

# FRANEO 800

## Technical Data



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# 1 Technical data

## 1.1 Calibration interval of *FRANEO 800*

All input/output values are guaranteed for one year within an ambient temperature of 23 °C ± 5 °C/73 °F ± 10 °F and a warm-up time longer than 25 min. Technical data is subject to change without notice.

## 1.2 *FRANEO 800* specifications

Table 1-1: General specifications

| Characteristic                          | Rating  |
|---|---|
| Frequency range                         | 1 Hz...30 MHz   |
| <b>Source output</b>                    |   |
| Output impedance <sup>1</sup>           | 50 Ω± 2%  |
| Connector                               | BNC   |
| Wave form                               | Sinusoidal signal   |
| Amplitude                               | 10 V <sub>pp</sub> at 50 Ω load                             |
| <b>Reference and measurement inputs</b> |   |
| Input impedance <sup>1</sup>            | 50 Ω± 2%  |
| Connectors                              | BNC   |
| Input sensitivity                       | 10 V <sub>pp</sub>  |
| Dynamic range <sup>1</sup>              | >150 dB<br>(+10 dB...< -140 dB noise floor <sub>RMS</sub> ) |

1. In the frequency range 20 Hz...2 MHz

Table 1-2: Accuracy<sup>1</sup>

| Attenuation      | Typical | Guaranteed |
|------------------|---------|------------|
| 0 dB...-50 dB    | ±0.1 dB | ±0.3 dB    |
| -50 dB...-100 dB | ±0.3 dB | ±0.5 dB    |

1. In the frequency range 20 Hz...2 MHz

Table 1-3: Frequency accuracy<sup>1</sup>

| Frequency Range | Guaranteed |
|-----------------|------------|
| 1 Hz...3 Hz     | 0.3%       |
| 3 Hz...20 Hz    | 0.1%       |
| 20 Hz...30 MHz  | 0.02%      |

1. The *FRANEO 800* is equipped with a 25 MHz frequency oscillator which has an accuracy of  $\pm 30$  ppm.

Table 1-4: Phase accuracy<sup>1</sup>

| Phase accuracy        | Rating        |
|-----------------------|---------------|
| $\pm 10$ dB... -80 dB | $\pm 1^\circ$ |
| -80 dB...-100 dB      | $\pm 5^\circ$ |

1. In the frequency range 20 Hz...2 MHz

## 1.3 Power supply specifications

Table 1-5: AC power supply specifications

| Characteristic | Rating                                   |
|----------------|--|
| Input          | 100 V...240 V AC/50...60 Hz/700...350 mA |
| Output         | 18 V DC/1.33 A                           |

## 1.4 Environmental conditions

Table 1-6: Climate

| Characteristic |                      | Rating                           |
|----------------|----------------------|----------------------------------|
| Temperature    | Operating            | -10 °C...+55 °C/+14 °F...+131 °F |
|                | Storage <sup>1</sup> | -35 °C...+55 °C/-31 °F...+131 °F |
| Max. altitude  | Operating            | 5 000 m/16 400 ft                |
|                | Storage              | 12 000 m/40 000 ft               |

1. For the reduction of the battery's lifetime with the storage temperature, see Table 1-7: "Aging speed" later in this section.

Storing the battery at higher temperatures reduces the battery's lifetime as shown in the following table.

Table 1-7: Aging speed

| Storage temperature | Aging speed     |
|---------------------|-----------------|
| +25 °C/+77 °F       | Normal          |
| +45 °C/+113 °F      | 4 times faster  |
| +55 °C/+131 °F      | 12 times faster |



## 1.5 Mechanical data

Table 1-8: Mechanical data

| Characteristic         | Rating   |
|------------------------|--|
| Dimensions (w × h × d) | 25.2 cm × 5.5 cm × 26.9 cm/<br>9.9 inch × 2.2 inch × 10.6 inch |
| Weight                 | 1.82 kg/4.0 lb<br>(without measuring cables)                   |

## 1.6 Standards

Table 1-9: Standards conformity

| EMC, safety          |  |   |
|----------------------|--|---|
| EMC                  | IEC/EN 61326-1 (industrial electromagnetic environment)<br>FCC subpart B of part 15, class A   |  |
| Safety               | IEC/EN/UL 61010-1  |  |
| Other                |  |   |
| Shock                | IEC/EN 60068-2-27<br>(15 g/11 ms, half-sinusoid, 3 shocks in each axis)  |   |
| Vibration            | IEC/EN 60068-2-6<br>(frequency range 10 Hz...150 Hz, acceleration 2 g continuous (20 m/s <sup>2</sup> /<br>65 ft/s <sup>2</sup> ), 20 cycles per axis) |   |
| Humidity             | IEC/EN 60068-2-78<br>(5%...95% relative humidity, no condensation),<br>tested at 40 °C/104 °F for 48 hours   |   |
| Application Relevant |  |   |
|                      | IEC 60076 Edition 1.0 2012-07  |   |
|                      | IEEE C57.149™-2012   |   |
|                      | DL/T911-2004   |   |
|                      | NCEPRI   |   |
|                      | CIGRE A2.26 - 342  |   |