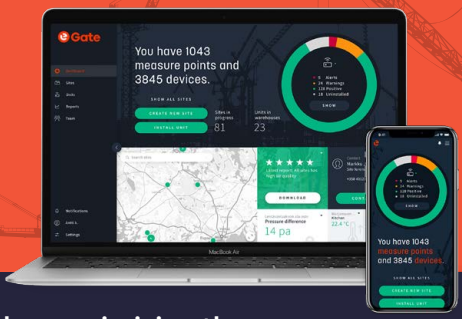
eGATE SMART BUILDING INNOVATION

eGate
Smart Building Innovation



eGate's real-time IoT sensor data enables maximizing the project profitability through better scheduling and helps monitoring job site environment for health and safety.

eGate Overview

eGate is a cloud-connected IoT solution for remote monitoring of construction job sites. It has the widest range of high-precision IoT sensors on the market. All sensors are connected directly to the eGate cloud data platform with visual floor plans and mobile access.

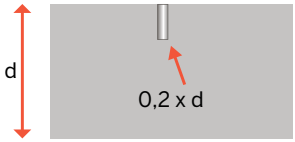
What eGate does at the job site:

- Concrete RH+ Temp measurement for flooring projects with industry leading 1% accuracy
- ASTM 2170 compliant concrete sensors for RH + Temp + Strength
- Concrete temperature measurement for calculating concrete strength using ASTM or Sadgrove conversion curves
- ePredict prediction algorithms for forecasting the drying time for concrete floor slab
- ePredict algorithms to monitor the concrete strength development
- Silica dust monitoring at the job site, with 8h average reporting vs. OSHA limits
- Air particle monitoring for both hazardous dust and normal construction dust for cleanliness, for managing the cleaning processes
- Monitoring ambient air for optimal conditions for RH+Temp, Differential Pressure, CO2, TVOC,...
- Project reports in PDF and excel format, with time stamps and location data with visual floor plans
- Real-time cloud data, with online dashboard and access with all devices, mobile and desktop
- Live mobile alerts for values that exceed the set min/max thresholds

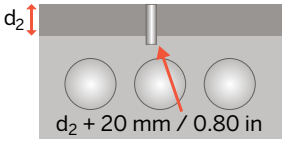
Installation of eGate NSens concrete RH & T sensor

1. Drill a hole (ø 16 mm (5/8")) in the depth presented in the chart below using dry method. Maximum measuring depth 70 mm / 2.75 in.

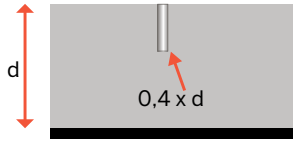
2. The bore holes are carefully cleaned of drilling dust using a vacuum cleaner or compressed air.



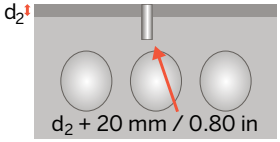
Intermediate floor structure
(dries in two directions)



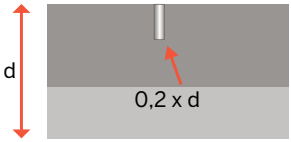
Hollow core slab +
surface casting (d_2)



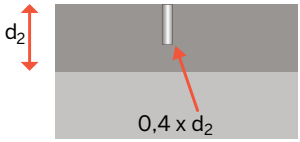
Connection slab or earth-banked
floor (dries in one direction)



Hollow core slab + filler (d_2)



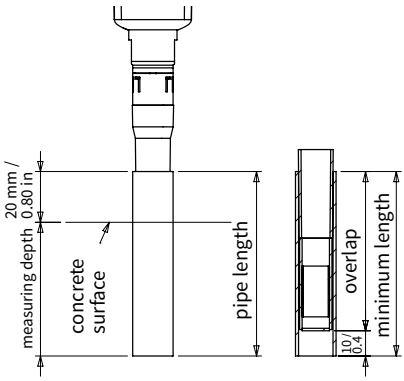
Shell slab structure



Cast-in-situ concrete toppings +
post-casting (d_2)

3. A plastic hole liner is placed in the bore hole all the way to the bottom. The length of the conduit is measuring depth (max 70 mm / 2.75 in) + 20 mm / 0.80 in. The minimum length of the conduit can be determined by measuring how much the conduit and the sensor overlap and by adding 10 mm / 0.40 in to this measurement. The conduit is cut to the larger measurement.

The sensor may not touch the bottom of the bore hole, but must remain at least 10 mm / 0.40 in away from the bottom.



4. The seams of the conduit and the casting, as well as the sensor and the conduit are carefully sealed by a layer of Blu-Tack.

5. Installation guide for Multitech Conduit® IP67 Base Station 200 Series.
www.multitech.com/documents/publications/getting-started-guides/82130900L_MTCDTIP2_Installation_Guide_online_ext.pdf

6. Make sure in the eGate online service that the measurement data of the transmitters is transmitted. Sign up to the online service at **app.e-gate.io** and make sure that new measurement data is transmitted to the measuring channels corresponding with the transmitters. Please note that the transmitters send data every 15 minutes.

Compliant with "ASTM 2170 standard

eGate nSens

The **eGate nSens** is a specialized modular wireless LoRaWAN transmitter for accurately measuring the relative humidity and temperature from inside concrete structures. This transmitter uses a special Novasina **nSens-HT-ENS** or **nSens-HT-EIS** humidity-temperature sensor probe which is based on unique conductive humidity measurement principle which employs an electrolytic sensor element. This offers an unprecedented measuring accuracy and properties that withstand constant exposure to very high humidity levels, as encountered inside freshly poured concrete structures.

NSENS-HT-ENS

Humidity:

Range	0…100 %RH
Accuracy	Typically ±0.5 % RH (5…100 % RH and +15…+30°C / +59…+86°F)
	Typically ±0.8 % RH (15…100 % RH and 0…+50°C / +32…+122°F)
	Typically ±2.5% RH (50…98 % RH and -20…+80°C / -4…+176°F)

Temperature:

Range	-20...+80 °C / -4…+176°F
Accuracy	Typically ±0.1°C over 0…+70 °C / +32…+158 °F
	Typically ±0.2°C over -20…+80 °C / -4…+176 °F

Operating temperature	-20...+60 °C / -4…+140°F
Protection class	IP65

Easy Installation:

1. Log in at: app.e-gate.io
2. Make sure the job site floor plan drawings have been uploaded to the eGate cloud.
3. Plan the location of measurement points.
4. Install the Sensors.
5. Start monitoring data & alerts.

Ask your dealer for training on using the eGate system.
Contact information: www.e-gate.io/en/contact

Watch video

FCC labels

IC: 28328-FLEX21

This device complies with Part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux la partie 15 des règles de la FCC et CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.