



### **1. Kalibriergegenstand / Calibration object**

8 Channel Data Acquisition DEWETRON TRION-1820-POWER-4, S/N: A1244692

### **2. Kalibrierverfahren / Calibration procedure**

Die Kalibrierung erfolgt durch Vergleich der durch die Kalibrierstelle / Normale dargestellten Werte mit den Ausgangsgrößen am Kalibriergegenstand beziehungsweise den am Kalibriergegenstand angezeigten Werten.  
*The calibration is made by comparing the readings from the laboratory / standards to the output of the calibration object respectively the values displayed on the calibration object.*

Prüfroutine / *Calibration procedure*: TRION-Active-Power-1-4-Phase\_Akkred, Rev. 2.00

### **3. Messergebnisse / Measurement results**

Die Kalibrierung im Rahmen der Akkreditierung umfasst die Messgrößen Gleichspannung, Wechselspannung, Gleichstrom, Wechselstrom und Gleichstromwiderstand.

Die Messergebnisse beziehen sich ausschließlich auf diesen Kalibriergegenstand zum Zeitpunkt der Kalibrierung.  
*The calibration scope of the accreditation contains the quantities direct voltage, alternating voltage, direct current, alternating current and direct current resistance.*

*The measurement results are exclusively linked to this calibration object at the time of calibration.*

### **4. Messunsicherheit / Measurement uncertainty**

Angegeben ist die erweiterte Messunsicherheit, die sich aus der Standardmessunsicherheit durch Multiplikation mit dem Erweiterungsfaktor  $k=2$  ergibt. Sie wurde gemäß EA-4/02 ermittelt. Der Wert der Messgröße liegt im Regelfall mit einer Wahrscheinlichkeit von annähernd 95% im zugeordneten Werteintervall.

Ein Anteil für die Langzeitstabilität des Kalibriergegenstandes ist nicht enthalten.

*The stated extended measurement uncertainty is derived from the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ . It has been determined according to EA-4/02. The measured quantity is inside the corresponding value interval with a probability of approximately 95%.*

*A factor for the long time stability of the calibration object is not taken into account.*

### **5. Umgebungsbedingungen / environmental conditions**

Temperatur / *Temperature*: 23,2 °C

Rel. Luftfeuchte / *Rel. humidity*: 33,2 % r.H.

Kalibrierort / *Place of calibration*: DEWETRON GmbH, Parkring 4, 8074 Grambach, Austria

### **6. Auftragsnummer / Reference Number**

### **7. Status / Status**

PASS ()

AS-FOUND: Eingangskalibration / *Incoming calibration*

AS-LEFT: Ausgangskalibration / *Outgoing calibration*

FOUND/LEFT: Eingangskalibration erfüllt Herstellerspezifikation / *Incoming calibration according to manufacturer specifications*

PASS: Messergebnis liegt innerhalb der Herstellerspezifikationen (ohne Berücksichtigung der Messunsicherheiten) / *Measurement result is within manufacturer's specifications (without taking into account the measurement uncertainties)*

FAIL: Das Messergebnis liegt nicht innerhalb der Herstellerspezifikationen (ohne Berücksichtigung der Messunsicherheiten) / *Measurement result is out of manufacturer's specifications (without taking into account the measurement uncertainties)*

### **8. Verwendete Fußnoten / Used foot notes:**

(1) Zusätzliche Messwerte außerhalb des akkreditierten Bereiches, es kann keine Konformitätsaussage getroffen werden.

*(1) Additional measured values outside the accredited scope, a conformity statement cannot be made.*

### **9. Kommentare / Comments**

Sub-cur 2 A

Für die Festlegung und Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

*The user is responsible for the definition and the compliance to a reasonable period for repeating the calibration.*



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8074 Grambach  
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Kalibrierschein nach ISO/IEC 17025  
*Calibration Certificate according to ISO/IEC 17025*

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**10. Verwendete Normale / Standards used**

<u>Asset</u>	<u>Description</u>	<u>Serial Number</u>	<u>Certificate No.</u>	<u>Cal Date</u>	<u>Due Date</u>
5522A 01	5522A CALIBRATOR	3904901	16082024	2-Aug-2024	2-Aug-2025
6105A	6105A Electrical Power Standard	514177505	099967	25-Nov-2024	25-Nov-2025



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**11. Testergebnisse / Test results**

<u>Test Description</u>	<u>True Value</u>	<u>Test Result</u>	<u>Lower limit</u>	<u>Upper limit</u>	<u>Exp Uncert</u>	<u>Error</u>	<u>% of Tol</u>	<u>Status</u>
Kalibrierverfahren / calibration method: CAL-KV-01_Gleichspannung_v1.0_2024-07-04.xlsx-02 CAL-KV-02_Wechselspannung_v1.0_2024-07-04.xlsx-02C CAL-KV-03_Gleichstromstärke_v1.0_2024-07-04.xlsx-02C CAL-KV-04_Wechselstromstärke_v1.0_2024-07-04.xlsx-02C CAL-KV-08_Gleichstromleistung_v1.0_2024-07-04.xlsx-01C CAL-KV-09_Wechselstromwirkleistung_v1.0_2024-07-04.xlsx-01C								
Current Temperature Calibrator: 26.63°C								
DEWE3 device S/N: CB210022								
Oxygen Version: 7.3.2 TRION API: 7.3.2.6198" TRION Board Type: TRION-1820-POWER-4 TRION Board S/N: A1244692 TRION Board FW: 0078								
TRION-SUB-CUR Type: TRION-POWER-SUB-CUR-2A-1 @I1: SN: 1308158 @I2: SN: 1308182 @I3: SN: 1308142 @I4: SN: 1308180								
All Tests done with appropriate Range SampleRate for all Tests: 2000000S/s Filter Type/Frequency for U: Butterworth/8th order/600kHz Filter Type/Frequency for I: Butterworth/8th order/300kHz Update Rate of power group: 3s								
Frequency Accuracy: DEWE3 : ±0.005% of reading ± 1 mHz								
Voltage Accuracy: DC : ±0.02% of reading ±0.02% of range >0.5Hz to 1kHz : ±0.03% of reading >1kHz to 5kHz : ±0.15% of reading >5kHz to 10kHz : ±0.35% of reading >10kHz to 50kHz : ±0.6% of reading >50kHz to 300kHz : ±(0.02% * f[kHz]) of reading								
Current Accuracy: DC and AC below 1 % of range add : 25 ppm of range DC with no zero level add : ±0.03% of range  DC : ±0.02% of reading ±0.02% of range >0.5Hz to 10kHz : ±0.03% of reading >10kHz to 30kHz : ±0.1% of reading >30kHz to 200kHz : ±(0.015% * f[kHz]) of reading >200kHz to 300kHz : ±(0.1% * f[kHz]) of reading								
Power Accuracy with PF=1: DC with no zero level add : ±0.03% of range  DC : ±0.03% of reading ±0.03% of range >0.5Hz to 1kHz : ±0.04% of reading >1kHz to 5kHz : ±0.2% of reading >5kHz to 10kHz : ±0.5% of reading >10kHz to 50kHz : ±(0.5% + 0.05% * f[kHz]) of reading								
Influence of PF : add 0.01 % * f[Hz]/50 * sqrt(1/PF²-1)								
#####								
AC Power Calibration								
Range U: 1000V    Range I: 2A -----								
Following tests @ 20Hz								
Frequency	20.00000 Hz	19.99989 Hz	19.99800 Hz	20.00200 Hz		-0,00011 Hz	5.55%	Pass (1)
-----								
Phase 1								
Test @ 10% U 10% I								
Voltage U1	100.00000 V	99.97862 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,02138 V	71.3%	Pass



