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European Structural and Investing Funds
Operational Programme Research,
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FRAMEWORK PURCHASE AGREEMENT

*concluded pursuant to relevant provisions of the Act No. 134/2016 Coll., on Public Procurement,
and pursuant to § 2079 et seq of the Act No. 89/2012 Coll., Civil Code, as amended*

Contractual parties:

1. **Fyzikální ústav AV ČR, v. v. i.**
Seat: Na Slovance 2, 182 21 Praha 8
Authorized representatives:
- in contractual matters: RNDr. Michael Prouza, PhD., Director
- in technical matters: Plötzeneder Birgit
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ID No.: 683 78 271

Registered in the Registry of public research institutions kept by the Ministry of education, youth and sports

(hereinafter the “**Buyer**”), and

2. **Sonepar Česká republika spol. s r.o.**
Seat: Vážní 1125, Slezské Předměstí, 500 03 Hradec Králové
Authorized representatives:
- in contractual matters: Dominik Chvojka, Sales manager
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Registered in commercial register kept by Krajský soud Hradec Králové, [section C , file 9304]

(hereinafter the “**Seller**”);

the parties jointly may be referred to as the “**Parties.**”

The Parties have agreed, on the day, month and year specified below, and on the basis of a completed public contract awarding procedure (carried out pursuant to Act No. 134/2016 Coll., on Public Procurement) for the public contract entitled “**Electrical installation material (TP20_064) -reissue**” (hereinafter the “**Procurement procedure**”), to conclude the following Framework Purchase Contract (hereinafter the “**Contract**”):



I. Subject of the Contract and General Provisions

1. The subject of this Contract is the commitment of the Seller to deliver electrical installation components corresponding to the parameters agreed herein and to provide certain associated services (the components hereinafter the “**Components**”) to the Buyer under the terms agreed upon herein. Any provisions hereof must be interpreted in accordance with the terms and conditions of the Procurement procedure and the bid submitted by the Seller thereto. The subject of this Contract is also the commitment of the Buyer to pay the purchase price agreed upon between the Parties in Art. III. hereof.
2. Detailed specifications of the Components are provided in the following Annexes hereof:
Annex 1: Technical Specifications (Requirements Specification Document)
Annex 2: Products and Prices
3. The Seller shall deliver Components identified in Annex 2 hereto by their catalogue numbers or by other designation or another Components that fully meet the requirements on the Components set forth by this Contract.
4. The Seller acknowledges that the Buyer is not, in relation to the performance agreed upon hereunder, in the position of an entrepreneur and that the performance is in no manner related to business activities of the Buyer.
5. The Components shall be new (unused).

II. Place of Delivery and Deadlines

1. Place of Delivery shall be the Buyer’s ELI Beamlines research facility: Průmyslová 836, 252 41 Dolní Břežany, Czech Republic.

Framework contract

2. This Contract is a framework contract under which the Buyer will order individual batches of Components in accordance with its actual needs based on individual written purchase orders. The Buyer is entitled to execute individual purchase orders within the entire term of validity of this Contract.
3. The Seller acknowledges that the numbers of Components to be ordered by the Buyer depend solely on the discretion of the Buyer, i.e. the Buyer does not promises to buy any minimum number of Components, except for the initial purchase described below.

Should the Buyer not buy Components of any type in the numbers stipulated in Annex 2 hereto as “Maximum quantity”, the Buyer shall have the right, in the financial extent remaining regarding the respective type of Component, to order any other type of Components (even the ones where the maximum quantity has already been reached). But the maximum total value of this Contract defined in Art. VII.2 hereof must not be exceeded.



The supplier shall accept purchase orders in minimum order increments (multiples) specified in column “MOQ increments” of Annex 2 hereto.

Initial Purchase

4. The minimum quantities of Components indicated in Annex 2 hereto shall form the Initial purchase to which the Buyer commits by entering into this Contract. The components forming the Initial purchase shall be delivered by the Seller without the need of receiving a purchase order from the Buyer.
5. The deadline for the delivery of the Components to the Place of Delivery under the individual purchase orders and also of the Components forming the Initial purchase shall be 4 weeks from the date when the Seller received a written order from the Buyer (from the date of signature hereof in case of the Initial order).

III. Price and Payment Terms

1. The unit prices for the Components are stipulated in Annex 2 hereto. VAT shall be added on top of the unit price in accordance with valid legislation.
2. The unit prices have been agreed as the highest acceptable (maximum) prices including any and all associated costs, fees and payments and reflect any and all costs of the Seller associated with the performance of the Seller hereunder. The price includes all costs of the Seller accrued in production, delivery, support that may be provided by the Seller by telephone, operational overhead, IP rights, insurance, taxes (except for VAT), customs, provision of warranty and any other costs that may be in any manner associated with performance hereunder.
3. In case the Buyer orders Components defined in Annex 2 hereto and such Components are no longer available, primarily due to the technological development of the product, the Seller shall offer to the Buyer other similar Components. The technical parameters of such Components must not be in any manner below the standard that was defined herein. Should the production of any of the Components be stopped or should any Component become unavailable for other reasons, the Seller shall be obliged to inform the Buyer of such fact in sufficient advance so that the Buyer may order needed number of such Components.
4. The price for the Components shall be paid to the Seller in CZK on the basis of invoices – tax receipts, by bank transfers to the Seller’s account provided in individual invoices. The Seller shall be authorized to issue invoices only after timely and proper delivery and take over of the Components; all invoices must be accompanied by copies of delivery notes confirmed by the Buyer. The Buyer accepts only electronic invoices delivered to the email address efaktury@fzu.cz.
5. The invoices shall be due in 30 days of their receipt by the Buyer. If an invoice states any other due period such period is deemed irrelevant and the due period stipulated here applies.
6. Payment date shall be understood as the day the invoiced amount was remitted from the Buyer’s account to the Seller’s account.



