



## PREPARATION OF TECHNICAL SPECIFICATIONS FOR PROCUREMENT OF EQUIPMENT

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**03 December 2024**

**Project Number 230228 – Funded by The European Union**

### **Project References:**

Youth Rising - EU Support to Technical and Vocational Education and Training (TVET) for Young People in Liberia – Phase II  
*[EU Project number NDICI AFRICA/2023/449-200]*

### **Subject of Tender:**

*Technical specifications for the supply of Electrical Components and Consumable Materials for electrical and electronics practical training on project number 230228 in Liberia.*

### **I. General Background Information:**

The 'Youth Rising' project (Phase I) aims to strengthen the Liberian TVET sector in its capacity to deliver equitable and gender-balanced access to high quality and demand-driven TVET in seven counties (six supported by the EU and one by the Government of Sweden). The next phase of the ongoing 'Youth Rising' project (Phase II) will expand the support provided to cover all 15 counties of Liberia, adding a further 10 schools in 8 counties to the existing schools in 7 counties already covered. Secondly, Phase II will continue capacity development support to the central TVET institutions to eventually transition the nascent system of TVET quality management by two Ministries (i.e. MoE and MoYS) towards a centrally governed Liberia TVET Commission. Thirdly, Phase II will also continue to support the TVET providers supported under Phase I in managing their new and/or renovated infrastructure, delivering training, and supporting the continuous professional development of TVET teachers professionally and sustainably.

This procurement aims to purchase a variety of electrical components and consumable materials to facilitate electrical, motors, drives, PLCs and electronic controls training at various school locations within Liberia.

**NOTE:** To aid Bidders with identification of the product design/configurations, in addition to the description of the product, a brand and model number has been mentioned and UNIDO shall consider offers for **identical or equivalent products** provided that full technical datasheets for the product offered is included to verify compatibility/equivalence.

*Technical specifications for the supply of Electrical Components and Consumable Materials for electrical and electronics practical training on project number 230228 in Liberia.*

**III. The Scope of Supply – TECHNICAL SPECIFICATIONS**

Item	UNIDO REQUIREMENTS  Name and required parameters	Total Qty	TO BE COMPLETED BY THE INVITEE			
			unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
1	ONE (1) x Side Mount Auxiliary Contact Block <ul style="list-style-type: none"> <li>• Side Mount Clip-on Auxiliary Block</li> <li>• 1 NO &amp; 1 NC</li> </ul> Identical or equivalent to product: MCE, MCE-DN11	40				
2	ONE (1) x Clip On Pneumatic Timers <ul style="list-style-type: none"> <li>• Clip-on Pneumatic Timer- Delay On</li> <li>• 10 - 180 seconds</li> <li>• 1 NO &amp; 1 NC</li> </ul> Identical or equivalent to product: MCE, MCEA-DT4	20				
3	ONE (1) x Manual Motor Starter <ul style="list-style-type: none"> <li>• 5,5kW @ 400V</li> <li>• Current rating 9 - 14A</li> </ul> Identical or equivalent to product: MCE, DZS12-M16	20				
4	ONE (1) x Direct On-line Starter <ul style="list-style-type: none"> <li>• Direct on-Line starter with isolator</li> <li>• 400VAC control voltage</li> <li>• 25 Amp max motor current (AC3)</li> <li>• Heavy duty BF series contactor</li> <li>• Rated to IP68</li> <li>• Insulated polycarbonate enclosure</li> <li>• Complies to IEC/EN60947-1 &amp; 60947-4-1</li> </ul> Identical or equivalent to product: LOVATO, DOLSW11400	4				

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Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
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5	ONE (1) x Forward Reverse Switch <ul style="list-style-type: none"><li>3P Forward/reverse switch</li><li>Size 48x48mm</li><li>Current rating 20A</li></ul> Identical or equivalent to product: MCE, C20-08-11	20				
6	ONE (1) x Illuminated Pushbuttons 1 NO Green <ul style="list-style-type: none"><li>Illuminated push button</li><li>Metal, flush, 1NO + 1NC</li><li>Green, 22mm diameter</li><li>Universal LED, plain lens</li></ul> Identical or equivalent to product: SCHNEIDER, XB4BW33M5	20				
7	ONE (1) x Illuminated Pushbuttons 1Nc Red <ul style="list-style-type: none"><li>Illuminated push button</li><li>Metal, flush, 1 NO + 1 NC</li><li>Red, 22mm diameter</li></ul> Identical or equivalent to product: SCHNEIDER, XB4BW34M5	20				
8	ONE (1) x Illuminated Pushbuttons 1No Blue <ul style="list-style-type: none"><li>Illuminated push button</li><li>Metal, flush, 1 NO + 1 NC</li><li>Blue, 22mm diameter</li></ul> Identical or equivalent to product: SCHNEIDER, XB4BW36M5	20				
9	ONE (1) x Illuminated Pushbuttons 1No Yellow <ul style="list-style-type: none"><li>Illuminated push button</li><li>Metal, flush, 1 NO + 1 NC</li><li>Orange, 22mm diameter</li></ul> Identical or equivalent to product: SCHNEIDER, XB4BW35M5	20				

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10	ONE (1) x Illuminated On-Off Pushbutton Led-230V <ul style="list-style-type: none"><li>22mm diameter pushbutton with spring return</li><li>2 positions</li><li>1 NO + 1 NC</li><li>Yellow Indication</li></ul> Identical or equivalent to product: SCHNEIDER, XB2-BW8465	20				
11	ONE (1) x Latching E/Stop - Twist To Release <ul style="list-style-type: none"><li>Red emergency stop, 22mm diameter</li><li>40mm mushroom head</li></ul> Identical or equivalent to product: SCHNEIDER, XB2-BS542	40				
12	ONE (1) x Latching E/Stop - Key Operated <ul style="list-style-type: none"><li>Red emergency stop, 22mm diameter</li><li>60mm mushroom head</li><li>key release</li></ul> Identical or equivalent to product: SCHNEIDER, XB2-BS242	20				
13	ONE (1) x 2 Pos. Selector Switch <ul style="list-style-type: none"><li>22mm diameter black selector switch with spring return</li><li>2 positions</li><li>1 NO</li><li>Black</li></ul> Identical or equivalent to product: SCHNEIDER, XB2-BD41	20				
14	ONE (1) x 3 Pos. Selector Switch <ul style="list-style-type: none"><li>22mm diameter black selector switch with spring return</li><li>3 positions</li><li>2 NO</li></ul>	20				

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	<ul style="list-style-type: none"><li>Black</li></ul> Identical or equivalent to product: SCHNEIDER, XB2-BD53					
15	ONE (1) x 2 Pos. Key Switch <ul style="list-style-type: none"><li>22mm diameter black selector switch with key</li><li>2 positions</li><li>Remove In Off</li><li>1 NO</li><li>Black</li></ul> Identical or equivalent to product: SCHNEIDER, XB2-BG21	10				
16	ONE (1) x Auxiliary Contact Block <ul style="list-style-type: none"><li>Contact Blocks NO</li><li>Green</li><li>Slow break contact operation</li><li>Vibration resistant screw clamp connection terminals</li></ul> Identical or equivalent to product: SCHNEIDER, ZB2-BE101	200				
17	ONE (1) x Auxiliary Contact Block <ul style="list-style-type: none"><li>Contact Blocks NC</li><li>Red</li><li>Slow break contact operation</li><li>Vibration resistant screw clamp connection terminals</li></ul> Identical or equivalent to product: SCHNEIDER, ZB2-BE102	200				
18	ONE (1) x Control Station 22mm, 2 hole <ul style="list-style-type: none"><li>PVC control station box</li><li>Empty box (grey) for 22mm control devices</li><li>2 holes</li></ul> Identical or equivalent to product: MCE, MCE-2E	40				

