| Module | Module key | Group | Group ID | Description |
|-----------|------------|--------------------------------|----------|---|
| Sentiface | 0x1XXX | Timings | 0x00 | Defines parameters for measurements and transmission behavior |
| Sentiface | 0x1XXX | Alarms and limit values | 0x01 | Defines alarms and limit values, e.g. upper temperature limit and lower temperature limit |
| Sentiface | 0x1XXX | Settings for opening detection | 0x02 | Defines measurement thresholds for triggering the alarm for temperature and relative humidity |
| Sentiface | 0x1XXX | Settings for tilt detection | 0x03 | Defines the behavior of the acceleration sensor |

Tables for cross-product modules (Senticom/Sentivisor) can be found in the Generic NFC and Downlink documentation.

Further information on configuring sensor communication can be found in the respective generic <u>LoRaWAN®</u> or <u>mioty®</u> documentation, depending on the version.

Instructions valid for versions:

| ARTICLE CODE | FEATURES |
|--------------------|---|
| S-JUNO-LOEU-TH | JUNO TH sensor, temperature and relative humidity with tilt detection and opening detection LoRaWAN® |
| S-JUNO-IX-LOEU-TH | INDUSTRIAL TH sensor, temperature and relative humidity with tilt detection and opening detection LoRaWAN® |
| S-JUNO-MIOTY-TH | JUNO TH sensor, temperature and relative humidity with tilt detection and mioty® opening detection |
| S-JUNO-IX-MIOTY-TH | INDUSTRIAL JUNO TH sensor, temperature and relative humidity with tilt detection and mioty® opening detection |

| | SENTIFACE: GROUP TIMINGS 0x00 | | | | | | | |
|-------------------------------------|-------------------------------|---|------------------|------|-----|-----------------|------|---------------|
| Resources | Resource ID | Description | key (NFC/BLE) | Min | Max | Factory setting | Unit | Module key |
| MEASUREMENT PERIOD | 0×00 | Specifies the period in which the measured values are recorded. 5 minutes means that a measurement is always taken by the sensor after 5 minutes. | period | 1/5* | 360 | 30 | min | 1111 |
| REGULAR TRANSMISSION INTERVAL | 0x01 | Number of measurements performed up to transmission. | every | 1 | 64 | 6 | | 1111 |

*

5: For version S-JUNO-LOEU-TH and S-JUNO-MIOTY-TH

1: For version S-JUNO-IX-LOEU-TH and S-JUNO-IX-MIOTY-TH

| | | SENTIFACE: GROU | JP ALARM SE | TTING | S 0x01 | | | |
|----------------------------|-------------|--|------------------|-------|--------|-----------------|------|------------|
| Resources | Resource ID | Description | key (NFC/BLE) | Min | Max | Factory setting | Unit | Module key |
| ALARM ACTIVE | 0×00 | Indicates which alarms are activated, whether for temperature or relative humidity: • 0: Both alarms deactivated • 1: Temperature alarm active • 2: Rel. humidity alarm active • 3: Both alarms active | aact | 0 | 3 | 1 | | 1111 |
| TEMPERATURE DELTA | 0×01 | Specifies by how much the temperature must change in absolute terms compared to the last transmission for an ALARM transmission to be triggered. This transmission is carried out independently of the normal transmission interval. | tdt | 1 | 50 | 5 | °C | 1111 |
| TEMPERATURE UPPER LIMIT | 0x02 | Specifies the upper absolute limit value at which an alarm is triggered. | tht | 0 | 85 | 40 | °C | 1111 |
| TEMPERATURE LOWER LIMIT | 0x03 | Specifies the lower absolute limit value at which an alarm is triggered. | tlt | -25 | 75 | 0 | °C | 1111 |
| REL. HUMIDITY DELTA | 0x04 | Specifies by how much the relative humidity must change in absolute terms compared to the last transmission for an ALARM-transmission to be triggered. This | hdt | 1 | 80 | 20 | %RH | 1111 |

