DEWETRON GmbH

Parkring 4
8074 Grambach
Austria

AAT2560010
Akkreditierung Austria 0632
13.01.2025

Kalibrierstelle für elektrische Messgrößen
Calibration body for electrical measurands

akkreditiert durch / *accredited by*
AKKREDITIERUNG AUSTRIA

Kalibrierzeichen
Calibration Mark

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

Gegenstand *Object*	8 Channel Data Acquisition
Hersteller *Manufacturer*	DEWETRON
Typ *Type*	TRION3-1810M-POWER-4
Herstellernummer *Serial number*	A1202920
Auftraggeber *Customer*	
Kalibriernummer *Order number*	AAT2560010
Anzahl der Seiten des Kalibrierscheines *Number of pages of the certificate*	7
Datum der Kalibrierung *Date of calibration*	13.01.2025

Dieser Kalibrierschein dokumentiert die Rückführbarkeit auf nationale Normale zur Darstellung der physikalischen Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).

Akkreditierung Austria ist Unterzeichner der multilateralen Übereinkommen der European Co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine.

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements according to the International system of Units (SI).

Akkreditierung Austria is a signatory to the multilateral agreements of the European Co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates.

Stempel *Seal*	Datum *Date*	Zeichnungsberechtigter *Authorised person*	Bearbeiter *Person responsible*
	13.01.2025	Stefan Strohmaier	Nandor Nagy

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AUSTRIA

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1. Kalibriergegenstand / *Calibration object*

8 Channel Data Acquisition DEWETRON TRION3-1810M-POWER-4, S/N: A1202920

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-18xx-HV/POWER_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:*	22,3 °C
Rel. Luftfeuchte / *Rel. humidity:*	33,9 % r.H.
Kalibrierort / *Place of calibration:*	DEWETRON GmbH, Parkring 4, 8074 Grambach, Austria

6. Auftragnummer / *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 accreditited scope, a conformity statement cannot be made.

9. Kommentare / *Comments*

test 1810M

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 resonable period for repeating the calibration.

10. Verwendete Normale / Standards used

Asset	Description	Serial Number	Certificate No.	Cal Date	Due Date
5522A 02	5522A CALIBRATOR	6032901	SA01246868	9-Feb-2024	8-Feb-2025

