

Manual

i·C4C GO

2026

Firmware version: 3.0.3



Inhoud

General	4
Overview.....	5
Description	6
Installation.....	7
Dimensions.....	7
Instructions	8
Wireless antenna.....	9
Connections	10
Supply	11
Standard power adaptor	11
Webpage.....	12
Connect to webpage	12
Menu	13
Dark/Light mode	14
Home (User).....	15
Setup (User).....	16
Service (User).....	17
I/O (User).....	18
Duty class (User).....	19
Flash parameters (User)	20
Device Info	21
File System (User).....	22
Login.....	23
Setup (OEM/Dealer)	24
Change parameter – manually.....	24
Change parameters – automatically.....	25
Service (OEM/Dealer)	27
Edit values	27
Configure counter	28
Adding counter	29
I/O (OEM/Dealer).....	30
Duty class (OEM/Dealer).....	31
Add hoist	32
I/O mapping.....	33
Network (OEM/Dealer)	34

Rename AP	35
Connect the device to Wi-Fi	36
Connect to device through Ethernet	37
Connect to an MQTT server	39
CAN-bus (OEM/Dealer)	41
Vendor id.....	42
Modbus (OEM/Dealer)	43
Flash parameters (OEM/Dealer)	44
Firmware (OEM/Dealer)	45
Upload firmware	46
Upload web assets	49
File System (OEM/Dealer)	50
Communication	51
Architecture	51
Wired (CAN).....	51
Wireless (Wifi)	52
Technical specifications.....	53
General data	53
Electrics/electronics	53
Mechanical data	54
Ambient data	54
Annex.....	55
Load cells	55
Connection.....	55
Load cell on rope.....	55
Load cell flexion.....	56
Double shear Load Pin.....	57
Antennas	58
Standard antenna 5dBi	58
Directional Flat Patch Antenna.....	59

General

The i-C4C GO PRO is our new generation cutting-edge controller offering fully integrated hoisting equipment intelligence. It features separate processors (MCUs) for general functionality and overload protection, for which it is Performance Level d certified – exceeding the requirements of EN 14492-2 and ISO 13849-1:2015.

It is a fully integrated controller for your crane hoisting equipment, combining customized functionality with certified safety. The human interface of your choice is connected via Wi-Fi.

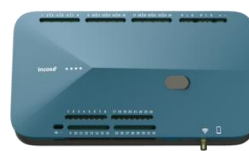
The i-C4C GO BASIC is the limited version of the i-C4C GO PRO, usable as controller where the safety certification and the extra connectivity is not required.

Overview

The product covered by this manual is the i-C4C GO. This document provides an overview of the installation, configuration and use of this device.

The i-C4C GO is available in two main models: PRO and BASIC. The human interface of for both models is via Wi-Fi.

The PRO model has overload protection, for which it is Performance Level d certified – exceeding the requirements of EN 14492-2 and ISO 13849-1:2015. As of firmware v3.0.0, the PRO model also communicates over a wired Ethernet port, integrates Modbus TCP field sensors and publishes its data to an MQTT broker (Cloud Connect). The BASIC model is the limited version of the i-C4C GO PRO, usable as controller where the safety certification and the extra connectivity is not required.

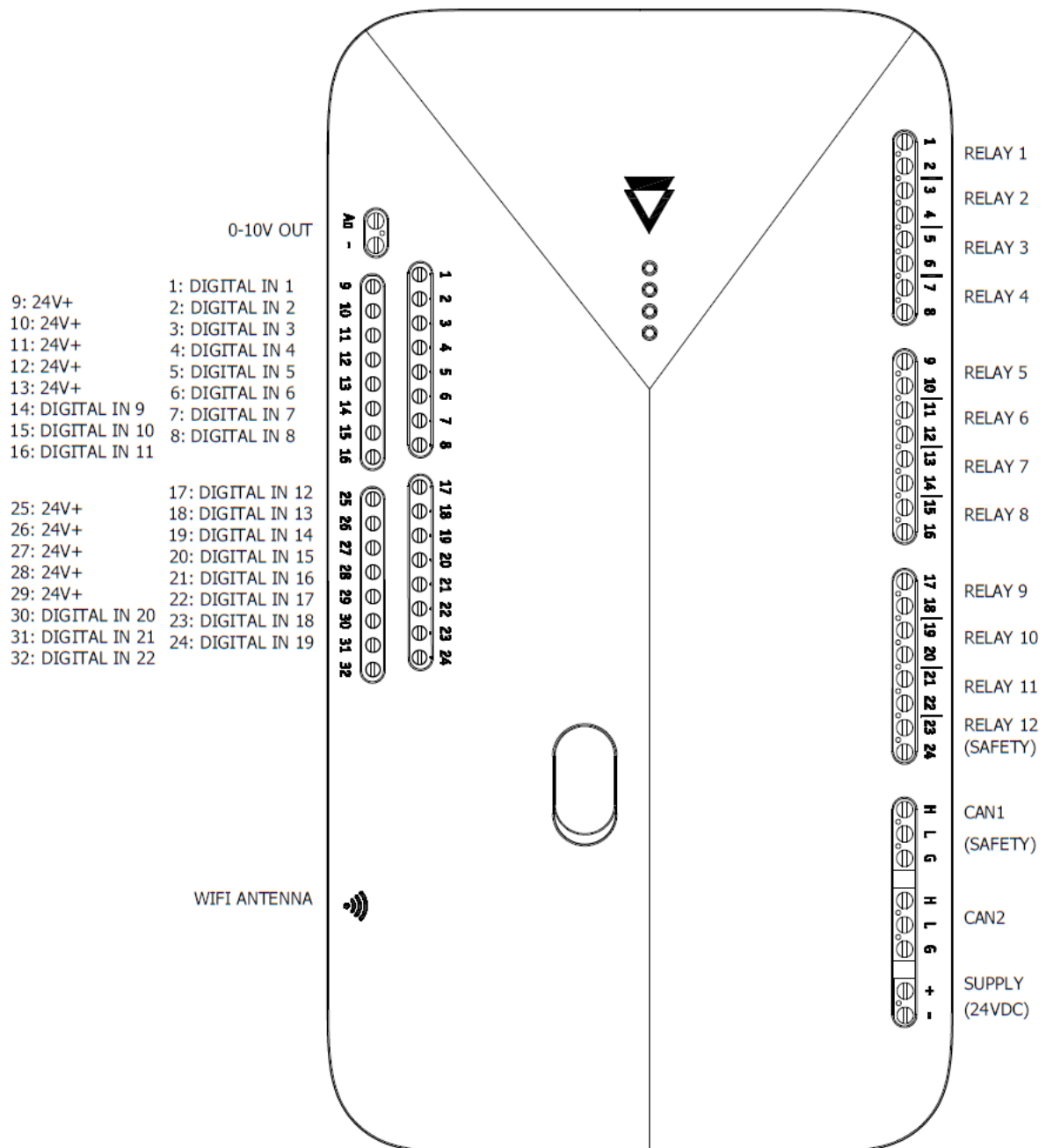


HARDWARE	PRO	BASIC
PLd certified overload protection	✓	✗
Ethernet port	✓	✗
22/12 I/O	✓	✓
Wi-Fi	✓	✓
CAN	✓	✓
0-10V	✓	✓
Cloud connect	✓	✗

By default, the i-C4C GO is configured as a load limiter. Given the numerous variations of possibilities concerning the connections and software configurations, this document will handle the default application of the i-C4C GO.

All other application configurations will be detailed in the production file of each custom made system.

Description

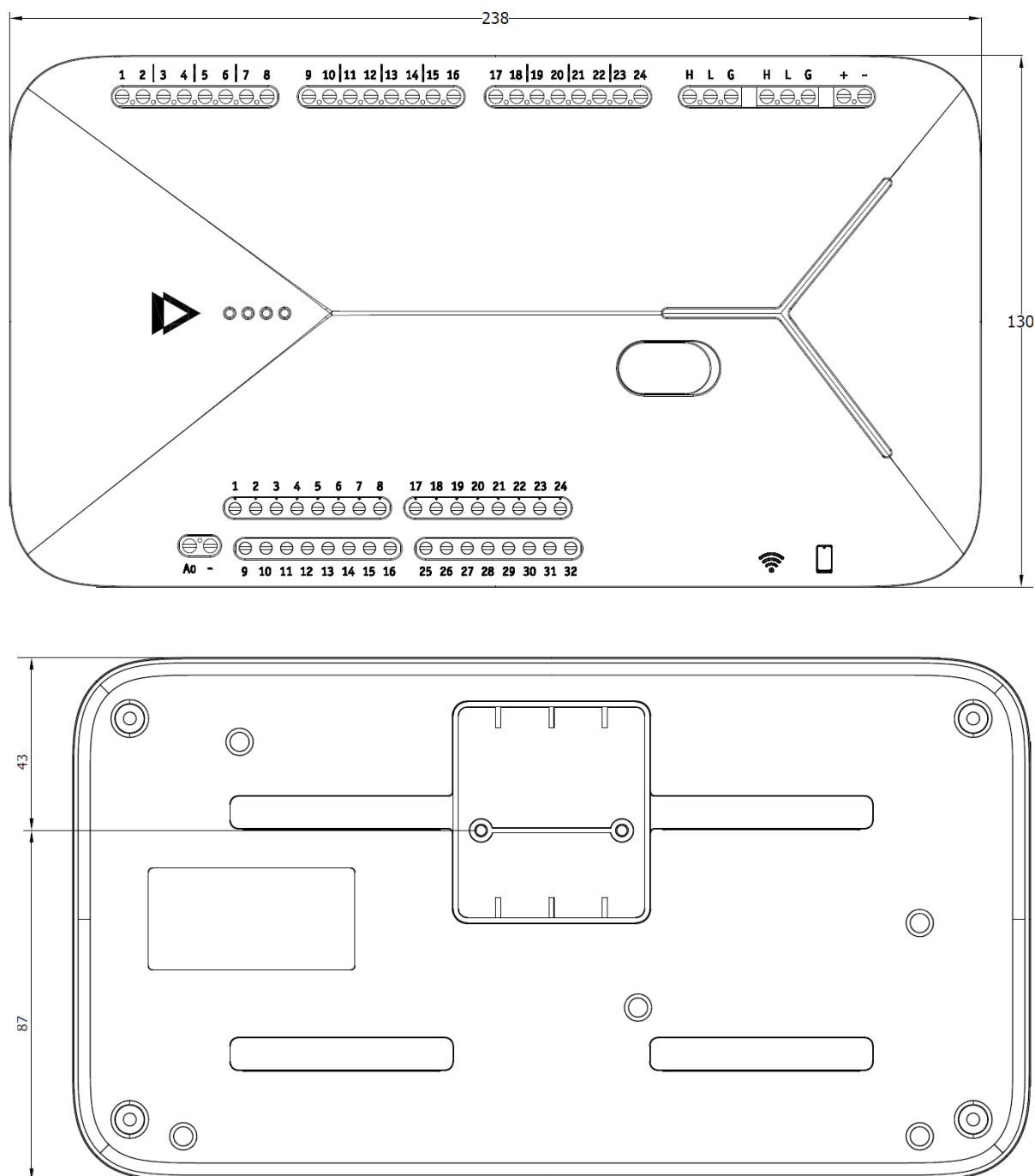


Installation

Follow the instructions as described in this manual for the installation of this product.

Dimensions

The following diagram shows the dimensions for the i-C4C GO.



Instructions

- Turn off the power supply.
- Locate a suitable and accessible place to install the **i-C4C GO**, away from any devices that produces strong electro-magnetic fields.
- Connect the power supply cable to the **i-C4C GO**.
- Connect the input and output cables to the corresponding connectors according the connection diagram.
- Connect the CAN communication cable(s) to the corresponding CAN interfaces according the connection diagram.
- Install the cables (inputs, outputs, communication) away from power cables.

Remark

It is advised to use shielded cables for the inputs, outputs and communication connections.

Remark

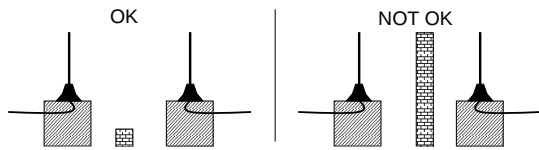
It is advised to respect a distance of at least 200mm between the i-C4C GO cables (inputs, outputs, communication) and power cables 230Vac/380Vac 50/60Hz. A greater distance is advised for larger power and/or high frequency.

Wireless antenna

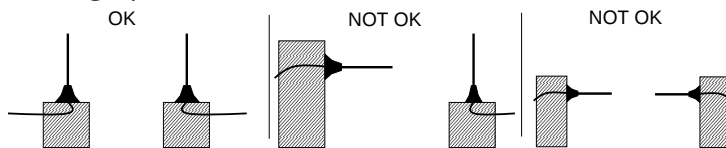
Optional, the **i-C4C GO** can be configured for wireless communication with a display. By means of the magnetic foot, the antenna can easily be installed on any magnetic metal surfaces.

For optimal communication you need to locate the antennas of the wireless modules according to these recommendations.

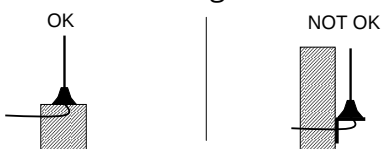
- Line of sight



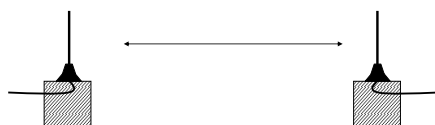
- Pointing up



- Free surrounding



- Max range*: 50m (with standard antenna)



Remark

*Wireless communication performance depends on many factors, conditions and variables, including building materials and construction, mix of wireless products used, interference and other adverse conditions, which can affects the wireless signal range.

Connections

There are several rules that must be followed when wiring the i-C4C GO.

Recommendations, when needed, are provided on how to comply with the rules.

Danger – Electric shock

- Be sure to remove ALL power from ALL devices before connecting or disconnecting inputs or outputs.
- Be sure to connect the grounding wire to a proper ground.

Failure to follow this instruction will result in death, serious injury, or equipment damage.

Warning – Failure of outputs

- If outputs would fail, outputs may remain on or off. Where personnel and or equipment hazards exist, use appropriate safety interlocks.

Failure to follow this instruction can result in death, serious injury, or equipment damage.

- Each terminal accepts wires from 26 AWG (0,13 mm²) up to 14 AWG (2.08 mm²) fitted with cable ends or tags.
- Depending on the load, a protection circuit may be needed for relay outputs on modules.
- The power supply wire should be between 26 AWG (0.13 mm²) and 14 AWG (2.08 mm²). Use the shortest wire length possible.
- Incorrect wiring can cause equipment damage.
- Make sure that the operating conditions and environments are within the specification values.
- Use proper wire size to meet voltage and current requirements.

Supply

The main supply of the i-C4C GO is 24VDC. For other supply voltages, a power adaptor will be needed to convert the available supply voltage into 24VDC.

Standard power adaptor

- Input voltage: 100-240V AC (0.9A, 50-60Hz)
- Output voltage: 24V DC (1.5A)
- Short circuit protection

Please refer to your dealer/retailer for appropriate power adaptor.

