

Elevate Wireless

Elevate Wireless kits work in conjunction with the CEDES cegard/Smart controllers

BENEFITS

- ▶ Integrated into CEDES Elevate Software Platform (IoT) for use in elevator applications
 - To provide temperature information,
 - when temperature is too high for working safely in machine rooms.
 - when water is present in the elevator pit and it is not safe for the elevator to operate.
- ▶ Reduces potential for elevator submersion into water located in the pit
- ▶ Reduces potential heat exposure for technicians servicing elevator equipment in the machine room
- ▶ Conforms with cybersecurity requirements in elevator applications



LoRaWAN® Gateway

Antenna	1 × 50 Ω N-female external connector
Channel	8 (half- / full-duplex)
Frequency bands	
- Initial release	EU868 / US915
- Future	AU915 / KR920 / AS923-1&2&3&4 / CN470 / IN865 / RU864
Sensitivity	
- Gateway	-140 dBm Sensitivity at 292 bps
- Temperature / Humidity sensor	-147 dBm at 300 bps
- Water-in-pit sensor	-137 dBm at 300 bps
Transmitting power	
- Gateway	Max. 27 dBm
- Sensor(s)	16 dBm (868 MHz) / 20 dBm (915 MHz) / 19 dBm (470 MHz)
Gateway protocol	V1.0 Class A / Class B / Class C and V1.0.2 Class A / Class B / Class C

LoRaWAN® Gateway ethernet interface

Port	1 × RJ45 WAN Port (PoE PD supported)
Physical layer	10 / 100 / 1,000 Base-T (IEEE 802.3)
Data rate	10 / 100 / 1,000 Mbps (auto-sensing)
Interface	Auto MDI / MDIX
Mode	Full- or half-duplex (auto-sensing)
Ethernet isolation	1.5 kV RMS

LoRaWAN® components - electrical

Input / output voltage	
- Gateway	IEEE 802.3af PoE (power over Ethernet)
- Sensor(s)	2 × 4000 mAh ER18505 Li-SOCL ₂ Battery
Power consumption	
- Gateway	Typical 2.9 W, max. 4.2 W
- Sensor(s)	Typical Battery Life: 8 years or more

LoRaWAN® components - mechanical

Dimensions (w × h × l)	
- Gateway	180 × 110 × 55.5 mm (7.09 × 4.33 × 2.19 in)
- Temperature / humidity	88.5 × 85.3 × 27 mm (3.48 × 3.36 × 1.06 in)
- Water-in-pit	105.6 × 85.3 × 27 mm (4.16 × 3.36 × 1.06 in)
Housing material	
- Gateway	PC + ABS (UL94 V0)
- Sensor(s)	ABS + PC (flame retardant)
Housing color	
- Gateway	White + Black
- Sensor(s)	White
Weight - Gateway	548 g
Enclosure rating	Gateway IP65 Sensor IP67
Temperature range	
- Operation	Gateway -40°C to +70°C (-40°F to +158°F) Sensor(s) -30°C to +70°C (-22°F to +158°F)
- Storage	Gateway -40°C to +85°C (-40°F to +185°F)
Relative Humidity	
- Gateway	0% to 95% (non-condensing) at 25°C / 77°F
- Sensor(s)	0% to 100% (non-condensing)

LoRaWAN® sensor characteristics (temperature / humidity / water in pit)

Temperature	
- Range	-30°C ... +70°C
- Accuracy	0°C ... +70°C (±0.3°C), -30°C ... 0°C (±0.6°C)
- Resolution	0.1°C
Humidity	
- Range	0% ... 100% RH
- Accuracy	10% ... 90% RH (±3%), below 10% and above 90% RH (±5%)
- Resolution	0.5% RH
Water-in-pit sensor	
Liquid type	Conducting liquid
Trigger condition	When liquid level reaches 5 mm
Cable length (probe)	1.5 m
LED indicator	1 × LED indicator (internal)
Button	1 × power / reset button (internal)
Mounting	- Receiver Wall screw, 3M tape, or cable-tie mounting - Water-in-pit sensor probe Wall screw or 3M tape mounting

LoRaWAN® general components compliance

Gateway	CE, FCC, IC, Telec, JATE, RCM
Sensor	CE, FCC, ISSED, RCM, Telec, ICASA
RoHS	Yes
REACH	Yes