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19	ONE (1) x Control Station 22mm, 3 hole <ul style="list-style-type: none"><li>PVC control station box</li><li>Empty box (grey) for 22mm control devices</li><li>3 holes</li></ul> Identical or equivalent to product: MCE, MCE-3E	20				
20	ONE (1) x Control Station 22mm, 4 hole <ul style="list-style-type: none"><li>PVC control station box</li><li>Empty box (grey) for 22mm control devices</li><li>4 holes</li></ul> Identical or equivalent to product: MCE, MCE-4E	20				
21	ONE (1) x Control Station 22mm, 5 hole <ul style="list-style-type: none"><li>PVC control station box</li><li>Empty box (grey) for 22mm control devices</li><li>5 holes</li></ul> Identical or equivalent to product: MCE, MCE-5E	20				
22	ONE (1) x Control Station 22mm, 6 hole <ul style="list-style-type: none"><li>PVC control station box</li><li>Empty box (grey) for 22mm control devices</li><li>6 holes</li></ul> Identical or equivalent to product: MCE, MCE-6E	10				
23	ONE (1) x Plug In Relay <ul style="list-style-type: none"><li>2-pole changeover power relay fitted with octal plug-in base.</li><li>Rated current 10A, 230V, 2500VA switching power</li><li>Manual test button with a mechanical flag contact operating indicator</li><li>Flame retardant cover</li></ul>	10				

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	<ul style="list-style-type: none"><li>Approved to BSI, VDE, CSA, UL, BEAB, IMQ, SETI, SEMKO, DEMKO and SEV standards</li></ul> Identical or equivalent to product: FINDER, 60.12.8.230.0040					
24	ONE (1) x Din Mounting Screw Terminal Base <ul style="list-style-type: none"><li>8 Pin Plug In Relay Base</li><li>Panel or 35mm DIN rail [EN 60715] mounting</li><li>Supplied with metal retaining clip</li></ul> Identical or equivalent to product: FINDER, 9020SMA	10				
25	ONE (1) x Pendant Stations <ul style="list-style-type: none"><li>4 Push-button control</li><li>1NO + 1NC + 1NO</li><li>2 Speed Crane Application</li></ul> Identical or equivalent to product: MCE, XAC-A491	10				
26	ONE (1) x Joysticks <ul style="list-style-type: none"><li>Spring return joystick</li><li>2 directions</li><li>22mm, 2NO</li></ul> Identical or equivalent to product: MCE, XD4-PA22	5				
27	ONE (1) x Joysticks <ul style="list-style-type: none"><li>Spring return joystick</li><li>4 directions</li><li>22mm, 4NO</li></ul> Identical or equivalent to product: MCE, XD4-PA24	5				
28	ONE (1) x Copper Busbar <ul style="list-style-type: none"><li>M8 Copper Busbar</li></ul>	50				

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	<ul style="list-style-type: none"><li>Size: 30 x 5 Busbar</li><li>300A rating</li></ul> Identical or equivalent to product: MCE, CBB-30X10					
29	ONE (1) x Slotted Trunking <ul style="list-style-type: none"><li>Pack of THIRTY (30) pieces of 25mm x 40mm x 2 metre lengths of thermoplastic slotted trunking designed for terminal block and DIN component applications</li><li>Grey RAL7030.</li><li>Self extinguishing rigid PVC Class 1 (UL94-VO).</li></ul> Identical or equivalent to product: CANALPLAST, E134	6				
30	ONE (1) x Slotted Trunking <ul style="list-style-type: none"><li>Pack of TWENTY (20) pieces of 40mm x 40mm x 2 metre lengths of thermoplastic slotted trunking designed for terminal block and DIN component applications</li><li>Grey RAL7030.</li><li>Self extinguishing rigid PVC Class 1 (UL94-VO).</li></ul> Identical or equivalent to product: CANALPLAST, E84	8				
31	ONE (1) x Flexible Wiring Ducting <ul style="list-style-type: none"><li>Pack of FIFTY (50) pieces of 20mm x 20mm x 0.5 metre lengths of naiton (UL94-V2) flexible ducting.</li><li>Grey RAL7035.</li><li>Adhesive backed base.</li></ul> Identical or equivalent to product: CANALPLAST, FLX20	20				
32	ONE (1) x Slotted Trunking,Narrow Slot <ul style="list-style-type: none"><li>Pack of TWELVE (12) pieces of 37.5mm x 37.5mm x 2 metre lengths of thermoplastic narrow slotted trunking</li></ul>	10				



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	<ul style="list-style-type: none"><li>Grey RAL7030.</li></ul> Identical or equivalent to product: BETADUCT, 10470032Y					
33	ONE (1) x Slotted Din Rail <ul style="list-style-type: none"><li>Top hat style slotted DIN Rail</li><li>35mm wide x 7.5mm depth x 1 metre length</li></ul> Identical or equivalent to product: MCE, S35S-1	45				
34	ONE (1) x Din Rail Support <ul style="list-style-type: none"><li>Bolt-on slat support bracket for 35mm DIN rail</li><li>Identical or equivalent to product: MCE, TS-F</li><li></li></ul>	60				
35	ONE (1) x Plastic Spiral Wrapping Bands <ul style="list-style-type: none"><li>Black plastic wrapping bands</li><li>Inner diameter 4mm</li><li>Bundle diameter 4-50mm</li><li>10 metre length</li></ul> Identical or equivalent to product: CABLECRAFT, SWB-6-BK	5				
36	ONE (1) x Plastic Spiral Wrapping Bands <ul style="list-style-type: none"><li>Black plastic wrapping bands</li><li>Inner diameter 9mm</li><li>Bundle diameter 9-65mm</li><li>10 metre length</li></ul> Identical or equivalent to product: CABLECRAFT, SWB-12-BK	5				
37	ONE (1) x Neutral Link <ul style="list-style-type: none"><li>10 x 38 mm cylindrical neutral link for fuses</li></ul> Identical or equivalent to product: EUROPA COMPONENTS, F1038-NL	12				

