

	Specification	Medupi Power Station
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Title: Medupi Power Station Supply and Delivery of Modules, Converters, Controllers and Power Supplies scope of work

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Controlled Disclosure

1. Introduction

The reliability and availability of the Modules, Converters, Controllers and Power Supplies in general is a concern for us due to the unplanned downtime and regular planned outages at Medupi Power Station. It has contributed too many production risks on the plant and the return to service deadlines of Units after execution works of planned outages.

Initiatives to improve the reliability and availability of the Modules, Converters, Controllers and Power Supplies amongst others includes, placing a Modules, Converters, Controllers and Power Supplies supply and delivery contract to ensure continuous plant availability, sustainability and improvement.

This document describes the scope of work required for this contract.

2. Supporting Clauses

2.1 Scope

This document covers the requirements for the supply and delivery of the Modules, Converters, Controllers and Power Supplies at Medupi Power Station.

2.1.1 Purpose

The purpose of this document is to provide the SOW for the supply and delivery of the Modules, Converters, Controllers and Power Supplies contract at Medupi Power Station.

2.1.2 Applicability

This document shall apply to the material management for support to the C&I department at Medupi Power Station.

2.1.3 Effective date

The document will be effective from the date of authorisation.

2.2 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

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2.2.1 Normative

- [1]. Eskom SHEQ Policy 32-727
- [2]. Life Saving-Rules – 240-62196227 Medupi Power Station - SHE File Evaluation Checklist – 24097661287
- [3]. ISO 9001 Quality Management Systems.
- [4]. 240 - 97020108 REV. 5 Medupi Maintenance Contracts User Requirement Specification (URS).

2.2.2 Informative

- [1]. Act No 85 Occupational Health and Safety Act & Regulations.
- [2]. 240-46554063: Safety Health Environmental and Quality Policy.

2.3 Definitions

Definition	Description
<i>Contractor</i>	Service provider contracted for the supply and delivery of C&I material with its associated fittings and consumables
<i>Employer</i>	Eskom or Eskom Medupi power station representative appointed in writing.
Task order	The <i>Employer's</i> instruction to be carried out as a task to supply and deliver requested items.

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2.4 Abbreviations

Abbreviation	Explanation
C&I	Control and Instrumentation.
NEC3	New Engineering Contract
OEM	Original Equipment Manufacturer
PD	Order On Request (As and When required)
QC	Quality Control
RF	Refurbishment of items
SHE	Safety Health and Environmental
SHEQ	Safety Health Environmental and Quality
SOW	Scope of Work
V1	Re-Order Point for Non-Repairable Material (Normal)
VB	Manual Re-Order Point Planning (RF)

2.5 Roles and Responsibilities

2.5.1 Employer

The *Employer* shall compile and submit scope of work with technical specifications for the Modules, Converters, Controllers and Power Supplies to be supplied and delivered to Medupi Power Station.

The *Employer* shall perform quality checks of all the Modules, Converters, Controllers and Power Supplies delivered to Medupi Power Station at the main store.

2.5.2 Contractor

The *Contractor* shall supply and deliver the Modules, Converters, Controllers and Power Supplies on an *as and when required basis* to Medupi Power station according to the specifications and technical requirements on this document.

The *Contractor* shall submit all relevant documentation for example manuals, calibration certificates, datasheets etc. as requested by the Employer.

2.6 Process of Monitoring

Not Applicable.

2.7 Related/Supporting Documents

Not Applicable.

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3. Scope of Work

This work specification is developed for the supply and delivery of the Modules, Converters, Controllers and Power Supplies at Medupi power station on an **as and when required basis**. This specification is intended to ensure that the appointed *Contractor* supply the correct Modules, Converters, Controllers and Power Supplies to Medupi power station.

3.1 Supply of Spares

The scope is as follow:

3.1.1 Description of Item:

Refer to Appendix A: List of Spares with material description

3.1.1.1 Performance Characteristics

The spares shall comply with the specific ratings, software versions etc.

3.1.1.2 Physical Characteristics

The spares shall be robust, reliable and comply with the specified dimensions, materials etc.

3.1.2 Contract Period:

The Contract period is for a duration of 3 Years (36 months). All spares should be available from the supplier for at least 3 years. Replacement spares for obsolete items shall be available from the supplier within 4 weeks of placing such an order and immediately for any spares that are critical.

3.1.3 Quantity of supply: See Appendix A

The estimated quantities the *Employer* anticipates will be required for the duration of this contract. This value will be used with other estimates to determine the overall contract value. It should be noted that this is just an estimate, and it does not mean that the *Employer* will definitely consume the Modules, Converters, Controllers and Power Supplies in the duration of the contract. These quantities are therefore not fixed, and the *Contractor* shall supply the Modules, Converters, Controllers and Power Supplies only when instructed by a task order, from the *Employer*.

It is the *Contractor's* responsibility to ensure that the correct spares are delivered. If incorrect spares are delivered, the spares will have to be replaced with the correct spares at the *Contractor's* cost which includes transport and delivery.

3.2 General Requirements

The Spares must be the same in all respects when compared to the original equipment, supplied to Eskom by the OEM under contract. This includes all aspects such as design, materials and material

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specifications, manufacturing, including manufacturing processes and acceptance testing. Where spares offered deviate from the original in any respect, it should be indicated to the *Employer*.

In the case of an obsolete spare, the *Employer* shall be informed and an OEM letter stating such obsolescence, and the predecessor shall be supplied to the Employer for approval prior to any delivery of the latest equipment version. The replacement of the obsolete item shall consider the integration and physical characteristics of the equipment and ensure that it is Form, Fit and Functional.

3.3 Packaging

The following packaging requirements should be adhered to:

- a) The Goods are to be packaged in such a manner that it can be transported and stored for an extended period of time without resulting in damage to the goods.
- b) This includes damage due to moisture ingress, corrosion, vibration from the power station etc.
- c) Where lifting gear is utilised to move the goods, the packaging should allow the lifting operation and ensure that the goods are not damaged in any way during the process.
- d) It will also not be necessary to open packaging for any lifting or transport operation.
- e) Where eye bolts are fitted to move the goods, these eye bolts should be fitted such a way that they can be easily removed and replaced with the Purchaser's eye bolts, ensuring that the packaging stays intact.
- f) The different spare types are to be packaged separately in such a way that each type can be stored separately.
- g) Packaging and labelling of spares should ensure that the spare can be identified without opening the packaging.
- h) Where possible the packaging should ensure that parts can be positively identified through the packaging. Where this is not possible the packaging should allow opening and closing of the packaging and still maintain the packaging integrity afterwards.
- i) Delivery packaging to have the following detail on it as a minimum (removable adhesive sticker if possible):
 1. Order number,
 2. A short description of component
 3. The Eskom stock and / or material number
 4. Manufacturing date, where possible
 5. Destination power station

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7. Acknowledgements

Not Applicable.

8. Appendix

8.1 Appendix A: List of Spares with material description

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Material	Material short description	Material full description	Lab Code	Material Type	Unit of Measure	Max	Required Quantity
213656	MODULE:DIGITAL INPUT;24 V DC	MODULE: TYPE: DIGITAL INPUT; POWER SOURCE: 24 V DC; DIMENSIONS: WD 125 X LG 40 X HT 150 MM; MANUF P/N: TSXDEZ32D2; MATL:PLASTIC FINISH, CREAM COLOR	STP	V1	EA	2	4
245103	CONVERTER FREQ:PROGRAMMABLE ;0-20 MA;2.2	CONVERTER, FREQUENCY: TYPE: PROGRAMMABLE; INPUT: 12 KHZ TO 1 MHZ; CONSTANT OUTPUT CURRENT: 0-20 MA; POWER: 2.2 W; APPARENT POWER: 3 VA; APPLICATION: CLARIFIER IMPELLER; SUPPL P/N: KFU8-UFC-1.D; RATED VOLTAGE: 48-254 VAC/20-90 VDC	C&I	V1	EA	10	20

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250170	MODULE PWR SUP:TERMINAL;I/P 24 VDC 2 A	MODULE, POWER SUPPLY: TYPE: TERMINAL; INPUT: 24 VDC 2 A; OUTPUT: 30 VDC 2 A; MANUF P/N: X1006030; SPECIFICATION: C.O.C; Q4:NFC:NC:0; MODEL NO: MINI MCR-SL-PTB-SP; WITH SPRING-CAGE; INPUT VOLTAGE:POWER IN 1/2:20-30 VDC; OUTPUT VOLTAGE:POWER IN-(0.8 V); OUTPUT CURRENT:2 A MAX; TOTAL CURRENT:2 A,MAX.2A+0A/1.5A+0.5A/1A+1A; DEGREE OF PROTECTION:IP20; TEMPERATURE OPERATION:-20 DEG C TO +65 DEG C (-4 TO +149 DEG F); STORAGE:-40 TO +85 DEG C(-4 TO +185 DEG F); DIMENSIONS(WXHXD):-20; STRIPPING LENGTH SCREW CONNECTION:12 MM; SPRING-CAGE CONNECTION:8 MM; CURRENT: 2 A; POTENTIAL: 24 VDC	C&I	V1	EA	4	8
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250191	MODULE PWR SUP:ISOLATION;I/P 0-20 MA	MODULE, POWER SUPPLY: TYPE: ISOLATION; INPUT: 0-20 MA; OUTPUT: 0-20 MA; APPLICATION: REPEATER; MANUF P/N: X1006390; SPECIFICATION: C.O.C; Q4:NFC:NC:0; MODEL NO: MINI MCR-SL-RPS-1-1; VOLTS: 19.2-30VDC RATING: 600MW, TEMP.RANGE: OPERATING:-20 TO +60 DEG C STORAGE:-40 TO +85 DEG C, DIMENSIONS: WD 6.2 MM X HT 93.1 MM X DP 102.5 MM	C&I	V1	EA	5	10
250192	MODULE PWR SUP:QUINT DIODE, REDUNDANCY	MODULE, POWER SUPPLY: TYPE: QUINT DIODE, REDUNDANCY; MANUF P/N: 2938963; SPECIFICATION: C.O.C; Q4:NFC:NC:0; MODEL NO: QUINT-DIODE/40; AMBIENT TEMPERATURE: OPERATION:-25 DEG C TO +70 DEG C STORAGE:-40 DEG C TO +85 DEG C HUMIDITY:>95PER	C&I	V1	EA	4	8

