



Request for Sealed Quotations for Goods

**Supply and Delivery of One Electrical Switchboard for
Oshakati new reservoir Chlorination.**

Procurement Reference No: G/RFQ/NW-022/2027

Name of Bidder		
Contact Person		
E-mail Address		
Postal Address		
Total Amount (Excl. VAT)		
Contact Phone number	Work:	Mobile:

Documents must be posted / delivered to:

The Quotation/Bid Box

Att: Procurement Management Unit (+264 61 71 2081, bids@namwater.com.na)

Namibia Water Corporation Ltd.
Private Bag 13389
176 Iscor Street, Aigams Building
Windhoek

**Closing Date: Thursday, 09 July 2026 at 11h00
NO LATE BIDS WILL BE ACCEPTED!**

Initials.....

NOTICE TO BIDDERS

- Please take note of initializing all pages of the standard bidding document and initial all the supporting documents including company profiles, brochures, etc.**
- Take note to sign all relevant pages as stipulated in the bidding standard document.**
- Copies of documents not certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963) will not be accepted.**



Namibia Water Corporation Ltd.
Private Bag 13389, Windhoek, Namibia
Tel: +264 61 71 2066
Fax: +264 61 21 0741

Letter of Invitation

Name and Address of Bidder _____

Procurement Reference Number: G/RFQ/NW-022/2027

29 June 2026

Dear Bidder,

Supply and Delivery of One Electrical control Switchboard for Oshakati new reservoir Chlorination.

NamWater invites you to submit your best quote for the items described in detail hereunder.

Any resulting contract shall be subject to the terms and conditions referred to in the document.

Queries, if any, should be addressed to Procurement Management Unit (Tel: +264 61 71 2081, E-mail: bids@namwater.com.na) Private Bag 13389 Windhoek, Namibia.

Please prepare and submit your quotation in accordance with the instructions given or inform the undersigned if you will not be submitting a quotation.

Yours faithfully

Procurement Management Unit

Initials.....

SECTION I: INSTRUCTIONS TO BIDDERS

1. Rights of Public Entity

NamWater reserves the right:

- (a) to split the contract as per the lowest evaluated cost per item, or
- (b) to accept or reject any quotation; and
- (c) to cancel the quotation process and reject all quotations at any time prior to contract award.

2. Preparation of Quotations

You are requested to quote for the items mentioned in Section III by completing, signing and returning:

- (a) the Quotation Letter in Section II with its annex for Bid Securing Declaration;
- (b) the List of Goods and Price Schedule Section III;
- (c) the Specifications and Compliance Sheet in Section V; and
- (d) any other attachment deemed appropriate.

You are advised to carefully read the complete Request for Sealed Quotations document, including the Special Conditions of Contract in Section VII, before preparing your quotation. The standard forms in this document may be retyped for completion but the Bidder is responsible for their accurate reproduction.

3. Validity of Quotations

The Quotation validity period shall be **120 days** from the date of submission deadline.

4. Eligibility Criteria

To be eligible to participate in this Quotation exercise, you should:

- (a) Have a certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of a full valid company Registration Document;
- (b) Have an original or a certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of a valid Good Standing Tax Certificate, as certified by the Commissioner of Oath;
- (c) A valid good Standing Social Security Certificate;
- (d) Have a valid certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998 or a valid certified copy of the original document, as certified by the Commissioner of Oath;
- (e) Submit signed Bid-securing Declaration.
- (f) An undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws, Remuneration Order, and Award, where applicable and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof; and;

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- (g) Submit a minimum of one (1) reference letter from reputable entities whom the Bidder has supplied Electrical Switchboard in the last three (3) years, and handled successfully.
- (h) Supporting information / literature for all the items offered to substantiate compliance, where applicable. **These documents must be from the manufacturer or an authorised manufacturer's representative. Representatives must provide an authorised letter from the manufacturer confirming their status.**
- (i) Bids from service providers appearing on the ineligibility lists of African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank Group and World Bank Group shall be rejected.

Links for checking the ineligibility lists are available at:

- Republic of Namibia, Procurement Policy Unit
<https://egp2.gov.na/forms/SearchSuspendedBidders.jsf>
- African Development Bank
<https://www.afdb.org/en/projects-operations/debarment-and-sanctions-procedures>
- Asian Development Bank
<http://lnadbg4.adb.org/oga0009p.nsf/sancALLPublic?OpenView&count=999>
- European Bank for Reconstruction and Development
<http://www.ebrd.com/pages/about/integrity/list.shtml>
- Inter-American Development Bank Group
<http://www.iadb.org/en/topics/transparency/integrity-at-the-idb-group/sanctioned-firms-and-individuals,1293.html>
- World Bank Group
<http://www.worldbank.org/en/projects-operations/procurement/debarred-firms>

5. Bid Security/Bid Securing Declaration

Bidders are required to subscribe to a Bid Securing Declaration for this procurement process.

6. Delivery

Delivery shall be **4-6weeks** after acceptance/issue of Purchase Order. Deviation in delivery period shall be considered if such deviation is reasonable.

7. Sealing and Marking of Quotations

Quotations should be sealed in a single envelope, clearly marked with the Procurement Reference Number, addressed to the Public Entity with the Bidder's name and contact information at the back of the envelope.

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8. Submission of Quotations

Quotations should be deposited in the Quotation/Bid Box located at Namibia Water Corporation Ltd Head office, Private Bag 13389, 176 Iscor Street, Aigams Building, Windhoek, not later than **09 July 2026 at 11h00**. Offers by post or hand delivered should reach Private Bag 13389 by the same date and time at latest. Late Offers will be rejected. Quotations received by e-mail will not be considered.

9. Opening of Quotations

Quotations will be opened internally by the Public Entity immediately after the closing time referred to in instruction 8 above. A record of the Quotation Opening stating the name of the bidders, the amount quoted, the presence or absence of a Bid Security/Bid Securing Declaration, will be posted on the website of the Public Entity and available to any bidder on request within three working days of the Opening.

10. Evaluation of Quotations

NamWater shall have the right to request for clarifications in writing during evaluation. Substantially responsive offers shall be compared according to lifecycle cost to establish the lowest evaluated offer.

11. Technical Compliance

Bidders shall submit along with their quotations documents, catalogues and any other literature to substantiate compliance with the required specifications and to qualify deviations if any with respect to Public Entity's requirements.

The Specifications, Performance Requirements and Compliance Sheet details the minimum specifications of the goods/items to be supplied. The specifications have to be met but no credit will be given for exceeding the specifications.

12. Prices and Currency of Payment

Prices shall be fixed in Namibian Dollars.

13. Margin of Preference

Not Applicable

14. Award of Contract

The Bidder having submitted the lowest evaluated responsive quotation and qualified to supply the goods/items and related services shall be selected for award of contract. Award of contract shall be by issue of a Purchase Order/Letter of Acceptance in accordance with terms and conditions contained in Section VI: Contract Agreement and General Conditions of Contract. **NamWater may consider partially awarding of offers as per Items or Lots.**

15. Notification of Award and Debriefing

The Public Entity shall after award of contract promptly inform all unsuccessful bidders in writing of the name and address of the successful bidder and the contract amount and post a notice of award on its website within seven days. Furthermore, the Public Entity shall attend to all requests for debriefing made in writing within 7 days of the unsuccessful bidders being informed of the award.

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SECTION II: QUOTATION LETTER

(To be completed by Bidders)

[Complete this form with all the requested details and submit it as the first page of your quotation with the Price list and documents requested above. A signature and authorisation on this form will confirm that the terms and conditions of the RFQ prevail over any attachments. **If your quotation is not authorised, it will be rejected.**]

Quotation addressed to:	NamWater
Procurement Reference Number:	G/RFQ/NW-022/2027
Subject matter of Procurement:	Supply and Delivery of One Electrical control Switchboard for Oshakati new reservoir Chlorination.

We offer to supply the items listed in the attached List of Goods and Price Schedule as per the defined specifications, except for the qualified deviations [Bidder may delete this phrase in case of no deviation] and, in accordance with the terms and conditions stated in your Request for Quotations referenced above.

We confirm that we are eligible to participate in this Quotation exercise and meet the eligibility criteria specified in Section 1: Instruction to Bidders.

We undertake to abide ethical conduct during the procurement process and the execution of any resulting contract.