Webpage

Connect to webpage

1. Connect to the SSID of the I-C4C GO:
 - a. The default network name consists of "**IC4C_**" + "**Serial number**"
(The serial number can be found on the front and back of the I-C4C GO)
 - b. Contact your supplier for the password



Remark

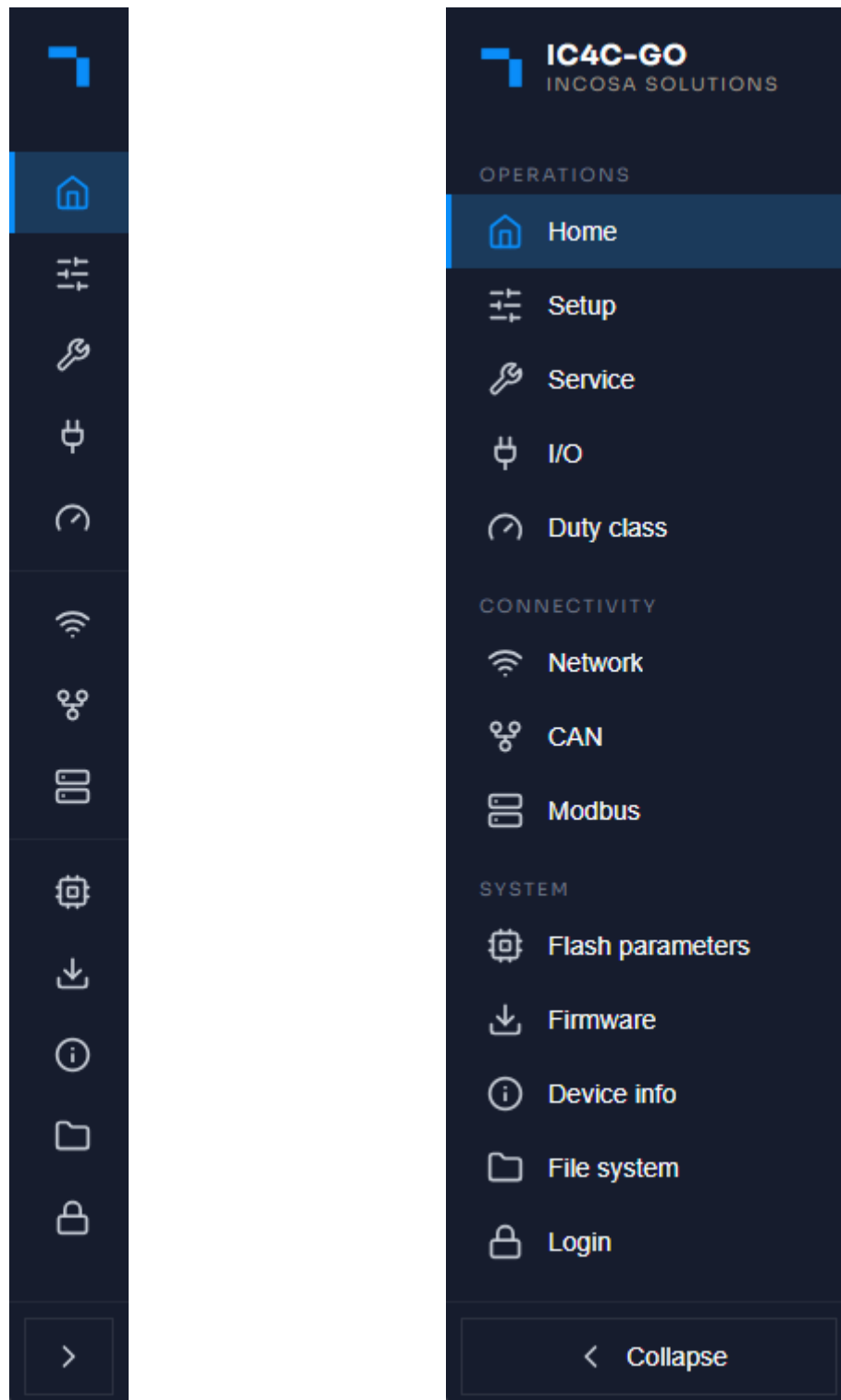
When logged in, it is possible to change the suffix of the SSID name. However, it will always start with "**IC4C_**".

2. Open an webpage and go to **192.168.1.1**

Menu

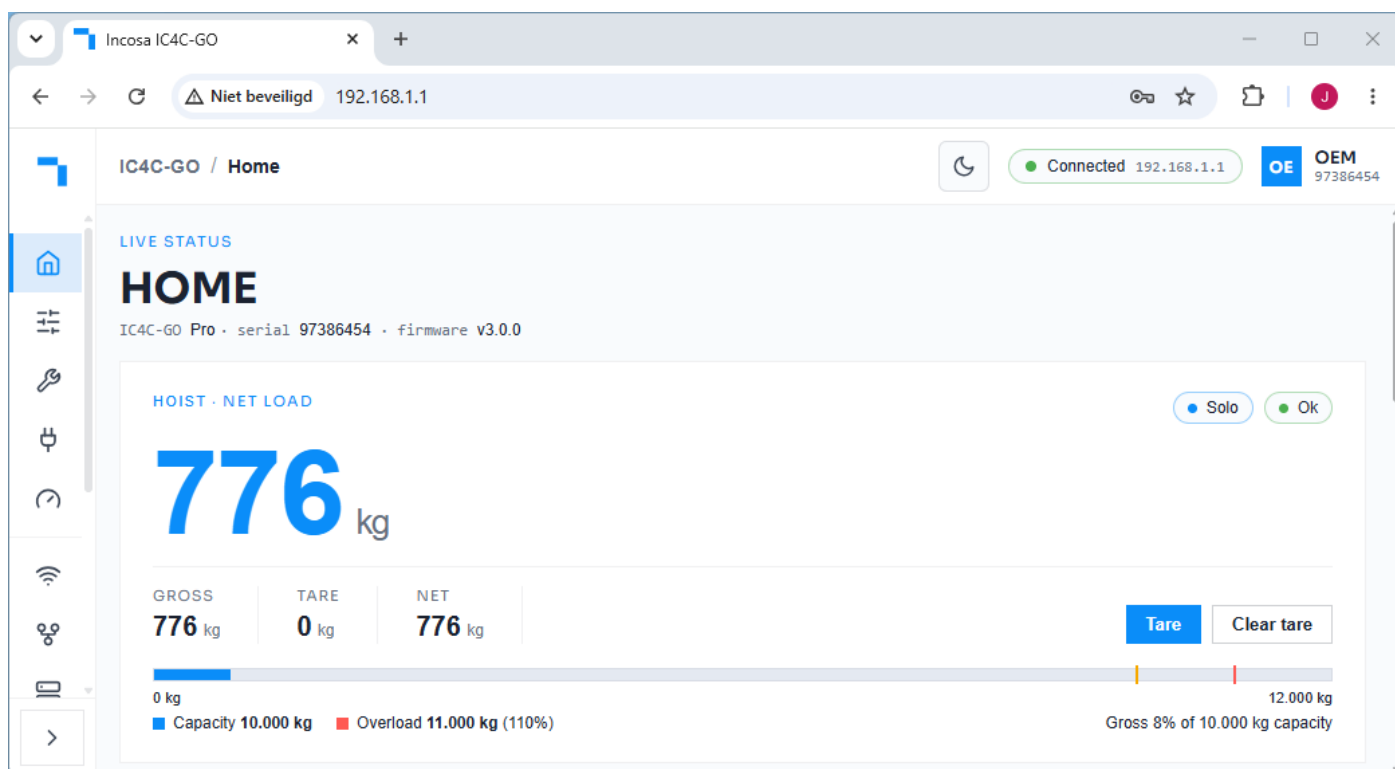
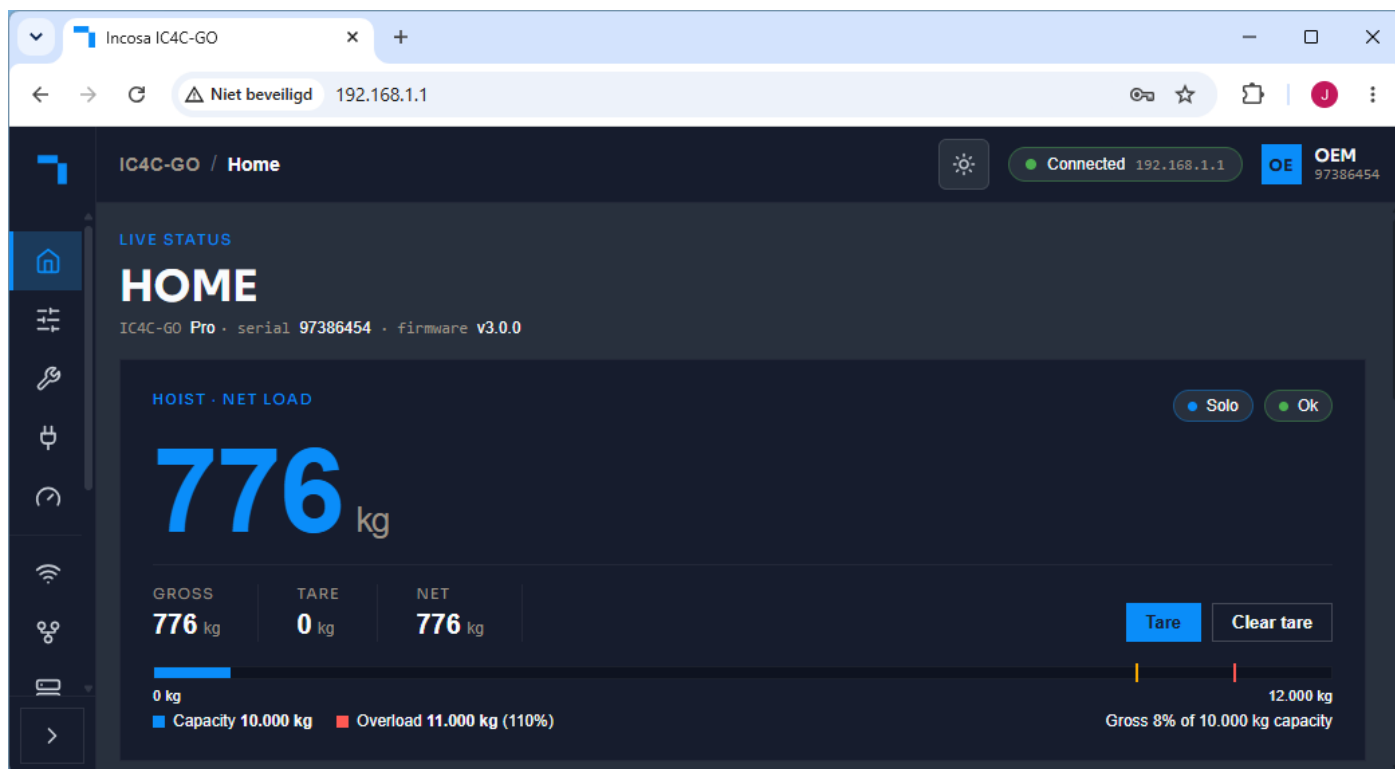
The web interface was redesigned in firmware v3.0.0. The menu on the left is now grouped into three sections. "Operations" contains Home, Setup, Service, I/O and the new Duty class page. "Connectivity" contains Network (with separate tabs for Wi-Fi client, Wi-Fi access point, Ethernet and MQTT), CAN and the Modbus page. "System" contains Flash parameters, Firmware, Device info, File system and Login.

The pages available to you depend on your login level (User, Dealer or OEM) and on your hardware model (PRO or BASIC). Pages and tabs that do not apply to your device (for example Ethernet on a BASIC model) stay hidden.



Dark/Light mode

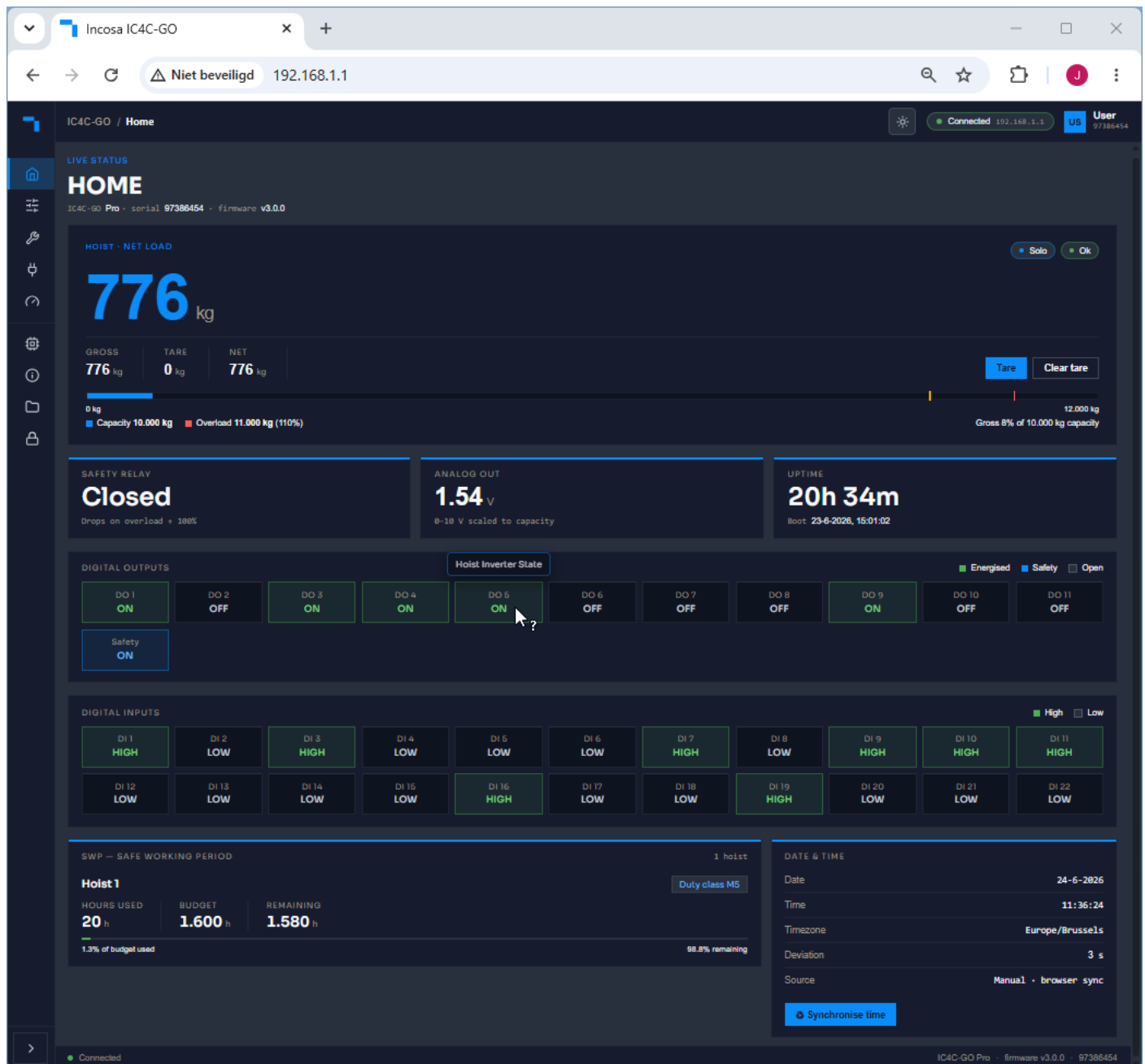
On the top bar it is possible to swap between dark (moon-icon) and light (sun-icon) mode on the webpage. By default the webpage is loaded in dark mode.



Home (User)

Open a webbrowser and go to the address: 192.168.1.1.

Here you have an overview of the current I/O states of the i-C4C GO. You can tare the current load and it is possible to synchronise the internal clock of the i-C4C GO to the same value as the connected device. You can use the Deviation field as reference. If set up in advance, you can hover over the I/O to see their description/function. See I/O tab for more information.



Setup (User)

Here you can find an overview of all parameters. You have to be logged in to be able to change them.

The screenshot shows the IC4C-GO Setup interface in a web browser. The browser address bar shows '192.168.1.1' and a security warning 'Niet beveiligd'. The interface has a dark theme. On the left is a sidebar with navigation options: Home, Setup (selected), Service, I/O, Duty class, Flash parameters, Device info, File system, and Login. The main area is titled 'IC4C-GO / Setup' and 'PARAMETERS'. It features a 'Unit: kg' toggle and a note: 'Safety, display and operating-mode parameters. Changes require a Write to persist.' The parameters are organized into sections: 'SAFETY PARAMETERS' (Loadcell CAN id, Loadcell cable diameter, Load measurement offset, Gain, Overload value, Overload hysteresis, Overload delay, Loadcell capacity, Hoist capacity, Additional gain factor) and 'Manual mode' (Auto calibrates gain from a known load). At the bottom, there are sections for 'DISPLAY PARAMETERS' and 'CONFIGURATION PARAMETERS' (Slackrope).