ETHERNET SWITCH KIT

ETH	Multi-layer managed 8 x ETH ports, 10/100/1000 Mbps
IEEE 802.3 series standards	802.3i, 802.3u, 802.3ab, 802.3x, 802.3az, 802.3z, 802.3ad
PoE standards	IEEE 802.3af (PoE, Type 1) and IEEE 802.3at (PoE+, Type 2), Alternative A (Batch 15 and all batches from Batch 17 onward) IEEE 802.3af (PoE, Type 1) and IEEE 802.3at (PoE+, Type 2), Alternative B (Batches 1–14 and Batch 16)
PoE Power per Port (at PSE)	Max. 30 W
Total PoE Power Budget (at PSE)	75 W
Max. Ethernet cable length	100 m
PoE protection	Short-circuit and overload protection



Elevate Wireless



Elevate Ethernet switch

ELECTRICAL

Input / output voltage

- Elevate Ethernet switch kit	100 ... 240 VAC, 47 ... 63 Hz input voltage 48 VDC output voltage rated to 1.6 A
- Ethernet Switch	7 ... 57 VDC input voltage 44 ... 57 VDC PoE-Out input voltage range

Power consumption

Ethernet Switch	Idle	< 3 W / Max: 8 W
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MECHANICAL - ETHERNET SWITCH KIT

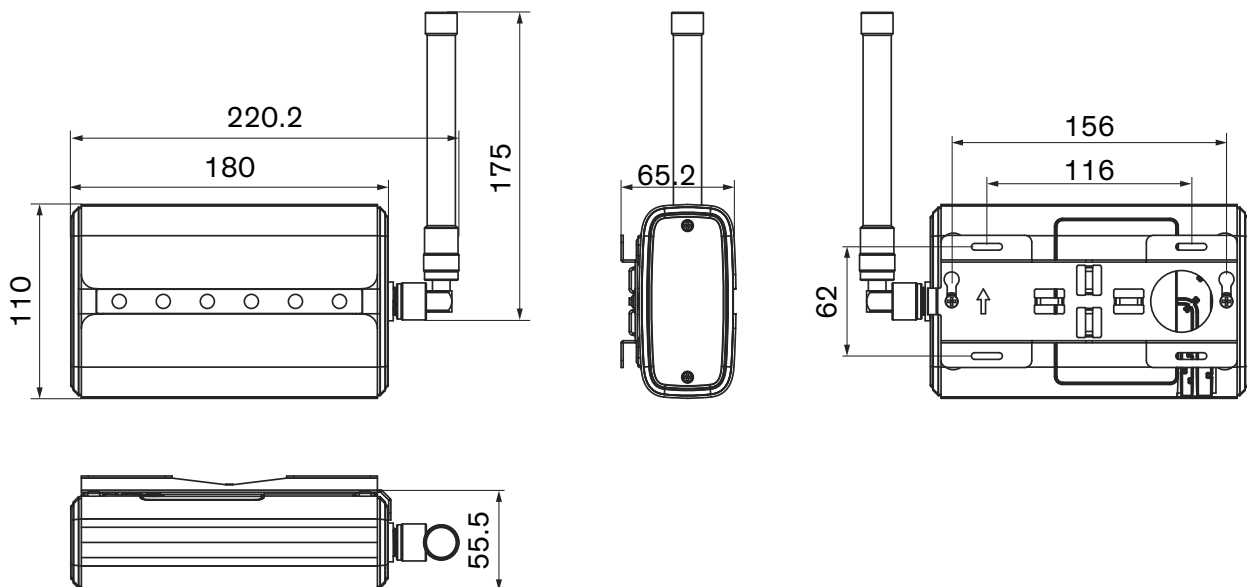
Dimensions (w × h × l)	250 × 191 × 110 mm
Housing material	Metal
Housing color	Blue
Weight	3.2 kg
Enclosure rating	IP23
Operating temperature	-30°C to +65°C
Humidity	20% to 90% (non-condensing)

