5. SPECIFICATIONS

5.1 Reference Conditions

Parameter	Reference Conditions
Ambient temperature	73°F (23 °C) ± 2°F/C
Relative humidity	45% to 75% RH
Voltage	No DC component in AC, no AC component in DC (< 0.1%)
Current	No DC component in AC, no AC component in DC (< 0.1%)
Phase voltage	100 to 1000Vrms, without DC (< 0.5%)
Input voltage of current inputs (except AmpFlex®/MiniFlex®)	50mV to 1.2V without DC (< 0.5%) for AC measurement, without AC (< 0.5%) for DC measurement
Harmonics	< 0.1%
Voltage unbalance	0%
Preheating	Device powered for at least an hour
Common mode	Neutral input and enclosure are held at earth potential
	Instrument powered on battery, USB disconnected
Magnetic field	0 A/m AC
Electric field	0 V/m AC

Table 13

5.2 Electrical Specifications

5.2.1 Voltage Inputs

Operating Range: up to 1000Vrms for phase-to-neutral voltages
up to 1700Vrms for phase-to-phase voltages

NOTE: Phase-to-neutral voltages lower than 2V and phase-to-phase voltages lower than 2√3 are zeroed.

Input Impedance: 1908kΩ (phase-to-neutral and neutral-to-earth/ground)

Max Overload: 1100Vrms

5.2.2 Current Inputs

NOTE: Current sensor inputs are “voltage” inputs (current probes have a voltage output).

Operating Range: 0.5mV to 1.2V (1V = Inom) with crest factor = √2

Input Impedance: 1MΩ (except for AmpFlex®/MiniFlex® current sensors)
12.4kΩ (AmpFlex®/MiniFlex® current sensors)

Max Overload: 1.7V

5.2.3 Accuracy Specifications (excluding current sensors)

5.2.3.1 Specifications at 50/60Hz

Quantity	Measurement Range	Intrinsic Uncertainty
Frequency (f)	42.5 to 69Hz	± 0.1Hz
Phase to neutral voltage (V)	10 to 100V	± 0.2% ± 0.2V **
	100 to 1000V	± 0.2% ± 0.2V
Phase to phase voltage (U)	17 to 170V	± 0.2% ± 0.4V **
	170 to 1700V	± 0.2% ± 0.4V
Current (I) without current sensor *	0.2 to 5% Inom	± 0.2% ± 0.02% Inom **
	5 to 120% Inom	± 0.2% ± 0.02% Inom
Active power (P)	PF = 1 V = 100 to 1000V I = 5 to 120% Inom	± 0.5% ± 0.005% Pnom
	PF = [0.5 inductive ; 0.8 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 0.7% ± 0.007% Pnom
Reactive power (Q)	Sin φ = 1 V = 100 to 1000V I = 5 to 120% Inom	± 1% ± 0.01% Qnom
	Sin φ = [0.5 inductive ; 0.5 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 1% ± 0.015% Qnom
	Sin φ = [0.5 inductive ; 0.5 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 1.5% ± 0.015% Qnom
	Sin φ = [0.25 inductive ; 0.25 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 3.5% ± 0.003% Qnom
Apparent power (S)	V = 100 to 1000V I = 5 to 120% Inom	± 0.5% ± 0.005% Snom
Power factor (PF)	PF = [0.5 inductive ; 0.5 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 0.05
	PF = [0.2 inductive ; 0.2 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 0.1
Tan Φ	Tan Φ = [$\sqrt{3}$ inductive ; $\sqrt{3}$ capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 0.02
	Tan Φ = [3.2 inductive ; 3.2 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 0.05
Active energy (Ep)	PF = 1 V = 100 to 1000V I = 5 to 120% Inom	± 0.5%
	PF = [0.5 inductive ; 0.8 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 0.6 %