We have read and understood the content of the Bid Securing Declaration (BSD) attached hereto and subscribe fully to the terms and conditions contained therein. We further understand that this subscription could lead to disqualification on the grounds mentioned in the BSD.

The validity period of the Quotation isdays from the date of the bid submission deadline.

We confirm that the prices quoted in the List of Goods and Price Schedule are fixed and firm and will not be subject to revision or variation, if we are awarded the contract **prior to the expiry** date of the quotation validity.

The delivery period offered from the date of issue of Purchaser Order/ Letter of Acceptance is as shown in the List of Goods items and Price Schedule.

Quotation Authorised by:

Name of Bidder		Company's Address and seal	
Contact Person			
Name of Person Authorising the Quotation:		Position:	Signature:
Date		Phone No./Fax	

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Appendix to Quotation Letter

BID SECURING DECLARATION
(Section 45 of Act)
(Regulation 37(5) and 56(2))

Date:

Procurement Ref No.:.....

To:

I/We* understand that in terms of section 45 of the Act a public entity must include in the bidding document the requirement for a declaration as an alternative form of bid security.

I/We* accept that under section 45 of the Act, I/we* may be suspended or disqualified in the event of

- (a) a modification or withdrawal of a bid after the deadline for submission of bids during the period of validity;**
- (b) refusal by a bidder to accept a correction of an error appearing on the face of a bid;**
- (c) failure to sign a procurement contract in accordance with the terms and conditions set forth in the bidding document, should I/We* be successful bidder; or**
- (d) failure to provide security for the performance of the procurement contract if required to do so by the bidding document.**

I/We* understand this bid securing declaration ceases to be valid if I am/We are* not the successful Bidder

Signed:
[insert signature of person whose name and capacity are shown]

Capacity of:
[indicate legal capacity of person(s) signing the Bid Securing Declaration]

Name:
[insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the bid for and on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____
[insert date of signing]

Corporate Seal (where appropriate)

[Note*: In case of a joint venture, the bid securing declaration must be in the name of all partners to the joint venture that submits the bid.]

**delete if not applicable / appropriate*

Initials.....



Republic Of Namibia

Ministry of Labour, Industrial Relations and Employment Creation

Written undertaking in terms of section 138 of the Labour Act, 2015 and section 50(2) (D) of the Public Procurement Act, 2015

1. EMPLOYERS DETAILS

Company Trade Name:.....

Registration Number:.....

Vat Number:

Industry/Sector:

Place of Business:.....

Physical Address:.....

Tel No.:.....

Fax No.:.....

Email Address:.....

Postal Address:.....

Full name of Owner/Accounting Officer:.....

.....

Email Address:.....

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2. PROCUREMENT DETAILS

Procurement Reference No.:.....

Procurement Description:
.....
.....

Anticipated Contract Duration:

Location where work will be done, good/services will be delivered:
.....

3. UNDERTAKING

I [insert full name], owner/representative
of[insert full name of company]

hereby undertake in writing that my company will at all relevant times comply fully with the relevant provisions of the Labour Act and the Terms and Conditions of Collective Agreements as applicable.

I am fully aware that failure to abide to such shall lead to the action as stipulated in section 138 of the labour Act, 2007, which include but not limited to the cancellation of the contract/licence/grant/permit or concession.

Signature:

Date:

Seal:.....

Please take note:

1. A labour inspector may conduct unannounced inspections to assess the level of compliance
2. This undertaking must be displayed at the workplace where it will be readily accessible and visible by the employees rendering service(s) in relations to the goods and services being procured under this contract.

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3. SECTION III: LIST OF GOODS AND PRICE SCHEDULE

Supply and Delivery of One (MCC) Electrical Control Switchboard for Oshakati new reservoir Chlorination.

Table 1 - Bill of Quantities 1 x Oshakati New Reservoir Chlorination Switchboard

SPECIFICATIONS				EQUIPMENT OFFERED	QUANTITIES & PRICES		
ITEM	SYMBOL	DESCRIPTION	RATING	MAKE,TYPE,RATING,YEAR OF MANUFACTURING	UNIT PRICE	QTY	TOTAL PRICE
A	B	C	D	E	F	G	H
1	Q0	3-Pole Main Circuit Breaker with 1xN/O + Rotary Handle (ONLY Metallic support) on the Door.	40 A			1	
2	Q1 – Q4	3-Pole Circuit Breakers with 1xN/O 6kA	10 A			4	
3	E/L	Earth Leakage Unit 1-Pole + Neutral 6kA	25 A			1	
5	Q8	Single Plug 230Vac, 2-Pole + E	20 A			1	
6	Q5, Q6,Q7,Q13,Q14,Q15, Q16,Q17,Q18,Q19,Q20	1-Pole Circuit Breaker with N/O 6k A	6 A			11	
7	Q9, Q10,Q11	1-Pole Circuit Breakers 6kA	10 A			3	
8	K1M – K2M	Contactors with 1xN/O	240V AC			2	
9	K1 – K2	Relays with 1xN/O	24V DC			2	
10	H1-H2	Hour meters				2	
11		Dehnbloc M 255 FM Surge Arrester.				3	
12		Dehnguard S 275 FM Surge Arrester.				3	
13		Dehngap M 255 FM Surge Arrester.				1	

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14	F10	Dehnrail M 2P 30 FM Surge Arrester				1	
15	F11, F12	Fuse Holders complete with Fuses.	10 A			2	
16	F6	Voltage Window Comparator – SP 231	400 VAC			1	
17		Volt Selector Switch.3-Phase with Neutral				1	
18	P0	Voltmeter (Digital).	0 – 400 Vac			1	
19	D2-09BDC1-1	205 PLC Direct Logic	12/24V			1	
20	H2-D1ME	CPU Do More				1	
21	D2-16ND3-2	Sixteen channel digital input card				1	
22	D2-08TR	Eight Channel Digital Relay card				1	
23	F2-08DA-1	Eight channel analog output card				2	
24	F2-08AD-1	Eight channel analog input card				2	
25	5 ports	Ethernet Switch/Moxa				1	
26	Human Machine Interface (HMI - KTP700 6AV2 123-2GA03-0AX0	Touch Panel (HMI)				1	
27	12V	Battery Blue power Charger	12/30A			1	
28	240W 12/24V DC-DC	DC-DC Converter	15A			1	
29		Gate way box				2	
30		Loop Isolator				4	
31		FS 9 serial protection				1	
32		Stryde Gateway Module TCP Server to Serial RTU Client				2	
33		Victron DC - DC Converter 12V/24V DC				1	
34		Victron Battery Protector (BP 40i)				1	
35		Victron Battery Charger				1	
32		Sheet Metal enclosure				1	
33		360° bonding bars				1	

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34		Isolators				1	
35		Anything to complete in accordance to the specifications, but not covered within the above items.		Specify			
36		Factory testing and commissioning				1	
37		Packing				1	
38		Engraving				1	
39		Drawings				1	
40		Documentation				1	
41		Delivery				1	
42		Wiring and Assembly				1	
Sub-Total (Excl. VAT)							
VAT Amount							
Total Amount							

Wiring and Assembly of Oshakati New Reservoir Chlorination Switchboard

Table 2 - wiring and assembly Oshakati New Reservoir Chlorination Switchboard

SPECIFICATIONS				EQUIPMENT OFFERED		QUANTITIES & PRICES		
ITEM	REF.	SYMBOL	DESCRIPTION	RATING	MAKE,TYPE,RATING,YEAR OF MANUFACTURING	UNIT PRICE	QTY	TOTAL PRICE N\$
			Terminals		Specify:		1	
			Anything to complete in accordance to the specifications, but not covered within the above items.		Specify:		1	

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Sub-Total (Excl. VAT) carried forward to Summary								
						TOTAL		
NAME:			POSITION:		SIGNATURE:			DATE:
NAME OF BIDDER:			ADDRESS:					

If Price quoted is subject to change in rate of exchange at the time of delivery of goods provide details hereunder:

Currency:..... Exchange Rate:.....

If no base rate of exchange is given, the price shall be treated as firm in Namibian Dollars for all intent and purpose.

