

# Tec4med

Supply chain visibility.  
Simple. Smart. Secure.

- Global real-time monitoring
- Data stored in the Tec4Cloud
- Temp, Humidity, Shock, Light, Geo, Tilt
- Full cold chain data visibility
- 24/7 data & analysis
- Managing quality and control
- Real time alert via Email



## Technical data - SmartTag

**S / S Lite** [Single-Use, Non-Lithium batteries]

**SP / SP Lite** [Single-Use with Probe, Non-Lithium]

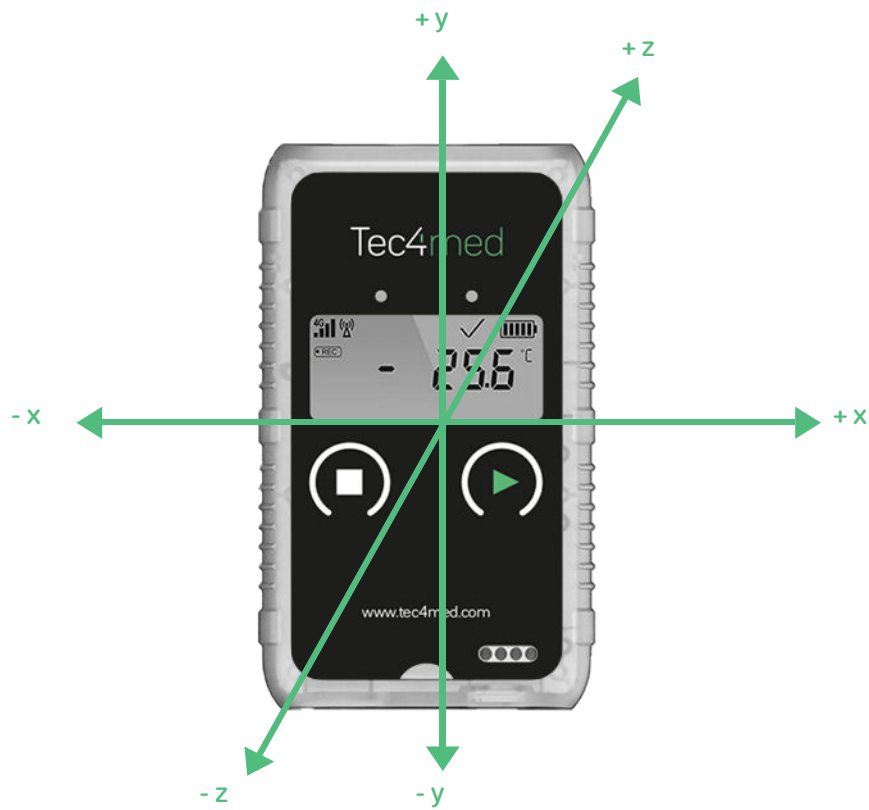
**M** [Multi-Use, rechargeable]