| REL. HUMIDITY | | transmission is carried out independently of the normal transmission interval (0x05 and following were used here for sample versions). Specifies the upper absolute limit | | | | | | |
|---------------------------------------|------|--|-----|---|-----|----|-----|------|
| UPPER LIMIT VALUE | 0x05 | value at which an alarm is triggered. | hht | 5 | 100 | 80 | %RH | 1111 |
| REL. HUMIDITY LOWER LIMIT VALUE | 0x06 | Specifies the lower absolute limit value at which an alarm is triggered. | hlt | 0 | 95 | 20 | %RH | 1111 |
| HYSTERESIS TEMPERATURE | 0x07 | Determines the absolute hysteresis in °C for state changes. If the temperature falls below or exceeds a threshold value minus hysteresis, the system switches from a higher to a lower alarm status. | thy | 2 | 0 | 10 | °C | 1111 |
| HYSTERESE REL. AIR FLUID | 0x08 | Determines the absolute hysteresis in %RH for status changes. If the relative humidity falls below or exceeds a threshold value minus hysteresis, the system switches from a higher to a lower alarm status. | hhy | 5 | 0 | 30 | %RH | 1111 |

| | | SENTIFACE: OPENIN | G DETECTION | I GROUP | 0x02 | | | |
|-----------------------|----------------|--|------------------|---------|------|---------|------|---------------|
| Property | Property ID | Description | key (NFC/BLE) | Min | Max | Default | Unit | Module Key |
| OPENING COOLDOWN | 0x00 | Specifies a period of time in which, after the triggering of an opening Further opening not again can be triggered (debounces the openings). The reference value is the last counted opening. | acool | 0 | 600 | 0 | sec | 1111 |
| OPENING TIME ALARM | 0x01 | Indicates how long the lid is open until an alarm is triggered. | oaaf | 5 | 2880 | 10 | min | 1111 |
| OPENING MODE | 0x02 | Describes which direction the sensor is facing when it is closed and which angles are defined for opening detection. Face up describes the status when the sensor is lying on the table and looking up at the ceiling. Settings from 0 to 7 with acceleration sensor , 8 and 9 Hall sensor: • 0: off • 1: Ultra low power. Fixed threshold value 50°. Closed when directed downwards (face down). • 2: Ultra low power. Fixed threshold value 50°. Closed when directed upwards (face up). • 3: Ultra low power. Fixed threshold value 50°. Closed | opmo | 0 | 8 | 1 | | 1111 |

| when directed to the side (sidewards). 4: Extended tilt sensing. Adjustable threshold value. Closed when directed downwards (face down). 5: Extended tilt sensing. Adjustable threshold value. Closed when directed upwards (face up). 6: Extended tilt sensing. Adjustable threshold value. Closed when directed sideways. 7: Extended tilt sampling. Adjustable threshold value. Automatic calibration of the closed alignment. 8: Container is closed when solenoid is applied. 9: Container is open when solenoid is applied. | |
|---|--|
|---|--|

| | | SENTIFACE: ADVANCED INC | LINATION SE | TTINGS | ROUP 0x03 | | | |
|---------------------|----------------|---|------------------|--------|-----------|---------|------|---------------|
| Property | Property ID | Description | key (NFC/BLE) | Min | Max | Default | Unit | Module Key |
| SAMPLING PERIOD | 0x00 | Specifies how often the acceleration sensor determines the angle. The higher the frequency, the higher the power consumption. | tspe | 2 | 600 | 2 | S | 1111 |
| TRIGGER LEVEL | 0x01 | Specifies the angle from which an opening is counted or an alarm is triggered. | ttle | 5 | 180 | 20 | 0 | 1111 |
| TRIGGER HYSTERIA | 0x02 | Hysteresis value for the opening angle | tthy | 1 | 90 | 4 | 0 | 1111 |

Example downlinks:

| Setting | Downlink |
|---------------|----------------------------|
| period = 10 | 00 11 11 00 00 00 00 0A |
| every = 5 | 00 11 11 00 01 00 00 00 05 |
| alarm_act = 0 | 00 11 11 01 00 00 00 00 00 |