

Purchase Contract

(hereafter the “Contract”)

1. CONTRACTUAL PARTIES

1.1 Fyzikální ústav AV ČR, v. v. i. (Institute of Physics of the Czech Academy of Sciences),

with registered offices at: Na Slovance 1999/2, 182 00 Praha 8, Czech Republic,
represented by: RNDr. Michael Prouza, Ph.D., Director,
registered in the Register of public research institutions of the Ministry of Education, Youth and Sports
of the Czech Republic.
ID No.: 68378271

Bank: [REDACTED]
Account No.: [REDACTED]

(hereinafter referred to as the “Buyer”)

and

TESTOVACÍ TECHNIKA s.r.o.

with registered offices at: Československé armády 923, 290 01 Poděbrady,
represented by: Ing. Bohumil Kvapil, executive
registered in Commercial Register kept by the Municipal Court in Prague, Section C, File 72744.
ID No.: 26129507
Tax ID No.: CZ26129507

Bank: [REDACTED]
Account No.: [REDACTED]

(hereinafter referred to as the “Seller”)

(the Buyer and the Seller are hereinafter jointly referred to as the “Parties” and each of them
individually as a “Party”).

2. FUNDAMENTAL PROVISIONS

- 2.1 The Buyer is the *Beneficiary* of the projects "Investment for RI CERN-CZ (CERN-INV)" project registration number CZ.02.01.01/00/23_015/0008198, and "Fundamental constituents of matter through frontier technologies (FORTE)", project registration number CZ.02.01.01/00/22_008/0004632, both under the *Operational Programme Jan Amos Komenský* within the framework of EU funds (hereinafter referred to as the “Projects”). The subject of performance under this Contract is intended for the Project and mainly financed from the support provided for its implementation.





- 2.2 The Seller has been selected as the winner of a public procurement procedure announced by the Buyer in accordance with Act No. 134/2016 Coll., on Public Procurement, as amended (hereinafter the **“Act”**), for the public contract with the title **“Set of instruments for electrical characterization of semiconductor devices”** (hereinafter the **“Procurement Procedure”**).
- 2.3 The documentation necessary for the implementation of the subject of performance hereof consist of
- 2.3.1 **Technical specifications** of the subject of performance hereof attached as **Annex No. 1** hereto.
- 2.3.2 The Seller’s bid submitted within the Procurement Procedure in its parts which describe the subject of performance in technical detail (hereinafter the **“Seller’s Bid”**); the Sellers’s Bid forms **Annex No. 2** to this Contract and is an integral part hereof.

In the event of a conflict between the Contract and its Annex or between the Contract’s Annexes, the technical specification / requirement of the higher level / quality shall prevail.

- 2.4 The Seller acknowledges that it is essential for the Buyer that the Seller delivers and handovers the subject of performance within the specified time and in the specified quality as stated in Annexes No. 1 and 2 of this Contract (including invoicing). If the Seller fails to comply with the contractual requirements, the Buyer may incur damages.

3. SUBJECT-MATTER OF THE CONTRACT

- 3.1 The subject of this Contract is the Seller’s obligation to deliver and transfer into the Buyer’s ownership:
- a **Set of instruments for electrical characterization of semiconductor devices** specified in detail in Annexes No. 1 and No. 2 hereto

(hereinafter the **“Equipment”**)

and the Buyer's obligation to accept the Equipment and to pay the Seller the purchase price as defined below.

- 3.2 The following activities are an integral part of the performance to be provided by the Seller:
- 3.2.1 Transport of the Equipment incl. all accessories specified in Annexes No. 1 and 2 hereto to the place of delivery;
- 3.2.2 Installation of the Equipment and all components necessary to operate the Equipment including connection to installation infrastructure at the place of performance;
- 3.2.3 Telephone or on-line assistance with the installation of the Equipment;
- 3.2.4 Delivery of detailed instructions and manuals for operation and maintenance, including list of spare parts, electrical connection schemes, etc. - all in Czech or English language, in electronic or hardcopy (printed) versions;
- 3.2.5 Free-of-charge warranty service during the warranty term;



Co-funded by
the European Union



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

OPJAK.cz
MSMT.cz



3.2.6 Provision of free technical support in the form of consultations, e.g. regarding fine tuning of the Equipment. The Seller shall provide the Buyer with this free support even after the warranty expires.

3.3 The Equipment consists of the following main parts:

3.3.1 High Power Source Measure Unit (1 piece),

3.3.2 Source Measure Unit (4 pieces),

3.3.3 Electrometer and High Resistance Meter with voltage source (1 piece),

3.3.4 the Dual-Channel Picoammeter (2 pieces).