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38	ONE (1) x Centrifugal Pumps <ul style="list-style-type: none"> <li>Centrifugal Pump</li> <li>220-240V, power 1.5kW /2.0HP</li> <li>Maximum current 9.2A</li> <li>1" inlet and 1" outlet connections</li> <li>IP44 rated</li> </ul> Identical or equivalent to product: MCE, HCm1500	2				
39	ONE (1) x Standard Terminals <ul style="list-style-type: none"> <li>WDU 8, 6mm feed-through terminal block</li> <li>41 Amps, 800V</li> <li>for DIN rail mounting</li> </ul> Identical or equivalent to product: WEIDMULLER, 1020200000	160				
40	ONE (1) x End Stops For All Terminals <ul style="list-style-type: none"> <li>Terminal end stop (metallic clamp)</li> <li>for Din rail mounting</li> </ul> Identical or equivalent to product: MCE, 43442	40				
41	ONE (1) x Earth Terminals <ul style="list-style-type: none"> <li>25mm earth terminal</li> <li>Green-yellow polyamide 6.6</li> <li>Wire Size: 1.5-25mm</li> <li>Terminal Width: 12mm</li> </ul> Identical or equivalent to product: MCE, 43451	40				
42	ONE (1) x Terminal Block <ul style="list-style-type: none"> <li>10A 12 way for 2,5mm wire terminal block</li> </ul> Identical or equivalent to product: METPRO, 15ACONN	200				

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43	ONE (1) x Terminal Block <ul style="list-style-type: none"><li>25A 12 way for 2,5mm wire terminal block</li></ul> Identical or equivalent to product: METPRO, 30ACONN	200				
44	ONE (1) x Wire Connector <ul style="list-style-type: none"><li>3 Wire Connector 400V 32A</li><li>for wire sizes 0,08 - 2,5mm2</li></ul> Identical or equivalent to product: WAGO, 221-413	100				
45	ONE (1) x Wire Connector <ul style="list-style-type: none"><li>5 Wire Connector 400V 32A</li><li>for wire sizes 0,08 - 2,5mm2</li></ul> Identical or equivalent to product: WAGO, 221-415	100				
46	ONE (1) x Multi Pole Distribution Blocks <ul style="list-style-type: none"><li>Multi pole distribution block for Din rail mounting</li><li>125A, 4 Pole</li><li>Terminals Per Pole: 2 x 25mm2; 2 x 16mm2 and 11 x 6mm2</li><li>Size 129 x 50 x 85mm</li></ul> Identical or equivalent to product: MCE, FJ415	10				
47	ONE (1) x Multi Pole Distribution Blocks <ul style="list-style-type: none"><li>Multi pole distribution block for Din rail or bolt-down mounting</li><li>100A, 600V</li><li>Input: 1 x 35mm2; 1 x 16mm2</li><li>Output: 6 x 16mm2</li><li>Size 77 x 46 x 29mm</li></ul> Identical or equivalent to product: MCE, FJ100	20				

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48	ONE (1) x Uninsulated Terminal Bar <ul style="list-style-type: none"><li>12 x 8mm terminal bar</li><li>8 Way screw on type</li></ul> Identical or equivalent to product: MCE, G-12808	20				
49	ONE (1) x Din Rail Neutral Bar <ul style="list-style-type: none"><li>Clip in Din rail 7-way neutral bar</li></ul> Identical or equivalent to product: MCE, KM13/N-7	20				
50	ONE (1) x Din Rail Earth Bar <ul style="list-style-type: none"><li>Clip in Din rail 7-way earth bar</li></ul> Identical or equivalent to product: MCE, KM13/E-7	20				
51	ONE (1) x Buzzer 230V AC <ul style="list-style-type: none"><li>Complete buzzer, 22mm diameter plastic</li><li>Continuous or intermittent tone</li><li>230-240 V AC</li></ul> Identical or equivalent to product: SCHNEIDER, XB5KSM	10				
52	ONE (1) x Foot Switches <ul style="list-style-type: none"><li>Light duty steel mini foot switch</li><li>16A, 250V AC</li><li>1 C/O Contact</li></ul> Identical or equivalent to product: MCE, MCEFS-3	5				
53	ONE (1) x Current Transformers <ul style="list-style-type: none"><li>30mm ID ring type current transformer</li><li>Class 1.0 200/5A</li><li>Din Mount</li></ul> Identical or equivalent to product: MCE, CP62/30-200/5	15				

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54	ONE (1) x Analogue Panel Ammeter <ul style="list-style-type: none"><li>DIN style panel meter for 0A to 5A input, 0A to 200A SC, and 200/5A CT.</li><li>Frequency range of 15Hz to 400Hz</li><li>True RMS values with overload scales of X2, X3, X5, or X6 to measure motor inrush current.</li><li>Polycarbonate housing and is suitable for measurement of AC currents for the frequency range of 15Hz to 400Hz.</li><li>Accuracy: 1% with knife-edge pointer and deflection of 0° to 90°</li><li>Overload: 2 times nominal current (continuous)</li></ul> Identical or equivalent to product: RS PRO, 186-2437	15				
55	ONE (1) x Ammeters <ul style="list-style-type: none"><li>DIN style panel meter for 0A to 15A input, 30A overscale.</li><li>Direct reading moving iron.</li><li>48 x 48mm size.</li></ul> Identical or equivalent to product: MCE, AMI-48-15A	15				
56	ONE (1) x AC Voltmeters <ul style="list-style-type: none"><li>DIN style panel meter for 0A to 15A input, 30A overscale.</li><li>Direct reading moving iron.</li><li>48 x 48mm size.</li></ul> Identical or equivalent to product: ELTIME CONTROLS, FE48MIV400	15				
57	ONE (1) x AC Voltmeter 500V <ul style="list-style-type: none"><li>50-500V AC digital voltmeter for panels</li><li>22mm diameter with red 3 digit display</li></ul> Identical or equivalent to product: MCE, AD22-22VM-AC-B	20				

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58	ONE (1) x AC Frequency Meter 525V <ul style="list-style-type: none"><li>24-525V AC digital hertz (frequency) meter for panels</li><li>22mm diameter with clear 3 digit display</li></ul> Identical or equivalent to product: MCE, AD22-22HZ-B	20				
59	ONE (1) x Temperature 50V - 380V AC <ul style="list-style-type: none"><li>50-380V AC digital temperature (0-199 deg C) meter for panels</li><li>22mm diameter with green 3 digit display (00.0 deg C)</li></ul> Identical or equivalent to product: MCE, AD22-22TM-B	20				
60	ONE (1) x 3 In 1 AC Digital Meter <ul style="list-style-type: none"><li>3 Way Voltmeter, Ammeter and Frequency light panel meter</li><li>Green 3 row and 3 digit display</li><li>AC ammeter with 100A current transformer 24-400V</li><li>AC voltmeter 20V-500V</li><li>AC hertz meter 24V-525V</li></ul> Identical or equivalent to product: MCE, AD22-VHA-G	12				
61	ONE (1) x 4 Pole Change Over Switch <ul style="list-style-type: none"><li>20A 4P Surface Mount Change Over Switch</li></ul> Identical or equivalent to product: MCE, UKT0-204-SM	10				
62	ONE (1) x Pushbuttons Din Rail Mount <ul style="list-style-type: none"><li>Red Latching Pushbutton for din rail mounting</li><li>1A 250V AC</li><li>3A 125V AC</li></ul> Identical or equivalent to product: ONESTO, KC-PB-RL	20				
63	ONE (1) x Pushbuttons Din Rail Mount <ul style="list-style-type: none"><li>Green Latching Pushbutton for din rail mounting</li></ul>	40				

