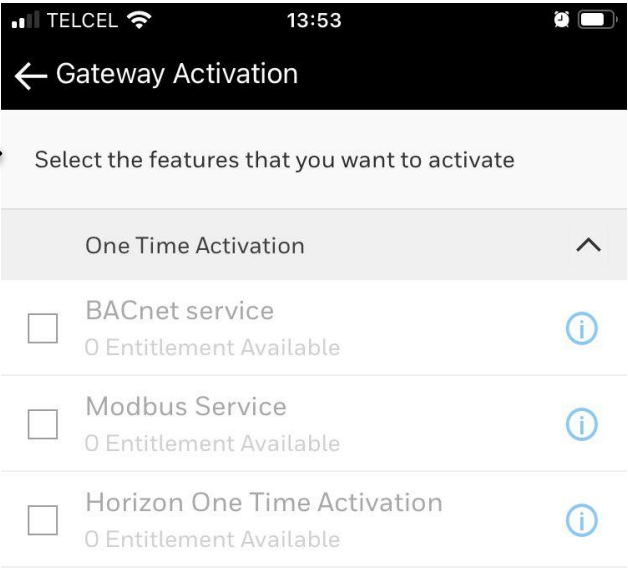
En la app de CLSS



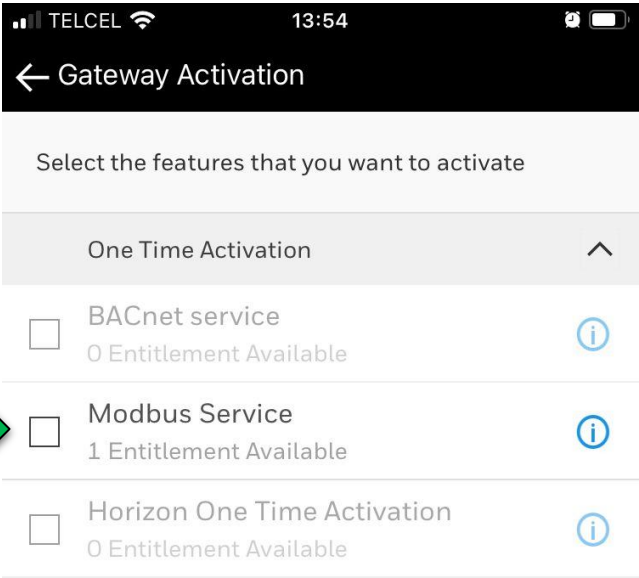
En la app de CLSS



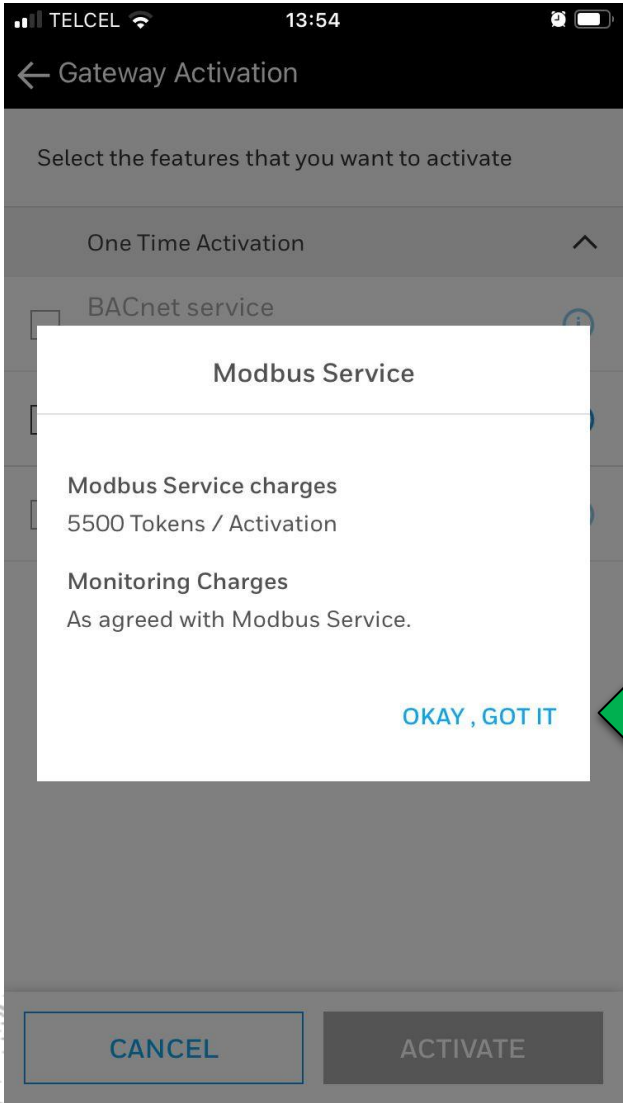
En la app de CLSS



En la app de CLSS



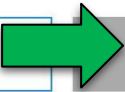
En la app de CLSS



CANCEL

ACTIVATE

CANCEL

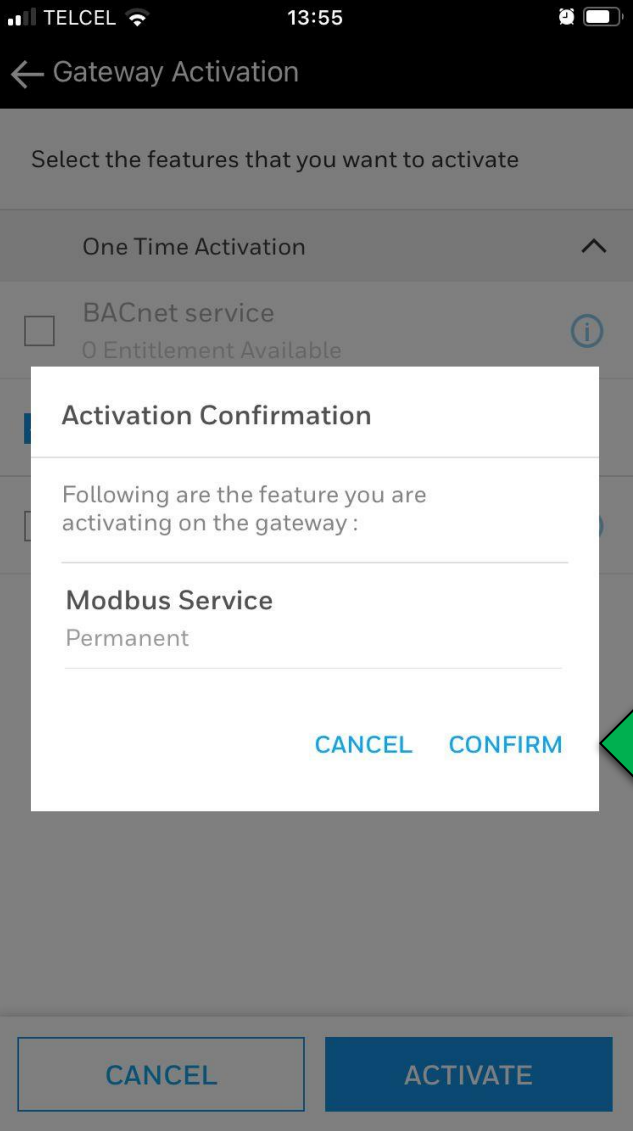


ACTIVATE

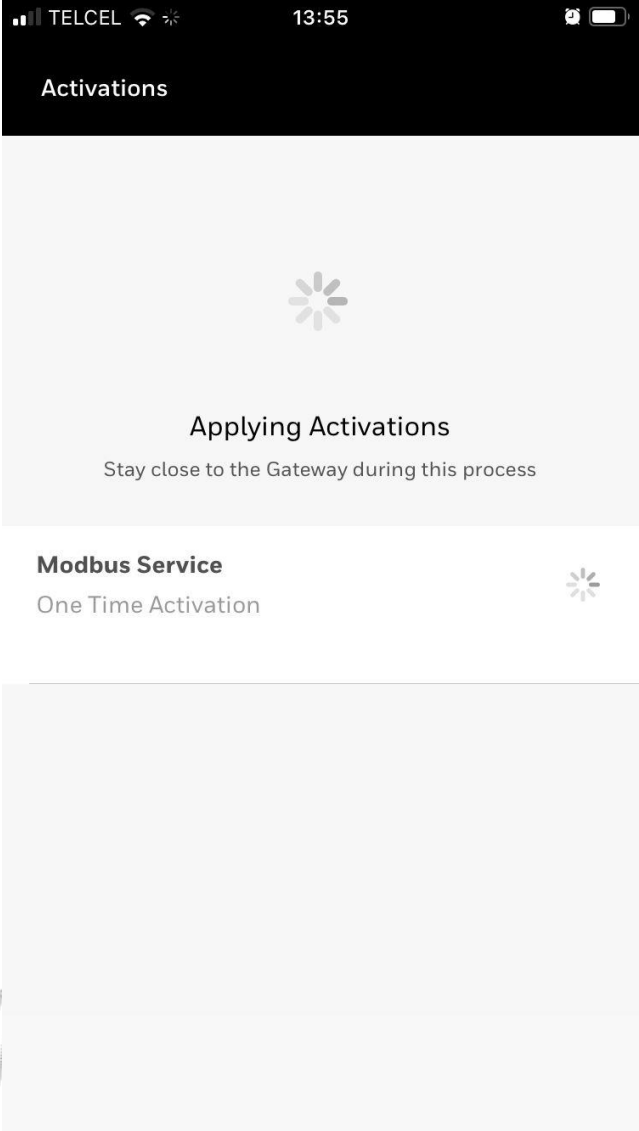
CANCEL

ACTIVATE

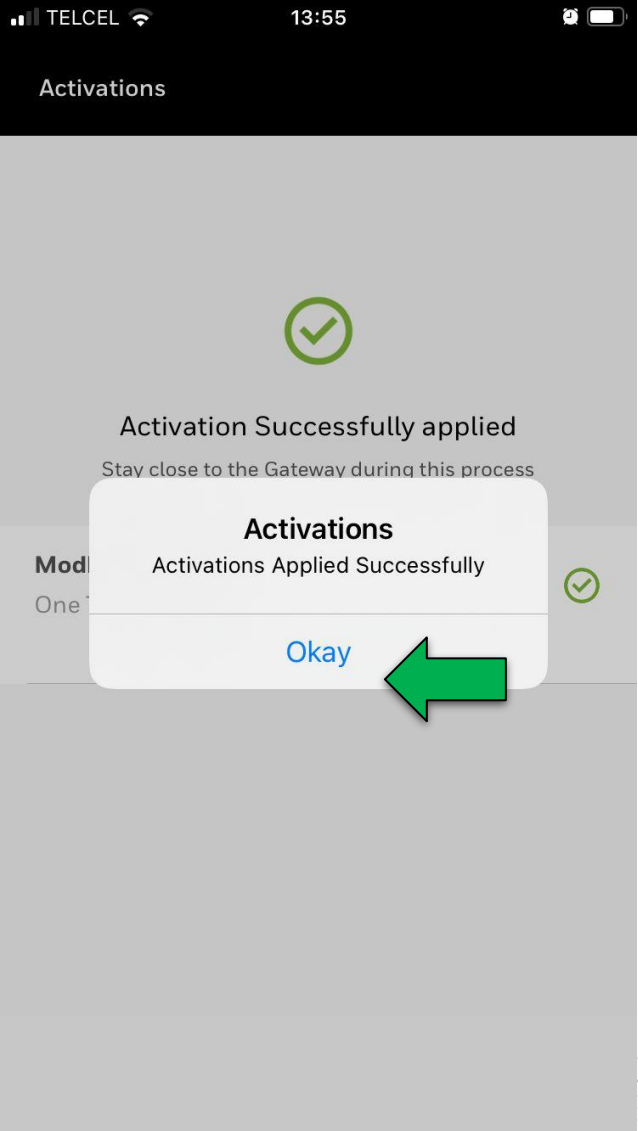
En la app de CLSS



En la app de CLSS



En la app de CLSS

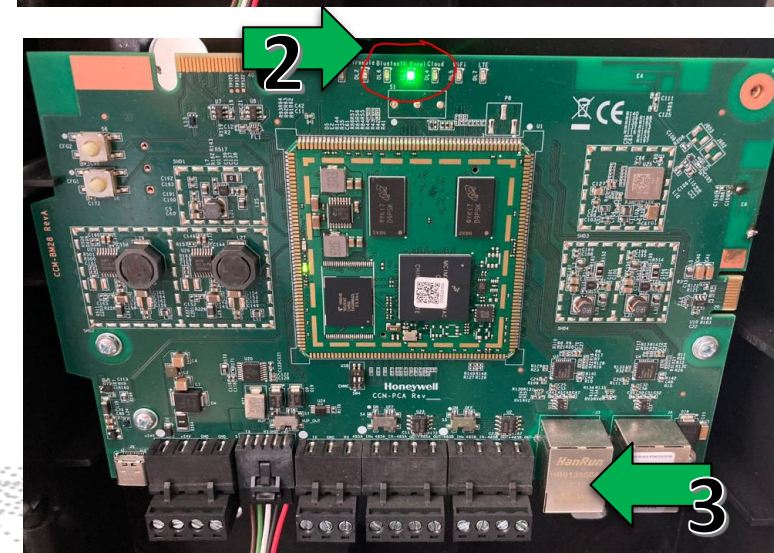
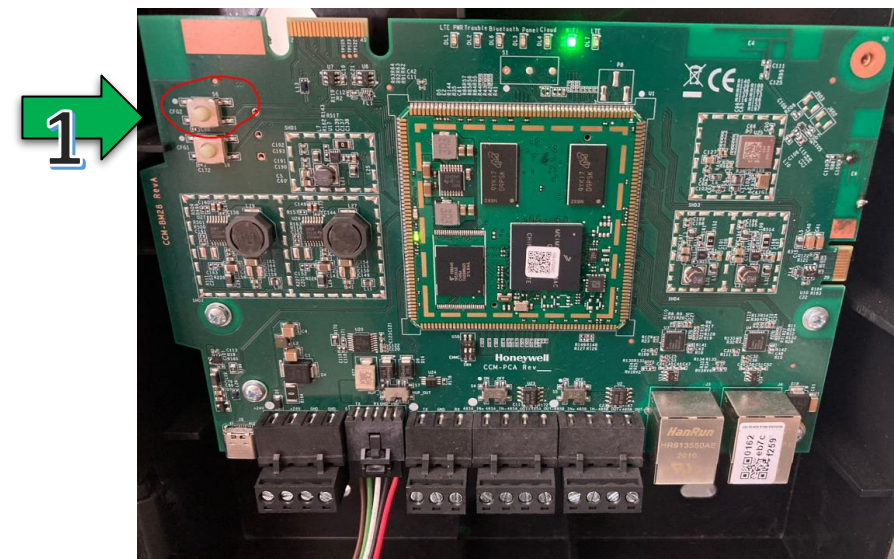


Configurando mi Gateway CLSS para leer Modbus

Nos referiremos ahora a la sección 7.17 del manual del Gateway CLSS donde nos indica como entrar al modo configuración

7.17 To Configure the Modbus Settings