7. Invoices issued by the Seller shall comply with all requirements defined by applicable legislation, particularly by provisions of Act No. 563/1991 Coll., on Accounting, as amended, and Act No. 235/2004 Coll., on VAT, as amended (for tax receipts). In case of any invoice failing to meet the requirements the Buyer shall be authorized to return such invoice before the due date to the Seller for correction. Once the invoice is corrected and delivered to the Buyer, the due period starts to run from the beginning.
8. The Buyer is entitled to request that any invoice contains identification of a dotation project from which the respective purchase is funded.

IV. Right and Obligation of the Parties

1. Due to the nature of the Components and in some cases due to the need to unpack and install the Components under special conditions (for instance in cleanroom premises), the Buyer shall be authorized to inspect the Components and to identify apparent defects within 60 days of taking over the delivery.
2. The ownership right to the delivered Components and the risk of loss and damage thereto pass to the Buyer upon the takeover of the Components in the Place of delivery based on a confirmed delivery note.
3. The Buyer can't store original packaging of the delivered Components. Absence of original packaging cannot constitute valid reason for denial of potential claims related to the Components.
4. The Seller shall not assign any rights or obligations hereunder to third persons without a previous written consent of the Buyer.
5. The Seller expressly agrees that it shall not have any right to assign or unilaterally set off any of the receivables it may have against the Buyer arising in connection with this Contract.

V. Defects and Warranty for Quality

1. The Seller provides warranty (guarantee) for the quality of the delivered Components for the period of 2 years starting on the date of their delivery to the Buyer.
2. The Seller is liable for defects present in the Components upon their handover to the Buyer and for defects that will occur throughout the warranty period.
3. The Buyer shall make any defect claims in writing (including the form of a simple email). The Seller shall establish a special email address for reception of defect claims. The Seller shall receive defect claims during the entire term hereof and the warranty period at: kohoutek@sonepar.cz.
4. The Buyer shall specify in the claim the description of the defect and provide, if available, additional documentation (photo or other documentation). Should the Seller not be able to assess existence of the defect without inspecting the Components, the Parties shall agree whether the Components shall be shipped to the Seller or whether the Seller will inspect the



Components at the Buyer's site. Should the Buyer incur any costs in relation to claiming the defect (such as shipping costs), for which the Seller is liable, the Seller shall compensate the Buyer for any such costs. The Seller shall confirm to the Buyer the receipt of the defect claim within 2 working days of its delivery and shall inform the Buyer, within 5 working days from receiving the claim, carrying out the inspection or receiving the shipped Components for inspection, whether it recognizes the claim or not, and to propose the method of removing the defect in accordance with this Contract.

5. The Seller shall remove the defect by repair or by providing a replacement within 4 weeks from receiving the defect claim, unless a different deadline is agreed by the Parties due to the existence of objective obstacles.
6. In case of an irremovable defect and if the Buyer agrees, the defect might be removed by provision of an adequate discount.
7. In case the Seller fails to remove any defect within deadlines defined in Section 5 of this Article, or within additional period that may be agreed in writing between the Parties not exceeding 30 days, the Buyer shall be authorized to have the defect removed by a third person at its own cost and the Seller shall be obliged to compensate the Buyer for these costs within 15 business days from the Buyer claiming these in writing against the Seller. The Seller's liability (warranty) shall not be in any manner prejudiced by such actions.
8. Warranty does not cover defects caused by unprofessional handling, incorrect or inappropriate maintenance, failure to follow instructions of the manufacturers related to operation or maintenance of the Components, which were provided to the Buyer in writing.

VI. Delays, Penalties

1. In case the Seller is in delay with delivery of any Component to the Buyer, the Buyer shall be entitled starting with the first day of the eleventh week of the delay to claim a contractual penalty against the Seller in the amount of 0.3% of the price of the undelivered Component for each commenced day of delay; such contractual penalty shall not exceed 20% of the price of the undelivered Component.
2. In case the Seller is in delay with removing defects claimed by the Buyer during the warranty term, within the deadlines defined herein, the Seller shall starting with the first day of the fifth week of the delay pay a contractual penalty in the amount of 0.1% of the price of the defective Component for each commenced day of delay; such contractual penalty shall not exceed 10% of the price of the defective Component.
3. In case the Buyer is in delay with any payment due, the Buyer shall be obliged to pay late interest to the Seller in the amount specified by applicable legislation (Government Resolution No. 351/2013 Coll., as amended, or law replacing this resolution).



4. Contractual penalties shall be payable within 15 days of delivery of their enumeration by the other Party. Payment of contractual penalty does not prejudice the right to damages in the extent such damages exceed the amount of the contractual penalty.
5. The Buyer shall be entitled to unilaterally set off any contractual penalty against any payments invoiced by the Seller, even against those which have not become due yet.

VII. Term, Validity and Effective Date

1. This Contract becomes valid upon its signature and effective upon its publication in accordance with the applicable law.
2. This Agreement is concluded for the period of 18 months (or a longer period if automatically extended in accordance with the following sentence) or until exhausting the financial limit of 8 000 000 CZK excl. VAT, whichever comes first. If neither of the Parties states in written no later than 2 months before time expiration of this Contract that it does not wish time extension of the term of this Contract, the term of the Contract is automatically extended by 6 months (maximum four times). The total financial limit of the Contract must not be exceeded.
3. This Contract may be terminated by:
 - a) agreement of the Parties in writing;
 - b) termination notice in writing subject to conditions described below;
 - c) withdrawal from the Contract by either Party due to reasons defined herein or by law.
4. The Buyer shall be entitled to terminate this Contract by a three-month termination notice in writing, without specifying the reason; the termination notice period starts to run on the first day of the month following the month in which the notice was delivered to the Seller.
5. The Parties are entitled to withdraw from the Contract in case of material breaches of contractual obligations by the other Party, if such material breaches affected the contractual rights of the withdrawing Party. Withdrawal must be made in writing and must be delivered to the other Party. The Buyer shall be entitled to withdraw from this Contract also partially in relation to an individual purchase order.
6. The following instances represent material breaches of the Contract, including but not limited to:
 - a) seller's delay with delivery of any Components exceeding 90 days;
 - b) seller's delay with removal of defects exceeding three times the applicable period granted hereunder;
 - c) repeated delay on the Buyer's part with payment of invoiced amounts for the Components exceeding 90 days.



