

Standalone 3G IoT Sensor



Features

- Two RJ11 ports for connection to temperature, humidity and contact sensors*
- 1 actuating relay - 125VAC/110VDC, 2A
- Data transmission over the 3G mobile network
- Cloud integration via MQTT
- Onboard temperature and humidity sensor**

* Dry contact operating mode configurable via MQTT commands

** Available in the ITS 312 model only. Model with differentiated cost.

Applications

- Health
- Agribusiness
- Industries
- Corporate

Overview

The ITS 3G is Khomp's Endpoint IoT designed to integrate sensors of different magnitudes with your IoT solution. It can be fixed in locations without network infrastructure. The data read by the sensors connected to the Endpoint is sent to the integrator's cloud through the 3G mobile network, and with multiple ITS Endpoints, the application can monitor a wide area, such as a metropolitan area or rural areas that have a 3G mobile network signal.

The ITS 3G makes it possible to develop complete solutions for monitoring ambient temperature, humidity, as well as port opening verification if connected with a contact sensor. It is the ideal device for applications such as industries, laboratory clinics and agribusiness, with cameras or monitoring points that are isolated or distant from an Internet network, where it is necessary to use the mobile network to send data.

The ITS 3G has resources to increase the guaranteed transmission of the data read by the sensors, has an internal battery for contingency in cases of power outages, and can store approximately 72 hours of data if the mobile data network is unavailable.

The ITS 3G also includes a relay, which can be used, for example, when a preset temperature value is detected in order to actuate a connected device. With this relay, the ITS 3G not only monitors, but also remotely powers and controls applications.

ITS 3G has two models to better suit your project:

Models	Description
ITS 302 I	Indoor base version
ITS 312 I	Indoor with integrated temperature and humidity sensor onboard

Integrated humidity and temperature sensor

The ITS 312 has a temperature and humidity sensor integrated onboard, which allows you to read the internal state of its case. With this resource, you can monitor and evaluate whether the environment in which the device is installed affects the integrity of its operation.

Technical specifications

3G Modem

- Frequency bands: GSM850, EGSM900, DCS1800, PCS1900, WCDMA850, WCDMA900, WCDMA1900 and WCDMA2100
- Transfer rate:
 - GSM - up to 9.6 kbps
 - WCDMA - up to 14.4 kbps
 - HSPA - Download up to 7.2 Mbps and Upload up to 5.76 Mbps
- SIM card size: micro-SIM (2FF)

Battery

- Lithium-Polymer (LiPO) 1500 mAh, 3.7 V

Antenna

- 1x omnidirectional antenna
- Gain: 5 dBi
- Impedance: 50 Ohms
- Maximum power: 50 W
- Polarization: vertical
- VSWR: 1.5:1

Warranties and certifications

- Full warranty (legal + Khomp warranty): 1 year
- Legal warranty: 90 days
- Khomp warranty: 9 months
- ISO 9001 certified industry

Sampling period

- Minimum configurable period: 60 seconds
- Factory default: 300 seconds

Security

- Communication with server via MQTT:
 - TLS Version: 1.2
 - Data format via SenML

Physical/Environmental

- Internal installation (indoor)
- Dimensions (WxHxD):
 - No antenna: 79x95x36 mm
 - With antenna: 97x225x36 mm
- Power/Reset Button
- Battery charge LED
- Battery charging status LED
- Cloud data transmission LED
- 3G network signal status LED
- Sensor reader sampling/ITS status LED
- Operating temperature: -20 °C to 85 °C
- Operating Humidity: 0–90% (not condensed)
- Wall mounting bracket
- 1 X Actuating relay - 125VAC/110VDC, 2A
- 1 X USB Micro-B (for power)
 - Input voltage (USB): 4–6 VDC
 - Consumption: 3 W
- 1 x I²C connector (for sensor extension)
- 2 X RJ11 (1-Wire)*

* Dry contact operating mode configurable via MQTT commands.

Product images



Legend: Front view.



Legend: Bottom view.



Legend: Side view.

Application model