1. On the CLSS Gateway board, find the S6 button.
2. Press the S6 button for a minimum of 6 seconds and then release it. It will switch the gateway to configuration mode.
The LED indicator DL3 turns ON and SOLID indicating that the configuration is enabled.
3. Connect the Ethernet cable to *Eth0* for enabling web configuration.



Nota: recuerde poner una dirección de red a su ordenador para poder conectarse con el Gateway

NOTE: The web configuration is available only on *Eth0*.

4. Open the Configuration Computer connected to the *Eth0* port of the gateway.

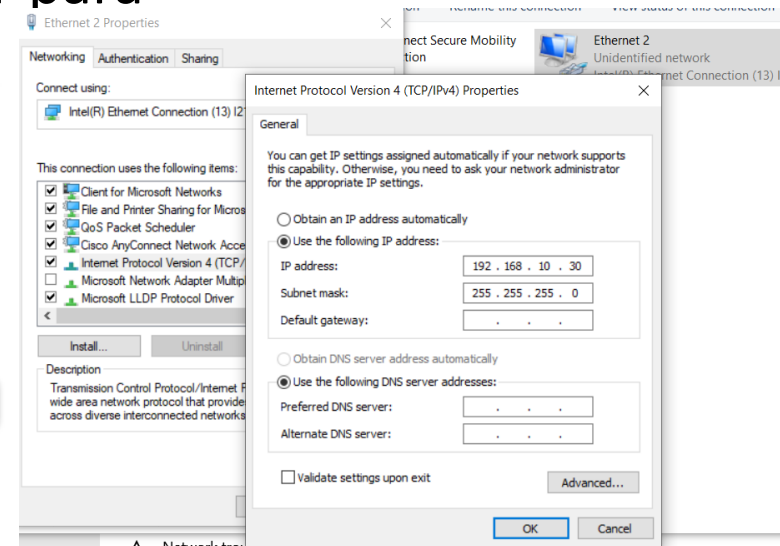
NOTE: The static IP of the *Eth0* port is 192.168.10.190.

5. In the Chrome browser, enter the following URL:
<https://192.168.10.190:9443/config/index.html>

6. Do the following if any security warning is shown. Otherwise, go to step 7.

1. Click the *Advanced* link below the error message.
2. Agree to proceed.

7. In the **Gateway Configuration Tool** page, enter the password.



Honeywell | Gateway Configuration Tool

Sign In

Enter your credentials to log in to Gateway Configuration Tool.

Password:

Enter Password

[Forgot Password?](#)

[SIGN IN](#)



NOTE: The default password is: Welcome123



NOTE: The default password is: Welcome123

- 8. Go to the **Network Settings** in the **Gateway Settings** section.
- 9. Assign the *Eth1* port with a static IP address for the Modbus connection.
- 10. Connect the Ethernet cable between the *Eth1* port of CLSS gateway and its LAN device.
- 11. Find and click **Modbus Settings** in the **Gateway Settings** section.