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7. All obligations of the Parties hereunder cease to exist when this Contract becomes ineffective. The rights related to damages compensation and the rights to contractual penalties arising before this Contract became ineffective survive as well as those obligations of the parties which are, by law, under this Contract or by their nature, meant to survive.

VIII. Final Provisions

1. This Contract shall be governed by the laws of the Czech Republic, in particular by the Civil Code.
2. This Contract constitutes the entire agreement between the Parties.
3. This Contract may be supplemented or amended solely by the way of written and numbered amendments.
4. Following annexes form an integral part of the Contract:
Annex No. 1: Technical Specifications (Requirements Specification Document)
Annex No. 2: Products and Prices
5. The Parties confirm they have read the Contract before signing and they understand and agree to its contents. Both Parties confirm their agreement by signing.

On behalf of the Buyer:
Fyzikální ústav AV ČR, v. v. i.

On behalf of the Seller:
Sonepar Česká republika spol. s r.o.

.....
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Director

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Annex No. 1 – Technical Specifications (Requirements Specification Document)

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<p>[RSD Product Category A]</p> <p><i>Electrical installation material</i></p> <p>TP20_064</p>  <p>Keywords</p> <p>N/A</p>			
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Prepared by	Control System Team Leader	Birgit Plötzeneder	

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Reviewed By

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<i>Name (Approver)</i>	<i>Position</i>	<i>Date</i>	<i>Signature</i>
Roman Kuřátko	Facility Manager		

Revision History / Change Log

<i>Change No.</i>	<i>Made by</i>	<i>Date</i>	<i>Change description, Pages, Chapters</i>	<i>TC rev.</i>
1	B. Plötzeneder	11.3.2020	RSD draft creation	A
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1. Introduction

1.1. Purpose

This Requirements Specification Document (RSD) lists the technical requirements and constraints on product applying in Control systems group of ELI project. This leads to the identification of product interfaces with the ELI science based technology and ELI building facility.

1.2. Scope

This RSD contains all general, transportation & installation, safety and quality requirements for the product **Electrical installation material** (TP20_064).

The product is an integral part of the control systems of the Beam transport and experiments and are registered in the PBS software under the PBS code: SE.BDS.CS.HW.MAT.EL.

This product is a **product of the category A**. The category A is an off-the-shelf product without necessity of modifications and necessity to be subjected to a verification program (design, inspection and testing review) according to the ELI Beamlines project. All verification activities shall be executed by Supplier in accordance to the supplier's outgoing inspection plan.

1.3. Terms, Definitions and Abbreviations

For the purpose of this document, the following abbreviated terms are applied:

Abbreviation	Meaning
CA	Contracting Authority (Institute of Physics AV CR, v. v. i.)
RSD	Requirements Specification Document

1.4. Reference documents

Doc. number	TC ID	Title of document / File
RD-01	00261571	Database-Electrical Installation Material_TP20_064

1.5. References to standards

If this document includes references to standards or standardized/ standardizing technical documents the CA allows/permits also another equal solution to be offered. If a supplier offers another equal solution the CA shall not reject its bid, once the supplier by appropriate means in the bid proves that the offered supplies, services or works meet in an equivalent manner the requirements including references to standards or technical documents.

2. General requirements

REQ-029023/A

The Supplier shall deliver to CA electrical installation components with parameters given in the **RD-01** (see chapter 1.4).

3. Transportation requirements and other business conditions

REQ-028804/A

The supplier shall transport the goods to the ELI facility.

REQ-028805/A

All products shall be delivered in protective package preventing damage.

REQ-028806/A

The supplier shall deliver the individual items in quantities specified in the **RD-01** column "**Min Qty**" (see also chapter 1.4).

*NOTE: The list **RD-01** includes individual item quantities, **not packages**.*

REQ-028807/A

The supplier shall accept additional orders at fixed item price in minimum order increments (multiples) specified in column "**MOQ**" of **RD-01** up to a total number of items specified in column "**Max Qty**" of **RD-01**.

REQ-028812/A

The Supplier shall deliver the items within maximum of 4 weeks from the contract signature, or from the date of additional order (REQ-028807/A)

REQ-028856/A

The supplier shall provide free delivery of any order exceeding in value a total of 10 000 CZK.

4. Safety Requirements

REQ-028808/A

The Supplier shall supply a Declaration of Conformity or any other equivalent document legally recognized and accepted in the Czech Republic for each product type if the appropriate legislation determines the Supplier's obligation to have a Declaration of Conformity (or the equivalent document) for the purposes of a Device sale in the Czech Republic to fulfil the requirements of 2001/95/EC directive or applicable Czech law.

5. Quality Requirements

REQ-028809/A

The Supplier shall provide the Product Manual as part of the delivered Device. The Manual shall include the instructions and descriptions regarding the following procedures:

- transport and handling;
- storage, cleaning and installation;
- safe operation and maintenance procedures.

REQ-028814/A

The Supplier shall provide information on the execution of the outgoing check of the products and ensure their completeness. At least this information shall comprise a declaration about the execution of outgoing check and declaration of conformity with the technical requirements defined by the product RSD.