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Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Current I1	0.200000 A	0.199998 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000002 A	3.82%	Pass
Power @ PF 1	20.00000 W	19.99549 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00451 W	56.4%	Pass
Test @ 50% U 2% I								
Voltage U1	500.00000 V	499.90911 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,09089 V	60.6%	Pass
Current I1	0.040000 A	0.039999 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000001 A	8.48%	Pass
Power @ PF 1	20.00000 W	19.99580 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00420 W	52.6%	Pass
Test @ 50% U 20% I								
Voltage U1	500.00000 V	499.91153 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,08847 V	59%	Pass
Current I1	0.400000 A	0.399994 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000006 A	4.73%	Pass
Power @ PF 1	200.00000 W	199.96175 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,03825 W	47.8%	Pass
Test @ 50% U 50% I								
Voltage U1	500.00000 V	499.91446 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,08554 V	57%	Pass
Current I1	1.000000 A	0.999989 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000011 A	3.64%	Pass
Power @ PF 1	500.00000 W	499.90892 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09108 W	45.5%	Pass
Test @ 50% U 100% I								
Voltage U1	500.00000 V	499.91663 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,08337 V	55.6%	Pass
Current I1	2.000000 A	2.000001 A	1.999400 A	2.000600 A	220.00 e-06 A	0,000001 A	0.222%	Pass
Power @ PF 1	1000.00000 W	999.83382 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,16618 W	41.5%	Pass
Test @ 90% U 90% I								
Voltage U1	900.00000 V	899.88206 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,11794 V	43.7%	Pass
Current I1	1.800000 A	1.799989 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000011 A	2.1%	Pass
Power @ PF 1	1620.00000 W	1619.77737 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,22263 W	34.4%	Pass
Test @ 100% U 100% I								
Voltage U1	1000.00000 V	999.88015 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,11985 V	40%	Pass
Current I1	2.000000 A	2.000004 A	1.999400 A	2.000600 A	220.00 e-06 A	0,000004 A	0.65%	Pass
Power @ PF 1	2000.00000 W	1999.76400 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,23600 W	29.5%	Pass
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Phase 2								
Test @ 10% U 10% I								
Voltage U2	100.00000 V	99.98331 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01669 V	55.6%	Pass
Current I2	0.200000 A	0.199993 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000007 A	12.2%	Pass
Power @ PF 1	20.00000 W	19.99592 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00408 W	51.1%	Pass
Test @ 50% U 2% I								
Voltage U2	500.00000 V	499.93037 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,06963 V	46.4%	Pass
Current I2	0.040000 A	0.039997 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000003 A	22.1%	Pass
Power @ PF 1	20.00000 W	19.99576 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00424 W	53%	Pass
Test @ 50% U 20% I								
Voltage U2	500.00000 V	499.93070 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,06930 V	46.2%	Pass
Current I2	0.400000 A	0.399981 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000019 A	15.8%	Pass
Power @ PF 1	200.00000 W	199.96275 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,03725 W	46.6%	Pass
Test @ 50% U 50% I								
Voltage U2	500.00000 V	499.93108 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,06892 V	45.9%	Pass
Current I2	1.000000 A	0.999954 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000046 A	15.2%	Pass
Power @ PF 1	500.00000 W	499.90817 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09183 W	45.9%	Pass
Test @ 50% U 100% I								
Voltage U2	500.00000 V	499.93086 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,06914 V	46.1%	Pass
Current I2	2.000000 A	1.999925 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000075 A	12.5%	Pass
Power @ PF 1	1000.00000 W	999.82393 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,17607 W	44%	Pass
Test @ 90% U 90% I								
Voltage U2	900.00000 V	899.90871 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,09129 V	33.8%	Pass
Current I2	1.800000 A	1.799920 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000080 A	14.9%	Pass
Power @ PF 1	1620.00000 W	1619.76343 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,23657 W	36.5%	Pass
Test @ 100% U 100% I								
Voltage U2	1000.00000 V	999.90983 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,09017 V	30.1%	Pass
Current I2	2.000000 A	1.999926 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000074 A	12.4%	Pass
Power @ PF 1	2000.00000 W	1999.74537 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,25463 W	31.8%	Pass
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Phase 3								
Test @ 10% U 10% I								
Voltage U3	100.00000 V	99.98861 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01139 V	38%	Pass
Current I3	0.200000 A	0.199978 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000022 A	35.9%	Pass
Power @ PF 1	20.00000 W	19.99553 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00447 W	55.9%	Pass
Test @ 50% U 2% I								
Voltage U3	500.00000 V	499.95531 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04469 V	29.8%	Pass
Current I3	0.040000 A	0.039996 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000004 A	33.2%	Pass
Power @ PF 1	20.00000 W	19.99574 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00426 W	53.2%	Pass
Test @ 50% U 20% I								
Voltage U3	500.00000 V	499.95484 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04516 V	30.1%	Pass
Current I3	0.400000 A	0.399955 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000045 A	37.1%	Pass
Power @ PF 1	200.00000 W	199.95956 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,04044 W	50.5%	Pass
Test @ 50% U 50% I								
Voltage U3	500.00000 V	499.95504 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04496 V	30%	Pass
Current I3	1.000000 A	0.999892 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000108 A	36.1%	Pass
Power @ PF 1	500.00000 W	499.90074 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09926 W	49.6%	Pass
Test @ 50% U 100% I								
Voltage U3	500.00000 V	499.95518 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04482 V	29.9%	Pass
Current I3	2.000000 A	1.999804 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000196 A	32.6%	Pass
Power @ PF 1	1000.00000 W	999.81236 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,18764 W	46.9%	Pass
Test @ 90% U 90% I								
Voltage U3	900.00000 V	899.94601 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,05399 V	20%	Pass



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**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Current I3	1.800000 A	1.799813 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000187 A	34.6%	Pass
Power @ PF 1	1620.00000 W	1619.73450 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,26550 W	41%	Pass
Test @ 100% U 100% I								
Voltage U3	1000.00000 V	999.94600 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,05400 V	18%	Pass
Current I3	2.000000 A	1.999812 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000188 A	31.4%	Pass
Power @ PF 1	2000.00000 W	1999.70357 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,29643 W	37.1%	Pass
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Phase 4								
Test @ 10% U 10% I								
Voltage U4	100.00000 V	99.99388 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,00612 V	20.4%	Pass
Current I4	0.200000 A	0.199991 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000009 A	15.4%	Pass
Power @ PF 1	20.00000 W	19.99784 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00216 W	27%	Pass
Test @ 50% U 2% I								
Voltage U4	500.00000 V	499.98256 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01744 V	11.6%	Pass
Current I4	0.040000 A	0.039998 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000002 A	15.7%	Pass
Power @ PF 1	20.00000 W	19.99807 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00193 W	24.2%	Pass
Test @ 50% U 20% I								
Voltage U4	500.00000 V	499.98298 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01702 V	11.3%	Pass
Current I4	0.400000 A	0.399979 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000021 A	17.4%	Pass
Power @ PF 1	200.00000 W	199.98272 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,01728 W	21.6%	Pass
Test @ 50% U 50% I								
Voltage U4	500.00000 V	499.98332 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01668 V	11.1%	Pass
Current I4	1.000000 A	0.999951 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000049 A	16.4%	Pass
Power @ PF 1	500.00000 W	499.95859 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,04141 W	20.7%	Pass
Test @ 50% U 100% I								
Voltage U4	500.00000 V	499.98326 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01674 V	11.2%	Pass
Current I4	2.000000 A	1.999920 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000080 A	13.3%	Pass
Power @ PF 1	1000.00000 W	999.92651 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,07349 W	18.4%	Pass
Test @ 90% U 90% I								
Voltage U4	900.00000 V	899.99725 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,00275 V	1.02%	Pass
Current I4	1.800000 A	1.799915 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000085 A	15.8%	Pass
Power @ PF 1	1620.00000 W	1619.91823 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,08177 W	12.6%	Pass
Test @ 100% U 100% I								
Voltage U4	1000.00000 V	999.99976 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,00024 V	0.0811%	Pass
Current I4	2.000000 A	1.999919 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000081 A	13.4%	Pass
Power @ PF 1	2000.00000 W	1999.91880 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,08120 W	10.2%	Pass
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Following tests @ 53Hz								
Frequency	53.00000 Hz	52.99972 Hz	52.99635 Hz	53.00365 Hz		-0,00028 Hz	7.62%	Pass (1)
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Phase 1								
Test @ 10% U 10% I								
Voltage U1	100.00000 V	99.98676 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01324 V	44.1%	Pass
Current I1	0.200000 A	0.199996 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000004 A	7.41%	Pass
Power @ PF 1	20.00000 W	19.99690 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00310 W	38.8%	Pass
Test @ 50% U 2% I								
Voltage U1	500.00000 V	499.94603 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05397 V	36%	Pass
Current I1	0.040000 A	0.039998 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000002 A	14.1%	Pass
Power @ PF 1	20.00000 W	19.99694 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00306 W	38.3%	Pass
Test @ 50% U 20% I								
Voltage U1	500.00000 V	499.94586 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05414 V	36.1%	Pass
Current I1	0.400000 A	0.399989 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000011 A	9.01%	Pass
Power @ PF 1	200.00000 W	199.97290 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,02710 W	33.9%	Pass
Test @ 50% U 50% I								
Voltage U1	500.00000 V	499.94586 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05414 V	36.1%	Pass
Current I1	1.000000 A	0.999976 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000024 A	7.95%	Pass
Power @ PF 1	500.00000 W	499.93386 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,06614 W	33.1%	Pass
Power @ PF 0.9 cap	450.00000 W	449.93337 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,06663 W	32.8%	Pass
Power @ PF 0.9 ind	450.00000 W	449.94753 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,05247 W	25.8%	Pass
Power @ PF 0.5 cap	250.00000 W	249.95179 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,04821 W	33%	Pass
Power @ PF 0.5 ind	250.00000 W	249.98136 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,01864 W	12.8%	Pass
Power @ PF 0.1 cap	50.00000 W	49.97713 W	49.92727 W	50.07273 W	31.00 e-03 W	-0,02287 W	31.4%	Pass
Power @ PF 0.1 ind	50.00000 W	50.01019 W	49.92727 W	50.07273 W	31.00 e-03 W	0,01019 W	14%	Pass
Test @ 50% U 100% I								
Voltage U1	500.00000 V	499.94558 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05442 V	36.3%	Pass
Current I1	2.000000 A	1.999975 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000025 A	4.17%	Pass
Power @ PF 1	1000.00000 W	999.87856 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,12144 W	30.4%	Pass
Test @ 90% U 90% I								
Voltage U1	900.00000 V	899.92798 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,07202 V	26.7%	Pass
Current I1	1.800000 A	1.799966 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000034 A	6.35%	Pass
Power @ PF 1	1620.00000 W	1619.83937 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,16063 W	24.8%	Pass
Test @ 100% U 100% I								
Voltage U1	1000.00000 V	999.92776 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,07224 V	24.1%	Pass
Current I1	2.000000 A	1.999979 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000021 A	3.54%	Pass
Power @ PF 1	2000.00000 W	1999.83410 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,16590 W	20.7%	Pass
-----								
Phase 2								
Test @ 10% U 10% I								
Voltage U2	100.00000 V	99.98559 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01441 V	48%	Pass