3.4 The Seller shall be liable for the Equipment and related services to be in full compliance with this Contract, its Annexes and all valid legal regulation, technical and quality standards and shall also be liable that the Buyer will be able to use the Equipment for the defined purpose. In case of any conflict between applicable standards, it is understood that the stricter standard or its part shall always apply.

3.5 The status of the Equipment:

3.5.1 High Power Source Measure Unit is *brand new and unused instrument*.

3.5.2 *All four Source Measure Units are brand new and unused instruments.*

3.5.3 Electrometer and High Resistance Meter with voltage source is *brand new and unused instrument*.

3.5.4 Dual-Channel Picoammeters are *both brand new and unused instruments*.

4. PERFORMANCE PERIOD

The Seller undertakes to manufacture and deliver the Equipment to the Buyer within **3 months from the date** of the conclusion of the Contract.

5. PURCHASE PRICE, INVOICING, PAYMENTS

5.1 The purchase price is based on the Seller's submitted bid and amounts to **2 187 500,- CZK** (in words: two millions one hundred eighty-seven thousands five hundreds) excluding VAT for the Equipment (hereinafter the "**Price**") VAT shall be settled in accordance with the valid Czech regulation.

5.2 The Price includes any and all performance provided by the Seller in connection with meeting the Buyer's requirements for the proper and complete delivery of the Equipment hereunder, as well as all costs that the Seller may incur in connection with the delivery of the Equipment.

5.3 The Seller is entitled to invoice the Price after the acceptance protocol in accordance with Section 10.4 will have been signed. In case the Equipment will be delivered with minor defects, the Price shall be invoiced after removal of these minor defects.



Co-funded by
the European Union



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

OPJAK.cz
MSMT.cz



- 5.4 All invoices issued by the Seller must contain all information required by the applicable laws of the Czech Republic and, in addition, they must
- 5.4.1 contain registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request before the issuance of the first invoice,
 - 5.4.2 state that the Equipment is supplied for the purposes of the projects "Investment for RI CERN-CZ (CERN-INV)" with the registration number CZ.02.01.01/00/23_015/0008198, and "Fundamental constituents of matter through frontier technologies (FORTE)", project registration number CZ.02.01.01/00/22_008/0004632,
 - 5.4.3 comply with the double taxation agreements, if applicable.
- 5.5 Buyer requests electronic invoicing to the electronic address efaktury@fzu.cz.
- 5.6 Invoices shall be payable within thirty (30) days of the date of their delivery to the above address. Payment of the invoiced amount means the date of its remittance to the Seller's account.
- 5.7 If an invoice is not issued in conformity with the payment terms stipulated by the Contract or if it does not comply with the requirements stipulated by law, the Buyer shall be entitled to return the invoice to the Seller as incomplete, or incorrectly issued, for correction or issue of a new invoice, as appropriate, within five (5) business days of the date of its delivery to the Buyer. In such a case, the Buyer shall not be in delay with the payment of the Price or part thereof and the Seller shall issue a corrected invoice with a new and identical maturity period commencing on the date of delivery of the corrected or newly issued invoice to the Buyer.
- 5.8 The Buyer shall be entitled to unilaterally set off any of their payments against any receivables claimed by the Seller due to:
- 5.8.1 damages caused by the Seller,
 - 5.8.2 contractual penalties.
- 5.9 The Seller shall not be entitled to set off any of his receivables against any part of the Buyer's receivable hereunder.
- 6. OWNERSHIP TITLE**
- The ownership right to the Equipment and at the same time the associated risk of damage shall pass to the Buyer by delivery.
- 7. PLACE OF DELIVERY**
- The place of delivery of the Equipment shall be the seat of the Buyer at Na Slovance 1999/2, 182 00 Praha 8, Czech Republic.
- 8. NOTIFICATION OF DELIVERY**





The Seller shall notify the Buyer in writing of the exact date of delivery of the Equipment at least 15 days prior to such date, ensuring that the deadline for the performance hereunder is maintained.

9. INTERACTION OF THE PARTIES

- 9.1 The Seller undertakes to notify the Buyer of any obstacles on his part, which may negatively influence proper and timely delivery of the Equipment.
- 9.2 The Seller undertakes to provide the Buyer with cooperation in the event of inspections by authorized entities in connection with the Project.