Key notes: NA=NOT APPLICABLE, NQ=NO QUOTE

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4. General Technical Specifications

SECTION V: SPECIFICATIONS COMPLIANCE SHEET

Procurement Ref No. G/RFQ/NW-022/2027

Insert Specifications Compliance Sheet

Item No	Specifications and Performance Required	Compliance of Specifications and Performance Offered	Details of Non-Compliance/ Deviation (if applicable)
<i>A*</i>	<i>B*</i>	<i>C</i>	<i>D</i>
1	Sheet Metal Enclosure - Orange		
2	3-Pole Main Circuit Breaker with Rotary Handle on Door (Moulded Case), 10Ka 50A		
3	3-Pole Pump Circuit Breaker with 1xN/O + Rotary Handle on Door (Moulded Case), 6kA 25A		
4	3-Pole Pump Circuit Breaker with 1xN/O + Rotary Handle on Door (Moulded Case), 6kA 6A		
5	1-Pole, Circuit Breakers 6kA 10A		
6	1-Pole, Circuit Breakers 6kA 16A		
7	Earth Leakage Unit 1-Pole + Neutral 6kA 25A		
8	Single Plug 230Vac, 2-Pole + E 16A		
9	DEHNbloc M 255 FM Surge Arrester.		

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Item No	Specifications and Performance Required	Compliance of Specifications and Performance Offered	Details of Non-Compliance/ Deviation (if applicable)
<i>A*</i>	<i>B*</i>	<i>C</i>	<i>D</i>
10	DEHNguard S 275 FM Surge Arrester.		
11	DEHNgap M 255 FM Surge Arrester.		
12	Fuse Holders complete with Fuses. 10A		
13	Dehnrail M 2P 30 FM Surge Arrester		
14	Fuse Holders complete with Fuses. 1A		
15	Voltage Window Comparator SP231 400 AC		
16	Current Transformers – Class 0.5 40/5		
17	Volt Selector Switch.3-Phase with Neutral		
18	Voltmeter (Digital).0-500 V AC		
19	Ampmeter (Digital)		
20	Running Hour meter 220Vac 999		
21	24VDC Coil Control Relay (2xN/O, 2xN/C). 10A		
22	Programmable Logic Controller(Koyo PLC) - DL-205-1-1 24V DC		
23	Analog Input cards - F2-08AD-1 4-20mA		
24	Digital Input Cards - D2-16ND3-2		

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Item No	Specifications and Performance Required	Compliance of Specifications and Performance Offered	Details of Non-Compliance/ Deviation (if applicable)
<i>A*</i>	<i>B*</i>	<i>C</i>	<i>D</i>
25	Digital Output Cards - D2-08TR		
26	DL2626 - CPU		
27	D2-FILL		
28	Stryde Gateway Module TCP Server to Serial RTU Client		
29	FS 9 serial protection		
30	Human Machine Interface (HMI - KTP700 6AV2 123-2GA03-0AX0		
31	Victron DC - DC Converter 12V/24V DC 12V/24V DC 15A		
32	Victron Battery Protector (BP 40i)		
33	Victron Battery Charger Input 230V AC, Output 12 VDC 15A		
34	Telemetry Comms Cable		
35	Ethernet Cable - (8pin Ethernet Straight through cable)		
36	Schnieder Motor Protection Unit (Complete unit set) 27A		
37	Energy Meter PRO 100		
38	Signal Isolator 1Ch-OUT-Weidmuller Loop Isolator		
39	Powercom / Kocos Modem A1700		

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Item No	Specifications and Performance Required	Compliance of Specifications and Performance Offered	Details of Non-Compliance/ Deviation (if applicable)
<i>A*</i>	<i>B*</i>	<i>C</i>	<i>D</i>
40	Terminals		
41	Ferrules		

Specifications and Compliance Sheet Authorised By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:	Company		

Attach datasheet with specifications for each product item that the bidder is bidding for.

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Electrical Switchboard for Oshakati new reservoir Chlorination.

1. TECHNICAL SPECIFICATIONS: SUPPLY AND DELIVERY OF 1 X OSHAKATI NEW RESERVOIR CHLORINATION, ELECTRICAL CONTROL SWITCHBOARD.

1.1 General

This tender is for the supply and delivery of one chlorine dosing electrical switchboard.

The switchboard shall be designed for in-door use.

All material supplied shall be new and undamaged.

Components will be mounted inside a sheet metal enclosure and shall work satisfactory under ambient temperatures between -5° to 40°C.

All panel equipment of identical functionality shall be of the same size, shape and appearance.

The wiring diagrams and front panel designs attached to this tender forms part of the specifications as shown in Annexure 1.

The contractor shall check the sizes and ratings specified in the design, and if he does not agree, the responsible engineer must be contacted.

Special attention shall be given to the neatness and practical layout of components and their installation. The assembly of the switchboards with its components shall comply with IEC 439 (1985) standards where applicable, unless specified otherwise in this document.

The attached front panel layouts shall be a guideline to the Tenderer/contractor. Should the enclosure size be too small to house the components, the contractor shall notify the Employer immediately for approval on a larger enclosure. The layout is based on a 192 mm Cubic grid system as shown in Annexure 1, sheet 1/9.

The tenderer shall supply and deliver the switchboards with specific reference to the following requirements:

1.2 Pump Control Switchboard

1.2.1 Sheet Metal Enclosure

The enclosure shall be of modular type (e.g. CUBIC or equivalent), constructed of sheet metal and rigidly framed. It shall be factory powder coated, colour: electric orange.

The separation of assemblies shall comply with SABS IEC 439-1 standards as follows:

All Sections	:	Form 3b	
Mounting	:	Wall-Mounted	
Protection	:	Doors closed	: IP 54 (front, sides and top of enclosure)
	:	Doors opened	: IP 20

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The Tenderer shall provide ventilation for the enclosure on the front panel.

Sections shall be as indicated on the Front Panel Layout.

1.2.2 Size

20% spare mounting area shall be provided on the mounting plate in the enclosure to allow for future extensions of the switchgear. The unused area shall already be provided with DIN rails and PVC trunking.

For tendering purposes, sizing shall be according to the dimensions given in Annexure 1. If these sizes are not sufficient, the contractor shall approach the Engineer (when submitting the component layout for approval) to increase the size of the switchboard according to tender rates.

1.2.3 Wiring

- All control wiring shall be done with multi-strand, flexible control cable, with a minimum conductor size of 0.5 mm².
- Terminal blocks shall be easily but rigidly fastened onto rails.
- All cable and wire ends shall be labelled with the corresponding wiring diagram numbers (including ends of terminal blocks as well).
- All cable and wire ends shall be ferruled (bootlace ferrules only) or terminate in lugs.
- Cable access to the switchboard shall be from the bottom. Sufficient space (min 150 mm for control cables and min of 300mm for power cables) must be provided between gland-plates and the terminals for easy connection of all terminals. Further sufficient space shall be provided below the gland plate for hand and tool access for easy cable glanding.
- Trunking shall be square PVC. All trunking and cable cut-outs shall be sized to allow 50% additional cable to be drawn through.
- The contractor shall split power cables (220 Vac) from control cables (24 Vdc) by means of separate trunkings.
- The distance between components and trunking shall be at least 50 mm.

1.2.4 Earthing

Earthing of the complete installation shall comply with Section 13 of the Standard Regulations for the Wiring of Premises and with Regulation C.61 of the Factories, Machinery and Building Work Act. However, all external earthing will be supplied by others.

A 25mm x 4mm earth bar with M10 Earth Studs shall be provided at the bottom of the metal enclosure. Sufficient earth terminals shall be provided and connected to the earth bar, electronic equipment (e.g. PLC) and the doors of the switchboard.

As shown in Annexure 1, sheet 2/9, the tenderer shall install lightning surge arrester units inside the main incomer section of the switchboard using minimum 16mm² wires.

Three bars of 20mm x 5mm COPER BAR on two separate isolators have to be inserted in at bottom of control panels to ensure the 360° bonding (See attached photo). Each bar will consist of 13 x 8mm Ø holes with CADMIUM plated nuts, spring washers, washers and bolts. See attached drawing for earthing. This is required to comply with EMC best practices.

1.3 Labels

1.3.1 General

All labelling (except if specified otherwise) shall be done by engraving on sandwiched durable plastic or aluminium strips in black on white/metal. Labels shall be fixed underneath/above the applicable item using PVC pop - rivets.