Honeywell | Gateway Configuration Tool

LOGOUT

Gateway Configuration

Configure gateway hardware settings

Gateway Settings

Panel List

Network Settings

Modbus Settings

Alarm Transmission

POTS Configuration

Central Station Configuration

Diagnostic

Change Password

MODBUS GATEWAY SETTING

Enable Modbus Functionality

☒ Check to enable Modbus Functionality

Authorized Client IP

0.0.0.0

Gateway Unit ID

115

Analog Value Timeout

15

NODE MAPPING

Show all nodes

Yes

CANCEL

SAVE

Ejemplo de configuración de la red de trabajo para el puerto ETH1

HoneywellGateway Configuration Tool

LOGOUT

Gateway Configuration

Configure gateway hardware settings

Gateway Settings

Panel List

Network Settings

Modbus Settings

Alarm Transmission

CLSS Dialer

Diagnostic

Change Password

Status

Enable DHCP

☒

Check to enable DHCP

IP Address

192.168.10.35

Subnet Mask

255.255.255.0

Default Gateway

192.168.10.1

Preferred DNS Server

8.8.8.8

Alternate DNS Server

8.8.4.4

MAC Address

00:60:2d:0b:1e:7d

CANCEL

SAVE

Ejemplo de configuración de la funcionalidad Modbus

Honeywell | Gateway Configuration Tool

LOGOUT

Gateway Configuration

Configure gateway hardware settings

Gateway Settings

Panel List

Network Settings

Modbus Settings

Alarm Transmission

CLSS Dialer

Diagnostic

Change Password

Status

About

Enable Modbus Functionality

☒ Check to enable Modbus Functionality

Authorized Client IP

0.0.0.0

Gateway Unit ID

235

Analog Value Timeout

15

NODE MAPPING

Show all nodes

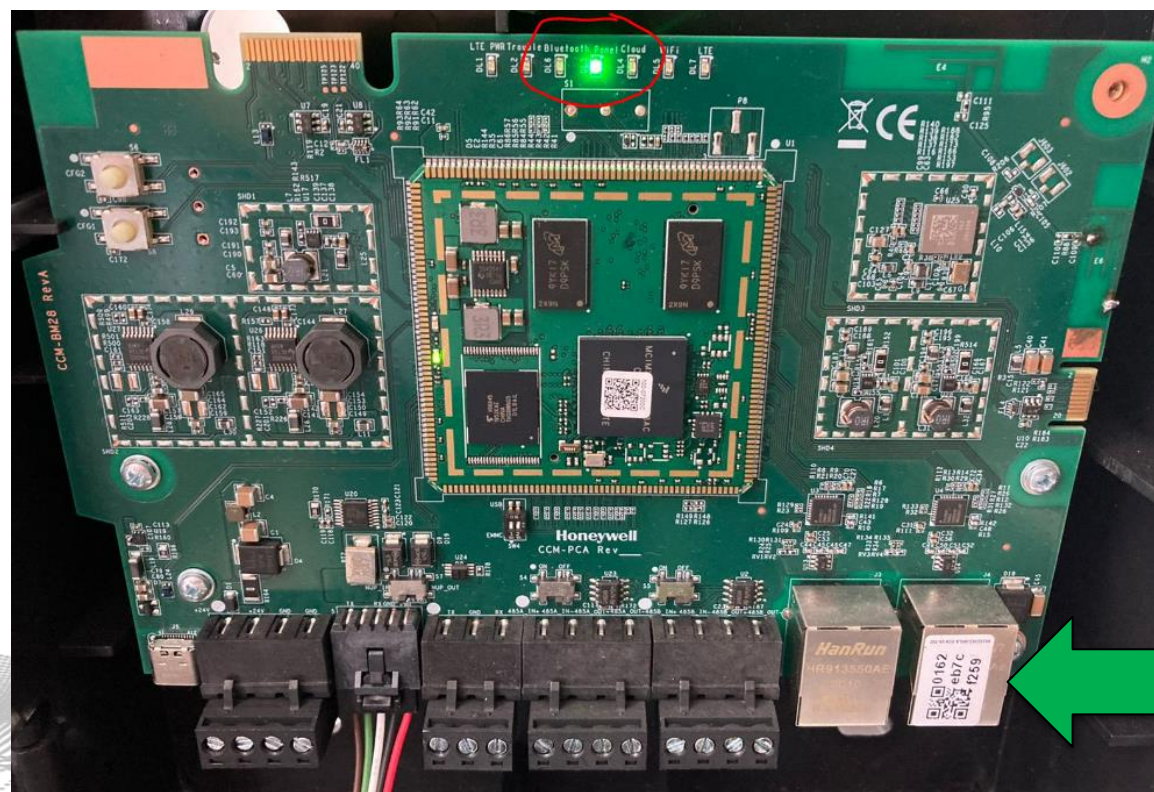
No

Node Status	Node ID	Node Type	Node Unit ID	Monitoring
Online	2	NFS2-640	2	No
Offline	20	Unknown	20	Yes

CANCEL

SAVE

Para hacer la lectura de los registros en Modbus del o los paneles deberá conectarse al puerto ETH1 físicamente y utilizar alguna herramienta emulador de Modbus para verificar la conexión, por favor referirse al manual del Gateway CLSS sección 7 pagina 44 para verificar los registros necesarios para su integración



Lectura Modulo 4-20 mA

Alta de Modulo en panel (esta información depende donde se esta instalando el modulo, Lazo y dirección) para este ejemplo:

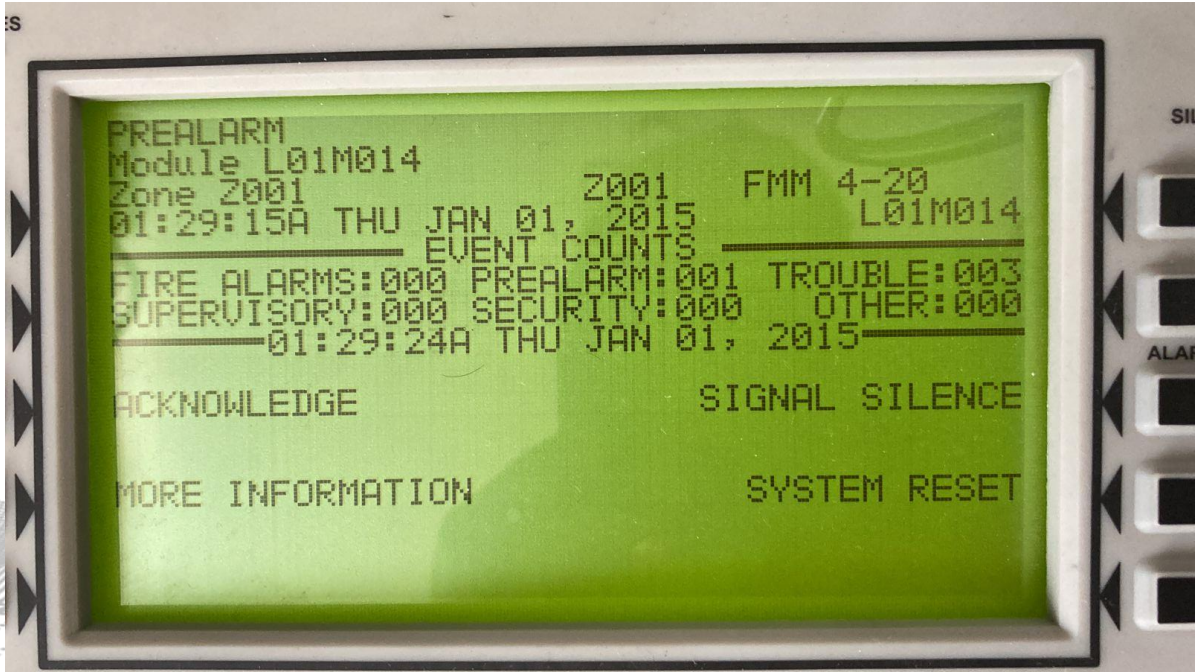
Dirección del Modulo en panel : Lazo **01** dirección **14**