**DEWETRON GmbH**  
 Parking 4  
 8074 Grambach  
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Kalibrierschein nach ISO/IEC 17025  
 Calibration Certificate according to ISO/IEC 17025

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Current I2	0.200000 A	0.199988 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000012 A	19.4%	Pass
Power @ PF 1	20.00000 W	19.99594 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00406 W	50.7%	Pass
Test @ 50% U 2% I								
Voltage U2	500.00000 V	499.94102 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05898 V	39.3%	Pass
Current I2	0.040000 A	0.039997 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000003 A	27.5%	Pass
Power @ PF 1	20.00000 W	19.99586 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00414 W	51.8%	Pass
Test @ 50% U 20% I								
Voltage U2	500.00000 V	499.94047 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05953 V	39.7%	Pass
Current I2	0.400000 A	0.399974 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000026 A	21.5%	Pass
Power @ PF 1	200.00000 W	199.96326 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,03674 W	45.9%	Pass
Test @ 50% U 50% I								
Voltage U2	500.00000 V	499.94045 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05955 V	39.7%	Pass
Current I2	1.000000 A	0.999937 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000063 A	21.1%	Pass
Power @ PF 1	500.00000 W	499.90876 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09124 W	45.6%	Pass
Power @ PF 0.9 cap	450.00000 W	449.91082 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,08918 W	43.9%	Pass
Power @ PF 0.9 ind	450.00000 W	449.92499 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,07501 W	36.9%	Pass
Power @ PF 0.5 cap	250.00000 W	249.93957 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,06043 W	41.4%	Pass
Power @ PF 0.5 ind	250.00000 W	249.96864 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,03136 W	21.5%	Pass
Power @ PF 0.1 cap	50.00000 W	49.97495 W	49.92727 W	50.07273 W	31.00 e-03 W	-0,02505 W	34.4%	Pass
Power @ PF 0.1 ind	50.00000 W	50.00752 W	49.92727 W	50.07273 W	31.00 e-03 W	0,00752 W	10.3%	Pass
Test @ 50% U 100% I								
Voltage U2	500.00000 V	499.93946 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,06054 V	40.4%	Pass
Current I2	2.000000 A	1.999890 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000110 A	18.4%	Pass
Power @ PF 1	1000.00000 W	999.82355 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,17645 W	44.1%	Pass
Test @ 90% U 90% I								
Voltage U2	900.00000 V	899.92202 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,07798 V	28.9%	Pass
Current I2	1.800000 A	1.799888 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000112 A	20.7%	Pass
Power @ PF 1	1620.00000 W	1619.75893 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,24107 W	37.2%	Pass
Test @ 100% U 100% I								
Voltage U2	1000.00000 V	999.92381 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,07619 V	25.4%	Pass
Current I2	2.000000 A	1.999893 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000107 A	17.9%	Pass
Power @ PF 1	2000.00000 W	1999.74040 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,25960 W	32.5%	Pass
-----								
Phase 3								
Test @ 10% U 10% I								
Voltage U3	100.00000 V	99.98913 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01087 V	36.2%	Pass
Current I3	0.200000 A	0.199978 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000022 A	36.7%	Pass
Power @ PF 1	20.00000 W	19.99557 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00443 W	55.3%	Pass
Test @ 50% U 2% I								
Voltage U3	500.00000 V	499.95754 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04246 V	28.3%	Pass
Current I3	0.040000 A	0.039996 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000004 A	35.3%	Pass
Power @ PF 1	20.00000 W	19.99559 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00441 W	55.1%	Pass
Test @ 50% U 20% I								
Voltage U3	500.00000 V	499.95693 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04307 V	28.7%	Pass
Current I3	0.400000 A	0.399954 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000046 A	38.1%	Pass
Power @ PF 1	200.00000 W	199.95980 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,04020 W	50.3%	Pass
Test @ 50% U 50% I								
Voltage U3	500.00000 V	499.95689 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04311 V	28.7%	Pass
Current I3	1.000000 A	0.999889 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000111 A	37.1%	Pass
Power @ PF 1	500.00000 W	499.90114 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09886 W	49.4%	Pass
Power @ PF 0.9 cap	450.00000 W	449.90068 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,09932 W	48.9%	Pass
Power @ PF 0.9 ind	450.00000 W	449.92084 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,07916 W	39%	Pass
Power @ PF 0.5 cap	250.00000 W	249.93031 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,06969 W	47.8%	Pass
Power @ PF 0.5 ind	250.00000 W	249.97049 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,02951 W	20.2%	Pass
Power @ PF 0.1 cap	50.00000 W	49.96686 W	49.92727 W	50.07273 W	31.00 e-03 W	-0,03314 W	45.6%	Pass
Power @ PF 0.1 ind	50.00000 W	50.01358 W	49.92727 W	50.07273 W	31.00 e-03 W	0,01358 W	18.7%	Pass
Test @ 50% U 100% I								
Voltage U3	500.00000 V	499.95704 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04296 V	28.6%	Pass
Current I3	2.000000 A	1.999796 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000204 A	33.9%	Pass
Power @ PF 1	1000.00000 W	999.81213 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,18787 W	47%	Pass
Test @ 90% U 90% I								
Voltage U3	900.00000 V	899.94837 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,05163 V	19.1%	Pass
Current I3	1.800000 A	1.799806 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000194 A	36%	Pass
Power @ PF 1	1620.00000 W	1619.73217 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,26783 W	41.3%	Pass
Test @ 100% U 100% I								
Voltage U3	1000.00000 V	999.94729 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,05271 V	17.6%	Pass
Current I3	2.000000 A	1.999803 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000197 A	32.8%	Pass
Power @ PF 1	2000.00000 W	1999.69747 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,30253 W	37.8%	Pass
-----								
Phase 4								
Test @ 10% U 10% I								
Voltage U4	100.00000 V	99.99410 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,00590 V	19.7%	Pass
Current I4	0.200000 A	0.199988 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000012 A	20.5%	Pass
Power @ PF 1	20.00000 W	19.99758 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00242 W	30.3%	Pass
Test @ 50% U 2% I								
Voltage U4	500.00000 V	499.98442 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01558 V	10.4%	Pass
Current I4	0.040000 A	0.039997 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000003 A	28.3%	Pass
Power @ PF 1	20.00000 W	19.99747 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00253 W	31.6%	Pass
Test @ 50% U 20% I								
Voltage U4	500.00000 V	499.98420 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01580 V	10.5%	Pass