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	<ul style="list-style-type: none"><li>1A 250V AC</li><li>3A 125V AC</li></ul> Identical or equivalent to product: ONESTO, KC-PB-G					
64	ONE (1) x Led Indicator - Din Rail <ul style="list-style-type: none"><li>3-in-1 9mm wide LED status indicator for din rail mounting</li><li>230V three-phase</li><li>Features a RED WHITE AND BLUE LED (Light Emitting Diode) that emits light per phase when powered</li></ul> Identical or equivalent to product: ONESTO, KCI-3L-RWB	40				
65	ONE (1) x Time Switch <ul style="list-style-type: none"><li>Mini rail 7 day digital time switch</li><li>Single channel, 16 on and 16 off operations</li><li>8 pulse countdown function</li><li>Switching time of 1 minute, 1 NO</li><li>20A at 250V</li></ul> Identical or equivalent to product: MCE, GTS-16C20A-MR	5				
66	ONE (1) x 4 Pole Surge Arrestor <ul style="list-style-type: none"><li>4 pole surge arrestor for Din rail mounting</li><li>385V, 10kA</li></ul> Identical or equivalent to product: ONESTO, BY7-10/4-385	10				
67	ONE (1) x Din Rail Modular Contactor <ul style="list-style-type: none"><li>18mm Din Rail Modular Contactor</li><li>2 pole, 1NO + 1 NC</li><li>25A current rating (7a)</li><li>9A current rating (7b)</li></ul>	10				

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	<ul style="list-style-type: none"><li>230V</li></ul> Identical or equivalent to product: MCE, 12946					
68	ONE (1) x Change Over Switch <ul style="list-style-type: none"><li>63Amp 4 Pole Change Over Switch</li></ul> Identical or equivalent to product: MCE, MCS63-4	5				
69	ONE (1) x Surface Mounting Distribution Boards <ul style="list-style-type: none"><li>Plastic surface mounting distribution board</li><li>IP65 rated</li><li>6 Module; 6 Way</li><li>Size approx 215mm long x 180mm wide x 110mm deep.</li></ul> Identical or equivalent to product: ONESTO, WDB-6	10				
70	ONE (1) x Surface Mounting Distribution Boards <ul style="list-style-type: none"><li>Plastic surface mounting distribution board</li><li>IP65 rated</li><li>26 Module; 26 Way (2 compartment style)</li><li>Size approx 445mm long x 285mm wide x 140mm deep.</li></ul> Identical or equivalent to product: ONESTO, WDB-26	10				
71	ONE (1) x Variable Speed Drives <ul style="list-style-type: none"><li>Three phase sensorless vector invertor</li><li>400V, 7.5kW, 16A</li></ul> Identical or equivalent to product: MCE (HYUNDAI), N700E-075HF	2				
72	ONE (1) x On Delay 240V <ul style="list-style-type: none"><li>Star Delta Timer On Delay 0 1-240Hrs Multi Volt Din Timer</li><li>1 Module compact size</li><li>10A 230V AC</li></ul>	20				



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Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"><li>Time = 0.1 Sec - 10Days</li><li>Energiser after delay</li></ul> Identical or equivalent to product: MCE, DTMSLD1					
73	ONE (1) x Four-Pole Stepped Busbar Supports <ul style="list-style-type: none"><li>3 Phase + neutral busbar supports for DIN rail or screw down mounting</li><li>4 bars, 16mm width, 160A</li><li>Insert: brass with zinc plated screws</li><li>Insulation: polycarbonate and polyamide</li></ul> Identical or equivalent to product: MICOEL, MRS416 (160A)	20				
74	ONE (1) x Threaded Busbars 1M <ul style="list-style-type: none"><li>M6 drilled and threaded copper busbar</li><li>15mm wide x 5mm thick and between 990 or 1000mm length</li><li>Rated upto 218 to 300A</li></ul> Identical or equivalent to product: ERICO, 550210	10				
75	ONE (1) x Heat-Shrinkable Tubing <ul style="list-style-type: none"><li>HDT-A heat-shrink tubing</li><li>Diameter 85/26 mm, cut resistant material</li><li>Length 1 metre</li></ul> Identical or equivalent to product: 3M, HDT-A-85-26	10				
76	ONE (1) x Pack of 2.5mm <sup>2</sup> Crimping Lugs <ul style="list-style-type: none"><li>2.5mm<sup>2</sup> copper tube terminals with 6mm stud</li><li>Bell mouth entry for ease of cable insertion</li><li>Terminal must have inspection hole</li><li>High conductivity copper coated in bright electro-tin plating</li><li>Pack of one-hundred (100) terminals</li></ul>	4				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	Identical or equivalent to product: PARTEX, COL2.5-6					
77	ONE (1) x Pack of 6mm <sup>2</sup> Crimping Lugs <ul style="list-style-type: none"><li>6mm<sup>2</sup> copper tube terminals with 6mm stud</li><li>Bell mouth entry for ease of cable insertion</li><li>Terminal must have inspection hole</li><li>High conductivity copper coated in bright electro-tin plating</li><li>Pack of one-hundred (100) terminals</li></ul> Identical or equivalent to product: PARTEX, COL6-6	6				
78	ONE (1) x Pack of 10mm <sup>2</sup> Crimping Lugs <ul style="list-style-type: none"><li>10mm<sup>2</sup> copper tube terminals with 6mm stud</li><li>Bell mouth entry for ease of cable insertion</li><li>Terminal must have inspection hole</li><li>High conductivity copper coated in bright electro-tin plating</li><li>Pack of one-hundred (100) terminals</li></ul> Identical or equivalent to product: PARTEX, COL10-6	6				
79	ONE (1) x Pack of 1.5mm <sup>2</sup> Cord-End Terminal <ul style="list-style-type: none"><li>1.5mm<sup>2</sup> long cord end or bootlace ferrule</li><li>Black (French type) with 18mm long barrel to provide a neat end termination to tri-rated cable and multi-stranded wires</li><li>Tin coated high conductivity copper with polyamide 66 insulating sleeves</li><li>Pack of one-hundred (100) terminals</li></ul> Identical or equivalent to product: PARTEX, CEF1518F	6				
80	ONE (1) x Pack of 2,5mm <sup>2</sup> Cord-End Terminal <ul style="list-style-type: none"><li>2.5mm<sup>2</sup> long cord end or bootlace ferrule</li><li>Grey (French type) with 18mm long barrel to provide a neat end termination to tri-rated cable and multi-stranded wires</li></ul>	6				