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256387	MODULE COMM:CONNECTION;I/P 24 VDC	MODULE, COMMUNICATION: TYPE: CONNECTION; INPUT: 24 VDC; APPLICATION: SIMATIC S7-400; PROCESSOR CP443-1;TO INDUSTRY ETHERN, VIA ISO, TCP/IP AND UDP; S7-COMM, FETCH/WRITE; SEND/RCV WITH & W/O RFC1006, MULTICAST, PROFINET IO-CONTROLLER, DHCP, SNMP V2, WEB; DIAGNOS, INITIALIZATION VIA LAN	C&I	V1	EA	5	10
501470	CARD:AMPLIFIER	CARD: TYPE: AMPLIFIER; FOR USE ON WELLAND AND TUXHORN HYDRAULIC DRIVE SYSTEM PROPORTIONAL VALVE DUV; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	PPS	PD	EA	10	20
571270	MODULE:FUSE DISTRIBUTION UNIT	MODULE: TYPE: FUSE DISTRIBUTION UNIT; MANUF P/N: T8293	C&I	V1	EA	4	8
571271	MODULE:EXPANSION INTERFACE ADAPTOR	MODULE: TYPE: EXPANSION INTERFACE ADAPTOR; MANUF P/N: T8312-7WAY; X1005700	C&I	V1	EA	4	8
571272	MODULE:FTA DIGITAL INPUT	MODULE: TYPE: FTA DIGITAL INPUT; MANUF P/N: T8801	C&I	V1	EA	8	16

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571273	MODULE:VFTA ANALOG INPUT	MODULE: TYPE: VFTA ANALOG INPUT; MANUF P/N: T8842	C&I	V1	EA	8	16
571274	MODULE:FTA DIGITAL OUTPUT	MODULE: TYPE: FTA DIGITAL OUTPUT; MANUF P/N: T8850	C&I	V1	EA	8	16
571275	MODULE:PROCESS INTERFACE ADAPTOR	MODULE: TYPE: PROCESS INTERFACE ADAPTOR; MANUF P/N: T8121; X1005650	C&I	V1	EA	4	8
571276	MODULE:TMR PROCESSOR	MODULE: TYPE: TMR PROCESSOR; MANUF P/N: C1003010; T81108	C&I	V1	EA	4	8
571277	MODULE:TMR EXPANDER	MODULE: TYPE: TMR EXPANDER; MANUF P/N: T8311; C1003040	C&I	V1	EA	4	8
571279	MODULE:COMMUNICAT ION INTERFACE	MODULE: TYPE: COMMUNICATION INTERFACE; MANUF P/N: T8151; C1003020	C&I	V1	EA	4	8
571280	MODULE:EXPANDER PROCESSOR	MODULE: TYPE: EXPANDER PROCESSOR; MANUF P/N: C1003060; T8310	C&I	V1	EA	4	8
571281	MODULE:TMR ANALOG INPUT	MODULE: TYPE: TMR ANALOG INPUT; MANUF P/N: T8413; C1003080	C&I	V1	EA	4	8
571282	MODULE:TMR DIGITAL INPUT	MODULE: TYPE: TMR DIGITAL INPUT; MANUF P/N: C1003220; T8403	C&I	V1	EA	4	8
571283	MODULE:TMR DIGITAL OUTPUT	MODULE: TYPE: TMR DIGITAL OUTPUT; MANUF P/N: C1003250; T8415	C&I	V1	EA	4	8

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571285	MODULE:POWER SUPPLY DIODE	MODULE: TYPE: POWER SUPPLY DIODE; SPECIFICATION: TRIO-DIODE/24DC/2X10; MANUF P/N: 2866514	C&I	V1	EA	15	30
571286	MODULE:POWER SUPPLY;I/P 110-240 VAC	MODULE: TYPE: POWER SUPPLY; INPUT: 110-240 VAC; MANUF P/N: PS-100-240AC/24DC/40; QUINT; ORDER NR: 2938879	C&I	V1	EA	10	20
571287	MODULE:POWER SUPPLY DIODE;I/P 24 VDC	MODULE: TYPE: POWER SUPPLY DIODE; INPUT: 24 VDC; OUTPUT: 20 W; MANUF P/N: 40-24V; QUINT	C&I	V1	EA	4	8
571319	MODULE:TERMINATION	MODULE: TYPE: TERMINATION; MANUF P/N: X1005640; T8153	C&I	V1	EA	2	4
574393	MODULE:INTERFACE CONVERTER;24 V DC	MODULE: TYPE: INTERFACE CONVERTER; POWER SOURCE: 24 V DC; APPLICATION: FOR CONVERSION OF RS232 TO TTYP; DIMENSIONS: WD 99 X HT 118.6 X DP 22.5 MM; SPECIFICATION: DIN 22258-1; DIN 66348-1; MANUF P/N: L0203030; 2744458; 24V/CURRENT LOOP; 3-WAY ISOLATION; RAIL MOUNTABLE; PSM-ME-RS232/TTYP	C&I	V1	EA	3	6
575253	MODULE:INSTR DISCONNECT;METERING	MODULE: TYPE: INSTR DISCONNECT; APPLICATION: METERING; MANUF P/N: 6468 2 049-10	MET	V1	EA	4	8

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575294	MODULE:DISCONNECT; METERING;IEC 11801	MODULE: TYPE: DISCONNECT; APPLICATION: METERING; SPECIFICATION: IEC 11801; MANUF P/N: 6468 5050-10	MET	V1	EA	4	8
576684	POWER SUPPLY:KFD2- STC4-EX1	POWER SUPPLY: INPUT: 24 VDC; OUTPUT VOLTAGE: 20-35 VDC; OUTPUT CURRENT: 4-20 MA; APPLICATION: SMART TRANSMITTER SINGLE OUTPUT; DIMENSIONS: 118X20X115 MM; TYPE: TRANSMITTER; MOUNTING: RAIL; SPECIFICATION: UP TO SIL3 ACCORDING TO IEC61508; MANUF P/N: KFD2-STC4-EX1	C&I	V1	EA	30	60
no material number	POWER SUPPLY: KFD2- STC4-EX1.2O	POWER SUPPLY: INPUT: 24 VDC; OUTPUT VOLTAGE: 20-35 VDC; OUTPUT CURRENT: 4-20 MA; APPLICATION: SMART TRANSMITTER DUAL OUTPUT; DIMENSIONS: 124X20X115 MM; TYPE: TRANSMITTER; MOUNTING: RAIL; SPECIFICATION: UP TO SIL3 ACCORDING TO IEC61508; MANUF P/N: KFD2-STC4-EX1.2O	C&I	V1	EA	6	12
576689	MODULE PWR SUP:REDUNDANT POWER;I/P 24	MODULE, POWER SUPPLY: TYPE: REDUNDANT POWER; INPUT: 24 VDC; OUTPUT: 2 A; APPLICATION: POWER RAIL; MANUF P/N: KFD2-EB-R2A.B	EXC	V1	EA	10	20

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576701	POWER SUPPLY:I/P 230 VAC;24 VDC;20 A	POWER SUPPLY: INPUT: 230 VAC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 20 A; DIMENSIONS: 203.5 X 144.5 X 130 MM; TYPE: SWITCH MODEM; MANUF P/N: CP-C 24/20.0	EXC	V1	EA	4	8
576728	MODULE:PULS AMPLIFIER;CONNECTS TO TPT214	MODULE: TYPE: PULS AMPLIFIER; APPLICATION: CONNECTS TO TPT214; DIMENSIONS: 297 X 202 X 81 MM; MANUF P/N: L54E80801854	EXC	V1	EA	6	12
576739	MODULE COMM:BUS EXTENSION	MODULE, COMMUNICATION: TYPE: BUS EXTENSION; MANUF P/N: 750-627	EXC	V1	EA	2	4
576740	MODULE PWR SUP:INTERNAL SYSTEM	MODULE, POWER SUPPLY: TYPE: INTERNAL SYSTEM; INPUT: 24VDC 0.5A; OUTPUT: 24VDC/10A; MANUF P/N: 750-613	EXC	V1	EA	2	4
576741	MODULE COMM:8 CHANNEL;I/P DIGITAL	MODULE, COMMUNICATION: TYPE: 8 CHANNEL; INPUT: DIGITAL; OUTPUT: -3V - 5VDC / 15V - 30VDC; MANUF P/N: 750-431	EXC	V1	EA	7	14
576742	MODULE COMM:2 CHANNEL;O/P ANALOG	MODULE, COMMUNICATION: TYPE: 2 CHANNEL; OUTPUT: ANALOG; MANUF P/N: 750-554	EXC	V1	EA	2	4
576744	MODULE COMM:BUS EXTENSION COUPLER	MODULE, COMMUNICATION: TYPE: BUS EXTENSION COUPLER; INPUT: 200MA AT 24V; MANUF P/N: 750-628	EXC	V1	EA	4	8

