

PURCHASE CONTRACT

5961210E

This purchase contract ("Contract") was concluded pursuant to section 2079 *et seq.* of the act no. 89/2012 Coll., Civil Code ("Civil Code"), on the day, month and year stated below by and between:

- (1) **Institute of Physics of the Academy of Sciences of the Czech Republic, a public research institution,**

with its registered office at: Na Slovance 2, Praha 8, PSČ: 182 21,

registration no.: 68378271,

represented by: prof. Jan Řídký, DrSc. – director

("Buyer"); and

- (2) **Renishaw plc,**

with its registered office at: New Mills, Wotton-under-Edge, Gloucestershire, GL128JR,

registration no.: 1106260 England,

represented by: Ing. Josef Sláma

enrolled in the commercial registered kept by GB422900581

("Seller").

(The Buyer and the Seller are hereinafter jointly referred to as "Parties" and individually as "Party".)

WHEREAS

- (A) The Buyer is a public contracting authority and the beneficiary of a grant of the Ministry of Education, Youth and Sports of the Czech Republic for a project „ELI: EXTREME LIGHT INFRASTRUCTURE – Phase 2“, reg. number: CZ.02.1.01/0.0/0.0/15_008/0000162 ("Project"), within the Operational Programme Research, Development and Education.
- (B) For the successful realization of the Project it is necessary to purchase the Object of Purchase (as defined below) in accordance with the Rules for the Selection of Suppliers within the Operational Programme Research, Development and Education.
- (C) The Seller wishes to provide the Object of Purchase to the Buyer for consideration.



- (D) The Seller's bid for the public procurement entitled "**Absolute Optical Encoder Assemblies**", whose purpose was to procure the Object of Purchase ("Public Procurement"), was selected by the Buyer as the most suitable.

IT WAS AGREED AS FOLLOWS:

1. BASIC PROVISIONS

1.1 Under this Contract the Seller shall hand over to the Buyer products that are described in Annex 1 (*Technical Specification*) to this Contract in the required quality, number (amount), and with the properties described therein ("Object of Purchase") and shall transfer to the Buyer ownership right to the Object of Purchase, and the Buyer shall take over the Object of Purchase and shall pay the Seller the Purchase Price (as defined below), all under the terms and conditions stipulated in this Contract.

1.2 Under this Contract the Seller shall also carry out following activities ("Related Activities"):

- a) to transport the Object of Purchase to the place of delivery; and
- b) cooperate with the Buyer during the performance of this Contract.

2. THE PLACE OF DELIVERY

The place of delivery is at the address: Fyzikální ústav AV ČR v.v.i/ELI beamlines, Průmyslová 836, 252 41 Dolní Břežany, Czech Republic or any other address in Dolní Břežany, Czech Republic, which the Buyer communicated to the Seller prior to the delivery of the Object of Purchase.

3. THE TIME OF DELIVERY

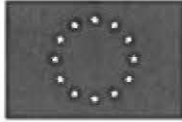
3.1 The Seller shall deliver the Object of Purchase and shall carry out Related Activities within 6 weeks from the effectiveness of this Contract.

4. THE OWNERSHIP RIGHT

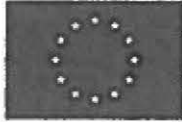
The ownership right to the Object of Purchase shall be transferred to the Buyer upon the signature of the handover protocol (delivery note).

5. PRICE AND PAYMENT TERMS

5.1 The purchase price for the Object of Purchase is 803 043,72,- Kč ("Purchase Price") without value added tax ("VAT"). VAT will be paid in accordance with the applicable legal regulations.



- 5.2 The Purchase Price cannot be exceeded and includes all costs and expenses of the Seller related to the performance of this Contract. The Purchase Price includes, among others, all expenses related to the handover of the Object of Purchase and execution of Related Activities, costs of copyright, insurance, customs, warranty service and any other costs and expenses connected with the performance of this Contract.
- 5.3 The Purchase Price for the Object of Purchase shall be paid on the basis of a tax document – invoice, to the account of the Seller designated in the invoice. The Purchase Price shall be paid after the signature of the handover protocol (delivery note).
- 5.4 The Buyer shall realize payments on the basis of duly issued invoices within 30 days from their receipt.
- 5.5 The invoice issued by the Seller as a tax document must contain all information required by the applicable laws of the Czech Republic. Invoices issued by the Seller in accordance with this Contract shall contain in particular following information:
- a) Name and registered office of the Buyer,
 - b) Tax identification number of the Buyer,
 - c) Name and registered office of the Seller,
 - d) Tax identification number of the Seller,
 - e) Registration number of the tax document,
 - f) Scope of the performance (including the reference to this Contract),
 - g) Date of the issue of the tax document,
 - h) Date of the fulfilment of the Contract,
 - i) Purchase Price,
 - j) Registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request before the issuance of the invoice,
 - k) Declaration that the performance of the Contract is for the purposes of a project „ELI: EXTREME LIGHT INFRASTRUCTURE – Phase 2“, reg. number: CZ.02.1.01/0.0/0.0/15_008/0000162.
- 5.6 In case that the invoice shall not contain the above mentioned information, the Buyer is entitled to return it to the Seller during its maturity period and this shall not be considered as a default. The new maturity period shall begin from the receipt of the supplemented or corrected invoice to the Buyer.



