Measured Quantity	Measuring Range / Nominal Range of Use	Reso-lution	Addi-tional Info	Open-Circuit Voltage U_0	Addi-tional Info	Short-Circuit Current I_K	Int. Resist. R_I	Ref. Resist. R_{REF}	Measuring Error	Intrinsic Error	Overload Capacity Value	Overload Capacity Time
R_{PE} Protective earth resistance	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 I_{PE} = 200 mA~ where 48 Hz 1)	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	240 V AC/DC	Cont.
R_{INS} Insulation resistance	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: 500 V DC 2)	$U_N < U < 1.2\ U_N$	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	240 V AC/DC	Cont.
Leakage Current Measurements – Direct Method (DIR/DL)												
I_E Equipment leakage current	10 ... 300 µA~ 0.01 ... 3.00 mA at 0.1 ... 30.0 mA at	1 µA 10 µA 100 mA	= Protective earth current, direct (between L and N) 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)	240 V AC/DC	Cont.
I_T Touch current	10 ... 300 µA~ 0.01 ... 3.00 mA at 0.1 ... 30.0 mA at	1 µA 10 µA 100 µA	Probe current monitoring: Probe shutdown: I_T > 10 mA~ (5 ms) Residual current monitoring Mains shutdown: I_{DF} > 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)	240 V AC/DC	Cont.
I_P Patient leakage current	2 ... 300 µA~ 0.01 ... 3.00 mA at	1 µA 10 µA	Probe current monitoring: Probe shutdown: I_P > 10 mA~ (5 ms) Residual current monitoring Mains shutdown: I_{DF} > 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)	240 V AC/DC	Cont.
I_{AP} Applied parts leakage current	10 ... 300 µA~ 0.01 ... 3.00 mA~ 0.1 ... 30.0 mA~	1 µA 10 µA 100 mA	Test voltage: 110/220/230/240 V AC	110 ... 240 V~ –15 / +10%	Fre-quency 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)	240 V AC/DC	Cont.
Leakage Current Measurements – Differential Method (DIF)												
I_E **I_T** Residual current between L and N	10 ... 300 µA~ 0.01 ... 3.00 mA~ 0.1 ... 30.0 mA	1 µA 10 µA 100 µA	= Protective earth 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)	240 V AC/DC	Cont.
Leakage Current Measurements – Alternative Method: Alternative leakage current (ALT)												
I_E **I_T** **I_{AP}**	2 ... 300 µA~ 0.01 ... 3.00 mA~ 0.1 ... 30.0 mA~	1 µA 10 µA 100 µA	Test voltage: 110/220/230/240 V AC	110 ... 240 V~ –15 / +10%	Fre-quency 50/60 Hz 3)	< 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)	240 V AC/DC	Cont.
Function test												
U_{LN} Line voltage (RMS)	90 ... 240 V AC (50 ... 400 Hz)	0.1 V							±5.0% rdg.	±(2.5% rdg. + 1 d)	240 V AC	Cont.
I_V Load current (RMS)	0.02 ... 16.00 A AC (50 ... 400 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.
P Active power	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 f ≥ 100 Hz ±(7.5% rdg. + 10 d)	< 1000 W < 4000 W	Cont. 10 min
S Apparent power	10 ... 4000 W	1 VA	Calculated vale U_{L-N} • I_V 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. 10 min
LF Power factor 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)	—	—