10. DELIVERY AND ACCEPTANCE

- 10.1 The Seller shall transport the Equipment at his own cost to the place of delivery. If the shipment is intact, the Buyer shall issue delivery note for the Seller.
- 10.2 The Buyer shall verify whether the Equipment and its communication interfaces are functional within 3 weeks of the delivery of the Equipment.
- 10.3 The delivery shall include all technical documentation pertaining to the Equipment, user manuals and certificate of compliance of the Equipment and all its parts and accessories with approved standards.
- 10.4 The procedure shall be completed by acceptance of the Equipment confirmed by the acceptance protocol. The protocol shall contain the following information:
 - 10.4.1 Information about the Seller, the Buyer and any subcontractors;
 - 10.4.2 Description of the Equipment including description of all components and their serial numbers;
 - 10.4.3 Description of executed acceptance tests: type of test, duration and achieved parameters;
 - 10.4.4 List of technical documentation including the manuals;
 - 10.4.5 Eventually reservation of the Buyer regarding minor defects including the manner and deadline for their removal and
 - 10.4.6 Date and signature of the representative of the Buyer specified in Section 11.2 hereof.
- 10.5 Acceptance of the Equipment does not release the Seller from liability for defects that were not detected during the acceptance procedure.
- 10.6 The Buyer shall not be obliged to accept Equipment, which would show defects that would otherwise not form a barrier, on their own or in connection with other defects, to using the Equipment. In this case, the Buyer shall issue a record containing the reason for his refusal to accept the Equipment.

11. REPRESENTATIVES, NOTICES



Co-funded by
the European Union



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

OPJAK.cz
MSMT.cz



11.1 The Seller authorized the following representatives to communicate with the Buyer in all matters relating to the Equipment delivery:

[REDACTED]
e-mail: [REDACTED]
tel. [REDACTED]

11.2 The Buyer authorized the following representatives to communicate with the Seller in all matters relating to the Equipment delivery:

[REDACTED]
e-mail: [REDACTED]
tel.: +420 [REDACTED]

11.3 The representatives according to Sections 11.1 and 11.2 can be changed by a unilateral written declaration of the Buyer / Seller delivered to the Seller / Buyer.

11.4 All notifications to be made between the Parties hereunder must be made out in writing and delivered by hand (with confirmed receipt) or by post (to the address of the Seller's or Buyer's registered offices), or in the form of electronic delivery incorporating electronic signature (qualified certificate) to epodatelna@fzu.cz in the case of Buyer and to teste@teste.cz in the case of the Seller.

11.5 In all technical and expert matters (discussions on the Equipment testing, notification of the need to provide warranty or post-warranty service, technical assistance etc.), electronic communication between technical representatives of the Parties will be acceptable using e-mail addresses specified in Sections 11.1 and 11.2.

12. TERMINATION

12.1 This Contract may be terminated early by agreement of the Parties or withdrawal from the Contract on the grounds stipulated by law or in the Contract.

12.2 The Buyer is entitled to withdraw from the Contract without any penalty from the Seller in any of the following events:

12.2.1 The Seller is in delay with the delivery of the Equipment longer than 1 month after the date pursuant to Section 4. hereof.

12.2.2 The technical parameters or other conditions set out in the technical specifications set out in Annexes 1 and 2 to this Contract and in the relevant applicable technical standards will not be met by the Equipment at acceptance.

12.2.3 Facts emerge bearing evidence that the Seller will not be able to deliver the Equipment.

12.2.4 The Seller has breached the obligations specified within the conditions of the Procurement Procedure, in particular the obligations arising from the affidavit which forms Annex No. 3 to this Contract, necessary for the selection of an economic operator according to Section 2.2 of this Contract.



- 12.3 The Seller is entitled to withdraw from the Contract in the event of the Buyer being in default with the payment for more than 2 months with the exception of the cases when the Buyer refused an invoice due to defect on the delivered Equipment or due to breach of the Contract by the Seller.
- 12.4 Withdrawal from the Contract becomes effective on the day the written notification to that effect is delivered to the other Party. The Party which had received performance from the other Party prior to such withdrawal shall duly return such performance.

13. INSURANCE

- 13.1 The Seller undertakes to insure the Equipment against all risks, in the amount of the Price for the entire period from the commencement of the transportation of the Equipment until duly handed over to the Buyer. In the event of a breach of this obligation, the Seller shall be liable to the Buyer for damages incurred in connection therewith.
- 13.2 The Seller is liable for the damages that he has caused. The Seller is also liable for damages caused by third parties which have undertaken to carry out performance or part thereof under this Contract.

