

Sertifikat Kalibrasi

Calibration Certificate

Certificate number:

Order number:

Deskripsi Objek yang Dikalibrasi/Diukur

Description of object being calibrated or measured

Jenis alat atau objek : Digital Multimeter

Type of instrument or object

Merek/pembuat dan tipe : Fluke 5730A

Brand/manufacturer and type

Identifikasi alat

Instrument identification

Nomor seri : -

Serial number

Identifikasi lain :

Other identification

Identitas Pemilik

Owner's identification

Nama :

Designation

Alamat : , , ,

Address

Pengesahan

Authorization

Pejabat yang mengesahkan : Direktur SNSU Termoelektrik dan Kimia

Authorizing officer

Nama : Dr. Ghufon Zaid

Name NIP 19711104 199012 1 001

Tanggal pengesahan :

Date of issue (dd/mm/yyyy)

Jumlah halaman (termasuk :

halaman ini)

Total number of pages including this one

Dokumen ini disahkan secara elektronik sesuai peraturan yang berlaku dengan sertifikat dari Balai Sertifikasi Elektronik (BsrE) dan tidak memerlukan tanda tangan atau cap. Dokumen asli dapat diperoleh dengan memindai kode QR di samping ini.

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Kalibrasi atau pengukuran yang dilaporkan dalam sertifikat ini tercakup dalam lingkup akreditasi menurut SNI ISO/IEC 17025 oleh Komite Akreditasi Nasional, kecuali dinyatakan dalam badan sertifikat.

The calibration or measurement reported in the certificate is covered in the accreditation scope according to SNI ISO/IEC 17025 by the National Accreditation Committee of Indonesia, unless marked otherwise in the body of certificate.

Nama Alat/*Instrument Name* : Digital Multimeter
Pembuat/*Manufacturer* : Fluke
Model/*Model* : 5730A
No. Seri/*Serial Number* : -
Tanggal Kalibrasi/*Calibration Date* : -
Tempat Kalibrasi/*Calibration Place* : laboratory

