Function	Measured Quantity	Measuring Range / Nominal Range of Use	Resolution	Additional Info	Open-Circuit Voltage U_0	Additional Info	Short-Circuit Current I_K	Int. Resist. R_i	Ref. Resist. R_{REF}	Measuring Error [2]	Intrinsic Uncertainty [2]	Overload Capacity Value	Overload Capacity Time
DIN VDE 0701-0702 / 0751 Tests	Protective conductor resistance **R PE**	man: 1 ... 999 mΩ man: 0.01 ... 9.99 Ω auto: 0.01 ... 30.00 Ω 0.01 ... 3.30 Ω 0.1 ... 10.0 Ω	1 mΩ 10 mΩ 10 mΩ 10 mΩ 100 mΩ	Electronic fuse + fuse link	4.0 ... 4.5 V AC TRMS	where Isl = 200 mA~	220 ... 270 mA AC TRMS	—	—	< ±10 % rdg. within a rage of 0.1 ... 10 Ω for IP = 200 mA	±(2.5% rdg. + 10 mΩ) within a rage of 0.1 ... 10 Ω where IP = 200 mA	264 V AC/DC	Cont.
	Insulation resistance **R ISO**	10 ... 300 kΩ 0.01 ... 3.0 MΩ 0.1 ... 30.0 MΩ 1 ... 300 MΩ	10 kΩ 10 kΩ 100 kΩ 1 MΩ	Test voltage: 100/200/300/400/500 V DC	$U_N < U < 1.2\ U_N$	Nominal current > 1 mA where R_{ISO} = 500 kΩ	2 mA	—	—	0.01 ... 100 MΩ: < ±10% rdg. > 100 MΩ < ±20% rdg. where UP = 500 V each	0.1 ... 30 MΩ: ±(2.5% rdg. + 1 d) > 30 MΩ ±(5 % rdg. + 1 d) where UP = 500 V each	264 V AC/DC	Cont.
	Equivalent leakage current **I EA, I EPA**	10 ... 300 µA~ 0.01 ... 3.00 mA~ 0.1 ... 30.0 mA~	10 µA 10 µA 100 mA	Test voltage: 110/220/230/240 V AC	110 ... 240 V~ –15 / +10%	Frequency 50/60/200/400 Hz	< 1.5 mA	> 150 kΩ	1 kΩ ±10Ω	20 µA ... 15 mA AC: < ±10% rdg. > 15.0 mA AC: < ±15% rdg.	20 µA ... 15 mA AC: ±(5% rdg. + 1 d) > 15.0 mA AC: ±(10% rdg. + 1 d)	264 V AC/DC	Cont.
	Protective conductor current [1] **Direct I PE** between L and N	10 ... 300 µA⎓ 0.01 ... 3.00 mA at 0.1 ... 30.0 mA at	10 µA 10 µA 100 mA	= Protective conductor current, direct Residual current monitoring, Mains shutdown: > 20 mA~ (25 ms)						0.5 ... 20.0 mA: < ±10% rdg.	20 ... 300 µA: ±(5% rdg. + 1 d) > 300 µA: ±(2.5% rdg. + 1 d)	264 V AC/DC	Cont.
	Contact current [1] **I B**	10 ... 300 µA⎓ 0.01 ... 3.00 mA at 0.1 ... 30.00 mA at	10 µA 10 µA	Probe current monitoring: Probe shutdown: I_B > 10 mA~ (5 ms) Residual current monitoring Mains shutdown: I_D > 10 mA~ (25 ms)				1 kΩ ±10 Ω	—	0.02 ... 10 mA at: < ±10% rdg.	20 ... 300 µA at: ±(5% rdg. + 1 d) > 300 µA at: ±(2.5% rdg. + 1 d)	264 V AC/DC	Cont.
	Patient leakage current [1] **I PA**	10 ... 300 µA⎓ 0.01 ... 3.00 mA at	10 µA 10 µA	Probe current monitoring: Probe shutdown: I_{PA} > 10 mA~ (5 ms) Residual current monitoring Mains shutdown: I_D > 10 mA~ (25 ms)				1 kΩ ±10 Ω	—	0.01 ... 3 mA at: < ±10% rdg.	10 ... 300 µA at: ±(7.5% rdg. + 1 d) 0.30 ... 3.00 mA at ±(2.5% rdg. + 1 d)	264 V AC/DC	Cont.
	Residual current **I PE** between L and N	10 ... 300 µA~ 0.01 ... 3.00 mA~ 0.1 ... 30.0 mA	10 µA 10 µA 100 mA	= Protective conductor current, direct Residual current monitoring Mains shutdown: > 20 mA~ (25 ms)						0.5 ... 20.0 mA: < ±10% rdg.	20 ... 300 µA: ±(5% rdg. + 1 d) > 300 µA: ±(2.5% rdg. + 1 d)	264 V AC/DC	Cont.
	Protective conductor current I PE with current sensor	0.0 ... 100.0 mA	100 µA	Via current sensor as optional accessory (socket 3–4) with a transformation ratio of 1 mV / 1 mA						Depends upon current sensor characteristics			
RCD test	Time to trip	0 ... 400 ms	±5 ms	Test current: 30 mA	At nominal voltage of 230 / 240 V and 50 / 60 Hz, only during battery operation with mains connected								
PRCD	Time to trip	0 ... 400 ms	±2 ms	Test current: 30 mA	At nominal voltage of 230 / 240 V and 50 / 60 Hz,								
Function test (not during battery operation)	Line voltage (RMS) **U LN**	90 ... 264 V AC (45 ... 440 Hz)	0.1 V							±5.0% rdg.	±(2.5% rdg. + 1 d)	264 V AC	Cont.
	Load current (RMS) **I L**	0.02 ... 16.00 A AC (45 ... 440 Hz)	10 mA	Shutdown by mains relay at: I_V > 16 A~ where t > 0.5 s Shutdown by mains relay at: I_V > 4 A~ where internal temperature > 70° C						±5.0% rdg.	±(2.5% rdg. + 1 d)	4 A	Cont.
	Active power **P**	10 ... 4000 W	1 W	Measured value P and calculated value S are compared, and the smaller of the two is displayed. Shutdown at internal temperature > 70° C						f < 100 Hz ±7.5% rdg. f ≥ 100 Hz ±10% rdg.	P > 10 W, PF > 0,5 f < 100 Hz ±(5% rdg. + 10 d) P > 10 W, PF > 0,5 ≥ 100 Hz ±(7.5% rdg. + 10 d)	< 1000 W < 4000 W	Cont. Int.
	Apparent power **S**	10 ... 4000 W	1 VA	Calculated vale U_{L-N} • I_V [OL display for ULN or I L overload] Shutdown at internal temperature > 70° C						f < 100 Hz ±7.5% M f ≥ 100 Hz ±10% rdg.	P > 10 W f < 100 Hz ±(5% rdg. + 10 d) P > 10 W f ≥ 100 Hz ±(7.5% rdg. + 10 d)	< 1000 W < 4000 W	Cont. Int.
	Power factor **PF** with sinusoidal waveshape: cos φ	0.00 ... 1.00 inductive	0.01	Calculated value P / S, display as of P > 10 W						f < 100 Hz ±7.5% M f ≥ 100 Hz ±10% rdg.	P > 10 W, PF > 0.5 f < 100 Hz ±(5% rdg. + 10 d) P > 10 W, PF > 0.5 f ≥ 100 Hz ±(7.5% rdg. + 10 d)	—	—
	On-time t (**E** = P · t)	00:00:00 ... > 99:00:00 s	1 s	On-time, line voltage to test socket, for calculating energy							—	—	—