	UNIDO REQUIREMENTS		TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters	Total Qty	unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"> <li>Tin coated high conductivity copper with polyamide 66 insulating sleeves</li> <li>Pack of one-hundred (100) terminals</li> </ul> Identical or equivalent to product: PARTEX, CEF2518F					
81	ONE (1) x Pack of 4mm <sup>2</sup> Cord-End Terminal <ul style="list-style-type: none"> <li>4mm<sup>2</sup> long cord end or bootlace ferrule</li> <li>Orange (French type) with 18mm long barrel to provide a neat end termination to tri-rated cable and multi-stranded wires</li> <li>Tin coated high conductivity copper with polyamide 66 insulating sleeves</li> <li>Pack of one-hundred (100) terminals</li> </ul> Identical or equivalent to product: PARTEX, CEF418F	6				
82	ONE (1) x Pack of 3mm Fork/Spade Terminals <ul style="list-style-type: none"> <li>3mm blue straight spade terminal</li> <li>High grade PVC insulation sheath</li> <li>Conductor size 1.5-2.5mm<sup>2</sup> / 16-14awg.</li> <li>Pack of one-hundred (100) terminals</li> </ul> Identical or equivalent to product: PARTEX, BS32	10				
83	ONE (1) x Pack of 6mm Fork/Spade Terminals <ul style="list-style-type: none"> <li>6mm yellow straight spade terminal</li> <li>High grade PVC insulation sheath</li> <li>Conductor size 4.0-6.0mm<sup>2</sup> / 12-10awg.</li> <li>Pack of one-hundred (100) terminals</li> </ul> Identical or equivalent to product: PARTEX, YS64	10				
84	ONE (1) x Pack of 1.5mm <sup>2</sup> Twin Ferrules <ul style="list-style-type: none"> <li>1.5mm<sup>2</sup> long twin-entry cord end or bootlace ferrule</li> </ul>	10				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"><li>Black (French type) with 12mm long barrel to provide a neat end termination to tri-rated cable and multi-stranded wires</li><li>Tin coated high conductivity copper with polyamide 66 insulating sleeves</li><li>Pack of one-hundred (100) terminals</li></ul> Identical or equivalent to product: PARTEX, TCEF1512F					
85	ONE (1) x Pack of 2.5mm <sup>2</sup> Twin Ferrules <ul style="list-style-type: none"><li>2.5mm<sup>2</sup> long twin-entry cord end or bootlace ferrule</li><li>Blue (French type) with 12mm long barrel to provide a neat end termination to tri-rated cable and multi-stranded wires</li><li>Tin coated high conductivity copper with polyamide 66 insulating sleeves</li><li>Pack of one-hundred (100) terminals</li></ul> Identical or equivalent to product: PARTEX, TCEF2513F	10				
86	ONE (1) x Pack of 4mm <sup>2</sup> Twin Ferrules <ul style="list-style-type: none"><li>4mm<sup>2</sup> long twin-entry cord end or bootlace ferrule</li><li>Grey (French type) with 12mm long barrel to provide a neat end termination to tri-rated cable and multi-stranded wires</li><li>Tin coated high conductivity copper with polyamide 66 insulating sleeves</li><li>Pack of one-hundred (100) terminals</li></ul> Identical or equivalent to product: PARTEX, TCEF412F	10				
87	ONE (1) x Float Switch <ul style="list-style-type: none"><li>Float switch for grey water with a 5 metre long PVC cable</li><li>Functions: Emptying or filling with 45 degree activation angle counterweight, IP68 rating</li><li>Number of relay outputs: 1</li></ul>	10				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"><li>250V AC</li></ul> Identical or equivalent to product: LOVATO, LVFSP1W05					
88	ONE (1) x Pump Protection Relay <ul style="list-style-type: none"><li>Pump protection relay for single and three-phase systems, maximum AC current and minimum COSΦ.</li><li>Phase loss and incorrect phase sequence, 5A or 16A</li><li>Number of relay outputs: 1</li><li>220-240V 5 or 16a</li><li>Green LED for power on / Inhibition with 2 red LEDs for tripping</li></ul> Identical or equivalent to product: LOVATO, PMA50A240	5				
89	ONE (1) x Daylight Switches 230 Vac <ul style="list-style-type: none"><li>10A Photocell sensor with threaded PG13.5 gland entry at bottom and a bracket mount base (complete set with gland)</li><li>230V AC, 10A current</li><li>Ambient &lt; 5 - 15 lux</li></ul> Identical or equivalent to product: MCE, PCS10	10				
90	ONE (1) x Interlocking Switched Socket <ul style="list-style-type: none"><li>Surface mounting mechanical interlocking switched socket which only operates when the plug is inserted and cannot be removed with the switch in "ON" position.</li><li>Thermoplastic housing IP44, IP67 and IK08 rated for protection and impacts</li><li>16A, 4 pin 3 pole and earth</li><li>Approximate size 125mm tall x 136mm wide x 85mm deep</li></ul> Identical or equivalent to product: SCAME (OMNIA), 500.1686	12				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
91	ONE (1) x Kwh Meter 1 Phase 230V - 50Hz <ul style="list-style-type: none"><li>Single phase 230V direct reading energy meter for Din rail mounting</li><li>36mm wide, Class B accuracy</li><li>Direct measurement upto 63A</li><li>LCD display</li><li>Top supply and bottom load wiring method</li></ul> Identical or equivalent to product: ONESTO, KM2DS63	6				
92	ONE (1) x Kwh Meter 3 Phase 230/400V - 50Hz <ul style="list-style-type: none"><li>3 Phase 230/400V direct reading energy meter for Din rail mounting</li><li>72mm wide, Class B accuracy</li><li>Direct measurement upto 63A</li><li>LCD display</li><li>Top supply and bottom load wiring method</li></ul> Identical or equivalent to product: ONESTO, KM4DS63	6				
93	ONE (1) x Industrial Soft Starter <ul style="list-style-type: none"><li>ADXL soft starter with integrated by-pass relay.</li><li>Advanced, two-phase control</li><li>Auxiliary supply 100-240V AC.</li><li>Operational voltage 208-600V AC, 30A</li><li>Power 230V 7.5kW, 400V 15kW and 500V 18.5kW</li><li>Functions: NFC, motor current thermal protection, starting with current limit, optical port, optional RS485, torque control, kick start, PTC input, event log</li></ul> Identical or equivalent to product: LOVATO, ADXL0030600	3				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
94	ONE (1) x Ac Magnetic Contactors 230V <ul style="list-style-type: none"><li>4 Pole AC Magnetic Contactor</li><li>150A AC3 / 250A AC1</li><li>4NO</li></ul> Identical or equivalent to product: MCE, MCE-F150-4	40				
95	ONE (1) x Ac Magnetic Contactors 230V <ul style="list-style-type: none"><li>4 Pole AC Magnetic Contactor</li><li>150A AC3 / 250A AC1</li><li>4NO</li></ul> Identical or equivalent to product: MCE, MCE-F150-4	3				
96	ONE (1) x Ac Magnetic Contactors 230V <ul style="list-style-type: none"><li>4 Pole AC Magnetic Contactor</li><li>25A AC3 / 40A AC1</li><li>2 NO + 2 NC</li></ul> Identical or equivalent to product: MCE, MCE-D25008	10				
97	ONE (1) x Contactor Coil <ul style="list-style-type: none"><li>AC magnetic oil to fit contactors</li></ul> Identical or equivalent to product: MCE, MCX-D4-M	15				
98	ONE (1) x Top Mount Auxiliary Contact Blocks <ul style="list-style-type: none"><li>2 NO + 2 NC</li></ul> Identical or equivalent to product: Sigma Elektrik,, SAC-4S22	24				
99	ONE (1) x Top Mount Auxiliary Contact Blocks <ul style="list-style-type: none"><li>4 NO</li></ul>	20				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	Identical or equivalent to product: Sigma Elektrik, SAC-4S40					
100	ONE (1) x Top Mount Auxiliary Contact Blocks <ul style="list-style-type: none"><li>4 NC</li></ul> Identical or equivalent to product: Sigma Elektrik, SAC-4S04	20				
101	ONE (1) x Thermal Overload Relay Small frame - suitable for 25A contactors Identical or equivalent to product: Sigma Elektrik, STRP22-22	24				
102	ONE (1) x 22Mm Led Pilot Light 230V <ul style="list-style-type: none"><li>Colour Green</li></ul> Identical or equivalent to product: Sigma Elektrik, SL22-220DSG	40				
103	ONE (1) x 22Mm Led Pilot Light 230V <ul style="list-style-type: none"><li>Colour Red</li></ul> Identical or equivalent to product: Sigma Elektrik, SL22-220DSR	40				
104	ONE (1) x 22Mm Led Pilot Light 230V <ul style="list-style-type: none"><li>Colour Blue</li></ul> Identical or equivalent to product: Sigma Elektrik, SL22-220DSB	20				
105	ONE (1) x 22Mm Led Pilot Light 230V <ul style="list-style-type: none"><li>Colour Yellow</li></ul> Identical or equivalent to product: Sigma Elektrik, SL22-220DSY	20				
106	ONE (1) x AC Fuse Holders <ul style="list-style-type: none"><li>cylindrical (cartridge) fuse holder for 10x38mm</li><li>32A 1 pole</li></ul> Identical or equivalent to product: Sigma Elektrik, SFH132	10				