Hasil Kalibrasi/*Calibration Result*

Kondisi Ruangan/*Environmental Condition*

Suhu : $(22.0 \pm 24.0)^{\circ}\text{C}$
Lembap : $(49.0 \pm 59.0)\%$

Tegangan DC / *DC Voltage*

| Rentang <i>Range</i> | Titik Ukur <i>Measurement Point</i> | Pembacaan Alat <i>Instrument Reading</i> | Koreksi <i>Correction</i> | Ketidakpastian <i>Uncertainty</i> |
|--------------------------------|---|--|-------------------------------------|---|
| 100 mV | 0 mV | 0.0000 mV | 0.0000 mV | 0.0013 mV |
| 100 mV | 10 mV | 10.0000 mV | -0.0001 mV | 0.0014 mV |
| 100 mV | -10 mV | -10.0000 mV | 0.0000 mV | 0.0014 mV |
| 100 mV | 50 mV | 50.0000 mV | -0.0005 mV | 0.0016 mV |
| 100 mV | -50 mV | -50.0000 mV | -0.0001 mV | 0.0016 mV |
| 100 mV | 90 mV | 90.0000 mV | -0.0009 mV | 0.0018 mV |
| 100 mV | -90 mV | -90.0000 mV | -0.0001 mV | 0.0018 mV |
| 100 mV | 100 mV | 100.0000 mV | -0.0010 mV | 0.0019 mV |
| 100 mV | -100 mV | -100.0000 mV | -0.0001 mV | 0.0019 mV |
| 1 V | 0.1 V | 0.1000000 V | -0.0000010 V | 0.0000019 V |
| 1 V | -0.1 V | -0.1000000 V | -0.0000001 V | 0.0000019 V |
| 1 V | 0.5 V | 0.5000000 V | -0.0000017 V | 0.0000047 V |
| 1 V | -0.5 V | -0.5000000 V | 0.0000006 V | 0.0000047 V |
| 1 V | 0.9 V | 0.9000000 V | -0.0000020 V | 0.0000072 V |
| 1 V | -0.9 V | -0.9000000 V | 0.0000005 V | 0.0000071 V |
| 1 V | 1 V | 1.0000000 V | -0.0000021 V | 0.0000078 V |
| 1 V | -1 V | -1.0000000 V | 0.0000005 V | 0.0000078 V |
| 10 V | 1 V | 1.0000000 V | -0.0000021 V | 0.0000079 V |
| 10 V | -1 V | -1.0000000 V | 0.0000005 V | 0.0000078 V |
| 10 V | 2 V | 2.000000 V | -0.000003 V | 0.000014 V |
| 10 V | 3 V | 3.000000 V | -0.000010 V | 0.000027 V |
| 10 V | 4 V | 4.000000 V | -0.000012 V | 0.000029 V |
| 10 V | 5 V | 5.000000 V | -0.000013 V | 0.000032 V |
| 10 V | -5 V | -5.000000 V | 0.000010 V | 0.000032 V |
| 10 V | 6 V | 6.000000 V | -0.000015 V | 0.000045 V |
| 10 V | 7 V | 7.000000 V | -0.000016 V | 0.000048 V |
| 10 V | 8 V | 8.000000 V | -0.000018 V | 0.000050 V |
| 10 V | 9 V | 9.000000 V | -0.000020 V | 0.000053 V |
| 10 V | -9 V | -9.000000 V | 0.000008 V | 0.000053 V |
| 10 V | 10 V | 10.000000 V | -0.000021 V | 0.000058 V |
| 10 V | -10 V | -10.000000 V | 0.000008 V | 0.000058 V |
| 100 V | 10 V | 10.000000 V | -0.000021 V | 0.000059 V |
| 100 V | -10 V | -10.000000 V | 0.000008 V | 0.000059 V |
| 100 V | 50 V | 50.00000 V | -0.00003 V | 0.00046 V |
| 100 V | -50 V | -50.00000 V | 0.00005 V | 0.00046 V |

| | | | | |
|--------|---------|--------------|------------|-----------|
| 100 V | 90 V | 90.00000 V | -0.00005 V | 0.00076 V |
| 100 V | -90 V | -90.00000 V | 0.00005 V | 0.00076 V |
| 100 V | 100 V | 100.00000 V | -0.00006 V | 0.00083 V |
| 100 V | -100 V | -100.00000 V | 0.00005 V | 0.00083 V |
| 1000 V | 100 V | 100.00000 V | -0.00006 V | 0.00084 V |
| 1000 V | -100 V | -100.00000 V | 0.00005 V | 0.00084 V |
| 1000 V | 500 V | 500.0000 V | -0.0006 V | 0.0043 V |
| 1000 V | -500 V | -500.0000 V | 0.0001 V | 0.0043 V |
| 1000 V | 900 V | 900.0000 V | -0.0008 V | 0.0077 V |
| 1000 V | -900 V | -900.0000 V | 0.0003 V | 0.0077 V |
| 1000 V | 1000 V | 1000.0000 V | -0.0008 V | 0.0082 V |
| 1000 V | -1000 V | -1000.0000 V | 0.0004 V | 0.0082 V |