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The employer shall approve all labelling systems, as well as symbol types and names, before the manufacturing of the labels commences. The approval shall be given on a detailed labelling schedule submitted by the contractor to the employer.

1.3.2 Switch Gear

Each isolator, circuit breaker, push button and switch shall be neatly labelled with its name (symbols such as S1 are not acceptable).

1.3.3 Control Gear

Relays, contactors, current monitors etc. shall be labelled with their symbol (e.g. K1 for control relays, K1M for contactors). This labelling can be done by engraving the symbols directly onto the cover of the PVC trunking underneath the appropriate item. Different covers shall be numbered (or cut to different length) to ensure its correct position in the switchboard. The contractor shall obtain approval from the engineer of their proposed system.

1.3.4 Terminals

All terminals are to be of the Entrelec ADO type. All terminals and terminal groups provided for cables entering or leaving the enclosure shall be labelled by name. A single legend type label is preferred. All terminals for the PLC analogues must be fuse terminals, Annexure 1, sheets 5/9 and 6/9.

1.3.5 Indicators and Buttons

Indicators and buttons shall be labelled as shown in Annexure 1, sheet 1/7 using label mounts.

1.3.6 Cables

Power Cables must be marked L1; L2; L3 or red; white (yellow); blue, for the incoming lines and U; V; W; or red; white (yellow); blue for the outgoing lines. All Control Cables must be neatly numbered with e.g. sleeve numbering, according to the circuit diagram.

1.3.7 Wires

All control wires labelling will be supplied by the employer.

1.4 Switch-Gear

1.4.1 General Component Specification

Voltage : 230 V +15% / -10% ac for power
230 V +15% / -10% ac for controls
24 V DC \pm 15% for controls

Frequency : 50 Hz; \pm 10%

Minimum Short circuit breaking

Capacity of circuit breakers : As specified in the Schedule of Technical Information and Quantities.

Contactor switching capacity rating

According to : AC-3

Rating of Components : 27 kA

Min. & Max. Operating Temperatures : -5° to 40°C

All units (except if specified otherwise) shall be suitable for 100% duty cycle.

1.4.2 Mounting of Switch-Gear

The component layout of the switchboards shall be approved by The Employer before commencement of wiring & assembly. All switchgear shall be grouped according to function. It is the responsibility of the contractor to arrange for approval of the component layout when ready.

All switch and control gear shall be mounted on DIN 35mm x 7,7mm top hat-rails, properly fixed to a mounting plate at the back of the enclosure.

1.5 Operator Interface

Initials.....

In general, it is preferred that all operator interfaces be done via a Touch Screen or dedicated MMI's. This equipment shall be supplied by NamWater within 1-Week from the date of award of this tender.

1.6 Lightning Surge Arrester Units

The Lightning Surge Protection units under section 3.6 shall meet SABS 0171 (1986) standards.

NB: DEHN products must have (type FM) auxiliary contacts for 24Vdc to the PLC.

1.6.1 Reference: DEHNBloc (961125)

The unit shall comply with the following specifications:

Continuous Operating Voltage : 255 Vac / 50 ... 60 Hz
 Lightning Impulse Current : 25 kA
 Voltage Protection Level : Smaller or equal to 2.5 kV
 Reaction time : Smaller or equal to 100 ns
 Short circuit withstand capability : 27 kA / 50 Hz
 Mounting on : DIN-rail 35 mm to EN 60 715
 Remote alarm contacts : Changeover contact

1.6.2 Reference: DEHNgap (961105)

The unit shall comply with the following specifications:

Nominal Voltage : 255 Vac
 Nominal Frequency : 50 ... 60 Hz
 Nominal Current : 35 A
 Lightning Impulse Current : 100 kA
 Short circuit withstand capability : 27 kA / 50 Hz
 Remote alarm contacts : Changeover contact

Visual fault indicator should indicate failure of the component.

1.6.3 Reference: DEHNguard (952090)

The unit shall comply with the following specifications:

Continuous operating voltage : 275 Vac
 Maximum discharge current : 40 kA
 Response time : Smaller or equal to 25 ns
 Short circuit withstand capability : 50 kArms / 50 Hz
 Mounting on : DIN-rail 35 mm to EN 60 715
 Degree of protection : IP 20
 Remote alarm contacts : Changeover contact

Visual fault indicator should indicate failure of the component.

1.6.4 Dehnrail Fml 30 – Dc Lightning Protection Unit (953206)

The unit shall comply with the following specifications:

Continuous operating voltage : 30 VDC
 Nominal discharge current : 2 kA
 Response time : Smaller or equal to 25 ns
 Mounting on : DIN-rail 35 mm to EN 60 715
 Degree of protection : IP 20
 Remote alarm contacts : Changeover contact

Visual fault indicator to indicate failure of the component

1.7 Transient Suppressors for Serial Communication

10kA 4-wire protection for 5-Pin Modibus/rs 232 ports. Plug-in surge arrester with 3-stage protective circuit for use according to the lightning protection zones concept at boundaries 0B - 2 and higher (FS-9-24)

1.8 Single Phase Earth Leakage Protection

The unit shall comply with the following specifications:

SABS Approved

DIN Rail mounted

16A, 2-pole

Max. fault current : 30 mA

Voltage : $230 \pm 10\%$

1.9 Fuses And Fuse Holders

Reference: MERLIN GERIN STI, or equivalent

The fuses and fuse-holders shall comply with the following minimum specifications:

Voltage : 500Vac

Mounting : DIN-rail

Physical Fuse size : 10 x 38 mm

Short Circuit Rating : 100 kA

1.10 Voltage Window Comparator

Reference: SP 231 from Rhomberg Bräsler

The voltage window comparator shall comply with the following minimum specifications:

- Combined over and under voltage detection.
- Adjustable response delay of 1-10 sec.
- Adjustable range of -20% for Under Voltage, and $+20\%$ for Over Voltage
- Independent setting of over and under voltage.
- LED indication for type of fault and status of relay.
- Supply voltage of 230 Vac $+20\%$, -20% .
- 10 A SPDT relay output.

Any alternative make which is offered shall be proven by the Tenderer to be completely equivalent to the SP 231 in every respect. Tamperproof sealing buttons shall be provided to replace the adjustment knobs after commissioning on site.

The unit shall be secured to a socket by an effective locking system for vibration damping.

1.11 Loop Isolators

This item shall be of the Weidmuller brand or similar if approved by the engineer with the following specifications. Reference: Weidmuller signal conditioners

Current Input: 4-20mA

Current Output: 4-20mA

Power supply: 24VDC

Input reference voltage: 0VDC

Terminal wire cross-section max 2.5mm^2

Operating temperature: 0-55 degree Celsius

Mounting: DIN-rail

1.12 Current Transformers

This specification covers the supply of LT Current Transformers (CTs). The CTs shall be suitable for high grade kilowatt hour meters and general industrial measurements.

Type

Initials.....

- The CTs shall be of ring type or primary wound type (bar type or bus-bar type CTs shall not be accepted).
- The secondary leads shall be terminated with Tinned Cooper rose contact terminals with arrangements for sealing purposes.
- Polarity (both for primary and second leads) shall be marked.
- The CTs shall be varnished, fibreglass tape insulated or cast resin, air-cooled type. Only super enamelled electrolytic grade copper wires shall be used. The CTs shall conform to IEC60044-1

Technical details must comply with the following minimum specifications:

Current Transformers for Main Incomer / High Grade kWh meters

1. Class of Accuracy 0.5, 1
2. Rated Burden 5 VA
4. Highest System Voltage 260 V
5. Nominal System Voltage 230 V
6. Frequency 50 Hz
7. Supply System 1 Ph. Solidly grounded Neutral System
8. Transformer Ratio 25/5, 10/5

Ring type CT's shall have suitable clamp to fix the CT to the panel board, wherever required.

1.13 Instrumentation

1.13.1 Monitoring Devices

AC meter

Shall be sized 72 x 72 mm.