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576745	MODULE:END;I/P 24 VDC;24 V DC;AVR P320	MODULE: TYPE: END; INPUT: 24 VDC; POWER SOURCE: 24 V DC; APPLICATION: AVR P320; DIMENSIONS: WD 12 X LG 100 X HT 64 MM; SPECIFICATION: IEC 60068-2-6; MANUF P/N: 750-600; MOUNT: 35MM DIN RAIL; PROTECTION: IP20; OPERATING TEMP: 0-55DEG C	EXC	V1	EA	10	20
576747	MODULE:RECTIFUSE DIODE	MODULE: TYPE: RECTIFUSE DIODE; MANUF P/N: 029.138.659	EXC	V1	EA	4	8
576749	MODULE:DUAL COUPLING;I/P 10-60VDC 24VDC	MODULE: TYPE: DUAL COUPLING; INPUT: 10-60VDC 24VDC; OUTPUT: 20 A; DIMENSIONS: 32 X 124 X 102 MM; MANUF P/N: YR2.DIODE	EXC	V1	EA	2	4
576750	MODULE:DECOUPLER;I/P 10-60VDC 0-10A	MODULE: TYPE: DECOUPLER; INPUT: 10-60VDC 0-10A; OUTPUT: 0-10 A; DIMENSIONS: 45 X 75 X 91 MM; MANUF P/N: MLY02.100	EXC	V1	EA	2	4
577141	MODULE:TERMINAL;PROSONIC M	MODULE: TYPE: TERMINAL; APPLICATION: PROSONIC M; MANUF P/N: 52006197; POLE: 4; HART; 2 WIRE CABLE CONNECTION; MOCROPILOT M; LEVELFLEX M	MIL	V1	EA	3	6

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579840	MODULE:BRIDGE DRIVER;I/P 15 V;O/P 15 V	MODULE: TYPE: BRIDGE DRIVER; INPUT: 15 V; OUTPUT: 15 V; POWER SOURCE: 30 KVA; APPLICATION: 30 KVA UPS; MANUF P/N: 5911340000; CDING-00; DT 3 21 479; USED IN WATER TREATMENT PLANT C&I UPS 1	C&I	V1	EA	2	4
580168	MODULE:ANALOG OUTPUT;O/P 4-20 MA;24 V	MODULE: TYPE: ANALOG OUTPUT; OUTPUT: 4-20 MA; POWER SOURCE: 24 V; MANUF P/N: 3BSE008546R0001; REFERENCE NO: AO820; 4 CHANNEL	C&I	V1	EA	2	4
580248	MODULE:I/O EXPANSION	MODULE: TYPE: I/O EXPANSION; INPUT: 0-100MV 0-20MA 0-250OHM; OUTPUT: 8 BINARY AND 1 ANALOG; MANUF P/N: 1GS-PTM	DEG	V1	EA	5	10
580249	MODULE:ANALOGUE EXPANSION;I/P 8 ANALOGUE	MODULE: TYPE: ANALOGUE EXPANSION; INPUT: 8 ANALOGUE; MANUF P/N: IS-AIN8	DEG	V1	EA	1	2
580250	MODULE:AVR INTERFACE	MODULE: TYPE: AVR INTERFACE; MANUF P/N: 1G-AVRI	DEG	V1	EA	1	2

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581486	CONTROLLER:PROPOR TIONAL VALVE;4-20 MA	CONTROLLER: TYPE: PROPORTIONAL VALVE; RANGE: 4-20 MA; RATING: 24VDC 50HZ; OUTPUT: 3.3 A; MOUNTING: PLUG IN; MANUF P/N: E-ME-AC-01F/I AT0S; SQUARE WAVE PWN TYPE; DIN41494; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	COA	V1	EA	5	10
581494	MODULE:CURRENT	MODULE: TYPE: CURRENT; MANUF P/N: SE6375/C01	C&I	V1	EA	20	40
581668	MODULE PWR SUP:I/P 100 - 240VAC	MODULE, POWER SUPPLY: INPUT: 100 - 240VAC; OUTPUT: 2.1 - 1.8A / 24 - 28VDC; MANUF P/N: ML50.100; MINILINE	EXC	V1	EA	2	4
582697	MODULE:DIFFERENTIAL PROTECTION RELAY	MODULE: TYPE: DIFFERENTIAL PROTECTION RELAY; APPLICATION: SWITCHGEAR PROTECTION; MANUF P/N: P54416C6M0440K	SWG	V1	EA	3	6
582698	MODULE:PHASE DIFFERENTIAL RELAY;16	MODULE: TYPE: PHASE DIFFERENTIAL RELAY; POWER SOURCE: 110-250VDC; APPLICATION: SWITCHGEAR PROTECTION; COMMERCIAL SIZE: 16; MANUF P/N: P746316K6N0028K	SWG	V1	EA	3	6

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582699	MODULE:ARC PROTECTION RELAY;19-265VDC	MODULE: TYPE: ARC PROTECTION RELAY; INPUT: 18-265VAC/DC; POWER SOURCE: 19-265VDC; APPLICATION: SWITCHGEAR PROTECTION; MANUF P/N: VAM120	SWG	V1	EA	3	6
582700	MODULE:ARC SENSOR SLAVE RELAY;I/P 24 VDC	MODULE: TYPE: ARC SENSOR SLAVE RELAY; INPUT: 24 VDC; OUTPUT: 24 VDC; APPLICATION: SWITCHGEAR PROTECTION; MANUF P/N: VAM10L	SWG	V1	EA	15	30
582701	MODULE:MASTER PROTECTION RELAY;I/P 1A/5A	MODULE: TYPE: MASTER PROTECTION RELAY; INPUT: 1A/5A; POWER SOURCE: 48-265VAC/DC; MANUF P/N: VAMP221-3A3 AA	C&I	V1	EA	10	20
582702	MODULE:PROTECTION/CONTROL RELAY;IEC61850	MODULE: TYPE: PROTECTION/CONTROL RELAY; INPUT: 50-130V; POWER SOURCE: 48-250VDC; SPECIFICATION: IEC61850; MANUF P/N: P13956904544	SWG	V1	EA	3	6
593031	MODULE:BP607650100; FRONT FASCIA/LCD	MODULE: TYPE: FRONT FASCIA/LCD; OEM P/N: BP607650100; LCD(A310)	C&I	V1	EA	4	8
593120	MODULE:0104020117;T HYRISTOR CONTROL	MODULE: TYPE: THYRISTOR CONTROL; APPLICATION: UPS CHLORITE; OEM P/N: 0104020117; THYRISTOR ITAV = 56A; 1200V	C&I	V1	EA	6	12

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593122	MODULE:0104020123;T HYRISTOR CONTROL	MODULE: TYPE: THYRISTOR CONTROL; APPLICATION: UPS CHLORITE; OEM P/N: 0104020123; THYRISTOR ITAV = 91A; 1200V	C&I	V1	EA	6	12
593521	MODULE:SP116-24V- 5A;ANALOG/DIGITAL	MODULE: TYPE: ANALOG/DIGITAL; OEM P/N: SP116-24V-5A; CARD STATIC	DEG	V1	EA	4	8
600932	POWER SUPPLY:I/P 100-240 V;24 VDC;10 A	POWER SUPPLY: INPUT: 100-240 V; DESCRIPTION: PHOENIX CONTACT QUINT-PS/1AC/24DC/10; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 10 A; MANUF P/N: 2866763	C&I	V1	EA	10	20
607808	MODULE COMM:BS101IO;UNIVER SAL I/O;O/P 12	MODULE, COMMUNICATION: TYPE: UNIVERSAL I/O; OUTPUT: 12 VDC; APPLICATION: CDS INTERFACE MODULE; HARDWARE: BS 120 ENERGIZERS; SOFTWARE: WINDOWS PROGRAM; OEM P/N: BS101IO; RS485 TTL	EFC	V1	EA	4	8
608669	MODULE:ANALOG INPUT (8X16)BIT;I/P 4-20	MODULE: TYPE: ANALOG INPUT (8X16)BIT; INPUT: 4-20 MA; OUTPUT: 4-20 MA; POWER SOURCE: 10-30 V AC; APPLICATION: GROUND LOOP PROTECTION/SURGE PROTECTION; COMMERCIAL SIZE: 16; SUPPL P/N: S-ADAM- 4017+	PRO	V1	EA	2	4