NOTE: Alternatively the Supplier might provide the CA with information (e.g.: catalogue/technical data sheets, product manuals or other similar documentation) subject to the condition that such documentation is detailed enough to prove meeting all requirements stipulated herein.

REQ-028810/A

The Supplier shall establish and maintain a nonconformity control system compatible with ČSN EN ISO 9001 (equivalent to EN ISO 9001).



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Annex No. 2 – Products and Prices

Item Number	Category	Item Name	Main purpose	Requirements	Min Qty (Initial Purchase)	Max Qty	MOQ increments	Catalogue order number	Unit price (CZK ex. VAT)	Initial Purchase price (CZK ex. VAT)	Max Qty total price (CZK ex. VAT)
1	Relays	Slim Form Relays - 24VDC with bypass	External (inter-system) low-level signal interfaces	Relay terminal block for DIN rail NS 35/7.5 mount with screw connection and plug-in (replaceable) miniature electromechanical relay with LED, power contact, and manual operation ('override') function via quarter-turn screwdriver. Supports commoning of input and output voltages via continuous plug-in bridge to adjacent relays in continuous blocks of up to 32 adjacent relays. Contacts: 1 changeover contact; Coil voltage: 24 V DC; Operating voltage display: Yellow LED; Protection: Polarity protection diode, Damping diode; Contact type: 1 PDT; Contact material: AgSnO ₂ ; Max. switching voltage: 250 V AC/D; Max. inrush current: >= 10 A (4 s); Limiting continuous current: >= 6 A; Max. DIN rail width: 6.2 mm; Max. height: 80 mm; Max. depth: 94 mm; Min mechanical service life: 10 million cycles.	500	3200	50	2909649		CZK 0,00	CZK 0,00
2	Relays	Solid-state relays - 5VDC/ 24VDC/100KHZ	TTL trigger inputs (e.g., to fanout to cameras)	Solid-state relay for DIN rail NS 35/7.5 mount with LED and protective circuit in input and output circuits. Supports commoning of input and output voltages via continuous plug-in bridge to adjacent relays in continuous blocks of up to 32 adjacent relays. Input: 5 V DC; Output: 4 - 30 V DC/50 mA. Nominal input voltage UN: 5 V DC; Protection: Surge (> 14V on input, rated 0,5 kV), reverse polarity; Typical response time: <= 1.5 us; Typical turn-off time: <= 2 us; Minimum transmission frequency: 100 kHz; Operating voltage display: Yellow LED; Output voltage range: 4 V DC - 30 V DC; Limiting continuous current: >= 50 mA; Max. total DIN rail width: 6.2 mm; Max. height: 80 mm; Max. depth: 86 mm.	20	100	20	2902963		CZK 0,00	CZK 0,00
3	Relays	Solid-state relays - 24DC/ 24DC/100KHZ	bulk triggering of cameras and similar high speed signalling	Solid-state relay for DIN rail NS 35/7.5 mount with LED and protective circuit in input and output circuits. Supports commoning of input and output voltages via continuous plug-in bridge to adjacent relays in continuous blocks of up to 32 adjacent relays. Input: 24 V DC; Output: 4 - 30 V DC/50 mA. Nominal input voltage UN: 24 V DC; Protection: Surge (> 33V on input, > 35V on output, rated 0,5 kV), reverse polarity; Typical response time: <= 1.5 us; Typical turn-off time: <= 2 us; Minimum transmission frequency: 100 kHz; Operating voltage display: Yellow LED; Output voltage range: 4 V DC - 30 V DC; Limiting continuous current: >= 50 mA; Max. total DIN rail width: 6.2 mm; Max. height: 80 mm; Max. depth: 86 mm.	50	400	50	2902964		CZK 0,00	CZK 0,00
4	Relays	Solid State Relays - 24DC/24DC	internal systems galvanic isolation	Relay terminal block for DIN rail NS 35/7.5 mount with screw connection and plug-in (replaceable) miniature solid-state relay. Supports commoning of input and output voltages via continuous plug-in bridge to adjacent relays in continuous blocks of up to 32 adjacent relays. Contacts: 1 N/O contact; Input voltage: 24 V DC; Operating voltage display: Yellow LED; Input protection: Polarity protection diode, Damping diode; Output protection: Reverse polarity protection; Surge protection; Typical response time: <= 20 us; Typical turn-off time: <= 300 us; Output voltage range: 3 V DC - 33 V DC; Limiting continuous current: 3 A; Max. total DIN rail width: 6.2 mm; Max. height: 80 mm; Max. depth: 94 mm.	500	3200	50	2966634		CZK 0,00	CZK 0,00
5	Relays	Coupling relay - SIL 1	Safety systems interconnections	Safe coupling relay for DIN rail NS 35/7.5 mount with force-guided contacts, 5 N/O contacts, 2 N/C contacts, 1-channel, plug-in screw terminal block. Designation: SIL 1, High Demand according to IEC 61508; Insulation/surge voltage isolation: >= 4 kV between all current paths and housing; Recovery time: < 500 ms; Contact type: 5 enabling current paths, 2 confirmation current paths; Contact material: AgSnO ₂ ; Input voltage 24 V DC; Operating voltage display: 1x Green LED; Maximum switching voltage: 230 V AC/DC; Switching capacity according to IEC 60947-5-1: 3 A (24 V); Relay type: Electromechanical relay with force-guided contacts in accordance with EN 50205; Connection method: Screw connection; Max. total DIN rail width: 22.5 mm; Max. height: 115 mm; Max. depth: 100 mm; Predominant housing color: yellow.	10	100	10	2963747		CZK 0,00	CZK 0,00