Arus DC / DC Current

| Rentang <i>Range</i> | Titik Ukur <i>Measurement Point</i> | Pembacaan Alat <i>Instrument Reading</i> | Koreksi <i>Correction</i> | Ketidakpastian <i>Uncertainty</i> |
|-------------------------|--|---|------------------------------|--------------------------------------|
| 100 | 0 | 0.0015 | 0.0026 | 0.0070 |
| 100 | 10 | 9.9984 | 0.0056 | 0.0075 |
| 100 | -10 | -10.0013 | 0.0056 | 0.0075 |
| 100 | 50 | 49.9976 | 0.0058 | 0.0094 |
| 100 | -50 | -50.0005 | 0.0052 | 0.0093 |
| 100 | 90 | 89.997 | 0.006 | 0.011 |
| 100 | -90 | -90.000 | 0.005 | 0.011 |
| 100 | 100 | 99.997 | 0.006 | 0.012 |
| 100 | -100 | -100.000 | 0.005 | 0.012 |
| 1 mA | 0.1 mA | 0.099992 mA | 0.000011 mA | 0.000012 mA |
| 1 mA | -0.1 mA | -0.100018 mA | 0.000023 mA | 0.000015 mA |
| 1 mA | 0.5 mA | 0.500020 mA | -0.000014 mA | 0.000032 mA |
| 1 mA | -0.5 mA | -0.500042 mA | 0.000048 mA | 0.000037 mA |
| 1 mA | 0.9 mA | 0.900045 mA | -0.000039 mA | 0.000052 mA |
| 1 mA | -0.9 mA | -0.900066 mA | 0.000071 mA | 0.000057 mA |
| 1 mA | 1 mA | 1.000051 mA | -0.000045 mA | 0.000057 mA |
| 1 mA | -1 mA | -1.000072 mA | 0.000078 mA | 0.000062 mA |
| 10 mA | 1 mA | 0.999881 mA | 0.000125 mA | 0.000079 mA |
| 10 mA | -1 mA | -1.000147 mA | 0.000153 mA | 0.000089 mA |
| 10 mA | 2 mA | 1.99989 mA | 0.00011 mA | 0.00011 mA |
| 10 mA | 3 mA | 2.99995 mA | 0.00009 mA | 0.00020 mA |
| 10 mA | 4 mA | 3.99997 mA | 0.00007 mA | 0.00024 mA |
| 10 mA | 5 mA | 5.00000 mA | 0.00005 mA | 0.00027 mA |
| 10 mA | -5 mA | -5.00021 mA | 0.00020 mA | 0.00029 mA |
| 10 mA | 6 mA | 6.00001 mA | 0.00004 mA | 0.00032 mA |
| 10 mA | 7 mA | 7.00003 mA | 0.00004 mA | 0.00036 mA |
| 10 mA | 8 mA | 8.00005 mA | 0.00002 mA | 0.00040 mA |
| 10 mA | 9 mA | 9.00007 mA | 0.00001 mA | 0.00044 mA |
| 10 mA | -9 mA | -9.00029 mA | 0.00025 mA | 0.00046 mA |
| 10 mA | 10 mA | 10.00009 mA | -0.00001 mA | 0.00048 mA |
| 10 mA | -10 mA | -10.00032 mA | 0.00027 mA | 0.00050 mA |
| 100 mA | 10 mA | 10.00016 mA | -0.00008 mA | 0.00049 mA |
| 100 mA | -10 mA | -10.0027 mA | 0.0027 mA | 0.0014 mA |
| 100 mA | 50 mA | 50.0063 mA | -0.0052 mA | 0.0051 mA |
| 100 mA | -50 mA | -50.0083 mA | 0.0083 mA | 0.0057 mA |
| 100 mA | 90 mA | 90.0123 mA | -0.0107 mA | 0.0090 mA |
| 100 mA | -90 mA | -90.0145 mA | 0.0145 mA | 0.0098 mA |
| 100 mA | 100 mA | 100.014 mA | -0.012 mA | 0.010 mA |
| 100 mA | -100 mA | -100.016 mA | 0.016 mA | 0.011 mA |
| 1 A | 0.1 A | 0.099984 A | 0.000018 A | 0.000011 A |
| 1 A | -0.1 A | -0.100014 A | 0.000014 A | 0.000010 A |
| 1 A | 0.5 A | 0.49999 A | 0.00000 A | 0.00013 A |
| 1 A | -0.5 A | -0.50001 A | 0.00004 A | 0.00013 A |
| 1 A | 0.9 A | 0.89997 A | 0.00000 A | 0.00021 A |
| 1 A | -0.9 A | -0.90000 A | 0.00004 A | 0.00021 A |
| 1 A | 1 A | 0.99997 A | 0.00000 A | 0.00024 A |