Dirección del Modulo en registro Modbus : **40314**
(tabla de mapeo en manual)



Table 7.10: Point Status Holding Register Device/Module Addresses

Start Address	End Address	Address
400001	400300	L1D1-L1D300
400301	400600	L1M1-L1M300



Tablas de estatus para lectura de registros (registro 40314)

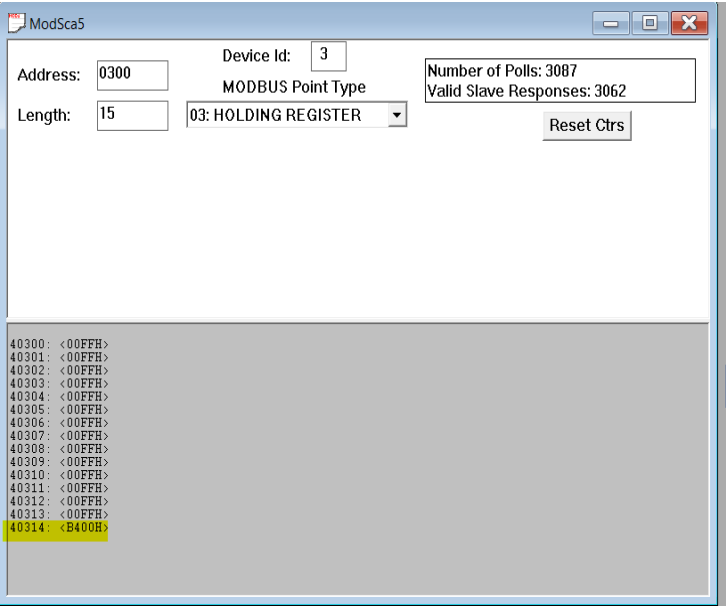
Parte Alta de Registro

Table 7.9: Point Status Holding Register Bit Definitions

Upper Byte									Lower Byte							
Bit No.	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Bit Name	Ack Block	Prealarm	Trouble	InActive	Active	Enable	Disable	Ack Fire Alarm								
When individual upper byte bits are set to 1, the following definitions apply: Ack Block (Bit 15): All events on this point, other than fire alarm, are acknowledged. Not applicable for zones. Prealarm (Bit 14): The point is in a prealarm state. Not applicable for zones. Trouble (Bit 13): The point is in a trouble state. Not applicable for zones. InActive (Bit 12): The point is not active. Active (Bit 11): The point is active and there will be an active event type in the lower byte. Enable (Bit 10): The point is enabled. Disable (Bit 9): The point is disabled. Ack Fire Alarm (Bit 8): The fire alarm on this point is acknowledged. Not applicable for zones.									Active Event Code (When Bit 11 is set to 1, see 7.30 "CLSS Gateway Active Event Code".)							

Parte baja del registro

Event	Modbus Register Value
No Active Status (see note)	00H
Mass Notification Alarm, High Priority	05H
Fire Alarm	10H
Security Alarm (Life)	11H
Critical Process Alarm (Life)	12H
Medical Emergency (Life)	13H
CO Alarm	14H
Mass Notification Alarm, Low Priority	15H
Security Alarm (Property)	20H
Critical Process (Property)	21H
Mass Notification Supervisory, High Priority	25H
Supervisory Signal (Guard's Tour)	30H
Supervisory Signal (Equipment)	40H
Mass Notification Supervisory, Low Priority	45H
Disabled Alarm (AFP2800 Panel Only)	52H
Disabled Active (AFP2800 Panel Only)	55H
Non-Fire Activation	71H
Non-Fire Activation (no acknowledgment required)	72H
CO Alarm & Fire Alarm	EAH
CO Supervisory	EBH
CO Supervisory & Photo Supervisory	ECH
CO Supervisory & Fire Alarm	EDH
CO Alarm & Photo Supervisory	EEH
Device Not Present	FFH



Ejemplo de lectura de registro Modbus (emulador Modbus)

Estatus + Event
1400H

Ejemplo Lectura parte alta del registro (Estatus registro 40314)

40300:	<00FFH>
40301:	<00FFH>
40302:	<00FFH>
40303:	<00FFH>
40304:	<00FFH>
40305:	<00FFH>
40306:	<00FFH>
40307:	<00FFH>
40308:	<00FFH>
40309:	<00FFH>
40310:	<00FFH>
40311:	<00FFH>
40312:	<00FFH>
40313:	<00FFH>
40314:	<1400H>

Estatus + Event

1400H

Table 7.9: Point Status Holding Register Bit Definitions

	Upper Byte								Lower Byte							
Bit No.	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Bit Name	Ack Block	Prealarm	Trouble	InActive	Active	Enable	Disable	Ack Fire Alarm	Active Event Code (When Bit 11 is set to 1, see 7.30 "CLSS Gateway Active Event Code".)							
	When individual upper byte bits are set to 1, the following definitions apply: Ack Block (Bit 15): All events on this point, other than fire alarm, are acknowledged. Not applicable for zones. Prealarm (Bit 14): The point is in a prealarm state. Not applicable for zones. Trouble (Bit 13): The point is in a trouble state. Not applicable for zones. InActive (Bit 12): The point is not active. Active (Bit 11): The point is active and there will be an active event type in the lower byte. Enable (Bit 10): The point is enabled. Disable (Bit 9): The point is disabled. Ack Fire Alarm (Bit 8): The fire alarm on this point is acknowledged. Not applicable for zones.															