6	Relay accessories	Terminal plug-in bridge bar, red	Used for relays. One bar = 75 relays	Continuous plug-in bridge compatible with items 1, 2, 3, 4 ('blade' type not 'comb' type). Color: red. Possible to cut to size for varying numbers of adjacent relays. Supplied in lengths of >= 500 mm.	20	100	10	2966786		CZK 0,00	CZK 0,00
7	Relay accessories	Terminal plug-in bridge bar, blue	Used for relays. One bar = 75 relays	Continuous plug-in bridge compatible with items 1, 2, 3, 4 ('blade' type not 'comb' type). Color: light blue. Possible to cut to size for varying numbers of adjacent relays. Supplied in lengths of >= 500 mm.	20	100	10	2966692		CZK 0,00	CZK 0,00
8	Wiring accessories	Cabinet cable duct, 2m, 60x100mm - 1 piece	Used for horizontal cabinet wire routing in signal areas (typically 5 per large cabinet)	Cable duct (trunking) for installation and mounting in control cabinets, comprising clip-on upper part (cover profile) and mounting base with open slots (comb) for cable egress. Individual bars (comb fingers) support easy snap-off removal without tools. Width: 60 mm, Height: 100 mm, Length: 2000 mm. Color: gray; Material: PVC; Min. slot width: 6 mm at widest point; Max. slot spacing: 12.5 mm; Base perforations according to DIN EN 50085.	30	200	1	3240263		CZK 0,00	CZK 0,00
9	Wiring accessories	Cabinet cable duct, 2m, 40x100mm - 1 piece	Used for horizontal cabinet wire routing in power areas (typically 3 per large cabinet)	Requirements identical to item 8 except: Width: 40 mm	15	100	1	3240264		CZK 0,00	CZK 0,00
10	Wiring accessories	Cabinet cable duct, 2m, 80x100mm - 1 piece	Used for vertical cabinet wire routing (typically 2x2m per cabinet)	Requirements identical to item 8 except: Width: 80 mm	20	150	1	3240294		CZK 0,00	CZK 0,00
11	Power supplies	DC/DC converters: 12-24VDC => 5-15VDC (2A)	Needed to generate isolated and nonstandard voltages from standard 24V supply	Primary-switched miniature DC/DC converter for DIN rail NS 35/7.5 mounting. Input voltage range: 10 V DC - 32 V DC; Output voltage: 5 - 15 V DC, adjustable with front-accessible screwdriver-adjusted multitrack potentiometer; Output current: 2 A; Connection method: pluggable screw connection; Isolation input/output >= 1 kV; IP category: IP20; MTBF: >= 2000000 h according to IEC 61709; Series output connection: yes; Parallel output connection yes; Residual ripple < 20 mVpp (20 MHz); DC OK active output status signal and green LED indicator; Max. total DIN rail width 22.5 mm; Max. height 100 mm; Max. depth 110 mm.	12	100	10	2320018		CZK 0,00	CZK 0,00
12	Wiring accessories	Interface module - DSUB9 - Screw Connections	Breakout of D-SUB-9 to wire terminals using minimal DIN rail space	Slimline D-subminiature 9-pin socket breakout to individually labelled screw terminals for each pin, plus shield terminal. DIN rail NS 35/7.5 mounting. Connection method: Screw connection; Stripping length: 8-10 mm; Conductor cross section stranded: 0.2 mm ² ... 2.5 mm ² ; Nominal voltage: 60 V DC; Max. current: 1.5 A on all pins; Max. total DIN rail width: 25 mm; Max. height 120mm; Max. depth 50 mm; IP category: IP20.	12	100	10	2959560		CZK 0,00	CZK 0,00
15	Terminal blocks	Terminal Blocks Double 4mm2, 6.2mm width	Most common type of terminal block used. 300 on average per large cabinet system	Double-level feed-through terminal block supporting two rows of commoning bridges per level. Commoning bridges plug in separately from wire terminals. Levels not interconnected. Upper and lower levels offset horizontally by half a terminal width. Each level supports individual markers. Connection method: Screw connection, Supported conductor cross sections: Single stranded, with ferrule, with plastic sleeve 0.14 mm ² - 4 mm ² , two conductors with the same cross section, stranded, with TWIN ferrules, with plastic sleeve 0.5 mm ² - 1.5 mm ² ; Stripping length: 8-10 mm; Mounting type: NS 35/7.5. Number of levels: 2; Number of connections: 4; Nominal internal cross section: 4 mm ² ; Rated surge voltage: 8 kV; Nominal current: 30 A; Nominal voltage: 800 V; Shock protection: Back of hand, Finger, according to IEC 60529:2001-02; Max. width on DIN rail 6.2 mm; Max. length 70 mm; Max. height 65 mm; Color: grey RAL 7042 or equivalent; Supplier must have the following compatible accessories available: End cover, Spacer Plate (aligns upper level offset), Partition Plate, Test Plugs, Test adapter to 4 mm banana plugs, Labels, Printable marker strips, Plug-in bridge in various widths and in colors: blue, red, gray.	1500	10000	100	3044814		CZK 0,00	CZK 0,00
16	Terminal block accessories	Terminal Block End Cover	Used one per block assume average block size	End cover for item 15. Provides electrical isolation for the last half-open terminal block. Color to match item 15.	180	1200	100	3047293		CZK 0,00	CZK 0,00
17	Terminal block accessories	Terminal Block Spacer	Used according to terminal block layout needs	Spacer for item 15. Compensates for the half-width offset between upper and lower levels when mounting item 15 against other DIN mount components. Color to match item 15	200	1200	100	3047303		CZK 0,00	CZK 0,00