**MP** [Multi-Use with Probe, rechargeable]

## Technical data

|                               | Description                                                 | Details                                                                                                                                                                               |
|-------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SmartTag S line               | Record interval<br>Transmission interval                    | <ul style="list-style-type: none"> <li>10 / 30 / 60 min</li> <li>20 / 30 / 60 / 120 / 240 min</li> </ul>                                                                              |
| SmartTag M line               | Record interval<br>Transmission interval                    | <ul style="list-style-type: none"> <li>1 / 2 / 5 / 10 / 30 / 60 min</li> <li>10 / 20 / 30 / 60 / 120 min</li> </ul>                                                                   |
| Accelerometer                 | 3 axes: x, y and z 1-8 g                                    | <ul style="list-style-type: none"> <li>1-8 g factory-calibrated</li> <li>Resolution: 1 g</li> </ul>                                                                                   |
| Temperature sensor            | Calibrated by manufacturer                                  | <ul style="list-style-type: none"> <li>-30 °C ... 70 °C</li> <li>±0,5 °C [-20 °C ... +40 °C];</li> <li>0,1 °C resolution</li> </ul>                                                   |
| Humidity sensor<br>(only S/M) | Calibrated by manufacturer                                  | <ul style="list-style-type: none"> <li>5 % rH to 95 % rH non condensing</li> <li>±3 % rH accuracy</li> <li>1 % rH resolution</li> </ul>                                               |
| Light sensor                  | Detect whether box is open                                  | <ul style="list-style-type: none"> <li>0 ... 52.000 Lux</li> </ul>                                                                                                                    |
| Geo-Positioning               | Detect geolocation of device                                | <ul style="list-style-type: none"> <li>Old Version: Geo-positioning via. cellular triangulation</li> <li>New Version: Geo-positioning via. cellular and Wifi triangulation</li> </ul> |
| Battery                       | Li-Ion [M/MP]<br>Non-Lithium [S/Lite/SP]                    | <ul style="list-style-type: none"> <li>Battery runtimes on following pages</li> </ul>                                                                                                 |
| Casing                        | ABS casing<br>SmartTag S/S Lite/SP/SP Lite<br>SmartTag M/MP | <ul style="list-style-type: none"> <li>Dimensions:<br/>103 x 61.3 x 33 mm<br/>103 x 61.3 x 23 mm</li> </ul>                                                                           |
| Weight                        | SmartTag S/S Lite/SP/SP Lite<br>SmartTag M/MP               | <ul style="list-style-type: none"> <li>300 g</li> <li>140 g</li> </ul>                                                                                                                |
| GSM Module Config             | Global roaming included                                     | <ul style="list-style-type: none"> <li>Global LTE 4G/5G</li> <li>Fallback 2G network</li> </ul>                                                                                       |
| Certifications                | Compliance                                                  | <ul style="list-style-type: none"> <li>FCC</li> <li>CE</li> <li>RTCA/DO-160G</li> <li>UN38.3</li> <li>ROHS</li> <li>WEEE</li> </ul>                                                   |
| Protection                    | IP 64                                                       | <ul style="list-style-type: none"> <li>Sensor protection through membrane</li> </ul>                                                                                                  |
| Versions                      | Pt100 sensor 4-wire connection, class A                     | <ul style="list-style-type: none"> <li>100 mm husk &amp; 1000 mm cable</li> <li>300 mm husk &amp; 500 mm cable</li> </ul>                                                             |

## Orientation



## Battery life according to transmission interval

| Versions                            | Transmission Interval [min] | Battery Runtime [days] |
|-------------------------------------|-----------------------------|------------------------|
| SmartTag<br>S/SP/S Lite/<br>SP Lite | 240                         | 120                    |
|                                     | 120                         | 60                     |
|                                     | 60                          | 30                     |
|                                     | 30                          | 15                     |
|                                     | 20                          | 10                     |
| SmartTag<br>M/MP                    | 120                         | 120                    |
|                                     | 60                          | 60                     |
|                                     | 30                          | 30                     |
|                                     | 20                          | 20                     |
|                                     | 10                          | 10                     |



# Shock values [G values related to drop in height]

| Sensor threshold | 10cm | 30cm | 50cm | 70cm | 90cm | 110cm | 130cm | 150cm |
|------------------|------|------|------|------|------|-------|-------|-------|
| Lev1             | ✓    | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev2             | ✗    | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev3             | ✗    | ✗    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev4             | ✗    | ✗    | ✗    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev5             | ✗    | ✗    | ✗    | ✗    | ✓    | ✓     | ✓     | ✓     |
| Lev6             | ✗    | ✗    | ✗    | ✗    | ✗    | ✓     | ✓     | ✓     |
| Lev7             | ✗    | ✗    | ✗    | ✗    | ✗    | ✗     | ✓     | ✓     |
| Lev8             | ✗    | ✗    | ✗    | ✗    | ✗    | ✗     | ✗     | ✓     |

# Tec4med

Lieferketten-Transparenz.  
Simple. Smart. Secure.