COMPLIANCE - ETHERNET SWITCH KIT

General Ethernet Switch	CE, UKCA, RCM, ANRT, FCC, IC, CB, NBTC, PROFINET, CITC, RoHS, REACH, WEEE, SDPPI (POSTEL), JATE, Kenya, ICASA, Giteki, UL Safety, MTCTE
General Power Supply	CE, cURus, cULus, CCC, ICC, PFC, SEMI F47, CB, DEKRA, EAC, UKCA, RCM
RoHS	Yes
REACH	Yes

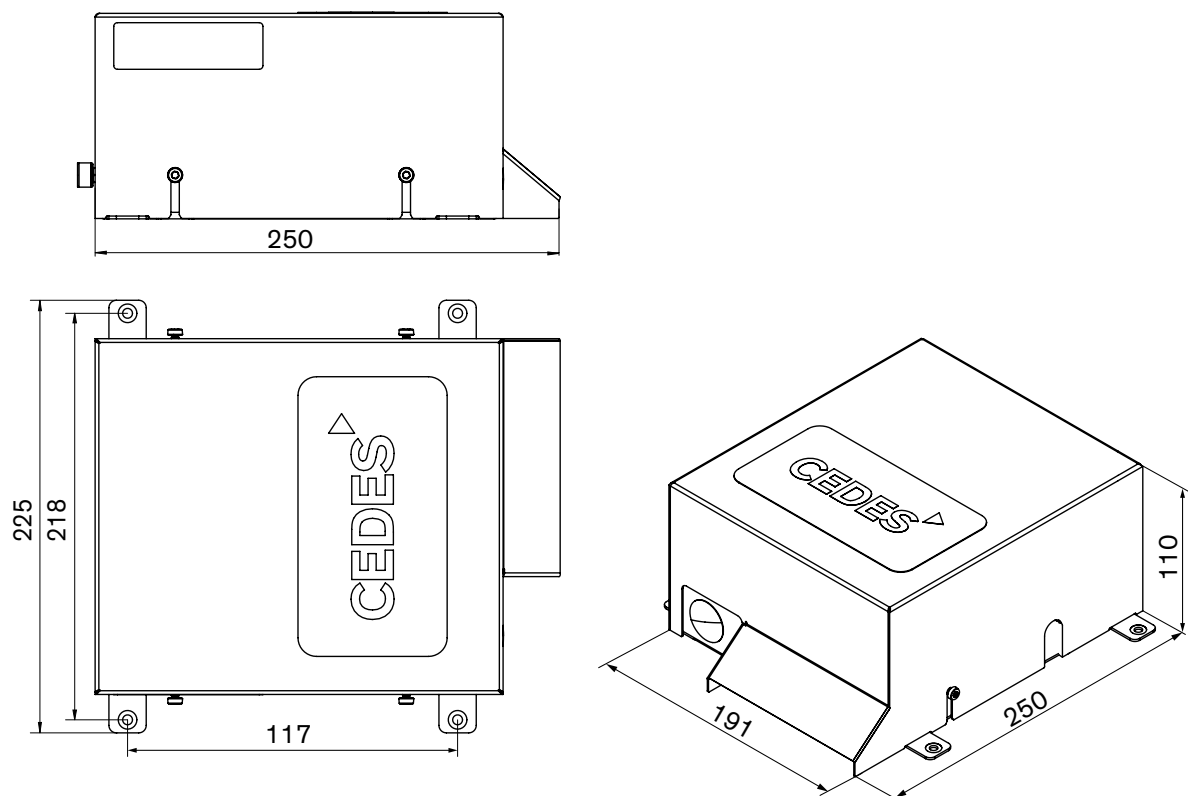