18	Terminal block accessories	Terminal Block Partition	Used according to terminal block layout needs	Partition for item 15. Provides logical separation and electrical insulation between sets of terminal blocks of item 15. Width 2-3 mm. Color to match item 15	200	1200	100	3047316		CZK 0,00	CZK 0,00
19	Terminal block accessories	Terminal Plug-in Bridge Red, 2 contacts	Simple commoning of adjacent terminal blocks	Plug-in bridge for item 15. Allows two adjacent terminal blocks to be bridged without wiring. Spacing to match item 15. Color: Red	200	1200	100	3030336		CZK 0,00	CZK 0,00
20	Terminal block accessories	Terminal Plug-in Bridge Blue, 2 contacts	Simple commoning of adjacent terminal blocks	Plug-in bridge for item 15. Allows two adjacent terminal blocks to be bridged without wiring. Spacing to match item 15. Color: Light blue	200	1200	100	3036932		CZK 0,00	CZK 0,00
21	Terminal block accessories	Terminal Plug-in Bridge Grey, 2 contacts	Simple commoning of adjacent terminal blocks	Plug-in bridge for item 15. Allows two adjacent terminal blocks to be bridged without wiring. Spacing to match item 15. Color: Grey to match item 15	200	1200	100	3032237		CZK 0,00	CZK 0,00
22	Terminal block accessories	Terminal Plug-in Bridge Red, 10 contacts	Simple commoning of adjacent terminal blocks	Plug-in bridge for item 15. Allows up to 10 adjacent terminal blocks to be bridged without wiring. Possible to cut to size for varying numbers of adjacent terminal blocks. Individual contacts may be removed to bridge across terminals without connecting. Spacing to match item 15. Color: Red	200	1200	100	3030271		CZK 0,00	CZK 0,00
23	Terminal block accessories	Terminal Plug-in Bridge Blue, 10 contacts	Simple commoning of adjacent terminal blocks	Plug-in bridge for item 15. Allows up to 10 adjacent terminal blocks to be bridged without wiring. Possible to cut to size for varying numbers of adjacent terminal blocks. Individual contacts may be removed to bridge across terminals without connecting. Spacing to match item 15. Color: Light blue	200	1200	100	3032198		CZK 0,00	CZK 0,00
24	Terminal block accessories	Terminal Plug-in Bridge Grey, 10 contacts	Simple commoning of adjacent terminal blocks	Plug-in bridge for item 15. Allows up to 10 adjacent terminal blocks to be bridged without wiring. Possible to cut to size for varying numbers of adjacent terminal blocks. Individual contacts may be removed to bridge across terminals without connecting. Spacing to match item 15. Color: Grey to match item 15	200	1200	100	201139		CZK 0,00	CZK 0,00
25	Wiring accessories	Neutral bus bar 3x10 mm, 2000mm	Used to terminate shielded cables. Typically needed for 3-4 rails in a large cabinet.	Neutral busbar. Width: 10 mm; Height: 3 mm; Applicable standard: DIN VDE 0611-4: 1991-02. Profile: Rectangular; Material: Copper, tin-plated; Supply length: 2000 mm; Nominal current rating: >= 140 A.	10	60	5	402006		CZK 0,00	CZK 0,00
26	Wiring accessories	Shield connection clamp, 5-20mm	One per external shielded cable, typically 30 per large cabinet	Compatible with item 25. Clamp for terminating cable shields to a busbar. Spring-loaded large-surface area pressure plate. Contact resistance: < 1 mOhm; Cable diameter 5 - 20 mm; Connection method: Screw termination; Max. width along busbar: 24 mm.	120	800	10	3025189		CZK 0,00	CZK 0,00
27	Wiring accessories	Shield connection clamp 3-14mm	One per external shielded cable, typically 30 per large cabinet	Requirements identical to item 26 except: Cable diameter: 5 - 20 mm; Max. width along busbar: 17 mm	120	800	10	3025176		CZK 0,00	CZK 0,00
28	Wiring accessories	Support bracket for bus bars, 65mm offset from DIN rail	Should be one every 20 cm	Compatible with item 25. DIN rail NS 35/7.5 mounted bracket for supporting a single busbar and providing low resistance electrical connection between the busbar and the rail. Distance from centre line of DIN rail to centre line of busbar when mounted: 65 mm. Max. total DIN rail width: 6.2 mm. Color: gray	30	500	10	3026489		CZK 0,00	CZK 0,00
29	Wiring accessories	Support bracket for bus bars, panel mount	Should be one every 20 cm	Compatible with item 25. Individual panel-mounted bracket for supporting busbar and providing low resistance electrical connection between the busbar and the mounting panel. Bracket secured to panel with an M4 screw or 4mm diameter rivet (not included). Busbar slots into bracket and is secured with a second screw. Distance between the panel and the busbar when mounted: 16-18 mm; Bracket width <= 25mm, height <= 25 mm.	30	500	10	3025888		CZK 0,00	CZK 0,00
30	Terminal blocks	Potential distributors, slim, Red, 1 piece.	One per power supply. Average 4 per system	Potential distributor terminal block for DIN rail NS 35/7.5. Total of 32 connections internally interconnected. Individual marking area on the front. Nominal cross section: 1.5 mm ² . Connection element color: red; Nominal current >= 17.5 A; Nominal voltage: >= 250 V; Shock protection: Back of hand & Finger, according to IEC 60529:2001-02; Supported conductor cross sections: Single stranded, with ferrule, with plastic sleeve 0.14 mm ² - 1.5 mm ² ; Stripping length: 8-10 mm; Max. total DIN rail width: 8.3 mm. Max. height: 100mm. Max. depth: 90 mm.	30	500	10	3270248		CZK 0,00	CZK 0,00