14. WARRANTY TERMS

- 14.1 The Seller shall provide warranty for the quality of the Equipment for a period of **1 year**.
- 14.2 The warranty term shall commence on the day following the date of signing of the acceptance protocol pursuant to Section 10.4 hereof. The warranty does not cover consumable parts. Consumable parts for the purposes of the Contract are the items contained in the Equipment which are consumed at regular intervals during the normal use of the Equipment, i.e. parts which have a specified typical lifetime, that does not exceed the warranty period provided the Equipment is used with normal frequency.
- 14.3 Should the Buyer discover a defect, he shall notify the Seller to rectify such defect using the e-mail address: teste@teste.cz. The Seller is obliged to notify the Buyer without delay about any change of this e-mail address. The Seller shall be obliged to review any warranty claim within 72 hours (within business days) from its receipt and to propose solution, unless agreed otherwise by the Parties.
- 14.4 During the warranty period, the Seller shall be obliged to rectify any claimed defects within 30 days from the date on which the Equipment was delivered to the Seller for repair or within 30 days from receipt of the Buyer's notification if the Seller sends a technician to perform the repair on-site. In cases of unusual defects, the Seller shall be obliged to rectify the defect in the period corresponding to the nature of the defect and to define the deadline for the completion of the repair or for shipping of the rectified Equipment.
- 14.5 During the warranty period, any and all costs associated with defect rectification / repair including transport and travel expenses of the Seller shall be always borne by the Seller.
- 14.6 The repaired Equipment shall be delivered by the Seller to the Buyer along with a protocol confirming removal of the defect (hereinafter the "**Repair Protocol**"). If the Equipment is delivered duly repaired and defect-free, the Buyer will confirm the Repair Protocol.
- 14.7 The repaired portion of the Equipment shall be subject to a new warranty term in accordance with Section 14.1 which commences to run on the day following the date when the Repair Protocol was





executed. However, the aggregate warranty period for any part of the Equipment shall not exceed 36 months.

- 14.8 The Seller undertakes to provide the Buyer with updates of the software controlling the Equipment for the entire term of warranty.

15. CONTRACTUAL PENALTIES

- 15.1 The Buyer shall be entitled to a contractual penalty in the amount of 0.1 % of the Price for each commenced day of delay with the performance pursuant to the relevant part of Section 4. hereof.
- 15.2 The Buyer shall be entitled to a contractual penalty in the amount of 0.05 % of the Price for each commenced day of delay with rectifying of defects claimed within the warranty period.
- 15.3 In the event of default in payment of any due receivables (monetary debt) under the Contract, the defaulting Party (the debtor) shall be obliged to pay a contractual penalty of 0.05 % of the amount due for each commenced day of delay in payment.
- 15.4 Contractual penalties are payable within 30 days of receipt of the demand for payment.
- 15.5 Payment of the contractual penalty shall be without prejudice to the rights of the Parties to claim compensation for damages incurred.
- 15.6 Payment of any contractual penalty cannot be demanded if the breach of the contractual obligation causes force majeure.

16. DISPUTES

In the event that any dispute arising out of this Contract cannot be resolved by negotiations, it shall be resolved by a court in the Czech Republic; the court having jurisdiction will be the court where the seat of the Buyer is located. Disputes shall be resolved exclusively by the law of the Czech Republic.

17. FINAL PROVISIONS

- 17.1 This Contract constitutes the entire agreement between the Parties. The relations between the Parties not regulated by this Contract shall be governed by Czech law, in particular by the Act No. 89/2012 Coll., the Civil Code, as amended (hereinafter the “**Civil Code**”).
- 17.2 This Contract may be amended or supplemented solely by written amendments. The Parties expressly refuse to amend the Contract in any other way.
- 17.3 The Parties expressly agree that the Contract will be published in accordance with Act No. 340/2015 Coll., on special conditions for the effectiveness of some contracts, publication of these contracts and Contract Register, as amended. The Parties hereby declare that all information contained in the Contract and its Annexes is not considered trade secrets under § 504 of the Civil Code and grant permission for their use and disclosure without setting any additional conditions. The Buyer shall ensure the publication of the Contract in the Contract Register.
- 17.4 This Contract becomes effective as of the day of its publication in the Contract Register.





17.5 The following Annexes form an integral part of the Contract:

Annex No. 1: Technical specification on the subject of performance

Annex No. 2: Technical description of the Equipment as presented in Seller's bid

Annex No. 3: Affidavit according to § 6 paragraph 4 of the Act No. 134/2016 Coll.

17.6 The Parties, manifesting their consent with the entire contents of this Contract, attach their signature hereunder.

In Prague

In Poděbrady

For the Buyer

For the Seller

23.7.2025 elektronický podpis

17.7.2025 elektronický podpis

_ RNDr. Michael Prouza, Ph.D.
Director

Ing. Bohumil Kvapil
Executive



Co-funded by
the European Union



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

OPJAK.cz
MSMT.cz



Annex No. 1 - Technical specification on the subject of performance

Tab. 1 – The Equipment must meet the technical conditions and include components listed in this table.