- Globale Echtzeit-Überwachung
- Daten werden in der Tec4Cloud gespeichert
- Temperatur, Luftfeuchtigkeit, Erschütterung, Licht, Geo, Neigung
- Vollständige Sichtbarkeit der Kühlkettendaten
- 24/7 Daten & Analyse Qualitätsmanagement und Kontrolle
- Echtzeit-Alarmierung per E-Mail



Technische Daten - Smart**Tag** [optionale Sonde]

**S / S Lite** [Einweg, Non-Lithium]

**SP / SP Lite** [Einweg mit Sonde, Non-Lithium]

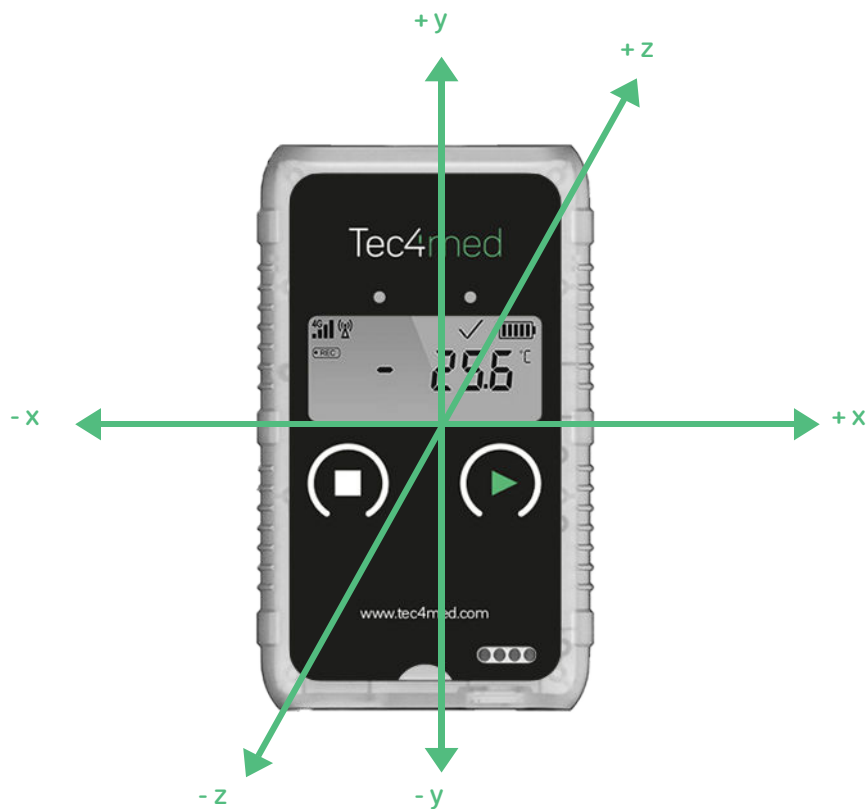
**M** [Mehrweg, Li-Ion Akkus]