**DEWETRON GmbH**  
 Parking 4  
 8074 Grambach  
 AUSTRIA

Kalibrierschein nach ISO/IEC 17025  
 Calibration Certificate according to ISO/IEC 17025

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Current I4	0.400000 A	0.399974 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000026 A	21.8%	Pass
Power @ PF 1	200.00000 W	199.98053 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,01947 W	24.3%	Pass
Test @ 50% U 50% I								
Voltage U4	500.00000 V	499.98436 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01564 V	10.4%	Pass
Current I4	1.000000 A	0.999937 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000063 A	20.9%	Pass
Power @ PF 1	500.00000 W	499.95291 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,04709 W	23.5%	Pass
Power @ PF 0.9 cap	450.00000 W	449.95116 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,04884 W	24%	Pass
Power @ PF 0.9 ind	450.00000 W	449.96608 W	449.79690 W	450.20310 W	90.00 e-03 W	-0,03392 W	16.7%	Pass
Power @ PF 0.5 cap	250.00000 W	249.96206 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,03794 W	26%	Pass
Power @ PF 0.5 ind	250.00000 W	249.99118 W	249.85410 W	250.14590 W	58.00 e-03 W	-0,00882 W	6.05%	Pass
Power @ PF 0.1 cap	50.00000 W	49.97892 W	49.92727 W	50.07273 W	31.00 e-03 W	-0,02108 W	29%	Pass
Power @ PF 0.1 ind	50.00000 W	50.01215 W	49.92727 W	50.07273 W	31.00 e-03 W	0,01215 W	16.7%	Pass
Test @ 50% U 100% I								
Voltage U4	500.00000 V	499.98446 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01554 V	10.4%	Pass
Current I4	2.000000 A	1.999894 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000106 A	17.6%	Pass
Power @ PF 1	1000.00000 W	999.91595 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,08405 W	21%	Pass
Test @ 90% U 90% I								
Voltage U4	900.00000 V	899.99855 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,00145 V	0.536%	Pass
Current I4	1.800000 A	1.799893 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000107 A	19.9%	Pass
Power @ PF 1	1620.00000 W	1619.90070 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,09930 W	15.3%	Pass
Test @ 100% U 100% I								
Voltage U4	1000.00000 V	1000.00157 V	999.70000 V	1000.30000 V	97.00 e-03 V	0,00157 V	0.524%	Pass
Current I4	2.000000 A	1.999896 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000104 A	17.4%	Pass
Power @ PF 1	2000.00000 W	1999.89883 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,10117 W	12.6%	Pass
-----								
Following tests @ 180Hz								
Frequency	180.00000 Hz	179.99902 Hz	179.99000 Hz	180.01000 Hz		-0,00098 Hz	9.8%	Pass (1)
-----								
Phase 1								
Test @ 50% U 50% I								
Voltage U1	500.00000 V	499.95206 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04794 V	32%	Pass
Current I1	1.000000 A	0.999992 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000008 A	2.66%	Pass
Power @ PF 1	500.00000 W	499.94801 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,05199 W	26%	Pass
Power @ PF 0.9 cap	450.00000 W	449.93838 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,06162 W	23.8%	Pass
Power @ PF 0.9 ind	450.00000 W	449.96767 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,03233 W	12.5%	Pass
Power @ PF 0.5 cap	250.00000 W	249.94430 W	249.74412 W	250.25588 W	83.00 e-03 W	-0,05570 W	21.8%	Pass
Power @ PF 0.5 ind	250.00000 W	250.00279 W	249.74412 W	250.25588 W	83.00 e-03 W	0,00279 W	1.09%	Pass
-----								
Phase 2								
Test @ 50% U 50% I								
Voltage U2	500.00000 V	499.94035 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05965 V	39.8%	Pass
Current I2	1.000000 A	0.999948 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000052 A	17.3%	Pass
Power @ PF 1	500.00000 W	499.91435 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,08565 W	42.8%	Pass
Power @ PF 0.9 cap	450.00000 W	449.90870 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,09130 W	35.3%	Pass
Power @ PF 0.9 ind	450.00000 W	449.93705 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,06295 W	24.4%	Pass
Power @ PF 0.5 cap	250.00000 W	249.92855 W	249.74412 W	250.25588 W	83.00 e-03 W	-0,07145 W	27.9%	Pass
Power @ PF 0.5 ind	250.00000 W	249.98492 W	249.74412 W	250.25588 W	83.00 e-03 W	-0,01508 W	5.89%	Pass
-----								
Phase 3								
Test @ 50% U 50% I								
Voltage U3	500.00000 V	499.95882 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04118 V	27.5%	Pass
Current I3	1.000000 A	0.999906 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000094 A	31.4%	Pass
Power @ PF 1	500.00000 W	499.91165 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,08835 W	44.2%	Pass
Power @ PF 0.9 cap	450.00000 W	449.89681 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,10319 W	39.9%	Pass
Power @ PF 0.9 ind	450.00000 W	449.94323 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,05677 W	22%	Pass
Power @ PF 0.5 cap	250.00000 W	249.90821 W	249.74412 W	250.25588 W	83.00 e-03 W	-0,09179 W	35.9%	Pass
Power @ PF 0.5 ind	250.00000 W	250.00235 W	249.74412 W	250.25588 W	83.00 e-03 W	0,00235 W	0.92%	Pass
-----								
Phase 4								
Test @ 50% U 50% I								
Voltage U4	500.00000 V	499.98783 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,01217 V	8.11%	Pass
Current I4	1.000000 A	0.999954 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000046 A	15.3%	Pass
Power @ PF 1	500.00000 W	499.96482 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,03518 W	17.6%	Pass
Power @ PF 0.9 cap	450.00000 W	449.95478 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,04522 W	17.5%	Pass
Power @ PF 0.9 ind	450.00000 W	449.98330 W	449.74154 W	450.25846 W	120.00 e-03 W	-0,01670 W	6.46%	Pass
Power @ PF 0.5 cap	250.00000 W	249.95395 W	249.74412 W	250.25588 W	83.00 e-03 W	-0,04605 W	18%	Pass
Power @ PF 0.5 ind	250.00000 W	250.01026 W	249.74412 W	250.25588 W	83.00 e-03 W	0,01026 W	4.01%	Pass
-----								
Following tests @ 400Hz								
Frequency	400.00000 Hz	399.99783 Hz	399.97900 Hz	400.02100 Hz		-0,00217 Hz	10.3%	Pass (1)
-----								
Phase 1								
Test @ 10% U 10% I								
Voltage U1	100.00000 V	99.98771 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01229 V	41%	Pass
Current I1	0.200000 A	0.199995 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000005 A	8.88%	Pass
Power @ PF 1	20.00000 W	19.99700 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00300 W	37.5%	Pass
Test @ 50% U 2% I								
Voltage U1	500.00000 V	499.94936 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05064 V	33.8%	Pass



**DEWETRON GmbH**  
 Parking 4  
 8074 Grambach  
 AUSTRIA

Kalibrierschein nach ISO/IEC 17025  
 Calibration Certificate according to ISO/IEC 17025