The holding register addresses and the points contained in these addresses are detailed

Ejemplo Lectura parte Baja del registro (Estatus registro 40314)

40300:	<00FFH>
40301:	<00FFH>
40302:	<00FFH>
40303:	<00FFH>
40304:	<00FFH>
40305:	<00FFH>
40306:	<00FFH>
40307:	<00FFH>
40308:	<00FFH>
40309:	<00FFH>
40310:	<00FFH>
40311:	<00FFH>
40312:	<00FFH>
40313:	<00FFH>
40314:	<1400H>

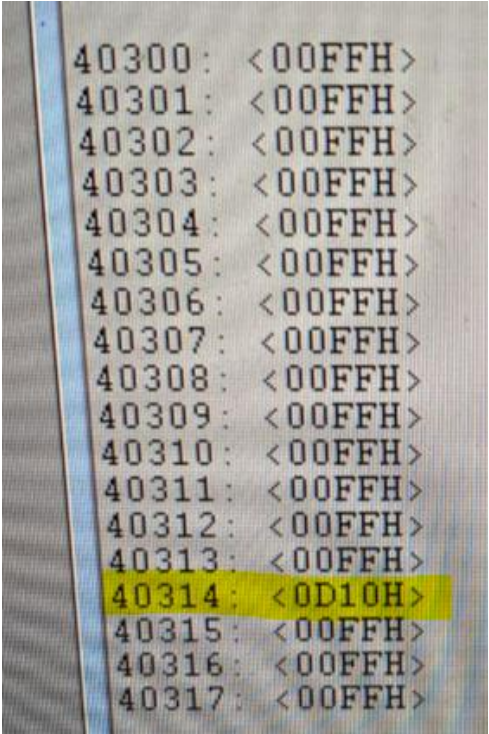
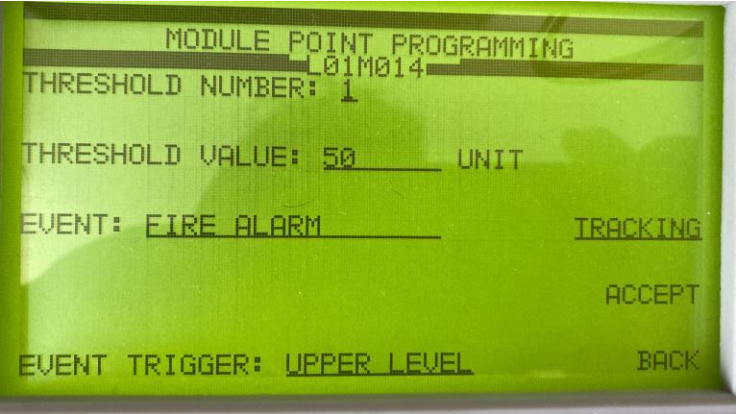
Estatus + Event

1400H

Event	Modbus Register Value
No Active Status (see note)	00H
Mass Notification Alarm, High Priority	05H
Fire Alarm	10H
Security Alarm (Life)	11H
Critical Process Alarm (Life)	12H
Medical Emergency (Life)	13H
CO Alarm	14H
Mass Notification Alarm, Low Priority	15H
Security Alarm (Property)	20H
Critical Process (Property)	21H
Mass Notification Supervisory, High Priority	25H
Supervisory Signal (Guard's Tour)	30H
Supervisory Signal (Equipment)	40H
Mass Notification Supervisory, Low Priority	45H
Disabled Alarm (AFP2800 Panel Only)	52H
Disabled Active (AFP2800 Panel Only)	55H
Non-Fire Activation	71H
Non-Fire Activation (no acknowledgment required)	72H
CO Alarm & Fire Alarm	EAH
CO Supervisory	EBH
CO Supervisory & Photo Supervisory	ECH
CO Supervisory & Fire Alarm	EDH
CO Alarm & Photo Supervisory	EEH
Device Not Present	FFH

Activación de diferentes tipos de eventos en los Thresholds (Estatus registro 40314)

Threshold 1_Fire-Alarm = 0C10H

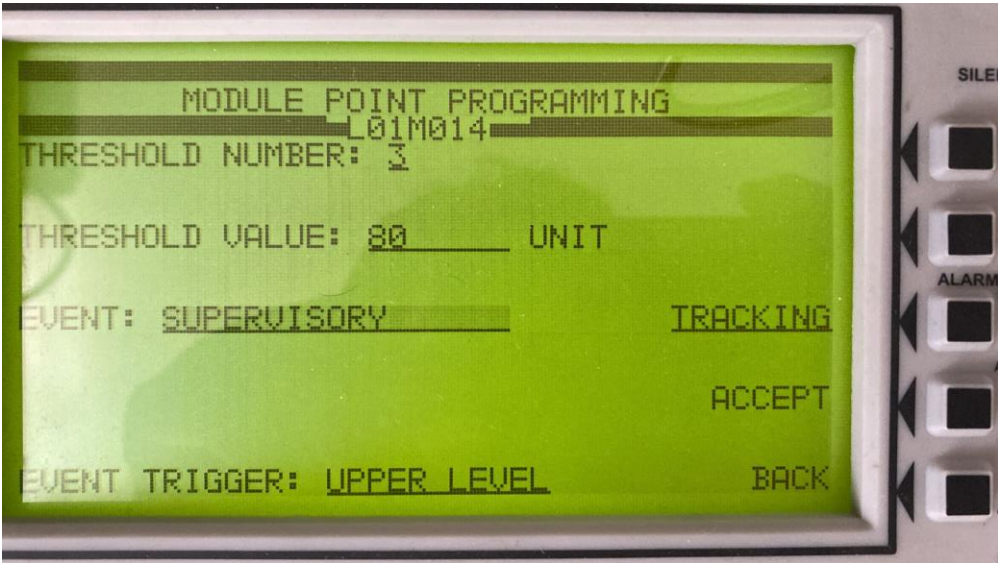


- B4= B(ack block, trouble, inactive) 4(enable)
- 0C= 0 (0) C(active, enable)
- 0D= 0(0) D (active, enable, ack fire alarm)
- 14 = 1(inactive),4 (enable)
- D4= D(ack, prealarm,inactive) 4(enable)

Table 7.30: Event Type Categories

Event	Modbus Register Value
No Active Status (see note)	00H
Mass Notification Alarm, High Priority	05H
Fire Alarm	10H
Security Alarm (Life)	11H
Critical Process Alarm (Life)	12H
Medical Emergency (Life)	13H
CO Alarm	14H
Mass Notification Alarm, Low Priority	15H
Security Alarm (Property)	20H
Critical Process (Property)	21H
Mass Notification Supervisory, High Priority	25H
Supervisory Signal (Guard's Tour)	30H
Supervisory Signal (Equipment)	40H
Mass Notification Supervisory, Low Priority	45H
Disabled Alarm (AFP2800 Panel Only)	52H
Disabled Active (AFP2800 Panel Only)	55H
Non-Fire Activation	71H
Non-Fire Activation (no acknowledgment required)	72H
CO Alarm & Fire Alarm	EAH
CO Supervisory	EBH
CO Supervisory & Photo Supervisory	ECH
CO Supervisory & Fire Alarm	EDH
CO Alarm & Photo Supervisory	EEH
Device Not Present	FFH