11. Testergebnisse / Test results

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status
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								
Current Temperature Calibrator: 24.37°C								
API Version:	7.3.2.6198							
Card Type:	TRION3-1810M-POWER-4							
Firmware Version:	78							
Model version:	1.00							
XML version:	SVN 1655904957							
SN. of board:	A1202920							
Channel I1 to I4								
All Tests in 5Vrms (10Vpeak) Range								
Samplerate: 2MS/s								
Filter off								
Accuracy:								
DC	: ±0.02% of reading ±0.02% of range							
>0.5Hz to 5kHz	: ±0.03% of reading							
>5kHz to 30kHz	: ±(0.01% * f) of reading							
>30kHz to 50kHz	: ±(0.02% * f) of reading							
>50kHz to 100kHz	: ±(0.1% * f) of reading							
f ... signal frequency in kHz								
Test @ 0V DC								
Channel I1	0.000000 V	-0.000006 V	-0.001000 V	0.001000 V	44.00 e-06 V	-0,000006 V	0.591%	Pass
Channel I2	0.000000 V	0.000031 V	-0.001000 V	0.001000 V	44.00 e-06 V	0,000031 V	3.11%	Pass
Channel I3	0.000000 V	0.000040 V	-0.001000 V	0.001000 V	44.00 e-06 V	0,000040 V	3.98%	Pass
Channel I4	0.000000 V	0.000006 V	-0.001000 V	0.001000 V	44.00 e-06 V	0,000006 V	0.559%	Pass
Test @ 1V DC								
Channel I1	1.000000 V	1.000100 V	0.998800 V	1.001200 V	47.00 e-06 V	0,000100 V	8.33%	Pass
Channel I2	1.000000 V	1.000120 V	0.998800 V	1.001200 V	47.00 e-06 V	0,000120 V	10%	Pass
Channel I3	1.000000 V	1.000130 V	0.998800 V	1.001200 V	47.00 e-06 V	0,000130 V	10.8%	Pass
Channel I4	1.000000 V	1.000100 V	0.998800 V	1.001200 V	47.00 e-06 V	0,000100 V	8.33%	Pass
Test @ -1V DC								
Channel I1	-1.000000 V	-1.000073 V	-1.001200 V	-0.998800 V	47.00 e-06 V	-0,000073 V	6.11%	Pass
Channel I2	-1.000000 V	-1.000030 V	-1.001200 V	-0.998800 V	47.00 e-06 V	-0,000030 V	2.5%	Pass
Channel I3	-1.000000 V	-1.000017 V	-1.001200 V	-0.998800 V	47.00 e-06 V	-0,000017 V	1.39%	Pass
Channel I4	-1.000000 V	-1.000053 V	-1.001200 V	-0.998800 V	47.00 e-06 V	-0,000053 V	4.44%	Pass
Test @ 3V DC								
Channel I1	3.000000 V	3.000230 V	2.998400 V	3.001600 V	63.00 e-06 V	0,000230 V	14.4%	Pass
Channel I2	3.000000 V	3.000247 V	2.998400 V	3.001600 V	63.00 e-06 V	0,000247 V	15.4%	Pass
Channel I3	3.000000 V	3.000247 V	2.998400 V	3.001600 V	63.00 e-06 V	0,000247 V	15.4%	Pass
Channel I4	3.000000 V	3.000230 V	2.998400 V	3.001600 V	63.00 e-06 V	0,000230 V	14.4%	Pass
Test @ 5V DC								
Channel I1	5.000000 V	5.000167 V	4.998000 V	5.002000 V	120.00 e-06 V	0,000167 V	8.33%	Pass
Channel I2	5.000000 V	5.000213 V	4.998000 V	5.002000 V	120.00 e-06 V	0,000213 V	10.7%	Pass
Channel I3	5.000000 V	5.000173 V	4.998000 V	5.002000 V	120.00 e-06 V	0,000173 V	8.67%	Pass
Channel I4	5.000000 V	5.000177 V	4.998000 V	5.002000 V	120.00 e-06 V	0,000177 V	8.83%	Pass
Test @ -5V DC								
Channel I1	-5.000000 V	-5.000123 V	-5.002000 V	-4.998000 V	120.00 e-06 V	-0,000123 V	6.17%	Pass
Channel I2	-5.000000 V	-5.000130 V	-5.002000 V	-4.998000 V	120.00 e-06 V	-0,000130 V	6.5%	Pass
Channel I3	-5.000000 V	-5.000110 V	-5.002000 V	-4.998000 V	120.00 e-06 V	-0,000110 V	5.5%	Pass
Channel I4	-5.000000 V	-5.000147 V	-5.002000 V	-4.998000 V	120.00 e-06 V	-0,000147 V	7.33%	Pass
Test @ 7V DC								
Channel I1	7.000000 V	6.999637 V	6.997600 V	7.002400 V	150.00 e-06 V	-0,000363 V	15.1%	Pass
Channel I2	7.000000 V	6.999767 V	6.997600 V	7.002400 V	150.00 e-06 V	-0,000233 V	9.72%	Pass
Channel I3	7.000000 V	6.999707 V	6.997600 V	7.002400 V	150.00 e-06 V	-0,000293 V	12.2%	Pass
Channel I4	7.000000 V	6.999723 V	6.997600 V	7.002400 V	150.00 e-06 V	-0,000277 V	11.5%	Pass
Test @ 9V DC								
Channel I1	9.000000 V	8.998560 V	8.997200 V	9.002800 V	180.00 e-06 V	-0,001440 V	51.4%	Pass
Channel I2	9.000000 V	8.998893 V	8.997200 V	9.002800 V	180.00 e-06 V	-0,001107 V	39.5%	Pass
Channel I3	9.000000 V	8.998733 V	8.997200 V	9.002800 V	180.00 e-06 V	-0,001267 V	45.2%	Pass
Channel I4	9.000000 V	8.998737 V	8.997200 V	9.002800 V	180.00 e-06 V	-0,001263 V	45.1%	Pass
Test @ -9V DC								