No.	Description and minimum specification of the Equipment as defined by the Buyer	Description and specification of the Equipment offered by the Seller	Complies YES/NO
	High Power Source Measure Unit, 1 piece	KEITHLEY 2657A	
1	Voltage source range (-3 kV, +3 kV) or wider	(-3 kV, +3 kV)	YES
2	Availability of fast digitizing (measurement speed close to 1 us per sample) and precise integrating measurement modes	The dual high speed A/D converters sample as fast as 1 μ s per point, both voltage and current. Two Measurement Modes: Digitizing or Integrating	YES
3	Voltage source power providing minimal current of +/-20 mA at +/- 3 kV, -120 mA and +60 mA at -1.5 kV, +120 mA and -60 mA at +1.5 kV, +/-120 mA at 0 kV	+/-20 mA at +/- 3 kV, -120 mA and +60 mA at -1.5 kV, +120 mA and -60 mA at +1.5 kV, +/-120 mA at 0 kV	YES
4	Minimal voltage source accuracy as +/-(% reading + volts): 0.05% + 50 mV for range 200 V, 0.05% + 150 mV for range 500 V, 0.05% + 500 mV for range 1500 V, 0.05% + 800 mV for range 3000 V	0.03% + 50 mV for range 200 V, 0.03% + 150 mV for range 500 V, 0.03% + 500 mV for range 1500 V, 0.03% + 800 mV for range 3000 V	YES
5	Minimal voltage measurement accuracy in fast measurement mode as +/-(% reading + volts): 0.05% + 100 mV for range 200 V, 0.05% + 200 mV for range 500 V, 0.05% + 600 mV for range 1500 V, 0.05% + 1200 mV for range 3000 V	0.05% + 100 mV for range 200 V, 0.05% + 200 mV for range 500 V, 0.05% + 600 mV for range 1500 V, 0.05% + 1200 mV for range 3000 V	YES
6	Minimal voltage measurement accuracy in precise integrating measurement mode as +/-(% reading + volts) for NPLC = 1: 0.03% + 50 mV for range 200 V, 0.03% + 100 mV for range 500 V, 0.03% + 300 mV for range 1500 V, 0.03% + 600 mV for range 3000 V	0.025% + 50 mV for range 200 V, 0.025% + 100 mV for range 500 V, 0.025% + 300 mV for range 1500 V, 0.025% + 600 mV for range 3000 V	YES
7	Minimal current source accuracy as +/-(% reading + amperes + proportional offset in amperes), with V_o being the output voltage: 0.1% + 2 pA + $V_o \times E^{-15}$ for range 1 nA, 0.1% + 5 pA + $V_o \times E^{-14}$ for range 10 nA, 0.1% + 60 pA + $V_o \times E^{-13}$ for range 100 nA, 0.05% + 700 pA for range 1 uA, 0.05% + 5 nA for range 10 uA, 0.05% + 60 nA for range 100 uA, 0.05% + 300 nA for range 1 mA, 0.05% + 1.2 μ A for range 2 mA, 0.05% + 12 μ A for range 20 mA, 0.05% + 36 μ A for range 120 mA	0.1% + 2 pA + $V_o \times E^{-15}$ for range 1 nA, 0.1% + 5 pA + $V_o \times E^{-14}$ for range 10 nA, 0.1% + 60 pA + $V_o \times E^{-13}$ for range 100 nA, 0.03% + 700 pA for range 1 uA, 0.03% + 5 nA for range 10 uA, 0.03% + 60 nA for range 100 uA, 0.03% + 300 nA for range 1 mA, 0.03% + 1.2 μ A for range 2 mA, 0.03% + 12 μ A for range 20 mA, 0.03% + 36 μ A for range 120 mA	YES
8	Minimal current measurement accuracy in fast measurement mode as +/-(% reading + amperes)		YES