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608670	MODULE PWR SUP:RACK;I/P 160/249 VDC	MODULE, POWER SUPPLY: TYPE: RACK; INPUT: 160/249 VDC; OUTPUT: 230 VAC; APPLICATION: GENERATOR PROTECTION; SPECIFICATION: IEC 320-OUTLETS-4; SUPPL P/N: S-UP800MGE; MODEL NO: 1U; REFERENCE NO: 66227; ADJUSTABLE OUTPUT: 200/220/240V; POWER: 800VA/560W; RACK DIMENSIONS: DIA: 499 X WD: 438 X HT: 44MM; PULSE EVOLUTION RACK800; ETN EVOLUTION850; GROUP PROTECTION OF HUBS	PRO	V1	EA	2	4
609131	AMPLIFIER:POWER;I/P +/-24VDC 0.3A;7.2 W	AMPLIFIER: TYPE: POWER; INPUT: +/-24VDC 0.3A; OUTPUT: 4-20 MA; POWER: 7.2 W; SUPPL P/N: EA81-014-0; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	C&I	V1	EA	15	30
614752	MODULE:REMOTE RELAY	MODULE: TYPE: REMOTE RELAY; OEM P/N: B00613201000; REFERENCE NO: A5-1	C&I	V1	EA	8	16

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614931	MODULE PWR SUP:BACKUP;I/P 24/48/60 VDC	MODULE, POWER SUPPLY: TYPE: BACKUP; INPUT: 24/48/60 VDC; OUTPUT: 5 VDC 10 A; APPLICATION: SIMATIC S7-400; SPECIFICATION: PS405; DIMENSIONS: WD: 50 X LG: 290 X DP: 217MM; POWER CONSUMPTION TYPE: 95W; BATTERY: 2 X LINTHIUM AA; 3.6V/2.3AH	C&I	V1	EA	5	10
615068	MODULE:DIGITAL INPUT;I/P 24 VDC;O/P 400	MODULE: TYPE: DIGITAL INPUT; INPUT: 24 VDC; OUTPUT: 400 MA; POWER SOURCE: 240 V AC; APPLICATION: SIMATIC S7 300/400; DIMENSIONS: WD 80 X LG 125 X DP 120 MM; SUPPL P/N: SM326	C&I	V1	EA	12	24
616241	MODULE:RELAY CARD;I/P 24 VDC 18 MA	MODULE: TYPE: RELAY CARD; INPUT: 24 VDC 18 MA; APPLICATION: PLC ACTUATOR RELAY; DIMENSIONS: WD 14 X HT 94 X DP 80 MM; SUPPL P/N: PLC-RSC-24DC/1-1/ACT; MODEL NO: 2967109; TYPICAL RESPONSE TIME: 8M/S; AMBIENT OPERATION TEMPERATURE: -25 TO 60 DEG C; AMBIENT STORAGE TEMPERATURE: -40 TO 85 DEG C; WEIGHT: 0.06798KG	C&I	V1	EA	5	10

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616555	MODULE:17 PLUS;I/P 433 VAC; 65 VDC	MODULE: TYPE: 17 PLUS; INPUT: 433 VAC; 65 VDC; SUPPL P/N: Q02-00; MIDDLE PART; TERMINAL BLOCKS	C&I	V1	EA	18	36
616562	MODULE:DUAL CURRENT LOOP;I/P 4- 20 MA	MODULE: TYPE: DUAL CURRENT LOOP; INPUT: 4-20 MA; OUTPUT: 4-20 MA; APPLICATION: ISOLATION/DUPLICATION OF ANALOG; SUPPL P/N: CAL23DMA-S2/SIL3; PROTECTION: IP20	C&I	V1	EA	34	68
621078	POWER SUPPLY:I/P 220 VAC;24 VDC;5 A	POWER SUPPLY: INPUT: 220 VAC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 5 A; APPLICATION: SUBMERGED SCRAPER CONVEYOR HYDRAULIC DRIVE; CLASSIFICATION: NON HAZARDOUS; MOUNTING: DIN RAIL; SUPPL P/N: TRIO-PS/1AC/24DC/5; VOLTAGE ADJUSTABLE ON FRONT PANEL 22.5 TO 29.5V TO COVER FRO VOLTAGE DROP	BAR	V1	EA	9	18

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621440	CNTRLR ELECTRNC:ENERGY MANAGER;230 VAC	CONTROLLER, ELECTRONIC: TYPE: ENERGY MANAGER; POTENTIAL: 230 VAC; OUTPUT: 4-20 MA; INPUT: 4-20 MA; CLASSIFICATION: NON HAZARDOUS; MOUNTING: DIN RAIL; SPECIFICATION: EN1434-1; SUPPL P/N: RMS621- 21BAA1211; 90-250VAC; 1-2X4-20MA; 2XPT100/500/1000; 0- 2X4-20MA; MATERIAL NO: 51003589; ALPHANUMERIC DISPLAY: 8 BUTTON	C&I	V1	EA	3	6
621696	CONVERTER SGNL:FLOW TO CURRENT;REMOTE	CONVERTER, SIGNAL: TYPE: FLOW TO CURRENT; INPUT: 0.01-10 M/S; OUTPUT: 24 V 4-20 MA; POWER SOURCE: 230 VAC 50 HZ; APPLICATION: DCMPU ELECTROMAGNETIC FLOWMETER; MOUNT: REMOTE; CLASSIFICATION: IP65; SPECIFICATION: SAFMAG; FLOWMETER MODEL NO: 200D2NISSR0031; SERIAL: 090513098	STP	V1	EA	1	2

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621698	MODULE:4 CHANNEL ANALOG INPUT	MODULE: TYPE: 4 CHANNEL ANALOG INPUT; APPLICATION: MODICON TSX MICRO TSX721101/TSX3721001 PLC; 16BITS ANALOG/DIGITAL CONVERSION; ISOLATION VOLTAGE: 500VAC; PRODUCT WEIGHT: 0.21KG; INPUT IMPEDENCE: 10OHM; CURRENT CONSUMPTION: 85MA; FOR USE ON SEWAGE TREATMENT PLANT	STP	V1	EA	2	4
630880	MODULE:RELAY;O/P 250 VAC;MICOM P139	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P139; SUPPL P/N: P139-56900044-309-415-633-462-949; REFERENCE NO: P139-56900044-309-415-633-462-947	SWG	V1	EA	10	20
630881	MODULE:RELAY;O/P 250 VAC;MICOM P243	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P243; SUPPL P/N: P243316A6M0578K; REFERENCE NO: PP243316A6M0578K	SWG	V1	EA	5	10

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630882	MODULE:RELAY;O/P 250 VAC;MICOM P264	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P264; SUPPL P/N: C264C11M6910003201000001110N00; REFERENCE NO: C264C11M6910003201000001110N00	SWG	V1	EA	5	10
630883	MODULE:RELAY;O/P 250 VAC;MICOM P544	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P544; SUPPL P/N: P544316C6M0420K; REFERENCE NO: P544316C6M0420K	SWG	V1	EA	5	10
630884	MODULE:RELAY;O/P 250 VAC;MICOM P746	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P746; SUPPL P/N: P746316A6N0028K; REFERENCE NO: P746316A6N0028K	SWG	V1	EA	5	10

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630885	MODULE:RELAY;O/P 250 VAC;MICOM P139	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P139; SUPPL P/N: P139-56904044-309-415-633-462-947; REFERENCE NO: P139-56904044-309-415-633-462-947	SWG	V1	EA	10	20
633924	MODULE:RELAY;O/P 250 VAC;MICOM P543	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P543; MICON TWO CHANNEL DIFFERENTIAL RELAY WITH CORTEXCODE P543 316C6M0448K DATASHEET OF ITEM REQUIRED UPON RF	SWG	V1	EA	5	10
633925	MODULE:RELAY;O/P 250 VAC;MICOM P631	MODULE: TYPE: RELAY; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P631	SWG	V1	EA	5	10

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633966	MODULE:SPEED MODULE;I/P 0-30 VDC	MODULE: TYPE: SPEED MODULE; INPUT: 0-30 VDC; OUTPUT: 4-20 MA; APPLICATION: TURBINE CENTER LINE SPEED MEASURE; SPECIFICATION: EPRO SPEED MODULE; SUPPL P/N: MMS6350D; REFERENCE NO: MMS6350 D; INPUT RESISTANCE100 KILO-OHMS, FREQUENCY 0-16 KHZ, SIL3	C&I	V1	EA	8	16
635490	AMPLIFIER:SWITCH;I/P 20-30 VDC;O/P 24;1	AMPLIFIER: TYPE: SWITCH; INPUT: 20-30 VDC; OUTPUT: 24 VDC; POWER: 1 W; CURRENT: <50 MA; SUPPL P/N: KFD2- SR2-EX1 WL/B; REFERENCE NO: KFD2-SR2-EX1 WL/B; OUTPUT CURRENT: MINIMUM 2MA. SIL 2 ACC. TO IEC 61508/IEC61511, RELAY OUTPUT CONTACT, CONTACTY LOADING 253V AC, SWITCHING FERQUENCY 2MA/24V DC, DEGREE OF PROTECTION IP20, DIMENSIONS 20 X 119 X 115MM, MOUNTING DIN RAIL; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	TGN	V1	EA	4	8