	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
107	ONE (1) x AC Fuse Holders <ul style="list-style-type: none"><li>cylindrical (cartridge) fuse holder for 10x38mm</li><li>32A 1 pole + N</li></ul> Identical or equivalent to product: Sigma Elektrik, SFH232	10				
108	ONE (1) x AC Fuse Holders <ul style="list-style-type: none"><li>cylindrical (cartridge) fuse holder for 10x38mm</li><li>32A 3 pole</li></ul> Identical or equivalent to product: Sigma Elektrik, SFH332	10				
109	ONE (1) x Ceramic Fuses <ul style="list-style-type: none"><li>cylindrical (cartridge) fuse, 16A current</li><li>10x38mm</li><li>32A 3 pole</li></ul> Identical or equivalent to product: Sigma Elektrik, SFLG16	12				
110	ONE (1) x Ammeter Switch <ul style="list-style-type: none"><li>4 stage, 20A current</li></ul> Identical or equivalent to product: Sigma Elektrik, SPM-A	15				
111	ONE (1) x Voltmeter Switch <ul style="list-style-type: none"><li>7 stage, 20A current</li></ul> Identical or equivalent to product: Sigma Elektrik, SPM-V	15				
112	ONE (1) x Led Indicator - Din Rail <ul style="list-style-type: none"><li>Colour of indicator Red</li><li>220V AC</li></ul> Identical or equivalent to product: Sigma Elektrik, SSL-R220A	40				
113	ONE (1) x Led Indicator - Din Rail <ul style="list-style-type: none"><li>Colour of indicator Green</li></ul>	40				

Item	UNIDO REQUIREMENTS  Name and required parameters	Total Qty	TO BE COMPLETED BY THE INVITEE			
			unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"> <li>220V AC</li> </ul> Identical or equivalent to product: Sigma Elektrik, SSL-G220A					
114	ONE (1) x Surge Arrestors Cartridge Type <ul style="list-style-type: none"> <li>Low voltage surge protection device suitable for Type 2 C Class (install after electricity meter)</li> <li>1 pole, 275 V AC</li> </ul> Identical or equivalent to product: Sigma Elektrik, SP1-C040	10				
115	ONE (1) x Surge Arrestors Replacement Cartridge <ul style="list-style-type: none"> <li>Spare cartridge for Class C surge protection</li> </ul> Identical or equivalent to product: Sigma Elektrik, SP1-C040K	10				
116	ONE (1) x 2 Pole Surge Arrestors <ul style="list-style-type: none"> <li>Low voltage surge protection device suitable for Type 2 C Class (install after electricity meter)</li> <li>2 pole, 275 V AC</li> </ul> Identical or equivalent to product: Sigma Elektrik, SP2-C040	10				
117	ONE (1) x Din Rail Modular Contactor <ul style="list-style-type: none"> <li>2 pole, 25A, 230V AC</li> <li>2 NO</li> </ul> Identical or equivalent to product: Sigma Elektrik, SMC-2025-2NO	10				
118	ONE (1) x Din Rail Modular Contactor <ul style="list-style-type: none"> <li>4 pole, 63A, 230V AC</li> <li>4 NO</li> </ul> Identical or equivalent to product: Sigma Elektrik, SMC-4063-4NO	10				
119	ONE (1) x Din Rail Modular Contactor	10				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"><li>4 pole, 25A, 230V AC</li><li>4 NO</li></ul> Identical or equivalent to product: Sigma Elektrik, SMC-4025-4NO					
120	ONE (1) x 1 Module Step Relay <ul style="list-style-type: none"><li>Impuse relay, 16A, 230V, 1 NO</li></ul> Identical or equivalent to product: Sigma Elektrik, SDA-16A	10				
121	ONE (1) x Mccb <ul style="list-style-type: none"><li>4 Poles Thermal-Magnetic Adjustable Type MCCB</li><li>100A, 25 kA breaking capacity</li></ul> Identical or equivalent to product: Sigma Elektrik, 4B160100	3				
122	ONE (1) x Star Delta Timer 240Vac <ul style="list-style-type: none"><li>Delay On Star/Delta Relay</li><li>Range of time delay t1:0.1s -10min</li><li>Switch time t2:0.1s-1s</li><li>AC/DC 12V~240V</li></ul> Identical or equivalent to product: Sigma Elektrik, SRT8ST240	10				
123	ONE (1) x Phase Sequence Relay <ul style="list-style-type: none"><li>Voltage Relay, 220-460V</li><li>Over voltage</li><li>Under voltage</li><li>Asymmetry time delay</li><li>Phase sequence</li><li>Phase failure</li></ul> Identical or equivalent to product: Sigma Elektrik, SRV805460	10				