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Current I1	0.040000 A	0.039998 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000002 A	12.9%	Pass
Power @ PF 1	20.000000 W	19.99714 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00286 W	35.8%	Pass
Test @ 50% U 20% I								
Voltage U1	500.00000 V	499.94929 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05071 V	33.8%	Pass
Current I1	0.400000 A	0.399989 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000011 A	9.45%	Pass
Power @ PF 1	200.00000 W	199.97402 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,02598 W	32.5%	Pass
Test @ 50% U 50% I								
Voltage U1	500.00000 V	499.94948 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05052 V	33.7%	Pass
Current I1	1.000000 A	0.999968 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000032 A	10.8%	Pass
Power @ PF 1	500.00000 W	499.93319 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,06681 W	33.4%	Pass
Power @ PF 0.9 cap	450.00000 W	449.89658 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,10342 W	29.2%	Pass
Power @ PF 0.9 ind	450.00000 W	449.98099 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,01901 W	5.37%	Pass
Power @ PF 0.5 cap	250.00000 W	249.88132 W	249.55359 W	250.44641 W		-0,11868 W	26.6%	Pass
Power @ PF 0.5 ind	250.00000 W	250.05192 W	249.55359 W	250.44641 W		0,05192 W	11.6%	Pass
Test @ 50% U 100% I								
Voltage U1	500.00000 V	499.94884 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05116 V	34.1%	Pass
Current I1	2.000000 A	1.999953 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000047 A	7.84%	Pass
Power @ PF 1	1000.00000 W	999.87405 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,12595 W	31.5%	Pass
Test @ 90% U 90% I								
Voltage U1	900.00000 V	899.93268 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,06732 V	24.9%	Pass
Current I1	1.800000 A	1.799950 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000050 A	9.23%	Pass
Power @ PF 1	1620.00000 W	1619.83390 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,16610 W	25.6%	Pass
Test @ 100% U 100% I								
Voltage U1	1000.00000 V	999.92973 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,07027 V	23.4%	Pass
Current I1	2.000000 A	1.999958 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000042 A	6.97%	Pass
Power @ PF 1	2000.00000 W	1999.81740 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,18260 W	22.8%	Pass
-----								
Phase 2								
Test @ 10% U 10% I								
Voltage U2	100.00000 V	99.98623 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01377 V	45.9%	Pass
Current I2	0.200000 A	0.199988 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000012 A	20.6%	Pass
Power @ PF 1	20.000000 W	19.99599 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00401 W	50.1%	Pass
Test @ 50% U 2% I								
Voltage U2	500.00000 V	499.94140 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05860 V	39.1%	Pass
Current I2	0.040000 A	0.039997 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000003 A	28%	Pass
Power @ PF 1	20.000000 W	19.99584 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00416 W	52%	Pass
Test @ 50% U 20% I								
Voltage U2	500.00000 V	499.94448 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05552 V	37%	Pass
Current I2	0.400000 A	0.399973 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000027 A	22.8%	Pass
Power @ PF 1	200.00000 W	199.96409 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,03591 W	44.9%	Pass
Test @ 50% U 50% I								
Voltage U2	500.00000 V	499.94457 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05543 V	37%	Pass
Current I2	1.000000 A	0.999928 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000072 A	23.9%	Pass
Power @ PF 1	500.00000 W	499.90868 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09132 W	45.7%	Pass
Power @ PF 0.9 cap	450.00000 W	449.87793 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,12207 W	34.4%	Pass
Power @ PF 0.9 ind	450.00000 W	449.95663 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,04337 W	12.2%	Pass
Power @ PF 0.5 cap	250.00000 W	249.87305 W	249.55359 W	250.44641 W		-0,12695 W	28.4%	Pass
Power @ PF 0.5 ind	250.00000 W	250.03362 W	249.55359 W	250.44641 W		0,03362 W	7.53%	Pass
Test @ 50% U 100% I								
Voltage U2	500.00000 V	499.94245 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,05755 V	38.4%	Pass
Current I2	2.000000 A	1.999870 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000130 A	21.6%	Pass
Power @ PF 1	1000.00000 W	999.81984 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,18016 W	45%	Pass
Test @ 90% U 90% I								
Voltage U2	900.00000 V	899.92828 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,07172 V	26.6%	Pass
Current I2	1.800000 A	1.799874 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000126 A	23.4%	Pass
Power @ PF 1	1620.00000 W	1619.75727 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,24273 W	37.5%	Pass
Test @ 100% U 100% I								
Voltage U2	1000.00000 V	999.93103 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,06897 V	23%	Pass
Current I2	2.000000 A	1.999875 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000125 A	20.9%	Pass
Power @ PF 1	2000.00000 W	1999.73670 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,26330 W	32.9%	Pass
-----								
Phase 3								
Test @ 10% U 10% I								
Voltage U3	100.00000 V	99.98961 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,01039 V	34.6%	Pass
Current I3	0.200000 A	0.199978 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000022 A	36%	Pass
Power @ PF 1	20.000000 W	19.99571 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00429 W	53.6%	Pass
Test @ 50% U 2% I								
Voltage U3	500.00000 V	499.96134 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,03866 V	25.8%	Pass
Current I3	0.040000 A	0.039996 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000004 A	31.6%	Pass
Power @ PF 1	20.000000 W	19.99594 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00406 W	50.7%	Pass
Test @ 50% U 20% I								
Voltage U3	500.00000 V	499.96137 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,03863 V	25.8%	Pass
Current I3	0.400000 A	0.399955 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000045 A	37.2%	Pass
Power @ PF 1	200.00000 W	199.96211 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,03789 W	47.4%	Pass
Test @ 50% U 50% I								
Voltage U3	500.00000 V	499.96019 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,03981 V	26.5%	Pass
Current I3	1.000000 A	0.999887 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000113 A	37.6%	Pass
Power @ PF 1	500.00000 W	499.90369 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,09631 W	48.2%	Pass
Power @ PF 0.9 cap	450.00000 W	449.85052 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,14948 W	42.2%	Pass
Power @ PF 0.9 ind	450.00000 W	449.97612 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,02388 W	6.74%	Pass



**DEWETRON GmbH**  
 Parking 4  
 8074 Grambach  
 AUSTRIA

Kalibrierschein nach ISO/IEC 17025  
 Calibration Certificate according to ISO/IEC 17025

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Power @ PF 0.5 cap	250.00000 W	249.82620 W	249.55359 W	250.44641 W		-0,17380 W	38.9%	Pass (1)
Power @ PF 0.5 ind	250.00000 W	250.07535 W	249.55359 W	250.44641 W		0,07535 W	16.9%	Pass (1)
Test @ 50% U 100% I								
Voltage U3	500.00000 V	499.95955 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,04045 V	27%	Pass
Current I3	2.000000 A	1.999788 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000212 A	35.3%	Pass
Power @ PF 1	1000.00000 W	999.81311 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,18689 W	46.7%	Pass
Test @ 90% U 90% I								
Voltage U3	900.00000 V	899.95099 V	899.73000 V	900.27000 V	89.00 e-03 V	-0,04901 V	18.2%	Pass
Current I3	1.800000 A	1.799801 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000199 A	36.9%	Pass
Power @ PF 1	1620.00000 W	1619.73233 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,26767 W	41.3%	Pass
Test @ 100% U 100% I								
Voltage U3	1000.00000 V	999.95669 V	999.70000 V	1000.30000 V	97.00 e-03 V	-0,04331 V	14.4%	Pass
Current I3	2.000000 A	1.999795 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000205 A	34.1%	Pass
Power @ PF 1	2000.00000 W	1999.70833 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,29167 W	36.5%	Pass
-----								
Phase 4								
Test @ 10% U 10% I								
Voltage U4	100.00000 V	99.99579 V	99.97000 V	100.03000 V	13.00 e-03 V	-0,00421 V	14%	Pass
Current I4	0.200000 A	0.199988 A	0.199940 A	0.200060 A	23.00 e-06 A	-0,000012 A	19.9%	Pass
Power @ PF 1	20.00000 W	19.99796 W	19.99200 W	20.00800 W	4.00 e-03 W	-0,00204 W	25.5%	Pass
Test @ 50% U 2% I								
Voltage U4	500.00000 V	499.99135 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,00865 V	5.77%	Pass
Current I4	0.040000 A	0.039997 A	0.039988 A	0.040012 A	11.00 e-06 A	-0,000003 A	25.7%	Pass
Power @ PF 1	20.00000 W	19.99794 W	19.99200 W	20.00800 W	9.00 e-03 W	-0,00206 W	25.8%	Pass
Test @ 50% U 20% I								
Voltage U4	500.00000 V	499.99350 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,00650 V	4.33%	Pass
Current I4	0.400000 A	0.399975 A	0.399880 A	0.400120 A	47.00 e-06 A	-0,000025 A	20.7%	Pass
Power @ PF 1	200.00000 W	199.98497 W	199.92000 W	200.08000 W	40.00 e-03 W	-0,01503 W	18.8%	Pass
Test @ 50% U 50% I								
Voltage U4	500.00000 V	499.99390 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,00610 V	4.07%	Pass
Current I4	1.000000 A	0.999935 A	0.999700 A	1.000300 A	110.00 e-06 A	-0,000065 A	21.6%	Pass
Power @ PF 1	500.00000 W	499.96141 W	499.80000 W	500.20000 W	100.00 e-03 W	-0,03859 W	19.3%	Pass
Power @ PF 0.9 cap	450.00000 W	449.92633 W	449.64564 W	450.35436 W	120.00 e-03 W	-0,07367 W	20.8%	Pass
Power @ PF 0.9 ind	450.00000 W	450.00380 W	449.64564 W	450.35436 W	120.00 e-03 W	0,00380 W	1.07%	Pass
Power @ PF 0.5 cap	250.00000 W	249.90125 W	249.55359 W	250.44641 W		-0,09875 W	22.1%	Pass (1)
Power @ PF 0.5 ind	250.00000 W	250.05953 W	249.55359 W	250.44641 W		0,05953 W	13.3%	Pass (1)
Test @ 50% U 100% I								
Voltage U4	500.00000 V	499.99166 V	499.85000 V	500.15000 V	56.00 e-03 V	-0,00834 V	5.56%	Pass
Current I4	2.000000 A	1.999884 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000116 A	19.4%	Pass
Power @ PF 1	1000.00000 W	999.92513 W	999.60000 W	1000.40000 W	200.00 e-03 W	-0,07487 W	18.7%	Pass
Test @ 90% U 90% I								
Voltage U4	900.00000 V	900.00952 V	899.73000 V	900.27000 V	89.00 e-03 V	0,00952 V	3.53%	Pass
Current I4	1.800000 A	1.799887 A	1.799460 A	1.800540 A	200.00 e-06 A	-0,000113 A	21%	Pass
Power @ PF 1	1620.00000 W	1619.91507 W	1619.35200 W	1620.64800 W	320.00 e-03 W	-0,08493 W	13.1%	Pass
Test @ 100% U 100% I								
Voltage U4	1000.00000 V	1000.01437 V	999.70000 V	1000.30000 V	97.00 e-03 V	0,01437 V	4.79%	Pass
Current I4	2.000000 A	1.999888 A	1.999400 A	2.000600 A	220.00 e-06 A	-0,000112 A	18.7%	Pass
Power @ PF 1	2000.00000 W	1999.91640 W	1999.20000 W	2000.80000 W	400.00 e-03 W	-0,08360 W	10.4%	Pass