Threshold 2_Supervisory = 0C40H



B4= B(ack block, trouble, inactive) 4(enable)
0C= 0 (0) C(active, enable)
0D= 0(0) D (active, enable, ack fire alarm)
14 = 1(inactive),4 (enable)
D4= D(ack, prealarm,inactive) 4(enable)

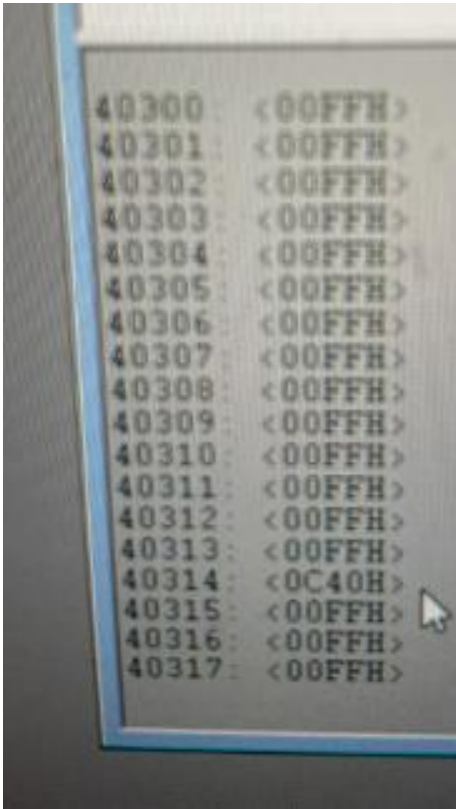
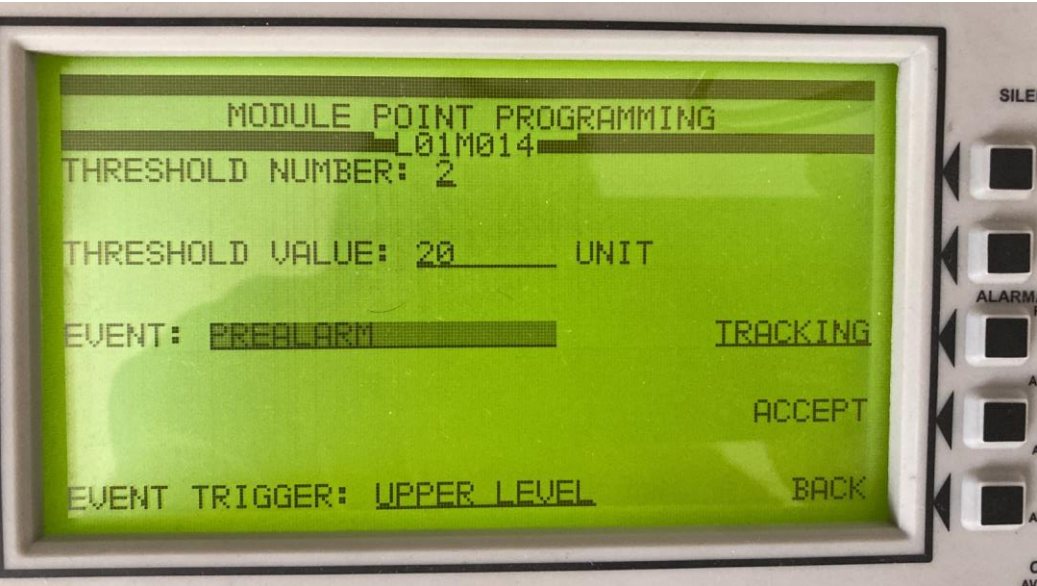


Table 7.30: Event Type Categories

Event	Modbus Register Value
No Active Status (see note)	00H
Mass Notification Alarm, High Priority	05H
Fire Alarm	10H
Security Alarm (Life)	11H
Critical Process Alarm (Life)	12H
Medical Emergency (Life)	13H
CO Alarm	14H
Mass Notification Alarm, Low Priority	15H
Security Alarm (Property)	20H
Critical Process (Property)	21H
Mass Notification Supervisory, High Priority	25H
Supervisory Signal (Guard's Tour)	30H
Supervisory Signal (Equipment)	40H
Mass Notification Supervisory, Low Priority	45H
Disabled Alarm (AFP2800 Panel Only)	52H
Disabled Active (AFP2800 Panel Only)	55H
Non-Fire Activation	71H
Non-Fire Activation (no acknowledgment required)	72H
CO Alarm & Fire Alarm	EAH
CO Supervisory	EBH
CO Supervisory & Photo Supervisory	ECH
CO Supervisory & Fire Alarm	EDH
CO Alarm & Photo Supervisory	EEH
Device Not Present	FFH

Threshold 3_Pre- Alarma = D400H



- B4= B(ack block, trouble, inactive) 4(enable)
- 0C= 0 (0) C(active, enable)
- 0D= 0(0) D (active, enable, ack fire alarm)
- 14 = 1(inactive),4 (enable)
- D4= D(ack, prealarm,inactive) 4(enable)