11. Testergebnisse / Test results

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status	
Channel I1	-9.000000 V	-8.999013 V	-9.002800 V	-8.997200 V	180.00 e-06 V	0,000987 V	35.2%	Pass	
Channel I2	-9.000000 V	-8.999333 V	-9.002800 V	-8.997200 V	180.00 e-06 V	0,000667 V	23.8%	Pass	
Channel I3	-9.000000 V	-8.999177 V	-9.002800 V	-8.997200 V	180.00 e-06 V	0,000823 V	29.4%	Pass	
Channel I4	-9.000000 V	-8.999187 V	-9.002800 V	-8.997200 V	180.00 e-06 V	0,000813 V	29%	Pass	
Test @ 0.5V_RMS @ 20Hz									
Channel I1	0.500000 V	0.500070 V	0.499850 V	0.500150 V	250.00 e-06 V	0,000070 V	46.4%	Pass	
Channel I2	0.500000 V	0.500064 V	0.499850 V	0.500150 V	250.00 e-06 V	0,000064 V	42.9%	Pass	
Channel I3	0.500000 V	0.500063 V	0.499850 V	0.500150 V	250.00 e-06 V	0,000063 V	42%	Pass	
Channel I4	0.500000 V	0.500068 V	0.499850 V	0.500150 V	250.00 e-06 V	0,000068 V	45.6%	Pass	
Test @ 0.5V RMS @ 50Hz									
Channel I1	0.500000 V	0.500072 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000072 V	48.2%	Pass	
Channel I2	0.500000 V	0.500067 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000067 V	44.7%	Pass	
Channel I3	0.500000 V	0.500068 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000068 V	45.3%	Pass	
Channel I4	0.500000 V	0.500070 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000070 V	46.7%	Pass	
Test @ 0.5V_RMS @ 1000Hz									
Channel I1	0.500000 V	0.500072 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000072 V	48.2%	Pass	
Channel I2	0.500000 V	0.500069 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000069 V	46.2%	Pass	
Channel I3	0.500000 V	0.500068 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000068 V	45.3%	Pass	
Channel I4	0.500000 V	0.500069 V	0.499850 V	0.500150 V	170.00 e-06 V	0,000069 V	46.2%	Pass	
Test @ 2.5V_RMS @ 20Hz									
Channel I1	2.500000 V	2.500173 V	2.499250 V	2.500750 V	990.00 e-06 V	0,000173 V	23.1%	Pass	
Channel I2	2.500000 V	2.500163 V	2.499250 V	2.500750 V	990.00 e-06 V	0,000163 V	21.8%	Pass	
Channel I3	2.500000 V	2.500160 V	2.499250 V	2.500750 V	990.00 e-06 V	0,000160 V	21.3%	Pass	
Channel I4	2.500000 V	2.500170 V	2.499250 V	2.500750 V	990.00 e-06 V	0,000170 V	22.7%	Pass	
Test @ 2.5V_RMS @ 50Hz									
Channel I1	2.500000 V	2.500200 V	2.499250 V	2.500750 V	540.00 e-06 V	0,000200 V	26.7%	Pass	
Channel I2	2.500000 V	2.500180 V	2.499250 V	2.500750 V	540.00 e-06 V	0,000180 V	24%	Pass	
Channel I3	2.500000 V	2.500180 V	2.499250 V	2.500750 V	540.00 e-06 V	0,000180 V	24%	Pass	
Channel I4	2.500000 V	2.500193 V	2.499250 V	2.500750 V	540.00 e-06 V	0,000193 V	25.8%	Pass	
Test @ 2.5V RMS @ 1000Hz									
Channel I1	2.500000 V	2.500190 V	2.499250 V	2.500750 V	700.00 e-06 V	0,000190 V	25.3%	Pass	