1 A

-1 A

-0.99998 A

0.00003 A

0.00024 A

Tegangan AC / AC Voltage

| Rentang | Titik Ukur | Frekuensi | Pembacaan Alat | Koreksi | Ketidakpastian |
|----------------|--------------------------|------------------|---------------------------|-------------------|-----------------------|
| <i>Range</i> | <i>Measurement Point</i> | <i>Frequency</i> | <i>Instrument Reading</i> | <i>Correction</i> | <i>Uncertainty</i> |
| 10 mV | 10 mV | 20 Hz | 10.0000 mV | -0.0002 mV | 0.0057 mV |
| 10 mV | 10 mV | 50 Hz | 10.0000 mV | -0.0004 mV | 0.0056 mV |
| 10 mV | 10 mV | 1 kHz | 10.0000 mV | -0.0004 mV | 0.0056 mV |
| 10 mV | 10 mV | 10 kHz | 10.0000 mV | -0.0010 mV | 0.0057 mV |
| 10 mV | 10 mV | 20 kHz | 10.0000 mV | -0.0052 mV | 0.0087 mV |
| 100 mV | 20 mV | 50 kHz | 20.000 mV | -0.012 mV | 0.018 mV |
| 100 mV | 30 mV | 100 kHz | 30.000 mV | -0.026 mV | 0.090 mV |
| 100 mV | 50 mV | 40 Hz | 50.000 mV | 0.000 mV | 0.012 mV |
| 100 mV | 100 mV | 80 Hz | 100.000 mV | 0.000 mV | 0.015 mV |
| 100 mV | 100 mV | 20 Hz | 100.000 mV | 0.001 mV | 0.025 mV |
| 100 mV | 100 mV | 50 Hz | 100.000 mV | 0.000 mV | 0.021 mV |
| 100 mV | 100 mV | 1 kHz | 100.000 mV | 0.000 mV | 0.021 mV |
| 100 mV | 100 mV | 10 kHz | 100.000 mV | -0.012 mV | 0.047 mV |
| 100 mV | 100 mV | 20 kHz | 100.00 mV | 0.10 mV | 0.11 mV |
| 100 mV | 100 mV | 50 kHz | 100.00 mV | 0.10 mV | 0.12 mV |
| 100 mV | 100 mV | 100 kHz | 100.00 mV | -0.07 mV | 0.15 mV |
| 1 V | 0.1 V | 20 Hz | 0.100000 V | 0.000001 V | 0.000025 V |
| 1 V | 0.1 V | 50 Hz | 0.100000 V | 0.000000 V | 0.000021 V |
| 1 V | 0.1 V | 1 kHz | 0.100000 V | 0.000000 V | 0.000021 V |
| 1 V | 0.1 V | 10 kHz | 0.100000 V | -0.000012 V | 0.000047 V |
| 1 V | 0.1 V | 20 kHz | 0.100000 V | 0.00010 V | 0.00011 V |
| 1 V | 0.1 V | 50 kHz | 0.100000 V | 0.00010 V | 0.00012 V |
| 1 V | 0.1 V | 100 kHz | 0.100000 V | -0.00007 V | 0.00015 V |
| 1 V | 0.3 V | 80 Hz | 0.300000 V | 0.000026 V | 0.000097 V |
| 1 V | 0.4 V | 100 Hz | 0.400000 V | 0.000031 V | 0.000099 V |
| 1 V | 1 V | 160 Hz | 0.500000 V | 0.00004 V | 0.00010 V |
| 1 V | 1 V | 200 Hz | 0.500000 V | 0.00004 V | 0.00010 V |
| 1 V | 1 V | 400 Hz | 0.600000 V | 0.00004 V | 0.00010 V |
| 1 V | 1 V | 500 Hz | 0.600000 V | 0.00004 V | 0.00010 V |
| 1 V | 1 V | 1 kHz | 0.800000 V | 0.00005 V | 0.00011 V |
| 1 V | 1 V | 2 kHz | 0.800000 V | 0.00010 V | 0.00013 V |
| 1 V | 1 V | 20 Hz | 1.000000 V | 0.00007 V | 0.00018 V |
| 1 V | 1 V | 50 Hz | 1.000000 V | 0.00006 V | 0.00011 V |
| 1 V | 1 V | 1 kHz | 1.000000 V | 0.00006 V | 0.00011 V |
| 1 V | 1 V | 10 kHz | 1.000000 V | -0.00006 V | 0.00029 V |
| 1 V | 1 V | 20 kHz | 1.000000 V | -0.00052 V | 0.00082 V |
| 1 V | 1 V | 50 kHz | 1.000000 V | -0.00052 V | 0.00088 V |
| 1 V | 1 V | 100 kHz | 1.000000 V | -0.00047 V | 0.00097 V |
| 10 V | 1 V | 20 Hz | 1.000000 V | 0.00007 V | 0.00018 V |
| 10 V | 1 V | 50 Hz | 1.000000 V | 0.00006 V | 0.00011 V |
| 10 V | 1 V | 1 kHz | 1.000000 V | 0.00006 V | 0.00011 V |
| 10 V | 1 V | 2 kHz | 1.000000 V | 0.00013 V | 0.00013 V |
| 10 V | 1 V | 4 kHz | 1.000000 V | 0.00013 V | 0.00013 V |
| 10 V | 1 V | 5 kHz | 1.000000 V | 0.00013 V | 0.00013 V |
| 10 V | 1 V | 10 kHz | 1.000000 V | -0.00006 V | 0.00029 V |
| 10 V | 1 V | 20 kHz | 1.000000 V | -0.00052 V | 0.00082 V |
| 10 V | 1 V | 50 kHz | 1.000000 V | -0.00052 V | 0.00088 V |
| 10 V | 1 V | 100 kHz | 1.000000 V | -0.00047 V | 0.00097 V |
| 10 V | 5 V | 20 Hz | 5.00000 V | 0.0004 V | 0.0014 V |
| 10 V | 5 V | 50 Hz | 5.00000 V | 0.0006 V | 0.0010 V |
| 10 V | 5 V | 1 kHz | 5.00000 V | 0.0006 V | 0.0010 V |
| 10 V | 5 V | 10 kHz | 5.00000 V | -0.0004 V | 0.0028 V |
| 10 V | 5 V | 20 kHz | 5.00000 V | -0.0010 V | 0.0082 V |
| 10 V | 5 V | 50 kHz | 5.00000 V | -0.0010 V | 0.0082 V |
| 10 V | 5 V | 20 kHz | 5.00000 V | -0.0010 V | 0.0082 V |
| 10 V | 10 V | 20 Hz | 10.00000 V | 0.0006 V | 0.0017 V |
| 10 V | 10 V | 50 Hz | 10.00000 V | 0.0010 V | 0.0011 V |