Parameter	Value
Loadcell CAN id (detected: 1)	1
Loadcell cable diameter (mm)	0
Load measurement offset (kg)	0
Gain (-)	2000
Overload value (kg)	11000
Overload hysteresis (%)	100
Overload delay (ms)	0
Loadcell capacity (kg)	2000
Hoist capacity (kg)	10000
Additional gain factor (-)	1
Slackrope (kg)	100

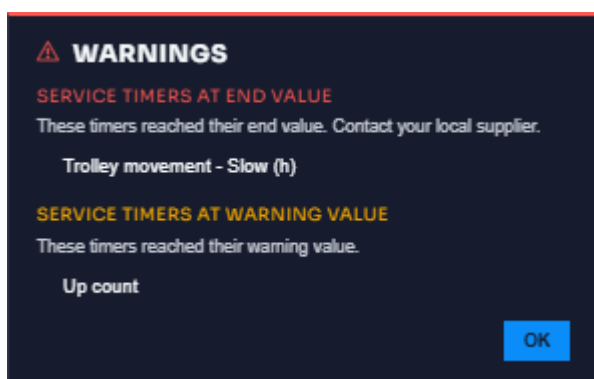
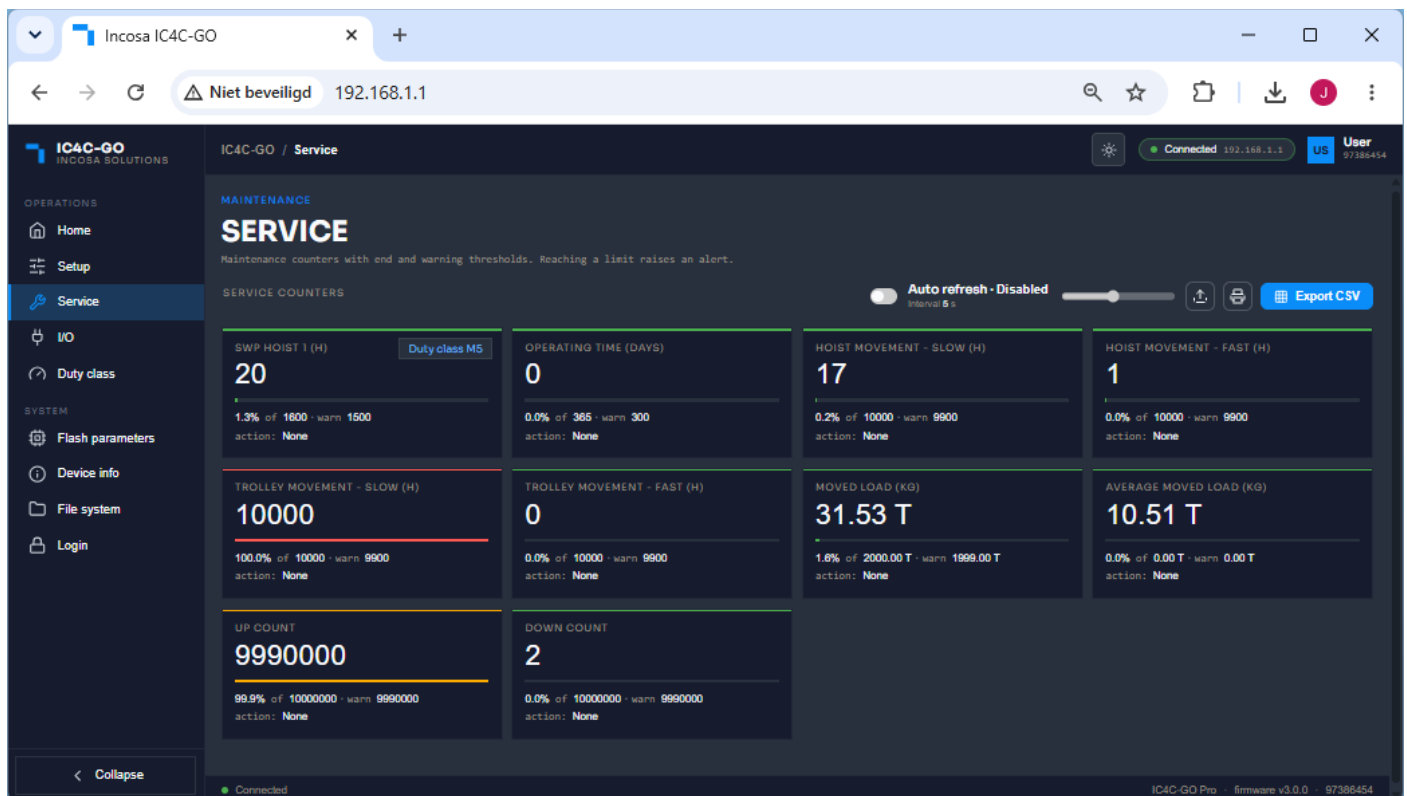
Service (User)

The layout may vary depending on your application. All counters defined here are service related. For each counter, you can see the end value, current value, warning value and action.

The Warning value is a kind of pre-alarm to indicate that the specific service counter almost reached its end value. When a timer/counter reaches its end value, it will activate the action that was linked to it. The action is caused by forcing a relay in a certain state (off/on).

By default the values are loaded once when opening the tab. However, by activating the “Auto refresh” switch, the values are updated automatically.

Next to the refresh interval, there are buttons to export the current service counter settings, print or save them as pdf, and export them as CSV-file.



I/O (User)

An overview of the I-C4c GO's I/O. The description next to it is shown when hovering over the I/O on the home screen.

IC4C-GO / I/O

Connected 192.168.1.1

us User 97386454

SIGNALS

I/O

Live state of the safety, analog, digital outputs and inputs. Edit the descriptions and Save to persist.

SAFETY OUTPUT

INDEX	PIN NUMBER	STATE	DESCRIPTION
1	23 - 24	ON	Safety Relay for Overload

ANALOG OUTPUT

INDEX	PIN NUMBER	VALUE (V)	DESCRIPTION
1	A0	1.54 V	Analog Load Value

OUTPUTS

INDEX	PIN NUMBER	STATE	DESCRIPTION
1	1 - 2	OFF	Lifting
2	3 - 4	OFF	Lowering
3	5 - 6	OFF	Lifting/Lowering Fast or Acceleration
4	7 - 8	ON	Extended speed range
5	9 - 10	ON	Hoist Inverter State
6	11 - 12	OFF	Right
7	13 - 14	OFF	Left

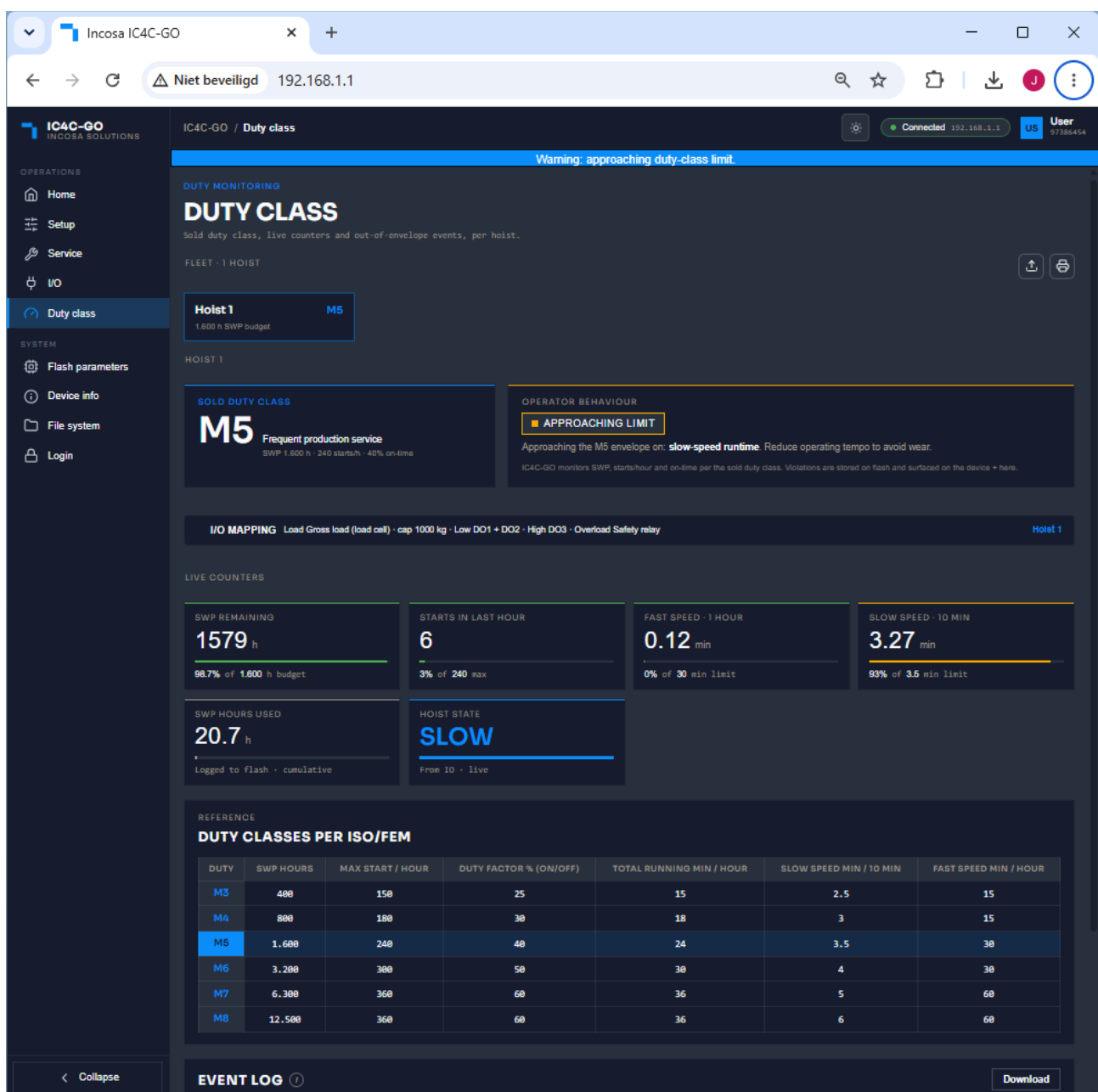
< Collapse

Duty class (User)

The Duty class page provides duty monitoring per hoist. It shows the sold duty class, the live duty counters and any out-of-envelope events. The i-C4C GO monitors the duty against the duty class that was sold for the hoist, according to ISO/FEM.

For each hoist you can read the sold duty class (M3 to M8). The page continuously tracks Safe Working Period (SWP) hours used against the budget, the number of starts in the last hour against the maximum, running time in the last hour, fast-speed and slow-speed time against their limits, and the effective duty factor compared with the sold on-time percentage. The current hoist state (for example IDLE) is shown live from the I/O.

When the hoist is operated outside the sold duty envelope, the violation is stored on flash and shown on the device and on this page. The Event log at the bottom of the page lists the duty-class events; it can be cleared or downloaded. A reference table of the ISO/FEM duty classes (SWP hours, maximum starts per hour, duty factor, running minutes and slow/fast speed limits) is included on the page.



Flash parameters (User)

You can find the serial number and hoist configuration. The configuration can be changed from the Dealer and OEM level.

The screenshot shows a web browser window with the URL 192.168.1.1. The page is titled "IC4C-GO / Flash parameters" and displays the "FLASH PARAMETERS" section under the "PROVISIONING" tab. The interface includes a sidebar with navigation options: Home, Setup, Service, I/O, Duty class, Flash parameters (selected), Device info, File system, and Login. The main content area shows the "MODULE" section with the "Serial number" set to "97386454" and the "CONFIGURATION" section with the "Hoist" set to "Solo hoist". The status bar at the bottom indicates "Connected" and "IC4C-GO Pro · firmware v3.0.0 · 97386454".

MODULE	
Serial number	97386454

CONFIGURATION	
Hoist	Solo hoist

Device Info

An overview of the current software and firmware versions, including the firmware version, the ESP-IDF version, the hardware (HAL) version and, when enabled, the MQTT version.

The screenshot shows a web browser window with the URL 192.168.1.1. The page is titled "IC4C-GO / Device info" and displays a "DEVICE INFO" section under the "SYSTEM" tab. The interface includes a sidebar with navigation options: Home, Setup, Service, I/O, Duty class, Flash parameters, Device Info (selected), File system, and Login. The main content area shows details for the device's identity, hardware, firmware, build, and partitions.

IDENTITY	
Serial number	97386454
Project name	PRLM165
Project version	v0.0.9
Network name	97386454

HARDWARE	
Board type	Pro
Flash memory	16 MB

FIRMWARE	
FW version	v3.0.0
IDF version	v5.4.1
HAL version	v0.1.15
MQTT version	v0.0.1

BUILD	
Build date	Jun 23 2026
Build time	12:26:55

PARTITIONS	
Boot partition	ota_0
Run partition	ota_0

At the bottom of the interface, a status bar shows "Connected" and "IC4C-GO Pro · firmware v3.0.0 · 97386454".

File System (User)

An overview of all the files inside the I-C4C GO.

The screenshot displays the IC4C-GO File System interface. The left sidebar contains navigation options under 'OPERATIONS' (Home, Setup, Service, I/O, Duty class) and 'SYSTEM' (Flash parameters, Device info, File system, Login). The 'File system' option is selected. The main area shows the 'FILE SYSTEM' status for the 'incosa_fs' partition. It indicates a total size of 5120.00 KB, with 260.00 KB used (5% usage) and 4860.00 KB free. A list of files is shown: 'data' (10.99 KB), 'site' (127.75 KB), and 'foo.txt' (0.02 KB). The interface also shows a 'Connected' status and the user 'US' with ID 97386454.

IC4C-GO / File system

Connected 192.168.1.1 US User 97386454

FILE SYSTEM

LittleFS partition status and the files stored on the device. Privileged roles can upload and delete files.

PARTITION		USAGE	
Label	incosa_fs	Used	260.00 KB
Total size	5120.00 KB	Free	4860.00 KB

5% USED

FILES

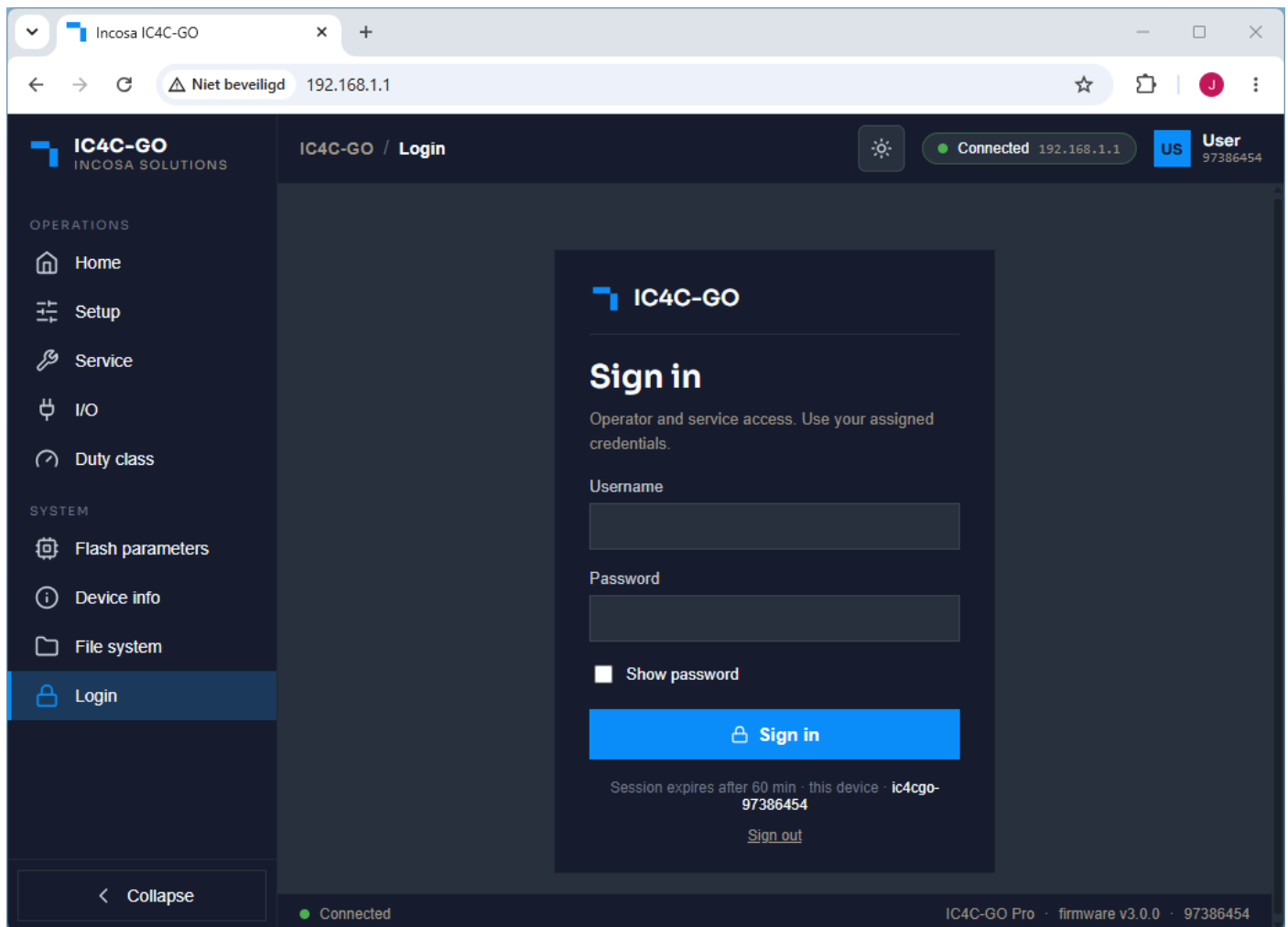
- IC4C-GO
 - data (10.99 KB)
 - site (127.75 KB)
 - foo.txt (0.02 KB)

Connected IC4C-GO Pro · firmware v3.0.0 · 97386454

Login

Some additional functionality on the i-C4C GO requires a login (e.g. change parameters, upload program,...). There are two possible login accounts: check you specification sheet for your login credentials.

- Username:
 - dealer
 - oem



Setup (OEM/Dealer)

Additional functionality

- Change parameter values
 - Manually
 - Automatic: offset
 - Automatic: gain

Change parameter – manually

You can change parameters by entering new values and confirming these values using the Write-button under each section. There are some additional restriction for the Safety parameters, which are described on the next page.