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637024	AMPLIFIER:SERVO;I/P 11-70 VDC;700 W	AMPLIFIER: TYPE: SERVO; INPUT: 11-70 VDC; OUTPUT: -10 TO 10 VDC; POWER: 700 W; SUPPL P/N: 53376; REFERENCE NO: 004.0773; SC A-B4-70-10; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	C&I	V1	EA	6	12
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no material number	Spraywater Control valve Contrac Unit	CONTROLLER, ELECTRONIC: TYPE: ABB CONTRAC XEBN 853H; POTENTIAL: 190-260VAC 1 PH; OUTPUT: 4-20 MA; INPUT: 4-20 MA; CLASSIFICATION: IP66 IN ACCORDANCE WITH IEC 60529 / EN 60529; MOUNTING: VERTICAL MOUNTING PLATE, LATERAL CABLE GLAND, LEFT; RANGE: 0-100 PCT; POWER: 780W; OPERATING TEMPERATURE: -25 TO +55 DEGC; OEM P/N: XEBN 853H; F-NR; 68853V205341; SERIAL NR: 3K650000709223; SOFTWARE VERSION 2,04; REFERENCE NO: 016078 AND 023872; APPLICATION: USED ON SPRAYWATER CONTROL VALVES WITH ABB ACTUATOR TYPE XRSD 100-1,5/150	C&I	V1	EA	5	10
639036	MODULE:RELAY;I/P 4-20 MA;O/P 250 VAC	MODULE: TYPE: RELAY; INPUT: 4-20 MA; OUTPUT: 250 VAC; APPLICATION: SWITCHGEAR PROTECTION; SPECIFICATION: MICOM P139	SWG	V1	EA	10	20

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641422	AMPLIFIER:FLOW SENSOR;I/P 115-230 VAC;60	AMPLIFIER: TYPE: FLOW SENSOR; INPUT: 115-230 VAC; OUTPUT: (2) RELAY/CHANGE OVER; POWER: 60 W; POTENTIAL: 230 V; REFERENCE NO: SKZ400WR; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	TRF	V1	EA	14	28
641676	MODULE:DISPLAY KEYBOARD	MODULE: TYPE: DISPLAY KEYBOARD; APPLICATION: FOR PREPERERCED DOOR (WITH CHLORIDE INDUSTRIAL SYSTEM) UPS; SUPPL P/N: 5911390000; DRAWING NO: 10KVA (DT320876); 20KVA (DT320878); 30KVA WTP UPS	TGN	V1	EA	8	16
642574	CONTROLLER:INDUSTR IAL;4-20 MA;I/P 4-20	CONTROLLER: TYPE: INDUSTRIAL; RANGE: 4-20 MA; RATING: 90-250 V AC; INPUT: 4-20 MA; MANUF P/N: KS90- 110-00090-DA0; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	C&I	V1	EA	1	2

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643803	MODULE:INTERFACE;// P 3PH 360-460V 304.1A	MODULE: TYPE: INTERFACE; INPUT: 3PH 360-460V 304.1A; OUTPUT: 230-400VAC/DC 116A; APPLICATION: STATION 2 C AND I UPS; COMMERCIAL SIZE: 80 KVA; SUPPL P/N: 5911240000; DRAWING NO: CP70Z1L-582622; REFERENCE NO: L12-0040; INCA-00 NUMERIC INTERFACE APODYS CHARGER 3 PHASES DT 321 406	C&I	V1	EA	10	20
645204	CNTRLR ELECTRNC:PROGRAMM ABLE	CONTROLLER, ELECTRONIC: TYPE: PROGRAMMABLE; SUPPL P/N: CPM1A-20CDR-A	C&I	V1	EA	3	6
645958	MODULE:ISOLATED INPUT;FEEDWATER SYSTEM	MODULE: TYPE: ISOLATED INPUT; APPLICATION: FEEDWATER SYSTEM; SUPPL P/N: 1794-IF4I	FWS	V1	EA	6	12
645959	MODULE:OUTPUT;FEED WATER SYSTEM	MODULE: TYPE: OUTPUT; APPLICATION: FEEDWATER SYSTEM; SUPPL P/N: 1794-OF41	FWS	V1	EA	6	12
646143	MODULE:CLOCK	MODULE: TYPE: CLOCK; SUPPL P/N: RS232-TXD8	C&I	V1	EA	4	8
646147	MODULE:CLOCK	MODULE: TYPE: CLOCK; SUPPL P/N: RS422	C&I	V1	EA	2	4

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648984	MODULE:RELAY;I/P 24 VDC;24 V DC	MODULE: TYPE: RELAY; INPUT: 24 VDC; POWER SOURCE: 24 V DC; APPLICATION: PLC INTERFACE; DIMENSIONS: WD 6.2 X HT 80 X DP 94 MM; MANUF P/N: 2966540; REFERENCE NO: PLC-RSP-24DC/21AU; 9 MA; 1 PDT, SINGLE CONTACT	C&I	V1	EA	10	20
648985	MODULE:RELAY;24 V DC;PLC	MODULE: TYPE: RELAY; POWER SOURCE: 24 V DC; APPLICATION: PLC; DIMENSIONS: WD 14 X HT 80 X DP 94 MM; MANUF P/N: 2967060; REFERENCE NO: PLC-RSC-24DC/21-21; AMBIENT TEMPERATURE -40 TO 60 DEG C - OPERATION	C&I	V1	EA	10	20
648986	MODULE:RELAY;24 V DC;PLC INTERFACE	MODULE: TYPE: RELAY; POWER SOURCE: 24 V DC; APPLICATION: PLC INTERFACE; DIMENSIONS: WD 6.2 X HT 80 X DP 94 MM; MANUF P/N: 2900299; REFERENCE NO: PLC-RPIT-24DC/21; 1 PDT; SINGLE CONTACT; AMBIENT TEMPERATURE OPERATION -40 TO 60 DEG C	C&I	V1	EA	10	20

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648990	POWER SUPPLY:I/P 4-20 MA;24 VDC;4-20 MA	POWER SUPPLY: INPUT: 4-20 MA; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 4-20 MA; DIMENSIONS: WD 6.2 X HT 93.1 X DP 102.5 MM; TYPE: REPEATER; MANUF P/N: 2810230; REFERENCE NO: MINI MCR-SL-RPSS-I-I-SP; IP20; AMBIENT TEMPERATURE OPERATION -20 TO 60 DEG C; AMBIENT TEMPERATURE STORAGE/TRANSPORT -40 TO 85 DEG C; WITH SPRING CAGE CONNECTION; CERTIFICATE OF CLASSIFICATION DNV GL TAA00000N1	C&I	V1	EA	10	20
649130	POWER SUPPLY:I/P 770 W;200-240 V;4 A	POWER SUPPLY: INPUT: 770 W; OUTPUT VOLTAGE: 200-240 V; OUTPUT CURRENT: 4 A; APPLICATION: PRIMERGY RX200/S6; TYPE: DUAL SOCKET RACK SERVER; MANUF P/N: DPS-770BB-A; RATED FREQUENCY RANGE 50-60 HZ; ACTIVE POWER MIN PER SYSTEM UNIT 178W; ACTIVE POWER MAX PER SYSTEM UNIT 549W; APPARENT POWER MAX PER SYSTEM UNIT 557 VA; POWER SUPPLY EFFICIENCY 8 PCT	C&I	V1	EA	2	4

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653929	DRIVER:PROPORTIONA L VALVE	DRIVER: TYPE: PROPORTIONAL VALVE; MANUF P/N: PVD3D1R; OPERATING VOLTAGE 9-35VDC; MAXIMUM OUTPUT CURRENT 3A; OPERATING TEMPERATURE -40 TO 75 DEG C; INPUT SIGNALS 4-20MA; INCLUDES ONE PWM SOLENOID OUTPUT; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	COA	V1	EA	3	6
653933	DRIVER:PROPORTIONA L VALVE	DRIVER: TYPE: PROPORTIONAL VALVE; MANUF P/N: PVD3D2R; OPERATING VOLTAGE 9-35 VDC; MAXIMUM OUTPUT CURRENT 3A; OPERATING TEMPERATURE -40 TO 75 DEG C; INPUT SIGNALS 4-20 MA; INCLUDES TWO PWM SOLENOID OUTPUTS; OR COAL STACKER SLEWING HYDRAULIC SYSTEM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	COA	V1	EA	3	6