Dimensions – LoRaWAN® Gateway

All dimensions in mm
Proportions not to scale



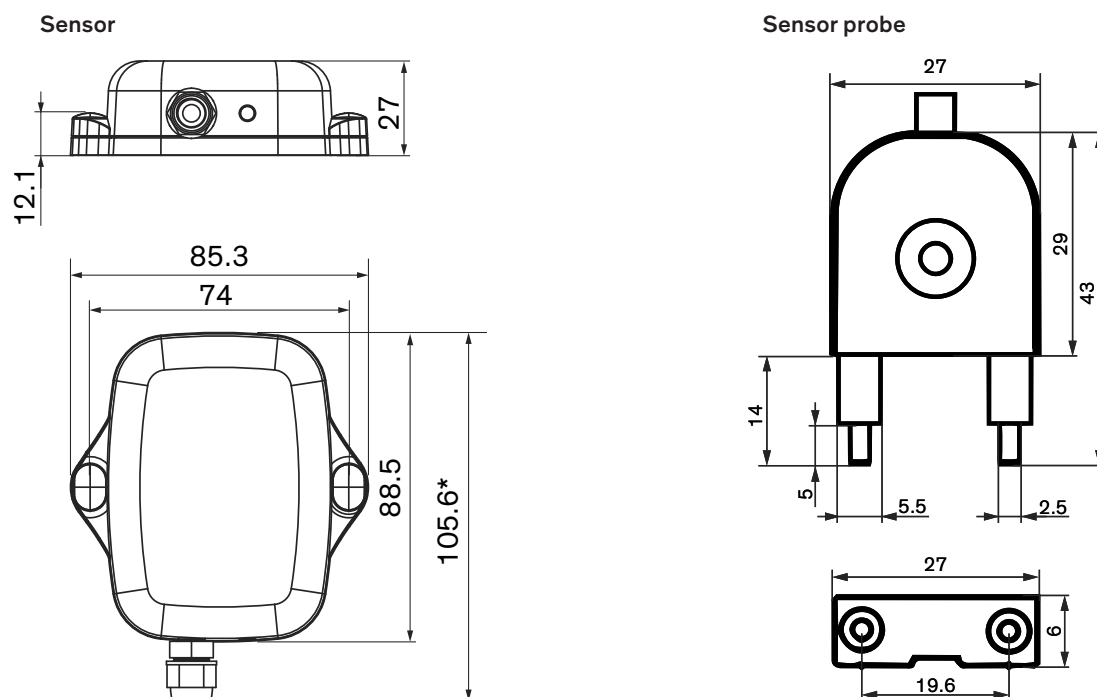
Dimensions – Ethernet switch

All dimensions in mm
Proportions not to scale



Dimensions – LoRaWAN® sensors

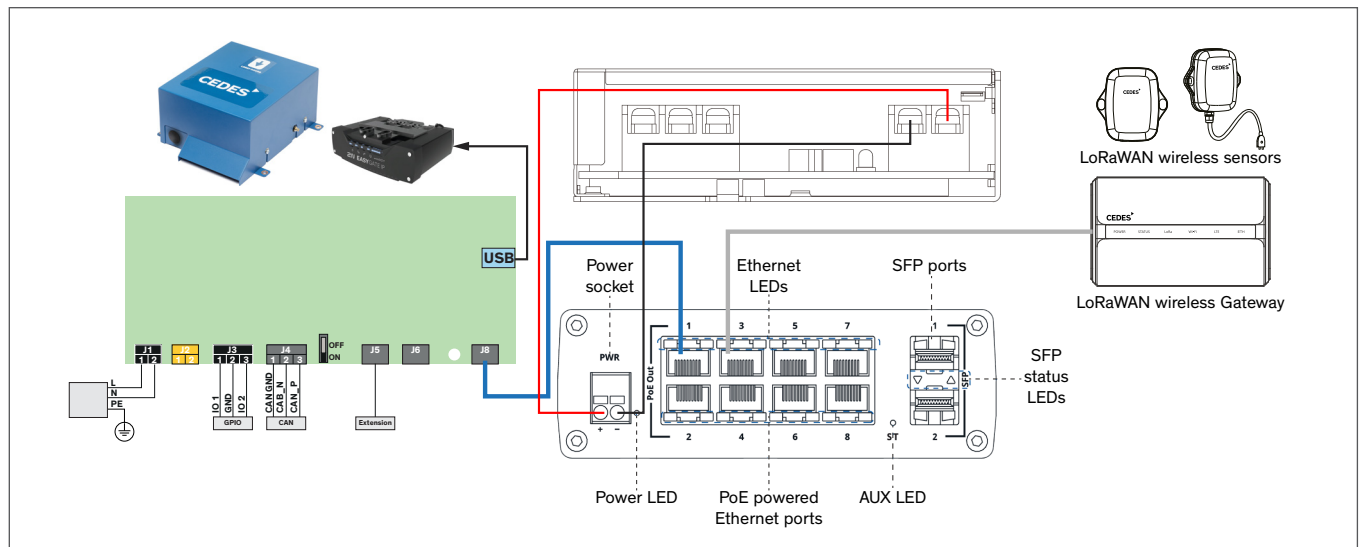
All dimensions in mm
Proportions not to scale