The screenshot displays the IC4C-GO Setup interface in a web browser. The browser address bar shows 'Niet beveiligd 192.168.1.1'. The interface has a dark theme with a sidebar on the left containing navigation links: Home, Setup (selected), Service, I/O, Duty class, Network, CAN, Modbus, Flash parameters, Firmware, Device info, File system, and Login. The main content area is titled 'IC4C-GO / Setup' and features a 'PARAMETERS' section with a 'Unit: kg' toggle. Below this, a 'SAFETY PARAMETERS' section lists various settings with input fields and current values: Loadcell CAN id (1), Loadcell cable diameter (0), Load measurement offset (0), Gain (-) (2000), Overload value (11000), Overload hysteresis (100), Overload delay (0), Loadcell capacity (2000), Hoist capacity (10000), and Additional gain factor (-) (1). At the bottom of this section are buttons for 'Manual mode', 'Deactivate bypass', 'Bypass overload (140%)', and 'Write'. Below the safety parameters are two sections: 'DISPLAY PARAMETERS' with 'Refresh time (s)' set to 1, and 'CONFIGURATION PARAMETERS' with 'Slackrope (kg)' set to 100.

Parameter	Value
Loadcell CAN id (detected: 1)	1
Loadcell cable diameter (mm)	0
Load measurement offset (kg)	0
Gain (-)	2000
Overload value (kg)	11000
Overload hysteresis (%)	100
Overload delay (ms)	0
Loadcell capacity (kg)	2000
Hoist capacity (kg)	10000
Additional gain factor (-)	1

Parameter	Value
Refresh time (s)	1
Slackrope (kg)	100

Safety Parameter restrictions

Parameter	Description/Restrictions
Loadcell CAN id	The can id of the loadcell
Loadcell cable diameter (mm)	The diameter of the cable (mm)
Load measurment offset (kg)	Maximum 20% of loadcell capacity (unsigned 32-bit value)
Gain (-)	Between 400-80000 (factor 0.4-80)
Overload value (kg)	Can be maximum 110% of Hoist capacity parameter (unsigned 32-bit value)
Overload hysteresis (%)	0-100% (Default: 50%)
Overload delay (ms)	0-1000 (Default: 200ms)
Loadcell capacity (kg)	Nominal capacity related to loadcell (unsigned 32-bit value)
Hoist capacity (kg)	(unsigned 32-bit value)
Additional gain factor (-)	Additional factor that can be applied if factor 20 of gain is not sufficient (default value 1)

Change parameters – automatically

When you select auto mode, you can automatically set the offset and gain to the right values.

SAFETY PARAMETERS

Loadcell CAN id (detected: 1)	1
Loadcell cable diameter (mm)	0
Load measurement offset (kg)	0
Gain (-)	2000
Overload value (kg)	11000
Overload hysteresis (%)	100
Overload delay (ms)	0
Loadcell capacity (kg)	2000
Hoist capacity (kg)	10000
Additional gain factor (-)	1

☒ **Auto mode**
Auto calibrates gain from a known load

Deactivate bypass

Bypass overload (140%)

Write

Known load (kg)

Set offset

Set gain

Offset

Make sure that the hook of your hoist is empty and completely down at its lowest position. Press **Set offset** to automatically subtract the remaining load from the measurement. The measured gross load should now be zero.

Gain

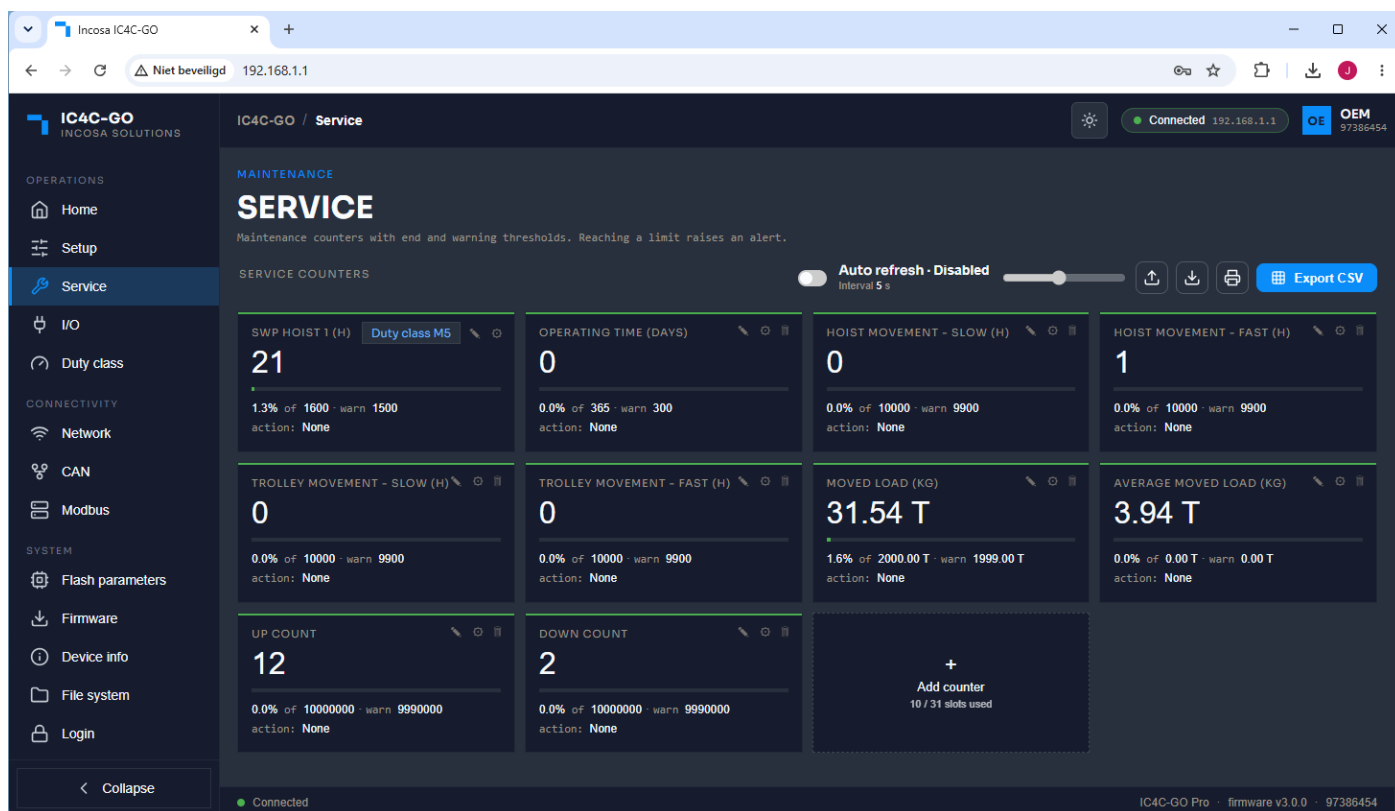
Hoist a known load (minimum 50% of hoist capacity). Fill in the Know load field and press Set Gain to automatically update the gain to match the calculated gross load to the known load.

Measurement units (kg / lbs)

On the Setup page you can switch the measurement unit between kilograms and pounds using the kg / lbs toggle at the top of the page. The selected unit is applied to every load value shown on the Home and Setup pages and to the safety parameters you enter.

Service (OEM/Dealer)

Next to export/printing the data, it is now also possible to import service parameters from other devices.



Edit values

On each counter, by clicking the pencil icon on the top right, you can edit the current value, end and warning value of the counter. Further is it possible to reset the counter to zero. The current and end value of SWP counters can only be set from the Duty class tab.

This screenshot shows the 'OPERATING TIME (DAYS)' edit form. It features a large input field for the current value, currently set to '100'. Below this, there are two input fields for 'End' (set to '365') and 'Warning' (set to '300'). A checkbox labeled 'Reset current to 0' is present, and a confirmation button with a checkmark is at the bottom left.



Configure counter

By clicking the cog icon, you can configure the counter and couple an action to. A relay can be forced to its on or off state. An active forced relay state is indicated with an orange border on the home page.

CONFIGURE COUNTER

Name: Operating time (days) 21 / 31

Type: Current time (days) ▼

End value: 365

Warning value: 300

Action at end: Force relay ▼

⚠ Forcing relays overrides the normal control of the selected outputs while this counter is at its end value, and may cause unexpected machine behaviour. Use with care.

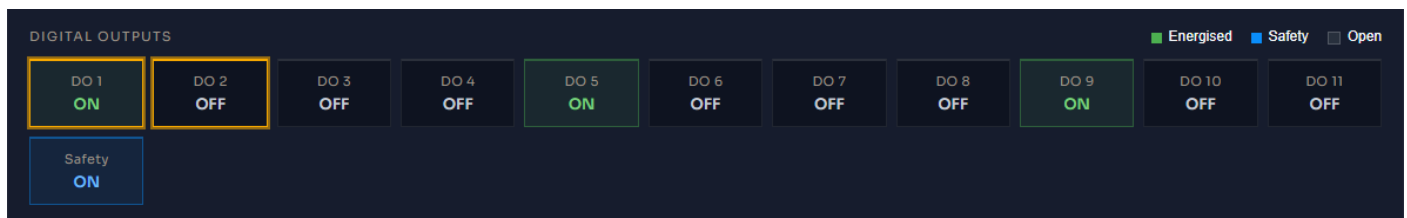
Output relays

Digital output ▼ DO 1 ▼ High ▼ X

Digital output ▼ DO 2 ▼ Low ▼ X

+ Add relay

Save changes Cancel



⚠ Warning – Forced relay state

Forcing relays overrides the normal control of the selected outputs while this counter is at its end value, and may cause unexpected machine behaviour.

This feature should only be used by trained personal.

Misuse can result in death, serious injury, or equipment damage.

Adding counter

Click on the Add counter button. It is located next to the last service counter and indicates how many counters that can be added. Give you counter a unique name and choose the counter type. Link the reference signals to it. What does trigger this counter? This could be one or more input(s)/output(s). Should this I/O be high or low? And if you have multiple signals, what is the relation between these signals. E.g. both signals should be high, one of the signals should be high,...

Next define the end and warning values of the counter. When these values are reached, a message will be shown on the home page and service tab.

As a last part, you can force an output relay state when the counter has reached it end value. However as state before, this feature should be handled with care.

The image displays two screenshots of the 'ADD COUNTER' configuration interface. The left screenshot shows the initial form with a dropdown menu open for the 'Type' field, listing options: Current time (days), Movement time (h), Moved load (kg), Counter (selected), Average moved load (kg), and Load cycles. The right screenshot shows the form after configuration, with 'Type' set to 'Counter', 'Signals' set to '2 signals', and logic defined as 'Active when DI 1 High OR DI 1 High'. It also shows 'End value' as 200000 and 'Warning value' as 199000.

Current time (days)

Registers the days the system has been active (powered).

Movement time (h)

Similar to the time registration, but triggered by an I/O signal. E.g. How long has the hoist been moving (signals: up/down motion).

Moved load (kg/lbs)

This calculates the total moved load. During operation, the maximum load is registered. From the moment that load is put down on the ground, the maximum value is added to this counter. It needs a load source, a signal (down motion), and the empty hook (or slack rope) value. If the slack rope value cannot be used, select the Empty hook option, to fill in a custom trigger value.

Counter

Counts whenever the signal(s) condition(s) are met.

Incosa Solutions bv part of the INDIC group

Molenberglei 21, 2627 Schelle, Belgium – BE0808.556.960 – +3234519395 – commercial@incosasolutions.com –

www.incosasolutions.com – www.ic4cgo.tech

Average moved load (kg/lbs)

This counter is linked to the Moved load counter, and calculates the average load moved per cycle. It can only be added if a Moved load counter exists.

Load cycles

This counter is linked to the Moved load counter, and counts the moved load cycles. It can only be added if a Moved load counter exists.

I/O (OEM/Dealer)

Additional functionality

- Setup the descriptions of the IO.

The screenshot shows the IC4C-GO I/O configuration interface. The left sidebar contains navigation options: OPERATIONS (Home, Setup, Service), I/O (selected), Duty class, CONNECTIVITY (Network, CAN, Modbus), and SYSTEM (Flash parameters, Firmware, Device info, File system, Login). The main content area is titled 'IC4C-GO / I/O' and includes a 'Save changes' button. It displays three sections: SIGNALS, I/O, and OUTPUTS. The SIGNALS section shows a table for SAFETY OUTPUT with columns INDEX, PIN NUMBER, STATE, and DESCRIPTION. The I/O section shows a table for ANALOG OUTPUT with columns INDEX, PIN NUMBER, VALUE (V), and DESCRIPTION. The OUTPUTS section shows a table with columns INDEX, PIN NUMBER, STATE, and DESCRIPTION.

INDEX	PIN NUMBER	STATE	DESCRIPTION
1	23 - 24	ON	Safety Relay for Overload

INDEX	PIN NUMBER	VALUE (V)	DESCRIPTION
1	A0	5.08 V	Analog Load Value

INDEX	PIN NUMBER	STATE	DESCRIPTION
1	1 - 2	ON	Lifting
2	3 - 4	OFF	Lowering
3	5 - 6	OFF	Lifting/Lowering Fast or Acceleration
4	7 - 8	OFF	Extended speed range
5	9 - 10	ON	Hoist Inverter State
6	11 - 12	OFF	Right
7	13 - 14	OFF	Left
8	15 - 16	OFF	Right/Left Fast or Acceleration

Duty class (OEM/Dealer)

It is possible to add an additional hoist, change the name of the existing hoist, change the duty class and edit the current SWP value. An important difference with previous version(s) is that the SWP now counts up, like all other service parameters.

The Duty configuration can be exported and imported from a file, so a hoist or fleet configuration can be backed up or copied to another device.

The screenshot shows the IC4C-GO web interface for configuring the duty class of a hoist. The page is titled "DUTY CLASS" and includes a sidebar with navigation options: Home, Setup, Service, I/O, Duty class, Network, CAN, Modbus, Flash parameters, Firmware, Device info, File system, and Login.

DUTY MONITORING
DUTY CLASS
Sold duty class, live counters and out-of-envelope events, per hoist.

FLEET - 1 HOIST

Hoist 1 (12.500 h SWP budget)

SOLD DUTY CLASS
M8 Continuous process-duty service
SWP 12.500 h · 360 start/h · 60% on-time
Change to: **M8** (Write Remove)
Stored in flash · logged

OPERATOR BEHAVIOUR
ON PROFILE
Hoist operating **within** the sold M8 duty envelope. All counters healthy.
IC4C-GO monitors SWP, starts/hour and on-time per the sold duty class. Violations are stored on flash and surfaced on the device + here.

I/O MAPPING Load Gross load (load cell) · cap 1000 kg · Low DO1 + DO2 · High DO3 · Overload Safety relay

LIVE COUNTERS

SWP REMAINING	STARTS IN LAST HOUR	FAST SPEED · 1 HOUR	SLOW SPEED · 10 MIN
12479 h 99.8% of 12.500 h budget	6 2% of 360 max	0.12 min 0% of 60 min limit	3.70 min 62% of 6 min limit

SWP HOURS USED
20.7 h
Logged to flash · cumulative

HOIST STATE
IDLE
From IO · live

REFERENCE
DUTY CLASSES PER ISO/FEM

DUTY	SWP HOURS	MAX START / HOUR	DUTY FACTOR % (ON/OFF)	TOTAL RUNNING MIN / HOUR	SLOW SPEED MIN / 10 MIN	FAST SPEED MIN / HOUR
M3	400	150	25	15	2.5	15
M4	800	180	30	18	3	15
M5	1.600	240	40	24	3.5	30
M6	3.200	300	50	30	4	30
M7	6.300	360	60	36	5	60
M8	12.500	360	60	36	6	60

EVENT LOG (Clear Download)

Add hoist

Click on Add hoist the include an additional hoist and Duty class tab. You can switch between the two hoist by clicking on the main rectangle on top.

The screenshot displays the IC4C-GO web interface for configuring a hoist's duty class. The browser address bar shows the URL 192.168.1.1. The interface is divided into a left sidebar with navigation options (Home, Setup, Service, I/O, Duty class) and a main content area. The 'Duty class' section is active, showing 'DUTY MONITORING' and 'DUTY CLASS' settings. It indicates 'FLEET - 2 HOISTS' and lists 'Main hoist' (M8, 12,500 h SWP budget) and 'Aux hoist' (M5, 1,600 h SWP budget). The 'AUX HOIST' section is expanded, showing 'SOLD DUTY CLASS' for 'M5' (Frequent production service, SWP 1,600 h - 240 starts/h - 40% on-time). Below this, there are buttons for 'Change to: M5', 'Write', and 'Remove'. The 'OPERATOR BEHAVIOUR' section shows 'ON PROFILE' and a message: 'Hoist operating within the sold M5 duty envelope. All counters healthy. IC4C-GO monitors SWP, starts/hour and on-time per the sold duty class. Violations are stored on flash and surfaced on the device + here.' The 'I/O MAPPING' section lists: 'Load Gross load (load cell) · cap 1000 kg · Low DI4 + DI5 · High DI6 · Overload Safety relay'. The 'LIVE COUNTERS' section displays four metrics: 'SWP REMAINING' (1600 h, 100.0% of 1,600 h budget), 'STARTS IN LAST HOUR' (0, 0% of 240 max), 'FAST SPEED · 1 HOUR' (0.00 min, 0% of 30 min limit), and 'SLOW SPEED · 10 MIN' (0.95 min, 27% of 3.5 min limit). At the bottom, 'SWP HOURS USED' is 0.0 h and 'HOIST STATE' is IDLE.