31	Terminal blocks	Potential distributors, slim, Blue, 1 piece	One per power supply. Average 4 per system	Requirements identical to item 30 except: Connection element color: light blue	30	500	10	3270249		CZK 0,00	CZK 0,00
32	Terminal block accessories	Spacer plate for potential distributors, 1 piece	Used to separate different potential groups	Partition for item 30. Provides logical separation and electrical insulation between sets of terminal blocks of item 30. Width 8.3 mm. Color to match item 30. Profile to match item 30.	30	500	10	3270166		CZK 0,00	CZK 0,00
33	Terminal block accessories	End cover for potential distributors, 1 piece	Used at the end of each potential distributor group	End cover for item 30. Provides electrical isolation for the last half-open terminal block. Width <= 4mm.	30	500	10	3270154		CZK 0,00	CZK 0,00
34	Terminal block accessories	End clamp with label insert E/NS 35N, 1 piece	At least one per terminal block, average of 8 terminals	General purpose end clamp for DIN rail NS 35/7.5 mounting. Clamps firmly to the DIN rail with screw, preventing movement of components along rail. Support for numeric markers and a terminal block label holder (item 35). Max. width along DIN rail 9.5 mm. Max. Height across DIN rail 50 mm, Depth above DIN rail 30-50 mm. Color: gray.	150	1200	50	800886		CZK 0,00	CZK 0,00
35	Terminal block accessories	Terminal Strip markers	One used for the end clamp at the start of each terminal block	Compatible with item 34. Transparent plastic label carrier mounted to item 34. Supports the insertion of a vertical label with lettering field size of 7mm x 44 mm (not included). Max. width along DIN rail: 9.5 mm. Max. height across DIN rail: 50 mm.	200	1200	50	1004348		CZK 0,00	CZK 0,00
39	Power supplies	EMC mains filter 10A	One in general installation, one per PSU and TMP for high EMP installations	Mains interference filter for one-phase circuits for mounting on DIN rail NS 35/7.5. Max. total DIN rail width 40 mm; Max. height 80 mm; Max. depth 90 mm; IP category: IP20; Maximum voltage: 250 VAC; Nominal frequency: 50 Hz, Rated current 10 A; Input attenuation: > 40 dB from 200 kHz to 10 MHz symmetric, 50 Ohm, > 40 dB from 600 kHz - 10 MHz asymmetric, 50 Ohm; Min. capacity 2x 470 nF (X2), 2x 2.2 nF (Y2); Min. inductivity: 2x 1.8 mH; Connection method: Screw connection.	15	120	1	2788977		CZK 0,00	CZK 0,00
40	Surge protection	Surge protection device- 24VDC - one signal, floating.	Typically need 2 per control block for external signals	Two-level terminal block for DIN rail NS 35/7.5 with fine surge protection for one signal wires and a floating common reference potential. Overload monitoring feature in case of breakdown. Number of levels: 2; Number of connections: 4; Individual marking area on the front. Internal protective circuit: TVS diode; IEC test classification: C1, C3 in accordance with IEC 61643-21; Nominal voltage: 24 V DC; Rated current: 6 A; Surge protection level <= 60 V (C1), <= 50 V (C3); Response time (line-earth) <= 1 ns; Max. total DIN rail width: 6.2 mm; Max. height: 110 mm; Max. depth 70 mm; color: grey RAL 7042 or equivalent.	200	1200	50	2906834		CZK 0,00	CZK 0,00
41	Surge protection	Surge protection device - 24VDC - two signal lines with ground	Typically need 1 per control block per external signals	Three-level terminal block for DIN rail NS 35/7.5 mounting with integrated fine surge protection for two signal wires with a common reference potential, connected to the DIN rail within the terminal block. Number of levels: 3; Number of connections: 6; Individual marking area on the front. Internal protective circuit: 2x TVS diodes; IEC test classification: C1, C3 in accordance with IEC 61643-21; Nominal voltage: 24 V DC; Rated current: 6 A; Surge protection level <= 60 V (C1), <= 50 V (C3); Response time (line-earth) <= 1 ns; Max. total DIN rail width: 6.2 mm; Max. height: 110 mm; Max. depth 70 mm; color: grey RAL 7042 or equivalent.	100	600	50	2906808		CZK 0,00	CZK 0,00
42	Surge protection	Surge protection device- 12VDC - Thin - one signal, grounded.	Typically 2 per PSU	Two-level terminal block for DIN rail NS 35/7.5 with fine surge protection for one signal wires and a floating common reference potential. Overload monitoring feature in case of breakdown. Number of levels: 2; Number of connections: 4; Individual marking area on the front. Internal protective circuit: TVS diode; IEC test classification: C1, C3 in accordance with IEC 61643-21; Nominal voltage: 24 V DC; Rated current: 6 A; Surge protection level <= 60 V (C1), <= 50 V (C3); Response time (line-earth) <= 1 ns; Max. total DIN rail width: 6.2 mm; Max. height: 110 mm; Max. depth 70 mm; color: grey RAL 7042 or equivalent.	50	400	50	2906829		CZK 0,00	CZK 0,00