Quantity	Measurement Range	Intrinsic Uncertainty
Reactive energy (Eq)	Sin φ = 1 V = 100 to 1000V I = 5 to 120% Inom	± 2%
	Sin φ = [0.5 inductive ; 0.5 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 2%
	Sin φ = [0.5 inductive ; 0.5 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 2.5%
	Sin φ = [0.25 inductive ; 0.25 capacitive] V = 100 to 1000V I = 5 to 120% Inom	± 2.5%
Apparent energy (Es)	V = 100 to 1000V I = 5 to 120% Inom	± 0.5%
Harmonics number (1 to 25)	PF = 1 V = 100 to 1000V I = 5 to 120% Inom	± 1%
Total Harmonic Distortion (THD)	PF = 1 V = 100 to 1000V I = 5 to 120% Inom	± 1%

Table 14

- *Inom is the value of the measured current for a current sensor output of 1V. See Table 26 for the nominal current values.*
- *Pnom and Snom are the active power and apparent power for V = 1000V, I = Inom and PF = 1.*
- *Qnom is the reactive power for V = 1000V, I = Inom, and Sin φ = 1.*
- ** The intrinsic uncertainty for input current (I) is specified for an isolated input voltage of 1V = Inom. The intrinsic uncertainty of the connected current sensor should be added to this intrinsic uncertainty to determine the total intrinsic uncertainty. In the case of using sensors AmpFlex® and MiniFlex®, intrinsic uncertainty is given in Table 27.*

  The intrinsic uncertainty for neutral current is the maximum intrinsic uncertainty on I1, I2 and I3.
- *** Indicative maximum value of the intrinsic uncertainty. Higher uncertainties can be noted, in particular with EMI.*

5.2.3.2 Specifications @ 400Hz

Quantity	Measurement Range	Intrinsic Uncertainty
Frequency (F)	340 to 460Hz	± 0.1Hz
Phase to neutral voltage (V)	10 to 100V	± 0.5% ± 0.5V **
	100 to 600V	± 0.5% ± 0.5V
Phase to phase voltage (U)	17 to 170V	± 0.5% ± 0.5V **
	170 to 1700V	± 0.5% ± 0.5V
Current (I) without current sensor *	0.2 to 5% Inom	± 0.5% ± 0.05% Inom **
	5 to 120% Inom ***	± 0.5% ± 0.05% Inom
Active power (P)	PF = 1 V = 100 to 600V I = 5 to 120% Inom	±2% ± 0.02% Pnom **
	PF = [0.5 inductive ; 0.8 capacitive] V = 100 to 600V I = 5 to 120% Inom	±3% ± 0.03% Pnom **
Active energy (Ep)	PF = 1 V = 100 to 600V I = 5 to 120% Inom	± 2% **

Table 15

- *Inom is the value of the measured current for a current sensor output at 50/60Hz. See Table 26 for the nominal current values.*
- *Pnom is the active power for V = 600V, I = Inom and PF = 1.*
- ** The intrinsic uncertainty for input current (I) is specified for an isolated input voltage of 1V = Inom. The intrinsic uncertainty of the connected current sensor should be added to this intrinsic uncertainty to determine the total intrinsic uncertainty. In the case of using sensors AmpFlex® and MiniFlex®, intrinsic uncertainty is given in Table 27. The intrinsic uncertainty for neutral current is the maximum intrinsic uncertainty on I1, I2 and I3.*
- *** Indicative maximum value of the intrinsic uncertainty. Higher uncertainties can be noted, in particular with EMI.*
- **** For AmpFlex® and MiniFlex®, the maximum current is limited to 60% Inom at 50/60Hz, because of higher sensitivity.*

5.2.3.3 Specifications @ DC

Quantity	Measurement Range	Typical Intrinsic Uncertainty **
Voltage (V)	V = 100 to 1000V	± 1% ± 3V
Current (I) without current sensor *	I = 5% to 120% Inom	± 1% ± 0.3% Inom
Power (P)	V = 100 to 1000V I = 5% to 120% Inom	± 1% ± 0.3% Pnom
Energy (Ep)	V = 100 to 1000V I = 5% to 120% Inom	± 1.5%