6. SELLER'S DUTIES

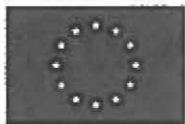
- 6.1 The Seller shall ensure that the Object of Purchase and Related Activities are in compliance with this Contract including all its annexes and applicable legal (e.g. safety), technical and quality norms.
- 6.2 During the performance of this Contract the Seller proceeds independently. If the Seller receives instructions from the Buyer, the Seller shall follow such instructions unless these are against the law or in contradiction to this Contract. If the Seller finds out or should have found out if professional care was exercised that the instructions are for any reason inappropriate or illegal or in contradiction to this Contract, then the Seller must notify the Buyer.
- 6.3 All things necessary for the performance of this Contract shall procure the Seller, unless this Contract stipulates otherwise.

7. HANDOVER OF THE OBJECT OF PURCHASE

- 7.1 Handover and takeover of the Object of Purchase shall be realized on the basis of a handover protocol (delivery note).
- 7.2 If the Seller fails to duly carry out all Related Activities or if the Object of Purchase does not meet requirements of this Contract, the Buyer is entitled to refuse the takeover of the Object of Purchase. In such a case the Seller shall remedy the deficiencies within ten (10) working days, unless Parties agree otherwise. The Buyer is entitled (but not obliged) takeover the Object of Purchase despite the above mentioned deficiencies, in particular if such deficiencies do not prevent the Buyer in the proper operation of the Object of Purchase. In such a case the Seller and the Buyer shall list the deficiencies in the handover protocol, including the manner and the date of their removal (remedy). If the Parties do not reach agreement in the handover protocol regarding the date of the removal, the Seller shall remove the deficiencies within ten (10) working days.

8. WARRANTY

- 8.1 The Seller hereby provides a warranty of quality of the Object of Purchase for the period of 12 months. If on the warranty list or other document is the warranty period of longer duration, then this longer warranty period shall have priority over the period stated in this Contract.
- 8.2 The warranty period shall begin on the day of the signature of the handover protocol by both Parties.
- 8.3 The Seller shall remove defects that occur during the warranty period free of charge.



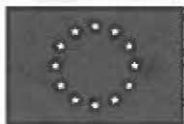
- 8.4 If the Buyer ascertains a defect of the Object of Purchase during the warranty period, the Buyer shall notify such defect without undue delay to the Seller. Defects may be notified on the last day of warranty period, at the latest.
- 8.5 The Buyer notifies defects in writing via e-mail. The Seller shall accept notifications of defects on the following e-mail address: martin.bohac@renishaw.com
- 8.6 In the notification the Buyer shall describe the defect and the manner of removal of the defect. The Parties shall agree on the manner of defects removal. If the Parties do not reach the agreement, the Buyer has the right to:
- a) request removal of the defect by the delivery of new Object of Purchase or its individual parts, or
 - b) request removal of the defect by repair, or
 - c) request adequate discount from the Purchase Price.

The choice among the above mentioned rights belongs to the Buyer. However, in case of a removable defect that occurs for the first time the Buyer shall not request removal of the defect by delivery of new Object of Purchase or its individual parts.

- 8.7 The Seller shall remove the defect within 10 working days. In cases where it is not possible for objective reasons proven to the Buyer by the Seller the Parties shall agree on another sufficient deadline.
- 8.8 Parties shall execute a protocol on the removal of the defect, which shall contain the description of the defect and the confirmation that the defect was removed. The warranty period shall be extended by a period of time that elapses between the notification of the defect until its removal in cases where the Buyer was prevented from using the Object of Purchase for its intended purpose.
- 8.9 In case that the Seller does not remove the defect within stipulated time or if the Seller refuses to remove the defect, then the Buyer is entitled to remove the defect at his own costs and the Seller shall reimburse these costs within 10 days after the Buyer's request to do so.
- 8.10 The warranty does not cover defects caused by unprofessional manipulation or by the failure to follow Seller's instructions for the operation and maintenance of the Object of Purchase.

