

Meas. Function	Measuring Range		Resolution at Upper Range Limit		Input Impedance		Intrinsic Uncertainty under Reference Conditions			Overload Capacity <sup>2)</sup>	
			11,999	1199	≡	~ / ≙	±(... % rdg. + ... d)	±(... % rdg. + ... d)	±(... % rdg. + ... d)	Value	Time
							≡	~ <sup>10)</sup>	≙ <sup>10)</sup>		
<b>V</b>	100 mV	10 μV			≥ 9 MΩ	≥ 9 MΩ // < 50 pF	0.09 + 5 with ZERO	1 + 30 (> 300 d) <sup>1)</sup>	1 + 30 (> 300 d) <sup>1)</sup>	1000 V DC AC RMS sine	Continuous
	1 V	100 μV			≥ 9 MΩ	≥ 9 MΩ // < 50 pF	0.05 + 3	0.5 + 9 (> 200 d)	1 + 30 (> 300 d)		
	10 V	1 mV			≥ 9 MΩ	≥ 9 MΩ // < 50 pF	0.05 + 3	0.5 + 9 (> 200 d)	1 + 30 (> 300 d)		
	100 V	10 mV			≥ 9 MΩ	≥ 9 MΩ // < 50 pF	0.05 + 3	0.5 + 9 (> 200 d)	1 + 30 (> 300 d)		
	1000 V	100 mV			≥ 9 MΩ	≥ 9 MΩ // < 50 pF	0.09 + 3	0.5 + 9 (> 200 d)	1 + 30 (> 300 d)		
				Voltage drop, approx. at upper range limit		≡	~ <sup>10)</sup>	≙ <sup>10)</sup>			
<b>A</b> X-TRA OUTDOOR PRO	100 μA	10 nA			12 mV	12 mV	0.5 + 5	1.5 + 10 (> 200 d)	1.5 + 30 (> 200 d)	0,2 A	Continuous
	1 mA	100 nA			120 mV	120 mV	0.5 + 3	1.5 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	10 mA	1 μA			16 mV	16 mV	0.5 + 3	1.5 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	100 mA	10 μA			160 mV	160 mV	0.5 + 3	1.5 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	1 A	100 μA			40 mV	40 mV	0.9 + 10	1.5 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	10 A	1 mA			600 mV	600 mV	0.9 + 10	1.5 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
<b>A</b> TECH	10 mA	1 μA			16 mV	16 mV	0.1 + 5	1 + 10 (> 200 d)	1.5 + 30 (> 200 d)	0,2 A	Continuous
	100 mA	10 μA			160 mV	160 mV	0.1 + 5	1 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	1 A	100 μA			40 mV	40 mV	0.9 + 10	1 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	10 A	1 mA			600 mV	600 mV	0.9 + 10	1 + 10 (> 200 d)	1.5 + 30 (> 200 d)		
	Factor: 1:1/10/100/1000	Input	Input impedance								
<b>A</b> ∞ TECH	0,1/1/10/100 A	100 mA			Current measuring input (A socket)		Specification see current ranges A (TECH) plus clip-on current sensor error			Measuring input 0,2 A continuous 10 A: 5 min	
	1/10/100/1000 A	1 A									
	10/100/1000/10000 A	10 A									
<b>A</b> ∞ TECH BASE	0,1/1/10/100 A	100 mV			Voltage measurement input TECH: (V socket) Ri = 1 MΩ/9 MΩ BASE: (A socket) Ri ~ 1 MΩ		±(0.5% rdg. + 10 d)	±(1% rdg. + 30 d) > 300 d	±(1% rdg. + 30 d) > 300 d	Measurement input 1000 V RMS Max. 10 s	
	1/10/100/1000 A	1 V									
	10/100/1000/10000 A	10 V									
				Open-circuit voltage	Meas. curr. @ range limit	±(... % rdg. + ... d)					
<b>Ω</b>	100 Ω	10 mΩ			< 1.4 V	Approx. 300 μA	0.2 + 5 with active ZERO function			1000 V DC AC RMS sine	Max. 10 s
	1 kΩ	100 mΩ			< 1.4 V	Approx. 250 μA	0.2 + 5				
	10 kΩ	1 Ω			< 1.4 V	Approx. 100 μA	0.2 + 5				
	100 kΩ	10 Ω			< 1.4 V	Approx. 12 μA	0.2 + 5				
	1 MΩ	100 Ω			< 1.4 V	Approx. 1.2 μA	0.2 + 5				
	10 MΩ	1 kΩ			< 1.4 V	Approx. 125 nA	0.5 + 10				
	40 MΩ	10 kΩ			< 1.4 V	Approx. 20 nA	2.0 + 10				
↻)	100 Ω	—	0.1 Ω	Approx. 8 V	Approx. 1 mA const.	3 + 5					
→	5,1 V <sup>3)</sup>	—	1 mV	Approx. 8 V	Approx. 1 mA const.	0.5 + 3					
				Discharge resist.	U <sub>0</sub> max	±(... % rdg. + ... d)					
<b>F</b> X-TRA OUTDOOR TECH	10 nF	10 pF			10 MΩ	0.7 V	1 + 6 <sup>4)</sup> with ZERO function active			1000 V DC AC RMS sine	Max. 10 s
	100 nF	100 pF			1 MΩ	0.7 V	1 + 6 <sup>4)</sup>				
	1 μF	1 nF			100 kΩ	0.7 V	1 + 6 <sup>4)</sup>				
	10 μF	10 nF			12 kΩ	0.7 V	1 + 6 <sup>4)</sup>				
	100 μF	100 nF			3 kΩ	0.7 V	5 + 6 <sup>4)</sup>				
	1000 μF	1 μF			3 kΩ	0.7 V	5 + 6 <sup>4)</sup>				
					f <sub>min</sub> <sup>5)</sup>	±(... % rdg. + ... d)					
<b>Hz (V)</b>	100.00 Hz	0.01 Hz								Hz (V) <sup>6)</sup> Hz (A∞) <sup>6)</sup> 1000 V Hz (A): <sup>7)</sup>	Max. 10 s
<b>Hz (A)</b>	1.0000 kHz	0.1 Hz			1 Hz	0.05 + 3 <sup>8)</sup>					
<b>Hz (A∞)</b>	10.000 kHz	1 Hz									
<b>Hz (V)</b>	100.00 kHz	10 Hz			10 Hz						
<b>Hz (A)</b>	30.00 kHz	10 Hz			10 Hz						
<b>MHz</b> X-TRA OUTDOOR	100 Hz ... 1 MHz	0,01 ... 100 Hz			1 ... 100 Hz	0.05 + 3	> 2 V ... 5 V			1000 V	Max. 10 s
	%	2.0 ... 98 %	—	0.01%	100 Hz ... 1 kHz	1 Hz	> 2 V ... 5 V				
	X-TRA OUTDOOR	5.0 ... 95 %	—	0.01%	... 10 kHz	1 Hz	0.1 R per kHz				
	10 ... 90 %	—	0.01%	... 100 kHz	1 Hz	0.1 R per kHz			> 2 V ... 5 V		
						±(... % rdg. + ... d)					
<b>°C/°F</b>	Pt100 OUTD.	-200.0 ... +850.0 °C	0.1 °C			0.3 + 15 <sup>9)</sup>			1000 V DC/AC RMS Sine	Max. 10 s	
	Pt1000 OUTD.	-150.0 ... +850.0 °C				0.3 + 15 <sup>9)</sup>					
	K (NiCr-Ni)	-250.0 ... +1372.0 °C				1% + 5 K <sup>9)</sup>					