I/O mapping

The duty class counters are triggered by a load source and I/O signals. Click on I/O mapping, to change the settings.

I/O MAPPING

Load Gross load (load cell) · cap 1000 kg · Low DI1 + DO2 · High DO3 · Overload Safety relay

Hoist 1

Load source

Gross load (load cell) ▾

Nominal capacity

1000

kg

Low speed (movement)

2 signals ▾

Digital output ▾

DO 1 ▾

High ▾

Digital output ▾

DO 2 ▾

High ▾

High speed (fast)

1 signal ▾

Digital output ▾

DO 3 ▾

High ▾

Hoist selection

☒ Use hoist selection

Extra condition for low & high speed

Digital input ▾

DI 1 ▾

High ▾

Overload

Logged when the signal leaves this level

Safety relay state ▾

High ▾

Write to flash

Revert

Per-hoist · stored in flash · logged

Network (OEM/Dealer)

This menu item is only available when logged in. The current network state can be found on top. Right under the network settings, is a list with connected devices. These are the devices connected through the Access Point (AP) and Ethernet (if setup as DHCP server). It is possible to rename the SSID, set the channel and bandwidth of its own AP.

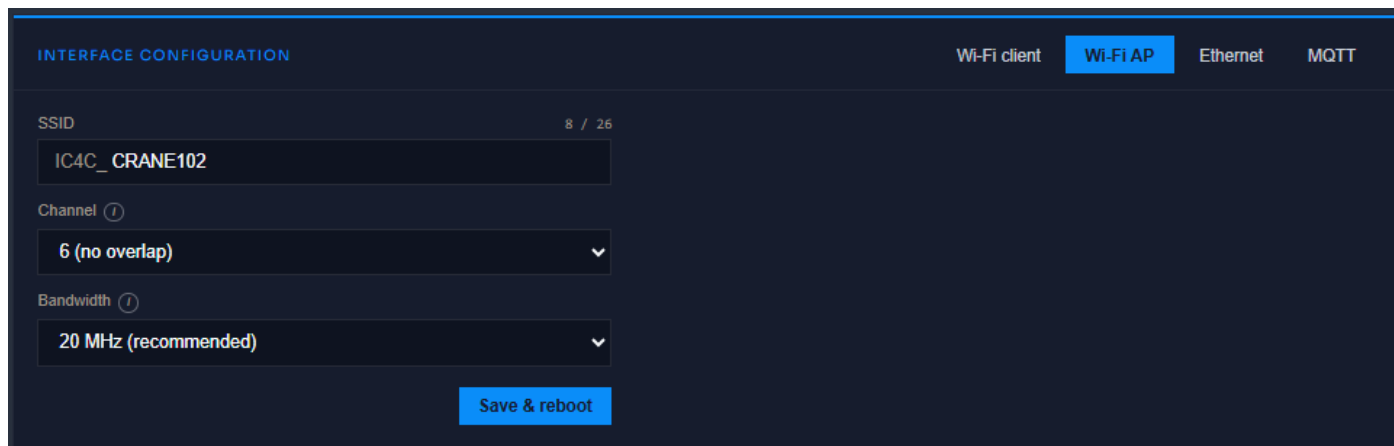
The screenshot displays the IC4C-GO Network configuration interface. The top navigation bar shows the device is connected to 192.168.1.1. The main content area is divided into several sections:

- CONNECTIVITY NETWORK**: Shows the current network state as "Connected through Wi-Fi AP".
- WI-FI ACCESS POINT**: A table showing the status of the Wi-Fi AP. The status is "ACTIVE".
- ETHERNET**: A table showing the status of the Ethernet connection. The status is "NO LINK".
- CONNECTED DEVICES**: A table showing the list of connected devices. One device is connected with IP address 192.168.1.2.
- INTERFACE CONFIGURATION**: A section for configuring the network interface. It includes a "Scan" button to show available networks, a "Connect" button, and fields for SSID and Password.

The bottom status bar shows the device is connected and provides the firmware version (v3.0.2) and the device ID (97386454).

Rename AP

Go to the Wi-Fi AP tab. By default the SSID is show as "IC4C_" + "serial number". You can rename the latter part to a custom name (e.g. CRANE102) or set a specific Wi-Fi channel.



INTERFACE CONFIGURATION

Wi-Fi client **Wi-Fi AP** Ethernet MQTT

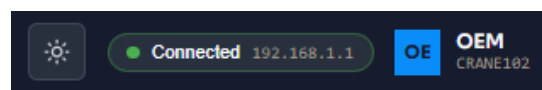
SSID 8 / 26
IC4C_CRANE102

Channel ⓘ
6 (no overlap) ▼

Bandwidth ⓘ
20 MHz (recommended) ▼

Save & reboot

After reboot, the new network name will be visible on your device. Connect to the new SSID and fill in your password. Reopen the webpage of the I-C4C GO. The new SSID suffix is also shown as a device name on the top bar.



WI-FI - ACCESS POINT		ACTIVE
SSID	IC4C_CRANE102	
Channel	6	
IP	192.168.1.1	
Subnet	255.255.255.0	
Gateway	192.168.1.1	
Clients	1	

Remark

It is recommended to set the Bandwidth to 20MHz, which ensures a stable wireless connection with less chance of interference from other networks.

Connect the device to Wi-Fi

1. Go to the INTERFACE CONFIGURATION
2. Under Wi-Fi client tab, Click on Scan
3. Click on the SSID of the network you would like to link
4. Enter the password for the network
5. Click on Connect to link the IC4C GO to the Wi-Fi network

6. The connection of the I-C4C GO with the network can be checked by reopening the network menu. The new client connection is shown on top. If you see all 0.0.0.0, the connection was not successful. Its own AP now uses the same channel as the connected network.

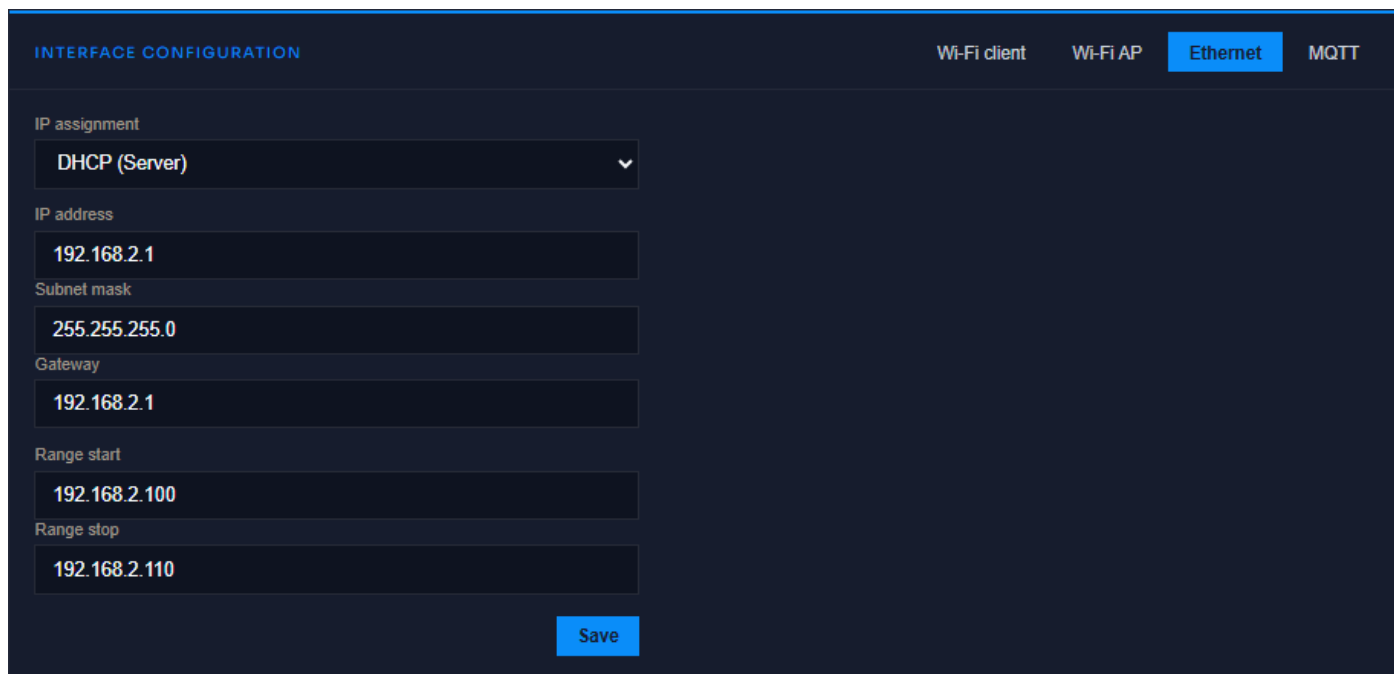
WI-FI - ACCESS POINT	ACTIVE	WI-FI - CLIENT	CONNECTED	ETHERNET	NO LINK
SSID	IC4C_97386454	SSID	INDIC GROUP	IP assignment	dhcp_server
Channel	1 - from client	IP	10.130.28.147	IP	192.168.2.1
IP	192.168.1.1	Subnet	255.255.255.0	Subnet	255.255.255.0
Subnet	255.255.255.0	Gateway	10.130.28.1	Gateway	192.168.2.1
Gateway	192.168.1.1	RSSI - Channel	-56 dBm - ch 1	Clients	0
Clients	1				

Connect to device through Ethernet

The I-C4C GO Pro is by default setup as an Ethernet DHCP server. This means that it by default works fine if it is connected by Ethernet cable to a DHCP client. However, if needed it can be setup as a DHCP client or with a static IP address.

DHCP-server

Got to the Ethernet tab. Under INTERFACE CONFIGURATION, set Ethernet to DHCP (Server) (Default setting). Connect an Ethernet cable to the DHCP client (Invision). Refresh your window and look for the connection on top of the screen.

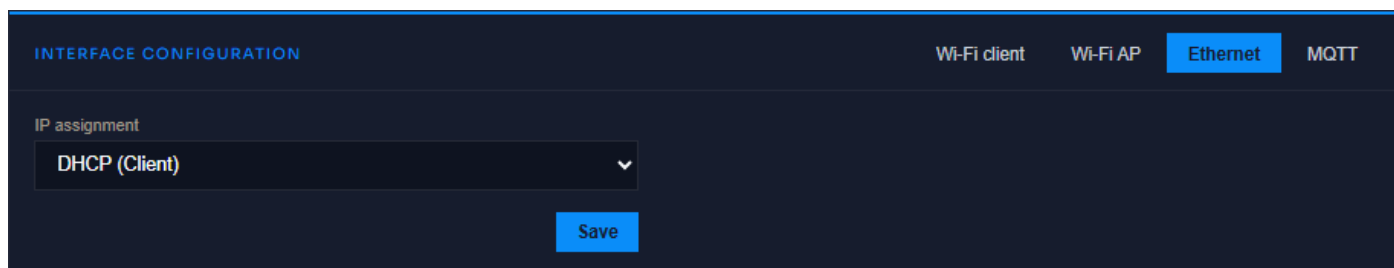


The screenshot shows the 'INTERFACE CONFIGURATION' page with the 'Ethernet' tab selected. The 'IP assignment' dropdown is set to 'DHCP (Server)'. Below it, the 'IP address' is 192.168.2.1, 'Subnet mask' is 255.255.255.0, 'Gateway' is 192.168.2.1, 'Range start' is 192.168.2.100, and 'Range stop' is 192.168.2.110. A 'Save' button is at the bottom right.

INTERFACE CONFIGURATION	Wi-Fi client	Wi-Fi AP	Ethernet	MQTT
IP assignment			DHCP (Server)	
IP address			192.168.2.1	
Subnet mask			255.255.255.0	
Gateway			192.168.2.1	
Range start			192.168.2.100	
Range stop			192.168.2.110	
Save				

DHCP-client

Under INTERFACE CONFIGURATION, set Ethernet to DHCP (Client). Connect an Ethernet cable to the DHCP server (I-C4C GO Pro or router). Refresh your window and look for the connection on the top of your screen.



The screenshot shows the 'INTERFACE CONFIGURATION' page with the 'Ethernet' tab selected. The 'IP assignment' dropdown is set to 'DHCP (Client)'. A 'Save' button is at the bottom right.

INTERFACE CONFIGURATION	Wi-Fi client	Wi-Fi AP	Ethernet	MQTT
IP assignment			DHCP (Client)	
Save				

WI-FI - ACCESS POINT		ACTIVE	WI-FI - CLIENT		CONNECTED	ETHERNET		CONNECTED
SSID	IC4C_CRANE102		SSID	INDIC GROUP		IP assignment	dhcp_client	
IP	192.168.1.1		IP	10.130.28.117		IP	10.130.28.117	
Subnet	255.255.255.0		Subnet	255.255.255.0		Subnet	255.255.255.0	
Gateway	192.168.1.1		Gateway	10.130.28.1		Gateway	10.130.28.1	
Clients	1		RSSI - Channel	-44 dBm - ch 1				

Static-client

Under INTERFACE CONFIGURATION, set Ethernet to Static. Set a unique IP-address, the subnetmask and the gateway in the same range as the other devices within the network. Connect an Ethernet cable to the network (e.g. InVision). Refresh your window and look for the connection under INTERFACE - STATUS.

INTERFACE CONFIGURATION
Wi-Fi client
Wi-Fi AP
Ethernet
MQTT

IP assignment
Static

IP address
192.168.2.20

Subnet mask
255.255.255.0

Gateway
192.168.2.1

Save

WI-FI · ACCESS POINT		ACTIVE	WI-FI · CLIENT		CONNECTED	ETHERNET		CONNECTED
SSID	IC4C_CRANE102		SSID	INDIC GROUP		IP assignment	static	
IP	192.168.1.1		IP	10.130.28.111		IP	192.168.2.20	
Subnet	255.255.255.0		Subnet	255.255.255.0		Subnet	255.255.255.0	
Gateway	192.168.1.1		Gateway	10.130.28.1		Gateway	192.168.2.1	
Clients	1		RSSI · Channel	-46 dBm · ch 1				

Connect to an MQTT server

The I-C4C GO can function as an MQTT client and send data to an MQTT server (Cloud Connect). To do this, the I-C4C GO should be connected as a client (Wi-Fi or Ethernet) in the network of the MQTT server or to a network with internet connection. Open the MQTT tab on the Network page, enable MQTT with the toggle and set the server IP, server port, username and password. Save your settings. The i-C4C GO publishes its digital inputs and outputs, the gross load and its analog values to the broker. The connection state and the last error messages are shown on the same tab, so you can confirm the link or diagnose a failed connection. MQTT is available on both the PRO and BASIC models; on a BASIC model it connects over Wi-Fi.

WI-FI · CLIENT		CONNECTED
SSID	One+	
IP	10.112.115.143	
Subnet	255.255.255.0	
Gateway	10.112.115.240	
RSSI · Channel	-31 dBm · ch 6	

INTERFACE CONFIGURATION

Wi-Fi clientWi-Fi APEthernetMQTT

☒ MQTT · Enabled

Broker connection

Server IP

10.112.115.234

Server port

1883

Username

user

Password

password

Status

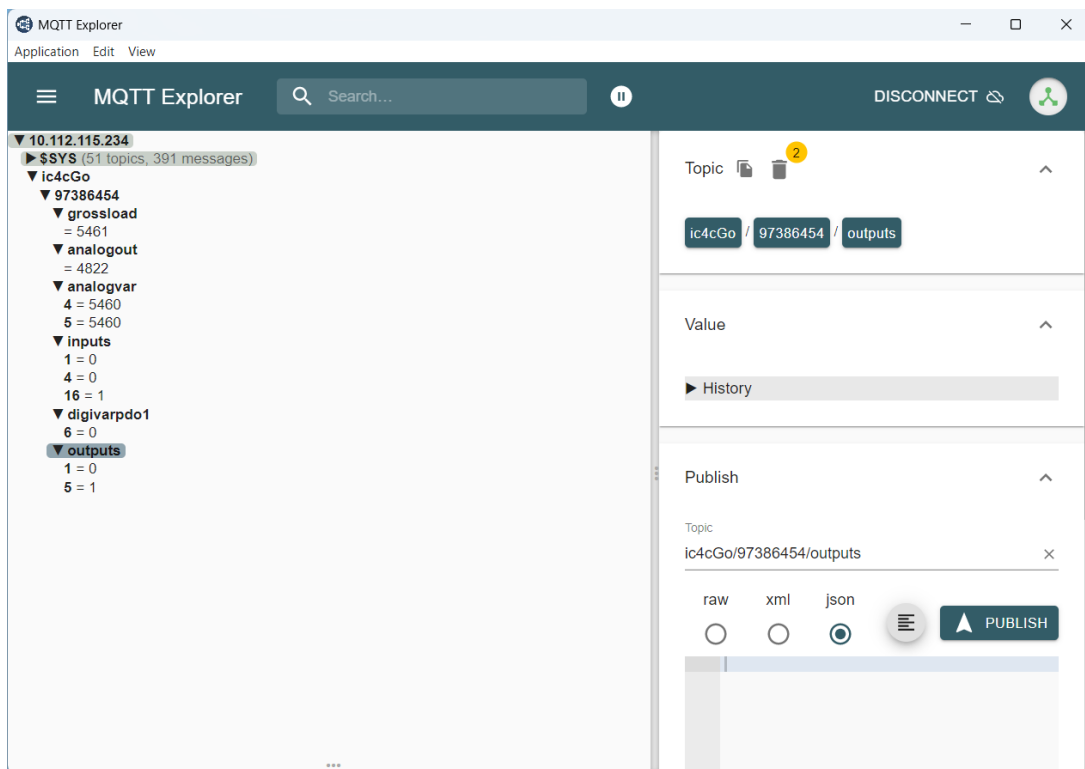
Connected

Save

Connection Log:

1: Other event id:7

2: MQTT_EVENT_CONNECTED



CAN-bus (OEM/Dealer)

This menu contains settings related to the second CAN-bus, to enable/disable CAN-communication, set the node id, baudrate and end resistor (termination). It is possible to look at live CAN-data from connected CAN-devices. These CAN-devices need to be defined in your software.