Channel I2	2.500000 V	2.500180 V	2.499250 V	2.500750 V	700.00 e-06 V	0,000180 V	24%	Pass	
Channel I3	2.500000 V	2.500177 V	2.499250 V	2.500750 V	700.00 e-06 V	0,000177 V	23.6%	Pass	
Channel I4	2.500000 V	2.500187 V	2.499250 V	2.500750 V	700.00 e-06 V	0,000187 V	24.9%	Pass	
Test @ 3.5V RMS @ 20Hz									
Channel I1	3.500000 V	3.500303 V	3.498950 V	3.501050 V	2.50 e-03 V	0,000303 V	28.9%	Pass	
Channel I2	3.500000 V	3.500310 V	3.498950 V	3.501050 V	2.50 e-03 V	0,000310 V	29.5%	Pass	
Channel I3	3.500000 V	3.500307 V	3.498950 V	3.501050 V	2.50 e-03 V	0,000307 V	29.2%	Pass	
Channel I4	3.500000 V	3.500327 V	3.498950 V	3.501050 V	2.50 e-03 V	0,000327 V	31.1%	Pass	
Test @ 3.5V_RMS @ 50Hz									
Channel I1	3.500000 V	3.500220 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000220 V	21%	Pass	
Channel I2	3.500000 V	3.500180 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000180 V	17.1%	Pass	
Channel I3	3.500000 V	3.500167 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000167 V	15.9%	Pass	
Channel I4	3.500000 V	3.500173 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000173 V	16.5%	Pass	
Test @ 3.5V_RMS @ 1000Hz									
Channel I1	3.500000 V	3.500040 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000040 V	3.81%	Pass	
Channel I2	3.500000 V	3.500050 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000050 V	4.76%	Pass	
Channel I3	3.500000 V	3.500040 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000040 V	3.81%	Pass	
Channel I4	3.500000 V	3.500053 V	3.498950 V	3.501050 V	1.40 e-03 V	0,000053 V	5.08%	Pass	
Test @ 3.5V_RMS @ 10000Hz									
Channel I1	3.500000 V	3.499687 V	3.496500 V	3.503500 V	1.40 e-03 V	-0,000313 V	8.95%	Pass	
Channel I2	3.500000 V	3.499603 V	3.496500 V	3.503500 V	1.40 e-03 V	-0,000397 V	11.3%	Pass	
Channel I3	3.500000 V	3.499727 V	3.496500 V	3.503500 V	1.40 e-03 V	-0,000273 V	7.81%	Pass	
Channel I4	3.500000 V	3.499547 V	3.496500 V	3.503500 V	1.40 e-03 V	-0,000453 V	13%	Pass	
Test @ 3.5V RMS @ 20000Hz									
Channel I1	3.500000 V	3.498577 V	3.493000 V	3.507000 V	1.80 e-03 V	-0,001423 V	20.3%	Pass	
Channel I2	3.500000 V	3.498307 V	3.493000 V	3.507000 V	1.80 e-03 V	-0,001693 V	24.2%	Pass	
Channel I3	3.500000 V	3.498780 V	3.493000 V	3.507000 V	1.80 e-03 V	-0,001220 V	17.4%	Pass	
Channel I4	3.500000 V	3.498223 V	3.493000 V	3.507000 V	1.80 e-03 V	-0,001777 V	25.4%	Pass	
SNR-Test dLV Channels									
Channel I1	95.00 dB	92.41 dB	80.00 dB	200.00 dB		-2,59 dB	17.3%	Pass	(1)
Channel I2	95.00 dB	92.48 dB	80.00 dB	200.00 dB		-2,52 dB	16.8%	Pass	(1)
Channel I3	95.00 dB	92.53 dB	80.00 dB	200.00 dB		-2,47 dB	16.4%	Pass	(1)
Channel I4	95.00 dB	92.46 dB	80.00 dB	200.00 dB		-2,54 dB	16.9%	Pass	(1)
CMRR-Test dLV Channels @ 50Hz									
CMRR better than 80dB CH1								Pass	(1)