	+ proportional offset in amperes), with V_o being the output voltage: 0.2% + 1.2 pA + $V_o \times E^{-15}$ for range 1 nA, 0.2% + 5 pA + $V_o \times E^{-15}$ for range 10 nA, 0.2% + 60 pA + $V_o \times E^{-13}$ for range 100 nA, 0.1% + 800 pA for range 1 uA, 0.1% + 3 nA for range 10 uA, 0.05% + 50 nA for range 100 uA, 0.05% + 400 nA for range 1 mA, 0.05% + 1 uA for range 2 mA, 0.05% + 10 uA for range 20 mA, 0.05% + 50 uA for range 120 mA	0.2% + 1.2 pA + $V_o \times E^{-15}$ for range 1 nA, 0.2% + 5 pA + $V_o \times E^{-15}$ for range 10 nA, 0.2% + 60 pA + $V_o \times E^{-13}$ for range 100 nA, 0.08% + 800 pA for range 1 uA, 0.08% + 3 nA for range 10 uA, 0.05% + 50 nA for range 100 uA, 0.05% + 400 nA for range 1 mA, 0.05% + 1 uA for range 2 mA, 0.05% + 10 uA for range 20 mA, 0.05% + 50 uA for range 120 mA	
9	Minimal current measurement accuracy in precise integrating measurement mode as +/-(% reading + amperes + proportional offset in amperes), with V_o being the output voltage and NPLC = 1: 0.1% + 1.2 pA + $V_o \times E^{-15}$ for range 1 nA, 0.1% + 5 pA + $V_o \times E^{-15}$ for range 10 nA, 0.1% + 60 pA + $V_o \times E^{-13}$ for range 100 nA, 0.03% + 400 pA for range 1 uA, 0.03% + 1.5 nA for range 10 uA, 0.03% + 25 nA for range 100 uA, 0.03% + 200 nA for range 1 mA, 0.03% + 500 nA for range 2 mA, 0.03% + 5 uA for range 20 mA, 0.03% + 24 uA for range 120 mA,	0.1% + 1.2 pA + $V_o \times E^{-15}$ for range 1 nA, 0.1% + 5 pA + $V_o \times E^{-15}$ for range 10 nA, 0.1% + 60 pA + $V_o \times E^{-13}$ for range 100 nA, 0.025% + 400 pA for range 1 uA, 0.025% + 1.5 nA for range 10 uA, 0.02% + 25 nA for range 100 uA, 0.02% + 200 nA for range 1 mA, 0.02% + 500 nA for range 2 mA, 0.02% + 5 uA for range 20 mA, 0.02% + 24 uA for range 120 mA	YES
10	Available interfaces for communication with High Power SMU: GPIB (IEEE Std 488.1 compliant), RS232 (Baud rates from 300 bps to 115,200 bps, programmable number of data bits, parity type, and flow control), USB (USB 2.0 or faster), Ethernet (RJ-45 connector)	GPIB (IEEE Std 488.1 compliant), RS232 (Baud rates from 300 bps to 115,200 bps, programmable number of data bits, parity type, and flow control), USB (USB 2.0), Ethernet (RJ-45 connector, LXI 1.4)	YES
	Source Measure Unit, 4 pieces	KEITHLEY 2470	
1	Voltage source range (-1100 V, +1100 V) or wider	(-1100 V, +1100 V)	YES
2	Voltage source power providing minimal current of +/-10 mA in a range (+/-20 V, +/-1000 V), +/-1 A in a range (0 V, +/-20 V)	+/-10 mA in a range (+/-20 V, +/-1000 V), +/-100 mA A in a range (0 V, +/-200 V) +/-1 A in a range (0 V, +/-20 V)	YES
3	Minimal voltage source accuracy as +/-(% reading + volts): 0.03% + 600 uV for range 200 mV, 0.03% + 600 uV for range 2 V, 0.03% + 3 mV for range 20 V, 0.03% + 100 mV for range 1000 V	0.015% + 200 uV for range 200 mV, 0.02% + 300 uV for range 2 V, 0.015% + 2.4 mV for range 20 V, 0.02% + 100 mV for range 1000 V	YES
4	Minimal voltage measurement accuracy as +/-(% reading + volts) for NPLC = 1: 0.015% + 300 uV for range 200 mV, 0.015% + 300 uV for range 2 V, 0.015% + 1 mV for range 20 V,	0.012% + 200 uV for range 200 mV, 0.012% + 300 uV for range 2 V, 0.015% + 1 mV for range 20 V,	YES