Reference Carl Gevazzi DI3-72AV5

Display : 3 Digit, decimal point selectable 9.99 or 99.9 or 999

Voltmeter : 0-500 Vac

Ammeter : 5A direct

C/T range : 40/5, 60/5

Dip switch selectable : 100/5, 150/5, 250/5, 400/5, 500/5, 600/5, 1000/5

Accuracy : 0.5 % F.S, +- 1 digit or better

Supply voltage : 230 Vac

1.14 Power Supply and Convertors

2. The charger, DC-DC converter, battery protector will be either of the Victron or Blue Smart brand with the specifications detailed in the electrical drawing as of the annexure 1 sheet

2.1 Programmable Logic Controller

All PLC equipment should be of the Koyo PLC brand and the product codes provided in the bill of quantity should be used as reference. Where the contractor feels the digital or analog input or output cards listed in the bill of quantity are not sufficient, the responsible engineer should be notified immediately.

The following PLC component is needed for this project and will be sourced by the bidder;

- i. Nine Slot Base-(D2-09BDC1-1)

Initials.....

9-slot base, requires external 12-24 VDC power, no isolated auxiliary device power supply, local I/O expandable.

- ii. Eight Channel Analog Input Card-(F2-08AD-1)
8-channel analog input module, 12-bit resolution, range: 4-20 mA. One extra F2-08AD-1 card to be delivered to client as spare
- iii. Eight Channel Analog Output Card-(F2-08DA-1)
8-channel analog output module, 12-bit resolution, range: 4-20 mA, sink or source output configurable. Designed to operate with 24VDC user-supplied power supply. One extra F2-08DA-1 card to be delivered as spare.
- iv. Eight Channel Digital Relay-(D2-08TR)
8-point 5-30 VDC or 5-240 VAC relay output module, 8 Form A (SPST) relays, 1 common (2 common terminals), 1A/point, 4.0A/module, replaceable fuse, removable terminal.
- v. Eight Channel Digital Input Card-(D2-8ND3-2)
8-point 24VDC current sinking/sourcing input module, 2 commons (isolated), with removable terminal.
- vi. Central Processing Unit(CPU)-(H2-DM1E/DO MORE)
DirectLOGIC 205 series PLC CPU module, 30.4k words total (15.8k words ladder - flash memory, 14.6k words V-memory), RLL/RLLPLUS programming, real time clock/calendar, built-in RS-232C ports. USB/PGM port and Ethernet port Bottom port also supports Remote I/O Master, DirectNET Master/Slave RS-422, Modbus RTU.

2.2 Landis+ Gyr E650 Energy meter
The preferred choice for three phase systems
Nominal voltage U_n ZMD400xT
3 x 220/380 to 240/415 V

Active energy, to IEC 62053-22 class 0.5 S
Reactive energy, to IEC 62053-24 class 1 S

3.3.1 Technical Information

The documentation must be supplied in software format and the documentation shall contain the complete technical- and user information for all components which could require adjustment, maintenance or are programmable.

The following formats are preferred:

Text : MS Word

Drawings : AutoCAD / AutoCAD LT

Pamphlets and brochures : PDF Files, PowerPoint, JPG/GIF

3.3.2 Circuit Diagram and Lay-out Diagrams

A circuit diagram of the switchboard (similar to Annexure 1) shall be supplied. All symbols, terminal- & cable numbers shall be indicated and must correspond to those used in the switchboard(s).

An AutoCAD compatible software copy of the as build circuit diagram in an electronic format, shall be handed to NamWater.

3.3.3 Part List

A complete component list shall be supplied, allowing cross-reference with the circuit diagram and contain make, type and catalogue/order number of all components or sub-assemblies used in the switchboard.

Original Pamphlets including all technical specifications such as component details, installation instructions, dimension sheets and material specifications.

PLEASE NOTE:

No payment will be made unless all documentation has been received.

All diagrams and information shall make use of metric units.

Initials.....

3.4 Switchboard Stand (to be supplied by Namwater)

The switchboard should have the following specifications:

- Should be made of steel angle irons
- The stand is of the length(3270mm), breadth(384mm) and height of 400mm
- Should have metal sheet covers, covering the sides of the stand
- Metal sheet covers should be painted primed black color :
- Metal sheet covers should be 4-6mm in thickness

NB: Similar installation of this nature can be viewed at NamWater electrical workshops for clarity.

Specifications and Compliance Authorized By:

Name:		Signature:	
Position:		Date:	
Authorized for and on behalf of:		Company	

Initials.....

2. SCHEDULE OF TECHNICAL INFORMATION AND QUANTITIES

The Schedule comprises items covering the contractor’s profit and costs of the general liabilities and of construction of temporary and permanent works.

Each insertion in the schedule shall be in INK. An item against which no price is entered will be considered to be covered by the other prices or rates in the schedule.
No payment shall be made for any item not listed as a Pay Item.

The subtotal of the items for each station/section shall be carried forward to the Schedule of Quantities and Prices.

i. Are the quoted prices firm? : _____ **(Yes/No)**
 Period for which the bid price is firm. : _____ **(Days from date of Quotation closure)**

ii. Delivery

Preference will be given to shorter delivery periods.

F.O.R. Windhoek? : _____ **(Yes/No)**
 Delivery period to Windhoek : _____ **weeks**
 Guarantee period : _____ **months**
 Details of Guarantee : _____
 Is delivery period fixed? : _____ **(Yes/No)**

DOCUMENTATION

iii. Technical Information

The documentation must be supplied in software format and the documentation shall contain the complete technical- and user information for all components which could require adjustment, maintenance or are programmable.

The following formats are preferred:

Text : MS Word
 Drawings : AutoCAD / AutoCAD LT
 • Pamphlets and brochures : PDF Files,
 PowerPoint, JPG/GIF

iv. Circuit Diagram and Lay-out Diagrams

Initials.....

A circuit diagram of the switchboard (similar to Annexure 1) shall be supplied. All symbols, terminal & cable numbers shall be indicated and must correspond to those used in the switchboard(s).

An AutoCAD compatible software copy of the as build circuit diagram in an electronic format, shall be handed to NamWater.

v. Part List

A complete component list shall be supplied, allowing cross-reference with the circuit diagram and contain make, type and catalogue/order number of all components or sub-assemblies used in the switchboard.

Original Pamphlets including all technical specifications such as component details, installation instructions, dimension sheets and material specifications.

PLEASE NOTE:

No payment will be made unless all documentation has been received.

All diagrams and information shall make use of metric units.

Initials.....

4. Drawings

List of Drawings		
Drawing Nr.	Drawing Name	Purpose
Drawing nr.1	Oshakati New reservoir MCC Chlorination	Switchboard construction (sheet 1-6)

5. Inspections and Tests

The following inspections and tests shall be performed:

- Weekly inspections will be done on the progress of the switchboard construction.
- Functional tests will be done at the contractor's workshop before the switchboards is delivered to NamWater to make sure that the board is wired as per electrical drawing supplied by the engineer.

Initials.....

SECTION VI: GENERAL CONDITIONS OF CONTRACT AND CONTRACT AGREEMENT

Any resulting contract shall be placed by means of a Purchase Order/Letter of Acceptance and shall be subject to the General Conditions of Contract (GCC) for the Procurement of Goods (Ref. **G/RFQ-GCC**) (available at public entities physical address/website: https://eprocurement.gov.na/documents/-/document_library/ycvk/view/53613 except where modified by the Special Conditions below.

SECTION VIII: SPECIAL CONDITIONS OF CONTRACT

Procurement Ref No. G/RFQ/NW-022/2027

The clause numbers given in the first column correspond to the relevant clause number of the GCC.

Subject and GCC clause reference	Special Conditions
Purchaser GCC 1.1(h)	The purchaser is: Namibia Water Corporation Ltd
Site GCC 1.1(m)	The Site/final destination for delivery of the Goods is Windhoek
Incoterms Edition GCC 4.2(b)	Incoterms shall be governed by the rules prescribed in Incoterms 2010.
Notices GCC 8.1	<p>Any notice shall be sent to the following addresses: For NamWater Ltd the address and the contact name shall be: Procurement Management Unit (Tel: +264 61 71 2081), E-mail: bids@namwater.com.na Private Bag 13389 Windhoek, Namibia</p> <p>For the Supplier, the address and contact name shall be: _____</p>
Disputes GCC 10.2	The rules of procedures for arbitration proceedings pursuant to GCC 10.2 shall be as follows: In the case of a dispute between the Purchaser and a Supplier, the dispute shall be arbitrated in accordance with Arbitration Act, 1965 (Act No. 42 of 1965).

Initials.....