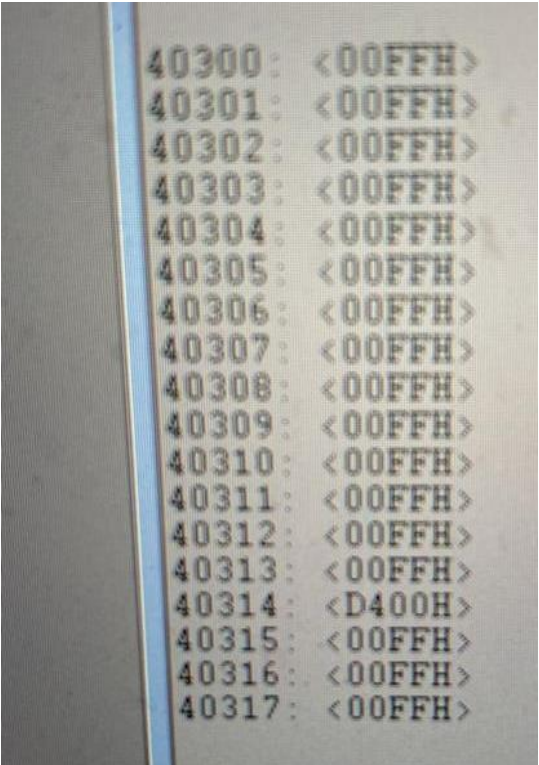


Table 7.30: Event Type Categories

Event	Modbus Register Value
No Active Status (see note)	00H
Mass Notification Alarm, High Priority	05H
Fire Alarm	10H
Security Alarm (Life)	11H
Critical Process Alarm (Life)	12H
Medical Emergency (Life)	13H
CO Alarm	14H
Mass Notification Alarm, Low Priority	15H
Security Alarm (Property)	20H
Critical Process (Property)	21H
Mass Notification Supervisory, High Priority	25H
Supervisory Signal (Guard's Tour)	30H
Supervisory Signal (Equipment)	40H
Mass Notification Supervisory, Low Priority	45H
Disabled Alarm (AFP2800 Panel Only)	52H
Disabled Active (AFP2800 Panel Only)	55H
Non-Fire Activation	71H
Non-Fire Activation (no acknowledgment required)	72H
CO Alarm & Fire Alarm	EAH
CO Supervisory	EBH
CO Supervisory & Photo Supervisory	ECH
CO Supervisory & Fire Alarm	EDH
CO Alarm & Photo Supervisory	EEH
Device Not Present	FFH

Escalando las señales

Threshold 1_Fire-Alarm = **0C10H**

80%

Threshold 2_Supervisory = **0C40H**

50%

Threshold 3_Pre- Alarma = **D400H**

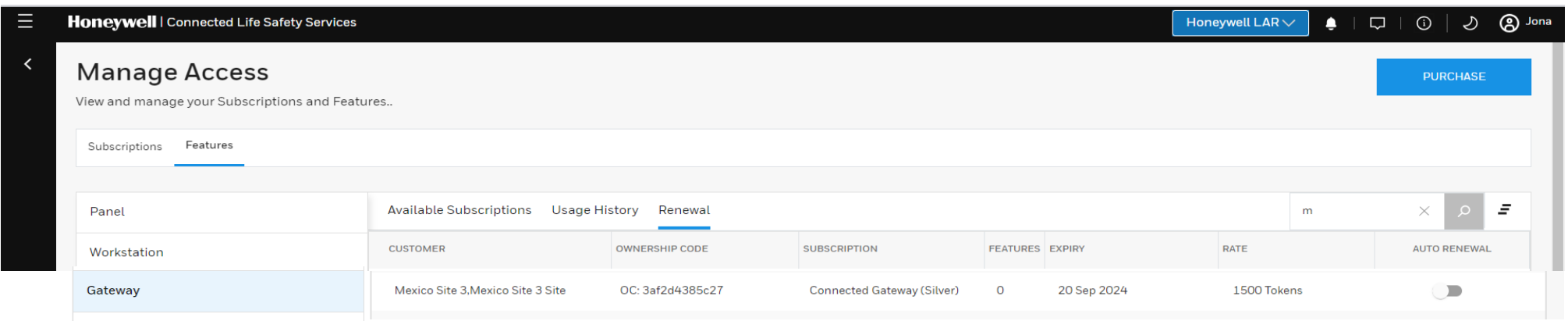
20%

El registro cambia según la activación Configurada y es así como podemos saber en que punto nuestra señal análoga se encuentra dentro de un rango.

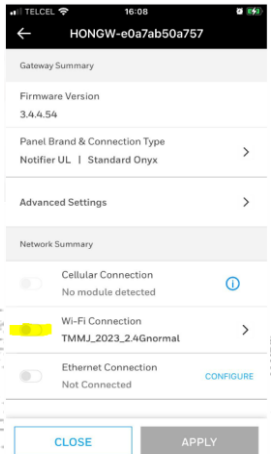
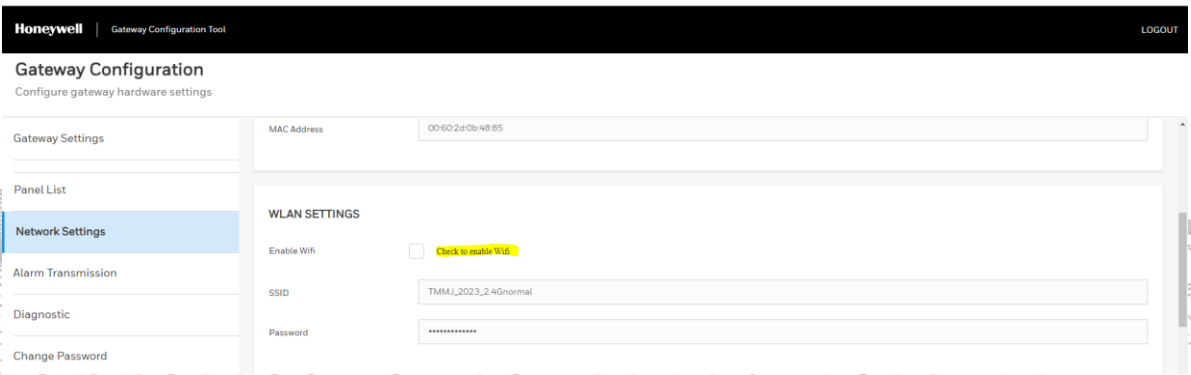


Configuraciones importantes después de la activación

Una vez que este licenciado el Gateway, ir a site manager en el menú Manage Access/ Feature/ Gateway/ Renewal y en la opción de “Auto renewal” **apagar la opción, debe quedar en gris el switch.** Esto permite tener el control de si queremos o no renovar los servicios cloud del CLSS Gateway, ya que en este proceso de licenciamiento hicimos la activación del Gateway.



Además, quitar toda conexión de internet al Gateway, si es por cable; desconectar el Cable, si es por medio de Wifi pueden Apagar la opción wifi desde “Gateway configuration” para que no se pueda conectar o directamente desde el menú de configuración en Network settings, quitar la opción de conexión de internet Wifi. En ambos casos apliquen los cambios para guardar, ya que si el Gateway está conectado a internet y envía alarmas a Site manager se encenderá automáticamente la opción de “ auto renewal” y podrá generar un cobro el siguiente año.



Gracias