9. RIGHT OF WITHDRAWAL

- 9.1 The Buyer is entitled to withdraw from this Contract without any penalties, if any of the following circumstances occur:



- a) the Seller shall be in delay with the fulfilment of this Contract and such delay lasts more than 4 weeks; or
- b) the insolvency proceeding is initiated against the Seller.

10. SPECIAL PROVISIONS

By signing this Contract, the Seller becomes a person that must cooperate during the finance control within the meaning of Section 2 letter e) of the act no. 320/2001 Coll., on finance control in the public administration, and shall provide to the Directing Body of the Operational Programme Research, Development and Education or other control bodies access to all parts of the bid, Contract or other documents that are related to the legal relationship formed by this Contract. This duty also covers documents that are subject to the protection in accordance with other acts (business secrets, secret information, etc.) provided that control bodies fulfil requirements stipulated by these acts. The Seller shall secure that all its subcontractors are also obliged to cooperate with control bodies in the above stipulated extent. The possibility of effective control must be preserved until the year 2026.

11. FINAL PROVISIONS

- 11.1 This Contract is governed by the laws of the Czech Republic, especially by the Civil Code.
- 11.2 All disputes arising out of this Contract or out of legal relations connected with this Contract shall be preferably settled by a mutual negotiation. In case that the dispute is not settled within sixty (60) days, such dispute shall be decided by courts of the Czech Republic in the procedure initiated by one of the Parties.
- 11.3 All modifications and supplements of this Contract must be in writing.
- 11.4 If any of provisions of this Contract are invalid or ineffective, the Parties are bound to change this Contract in such a way that the invalid or ineffective provision is replaced by a new provision that is valid and effective and to the maximum possible extent correspond to the original invalid or ineffective provision.
- 11.5 This Contract is executed in four (4) counterparts and every Party shall receive two (2) counterparts.
- 11.6 An integral part of this Contract is Annex 1 (Technical Specification). If Annex 1 (Technical Specification) uses the term "Contracting Authority" or "contracting authority" it means Buyer. If Annex 1 (Technical Specification) uses the term "Supplier" or "supplier" it means Seller.
- 11.7 This Contract shall be valid and effective on the date of the signature of both Parties.



IN WITNESS WHEREOF attach Parties their handwritten signatures:

Buyer

Signature: 

Name: prof. Jan Řídký, DrSc.

Position: director

Date: 28.11.2016

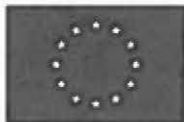
Seller

Signature: 

Name: Ing. Josef Sláma

Position: director Renishaw s.r.o.

Date: 29/11 2016



EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research,
Development and Education


MINISTRY OF EDUCATION,
YOUTH AND SPORTS

ANNEX 1

TECHNICAL SPECIFICATION

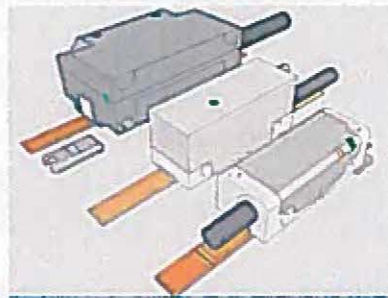
(NOTE: Annex No 3 to the Invitation to bid for the Public Procurement shall be attached hereto by the Contracting Authority before signature hereof by the Contracting authority after the Public Procurement procedur is finished)

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[RSD product category A]

Absolute Optical Encoder Assemblies

TP16_184




Keywords

N/A

	Position	Name
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Reviewed By			
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Petr Procházka	Safety Coordinator	NOTICE (RSD product category A)	
Viktor Fedosov	SE & Planning group leader; Quality Manager (<i>Appointed temporarily</i>)	NOTICE (RSD product category A)	

Approved by			
Name (Approver)	Position	Date	Signature
Bedřich Rus	Scientific Coordinator of Laser Technology (RP1)	19/10/2016	

Revision History / Change Log				
Change No.	Made by	Date	Change description, Pages, Chapters	TC rev.
1	B.Rus, M.Griffiths, M.Malý	20.09.2016	RSD draft creation; to be checked by RSD author/responsible	A
2	M.Malý	22.09.2016	Version for internal review	B
3	B.Rus, M.Malý	19.10.2016	Final version for approval	C

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1. Introduction

1.1. Purpose

The Contracting Authority is undertaking the ELI Beamlines project in the Czech Republic with the objective of building cutting-edge laser technologies to implement research in the field of laser-matter interaction.

The aim of this public contract is to procure, for use in the project, absolute optical encoder assemblies (linear and rotary types) meeting the requirements specified in the following sections.