	UNIDO REQUIREMENTS		TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters	Total Qty	unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
124	ONE (1) x Phase Failure & Phase Sequence <ul style="list-style-type: none"> <li>• Compact Size 1 Module, Out 1</li> <li>• Contact SPDT</li> <li>• Deenergise after delay,</li> <li>• Din Rail fitting</li> </ul> Identical or equivalent to product:MCEMVTGBD1S	10				
125	ONE (1) x 4 Pole Modular Contactor <ul style="list-style-type: none"> <li>• 4 pole, 25A, 230V AC</li> <li>• 4 NO</li> </ul> Identical or equivalent to product: Sigma Elektrik, SMC-4025-4NO	10				
126	ONE (1) x Single Pole 10Ka Circuit Breaker <ul style="list-style-type: none"> <li>• B-type</li> <li>• 10kA approved, 6A rated current</li> </ul> Identical or equivalent to product: Sigma Elektrik, 1SMD106B	60				
127	ONE (1) x Single Pole 10Ka Circuit BreakeRr <ul style="list-style-type: none"> <li>• 10kA MCB, 1 Pole</li> <li>• B-type, 10A</li> </ul> Identical or equivalent to product: Sigma Elektrik, 1SMD110B	60				
128	ONE (1) x Single Pole 10Ka Circuit Breaker <ul style="list-style-type: none"> <li>• 10kA MCB, 1 Pole</li> <li>• B-type, 16A</li> </ul> Identical or equivalent to product: Sigma Elektrik, 1SMD116B	60				
129	ONE (1) x Single Pole 10Ka Circuit Breaker <ul style="list-style-type: none"> <li>• 10kA MCB, 1 Pole</li> </ul>	36				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"><li>C-type, 25A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD125C					
130	ONE (1) x Single Pole 10Ka Circuit Breaker <ul style="list-style-type: none"><li>10kA MCB, 1 Pole</li><li>C-type, 32A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD132C <ul style="list-style-type: none"><li></li></ul>	12				
131	ONE (1) x Double Pole 10Ka Circuit Breaker <ul style="list-style-type: none"><li>10kA MCB, 2 Pole</li><li>C-type, 10A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD210C <ul style="list-style-type: none"><li></li></ul>	36				
132	ONE (1) x Double Pole 10Ka Circuit Breaker <ul style="list-style-type: none"><li>10kA MCB, 2 Pole</li><li>C-type, 25A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD225C	36				
133	ONE (1) x Double Pole 10Ka Circuit Breaker <ul style="list-style-type: none"><li>10kA MCB, 2 Pole</li><li>C-type, 32A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD232C	24				
134	ONE (1) x Triple Pole 10Ka Circuit Breaker <ul style="list-style-type: none"><li>10kA MCB, 3 Pole</li><li>C-type, 32A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD332C	24				
135	ONE (1) x Four Pole 10Ka Circuit Breaker	24				

	UNIDO REQUIREMENTS	Total Qty	TO BE COMPLETED BY THE INVITEE			
Item	Name and required parameters		unit price	total item price	compliance*	Remarks**
			Currency	Currency	Yes / No	
	<ul style="list-style-type: none"><li>10kA MCB, 4 Pole</li><li>C-type, 16A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD416C					
136	ONE (1) x Four Pole 10Ka Circuit Breaker <ul style="list-style-type: none"><li>10kA MCB, 4 Pole</li><li>C-type, 63A</li></ul> Identical or equivalent to product: Sigma Elektrik, 1SMD463C	12				
137	ONE (1) x Residual Current Devices 1Ph <ul style="list-style-type: none"><li>Residual Current Circuit Breakers (AC Type) 6 kA</li><li>2 Pole, 25A, 30mA</li></ul> Identical or equivalent to product: Sigma Elektrik, SHM2025030	12				
138	ONE (1) x Residual Current Devices 3Ph <ul style="list-style-type: none"><li>Residual Current Circuit Breakers (AC Type) 6 kA</li><li>4 Pole, 63A, 30mA</li></ul> Identical or equivalent to product: Sigma Elektrik, SHM4063030	12				

*Technical specifications for the supply of Electrical Components and Consumable Materials for electrical and electronics practical training on project number 230228 in Liberia.*

**SUMMARY OF OFFER:**

Bidder Name \_\_\_\_\_

	UNIDO REQUIREMENTS		TO BE COMPLETED BY THE INVITEE	
Item	Name and required parameters	Currency	Total item price	Remarks**
1-138	<b>Total Quantity Sub-Total, EX-Works factory</b>			Estimated lead time to EXW factory _____ weeks
	Export packed suitable for sea shipment			Packaging <b>must</b> be suitable for storage and transport under rough conditions. Plywood lined crates with metal band strapping is recommended. <sup>6</sup>
	Documentation (Certificate of Origin)			Note: CE marked products will be accepted as conforming to the required standards by the Liberian Ministry of Commerce and Industry.
	<b>Sub-Total, FCA (Free Carrier Agent) port of origin, declared for export)</b>			
	Estimated shipment weight / volume (e.g. ONE x euro pallet /400 kgs)			
<i>Bidders may offer based on Free Carrier Agent (FCA) incoterms, but are also encouraged to provide a delivery rate to Monrovia seaport if possible.</i>				
	Cost of transportation to Cost and Freight To (CFR) Monrovia seaport			<i>Consignee address:</i>  United Nations Industrial Development Organization (UNIDO) 6th Floor, One UN House, Pan African Plaza (PAP) Complex, 1st Street, Sinkor, Monrovia, LIBERIA
	Cost of transportation insurance to CFR Monrovia seaport, Liberia			
	<b>GRAND TOTAL CIF (Cost, Insurance, and Freight) To Monrovia seaport, Liberia</b>			

\*) compliance must be confirmed in detail by the contractor's offer and technical documentation and will be verified by UNIDO during technical evaluation;

\*\*) if not compliant with UNIDO's required parameters, the invitee must indicate his parameters in this column

### III. Notes for the invitees:

1. Products: The products to be supplied should be of the most current models or stock lines, incorporating all recent improvements in design and components.
2. The bid should be accompanied by adequate technical documentation, datasheets, catalogue(s) and other printed material or pertinent information (in English) for the items quoted.
3. Standards: All equipment must be rated or certified to international standards (i.e. CE, TUV, EN, ISO, RoHS Directive or other electrical industry standard as appropriate) and evidence of the rating or certification for each component must be supplied with/on the bid datasheets.
4. All active (powered) equipment must operate on 230V power supply 50Hz (unless specified differently in the line-item descriptions).
5. Guarantee/Warranty: Offers should specify guarantee/warranty details which must be a minimum of 12 months from the date of acceptance (after receipt and installation at final delivery sites).
6. Packing: Products must be EXPORT PACKED suitable for **ROAD/SEA** shipment and all relevant documents such as Certificate of Origin be provided to enable timely customs clearance. Packaging must be suitable for storage and transport under rough conditions. Bidders will be asked to provide images of the products before and after packaging prior to the shipment leaving their warehouse and UNIDO reserves the right to conduct a pre-shipment inspection at the warehouse of the awarded supplier where necessary.
7. Offers: UNIDO is exempt from all direct taxes, customs duties and charges of a similar nature in respect of articles imported or exported for its official use.
8. Offers to be made in **GBP, Euros** or **USD** only.
9. **Partial offers will be accepted** on a line-by-line basis and UNIDO reserves the right to split an award between any suppliers in any combination, as it may deem appropriate. If the quotation is submitted on an "all or none" basis, it should be clearly stated as such in your response to this Invitation to Bid.
10. Incoterm/Delivery: Delivery period to Free Carrier Agent (FCA) port of origin should be within 3-5 weeks from receipt of an award/purchase order.