Table 16

- *Inom is the value of the measured current for a current sensor output of 1 V. See Table 26 for the nominal current values.*
- *Pnom is the power for V = 1000V and I = Inom.*
- ** The intrinsic uncertainty for input current (I) is specified for an isolated input voltage of 1V = Inom. The intrinsic uncertainty of the connected current sensor should be added to this intrinsic uncertainty to determine the total intrinsic uncertainty. In the case of using sensors AmpFlex® and MiniFlex®, intrinsic uncertainty is given in Table 27.*
- *The intrinsic uncertainty for neutral current is the maximum intrinsic uncertainty on I1, I2 and I3.*
- *** Indicative maximum value of the intrinsic uncertainty. Higher uncertainties can be noted, in particular with EMI.*

5.2.3.4 Temperature

For V, U, I, P, Q, S, FP and E:

- 300 ppm/°C, with 5% < I < 120% and PF = 1
- 500 ppm/°C, with 10% < I < 120% and PF = 0.5 inductive
- Typical DC offset V: 10mV/°C
  I: 30 ppm x Inom/°C

5.2.3.5 Common Mode Rejection

The common mode rejection ratio on neutral input is typically 140 dB. For example, 110V applied on the neutral input will add 11µV to AmpFlex®/MiniFlex® values, which is a 230mA error at 60Hz. A voltage of 110V applied on the neutral input will add 11µV to other current sensors' values, resulting in an additional error of 0.01% Inom.

5.2.3.6 Magnetic Field Influence

For Rogowski inputs (without sensors): 10 mA/A/m typical at 50/60 Hz.

5.2.4 Current Sensors

5.2.4.1 Precautions for Use

Refer to the safety sheet or user manual that was supplied with your current sensors for more information.

5.2.4.2 Use and Characteristics

Current clamps and flexible current sensors are used to measure the current flowing in a cable without opening the circuit. They also insulate the user from dangerous voltages in the circuit.

- The choice of current sensor to be used depends on the current to be measured and the diameter of the cables.
- When installing current sensors, face the arrow on the probe or the sensor in the direction of the load.

5.2.4.3 MiniFlex® MA193

The Flexible Current Sensor MiniFlex® Model MA193 can be used to measure the current in a cable without opening the circuit. It also serves to isolate the user from hazardous voltages in the circuit. This sensor can only be used as an accessory of an instrument. Before connecting it, if you have several sensors, you can mark each of them using one of the color-coded ID markers supplied with the instrument to identify the phase. Then connect the sensor to the instrument.

- Press the yellow opening device to open the Flexible coil. Then, place it around the conductor through which the current to be measured flows (only one conductor in the sensor).
- Close the coil. In order to optimize measurement quality, it is best to center the conductor in the coil and make the shape of the coil as circular as possible.
- To disconnect the coil, open it and withdraw it from the conductor. Then, disconnect the sensor from the instrument.

MiniFlex® MA193	
Nominal Range	100/400/2000/10,000AAC
Measurement Range	200mA to 3000AAC
Sensor	Length = 10" (250 mm); Ø = 2.75" (70 mm)
Variation of the position of the conductor in the sensor	≤ 1.5% typical, 2.5% max
Adjacent conductor carrying alternating current	≤ 1% for a conductor in contact with sensor and ≤ 2% near the snap device
Safety	EN 61010-2-032, Pollution Degree 2, 600V CAT IV, 1000V CAT III

Table 17

NOTE: Currents < 0.05% of the nominal range (100, 400, 2000 or 10,000A) will be displayed as zero.
The nominal ranges are reduced to 50/200/1000/5000AAC at 400Hz. MiniFlex® will operate when 10,000A is selected.