1.2. Scope

This Requirements Specification Document (RSD) contains all of the functional, performance, design, safety, quality and delivery requirements for the procurement of **absolute optical encoder assemblies (linear and rotary types)**. It also identifies interfaces with the L3 laser compressor controls.

This requirement is for a product of procurement Category A. Category A is an Off-the-shelf Product without necessity of modifications and necessity to be subjected to a verification program (review of design, inspection and testing) for ELI applications by the actual project specifications. All verification activities performing by a Supplier shall be executed in accordance with the Supplier's plan of outgoing inspection and tests. Internal Acceptance Procedure of the product Category A shall be established and applied before the product implementation (operation phase).

1.3. Terms, Definitions and Abbreviations

For the purpose of this document, the following abbreviated terms apply:

Abbreviation	Meaning
BISS	Bidirectional/serial/synchronous (communication interface protocol)
CA	Contracting Authority
ELI	Extreme Light Infrastructure (project of the Contracting Authority)
FEP	Fluorinated Ethylene Propylene
RGA	Residual Gas Analysis
RSD	Requirements Specification Document
UHV	Ultra High Vacuum

2. Summary of Purchase Requirements

The CA's requirement is for:

- **2 in number rotary absolute optical encoder assemblies, and**
- **12 in number linear absolute optical encoder assemblies.**

Each assembly comprises a scale (either circular or linear) and a compatible readhead.

The encoders must be of "absolute" type, which provides a unique digital output for each position. The encoders must be able to identify its absolute position after switch-on.

The encoders must be designed and manufactured specifically for use in an ultra-high vacuum environment (vacuum pressure $\leq 10^{-7}$ mbar).

3. Specific Requirements

3.1. Encoder Type

REQ-018535/A

The encoders must be of "absolute" type, which provides a unique digital output for each position.

REQ-018536/A

The encoders must be able to identify its absolute position after switch-on.

3.2. Rotary Scales

REQ-018537/A

Rotary scales shall be manufactured in one piece from stainless steel with tapered mounting.

REQ-018538/A

A single track, true absolute scale shall be marked directly onto the outer periphery; scale pitch $\leq 30 \mu\text{m}$.

REQ-018539/A

The nominal external diameter of the ring shall be between 400 and 420 mm.

REQ-018540/A

Two (2) number rotary scales are required.

3.3. Linear Scales

REQ-018541/A

Linear scales shall be manufactured in one piece from stainless steel with adhesive back mounting.

REQ-018542/A

A single track, true absolute scale shall be marked directly onto the top face with $\pm 5 \mu\text{m/m}$ accuracy.

- REQ-018543/A Ten (10) number linear scales of 20mm long are required.
- REQ-018544/A Two (2) number linear scales of 160mm long are required.

3.4. Readheads

- REQ-018545/A The readhead communication interface shall be 'BISS C-mode' open source protocol.
- REQ-018546/A Readheads for rotary encoder shall be 26bit.
- REQ-018547/A Readheads for linear encoders shall be 32 bit.
- REQ-018548/A Resolution shall be 50nm or better.
- REQ-018549/A Two (2) in number compatible readheads are required for rotary encoder assemblies.
- REQ-018550/A Twelve (12) in number compatible readheads are required for linear encoders.

3.5. Vacuum Suitability

- REQ-018551/A All parts shall be compatible with vacuum pressures $\leq 10^{-7}$ mbar.
- REQ-018552/A All components shall be constructed from proven clean Residual Gas Analysis (RGA) materials.
- REQ-018553/A All construction materials of the readhead and cable shall withstand a bake-out temperature to 120 °C.
- REQ-018554/A There shall be no unvented voids.

3.6. Cables

- REQ-018555/A High-vacuum compatible cables shall be supplied with the readheads.
- REQ-018556/A Cables shall be minimum 3 m in length and shall be terminated in bare wire ends with identification of pins.

4. Delivery Requirements

REQ-018557/A

All components shall be cleaned according to a protocol suitable for installation into high-vacuum before packing in dust free wrappings.

5. Safety Requirements

REQ-018558/A

The Supplier shall supply a Declaration of Conformity for each product type if the appropriate legislation determines the Supplier's obligation to have a Declaration of Conformity for the purposes of a Device sale in the Czech Republic to fulfill the requirements of 2006/95/EC directive.

6. Quality Requirements

REQ-018559/A

The Supplier shall provide to the CA the Product User Manual.

REQ-018560/A

The Supplier shall provide factory test report sheet (outgoing check of the product). This information shall comprise declaration of conformity with the technical requirements defined by this RSD and completeness of the product.

REQ-018561/A

The Supplier shall establish and maintain a non-conformance control system compatible with EN ISO 9001: 2010 edition 2.