| | | | | | |
|--------|-------|---------|-----------|-----------|----------|
| 10 V | 10 V | 1 kHz | 10.0000 V | 0.0010 V | 0.0011 V |
| 10 V | 10 V | 10 kHz | 10.0000 V | -0.0009 V | 0.0028 V |
| 10 V | 10 V | 20 kHz | 10.0000 V | -0.0021 V | 0.0082 V |
| 10 V | 10 V | 50 kHz | 10.0000 V | -0.0021 V | 0.0082 V |
| 10 V | 10 V | 100 kHz | 10.0000 V | -0.0038 V | 0.0092 V |
| 100 V | 10 V | 20 Hz | 10.0000 V | 0.0006 V | 0.0017 V |
| 100 V | 10 V | 50 Hz | 10.0000 V | 0.0010 V | 0.0011 V |
| 100 V | 10 V | 1 kHz | 10.0000 V | 0.0010 V | 0.0011 V |
| 100 V | 10 V | 10 kHz | 10.0000 V | -0.0009 V | 0.0028 V |
| 100 V | 10 V | 20 kHz | 10.0000 V | -0.0021 V | 0.0082 V |
| 100 V | 10 V | 50 kHz | 10.0000 V | -0.0021 V | 0.0082 V |
| 100 V | 10 V | 100 kHz | 10.0000 V | -0.0038 V | 0.0092 V |
| 100 V | 100 V | 20 Hz | 100.000 V | 0.000 V | 0.017 V |
| 100 V | 100 V | 50 Hz | 100.000 V | -0.003 V | 0.012 V |
| 100 V | 100 V | 1 kHz | 100.000 V | -0.003 V | 0.012 V |
| 100 V | 100 V | 10 kHz | 100.000 V | -0.029 V | 0.029 V |
| 100 V | 100 V | 20 kHz | 100.000 V | -0.042 V | 0.082 V |
| 100 V | 100 V | 50 kHz | 100.000 V | -0.042 V | 0.084 V |
| 100 V | 100 V | 100 kHz | 100.00 V | -0.04 V | 0.15 V |
| 1000 V | 100 V | 20 Hz | 100.000 V | 0.000 V | 0.017 V |
| 1000 V | 100 V | 50 Hz | 100.000 V | -0.003 V | 0.012 V |
| 1000 V | 100 V | 1 kHz | 100.000 V | -0.003 V | 0.012 V |
| 1000 V | 500 V | 50 Hz | 500.000 V | 0.071 V | 0.076 V |
| 1000 V | 500 V | 1 kHz | 500.000 V | 0.071 V | 0.076 V |
| 1000 V | 900 V | 50 Hz | 900.00 V | 0.11 V | 0.13 V |
| 1000 V | 900 V | 1 kHz | 900.00 V | 0.11 V | 0.13 V |