11. Testergebnisse / Test results

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status	
CMRR better than 80dB CH2								Pass	(1)
CMRR better than 80dB CH3								Pass	(1)
CMRR better than 80dB CH4								Pass	(1)

Channel U1 to U4
All Tests in 1000Vrms (2000Vpeak) Range
Samplerate: 2MS/s
Filter: 300kHz

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) of reading

f ... signal frequency in kHz

Test @ 0V DC

Channel U1	0.0000 V	0.0198 V	-0.2000 V	0.2000 V	140.00 e-06 V	0,0198 V	9.9%	Pass
Channel U2	0.0000 V	0.0091 V	-0.2000 V	0.2000 V	140.00 e-06 V	0,0091 V	4.54%	Pass
Channel U3	0.0000 V	0.0133 V	-0.2000 V	0.2000 V	140.00 e-06 V	0,0133 V	6.67%	Pass
Channel U4	0.0000 V	-0.0104 V	-0.2000 V	0.2000 V	140.00 e-06 V	-0,0104 V	5.2%	Pass

Test @ 100V DC

Channel U1	100.0000 V	100.0217 V	99.7800 V	100.2200 V	2.70 e-03 V	0,0217 V	9.85%	Pass
Channel U2	100.0000 V	100.0120 V	99.7800 V	100.2200 V	2.70 e-03 V	0,0120 V	5.45%	Pass
Channel U3	100.0000 V	100.0160 V	99.7800 V	100.2200 V	2.70 e-03 V	0,0160 V	7.27%	Pass
Channel U4	100.0000 V	99.9888 V	99.7800 V	100.2200 V	2.70 e-03 V	-0,0112 V	5.08%	Pass

Test @ -100V DC

Channel U1	-100.0000 V	-99.9833 V	-100.2200 V	-99.7800 V	2.70 e-03 V	0,0167 V	7.58%	Pass
Channel U2	-100.0000 V	-99.9917 V	-100.2200 V	-99.7800 V	2.70 e-03 V	0,0083 V	3.77%	Pass
Channel U3	-100.0000 V	-99.9881 V	-100.2200 V	-99.7800 V	2.70 e-03 V	0,0119 V	5.42%	Pass
Channel U4	-100.0000 V	-100.0103 V	-100.2200 V	-99.7800 V	2.70 e-03 V	-0,0103 V	4.7%	Pass

Test @ 300V DC

Channel U1	300.0000 V	300.0250 V	299.7400 V	300.2600 V	7.80 e-03 V	0,0250 V	9.62%	Pass
Channel U2	300.0000 V	300.0153 V	299.7400 V	300.2600 V	7.80 e-03 V	0,0153 V	5.9%	Pass
Channel U3	300.0000 V	300.0203 V	299.7400 V	300.2600 V	7.80 e-03 V	0,0203 V	7.82%	Pass
Channel U4	300.0000 V	299.9853 V	299.7400 V	300.2600 V	7.80 e-03 V	-0,0147 V	5.64%	Pass

Test @ 500V DC

Channel U1	500.0000 V	500.0320 V	499.7000 V	500.3000 V	13.00 e-03 V	0,0320 V	10.7%	Pass
Channel U2	500.0000 V	500.0200 V	499.7000 V	500.3000 V	13.00 e-03 V	0,0200 V	6.67%	Pass
Channel U3	500.0000 V	500.0283 V	499.7000 V	500.3000 V	13.00 e-03 V	0,0283 V	9.44%	Pass
Channel U4	500.0000 V	499.9850 V	499.7000 V	500.3000 V	13.00 e-03 V	-0,0150 V	5%	Pass