Subject and GCC clause reference	Special Conditions
Delivery and Documents GCC 13.1	The Goods are to be delivered within 4-6 weeks from the date of Purchase Order or Letter of Acceptance. The documents to be furnished by the Supplier are: (a) signed delivery note and Invoice
Terms of Payment GCC 16.1	The structure of payments shall be: full payment following complete delivery of the Supplies and submission of an invoice and the documents listed in clause 13.1
Terms of Payment GCC 16.3	Payments shall be made not later than thirty days after submission of an invoice and its certification by the Purchaser. Payments are processed only at the end of each month.
Terms of Payment GCC 16.4	The currency of payment shall be the currency of order specified in the List of Goods, Price Schedule and Product details in the Statement of Requirements.
Performance Security GCC 18	Not Applicable
Packing GCC 23.2	The packing, marking and documentation within and outside the packages shall be: G/RFQ/NW-022/2027 Supply and Delivery of One Electrical control Switchboard for Oshakati new reservoir Chlorination. Aigams Building Northern Industrial Area Windhoek
Insurance GCC 24	The insurance should be covered as described in Delivery Duty Paid (DDP)
Transportation GCC 25	The Goods shall be delivered: Delivery Duty Paid (DDP)
Inspection and Tests GCC 26.	NamWater will inspect all items upon delivery to ascertain Technical compliance and specification compliance verification.
Liquidated Damages GCC 27	Liquidated damages for the whole contract are 1/14% per day. The maximum amount of liquidated damages for the whole contract is 14% of the final contract price.
Warranty GCC 28.3	The period of validity of the warranty shall be: 12 Months

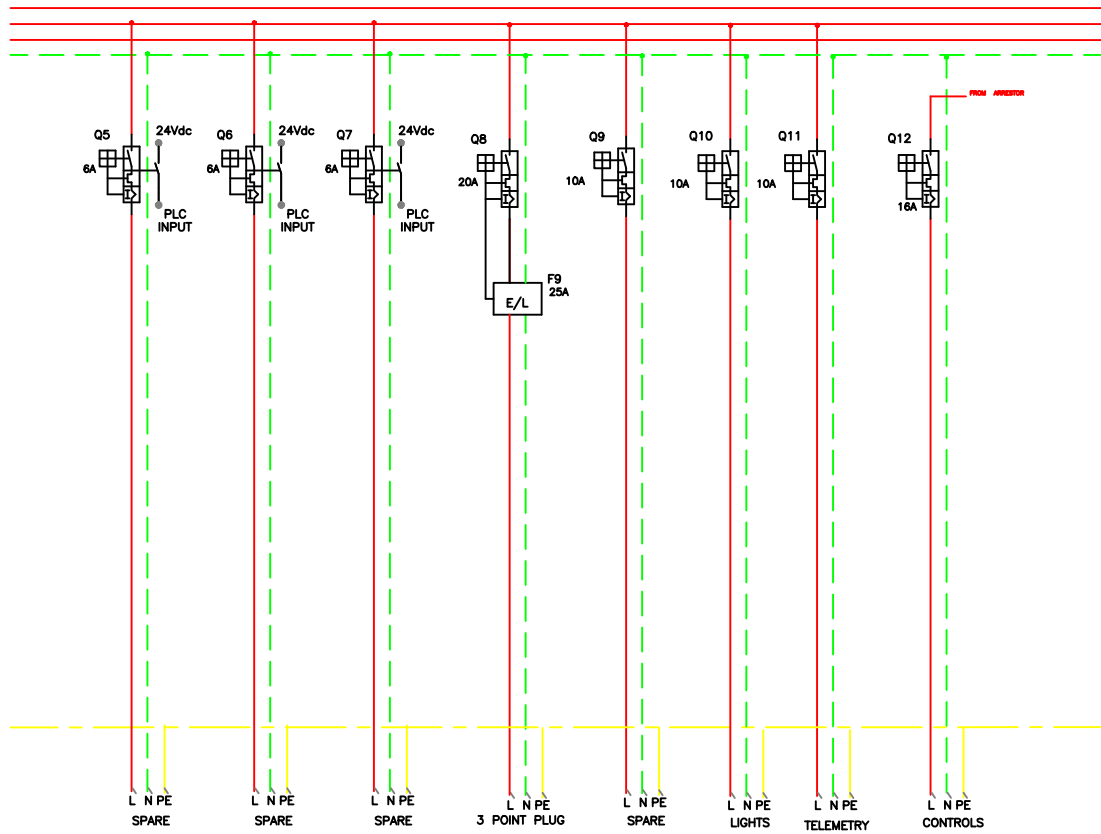
Initials.....

SCHEDULE 3: QUOTATION CHECKLIST SCHEDULE

Procurement Ref No. G/RFQ/NW-022/2027

Description	Attached	Not Attached
Quotation Letter		
List of Goods and Price Schedule		
Specifications Compliance Sheet		
Evidences for conformity of Goods		
valid copy of company registration / founding statement. (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963))		
Original or certified copy of valid good Standing TAX Certificate; (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963))		
Valid good Standing Social Security Certificate;		
A certified copy of a valid Affirmative Action Compliance Certificate, or proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998; (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963))		
Submit signed Bid-securing Declaration.		
An undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws, Remuneration Order, and Award, where applicable and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof; and		
Submit a minimum of one (1) reference letter from reputable entities whom the Bidder has supplied Electrical Switchboard in the last three (3) years, and handled successfully.		
Supporting information / literature for all the items offered to substantiate compliance, where applicable. These documents must be from the manufacturer or an authorised manufacturer's representative. Representatives must provide an authorised letter from the manufacturer confirming their status.		

Initials.....



Notes:

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NO.	AMENDMENTS	DATE	BY
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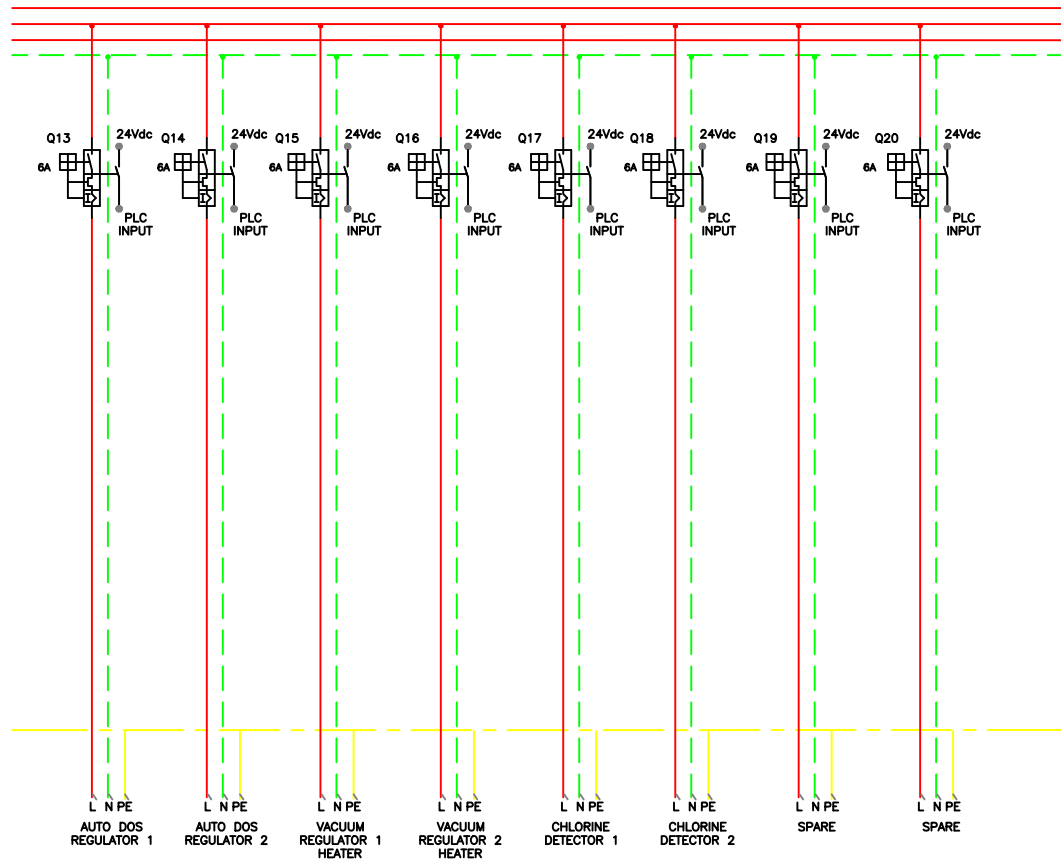