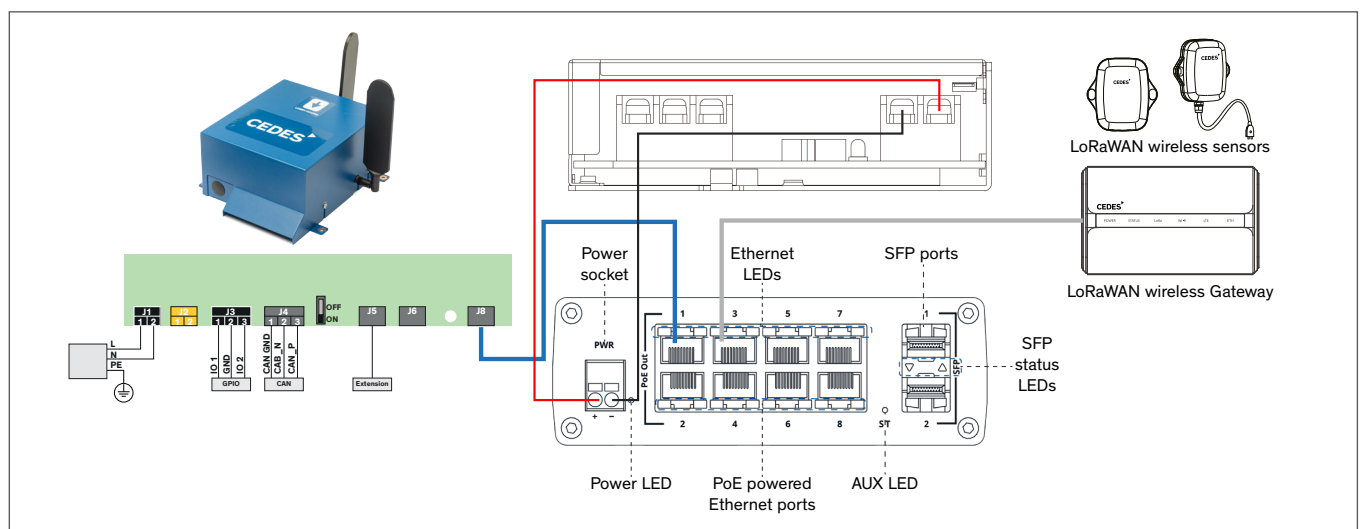
* = This dimension is for the water-in-the-pit sensor (including connection for the sensor probe).

Electrical connections

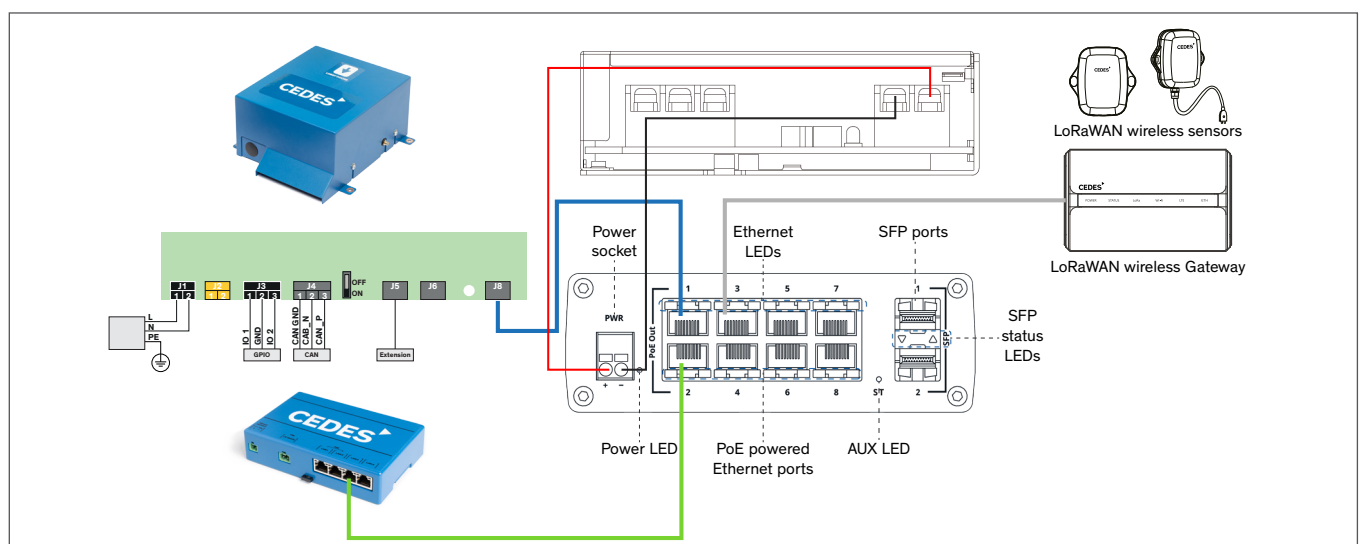
cegard/Smart controller (CGSM-B)