The screenshot shows the IC4C-GO web interface for configuring the CAN bus. The browser address bar shows '192.168.1.1'. The interface has a dark theme with a sidebar on the left containing navigation links: Home, Setup, Service, I/O, Duty class, Network, CAN (selected), Modbus, Flash parameters, Firmware, Device info, File system, and Login.

The main content area is titled 'CAN' under the 'INDUSTRIAL BUS' section. It includes a 'CONFIGURATION' table with settings for CAN Master switch, Node id, Baud rate, End resistor, and Vendor id. A 'Write & reboot' button is present. Below this is a 'CURRENT CONFIGURATION' table showing the current values for mode, nodeID, txQueueLength, rxQueueLength, baudrate_kbps, and termination.

To the right is a 'LIVE STATUS' table showing various CAN bus statistics. At the bottom, there is a 'CONFIGURED CAN NODES' section showing one online node, 'IC4C GO', with a 'Live update' toggle set to 'Disabled'.

CONFIGURATION	
CAN - Master switch	Enabled
Node id	11
Baud rate	250 kbit/s
End resistor	Enabled
Vendor id	Official (CiA)
Write & reboot	

CURRENT CONFIGURATION	
mode	Normal
nodeID	11
txQueueLength	5
rxQueueLength	127
baudrate_kbps	250
termination	true

LIVE STATUS	
state	Running
txQueue	0
rxQueue	0
txErrCount	0
rxErrCount	0
txFailCount	0
rxMissCount	0
rxOverrunCount	0
arbLostCount	97
busErrCount	26
rxMsgCount	3897
rxMsgSec	45
rxMsgAvgSec	19
txMsgCount	4553
txMsgSec	45
txMsgAvgSec	23

CONFIGURED CAN NODES	
1 of 1 online	Live update - Disabled Interval 5 s
IC4C GO IC4C-GO module - node 0x0C [12] - Incosa Solutions (CiA)	Online DATA PDO



Vendor id

We are now proud member of the CAN in Automation group (CiA), to keep up with the latest trends and standards within CAN-communication. This registration made that our Vendor id has changed. Devices with the latest firmware will detect both old and new devices correctly. However, for support & replacement with devices in the field (e.g. setup with external PLC), it is still possible to change the vendor id to the Legacy value using the new Vendor id setting.

The screenshot shows the 'CONFIGURATION' menu with the following settings:

Setting	Value
CAN - Master switch	Enabled
Node id	11
Baud rate	250 kbit/s
End resistor	Enabled
Vendor id	Official (CiA) (selected), Official (CiA), Legacy

Modbus (OEM/Dealer)

The Modbus page lists the Modbus field sensors connected to the i-C4C GO and their live readings. The i-C4C GO PRO acts as a Modbus TCP master and reads the connected devices over the Ethernet network. Expand a sensor to inspect its detailed data and the time of the last update.

Supported devices include IFM IO-Link masters (such as the AL1340 gateway with up to four IO-Link ports), on which IFM and SICK distance sensors (O1D106, DT80, DL35) can be connected. The sensors that apply to your installation are defined in your software. Modbus is available on the PRO model only.

The screenshot shows a web browser window with the URL 192.168.1.1. The page title is "Incosa IC4C-GO / Modbus". The interface is dark-themed and displays the "MODBUS" section under "INDUSTRIAL BUS". It shows a list of "MODBUS SENSORS" with "1 of 1 online". The sensor "O1D106" (Port X01) is listed as "Online". A "DATA" button is next to it. Below the sensor name, a table of data points is shown:

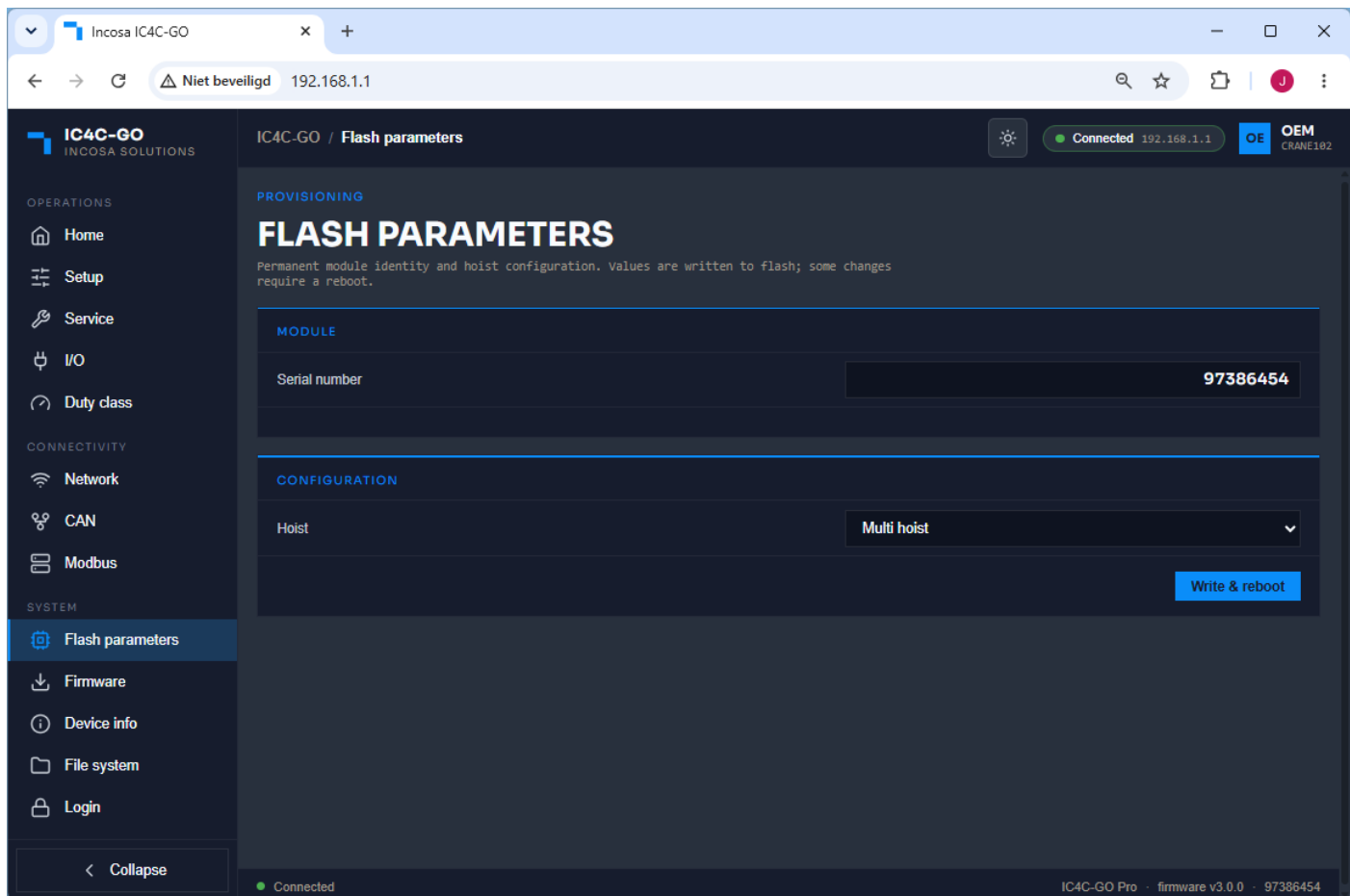
port	X01
vendorId	IFM
vendorIdValidated	1
deviceId	O1D106
deviceIdValidated	1
operational	1
distance	1,500
output_1	1
output_2	0
status	Device is OK

The bottom status bar shows "Connected" and "IC4C-GO Pro · firmware v3.0.0 · 97386454".

Flash parameters (OEM/Dealer)

Additional functionality:

- Change hoist configuration (solo hoist/multi hoist)



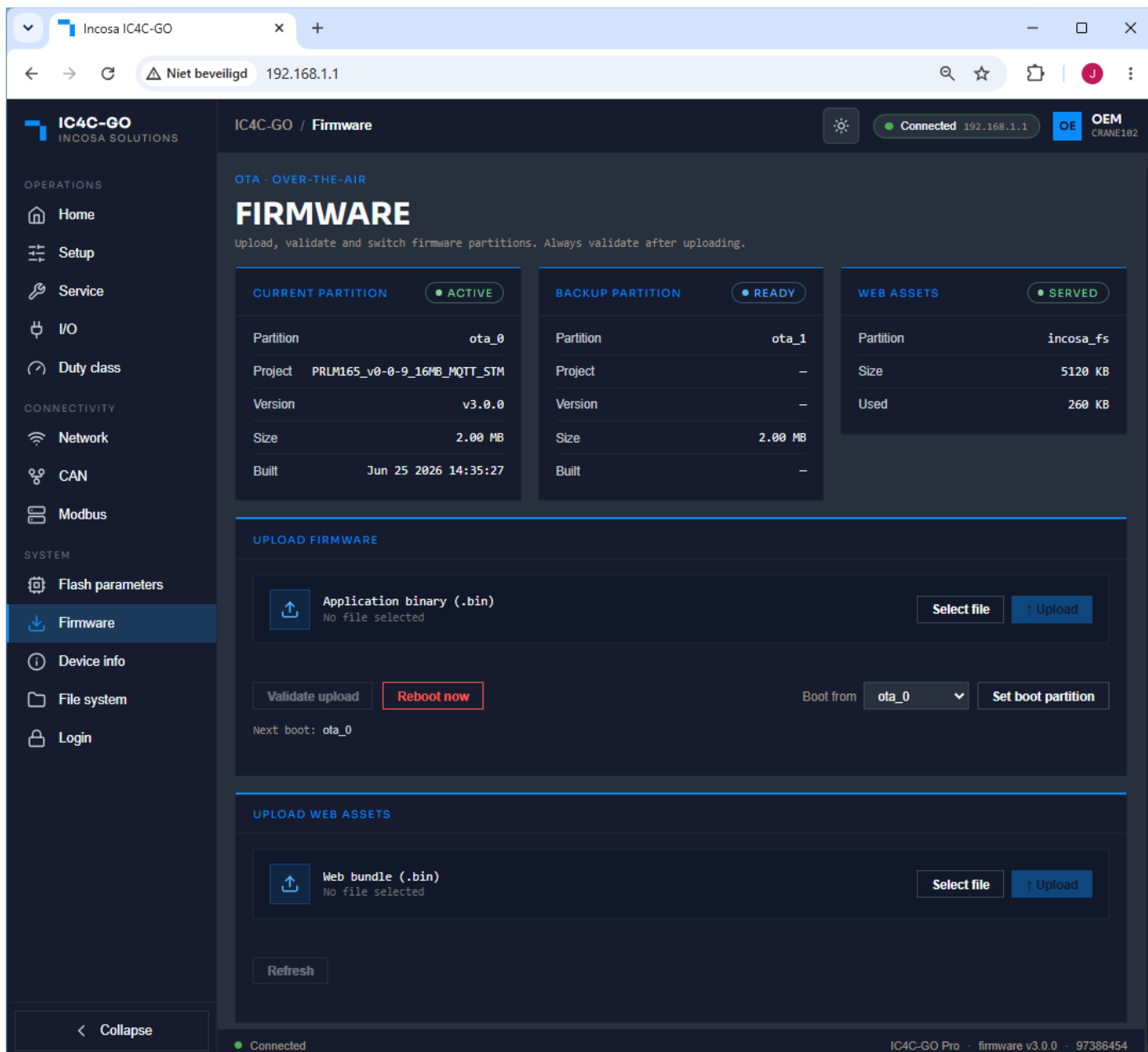
Firmware (OEM/Dealer)

This menu item is only available when logged in. You can select and upload a new firmware/configuration to the **i-C4C GO**. The module has two boot partitions. The new firmware will be uploaded to the inactive partition.

The active partition and the boot partition are displayed. You can change the boot partition to force the i-c4c to start with a different configuration already present in the other partition.

Warning

All action in this menu have large implication on the current behaviour of the i-C4C GO, therefore they should be controlled by qualified personnel.



The screenshot shows the IC4C-GO Firmware management interface in a web browser. The browser address bar shows the URL 192.168.1.1. The interface has a dark theme and a sidebar on the left with navigation options: Home, Setup, Service, I/O, Duty class, Network, CAN, Modbus, Flash parameters, Firmware (selected), Device info, File system, and Login. The main content area is titled "FIRMWARE" and includes a warning: "Upload, validate and switch firmware partitions. Always validate after uploading." Below this, there are three panels: "CURRENT PARTITION" (ACTIVE), "BACKUP PARTITION" (READY), and "WEB ASSETS" (SERVED). Each panel displays details like Partition, Project, Version, Size, and Built date. The "CURRENT PARTITION" panel shows: Partition: ota_0, Project: PRLM165_v0-0-9_16MB_MQTT_STM, Version: v3.0.0, Size: 2.00 MB, Built: Jun 25 2026 14:35:27. The "BACKUP PARTITION" panel shows: Partition: ota_1, Project: -, Version: -, Size: 2.00 MB, Built: -. The "WEB ASSETS" panel shows: Partition: incosa_fs, Size: 5120 KB, Used: 260 KB. Below these panels, there are two sections: "UPLOAD FIRMWARE" and "UPLOAD WEB ASSETS". The "UPLOAD FIRMWARE" section has a file upload area for "Application binary (.bin)" with a "Select file" button and an "Upload" button. Below this, there are buttons for "Validate upload" and "Reboot now" (highlighted in red). A "Boot from" dropdown menu is set to "ota_0" with a "Set boot partition" button. The "UPLOAD WEB ASSETS" section has a file upload area for "Web bundle (.bin)" with a "Select file" button and an "Upload" button, and a "Refresh" button. The bottom status bar shows "Connected", "IC4C-GO Pro", "firmware v3.0.0", and "97386454".

Partition	ota_0	ota_1	incosa_fs
Project	PRLM165_v0-0-9_16MB_MQTT_STM	-	
Version	v3.0.0	-	
Size	2.00 MB	2.00 MB	5120 KB
Built	Jun 25 2026 14:35:27	-	260 KB

Upload firmware

Click on **Select File**, and select the new firmware file.

UPLOAD FIRMWARE

Application binary (.bin)

No file selected

Select file

↑ Upload

Validate upload

Reboot now

Boot fromota_0Set boot partition

Next boot: ota_0

UPLOAD FIRMWARE

Application binary (.bin)

PRLM165_v0-0-9_16MB_MQTT_STM.bin · 1.06 MB · selected just now

Select file

↑ Upload

Validate upload

Reboot now

Boot fromota_0Set boot partition

Next boot: ota_0

Click on **Upload**, wait until the progress bar is full.

