Function	Measured Quantity	Display Range / Nominal Range of Use	Resolution	Nominal Voltage U_N	Open-Circuit Voltage U_0	Nom. Current I_N	Short-Circuit Current I_K	Internal Resistance R_i	Reference Resistance R_{REF}	Measuring Uncertainty [1]	Intrinsic Error [1]	Overload Capacity Value	Overload Capacity Time
Tests, 62638 (DIN VDE 0701-0702) / IEC 62353 (VDE 0751)	Protective conductor resistance **RPE**	1 … 999 mΩ	1 mΩ	—	< 24 V AC or DC	—	>200 mA AC or DC > 10 A AC 5)	—	—	±(15 % rdg. + 10 D) > 10 D > 10.0 Ω : ±(10 % rdg.+ 10 d)	±(10% rdg.+ 10 d) > 10 d	264 V 250 mA / 16 A 5)	Cont.
		1.00 … 999 Ω	10 mΩ										
		10.0 … 30.0 Ω	100 mΩ										
	Insulation resistance [9] **RISO**	10 … 999 kΩ	1 kΩ	50 … 500 V DC	1.0 • U_N … 1.5 • U_N	> 1 mA	> 2 mA	—	—	±(5% rdg.+ 4 d) > 10 d	±(2.5% rdg.+2 d) > 10 d	264 V	Cont.
		1.00 … 9.99 MΩ	10 kΩ										
		10.0 … 99.9 MΩ	100 kΩ							≥ 20 MΩ: ±(10% rdg.+ 8 d)	≥ 20 MΩ: ±(5% rdg.+4 d)		
		100 … 300 MΩ	1 MΩ										
	Leakage current, alternative measurement [2] **IPE, IB, IG, IA**	0.0 ... 99 µA	1 µA	—	50 … 250 V~ – 20/+10%	—	> 1.5 mA	> 150 kΩ	1 kΩ ±10 Ω	±(5% rdg.+ 4 d) > 10 d > 15 mA: ±(10% rdg.+ 8 d)	±(2% rdg.+2 d) > 10 d > 15 mA: ±(5% rdg.+ 4 d)	264 V	Cont.
		100 ... 999 µA	1 µA										
		1.00 ... 9.99 mA	10 µA										
		10.0 ... 30.0 mA	100 µA										
	Leakage current, direct measurement [3] **IPE, IB, IG, IA, IP**	Only Ip: 0.0 ... 99.9 µA	100 nA	—	—	—	—	1 kΩ ±10 Ω	—	±(5% rdg.+ 4 d) > 10 d	±(2.5% rdg.+2 d) > 10 d	264 V	Cont.
		0.0 ... 99 µA	1 µA										
		100 ... 999 µA	1 µA										
		1.00 ... 9.99 mA	10 µA										
		10.0 ... 30.0 mA	100 µA										
	Leakage current, differential current measurement [4] **IPE, IB, IG**	0 ... 99 µA	1 µA	—	—	—	—	1 kΩ ±10 Ω	—	±(5% rdg.+ 4 d) > 10 d	±(2.5% rdg.+2 d) > 10 d	264 V	Cont.
		100 ... 999 µA	1 µA										
		1.00 ... 9.99 mA	10 µA										
		10.0 ... 30.0 mA	100 µA										
Function test	Line voltage U_{L-N}	100.0 … 240.0 V~	0.1 V	—	—	—	—	—	—	—	±(2% rdg.+2 d)	264 V	Cont.
	Load current I_L	0 … 16.00 A_{RMS}	10 mA	—	—	—	—	—	—	—	±(2% rdg.+2 d)	16 A	Cont.
	Active power P	0 … 3700 W	1 W	—	—	—	—	—	—	—	±(5% rdg.+10 d) > 20 d	264 V	Cont.
												20 A	10 min
	Apparent power S	0 … 4000 VA	1 VA	Calculated value, U_{L-N} • I_N							±(5% rdg.+10 d) > 20 d		
	Power factor PF with sinusoidal waveform: cosφ	0.00 … 1.00	0.01	Calculated value, P / S, display > 10 W							±(10% rdg.+5 d)		
Voltage measurement	Probe voltage (test probe P1 to PE) ⎓, ~ and ⎓~	0,0 … 99,9 V	100 mV	—	—	—	—	3 MΩ	—	—	±(2 % v.M.+2 D)	300 V	Cont.
	Measurem. voltage (sockets V–COM [6]) ⎓, ~ and ⎓~	100 ... 250 V	1 V					1 MΩ			±(2 % rdg. +2 d) > 45 Hz ... 65 Hz ±(2 % rdg.+5 d) > 65 Hz ... 10 kHz ±(5 % rdg. +5 d) > 10 kHz ... 20 kHz		
t_A PRCD	Time to trip	0.1 ... 999 ms	0.1 ms	—	—	30 mA	—	—	—	±5 ms			
I_{Clamp}	Current via current/voltage clamp transformer WZ12C [1 mA:1 mV] (sockets V–COM [6][7])	1 ... 99 mA ~	1 mA (1 mV)	—	—	—	—	—	—	—	±(2 % rdg.+2 d) > 10 D 20 Hz ... 20 kHz without clamp	253 V	Cont.
		0,1 ... 0,99 A ~	0,01 A (10 mV)										
		1,0 ... 9,9 A ~	0,1 A (100 mV)										
		10 ... 15 A ~	1 A (1 V)										
I_{Leak}	Leakage current via AT3-IIIE adapter Z745S [6][8]	0,00 ... 0,99 mA ~	0,01 mA	—	—	—	—	—	—	—	±(2 % rdg.+2 d) > 10 D without adapter	253 V	Cont.
		1,0 ... 9,9 mA ~	0,1 mA										
		10 ... 20 mA ~	1 mA										
Temp	Temperature with Pt100 sensor	– 200,0 ... +850,0 °C	0,1 °C	—	< 20 V –		1,1 mA	—	—	—	±(2 % rdg.+1 °C)	10 V	Cont.
	Temperature with Pt1000 sensor	– 150,0 ... +850,0 °C											