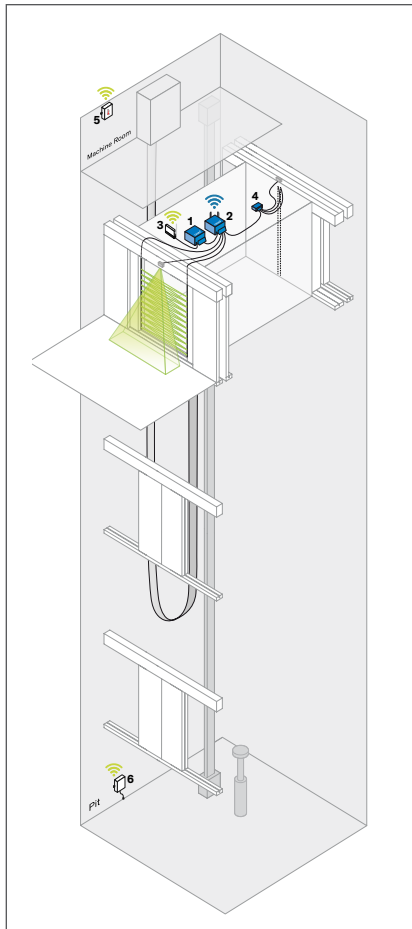
cegard/Smart controller (CGSM-C)



cegard/Smart controller (CGSM-E)



Positioning of the products



- 1 CEDES Ethernet switch
- 2 CEDES cegard/Smart controller
- 3 LoRaWAN® Gateway
- 4 CEDES extension module (used in e.g. cegard/Smart applications with front/rear doors)
- 5 LoRaWAN® machine room temperature sensor
- 6 LoRaWAN® Water-in-the-pit sensor

Elevate Wireless Kits

The Elevate WL Kits shown below include the Elevate LoRaWAN® Gateway, Elevate Ethernet switch kit with power supply, three (3) Ethernet cables, Elevate Wireless temperature / humidity sensor and Elevate water-in-the-pit sensor.

Ordering information for North American kits (915 MHz):

Part No.	Model designation	Description
1214435	Elevate WL-Kit-US915	North American variant (915 MHz)
Elevate Wireless Components		
1213344	Elevate WL-TH1-US915	Temperature / humidity sensor
1213346	Elevate WL-WIP1-US915	Water-in-the-pit sensor
1213348	Elevate WL-GW1-US915	Gateway
1214559	Elevate Ethernet Switch Kit	

Ordering information for European kits (868 MHz):

Part No.	Model designation	Description
1214437	Elevate WL-Kit-EU868	European variant (868 MHz)
Elevate Wireless Components		
1213345	Elevate WL-TH1-EU868	Temperature / humidity sensor
1213347	Elevate WL-WIP1-EU868	Water-in-the-pit sensor
1213349	Elevate WL-GW1-EU868	Gateway
1214559	Elevate Ethernet Switch Kit	

NOTE

Additional Elevate Wireless kits and components that utilize other frequencies are also possible based on volume and market needs. Please contact a local CEDES representative to discuss potential expansion of the Elevate Wireless product offering.