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654329	MODULE COMM:DVI-VISION FIBER COMPUTER	MODULE, COMMUNICATION: TYPE: DVI-VISION FIBER COMPUTER; APPLICATION: RECEIVER MODULE IN BPS SYSTEM; MANUF P/N: MC2ARU2C0N; RJ45 SOCKET; D-SUB HD 15 SOCKET; PS/2 SOCKET; USB-B SOCKET; 3.5MM JACK PLUG; CURRENT CONSUMPTION AT 100V: 310MA AT 240V; 160MA; TEMPERATURE RANGES: OPERATION 5-45 DEG C; STORAGE 10-55 DEG C; <85% AIR MOISTURE; POWER CONSUMPTION MAX AT 100VAC; 24.6W AT 240VAC; 24.4W AT 12VDC 19.9W; INTERNAL POWER PACK IEC PLUG AC 100-240V/50-60HZ; REDUNDANT 12VDC, 5A	C&I	V1	EA	2	4
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654336	MODULE COMM	MODULE, COMMUNICATION: TYPE: DVI-VISION FIBER COMPUTER RECEIVER; APPLICATION: TRANSMITTER MODULE IN BPS SYSTEM; MANUF P/N: MC2ARU2CPU; CURRENT CONSUMPTION AT 100V: 410MA AT 240V: 200MA; TEMPERATURE RANGES: OPERATION 5-45 DEG C; STORAGE 10-55 DEG C; <85% AIR MOISTURE; POWER CONSUMPTION MAX AT 100VAC: 10.2W AT 240VAC; 10.8W AT 12VDC: 7.3W	C&I	V1	EA	2	4
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656174	MODULE:CONTROLLER; I/P 20-30 VDC;O/P 24	MODULE: TYPE: CONTROLLER; INPUT: 20-30 VDC; OUTPUT: 24 VDC; POWER SOURCE: 24 V DC; APPLICATION: HART ON AH115/1H115B/AH125; MANUF P/N: E52C0204100; REFERENCE NO: MZ324; INTERNAL PROCESS VOLTAGE; THE PINS P1,P2,P5,P6 OF THE DAUGHTER BOARD ARE PLUGGED RESPECTIUELY ON M1,M2,M3,M4 OF THE MOTHER BOARD; EXTERNAL PROCESS VOLTAGE THE PINS P3,P4,P7,P8 OF THE DAUGHTER BOARD ARE PLUGGED RESPECTIVELY ON M3,M4,M5,M6 OF THE MOTHER BOARD	C&I	V1	EA	10	20
656179	POWER SUPPLY:I/P 100-240 VAC;24 VDC;1 A	POWER SUPPLY: INPUT: 100-240 VAC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 1 A; DIMENSIONS: WD 22.5 X HT 99 X DP 114.5 MM; TYPE: MINI; MOUNTING: HORIZONTAL DIN RAIL NS 35; MANUF P/N: MINI-PS-100- 240AC/24DC/1; IP20; AMBIENT TEMPERATURE OPERATION -25 TO 70 DEG C; PLUGGABLE SCREW CONNECTION; PRIMARY SWITCH MODE; SLIM DESIGN	C&I	V1	EA	2	4

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659173	CONVERTER:FIBER OPTIC;/I/P 24 VDC	CONVERTER: TYPE: FIBER OPTIC; INPUT: 24 VDC; OUTPUT: 5VDC 50MA; APPLICATION: PROFIBUS UP TO 12 MBPS; MANUF P/N: 2708559; REFERENCE NO: L0805230; PSI-MOS-PROFIB/FO 1300 E; IP20; AMBIENT TEMPERATURE OPERATION -20 TO 60 DEG C; WD 35 X HT 99 X DP 105MM; DEVICES CONVERT COPPER BASED PROFIBUS DP INTERFACES TO FIBER OPTICS	C&I	V1	EA	2	4
659191	MODULE:SINGLEMODE ESC PORT MEDIA	MODULE: TYPE: SINGLEMODE ESC PORT MEDIA; APPLICATION: MODULAR, MANAGED, INDUSTRIAL WORKGROUP SWITCH MACH102; COMMERCIAL SIZE: WD 138 X HT 90 X DP 42 MM; MANUF P/N: M1-8SM-SC; REFERENCE NO: 943 970-201; L0607010; 8 X 100 BASE FX; POWER CONSUMPTION 10W; OPERATING TEMPERATURE 0 TO 50 DEG C; IP20	C&I	V1	EA	2	4
660495	MODULE:RECTIFIER DIODE	MODULE: TYPE: RECTIFIER DIODE; MANUF P/N: DD89N; SCREW DEPTH MAX 9MM	EXC	V1	EA	6	12

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661243	MODULE COMM:48530001	MODULE, COMMUNICATION: TYPE: MULTI FLUIDS PULSE CONCENTRATOR; REFERENCE NO: E52Q0006550; 48530001; ANALOG INPUT 25MA; COMMUNICATION TYPE RS485;	C&I	V1	EA	10	20
661272	POWER SUPPLY:I/P 200-240V 4A;12 V;32 A	POWER SUPPLY: INPUT: 200-240V 4A; OUTPUT VOLTAGE: 12 V; OUTPUT CURRENT: 32 A; TYPE: SERVER PSU; MANUF P/N: S26113-E570-V50; 450W	C&I	V1	EA	4	8
661359	POWER SUPPLY:I/P 100-240 VAC;13.8 V;3.5	POWER SUPPLY: INPUT: 100-240 VAC; OUTPUT VOLTAGE: 13.8 V; OUTPUT CURRENT: 3.5 A; DIMENSIONS: WD 97 X LG 159 X HT 38 MM; TYPE: 55W SINGLE OUTPUT; MANUF P/N: AD-55A; WITH BATTERY CHARGER(UPS FUNCTION)	C&I	V1	EA	2	4
661362	POWER SUPPLY:I/P 100-240 VAC;12 V;3 A	POWER SUPPLY: INPUT: 100-240 VAC; OUTPUT VOLTAGE: 12 V; OUTPUT CURRENT: 3 A; DIMENSIONS: WD 97 X LG 99 X HT 36 MM; TYPE: 35W SINGLLE OUTPUT SWITCHING; MANUF P/N: NES-35-12	C&I	V1	EA	2	4

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661390	MODULE COMM:ETHERNET SERVER ADAPTER	MODULE, COMMUNICATION: TYPE: ETHERNET SERVER ADAPTER; MANUF P/N: L0103950; REFERENCE NO: I350; CONNECTOR RJ45 (COPPER), LC FIBER - OPTIC FIBER; DATA RATE SUPPORTED PR ART 10/100/1000 MBPS(COPPER), 1000 MPBS (FIBER)	C&I	V1	EA	5	10
661398	MODULE COMM:ETHERNET INTEL PRO	MODULE, COMMUNICATION: TYPE: ETHERNET INTEL PRO; MANUF P/N: L0103840; 100/S WITH 3 ETH PORTS	C&I	V1	EA	5	10
661409	POWER SUPPLY:I/P 100-240 VAC;12 VDC;20 A	POWER SUPPLY: INPUT: 100-240 VAC; OUTPUT VOLTAGE: 12 VDC; OUTPUT CURRENT: 20 A; DIMENSIONS: WD 115 X HT 130 X DP 152.5 MM; MOUNTING: DIN RAIL; MANUF P/N: U0710020; REFERENCE NO: TRIO-PS/1AC/24VDC/20; 2866381; IP20; AMBIENT TEMPERATURE -25 TO 70 DEG C (OPERATION)	C&I	V1	EA	6	12

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663788	AMPLIFIER:PROPORTIONAL CONTROL CARD;24	AMPLIFIER: TYPE: PROPORTIONAL CONTROL CARD; INPUT: 0-5 VDC; OUTPUT: 0.8-1.2 A; POWER: 24 VDC; MANUF P/N: V0006227553; MODEL NO: SDFSADF; DIMENSIONS WD 39 X LG 20 X HT 124MM; FOR ASH STACKER LUFFING HYDRAULIC MOTOR; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	MAP	V1	EA	2	4
663789	AMPLIFIER:CONTROL CARD;I/P 20-40 V;24	AMPLIFIER: TYPE: CONTROL CARD; INPUT: 20-40 V; OUTPUT: 0-2 V; POWER: 24 VDC; MANUF P/N: EEA PAM 523 A32; WD 40 X LG 175 X HT 128MM; FOR ASH STACKER LUFFING FLOW CONTROL VALVE; INCLUDING F32 CARD HOLDER; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	MAP	V1	EA	2	4

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664255	MODULE:EQ3730EDIO;// P 24 VDC;3 W	MODULE: TYPE: 8 CHANNEL ENHANCED DISCRETE I/O; INPUT: 24 VDC; OUTPUT: 2A AT 30VDC; POWER SOURCE: 3 W; OEM P/N: EQ3730EDIO	C&I	V1	EA	2	4
664259	CNTRLR ELECTRNC:EAGLE QUANTUM PREMIER;24	CONTROLLER, ELECTRONIC: TYPE: EAGLE QUANTUM PREMIER; POTENTIAL: 24 VDC; OUTPUT: 1A AT 30VDC; INPUT: 24 VDC; POWER: 9 W; MANUF P/N: EQ3001DNST; DRY CONTACT RATING OUTPUT (8 RELAYS); SPDT; TWO STATE INPUTS (ON/OFF)	C&I	V1	EA	2	4
664705	POWER SUPPLY:I/P 220-240 V;24 V;10 A	POWER SUPPLY: INPUT: 220-240 V; OUTPUT VOLTAGE: 24 V; OUTPUT CURRENT: 10 A; APPLICATION: FIRE SYSTEM; TYPE: BATTERY CHARGER; MANUF P/N: A36D-10-24V- 513L1-12L	C&I	V1	EA	2	4
665112	MODULE:OPERATING;C OAL, ASH MASS METER	MODULE: TYPE: OPERATING; APPLICATION: COAL, ASH MASS METER; SPECIFICATION: 60-12CSA; SUPPL P/N: XR462085	COA	V1	EA	9	18