UPLOAD FIRMWARE

Application binary (.bin)

PRLM165_v0-0-9_16MB_MQTT_STM.bin · 1.06 MB · selected just now

Select file

↑ Upload

0.31 MB / 1.06 MB · 29%

~9 s remaining

Validate upload

Reboot now

Boot fromota_0Set boot partition

Next boot: ota_0

UPLOAD FIRMWARE

Application binary (.bin)

PRLM165_v0-0-9_16MB_MQTT_STM.bin · 1.06 MB · selected just now

Select file

↑ Upload

1.06 MB / 1.06 MB · 100%

Validate upload

Reboot now

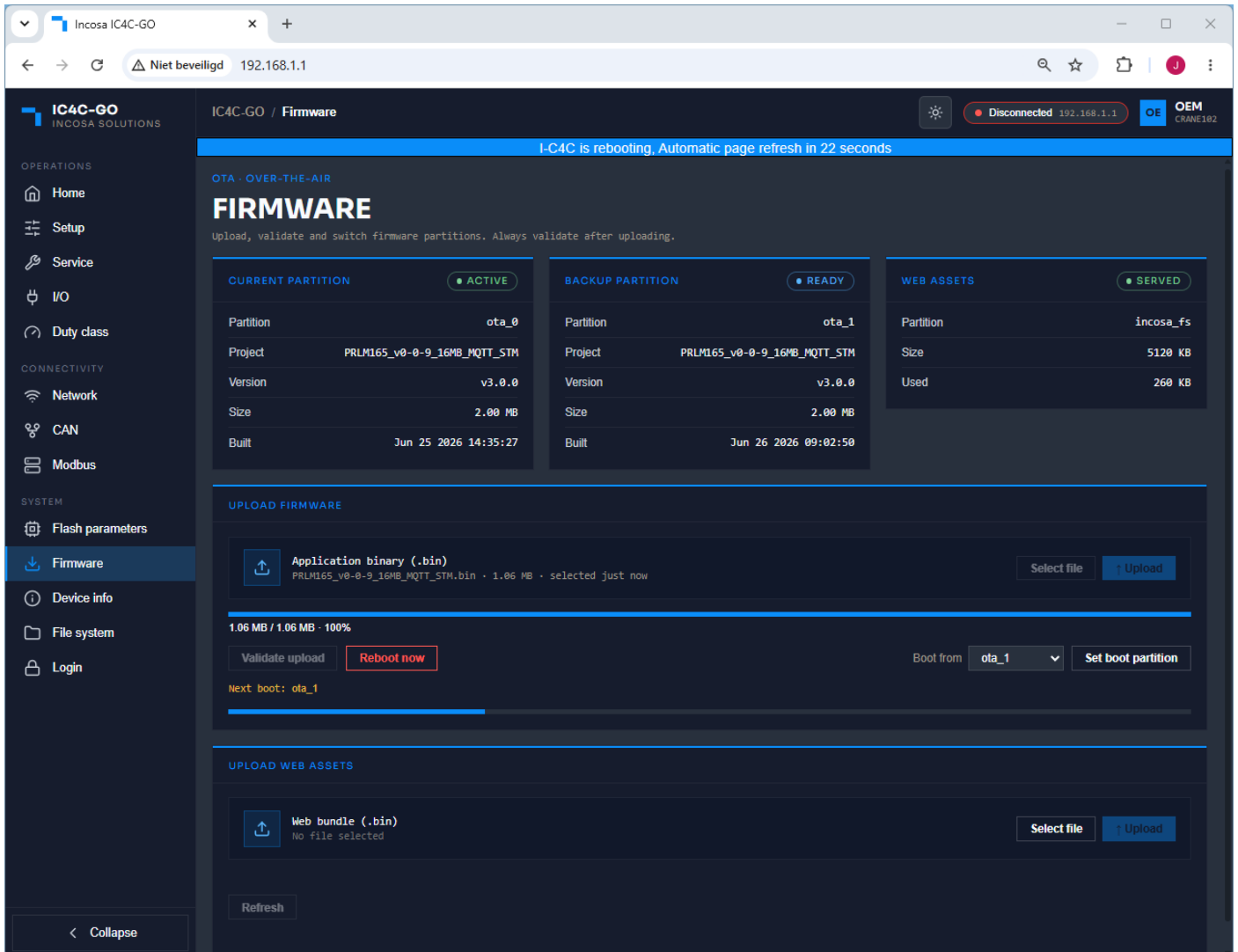
Boot fromota_1Set boot partition

Next boot: ota_1

Remark

The upload speed might vary depending the connection quality. If the upload get stuck, power down the i-C4C GO and retry.

After a successful upload the boot partion will be updated. Restart the **i-C4C GO** by clicking the **Reboot** button or by manually switching off the power to the **i-C4C GO**.



The screenshot shows the IC4C-GO Firmware management interface in a web browser. The browser address bar shows the URL 192.168.1.1. The interface has a dark theme and a sidebar on the left with navigation options: OPERATIONS (Home, Setup, Service, I/O, Duty class), CONNECTIVITY (Network, CAN, Modbus), and SYSTEM (Flash parameters, Firmware, Device info, File system, Login). The main content area is titled "FIRMWARE" and includes a status bar at the top indicating "I-C4C is rebooting. Automatic page refresh in 22 seconds". Below this, there are three sections: "CURRENT PARTITION" (ACTIVE), "BACKUP PARTITION" (READY), and "WEB ASSETS" (SERVED). Each section displays details for the selected partition, including Project, Version, Size, and Built date. The "UPLOAD FIRMWARE" section shows a progress bar for the application binary upload, which is currently at 100%. Below the progress bar, there are buttons for "Validate upload", "Reboot now", and a "Boot from" dropdown menu set to "ota_1". The "UPLOAD WEB ASSETS" section shows a "Web bundle (.bin)" upload area with a "Select file" button and an "Upload" button. A "Refresh" button is also present at the bottom of the interface.

Partition	ota_0	ota_1	incosa_fs
Project	PRLM165_v0-0-9_16MB_MQTT_STM	PRLM165_v0-0-9_16MB_MQTT_STM	incosa_fs
Version	v3.0.0	v3.0.0	
Size	2.00 MB	2.00 MB	5120 KB
Built	Jun 25 2026 14:35:27	Jun 26 2026 09:02:50	260 KB

UPLOAD FIRMWARE

Application binary (.bin)
PRLM165_v0-0-9_16MB_MQTT_STM.bin · 1.06 MB · selected just now

1.06 MB / 1.06 MB · 100%

Validate upload Reboot now

Boot from ota_1 Set boot partition

Next boot: ota_1

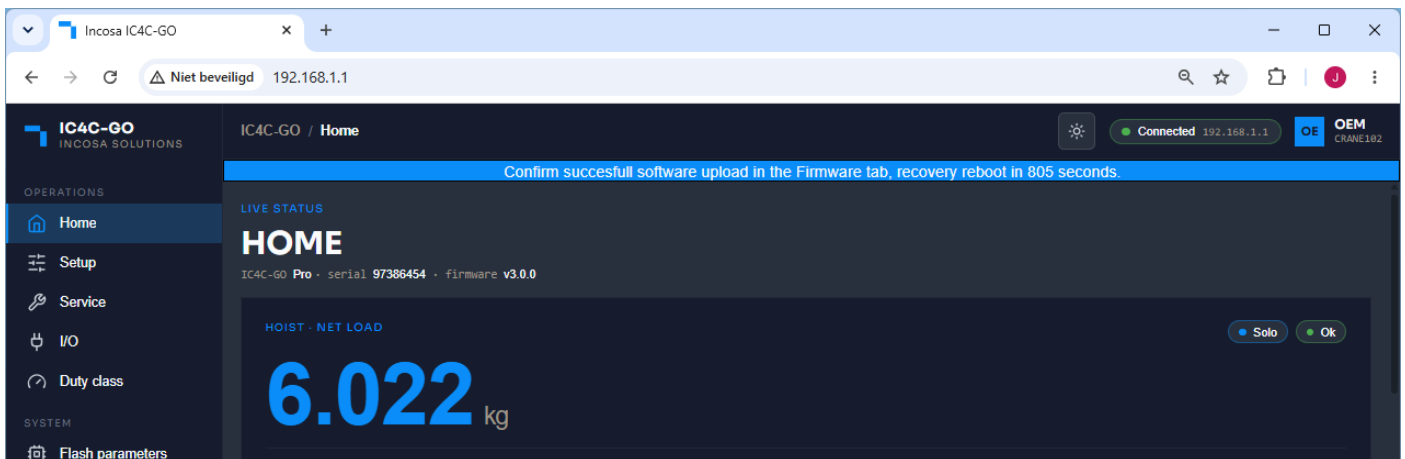
UPLOAD WEB ASSETS

Web bundle (.bin)
No file selected

Select file Upload

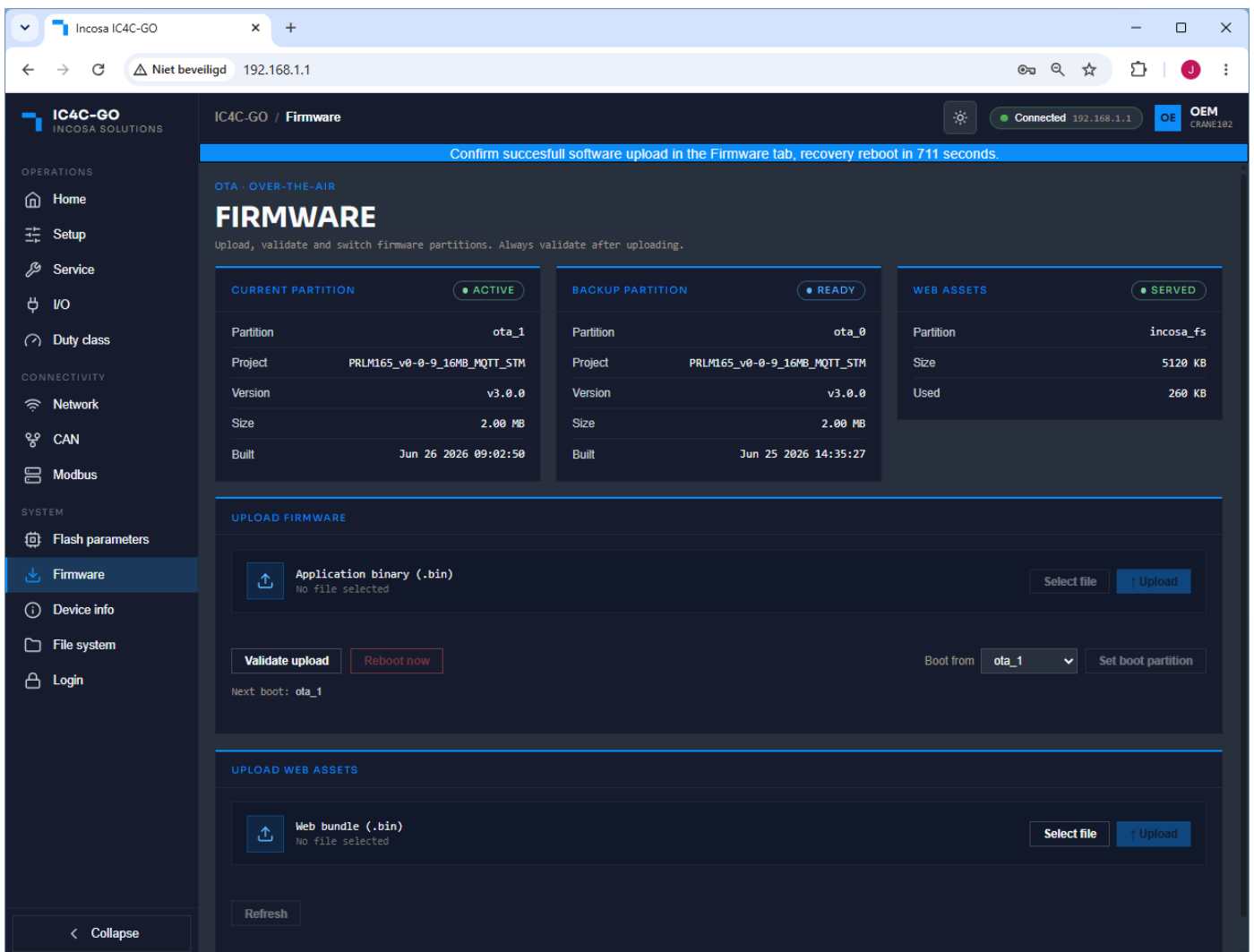
Refresh

Reconnect to the module. When you open the webpage, the following message appears in the status bar: “Confirm successful software upload in the Firmware tab, recovery reboot in x seconds.”



Go back into the firmware tab and validate the upload.

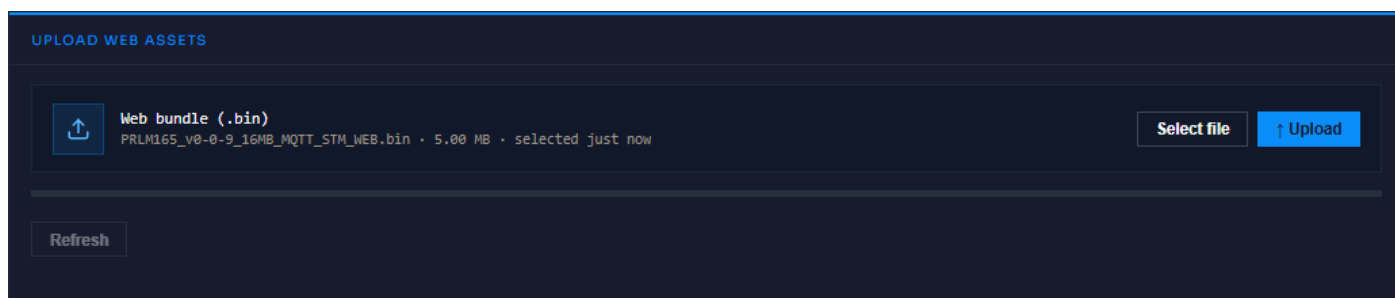
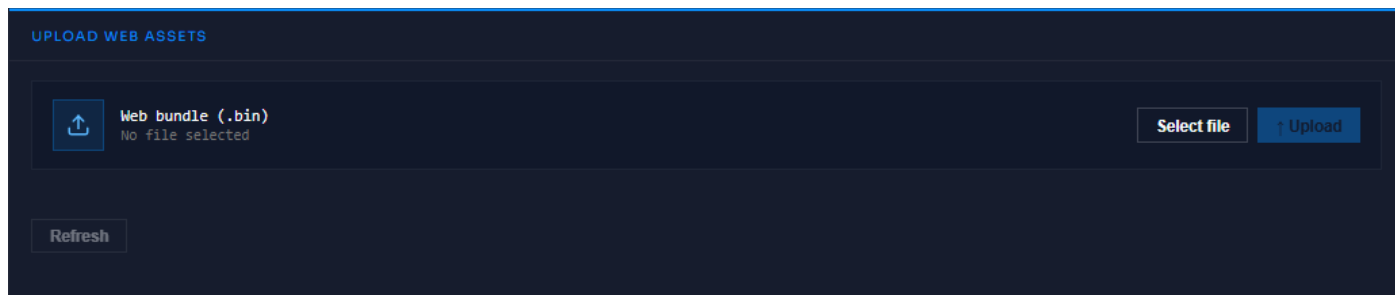
When you look at partition info the running partition should have been updated to match the new boot partition.



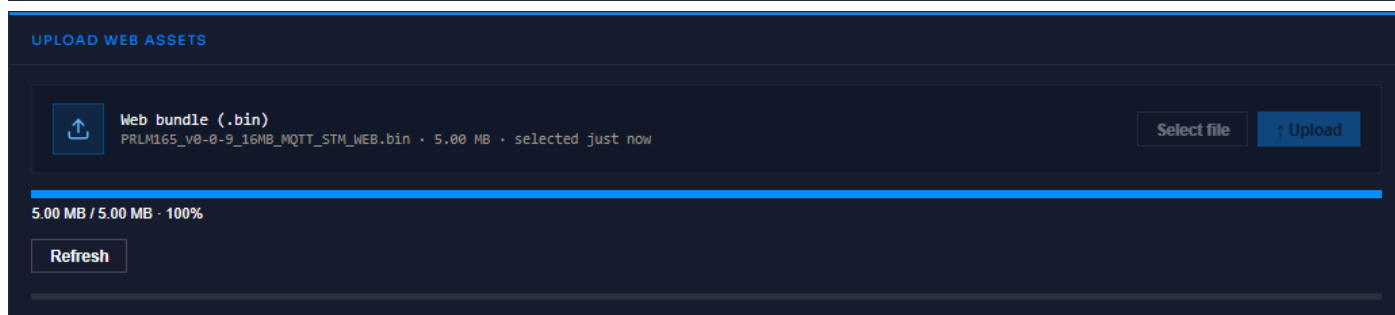
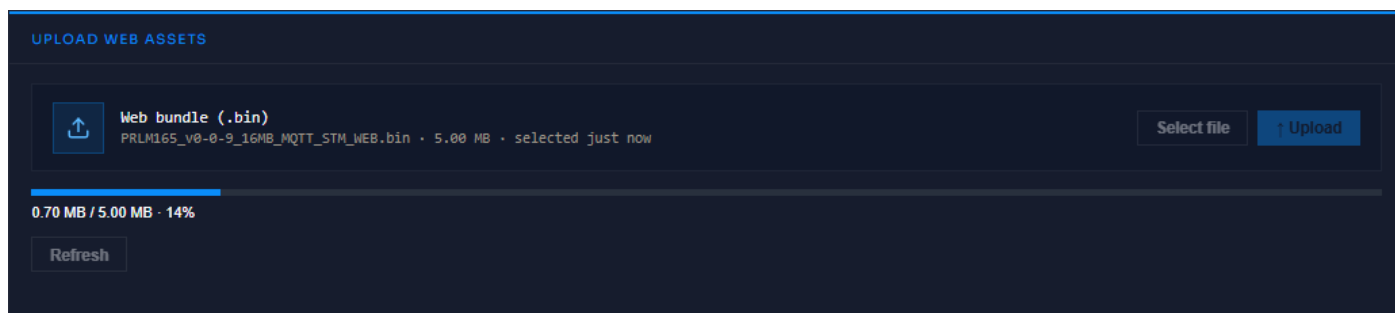
Upload web assets

In some cases it might be necessary to update the website files as well. This can be done in a similar way.