	0.015% + 50 mV for range 1000 V	0.015% + 50 mV for range 1000 V	
5	Minimal current source accuracy as +/-(% reading + amps): 0.035% + 600 pA for range 1.0 uA, 0.035% + 2 nA for range 10 uA, 0.035% + 20 nA for range 100 uA, 0.035% + 200 nA for range 1 mA, 0.05% + 4 uA for range <10,20> mA, 0.07% + 20 uA for range 100 mA, 0.3% + 900 uA for range 1 A	0.025% + 400 pA for range 1.0 uA, 0.025% + 1.5 nA for range 10 uA, 0.02% + 15 nA for range 100 uA, 0.02% + 150 nA for range 1 mA, 0.02% + 1.5 uA for range 10 mA, 0.025% + 15 uA for range 100 mA, 0.067% + 900 uA for range 1 A	YES
6	Minimal current measurement accuracy as +/-(% reading + amps) for NPLC = 1: 0.03% + 300 pA for range 1.0 uA, 0.03% + 700 pA for range 10 uA, 0.03% + 6 nA for range 100 uA, 0.03% + 60 nA for range 1 mA, 0.04% + 1.2 uA for range <10,20> mA, 0.06% + 6 uA for range 100 mA, 0.25% + 570 uA for range 1 A	0.025% + 300 pA for range 1.0 uA, 0.025% + 700 pA for range 10 uA, 0.02% + 6 nA for range 100 uA, 0.02% + 60 nA for range 1 mA, 0.02% + 0.6 uA for range 10 mA, 0.025% + 6 uA for range 100 mA, 0.03% + 500 uA for range 1 A	YES
7	Available interfaces for communication with SMU: GPIB (IEEE Std 488 compliant)	GPIB: IEEE Std 488.1 compliant USB device (rear panel, type B): 2.0 full-speed Ethernet: RJ-45 connector, 10/100 BT	YES
Electrometer and High Resistance Meter with Voltage Source, 1 piece		KEITHLEY 6517B	
1	6½-digit (or better) high accuracy measurement mode	6½-Digit Resolution	YES
2	Built-in voltage source with range +/-1000 V	+/-1000 V	YES
3	Minimal voltage measurement accuracy as +/-(% reading + offset) for NPLC = 1: 0.03% + 40 uV for range 2 V, 0.03% + 300 uV for range 20 V, 0.06% + 3 mV for range 200 V	0.025% + 40 uV for range 2 V, 0.025% + 300 uV for range 20 V, 0.06% + 3 mV for range 200 V	YES
4	Minimal current measurement accuracy as +/-(% reading + offset) for NPLC = 1: 1% + 3 fA for range 20 pA, 1% + 5 fA for range 200 pA, 0.3% + 300 fA for range 2 nA, 0.3% + 500 fA for range 20 nA, 0.3% + 5 pA for range 200 nA, 0.2% + 100 pA for range 2 uA, 0.2% + 500 pA for range 20 uA, 0.2% + 5 nA for range 200 uA, 0.2% + 100 nA for range 2 mA, 0.2% + 500 nA for range 20 mA	1% + 3 fA for range 20 pA, 1% + 5 fA for range 200 pA, 0.2% + 300 fA for range 2 nA, 0.2% + 500 fA for range 20 nA, 0.2% + 5 pA for range 200 nA, 0.1% + 100 pA for range 2 uA, 0.1% + 500 pA for range 20 uA, 0.1% + 5 nA for range 200 uA, 0.1% + 100 nA for range 2 mA, 0.1% + 500 nA for range 20 mA	YES
5	Minimal resistance measurement accuracy as +/-(% reading + offset) for NPLC = 1: 0.15% + 10 Ohm for range 2 MOhm, 0.15% + 100 Ohm for range 20 MOhm, 0.15% + 1 kOhm for range 200 MOhm, 0.25% + 10 kOhm for range 2 GOhm, 0.25% + 100 kOhm for range 20 GOhm,	0.125% + 10 Ohm for range 2 MOhm, 0.125% + 100 Ohm for range 20 MOhm, 0.15% + 1 kOhm for range 200 MOhm, 0.225% + 10 kOhm for range 2 GOhm, 0.225% + 100 kOhm for range 20 GOhm,	YES