Test @ -500V DC

Channel U1	-500.0000 V	-499.9910 V	-500.3000 V	-499.7000 V	13.00 e-03 V	0,0090 V	3%	Pass
Channel U2	-500.0000 V	-499.9983 V	-500.3000 V	-499.7000 V	13.00 e-03 V	0,0017 V	0.556%	Pass
Channel U3	-500.0000 V	-500.0000 V	-500.3000 V	-499.7000 V	13.00 e-03 V	0,0000 V	0%	Pass
Channel U4	-500.0000 V	-500.0073 V	-500.3000 V	-499.7000 V	13.00 e-03 V	-0,0073 V	2.44%	Pass

Test @ 700V DC

Channel U1	700.0000 V	700.0340 V	699.6600 V	700.3400 V	18.00 e-03 V	0,0340 V	10%	Pass
Channel U2	700.0000 V	700.0237 V	699.6600 V	700.3400 V	18.00 e-03 V	0,0237 V	6.96%	Pass
Channel U3	700.0000 V	700.0350 V	699.6600 V	700.3400 V	18.00 e-03 V	0,0350 V	10.3%	Pass
Channel U4	700.0000 V	699.9830 V	699.6600 V	700.3400 V	18.00 e-03 V	-0,0170 V	5%	Pass

Test @ 900V DC

Channel U1	900.0000 V	900.0410 V	899.6200 V	900.3800 V	23.00 e-03 V	0,0410 V	10.8%	Pass
Channel U2	900.0000 V	900.0303 V	899.6200 V	900.3800 V	23.00 e-03 V	0,0303 V	7.98%	Pass
Channel U3	900.0000 V	900.0430 V	899.6200 V	900.3800 V	23.00 e-03 V	0,0430 V	11.3%	Pass
Channel U4	900.0000 V	899.9777 V	899.6200 V	900.3800 V	23.00 e-03 V	-0,0223 V	5.88%	Pass

Test @ -900V DC

Channel U1	-900.0000 V	-900.0007 V	-900.3800 V	-899.6200 V	23.00 e-03 V	-0,0007 V	0.175%	Pass
Channel U2	-900.0000 V	-900.0063 V	-900.3800 V	-899.6200 V	23.00 e-03 V	-0,0063 V	1.67%	Pass
Channel U3	-900.0000 V	-900.0153 V	-900.3800 V	-899.6200 V	23.00 e-03 V	-0,0153 V	4.04%	Pass
Channel U4	-900.0000 V	-900.0063 V	-900.3800 V	-899.6200 V	23.00 e-03 V	-0,0063 V	1.67%	Pass

Test @ 100V_RMS @ 50Hz

Channel U1	100.0000 V	100.0120 V	99.9700 V	100.0300 V	26.00 e-03 V	0,0120 V	40%	Pass
Channel U2	100.0000 V	100.0120 V	99.9700 V	100.0300 V	26.00 e-03 V	0,0120 V	40%	Pass
Channel U3	100.0000 V	100.0123 V	99.9700 V	100.0300 V	26.00 e-03 V	0,0123 V	41.1%	Pass
Channel U4	100.0000 V	100.0090 V	99.9700 V	100.0300 V	26.00 e-03 V	0,0090 V	30%	Pass