Click on **Select File**, and select the new website file.



Click on **Upload**, wait until the progress bar is full. Click then on **Refresh**.



File System (OEM/Dealer)

Additional functionality:

- Upload new files on the file system

The screenshot displays the IC4C-GO File System interface in a web browser. The browser's address bar shows the URL 192.168.1.1. The interface has a dark theme and a sidebar on the left with navigation options: Home, Setup, Service, I/O, Duty class, Network, CAN, Modbus, Flash parameters, Firmware, Device info, File system (selected), and Login. The main content area is titled 'FILE SYSTEM' and includes a 'STORAGE' section with a 'PARTITION' table and a 'USAGE' table. The 'FILES' section shows a directory tree with 'data' and 'site' folders, and a 'foo.txt' file. The 'UPLOAD FILE' section features a file selection button, a 'Select file' button, an 'Upload' button, and a 'Destination path' input field.

IC4C-GO / File system

STORAGE

FILE SYSTEM

LittleFS partition status and the files stored on the device. Privileged roles can upload and delete files.

PARTITION	
Label	incosa_fs
Total size	5120.00 KB

USAGE	
Used	264.00 KB
Free	4856.00 KB

FILES

- IC4C-GO
 - data (10.89 KB)
 - site (127.84 KB)
 - foo.txt (0.02 KB)

UPLOAD FILE

Select a file to upload
No file selected

Select file Upload

Destination path /filename

Connected 192.168.1.1

IC4C-GO Pro - firmware v3.0.0 - 97386454

Communication

Data communication (e.g. I/O's, values ...) between **i-C4C GO** modules in a network configuration is achieved by wire through CAN-bus. It is also possible to connect to a normal i-C4C or i-C4C RF module using CAN-bus.

Remark

The i-C4C GO has two CAN-busses. The left CAN-bus is always used for the overload functionality and cannot be used for other applications. The right CAN-bus can be used for CAN-communication with other devices.

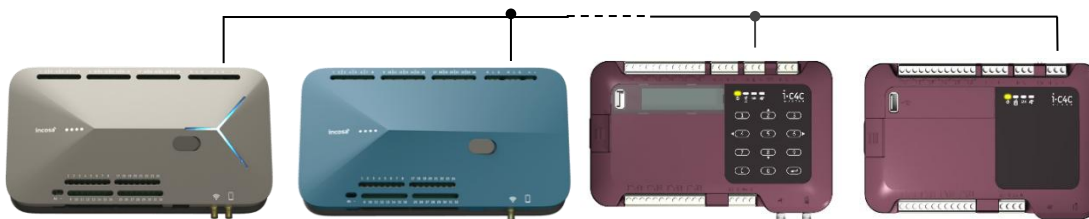
Remark

The configuration of the wired network is set by the i-C4C GO dealer.

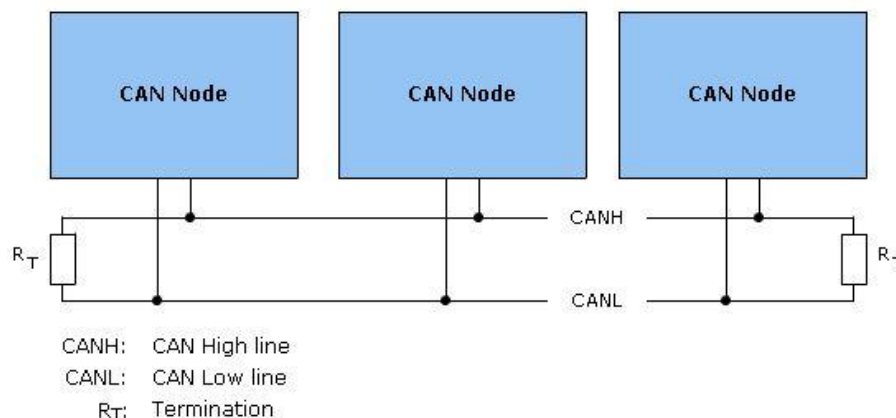
Architecture

Wired (CAN)

The wiring-topology of a CAN-network should be as close as possible to a single line structure in order to avoid cable-reflected waves. The total length of all the branches of the bus must not exceed 200 meters (650 ft.).



For a proper communication, terminating resistors R_T of 120Ω at each end of the bus are required to prevent reflections. The **i-C4C GO** includes an internal terminating resistor which can be enabled/disabled in software.



Wireless (Wifi)

i-C4C GO can be configured as access point (default) or client on an existing network for wireless communication. Wifi standard 802.11b/g/n: up to 150 Mbps. Unlicensed band 2.4 GHz (2412~2484 MHz).

Mobile devices with wifi communication possibilities can connect with i-C4C GO modules. This gives the chance to interact with modules through web-browser using the IP address of i-C4C GO.

Functionalities:

- status visualization
- modification of parameters
- download log files
- upload configuration

Technical specifications

General data

Function	Description
Human interface	• wifi interface with webserver • status LEDs ○ 1: power ○ 2: CAN ○ 3: not used ○ 4: overload state
Field of application	• load limiter PLd category 2 • summation • signal transmission (in combination with i-c4c RF)

Electrics/electronics

Function	Description
Digital inputs	• 22 optical isolated inputs • suitable for potential free contacts • suitable for direct activation (24VDC - if same source as module supply)
Digital outputs: Normal relays	• 11 relays, 1 NO contact, max 250VAC - 7A • galvanic insulated
Digital output: Overload	• 1 relay, 1 NO contact, max 250VAC - 7A Additional for PRO version in series: • 1 relay, 2 CO contacts, max 250VAC - 6A
Analog outputs	• 1 analog 0-10Vdc • resolution: 0-10000
Interfaces	• 1 CANOpen bus, 250 kbits/s, for overload • 1 CANOpen bus, different baud rates possible ○ 25/100/125/250/500/800/1000 kbits/s • 1 Wi-Fi • 1 Ethernet (Only on PRO model) • 1 Cloud connection (Only an option for PRO model)
Supply	• 24V DC
Power consumption	• max 7,2W (Without Cloud connection)

Mechanical data

Function	Description
Dimensions (weight x height x depth)	• 238x130x52 mm (Basic) • 238x130x57 mm (Pro)
Mounting	• DIN rail 35mm
Weight	• 470g (Basic) • 510g (Pro)
Housing	• PC/ABS V0 (Housing) • PC V0 (LED guides) • TPR (Plugs)

Ambient data

Function	Description
Temperature range	• Components : -20°C to +85°C • Environment: -10°C to +60°C • Storage : -40°C to +85°C
Relative Humidity	• 5 to 85% (without condensing)
Maximum operating altitude above sea level	• 2000 m
Index of protection	• IP20

Annex

Load cells

Connection

Color code to connect load cell to iC4C module:

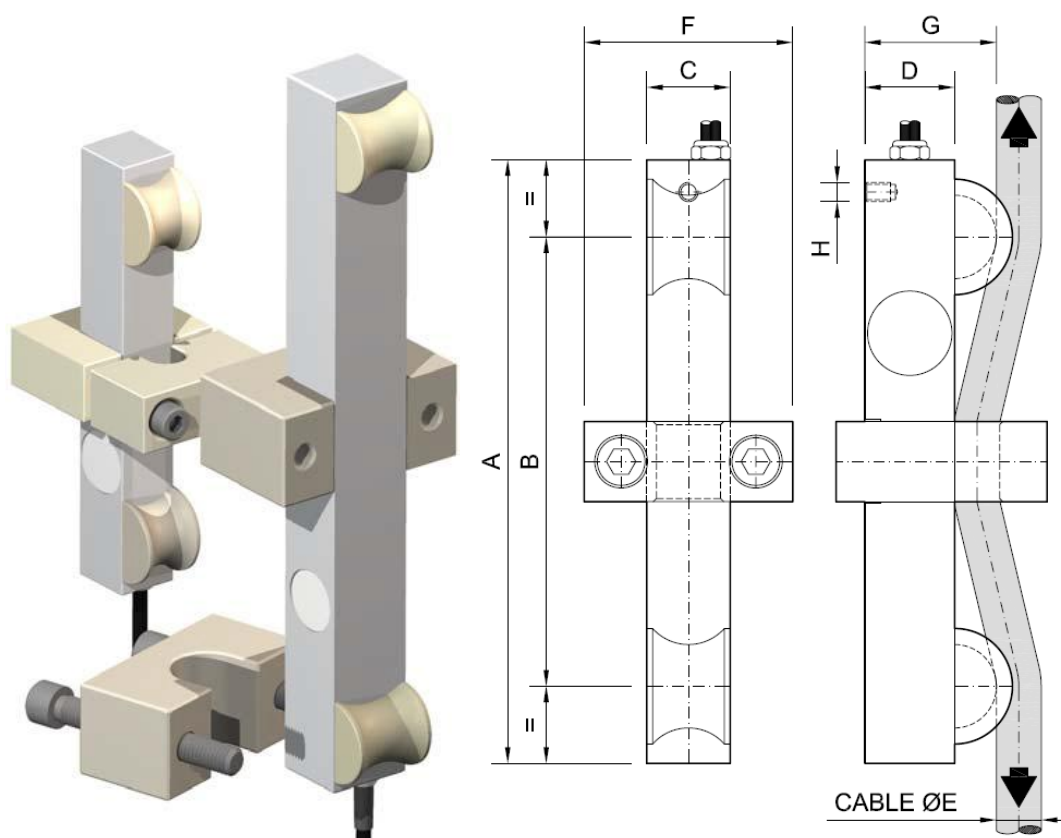
Function	M12 connector	Cable gland
Supply+ (24V)	• White	• Red
Supply- (0V)	• Blue	• Black
Signal+ (CAN H)	• Black	• Green
Signal- (CAN L)	• Grey	• White

Load cell on rope

Load cell designed for measuring the tension on steel ropes that work on traction.

LMP 1 .. 7t

LMG 8 .. 40t

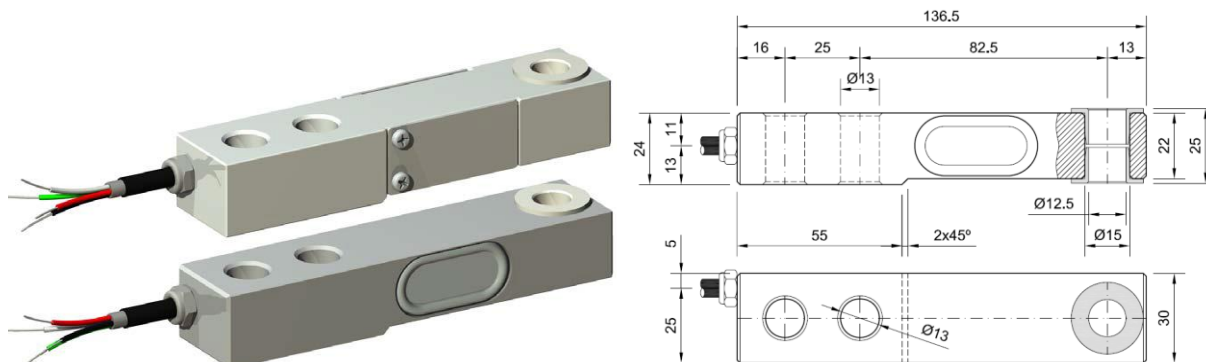


Load cell flexion

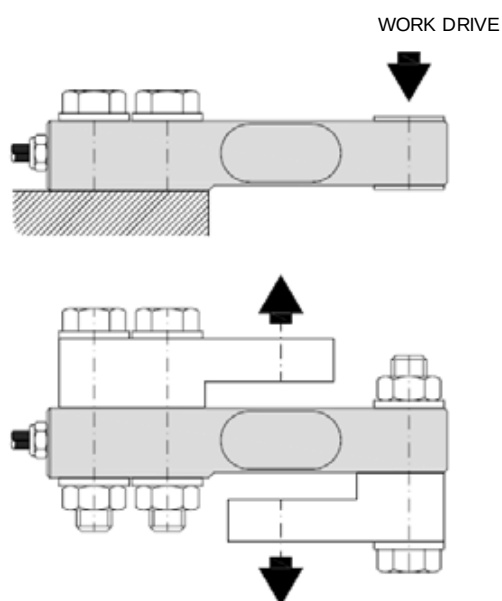
Load cells specially designed to work in jutting out with shear or flexion sensor element.

Equipped with insulating cases of high mechanical resistance.

CF 15...1500 kg.

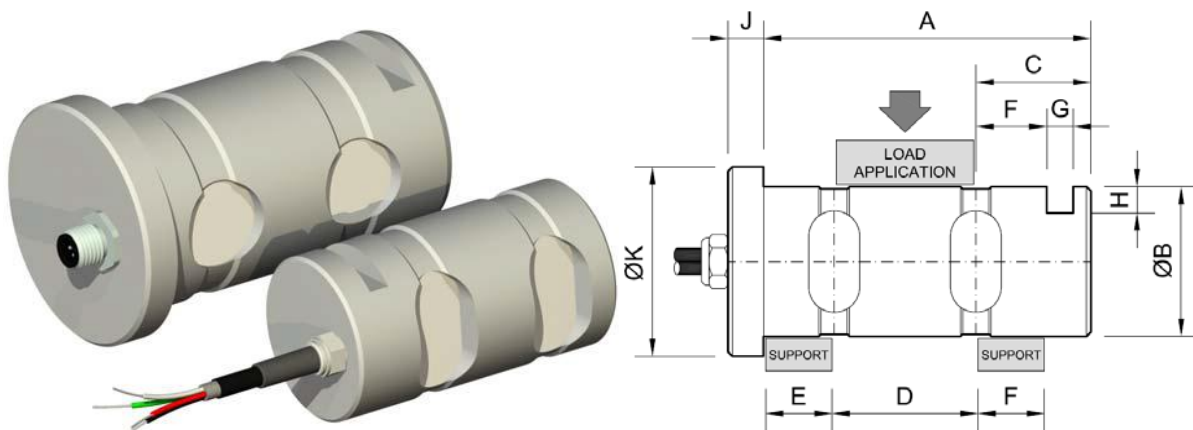


Dimensions in mm



Double shear Load Pin

Load pin type used in weighing system and load limitation.



Antennas

Standard antenna 5dBi



Electrical	
Frequency (MHz)	2400~2500
Efficiency (%)	
Straight	78.56
Bent	83.20
Average Gain (dB)	
Straight	-1.05
Bent	-0.80
Peak Gain (dBi)	
Straight	4.22
Bent	5.89
Impedance	50Ω
Polarization	Linear
Radiation Pattern	Omni
Max. input power	1W
Mechanical	
Height	198 ±3.3 mm
Planner Dimension	198*Ø13 mm
Casing	TPEE
Connector	RP-SMA(M)
Weight	22.5 g
Environmental	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

Directional Flat Patch Antenna



The HG2414P is a high performance directional flat patch Wifi antenna suitable for indoor and outdoor applications in the 2.4GHz ISM band, including IEEE 802.11b, 802.11g and 802.11n wireless LANs, Bluetooth ®, and public wireless hotspots. This WiFi antenna is lightweight and features an aesthetic UV-stable, UL flame rated white plastic radome which can also be painted to match the room or building structure. The HG2414P can be installed for horizontal or vertical polarization. It can be wall or ceiling mounted, as well as mast-mounted using U-bolts.

Electrical Specifications

Frequency	2400-2500 MHz
Gain	14 dBi
Horizontal Beam Width	30 degrees
Vertical Beam Width	30 degrees
Impedance	50 Ohm
Max. Input Power	25 Watts
VSWR	< 1.5:1 avg.
Lightning Protection	DC Short

Mechanical Specifications

Weight	.95 lbs. (.43 Kg)
Dimensions	8.5 x 8.5 x 1 (inches) 216 x 216 x 26 (mm)
Radome Material	UV-inhibited Polymer
Flame Rating	UL 94HB
Mounting	Four ¼ in. (6.3 mm) Holes
Polarization	Horizontal or Vertical
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Wind Survival	>150 MPH (241 KPH)