5.2.4.4 Other Current Sensors

The measurement ranges are those of the sensors. In some cases, they may differ from the ranges that can be measured by the PEL. For use, see the manual distributed with the current sensor

NOTE: Power calculations will be zeroed when the current is zeroed.

Model MR193	
Nominal Range	1000AAC, 1400ADC max
Measurement Range	10 to 1000AAC, 10 to 1300APEAK AC+DC
Maximum Clamping Diameter	One 1.6" (42mm) or two 0.98" (25.4mm) or two bus bars 1.96 x 0.19" (50 x 5mm)
Variation of the position of the conductor in the sensor	< 0.5% DC to 440Hz
Adjacent conductor carrying alternating current	< 10mA/A at 50/60Hz
Safety	EN 61010-2-032, Pollution Degree 2, 300V CAT IV, 600V CAT III

Table 18

NOTE: Currents < 1AAC/DC will be displayed as zero.

Model SR193	
Nominal Range	1000AAC for f ≤1 kHz
Measurement Range	1 to 1200AAC max (I >1000A not continuously)
Maximum Clamping Diameter	2" (52mm)
Variation of the position of the conductor in the sensor	< 0.5% DC to 440Hz
Adjacent conductor carrying alternating current	< 10mA/A at 50/60Hz
Safety	EN 61010-2-032, Pollution Degree 2, 600V CAT IV, 1000V CAT III

Table 19

NOTE: Currents < 0.5A will be displayed as zero.

AmpFlex® Sensors	
Nominal Range	100/400/2000/10,000AAC
Measurement Range	50mA to 12000AAC
Sensor	Length = 24" (610mm); Ø = 7.64" (190mm) Length = 36" (910mm); Ø = 11.46" (290mm)
Variation of the position of the conductor in the sensor	≤ 2% any position and ≤ 4% near snap device
Adjacent conductor carrying alternating current	≤ 1% any position and ≤ 2% near snap device
Safety	EN 61010-2-032, Pollution Degree 2, 600V CAT IV, 1000V CAT III

Table 20

NOTE: Currents < 0.05% for nominal range (100, 400, 2000 or 10,000A) will be displayed as zero.
The nominal ranges are reduced to 50/200/1000/5000AAC at 400Hz.

Model MN93	
Nominal Range	200AAC for f ≤1kHz
Measurement Range	2 to 240AAC max (I >200A not permanent)
Maximum Clamping Diameter	0.8" (20mm)
Variation of the position of the conductor in the sensor	< 0.5% at 50/60Hz
Adjacent conductor carrying alternating current	≤ 15mA/A
Safety	EN 61010-2-032, Pollution Degree 2, 300V CAT IV, 600V CAT III

Table 21

NOTE: Currents < 0.1A will be displayed as zero.

Model MN193	
Nominal Range	5A and 100AAC
Measurement Range	5A: 0.005 to 6AAC max 100A: 0.1 to 120AAC max
Maximum Clamping Diameter	0.8" (20mm)
Variation of the position of the conductor in the sensor	< 0.5% at 50/60Hz
Adjacent conductor carrying alternating current	≤ 15mA/A at 50/60Hz
Safety	EN 61010-2-032, Pollution Degree 2, 300V CAT IV, 600V CAT III

Table 22

The 5A range of the MN193 is designed to work with secondary current transformers.
NOTE: Currents < 2.5mA x ratio on the 5A range and < 0.05A on the 100A range will be displayed as zero with this probe.