Test @ 100V RMS @ 1000Hz

DEWETRON GmbH
Parkring 4
8074 Grambach
AUSTRIA

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

AAT2560010
Akkreditierung Austria
0632
13.01.2025

11. Testergebnisse / Test results

Test Description	True Value	Test Result	Lower limit	Upper limit	Exp Uncert	Error	% of Tol	Status	
Channel U1	100.0000 V	100.0140 V	99.9700 V	100.0300 V	29.00 e-03 V	0,0140 V	46.7%	Pass	
Channel U2	100.0000 V	100.0180 V	99.9700 V	100.0300 V	29.00 e-03 V	0,0180 V	60%	Pass	
Channel U3	100.0000 V	100.0170 V	99.9700 V	100.0300 V	29.00 e-03 V	0,0170 V	56.7%	Pass	
Channel U4	100.0000 V	100.0130 V	99.9700 V	100.0300 V	29.00 e-03 V	0,0130 V	43.3%	Pass	
Test @ 500V_RMS @ 50Hz									
Channel U1	500.0000 V	500.0443 V	499.8500 V	500.1500 V	190.00 e-03 V	0,0443 V	29.6%	Pass	
Channel U2	500.0000 V	500.0440 V	499.8500 V	500.1500 V	190.00 e-03 V	0,0440 V	29.3%	Pass	
Channel U3	500.0000 V	500.0503 V	499.8500 V	500.1500 V	190.00 e-03 V	0,0503 V	33.6%	Pass	
Channel U4	500.0000 V	500.0310 V	499.8500 V	500.1500 V	190.00 e-03 V	0,0310 V	20.7%	Pass	
Test @ 500V RMS @ 1000Hz									
Channel U1	500.0000 V	500.1040 V	499.8500 V	500.1500 V	380.00 e-03 V	0,1040 V	69.3%	Pass	
Channel U2	500.0000 V	500.1267 V	499.8500 V	500.1500 V	380.00 e-03 V	0,1267 V	84.4%	Pass	
Channel U3	500.0000 V	500.0980 V	499.8500 V	500.1500 V	380.00 e-03 V	0,0980 V	65.3%	Pass	
Channel U4	500.0000 V	500.0760 V	499.8500 V	500.1500 V	380.00 e-03 V	0,0760 V	50.7%	Pass	
Test @ 900V_RMS @ 50Hz									
Channel U1	900.0000 V	900.0443 V	899.7300 V	900.2700 V	340.00 e-03 V	0,0443 V	16.4%	Pass	
Channel U2	900.0000 V	900.0450 V	899.7300 V	900.2700 V	340.00 e-03 V	0,0450 V	16.7%	Pass	
Channel U3	900.0000 V	900.0587 V	899.7300 V	900.2700 V	340.00 e-03 V	0,0587 V	21.7%	Pass	
Channel U4	900.0000 V	900.0223 V	899.7300 V	900.2700 V	340.00 e-03 V	0,0223 V	8.27%	Pass	
Test @ 900V_RMS @ 1000Hz									
Channel U1	900.0000 V	900.1633 V	899.7300 V	900.2700 V	660.00 e-03 V	0,1633 V	60.5%	Pass	
Channel U2	900.0000 V	900.1853 V	899.7300 V	900.2700 V	660.00 e-03 V	0,1853 V	68.6%	Pass	
Channel U3	900.0000 V	900.1167 V	899.7300 V	900.2700 V	660.00 e-03 V	0,1167 V	43.2%	Pass	
Channel U4	900.0000 V	900.0990 V	899.7300 V	900.2700 V	660.00 e-03 V	0,0990 V	36.7%	Pass	
Test @ 900V_RMS @ 10000Hz									
Channel U1	900.0000 V	900.6937 V	896.8500 V	903.1500 V	660.00 e-03 V	0,6937 V	22%	Pass	
Channel U2	900.0000 V	901.4933 V	896.8500 V	903.1500 V	660.00 e-03 V	1,4933 V	47.4%	Pass	
Channel U3	900.0000 V	901.0550 V	896.8500 V	903.1500 V	660.00 e-03 V	1,0550 V	33.5%	Pass	
Channel U4	900.0000 V	901.1853 V	896.8500 V	903.1500 V	660.00 e-03 V	1,1853 V	37.6%	Pass	
CMRR-Test HV Channels @ 50Hz Filter: 120kHz									
CMRR better than 80dB CH5								Pass	(1)
CMRR better than 80dB CH6								Pass	(1)
CMRR better than 80dB CH7								Pass	(1)
CMRR better than 80dB CH8								Pass	(1)
Hardware Check (Selftest)								Pass	(1)
50 °C @ BoardTemp	50. °C	46 °C	25 °C	75 °C		-4,00 °C	14.8%	Pass	(1)

Ende des Kalibrierscheines / *End of Calibration Certificate*