AC Voltage Calibration

Test @ 100V_RMS @ 1000Hz								
Channel U1	100.00000 V	99.99820 V	99.97000 V	100.03000 V	29.00 e-03 V	-0,00180 V	6%	Pass
Channel U2	100.00000 V	99.99658 V	99.97000 V	100.03000 V	29.00 e-03 V	-0,00342 V	11.4%	Pass
Channel U3	100.00000 V	100.00105 V	99.97000 V	100.03000 V	29.00 e-03 V	0,00105 V	3.5%	Pass
Channel U4	100.00000 V	100.00978 V	99.97000 V	100.03000 V	29.00 e-03 V	0,00978 V	32.6%	Pass
Test @ 100V_RMS @ 10000Hz								
Channel U1	100.00000 V	100.07246 V	99.65000 V	100.35000 V	32.00 e-03 V	0,07246 V	22.7%	Pass
Channel U2	100.00000 V	100.07887 V	99.65000 V	100.35000 V	32.00 e-03 V	0,07887 V	20.5%	Pass
Channel U3	100.00000 V	100.08443 V	99.65000 V	100.35000 V	32.00 e-03 V	0,08443 V	24.1%	Pass
Channel U4	100.00000 V	100.13789 V	99.65000 V	100.35000 V	32.00 e-03 V	0,13789 V	39.4%	Pass
Test @ 100V_RMS @ 30000Hz								
Channel U1	100.00000 V	100.03186 V	99.40000 V	100.60000 V	160.00 e-03 V	0,03186 V	5.31%	Pass
Channel U2	100.00000 V	100.04028 V	99.40000 V	100.60000 V	160.00 e-03 V	0,04028 V	6.71%	Pass
Channel U3	100.00000 V	99.98578 V	99.40000 V	100.60000 V	160.00 e-03 V	-0,01422 V	2.37%	Pass
Channel U4	100.00000 V	100.12214 V	99.40000 V	100.60000 V	160.00 e-03 V	0,12214 V	20.4%	Pass

AC Current Calibration

Test @ 0.2A_RMS @ 1000Hz								
Channel I1	0.200000 A	0.200041 A	0.199940 A	0.200060 A	500.00 e-06 A	0,000041 A	68.7%	Pass
Channel I2	0.200000 A	0.200034 A	0.199940 A	0.200060 A	500.00 e-06 A	0,000034 A	55.9%	Pass
Channel I3	0.200000 A	0.200023 A	0.199940 A	0.200060 A	500.00 e-06 A	0,000023 A	39%	Pass
Channel I4	0.200000 A	0.200035 A	0.199940 A	0.200060 A	500.00 e-06 A	0,000035 A	58.1%	Pass

DC Power Calibration



**DEWETRON GmbH**  
 Parkring 4  
 8074 Grambach  
 AUSTRIA

Kalibrierschein nach ISO/IEC 17025  
 Calibration Certificate according to ISO/IEC 17025