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665920	MODULE:FLEX I/O;I/P 0-20 MA	MODULE: TYPE: FLEX I/O; INPUT: 0-20 MA; POWER SOURCE: 19.2-31.2 V DC; MANUF P/N: 1794-IF41 A; REFERENCE NO: 66578602; FLEXBUS 5VDC (55MA); TEMPERATURE RATING -20 TO 50 DEG C; TCODE T4A(PLANT 5170)	TGN	PD	EA	10	20
666457	MODULE:MULTIMODE DSC PORT MEDIA	MODULE: TYPE: MULTIMODE DSC PORT MEDIA; APPLICATION: MODULAR MANAGED SWITCH MACH102; COMMERCIAL SIZE: WD 138 X HT 90 X DP 42 MM; MANUF P/N: M1-8MM-SC; REFERENCE NO: 943 970-101; 8 X 100 BASE FX; POWER CONSUMPTION 10W; OPERATING TEMPERATURE 0 - TO 50 DEG C; IP20; CLASS A	C&I	V1	EA	4	8
666460	MODULE COMM:ETHERNET MACH 100 MEDIA	MODULE, COMMUNICATION: TYPE: ETHERNET MACH 100 MEDIA; APPLICATION: MODULAR MANAGED SWITCH MACH100 10/100 BASE-TX; MANUF P/N: M1-8TP-RJ45; SUPPL P/N: 943 970-001; POWER CONSUMPTION 2W; OPERATING TEMPERATURE 0 TO 50 DEG C; IP20; WD 138 X HT 90 X DP 42 MM; EN 55022 CLASS A	C&I	V1	EA	5	10

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667356	MODULE:PUMP CONTROL CARD;I/P 4-20 MA	MODULE: TYPE: PUMP CONTROL CARD; INPUT: 4-20 MA; OUTPUT: 200-650 MA; POWER SOURCE: 24 V DC; APPLICATION: ASH STACKER CRAWLER HPU; MANUF P/N: GB-HVZ/1A-HA/BBC; REFERENCE NO: 125627-A	MAP	V1	EA	2	4
669279	MODULE:AMPLIFIER;I/P 0-20 MA;O/P 4-20 MA	MODULE: TYPE: AMPLIFIER; INPUT: 0-20 MA; OUTPUT: 4-20 MA; DIMENSIONS: WD 114 X HT 105 X DP 45 MM; COMMERCIAL SIZE: WD 114 X HT 105 X DP 45 MM; MANUF P/N: 6D6332D22-AA	C&I	V1	EA	10	20
670075	MODULE:ELT BLOCKED CHUTE;24 V DC	MODULE: TYPE: ELT BLOCKED CHUTE; POWER SOURCE: 24 V DC; APPLICATION: ELT BLOCKED CHUTE DETECTOR; MANUF P/N: P07009G4; REFERENCE NO: 140494; WITH ADJUSTABLE DELAY FUNCTION; USED ON ASH CONVEYOR BELT PROTECTION	MAP	V1	EA	2	4

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671012	CNTRLR ELECTRNC:DIGITAL TEMPERATURE;250	CONTROLLER, ELECTRONIC: TYPE: DIGITAL TEMPERATURE; POTENTIAL: 250 V; OUTPUT: 10 A; INPUT: 6 A; CLASSIFICATION: IP20; MOUNTING: DIN RAIL; MANUF P/N: DDTC 24VDC; CONTACT 2 X 6A SPDT; OPERATING TEMPERATURE -10 TO 50 DEG C; DIMENSIONS: WD 36 X HT 92 X DP 64 MM; FOR USE AT WATERPLANT	WAT	V1	EA	12	24
671056	UNIT CTRL:SENSOR GUARD;220 VAC;PANEL	UNIT, CONTROL: TYPE: SENSOR GUARD; SUPPLY: 220 VAC; INPUT: 110/220 VAC; OUTPUT: 7.5-15 VDC; MOUNT: PANEL; MANUF P/N: 20351129; TEMPERATURE RANGE -20 TO 50 DEG C; OUTPUT CONTACTS RIP STOP, FAIL STOP AND AUXILIARIES; DIMENSIONS WD 305 X HT 457 X DP 184 MM; FOR USE ON COAL AND ASH PLANT	COA	V1	EA	2	4

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671058	CONTROLLER:METAL DETECTION;1-100 PCT	CONTROLLER: TYPE: METAL DETECTION; RANGE: 1-100 PCT; RATING: 220 V; APPLICATION: SY2A/B CONVEYORS; MOUNTING: INSIDE PANEL; MANUF P/N: METASEARCH4; SOLID STATE USER INTERFACE WITH LCD SCREEN; FACILITY TO ACCEPT THE SIGNAL FROM A BELT SPLICE PICK-UP; INCLUDES 3 X TRAIIP RELAYS AND LED INDICATORS; INCLUDES FAULT/TRIGGER RELAY AND LED INDICATOR; METAL DETECTION CONTROLLER CONNECTION POSSIBLE WITH POWDER MARKER SYSTEM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	COA	V1	EA	2	4
671861	MODULE:750-452;INPUT ANALOG	MODULE: TYPE: INPUT ANALOG; APPLICATION: GH180 VSD WAGO I/O MODULE; OEM P/N: 750-452	C&I	V1	EA	10	20
674847	MODULE:2 WIRC;O/P 4- 20 MA;24 V DC	MODULE: TYPE: 2 WIRC; OUTPUT: 4-20 MA; POWER SOURCE: 24 V DC; REFERENCE NO: Z015-909/01	C&I	V1	EA	30	60

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674858	CONTROLLER:SD6332D 22-AA#1;0-1.8 A;IP30	CONTROLLER: TYPE: SD6332D22-AA#1; RANGE: 0-1.8 A; RATING: IP30; APPLICATION: HP BYOASS VALVE; OUTPUT: 30 VDC; MOUNTING: DIN RAIL; INPUT: 1.8 A; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	C&I	V1	EA	10	20
675440	AMPLIFIER:SWITCHING, 2 CHANNEL ISOLATING	AMPLIFIER: TYPE: SWITCHING, 2 CHANNEL ISOLATING; INPUT: NAMUR EN 60947-5-6; OUTPUT: 2 NO RELAYS; POWER: 3 W; POTENTIAL: 20-250 VAC OR 20-125 VDC; CURRENT: 2 AMP; SUPPL P/N: IM1-22EX-R; THE OUTPUT CIRCUIT FEATURES 2 RELAYS; EACH WITH 1 NO CONTACT; ATEX CERTIFIED; IDENTIFICATION NUMBER: 7541231; PROTECTION CLASS: IP20; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	COA	V1	EA	10	20

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675635	AMPLIFIER:2 CHANNEL ISOLATING SWITCHING	AMPLIFIER: TYPE: 2 CHANNEL ISOLATING SWITCHING; INPUT: NAMUR EN 60947-5-6; OUTPUT: 2 NO RELAYS; POWER: 3 W; POTENTIAL: 20-250 VAC OR 20-125 VDC; CURRENT: 2 AMP; OEM P/N: IMI-22EX-R; THE OUTPUT CIRCUITS FEATURE 2 RELAYS; EACH WITH 1 NO CONTACT; ATEX CERTIFIED; IDENTIFICATION NUMBER: 7541231; PROTECTION CLASS: IP20; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	COA	V1	EA	16	32
675636	CONVERTER SGNL:ISOLATED;I/P RS232	CONVERTER, SIGNAL: TYPE: ISOLATED; INPUT: RS232; OUTPUT: RS485; POWER SOURCE: 12VAC 24VDC; APPLICATION: MEDUPI COAL STOCKYARD GPS SYSTEM MAIN PANEL; MOUNT: DIN RAIL; SPECIFICATION: HD67118; SUPPL P/N: HD67118; ELECTRICAL ISOLATION BETWEEN RS232C AND RS485; MAX BAUD RATE: 115.200 BPS; DIMENSION 120 X 107 X 23 MM	COA	V1	EA	2	4

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677893	MODULE:REVERSE ROTATION MONITOR	MODULE: TYPE: REVERSE ROTATION MONITOR; MANUF P/N: PSM 1130/5	SWG	V1	EA	5	10
688389	CNTRLR ELECTRNC:UNIT;24 VDC;DIN RAIL	CONTROLLER, ELECTRONIC: TYPE: UNIT; POTENTIAL: 24 VDC; OUTPUT: 7.5A (MAXIMUM 2.5A PER OUTPUT CHANNEL AT 24V); INPUT: 8A @ 24VDC; CLASSIFICATION: NON-RATED DESIGNED FOR ASH PLANT OPERATION; MOUNTING: DIN RAIL; RANGE: 12-24 VDC; CURRENT: 9A @ 24VDC OR 4.5 @ 12VDC; POWER: 95W (AT 12VDC) OR 190W (AT 24VDC); OEM P/N: ISVC-02-MEDUPI	DST	V1	EA	60	120
690211	POWER SUPPLY:I/P 85 TO 264 VAC;24 VDC;21	POWER SUPPLY: INPUT: 85 TO 264 VAC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 21 A; APPLICATION: EXCITATION HVAC LCP; TYPE: SWITCH MODE; MOUNTING: PANEL; MANUF P/N: PMC-24V050W1AA	C&I	V1	EA	4	8