	0.35% + 1 MOhm for range 200 GOhm, 0.35% + 10 MOhm for range 2 TOhm, 1.1% + 100 MOhm for range 20 TOhm, 1.2% + 1 GOhm for range 200 TOhm,	0.35% + 1 MOhm for range 200 GOhm, 0.35% + 10 MOhm for range 2 TOhm, 1.025% + 100 MOhm for range 20 TOhm, 1.15% + 1 GOhm for range 200 TOhm	
6	Minimal electric charge measurement accuracy as +/-(% reading + offset) for NPLC = 1: 0.5% + 50 fC for range 2 nC, 0.5% + 500 fC for range 20 nC, 0.5% + 5 pC for range 200 nC, 0.5% + 50 pC for range 2 uC	0.4% + 50 fC for range 2 nC, 0.4% + 500 fC for range 20 nC, 0.4% + 5 pC for range 200 nC, 0.4% + 50 pC for range 2 uC	YES
7	Minimal voltage source accuracy as +/-(% setting + offset): 0.15% + 10 mV for range 100 V, 0.15% + 100 mV for range 1000 V.	0.15% + 10 mV for range 100 V, 0.15% + 100 mV for range 1000 V	YES
8	Available interfaces for communication: GPIB (IEEE Std 488.2 compliant), RS232 (programmable Baud rates, number of data bits and parity type)	GPIB (IEEE Std 488.2 compliant), RS232 (programmable Baud rates, number of data bits and parity type, max 115 baud rate)	YES
Dual-Channel Picoammeter, 2 pieces		KEITHLEY 6482	
1	Picoammeter with 2 independent picoammeter / voltage source channels and scaled voltage analog output	Picoammeter with 2 independent picoammeter / voltage source channels and scaled voltage analog output	YES
2	6½-digit (or better) measurement capability	6½-digit	YES
3	Two independent voltage source channels with range (0,+/-30 V) or wider	Two independent voltage source channels with range (0,+/-30 V)	YES
4	Minimal voltage source accuracy as +/-(% setting + offset): 0.2% + 5 mV for range 10 V 0.3% + 50 mV for range 30 V	0.15% + 5 mV for range 10 V 0.3% + 50 mV for range 30 V	YES
5	Minimal current measurement accuracy as +/-(% reading + offset) for NPLC = 1: 1.0% + 2 pA for range 2 nA, 0.5% + 2 pA for range 20 nA, 0.3% + 200 pA for range 200 nA, 0.25% + 200 pA for range 2 uA, 0.1% + 20 nA for range 20 uA, 0.1% + 20 nA for range 200 uA, 0.1% + 2 uA for range 2 mA, 0.1% + 2 uA for range 20 mA	1.0% + 2 pA for range 2 nA, 0.4% + 2 pA for range 20 nA, 0.3% + 200 pA for range 200 nA, 0.2% + 200 pA for range 2 uA, 0.1% + 20 nA for range 20 uA, 0.1% + 20 nA for range 200 uA, 0.1% + 2 uA for range 2 mA, 0.1% + 2 uA for range 20 mA	YES
6	Minimal analog output accuracy as +/-(% reading + offset): 6.0% + 90 mV for range 2 nA, 3.0% + 9 mV for range 20 nA, 6.0% + 90 mV for range 200 nA, 3.0% + 9 mV for range 2 uA, 6.0% + 90 mV for range 20 uA, 2.5% + 9 mV for range 200 uA, 6.0% + 90 mV for range 2 mA, 2.5% + 9 mV for range 20 mA	6.0% + 90 mV for range 2 nA, 3.0% + 9 mV for range 20 nA, 6.0% + 90 mV for range 200 nA, 3.0% + 9 mV for range 2 uA, 6.0% + 90 mV for range 20 uA, 2.5% + 9 mV for range 200 uA, 6.0% + 90 mV for range 2 mA, 2.5% + 9 mV for range 20 mA	YES
7	Available interfaces for communication:	GPIB (IEEE Std 488.2 compliant),	YES





	GPIB (IEEE Std 488.2 compliant), RS232 (programmable Baud rates, number of data bits and parity type)	RS232 (programmable Baud rates, number of data bits and parity type, max 57.6 baud rate)	
--	-------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	--



Co-funded by
the European Union





Annex No. 2

The Seller's bid in the extent it describes technical parameters of the Equipment



Co-funded by
the European Union



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

dodavatel

TESTOVACÍ TECHNIKA s.r.o.

Československé armády 923/15

290 01 Poděbrady

Česká republika (Česko)

IČO: 26129507, DIČ: CZ26129507

odběratel

Fyzikální ústav AV ČR, v.v.i.

Na Slovance 1999/2

182 21 Praha - Libeň

Česká republika (Česko)

IČO: 68378271, DIČ: CZ68378271

vystaveno: **7.6.2024**platnost do: **27.7.2024**způsob platby: **platba na fakturu**splatnost: **30 dní**

zadavatel

vystavil:

+420

Keithley

#	číslo položka	j.	cena/j.	sleva	cena bez DPH
1.	2657A HIGH VOLTAGE SMU - SINGLE CHANNEL	1 ks	Kč	%	Kč
záruka: 12 měsíců, doba dodání: 6–8 týdnů					
2.	6517B ELECTROMETER/HI RESISTANCE MTR	1 ks	Kč	%	Kč
záruka: 12 měsíců, doba dodání: 6–8 týdnů					
3.	6482 DUAL-CHANNEL PICOAMMETER / VOLTAGE SOURCE	2 ks	Kč	%	Kč
záruka: 12 měsíců, doba dodání: 6–8 týdnů					
4.	2470 1100V 1A 20W SOURCEMETER SMU INSTRUMENT	4 ks	Kč	%	Kč
záruka: 12 měsíců, doba dodání: 8–10 týdnů					

sazba DPH	cena bez DPH	DPH	cena vč. DPH
21%	2 187 500,00 Kč	459 375,00 Kč	2 646 875,00 Kč
	2 187 500,00 Kč	459 375,00 Kč	2 646 875,00 Kč

DPH vyčíslené orientačně

cena celkem **2 187 500,00 Kč**

cena bez DPH