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status	
Range U: 1000V Range I: 2A		-----							
Phase 1									
Test @ 0% U 0% I									
Voltage U1	0.00000 V	0.01655 V	-0.20000 V	0.20000 V	140.00 e-06 V	0,01655 V	8.28%	Pass	
Current I1	0.000000 A	-0.000083 A	-0.001050 A	0.001050 A	4.40 e-06 A	-0,000083 A	7.92%	Pass	
Power	0.000000 W	-0.000001 W	-1.200000 W	1.200000 W		-0,000001 W	0.000115%	Pass (1)	
Test @ 5% U 10% I									
Voltage U1	50.00000 V	50.00848 V	49.79000 V	50.21000 V	1.50 e-03 V	0,00848 V	4.04%	Pass	
Current I1	0.200000 A	0.199939 A	0.198960 A	0.201040 A	29.00 e-06 A	-0,000061 A	5.88%	Pass	
Power	10.00000 W	9.99864 W	8.79700 W	11.20300 W	2.10 e-03 W	-0,00136 W	0.113%	Pass	
Test @ 5% U 2% I									
Voltage U1	50.00000 V	50.00910 V	49.79000 V	50.21000 V	1.50 e-03 V	0,00910 V	4.33%	Pass	
Current I1	0.040000 A	0.039947 A	0.038992 A	0.041008 A	8.90 e-06 A	-0,000053 A	5.27%	Pass	
Power	2.000000 W	1.997706 W	0.799400 W	3.200600 W	450.00 e-06 W	-0,002294 W	0.191%	Pass	
Test @ 50% U 20% I									
Voltage U1	500.00000 V	499.94699 V	499.70000 V	500.30000 V	13.00 e-03 V	-0,05301 V	17.7%	Pass	
Current I1	0.400000 A	0.399942 A	0.398920 A	0.401080 A	150.00 e-06 A	-0,000058 A	5.36%	Pass	
Power	200.00000 W	199.94985 W	198.74000 W	201.26000 W		-0,05015 W	3.98%	Pass (1)	
Test @ 30% U 30% I									
Voltage U1	300.00000 V	299.97392 V	299.74000 V	300.26000 V	7.80 e-03 V	-0,02608 V	10%	Pass	
Current I1	0.600000 A	0.599953 A	0.598880 A	0.601120 A	200.00 e-06 A	-0,000047 A	4.22%	Pass	
Power	180.00000 W	179.97016 W	178.74600 W	181.25400 W		-0,02984 W	2.38%	Pass (1)	
Test @ 5% U 50% I									
Voltage U1	50.00000 V	50.00935 V	49.79000 V	50.21000 V	1.50 e-03 V	0,00935 V	4.45%	Pass	
Current I1	1.000000 A	0.999952 A	0.998800 A	1.001200 A	300.00 e-06 A	-0,000048 A	3.97%	Pass	
Power	50.00000 W	50.00696 W	48.78500 W	51.21500 W	15.00 e-03 W	0,00696 W	0.573%	Pass	
Test @ -50% U -50% I									
Voltage U1	-500.00000 V	-499.91430 V	-500.30000 V	-499.70000 V	13.00 e-03 V	0,08570 V	28.6%	Pass	
Current I1	-1.000000 A	-1.000043 A	-1.001200 A	-0.998800 A	300.00 e-06 A	-0,000043 A	3.61%	Pass	
Power	500.00000 W	499.93592 W	498.65000 W	501.35000 W		-0,06408 W	4.75%	Pass (1)	
Test @ 50% U 100% I									
Voltage U1	500.00000 V	499.94845 V	499.70000 V	500.30000 V	13.00 e-03 V	-0,05155 V	17.2%	Pass	
Current I1	2.000000 A	2.000036 A	1.998600 A	2.001400 A	1.10 e-03 A	0,000036 A	2.55%	Pass	
Power	1000.00000 W	999.91478 W	998.50000 W	1001.50000 W	530.00 e-03 W	-0,08522 W	5.68%	Pass	
Test @ 70% U 70% I									
Voltage U1	700.00000 V	699.92499 V	699.66000 V	700.34000 V	18.00 e-03 V	-0,07501 V	22.1%	Pass	
Current I1	1.400000 A	1.399982 A	1.398720 A	1.401280 A	760.00 e-06 A	-0,000018 A	1.41%	Pass	
Power	980.00000 W	979.88236 W	978.50600 W	981.49400 W	530.00 e-03 W	-0,11764 W	7.87%	Pass	
Test @ 100% U 100% I									
Voltage U1	1000.00000 V	999.89777 V	999.60000 V	1000.40000 V	26.00 e-03 V	-0,10223 V	25.6%	Pass	
Current I1	2.000000 A	2.000043 A	1.998600 A	2.001400 A	1.10 e-03 A	0,000043 A	3.06%	Pass	
Power	2000.00000 W	1999.83847 W	1998.20000 W	2001.80000 W	1.10 e+00 W	-0,16153 W	8.97%	Pass	
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Phase 2									
Test @ 0% U 0% I									
Voltage U2	0.00000 V	0.02171 V	-0.20000 V	0.20000 V	140.00 e-06 V	0,02171 V	10.9%	Pass	
Current I2	0.000000 A	-0.000150 A	-0.001050 A	0.001050 A	4.40 e-06 A	-0,000150 A	14.3%	Pass	
Power	0.000000 W	-0.000003 W	-1.200000 W	1.200000 W		-0,000003 W	0.000271%	Pass (1)	
Test @ 5% U 10% I									
Voltage U2	50.00000 V	50.01436 V	49.79000 V	50.21000 V	1.50 e-03 V	0,01436 V	6.84%	Pass	
Current I2	0.200000 A	0.199858 A	0.198960 A	0.201040 A	29.00 e-06 A	-0,000142 A	13.7%	Pass	
Power	10.00000 W	9.99576 W	8.79700 W	11.20300 W	2.10 e-03 W	-0,00424 W	0.352%	Pass	
Test @ 5% U 2% I									
Voltage U2	50.00000 V	50.01443 V	49.79000 V	50.21000 V	1.50 e-03 V	0,01443 V	6.87%	Pass	
Current I2	0.040000 A	0.039862 A	0.038992 A	0.041008 A	8.90 e-06 A	-0,000138 A	13.7%	Pass	
Power	2.000000 W	1.993694 W	0.799400 W	3.200600 W	450.00 e-06 W	-0,006306 W	0.525%	Pass	
Test @ 50% U 20% I									
Voltage U2	500.00000 V	499.94725 V	499.70000 V	500.30000 V	13.00 e-03 V	-0,05275 V	17.6%	Pass	
Current I2	0.400000 A	0.399854 A	0.398920 A	0.401080 A	150.00 e-06 A	-0,000146 A	13.5%	Pass	
Power	200.00000 W	199.90592 W	198.74000 W	201.26000 W		-0,09408 W	7.47%	Pass (1)	
Test @ 30% U 30% I									
Voltage U2	300.00000 V	299.97455 V	299.74000 V	300.26000 V	7.80 e-03 V	-0,02545 V	9.79%	Pass	
Current I2	0.600000 A	0.599854 A	0.598880 A	0.601120 A	200.00 e-06 A	-0,000146 A	13%	Pass	
Power	180.00000 W	179.94089 W	178.74600 W	181.25400 W		-0,05911 W	4.71%	Pass (1)	
Test @ 5% U 50% I									
Voltage U2	50.00000 V	50.01436 V	49.79000 V	50.21000 V	1.50 e-03 V	0,01436 V	6.84%	Pass	
Current I2	1.000000 A	0.999854 A	0.998800 A	1.001200 A	300.00 e-06 A	-0,000146 A	12.2%	Pass	
Power	50.00000 W	50.00704 W	48.78500 W	51.21500 W	15.00 e-03 W	0,00704 W	0.58%	Pass	
Test @ -50% U -50% I									
Voltage U2	-500.00000 V	-499.90231 V	-500.30000 V	-499.70000 V	13.00 e-03 V	0,09769 V	32.6%	Pass	
Current I2	-1.000000 A	-1.000076 A	-1.001200 A	-0.998800 A	300.00 e-06 A	-0,000076 A	6.32%	Pass	
Power	500.00000 W	499.94024 W	498.65000 W	501.35000 W		-0,05976 W	4.43%	Pass (1)	
Test @ 50% U 100% I									
Voltage U2	500.00000 V	499.94590 V	499.70000 V	500.30000 V	13.00 e-03 V	-0,05410 V	18%	Pass	
Current I2	2.000000 A	1.999894 A	1.998600 A	2.001400 A	1.10 e-03 A	-0,000106 A	7.58%	Pass	
Power	1000.00000 W	999.83871 W	998.50000 W	1001.50000 W	530.00 e-03 W	-0,16129 W	10.8%	Pass	
Test @ 70% U 70% I									
Voltage U2	700.00000 V	699.92047 V	699.66000 V	700.34000 V	18.00 e-03 V	-0,07953 V	23.4%	Pass	



**DEWETRON GmbH**  
 Parking 4  
 8074 Grambach  
 AUSTRIA

Kalibrierschein nach ISO/IEC 17025  
 Calibration Certificate according to ISO/IEC 17025