### IV. Annexes:

Annex 1 – Logistics Procedures for Shipments to UNIDO Liberia



**Guidance Notes on Logistics Procedures for Bidders/Suppliers offering or undertaking shipment of Goods (Products, Materials and Equipment) to UNIDO projects in LIBERIA.**

The scope of the UNIDO project in Liberia involves procurement activities for the supply of Goods (products, materials and equipment) and the Technical Specifications will describe delivery terms as either Cost, Insurance and Freight (CIF) Monrovia seaport, Carrier and Insurance Paid To (CIP) Roberts International Airport or Delivered At Place (DAP) *designated location* in Liberia, as per Incoterms 2020.

In accordance with Section 7 of the Convention on the Privileges and Immunities of the United Nations and Section 9 of the Convention on the Privileges and Immunities of Specialized Agencies which are applicable to UNIDO by virtue of Article 21 of its Constitution, UNIDO is exempt from all direct taxes, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use.

The following guidance is issued to highlight a number of logistics factors (and associated costs) pertaining to procedure and documentation which is the responsibility of the **Supplier**, including the responsibility of the Supplier/Manufacturer, their Freight Forwarding Agent or Provider, or their Non-Vessel Operating Carrier [NVOCC]. Such factors and costs must be included in the Bidders' calculations and submissions as a response to the RFQ, RFP or ITB solicitation.







When preparing a response, Bidders/Suppliers are reminded that if goods are offered which are classed as hazardous for transport, the Supplier is responsible for the correct packaging methods, labelling and issue of Dangerous Goods Note (DGN) and Material Safety Data Sheets (MSDS) as applicable for the transportation method being selected (road, air or sea shipment).

On SEA FREIGHT shipments, special attention is drawn to The National Port Authority (NPA) *Cargo Tracking Note (CTN) System* which took effect from February 1st 2019 in Liberia. The Cargo Tracking Note is mandatory for all sea shipments bound to Liberia or in transit through Liberia and it is under Shipper's responsibility. Shipments not covered by a valid CTN number will not be loaded or discharged in Liberia. Fines will apply in accordance with the NPA regulation on top of additional costs. UNIDO reserves the right to claim any such costs from a Supplier which is found to have not followed the CTN process before shipping their Goods to the project. *The CTN must be entered as an "Import to Liberia" (not an Export from country of origin).*

The following table details the chain of activity for all UNIDO shipments and Suppliers should be familiar with this and all associated costs (e.g. CTN application or courier fees) during any preparations for bidding or contractual performance.

**Note:** In some instances, UNIDO may decide to opt for contracts based on EXW ex-works or free carrier *FCA loaded at origin factory* incoterm, where the awarded supplier will remain responsible for all export clearance formalities, documentation and loading of the goods into the container (for which UNIDO would arrange the truck and container to arrive at their factory). In these cases, timely handover of the export documentation to UNIDO or it's nominated forwarder, is of great importance to avoid delays and avoidable charges from the shipping line.

# LOGISTICS PROCEDURES FOR SHIPMENTS TO UNIDO LIBERIA

Activity	Guidance Notes	Action/Responsibility	
		UNIDO	Supplier
<b>Shipment pre-alert</b> 	<p>Supplier informs UNIDO of the delivery schedule and provides draft copies of the Bill of Lading (BOL)* or Airway Bill (AWB), Certificate of Origin, Shipping Invoice and Packing List for checking and notification by UNIDO of any amendments. <b>The BOL/AWB must show the UNIDO nominated clearing and forwarding agent (CFA) as a “Notify Party” as determined/advised by the specific Purchase Order/Contract communications.</b></p> <p><b>* A Master Bill of Lading (MBOL) showing ‘Supplier as Shipper’ to ‘UNIDO as Buyer’ and with notify party as UNIDO CFA will help to negate additional handover charges from carriers’ agents at destination point.</b></p>		Y
	 <p>Where the supplier is packing and sending goods which are classed as hazardous for transport, the Supplier is responsible for the correct packaging methods, labelling and issue of Dangerous Goods Note (DGN) and Material Safety Data Sheets (MSDS) as applicable for the transportation method being selected (road, air or sea shipment).</p>		Y
	UNIDO checks and confirms shipment <b>pre-alert documents</b> and advises if any amendments are required.	Y	
<b>Shipment booked for transport</b> 	<p>Supplier books the transportation in accordance with the Purchase Order/Contract and the described incoterms and conditions.</p>		Y
	<p><b>SEA FREIGHT only</b> - Supplier obtains the Cargo Tracking Note (CTN) which is compulsory for shipments arriving in Monrovia. The CTN has to be issued by the supplier/shipper situated at port of loading at the time of departure, not the importer at destination and <b>must state IMPORT – LIBERIA</b> (example below)</p>  <p><i>Some shipping lines may not load cargo without the CTN number.</i></p> <p>The Supplier can get this document from their freight forwarding company/shipping line, via a broker or directly from the Global Tracking and Maritime Solutions (GTMS) system. <b>Suppliers must ensure that at the time of arranging the freight movement, they specify with the forwarding company that the CTN is obligatory.</b></p>		Y
<b>Shipment documents sent to UNIDO</b>  <p><i>Originals should ideally arrive</i></p> <p><b>AIR: 5 days</b> <b>SEA: 10 days</b></p> <p><b>prior to the arrival of the flight/vessel</b></p>	<p>Supplier obtains and sends the following documents <b>by email</b> to the UNIDO Logistics team:</p> <ul style="list-style-type: none"> <li>• Invoice</li> <li>• Packing List</li> <li>• Certificate of Origin (CO)</li> <li>• <i>Cargo Tracking Note (CTN)</i></li> <li>• Bill of Lading (BOL) or Airway Bill (AWB)</li> <li>• Insurance certificate/evidence</li> <li>• Dangerous Goods Note (DGN) and Material Safety Data Sheet (MSDS)</li> </ul>		Y
	<p>Supplier obtains and sends the ORIGINAL documents <b>by courier</b> to the UNIDO Logistics team:</p> <ul style="list-style-type: none"> <li>• Invoice</li> <li>• Packing List</li> <li>• Certificate of Origin (CO)</li> <li>• <i>Cargo Tracking Note (CTN)</i></li> <li>• Bill of Lading (BOL) or Airway Bill (AWB)</li> <li>• Insurance certificate/evidence</li> <li>• Dangerous Goods Note (DGN) and Material Safety Data Sheet (MSDS)</li> </ul> <p><i>DHL or FedEx methods are both available in Monrovia; using other courier networks which utilise partner schemes may result in delays of service and should be avoided if possible.</i></p>		Y
<b>Clearance process in Monrovia</b>  <p><i>This can take 5 days or longer to process</i></p>	<p>UNIDO issues to our local clearing and forwarding agent (CFA) in advance of the shipment arrival to Liberia, an authorization letter for the duty/tax exemption, together with the required shipping documents:</p> <p><b>SEA:</b> Bill of Lading and CTN document, Certificate of Origin, Invoice and Packing List  <b>AIR:</b> Airway Bill, Certificate of Origin, Invoice and Packing List.</p>	Y	
	CFA submits the request for duty free approval to Ministry of Foreign Affairs (MOFA).	Y	
	CFA collects the approval letter from MOFA and submits to the LRA for processing.	Y	
	All signed and stamped documents from the LRA are taken to the port/ airport by the CFA to enable clearance upon arrival of the shipment.	Y	