Model SL261	
Nominal Range	10A and 100AAC/DC
Measurement Range	100mV/A: 100mA to 10A peak 10mV/A: 1 to 100A peak
Probe Output Signal	1000mV peak max
Maximum Clamping Diameter	0.46" (11.8mm)
Variation of the position of the conductor in the sensor	< 0.5%
Adjacent conductor carrying alternating current	-33 dB typical, DC to 1 kHz
Safety	EN 61010-2-032, Pollution Degree 2, 600V CAT III

Table 23

Model J93	
Nominal Range	3500AAC and 5000ADC
Measurement Range	50 to 3500AAC 50 to 5000ADC
Maximum Clamping Diameter	2.83" (72 mm)
Variation of the position of the conductor in the sensor	< ± 2%
Adjacent conductor carrying alternating current	> 35 dB typical, DC to 2kHz
Safety	IEC 61010-2-032, pollution degree 2, 600V CAT IV, 1000V CAT III

Table 24

5A Adapter Box /Essailec® adapter	
Nominal Range	5AAC
Measurement Range	250mAAC to 6AAC
Probe Output Signal	200mVAC/AAC
Number of transformer inputs	3
Safety	EN 61010-2-032, Pollution degree 2, 300V CAT III

Table 25

NOTE: Currents < 2.5mA will be displayed as zero.

5.2.4.5 Accuracy

The RMS current measurement accuracy and the phase accuracy correspond to addition values (which must therefore be added to the instrument's accuracy), indicated as influences on the calculations carried out by the instrument (powers, energies, power factors, tangents, etc.).

The following specifications are considered to be in the conditions of references of the current sensor.

Current sensors with 1V output at Inom specifications

Model	I nominal	Current (RMS or DC)	Intrinsic uncertainty at 50/60 Hz	Intrinsic uncertainty on φ at 50/60 Hz	Typical uncertainty on φ at 50/60 Hz	Typical uncertainty on φ at 400 Hz
MR193	1000ADC	1 to 50A	± 1.5% ± 1A **	-	-	
		50 to 100A	± 1.5% ± 1A	± 2.5°	-0.9°	
		100 to 800A	± 2.5%	± 2°	- 0.8°	- 4.5° @ 100A
		800 to 1000A	± 4%		- 0.65°	
SR193	1000AAC	1 to 50A	± 1% **	-	-	+ 0.1° @ 1000A
		50 to 100A	± 0.5%	± 1°	+ 0.25°	
		100 to 1200A	± 0.3%	± 0.7°	+ 0.2°	
MN93	200AAC	0.5 to 5A	± 3% ± 1A **	-	-	-
		5 to 40A	± 2.5% ± 1A	± 5°	+ 2°	- 1.5° @ 40A
		40 to 100A	± 2% ± 1A	± 3°	+ 1.2°	- 0.8° @ 100A
		100 to 240A	± 1% + 1A	± 2.5°	± 0.8°	- 1° @ 200A

Model	I nominal	Current (RMS or DC)	Intrinsic uncertainty at 50/60 Hz	Intrinsic uncertainty on φ at 50/60 Hz	Typical uncertainty on φ at 50/60 Hz	Typical uncertainty on φ at 400 Hz
MN193	100A$_{AC}$	200mA to 5A	± 1% ± 2mA **	± 4°	-	-
		5 to 120A	± 1%	± 2.5°	+ 0.75°	- 0.5° @100A
	5A$_{AC}$	5 to 250mA	± 1.5% ± 0.1mA **	-	-	-
		255mA to 6A	± 1%	± 5°	+ 1.7°	- 0.5° @ 5A
SL261	100A$_{AC/DC}$	5 to 40A	± 4% ± 50mA	± 1°	-	-
		40 to 100A	± 15%	± 1°	-	-
	10A$_{AC/DC}$	50mA to 250A	± 3% ± 50mA	± 1.5°	-	-
5A Adapter	5A^{AC}	5 to 250mA	± 0.5% ± 2mA **	-	-	-
		250mA to 6A	± 0.5% ± 1mA	± 0.5°		
J93	3500A^{AC} 5000A^{DC}	50 to 250A	±2% + 2.5A)	±3°	-	-
		250 to 500A	± (1.5% + 2.5A)	±2°		
		500 to 3500A	± 1%	±1.5°		
		3500 to 5000A (DC only)	± 1%	-		