AAT2550004
Akkreditierung Austria 0632
05.02.2025

**11. Testergebnisse / Test results**

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
Current I2	1.400000 A	1.399866 A	1.398720 A	1.401280 A	760.00 e-06 A	-0,000134 A	10.4%	Pass
Power	980.00000 W	979.79513 W	978.50600 W	981.49400 W	530.00 e-03 W	-0,20487 W	13.7%	Pass
Test @ 100% U 100% I								
Voltage U2	1000.00000 V	999.89752 V	999.60000 V	1000.40000 V	26.00 e-03 V	-0,10248 V	25.6%	Pass
Current I2	2.000000 A	1.999903 A	1.998600 A	2.001400 A	1.10 e-03 A	-0,000097 A	6.96%	Pass
Power	2000.00000 W	1999.69767 W	1998.20000 W	2001.80000 W	1.10 e+00 W	-0,30233 W	16.8%	Pass
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Phase 3								
Test @ 0% U 0% I								
Voltage U3	0.00000 V	0.07066 V	-0.20000 V	0.20000 V	140.00 e-06 V	0,07066 V	35.3%	Pass
Current I3	0.000000 A	-0.000365 A	-0.001050 A	0.001050 A	4.40 e-06 A	-0,000365 A	34.7%	Pass
Power	0.000000 W	-0.000026 W	-1.200000 W	1.200000 W		-0,000026 W	0.00215%	Pass (1)
Test @ 5% U 10% I								
Voltage U3	50.00000 V	50.06576 V	49.79000 V	50.21000 V	1.50 e-03 V	0,06576 V	31.3%	Pass
Current I3	0.200000 A	0.199642 A	0.198960 A	0.201040 A	29.00 e-06 A	-0,000358 A	34.4%	Pass
Power	10.00000 W	9.99525 W	8.79700 W	11.20300 W	2.10 e-03 W	-0,00475 W	0.395%	Pass
Test @ 5% U 2% I								
Voltage U3	50.00000 V	50.06659 V	49.79000 V	50.21000 V	1.50 e-03 V	0,06659 V	31.7%	Pass
Current I3	0.040000 A	0.039662 A	0.038992 A	0.041008 A	8.90 e-06 A	-0,000338 A	33.5%	Pass
Power	2.000000 W	1.985735 W	0.799400 W	3.200600 W	450.00 e-06 W	-0,014265 W	1.19%	Pass
Test @ 50% U 20% I								
Voltage U3	500.00000 V	500.01849 V	499.70000 V	500.30000 V	13.00 e-03 V	0,01849 V	6.16%	Pass
Current I3	0.400000 A	0.399631 A	0.398920 A	0.401080 A	150.00 e-06 A	-0,000369 A	34.2%	Pass
Power	200.00000 W	199.82271 W	198.74000 W	201.26000 W		-0,17729 W	14.1%	Pass (1)
Test @ 30% U 30% I								
Voltage U3	300.00000 V	300.04060 V	299.74000 V	300.26000 V	7.80 e-03 V	0,04060 V	15.6%	Pass
Current I3	0.600000 A	0.599659 A	0.598880 A	0.601120 A	200.00 e-06 A	-0,000341 A	30.4%	Pass
Power	180.00000 W	179.92213 W	178.74600 W	181.25400 W		-0,07787 W	6.21%	Pass (1)
Test @ 5% U 50% I								
Voltage U3	50.00000 V	50.06764 V	49.79000 V	50.21000 V	1.50 e-03 V	0,06764 V	32.2%	Pass
Current I3	1.000000 A	0.999647 A	0.998800 A	1.001200 A	300.00 e-06 A	-0,000353 A	29.4%	Pass
Power	50.00000 W	50.04998 W	48.78500 W	51.21500 W	15.00 e-03 W	0,04998 W	4.11%	Pass
Test @ -50% U -50% I								
Voltage U3	-500.00000 V	-499.87356 V	-500.30000 V	-499.70000 V	13.00 e-03 V	0,12644 V	42.1%	Pass
Current I3	-1.000000 A	-1.000218 A	-1.001200 A	-0.998800 A	300.00 e-06 A	-0,000218 A	18.2%	Pass
Power	500.00000 W	499.98246 W	498.65000 W	501.35000 W		-0,01754 W	1.3%	Pass (1)
Test @ 50% U 100% I								
Voltage U3	500.00000 V	500.01866 V	499.70000 V	500.30000 V	13.00 e-03 V	0,01866 V	6.22%	Pass
Current I3	2.000000 A	1.999640 A	1.998600 A	2.001400 A	1.10 e-03 A	-0,000360 A	25.7%	Pass
Power	1000.00000 W	999.85720 W	998.50000 W	1001.50000 W	530.00 e-03 W	-0,14280 W	9.52%	Pass
Test @ 70% U 70% I								
Voltage U3	700.00000 V	700.00137 V	699.66000 V	700.34000 V	18.00 e-03 V	0,00137 V	0.402%	Pass
Current I3	1.400000 A	1.399657 A	1.398720 A	1.401280 A	760.00 e-06 A	-0,000343 A	26.8%	Pass
Power	980.00000 W	979.76193 W	978.50600 W	981.49400 W	530.00 e-03 W	-0,23807 W	15.9%	Pass
Test @ 100% U 100% I								
Voltage U3	1000.00000 V	999.98207 V	999.60000 V	1000.40000 V	26.00 e-03 V	-0,01793 V	4.48%	Pass
Current I3	2.000000 A	1.999642 A	1.998600 A	2.001400 A	1.10 e-03 A	-0,000358 A	25.6%	Pass
Power	2000.00000 W	1999.60560 W	1998.20000 W	2001.80000 W	1.10 e+00 W	-0,39440 W	21.9%	Pass
-----								
Phase 4								
Test @ 0% U 0% I								
Voltage U4	0.00000 V	0.03707 V	-0.20000 V	0.20000 V	140.00 e-06 V	0,03707 V	18.5%	Pass
Current I4	0.000000 A	0.000100 A	-0.001050 A	0.001050 A	4.40 e-06 A	0,000100 A	9.5%	Pass
Power	0.000000 W	0.000004 W	-1.200000 W	1.200000 W		0,000004 W	0.000308%	Pass (1)
Test @ 5% U 10% I								
Voltage U4	50.00000 V	50.03602 V	49.79000 V	50.21000 V	1.50 e-03 V	0,03602 V	17.2%	Pass
Current I4	0.200000 A	0.200128 A	0.198960 A	0.201040 A	29.00 e-06 A	0,000128 A	12.3%	Pass
Power	10.00000 W	10.01359 W	8.79700 W	11.20300 W	2.10 e-03 W	0,01359 W	1.13%	Pass
Test @ 5% U 2% I								
Voltage U4	50.00000 V	50.03471 V	49.79000 V	50.21000 V	1.50 e-03 V	0,03471 V	16.5%	Pass
Current I4	0.040000 A	0.040132 A	0.038992 A	0.041008 A	8.90 e-06 A	0,000132 A	13.1%	Pass
Power	2.000000 W	2.007972 W	0.799400 W	3.200600 W	450.00 e-06 W	0,007972 W	0.664%	Pass
Test @ 50% U 20% I								
Voltage U4	500.00000 V	500.01401 V	499.70000 V	500.30000 V	13.00 e-03 V	0,01401 V	4.67%	Pass
Current I4	0.400000 A	0.400111 A	0.398920 A	0.401080 A	150.00 e-06 A	0,000111 A	10.2%	Pass
Power	200.00000 W	200.06091 W	198.74000 W	201.26000 W		0,06091 W	4.83%	Pass (1)
Test @ 30% U 30% I								
Voltage U4	300.00000 V	300.02285 V	299.74000 V	300.26000 V	7.80 e-03 V	0,02285 V	8.79%	Pass
Current I4	0.600000 A	0.600116 A	0.598880 A	0.601120 A	200.00 e-06 A	0,000116 A	10.4%	Pass
Power	180.00000 W	180.04859 W	178.74600 W	181.25400 W		0,04859 W	3.87%	Pass (1)
Test @ 5% U 50% I								
Voltage U4	50.00000 V	50.03449 V	49.79000 V	50.21000 V	1.50 e-03 V	0,03449 V	16.4%	Pass
Current I4	1.000000 A	1.000102 A	0.998800 A	1.001200 A	300.00 e-06 A	0,000102 A	8.48%	Pass
Power	50.00000 W	50.03958 W	48.78500 W	51.21500 W	15.00 e-03 W	0,03958 W	3.26%	Pass
Test @ -50% U -50% I								
Voltage U4	-500.00000 V	-499.94019 V	-500.30000 V	-499.70000 V	13.00 e-03 V	0,05981 V	19.9%	Pass
Current I4	-1.000000 A	-0.999846 A	-1.001200 A	-0.998800 A	300.00 e-06 A	0,000154 A	12.9%	Pass
Power	500.00000 W	499.86303 W	498.65000 W	501.35000 W		-0,13697 W	10.1%	Pass (1)
Test @ 50% U 100% I								
Voltage U4	500.00000 V	500.01351 V	499.70000 V	500.30000 V	13.00 e-03 V	0,01351 V	4.5%	Pass

**11. Testergebnisse / Test results**

<u>Test Description</u>	<u>True Value</u>	<u>Test Result</u>	<u>Lower limit</u>	<u>Upper limit</u>	<u>Exp Uncert</u>	<u>Error</u>	<u>% of Tol</u>	<u>Status</u>
Current I4	2.000000 A	2.000135 A	1.998600 A	2.001400 A	1.10 e-03 A	0,000135 A	9.64%	Pass
Power	1000.00000 W	1000.09447 W	998.50000 W	1001.50000 W	530.00 e-03 W	0,09447 W	6.3%	Pass
Test @ 70% U 70% I								
Voltage U4	700.00000 V	700.00809 V	699.66000 V	700.34000 V	18.00 e-03 V	0,00809 V	2.38%	Pass
Current I4	1.400000 A	1.400121 A	1.398720 A	1.401280 A	760.00 e-06 A	0,000121 A	9.44%	Pass
Power	980.00000 W	980.09593 W	978.50600 W	981.49400 W	530.00 e-03 W	0,09593 W	6.42%	Pass
Test @ 100% U 100% I								
Voltage U4	1000.00000 V	1000.00463 V	999.60000 V	1000.40000 V	26.00 e-03 V	0,00463 V	1.16%	Pass
Current I4	2.000000 A	2.000135 A	1.998600 A	2.001400 A	1.10 e-03 A	0,000135 A	9.62%	Pass
Power	2000.00000 W	2000.14397 W	1998.20000 W	2001.80000 W	1.10 e+00 W	0,14397 W	8%	Pass

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 Ende des Kalibrierscheines / End of Calibration Certificate