Arus AC / AC Current

| Rentang | Titik Ukur | Frekuensi | Pembacaan Alat | Koreksi | Ketidakpastian |
|---------|-------------------|-----------|--------------------|------------|----------------|
| Range | Measurement Point | Frequency | Instrument Reading | Correction | Uncertainty |
| 100 | 10 | 20 Hz | 10.00 | 0.00 | 0.12 |
| 100 | 10 | 50 Hz | 10.00 | 0.00 | 0.12 |
| 100 | 10 | 1 kHz | 10.00 | 0.00 | 0.12 |
| 100 | 100 | 20 Hz | 100.00 | 0.00 | 0.13 |
| 100 | 100 | 50 Hz | 100.00 | 0.00 | 0.13 |
| 100 | 100 | 1 kHz | 100.00 | 0.00 | 0.13 |
| 1 mA | 0.1 mA | 20 Hz | 0.10000 mA | 0.00000 mA | 0.00013 mA |
| 1 mA | 0.1 mA | 50 Hz | 0.10000 mA | 0.00000 mA | 0.00013 mA |
| 1 mA | 0.1 mA | 1 kHz | 0.10000 mA | 0.00000 mA | 0.00013 mA |
| 1 mA | 1 mA | 20 Hz | 1.00000 mA | 0.00009 mA | 0.00058 mA |
| 1 mA | 1 mA | 50 Hz | 1.00000 mA | 0.00009 mA | 0.00056 mA |
| 1 mA | 1 mA | 1 kHz | 1.00000 mA | 0.00009 mA | 0.00069 mA |
| 1 mA | 1 mA | 5 kHz | 1.0000 mA | 0.0001 mA | 0.0023 mA |
| 1 mA | 1 mA | 10 kHz | 1.0000 mA | -0.0002 mA | 0.0023 mA |
| 10 mA | 1 mA | 20 Hz | 1.00000 mA | 0.00009 mA | 0.00058 mA |
| 10 mA | 1 mA | 50 Hz | 1.00000 mA | 0.00009 mA | 0.00056 mA |
| 10 mA | 1 mA | 1 kHz | 1.00000 mA | 0.00009 mA | 0.00069 mA |
| 10 mA | 1 mA | 5 kHz | 1.0000 mA | 0.0001 mA | 0.0023 mA |
| 10 mA | 1 mA | 10 kHz | 1.0000 mA | -0.0002 mA | 0.0023 mA |
| 10 mA | 5 mA | 20 Hz | 5.0000 mA | 0.0007 mA | 0.0042 mA |
| 10 mA | 5 mA | 50 Hz | 5.0000 mA | 0.0003 mA | 0.0041 mA |
| 10 mA | 5 mA | 1 kHz | 5.0000 mA | 0.0003 mA | 0.0045 mA |
| 10 mA | 5 mA | 5 kHz | 5.000 mA | 0.001 mA | 0.013 mA |
| 10 mA | 5 mA | 10 kHz | 5.000 mA | 0.000 mA | 0.013 mA |
| 10 mA | 10 mA | 20 Hz | 10.0000 mA | 0.0011 mA | 0.0058 mA |
| 10 mA | 10 mA | 50 Hz | 10.0000 mA | 0.0007 mA | 0.0056 mA |
| 10 mA | 10 mA | 1 kHz | 10.0000 mA | 0.0007 mA | 0.0063 mA |
| 10 mA | 10 mA | 5 kHz | 10.000 mA | 0.001 mA | 0.020 mA |
| 10 mA | 10 mA | 10 kHz | 10.000 mA | 0.000 mA | 0.020 mA |
| 100 mA | 10 mA | 20 Hz | 10.0000 mA | 0.0011 mA | 0.0058 mA |
| 100 mA | 10 mA | 50 Hz | 10.0000 mA | 0.0007 mA | 0.0056 mA |
| 100 mA | 10 mA | 1 kHz | 10.0000 mA | 0.0007 mA | 0.0063 mA |