SCHEME
OSHAKATI_CHLORINATION

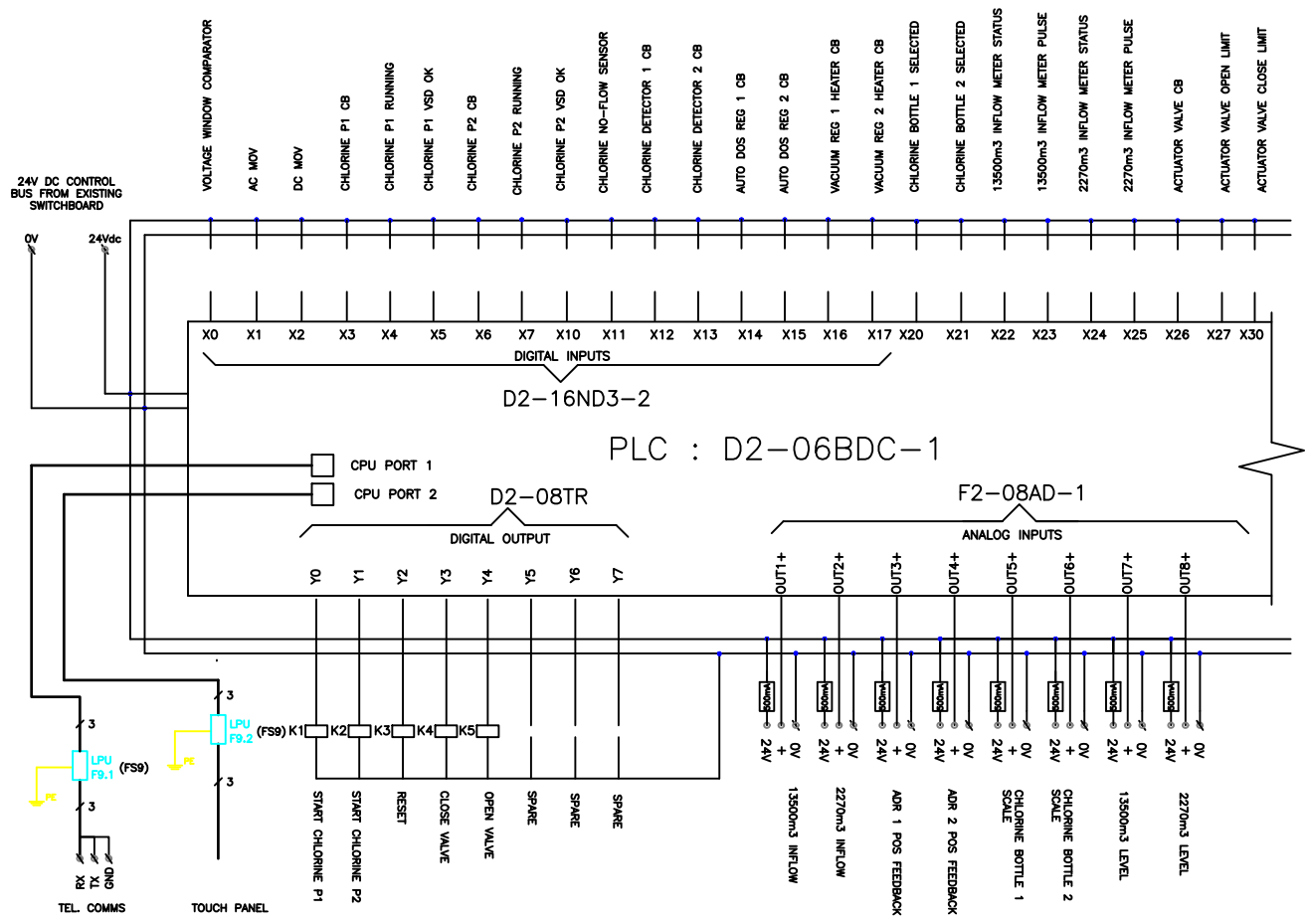
DRAWING
MAINS_2

DESIGNED ELEC.	OT_KADHIKWA
CHECKED ELEC.	JN LA GRANGE
APPROVED ELEC.	JN LA GRANGE

DATE	SCALE	SHEET NO.
JAN_2020	NTS	3/9



Notes:			
NO.	AMENDMENTS	DATE	BY
 Namibia Water Corporation Ltd			
SCHEME			
OSHAKATI_CHLORINATION			
DRAWING			
MAINS_3			
DESIGNED ELEC.	OT_KADHIKWA		
CHECKED ELEC.	JN LA GRANGE		
APPROVED ELEC.	JN LA GRANGE		
DATE	SCALE	SHEET NO.	
JAN_2020	NTS	4/9	



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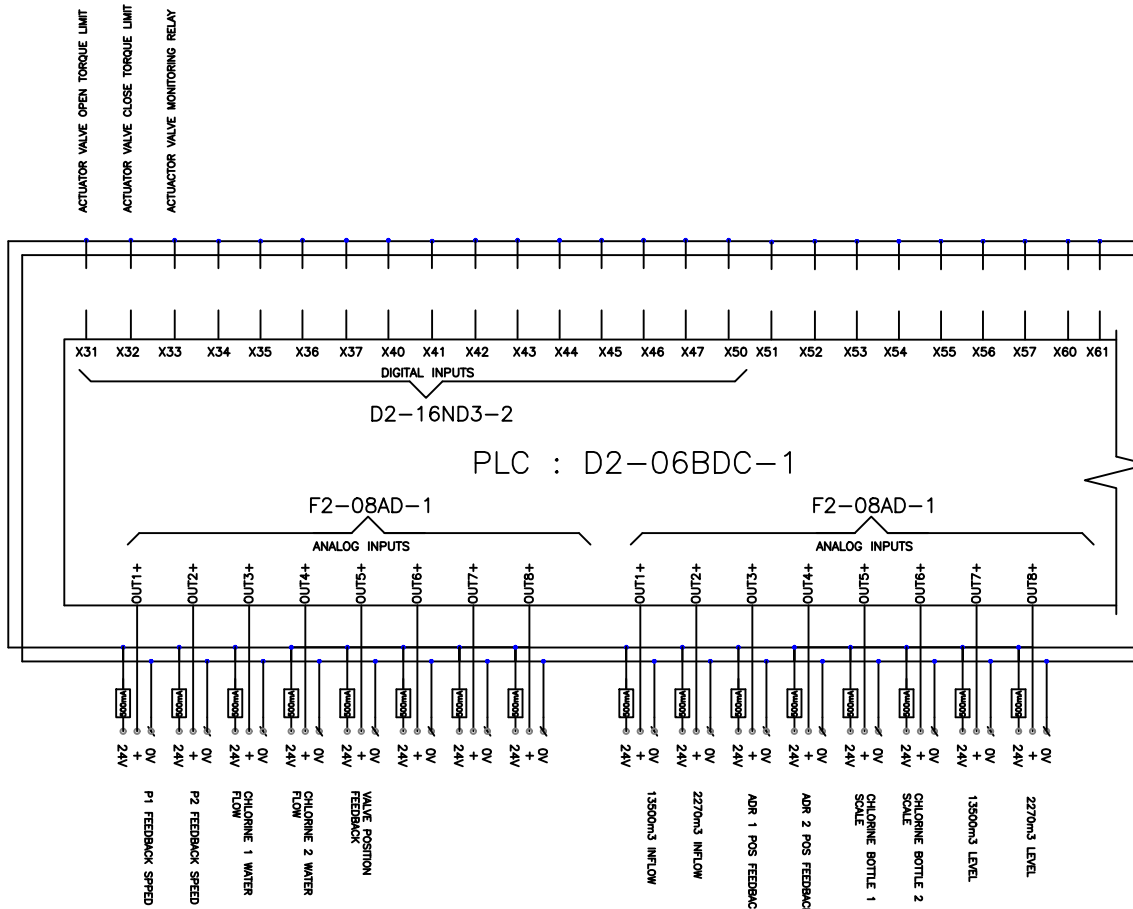
NO.	AMENDMENTS	DATE	BY