Table 26

*** Indicative maximum value of the intrinsic uncertainty. Higher uncertainties can be noted, in particular with EMI.*

AmpFlex® and MiniFlex® Specifications

Sensor type	I nominal	Current (RMS or DC)	Typical intrinsic uncertainty at 50/60Hz	Intrinsic uncertainty at 400Hz	Intrinsic uncertainty on φ at 50/60Hz	Typical uncertainty on φ at 400Hz
AmpFlex® A193 *	100A$_{AC}$	200mA to 5A	± 1.2% ± 50mA **	± 2% ± 0.1A **	-	-
		5 to 120A *	± 1.2% ± 50mA	± 2% ± 0.1A	± 0.5°	- 0.5°
	400A$_{AC}$	0.8 to 20A	± 1.2% ± 0.2A **	± 2% ± 0.4A **	-	-
		20 to 500A *	± 1.2% ± 0.2A	± 2% ± 0.4A	± 0.5°	- 0.5°
	2000A$_{AC}$	4 to 100A	± 1.2% ± 1A **	± 2% ± 2A **	-	-
		100 to 2400A *	± 1.2% ± 1A	± 2% ± 2A	± 0.5°	- 0.5°
	10,000A$_{AC}$	20 to 500A	± 1.2% ± 5A **	±2% ± 10A **	-	-
		500 to 12,000A *	± 1.2% ± 5A	± 2% ± 10A	± 0.5°	- 0.5°
MiniFlex® MA193 *	100A$_{AC}$	200mA to 5A	± 1.2% ± 50mA **	± 2% ± 0.1A **	-	-
		5 to 120A *	± 1.2% ± 50mA	± 2% ± 0.1A	± 0.5°	- 0.5°
	400A$_{AC}$	0.8 to 20A	± 1.2% ± 0.2A **	± 2% ± 0.4A **	-	-
		20 to 500A *	± 1.2% ± 0.2A	± 2% ± 0.4A	± 0.5°	- 0.5°
	2000A$_{AC}$	4 to 100A	± 1.2% ± 1A **	± 2% ± 2A **	-	-
		100 to 2400A *	± 1.2% ± 1A	± 2% ± 2A	± 0.5°	- 0.5°
	3000A$_{AC}$	20 to 500A	± 1.2% ± 5A **	±2% ± 10A **	-	-
		500 to 3000A *	± 1.2% ± 5A	± 2% ± 10A	± 0.5°	- 0.5°

Table 27

** The nominal ranges are reduced to 50/200/1000/5000A$_{AC}$ at 400Hz.*
*** Indicative maximum value of the intrinsic uncertainty. Higher uncertainties can be noted, in particular with EMI.*

When no current sensor is connected, the current values are forced to zero.

Distribution system	Abbreviation	I_1	I_2	I_3
Split phase (1-phase 2-wire)	1P-2W	•	–	–
Split phase (1-phase 3-wire)	1P-3W	•	•	–
3-phase 3-wire Δ	3P-3WΔ2	•	–	•
3-phase 3-wire Open Δ	3P-3W02	•	–	•
3-phase 3-wire Y 2	3P-3WY2	•	–	•
3-phase 3-wire Δ	3P-3WΔ3	•	•	•
3-phase 3-wire Open Δ	3P-3W03	•	•	•
3-phase 3-wire Y	3P-3WY	•	•	•
3-phase 3-wire Δ balanced	3P-3WΔB	–	–	•
3-phase 4-wire Y	3P-4WY	•	•	•
3-phase 4-wire Y balanced	3P-4WYB	•	–	–
3-phase 4-wire Y 2½	3P-4WY2	•	•	•
3-phase 4-wire Δ	3P-4WΔ	•	•	•
3-phase 4-wire Open Δ	3P-4WOΔ	•	•	•
DC 2-wire	DC-2W	•	–	–
DC 3-wire	DC-3W	•	•	–
DC 4-wire	DC-4W	•	•	•