43	Surge protection	Surge protection device for D-SUB-9	Need for encoders and similar serial devices in high EMP installations	DIN rail NS 35/7.5 mounting surge protection device for serial devices with D-SUB-9 plug input and D-SUB-9 socket output. Internal protective circuit: 8x TVS diodes (one for each D-SUB-9 pin except pin 5); Minimum action: line-line, line-signalground (pin 5); IEC test classification: C1 C2 C3 according to EN 61643-21; Max. continuous voltage: 15 V DC; Rated current: 1 A; Surge protection level <= 55 V (C1), line-line & line-signalground (pin 5); Response time (line-line & line-signalground) <= 1 ns; Cut-off frequency (3 dB, symmetrical, 150 Ohm, >= 2.5 MHz; Max. total DIN rail width: 25 mm; Max. Height 110 mm; Max. Depth 70 mm; IP category: IP20;	10	64	1	2803069		CZK 0,00	CZK 0,00
44	Surge protection accessories	End Cover Surge Protection Devices	Required on end of a block of surge protection terminals if they are open-sided	End cover for items 40,41,42.	200	4000	50	2908729		CZK 0,00	CZK 0,00
46	Terminal blocks	Fuse Terminal blocks - 5x20mm fuse, no LED, 2-level	Used for fusing wiring of certain field connections	Two-level terminal block for DIN rail NS 35/7.5 mounting with replaceable fuse in series on the upper level. Two rows of commoning bridges per level, compatible with plug-in bridge items 19, 20, 21, 22. Upper and lower levels not interconnected. Lower level is feed-through connection. Lever-type fuse compartment disconnects fuse holder when lifted for safe replacement. Individual marking area on the front of fuse compartment and individual marking areas on each level. Number of levels: 2; Number of connections: 4; Nominal internal cross-section: 4 mm ² ; Fuse type: 5 x 20 mm, glass or ceramic; Connection method: Screw connection; Supported conductor cross sections: Single stranded, with ferrule, with plastic sleeve 0.14 mm ² - 4 mm ² , Two conductors with the same cross section, stranded, with TWIN ferrules, with plastic sleeve 0.5 mm ² - 1.5 mm ² ; Stripping length: 8-10 mm; Max. total DIN rail width: 6.2 mm; Max height: 90 mm; Max length 100 mm;	50	400	50	3214366		CZK 0,00	CZK 0,00
47	Terminal blocks	Fuse Terminal blocks - 5x20mm fuse, LED, 2-level	Roughly 2 per PSU average	Requirements identical to item 46 except with fuse status LED indicator. LED function: Bidirectional red LED lights when fuse is blown; LED voltage range 12-30 V DC;	50	400	50	1044423		CZK 0,00	CZK 0,00
48	Surge protection accessories	Insertion bridge - double	Simple commoning of adjacent surge protection terminal blocks	Compatible with items 40,41,42. Allows two adjacent terminal blocks to be bridged without wiring (insertion bridge, not plugin bridge); Color: Gray to match items 37, 38, 39.	100	800	50	3029703		CZK 0,00	CZK 0,00
49	Surge protection accessories	Insertion bridge - 10	Simple commoning of adjacent surge protection terminal blocks	Compatible with items 40,41,42. Allows up to ten adjacent terminal blocks to be bridged without wiring (insertion bridge, not plugin bridge). Possible to cut to size for varying numbers of adjacent terminal blocks. Color: Gray to match items 37, 38, 39.	50	200	50	201139		CZK 0,00	CZK 0,00
50	Power supplies	DIN rail mount industrial UPS 230V/750VA	In cabinet UPS, typically one per critical large system	DIN rail NS 35/7.5 mounted single phase 230 V AC, 750 VA UPS module with integrated power supply and energy storage. Integrated USB interface supporting monitoring by connected industrial PCs. Battery type: VRLA AGM or GEL (valve regulated lead acid, absorbent glass mat); Capacity >= 3.4 Ah; Charging time <= 7h; Switch-over time < 10 ms; Output voltage waveform: Pure sine; Max. total DIN rail width 210 mm, Height 170 mm, Depth 140 mm; IP category: IP20; MTBF: > 200 000 h according to IEC 61709; max weight 6 kg; Service life >= 6 years; Status outputs (min.): Alarm, Mode, Ready, each output suitable for 24V DC signals for PLC connection; EMC compliant for fast transients (burst) on Input and Output to > 2 kV, Criterion A, according to EN 61000-4-4;	0	25	1	2905909		CZK 0,00	CZK 0,00
51	Connectors	Valve connector CI 9.4mm LED, cable diameter 4-6 mm	One per vacuum valve (common)	3-position valve connector CI (9.4 mm) according to DIN 43650, with built-in LED and surge protection. Central screw: M3 x 27; Cable gland: M12; External cable diameter 4 mm to 6 mm; Rated voltage: 24 V DC; Status display: Yellow LED; Surge protection: TVS diode or varistor; Connection method: Screw connection; Conductor cross section: 0.25 - 0.5 mm ² ; IP category: IP65; Rated insertion/withdrawal cycles: >= 50	50	400	50	1452291		CZK 0,00	CZK 0,00
52	Connectors	Valve connector BI 11mm LED, cable diameter 6-8 mm	Certain field devices	3-position valve connector BI (11 mm) according to DIN 43650, with built-in LED and surge protection. Cable gland: Pg9; External cable diameter 6 mm to 8 mm; Rated voltage: 24 V DC; Status display: Yellow LED; Surge protection: TVS diode or varistor; Connection method: Screw connection; Conductor cross section: 0.34 - 2.5 mm ² ; IP category: IP65; Rated insertion/withdrawal cycles: >= 50	10	200	10	1671140		CZK 0,00	CZK 0,00
53	Connectors	Valve connector C 8mm LED, cable diameter 4-6 mm	Certain field devices	3-position valve connector C (8 mm) according to DIN 43650, with built-in LED and surge protection. Central screw: M2.5 x 27; Cable gland: M12; External cable diameter 4 mm to 6 mm; Rated voltage: 24 V DC; Status display: Yellow LED; Surge protection: TVS diode or varistor; Connection method: Screw connection; Conductor cross section: 0.25 - 0.5 mm ² ; IP category: IP65; Rated insertion/withdrawal cycles: >= 50	10	200	10	1452262		CZK 0,00	CZK 0,00
54	Terminal blocks	BNC terminal block for DIN Rail, 50 Ohm	Trigger/coax signal interface	Double-level coaxial BNC-to-BNC feed-through adapter terminal block for DIN rail NS 35/7.5 mounting. Each level has one isolated BNC-BNC bulkhead feed-through adapter. BNC outer conductors insulated from DIN rail and each other. Marking location on front. Wave impedance: 50 Ohm; Frequency range: 0 GHz to 4 GHz; Color: gray; Max. total DIN rail width: 22 mm; Max height: 90 mm; Max. length 50 mm;	10	50	10	2805038		CZK 0,00	CZK 0,00
					6174	44769				CZK 0,00	CZK 0,00