**MP** [Mehrweg mit Sonde, Lio-Ion Akkus]

## Technische Daten

|                                      | Beschreibung                                                 | Details                                                                                                                                                                                   |
|--------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SmartTag S Serie                     | Aufzeichnungsintervall<br>Übertragungsintervall              | <ul style="list-style-type: none"> <li>10 / 30 / 60 min</li> <li>20 / 30 / 60 / 120 / 240 min</li> </ul>                                                                                  |
| SmartTag M Serie                     | Aufzeichnungsintervall<br>Übertragungsintervall              | <ul style="list-style-type: none"> <li>1 / 2 / 5 / 10 / 30 / 60 min</li> <li>10 / 20 / 30 / 60 / 120 min</li> </ul>                                                                       |
| Beschleunigungsmesser                | 3 Achsen: x, y und z 1-8 g                                   | <ul style="list-style-type: none"> <li>1-8 g factory-calibrated</li> <li>Auflösung: 1 g</li> </ul>                                                                                        |
| Temperatur Sensor                    | werkseitig kalibriert                                        | <ul style="list-style-type: none"> <li>-30 °C ... 70 °C</li> <li>±0,5 °C [-20 °C ... +40 °C]</li> <li>0,1 °C Auflösung</li> </ul>                                                         |
| Luftfeuchtigkeit Sensor<br>(nur S/M) | werkseitig kalibriert                                        | <ul style="list-style-type: none"> <li>5 % rH bis 95 % rH nicht kondensierend</li> <li>±3 % rH Genauigkeit</li> <li>1 % rH Auflösung</li> </ul>                                           |
| Licht Sensor                         | Erkennen, ob Box geöffnet ist                                | <ul style="list-style-type: none"> <li>0...52.000 Lux</li> </ul>                                                                                                                          |
| Geo-Position                         | Erkennen der Geo-Position                                    | <ul style="list-style-type: none"> <li>Alte Version: Geopositionierung über zelluläre Triangulation<br/>Neue Version: Geopositionierung über Mobilfunk- und Wifi-Triangulation</li> </ul> |
| Batterie                             | Li-Ion (SmartTag M Serie)<br>Non-Li (SmartTag S Serie)       | <ul style="list-style-type: none"> <li>Batterielaufzeiten auf der nächsten Seite</li> </ul>                                                                                               |
| Gehäuse                              | ABS Gehäuse<br>SmartTag S/S Lite/SP/SP Lite<br>SmartTag M/MP | <ul style="list-style-type: none"> <li>Abmessungen:<br/>103 x 61.3 x 33 mm<br/>103 x 61.3 x 23 mm</li> </ul>                                                                              |
| Gewicht                              | SmartTag S/S Lite/SP/SP Lite<br>SmartTag M/MP                | <ul style="list-style-type: none"> <li>300 g</li> <li>140 g</li> </ul>                                                                                                                    |
| GSM Modul                            | Globales Roaming inklusive                                   | <ul style="list-style-type: none"> <li>Global LTE 4G/5G</li> <li>Fallback auf 2G</li> </ul>                                                                                               |
| Qualifikationen                      | Konformität                                                  | <ul style="list-style-type: none"> <li>FCC</li> <li>CE</li> <li>RTCA/DO-160G</li> <li>UN38.3</li> <li>ROHS</li> <li>WEEE</li> </ul>                                                       |
| Schutzart                            | IP 64                                                        | <ul style="list-style-type: none"> <li>Sensorschutz durch Membran</li> </ul>                                                                                                              |
| Versionen                            | Pt100-Fühler 4-Leiteranschluss, Klasse A                     | <ul style="list-style-type: none"> <li>100 mm Hülse &amp; 1000 mm Kabel</li> <li>300 mm Hülse &amp; 500 mm Kabel</li> </ul>                                                               |

## Orientierung



## Batterielaufzeit nach Übertragungsintervall

| Versionen                           | Übertragungsintervall (min) | Batterielaufzeit (Tage) |
|-------------------------------------|-----------------------------|-------------------------|
| SmartTag<br>S/SP/S Lite/<br>SP Lite | 240                         | 120                     |
|                                     | 120                         | 60                      |
|                                     | 60                          | 30                      |
|                                     | 30                          | 15                      |
|                                     | 20                          | 10                      |
|                                     | 10                          | 5                       |
| SmartTag<br>M/MP                    | 120                         | 120                     |
|                                     | 60                          | 60                      |
|                                     | 30                          | 30                      |
|                                     | 20                          | 20                      |
|                                     | 10                          | 10                      |



## Schockwerte (G-Werte bezogen auf den Höhenunterschied)

| Schwellenwerte | 10cm | 30cm | 50cm | 70cm | 90cm | 110cm | 130cm | 150cm |
|----------------|------|------|------|------|------|-------|-------|-------|
| Lev1           | ✓    | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev2           | ✗    | ✓    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev3           | ✗    | ✗    | ✓    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev4           | ✗    | ✗    | ✗    | ✓    | ✓    | ✓     | ✓     | ✓     |
| Lev5           | ✗    | ✗    | ✗    | ✗    | ✓    | ✓     | ✓     | ✓     |
| Lev6           | ✗    | ✗    | ✗    | ✗    | ✗    | ✓     | ✓     | ✓     |
| Lev7           | ✗    | ✗    | ✗    | ✗    | ✗    | ✗     | ✓     | ✓     |
| Lev8           | ✗    | ✗    | ✗    | ✗    | ✗    | ✗     | ✗     | ✓     |