5.3 Bluetooth

Bluetooth 2.1

- Class 1 (range: 600 m)
- Nominal output power: +15 dBm
- Nominal sensitivity: -82 dBm
- Rate : 115.2 kbits/s

5.4 Power Supply

AC Power (external power supply) - Overvoltage CAT II

- **Operating Range:** 110V/230V (± 10%) @ 50/60Hz
- **Max Power:** 15VA (rated to 30 VA max)

Battery Power

- **Type:** Rechargeable NiMH battery
- **Charge Time:** 5 hours approx
- **Recharging Temperature:** 50° to 104°F (10° to 40°C)

NOTE: Configuration data is saved for up to 5 years during a low battery condition.
When the instrument is off, the real-time clock is maintained for two weeks or longer.

Autonomy

- 30 minutes minimum
- 60 minutes typical

5.5 Mechanical Specifications

Dimensions: 10.08 x 4.92 x 1.46" (256 x 125 x 37mm)

Weight: < 1 kg

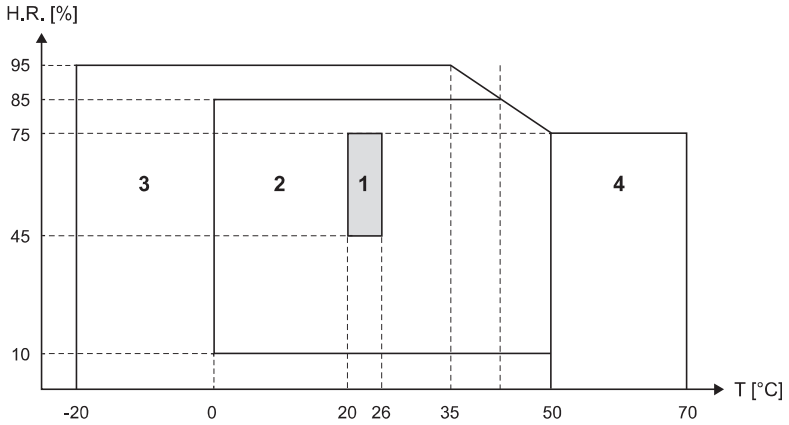
Drop Test: 1 m in the most severe position without permanent mechanical damage and functional deterioration

Degrees of Protection: Provided by enclosure (IP code) according to IEC 60529
IP 54 instrument not connected (de-energized) / not including the terminals
IP20 instrument connected (operating)

5.6 Environmental Specifications

Altitude: Operating: 0 to 2000 m (6560 ft); Non-Operating: 0 to 10000 m (32800 ft)

Temperature and % RH:



1 = Range of reference
1 + 2 = Operating range
1 + 2 + 3 = Storage range with batteries
1 + 2 + 3 + 4 = Storage range without batteries

5.7 Safety Specifications

Electrical Safety ⧈ CE

The instrument complies with IEC 61010-1, and IEC 61010-2-030 for the following:

- Measurement inputs and enclosure: 600V CAT IV / 1000V CAT III, pollution degree 2
- Power supply: 300V overvoltage category II, pollution degree 2

C ETL LISTED US
Intertek
4009819

Conforms to UL Std. UL 61010-1
Conforms to UL Std. UL 61010-2-030
Cert. to CAN/CSA Std. C22.2 No. 61010-1-12
Cert. to CSA Std. C22.2#61010-2-030

For current sensors, see § 5.2.4.4
The current sensors comply with IEC 61010-2-032
The test leads and alligator clips comply with IEC 61010-031

5.8 Electromagnetic Compatibility

- Emissions and immunity in an industrial setting compliant with IEC 61326-1 (with an influence of 0.5% typical of the full scale

Hi-Potential Technologies
http://www.hi-potential.com | http://hi-potential.com.au/
sales@hi-potential.com

Specifications are subject to change without notice.