| | | | | | |
|--------|--------|--------|------------|------------|------------|
| 100 mA | 10 mA | 5 kHz | 10.000 mA | 0.001 mA | 0.020 mA |
| 100 mA | 10 mA | 10 kHz | 10.000 mA | 0.000 mA | 0.020 mA |
| 100 mA | 100 mA | 20 Hz | 100.000 mA | 0.007 mA | 0.058 mA |
| 100 mA | 100 mA | 50 Hz | 100.000 mA | 0.007 mA | 0.055 mA |
| 100 mA | 100 mA | 1 kHz | 100.000 mA | 0.007 mA | 0.060 mA |
| 100 mA | 100 mA | 5 kHz | 100.00 mA | 0.01 mA | 0.15 mA |
| 100 mA | 100 mA | 10 kHz | 100.00 mA | 0.00 mA | 0.15 mA |
| 1 A | 0.1 A | 20 Hz | 0.100000 A | 0.000007 A | 0.000058 A |
| 1 A | 0.1 A | 50 Hz | 0.100000 A | 0.000007 A | 0.000056 A |
| 1 A | 0.1 A | 1 kHz | 0.100000 A | 0.000007 A | 0.000060 A |
| 1 A | 0.1 A | 5 kHz | 0.10000 A | 0.00001 A | 0.00015 A |
| 1 A | 0.1 A | 10 kHz | 0.10000 A | 0.00000 A | 0.00015 A |
| 1 A | 1 A | 20 Hz | 1.0000 A | 0.0000 A | 0.0010 A |
| 1 A | 1 A | 50 Hz | 1.0000 A | 0.0000 A | 0.0010 A |
| 1 A | 1 A | 1 kHz | 1.0000 A | 0.0000 A | 0.0011 A |
| 1 A | 1 A | 5 kHz | 1.0000 A | 0.0003 A | 0.0083 A |
| 1 A | 1 A | 10 kHz | 1.0000 A | 0.0012 A | 0.0083 A |