SCHEME
OSHAKATI_CHLORINATION

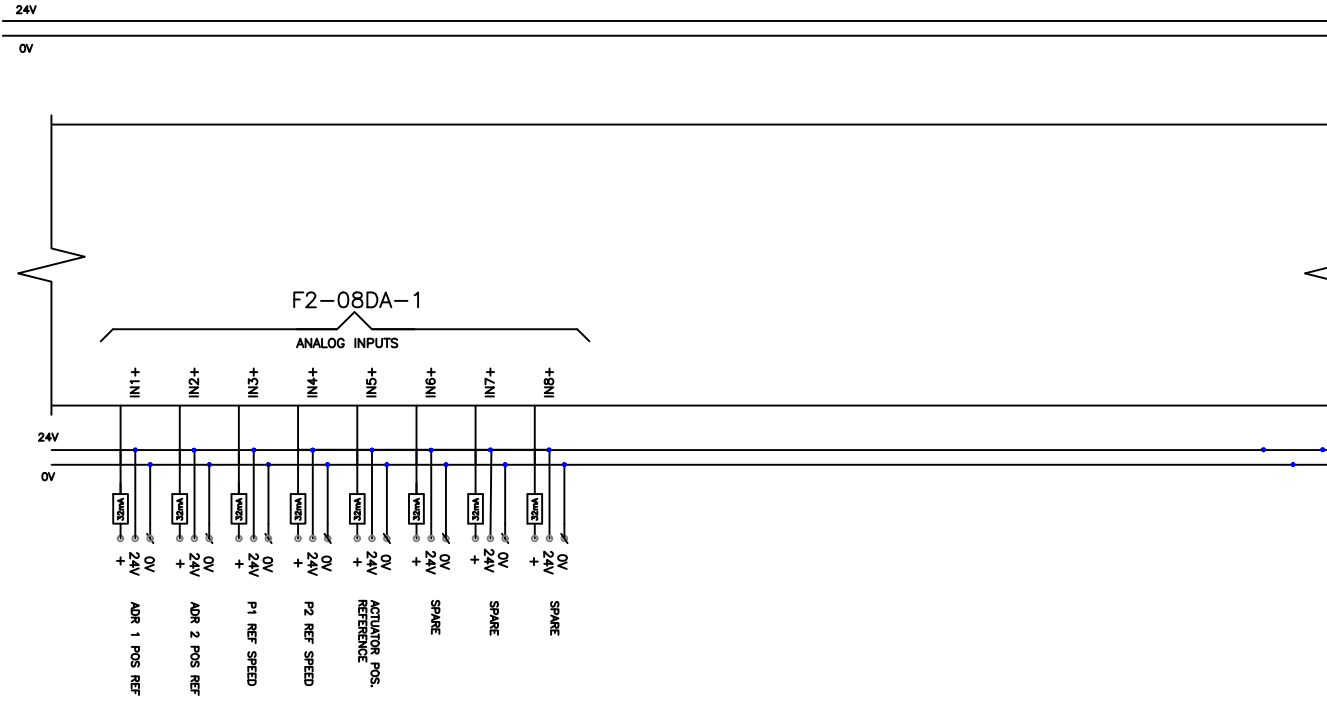
DRAWING
PLC_DIGITAL_IN/OUTPUTS

DESIGNED ELEC.	OT_KADHIKWA
CHECKED ELEC.	JN LA GRANGE
APPROVED ELEC.	JN LA GRANGE
DATE	JAN_2020
SCALE	NTS
SHEET NO.	6/9



Notes:

NO.	AMENDMENTS	DATE	BY
 Namibia Water Corporation Ltd			
SCHEME			
OSHAKATI_CHLORINATION			
DRAWING			
PLC_DIGITAL_IN/OUTPUTS			
DESIGNED ELEC.	OT_KADHIKWA		
CHECKED ELEC.	JN LA GRANGE		
APPROVED ELEC.	JN LA GRANGE		
DATE	SCALE	SHEET NO.	
JAN_2020	NTS	7/9	



Notes:

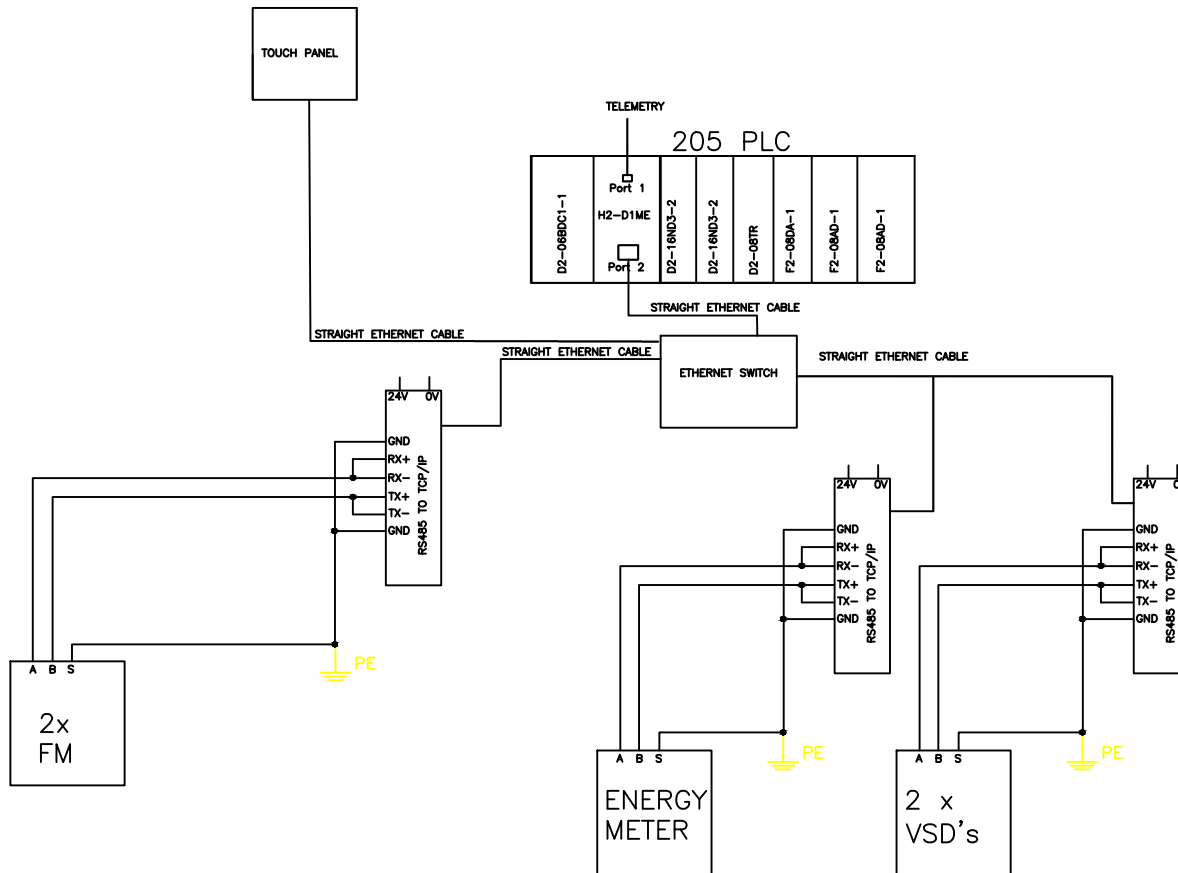
NO.	AMENDMENTS	DATE	BY

NAMWATER
Namibia Water Corporation Ltd


SCHEME
OSHAKATI_CHLORINATION

DRAWING
ANALOGS_OUTPUT

DESIGNED ELEC.	OT_KADHIKWA
CHECKED ELEC.	JN LA GRANGE
APPROVED ELEC.	JN LA GRANGE
DATE	JAN_2020
SCALE	NTS
SHEET NO.	8/9



Notes:

NO.	AMENDMENTS	DATE	BY
 Namibia Water Corporation Ltd			
SCHEME			
OSHAKATI_CHLORINATION			
DRAWING			
PLC+EXTERNAL_			
DESIGNED ELEC.	OT_KADHIKWA		
CHECKED ELEC.	JN LA GRANGE		
APPROVED ELEC.	JN LA GRANGE		
DATE	SCALE	SHEET NO.	
JAN_2020	NTS	8/9	