Resistansi / Resistance

| Rentang <i>Range</i> | Titik Ukur <i>Measurement Point</i> | Pembacaan Alat <i>Instrument Reading</i> | Koreksi <i>Correction</i> | Ketidakpastian <i>Uncertainty</i> |
|-------------------------|--|---|------------------------------|--------------------------------------|
| 10 Ω | 1 Ω | 1.00000 Ω | 0.00002 Ω | 0.00001 Ω |
| 10 Ω | 10 Ω | 10.00000 Ω | 0.00001 Ω | 0.00012 Ω |
| 100 Ω | 10 Ω | 10.00000 Ω | 0.00001 Ω | 0.00012 Ω |
| 100 Ω | 100 Ω | 100.0000 Ω | 0.0005 Ω | 0.0010 Ω |
| 1 k Ω | 0.1 k Ω | 0.1000000 k Ω | 0.0000005 k Ω | 0.0000010 k Ω |
| 1 k Ω | 1 k Ω | 1.000000 k Ω | 0.000057 k Ω | 0.000058 k Ω |
| 10 k Ω | 1 k Ω | 1.000000 k Ω | 0.000057 k Ω | 0.000058 k Ω |
| 10 k Ω | 10 k Ω | 10.000000 k Ω | 0.000054 k Ω | 0.000062 k Ω |
| 100 k Ω | 10 k Ω | 10.00000 k Ω | 0.00005 k Ω | 0.00006 k Ω |
| 100 k Ω | 100 k Ω | 100.0000 k Ω | 0.0008 k Ω | 0.0011 k Ω |
| 1 M Ω | 0.1 M Ω | 0.1000000 M Ω | 0.0000008 M Ω | 0.0000011 M Ω |
| 1 M Ω | 1 M Ω | 1.000000 M Ω | 0.000004 M Ω | 0.000015 M Ω |
| 10 M Ω | 1 M Ω | 1.000000 M Ω | 0.000004 M Ω | 0.000015 M Ω |
| 10 M Ω | 10 M Ω | 10.00000 M Ω | 0.00008 M Ω | 0.00027 M Ω |
| 100 M Ω | 10 M Ω | 10.00000 M Ω | 0.00008 M Ω | 0.00027 M Ω |
| 100 M Ω | 100 M Ω | 100.0000 M Ω | 0.0131 M Ω | 0.0039 M Ω |
| 1 G Ω | 0.1 G Ω | 0.1000000 G Ω | 0.0000131 G Ω | 0.0000039 G Ω |
| 1 G Ω | 1 G Ω | 1.00000 G Ω | 0.00107 G Ω | 0.00006 G Ω |

Catatan/Notes

Hasil kalibrasi ini diperoleh berdasarkan prosedur kalibrasi Instruksi Kerja Hasil kalibrasi ini diperoleh berdasarkan prosedur kalibrasi I.ME.1.03 untuk tegangan DC, I.ME.3.04 untuk arus DC, I.ME.5.05 untuk tegangan AC, I.ME.6.03 untuk arus AC, dan I.ME.2.10 untuk resistansi dengan menggunakan alat standar yang tertelusur ke SI melalui SNSU-BSN., dan Ketidakpastian Ketidakpastian pengukuran dihitung dengan tingkat kepercayaan tidak kurang dari 95% dan faktor cakupan $k = 2$. dengan menggunakan instrumen standar yang tertelusur ke SI melalui SNSU-BSN. / *The calibration result was acquired based on the procedure of Work Instruction The calibration result was acquired based on the procedure of I.ME.1.03 for DC voltage, I.ME.3.04 for DC current, I.ME.5.05 for AC voltage, I.ME.6.03 for AC current, and I.ME.2.10 for resistance using standard instruments that is traceable to SI through SNSU-BSN., and Uncertainty The uncertainty of measurement was calculated with a confidence level not less than 95% and coverage factor of $k = 2$. using the standard instrument that is traceable to SI through SNSU-BSN.*

Alat standar yang digunakan adalah Multifunction Calibrator F.5730A (SN.4978506), dan Transconductance Amplifier CH.8200 (SN.117). / *The standard instruments used were Multifunction Calibrator F.5730A (SN.4978506), and Transconductance Amplifier CH.8200 (SN.117).*

Ketidakpastian pengukuran dihitung dengan tingkat kepercayaan tidak kurang dari 0.95 dan faktor cakupan $k = 2$. / *The uncertainty of measurement was calculated with the confidence level not less than 0.95 and coverage factor of $k = 2$.*

Hasil kalibrasi yang ditandai bintang (*) tidak tercakup dalam ruang lingkup akreditasi KAN. / *Calibration results marked by asterisk (*) are not covered by KAN accreditation.*

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