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692480	CNTRLR ELECTRNC:CONTROLL ER;240 VAC;IP 66	<p>CONTROLLER, ELECTRONIC: TYPE: CONTROLLER; POTENTIAL: 240 VAC; INPUT: 240 VAC; SPECIFICATION: IP 66; REFERENCE NO: P0903055; SUPPLIER:STI; SERIAL NO: P0903055; PLEASE SUPPLY AND DELIVER THE FOLLOWING STI SMART TRACK CONTROLLER; SERIAL NO P0900024V TAG 29799; SUPPLY VOLTAGE 240 VAC; FREQUENCY 50-60HZ; ABIENT TEMPERATURE -20 TO T0 DEGREES CELCIUS; THE CONTROLLER ENCLOSURE IS RATED FOR NEMA4X / IP66 ENVIRONMENT; INSIDE CONTROLLER BOX THREE ELECTRONIC BOARDS ARE MOUNTED; THE FIRST ONE IS MOUNTED ON THE CONTROLLER COVER AND IT IS CALLED "DISPLAY BOARD" (STI P/N 64037); THE SECOND ONE IS MOUNTED ON THE BOTTOM OF THE CONTROLLER'S BOX AND IS CALLED "POWER BOARD:(STI P/N 64038); THE 3RD ONE IS THE DRIVER IF THE HYDRAULIS PROPORTIONAL VALUE AND IT IS PLUGGED IN TO POWER BOARD (P/N CS05032BT)</p>	C&I	V1	EA	6	12
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693583	MODULE:ZB10EBST18-A;CROWBAR FIRING UNIT	MODULE: TYPE: CROWBAR FIRING UNIT; OEM P/N: ZB10EBST18-A; DRAWING NO: WE4-101104-49 REV 0	C&I	V1	EA	10	20
694121	CNTRLR ELECTRNC:24VAC; 26VDC;O/P 10/100	CONTROLLER, ELECTRONIC: TYPE: MULTI-EQUIPMENT CONTROL AND INTEGRATION; POTENTIAL: 24VAC; 26VDC; OUTPUT: 10/100 MB; INPUT: 25 PCT; MOUNTING: BASE; POWER: 10 W; SUPPL P/N: ME-LGR25	C&I	V1	EA	3	6
699134	MODULE:AL.BR.1794-AENT	MODULE: TYPE: AL.BR.1794-AENT; APPLICATION: VORECON ETHERNET ADAPTOR; OEM P/N: AL.BR.1794-AENT; ALLEN-BRADLEY INTERFACE MODULE (ETHERNET ADAPTER) REF NO: TCR204.007 859 0; USED ON VORECON LAC11/12/13 AP010 MK01	FWS	V1	EA	6	12
699135	MODULE:ANALOG I/O;VORECON VEHS	MODULE: TYPE: ANALOG I/O; APPLICATION: VORECON VEHS; ALLANALOG INPUT/OUTPUT MODULE; REF NO: TCR204.001 872 00; USED ON VORECON LAC11/12/13 AP010 MK01	C&I	V1	EA	6	12

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700205	MODULE:DIGITAL I/O;VORECON CONTROL	MODULE: TYPE: DIGITAL I/O; APPLICATION: VORECON CONTROL; OEM P/N: AL.BR.1794-IB 16XOB16P; REFERENCE NO: TCR204.003 561 10; DIGITAL INPUT/OUTPUT MODULE; USED ON VORECON LAC11/12/13 AP010 MK01	FWS	V1	EA	6	12
700208	MODULE:DIGITAL OUTPUT;VORECON CONTROL	MODULE: TYPE: DIGITAL OUTPUT; APPLICATION: VORECON CONTROL; OEM P/N: AL.BR.1794-OB8EP; ALLEN-BRADLEY DIGITAL OUTPUT MODULE; USED ON VORECON LAC11/12/13 AP010 MK01	FWS	V1	EA	6	12
700628	POWER SUPPLY:I/P 24 VDC;24 V;30 W	POWER SUPPLY: INPUT: 24 VDC; OUTPUT VOLTAGE: 24 V; OUTPUT CURRENT: 30 W; APPLICATION: TUBE LEAK DETECTION SYSTEM; CLASSIFICATION: HARSH AND DUSTY INVIRONMENT IN THE ENCLOSURE; TYPE: UNO PHOENIX CONTACT; MOUNTING: DIN RAIL; SUPPL P/N: 2902991; MODULE POWER SUPPLY; MAKE PHOENIX CONTACT; UNO POWER SUPPLY; ORDER CODE: 2902991;	C&I	V1	EA	32	64

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704290	MODULE:CUAL-11 CUDSMC ISOLATED;O/P 24	MODULE: TYPE: CUAL-11 CUDSMC ISOLATED; INPUT: 80 / 300 VDC; OUTPUT: 24 VDC; DATASHEET IS REQUIRED; FOR USE AT COAL SILO C&I UPS APODYS2; DT321 478 SEARIAL NO: L12-0142	C&I	V1	EA	4	8
706705	MODULE:CUAL-11 CUDSMC;80 KVA	MODULE: TYPE: CUAL-11 CUDSMC; INPUT: 3 PH 360V - 460 304.1A; OUTPUT: 230 VDC 400VAC 116A; COMMERCIAL SIZE: 80 KVA; OEM P/N: 5911091100; FOR STATION 2 C&I UPS APODYS E; DT 321 406 SERIAL NO L12-0040	C&I	V1	EA	4	8
706707	MODULE:CUAL 11 CUDSMC;80 KVA	MODULE: TYPE: CUAL 11 CUDSMC; INPUT: 3 PH 360V - 460V 304.1 A; OUTPUT: 230 VDC 400 VAC 116A; COMMERCIAL SIZE: 80 KVA; FOR SUB WEST C&I UPS APODYS E; DT 321 407 SERIAL NO L12-0043	C&I	V1	EA	6	12
706709	MODULE:CUAL-11 CUDSMC;80 KVA	MODULE: TYPE: CUAL-11 CUDSMC; INPUT: 3 PH 360 - 460 304.1A; OUTPUT: 230 VDC 400VAC 116A; COMMERCIAL SIZE: 80 KVA; FOR UNIT 4 C&I UPS; DT 320 081 SERIAL NO: L10-2409	C&I	V1	EA	4	8

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706711	MODULE:CUAL-11 CUDSMC	MODULE: TYPE: CUAL-11 CUDSMC; FOR UNIT 5 C&I UPS APODYS E; DT 321 405 SERIAL NO L12-0039	C&I	V1	EA	4	8
706722	MODULE:CUAL 11 CUDSMC	MODULE: TYPE: CUAL 11 CUDSMC; FOR STATION 1 C&I UPS 3&4 APODYS 2; DT 582 617 SERIAL NO L-16 1760	C&I	V1	EA	4	8
706725	MODULE:CUAL 11 CUDSMC	MODULE: TYPE: CUAL 11 CUDSMC; FOR STATION 1 C&I UPS 1&2 APODYS 2; DT 321 406 SERIAL NO L12-0041; DATASHEET IS REQUIRED;	C&I	V1	EA	4	8
706726	MODULE:CUAL 11 CUDSMC	MODULE: TYPE: CUAL 11 CUDSMC; FOR 1; 2; 3 C&I UPS APODYS 2; DT 582 615 SERIAL NO L16-1644; DATASHEET IS REQUIRED	C&I	V1	EA	4	8
706905	POWER SUPPLY:I/P 100-240 VAC;24 VDC;40	POWER SUPPLY: INPUT: 100-240 VAC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 40 AMP; DIMENSIONS: WD 122 X HT 130 X THK 125 MM; MOUNTING: DIN RAIL MOUNTING; OEM P/N: QUINT-PS/1AC/24DC/20; ORDER NO:2866776; FOR USE ON VORECON COUPLING LAC11/12/13 AP010 MK01	FWS	V1	EA	5	10

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706906	POWER SUPPLY:I/P 24 VDC;24 VDC;2 AMP	POWER SUPPLY: INPUT: 24 VDC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 2 AMP; DIMENSIONS: WD 70 X HT 118 X THK 87 MM; OEM P/N: 1769-PB2	FWS	V1	EA	4	8
730772	CNTRLR ELECTRNC:SPEED CONTROLLER;48 -253	CONTROLLER, ELECTRONIC: TYPE: SPEED CONTROLLER; POTENTIAL: 48 -253 V; OUTPUT: 4-20 MA; INPUT: 0.001-5000 MHZ; CLASSIFICATION: IP67; MOUNTING: 35 MM DIN MOUNTING RAIL ACC. TO EN 60715:2001; RANGE: 0.001-5000 MHZ; CURRENT: 3 VA; SPECIFICATION: EN 60947-5-6 (NAMUR); SUPPL P/N: KFU8-UFC-EX1.D; UNIVERSAL USAGE AT DIFFERENT POWER SUPPLIES, INPUT FOR NAMUR SENSORS OR DRY CONTACTS	C&I	V1	EA	8	16

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707264	CONVERTER:KFU8-GUT-1.D;TEMPERATURE	CONVERTER: TYPE: KFU8-GUT-1.D; INPUT: 90V DC/253V AC; OUTPUT: 250 VAC/24 - 40VDC - 2A; APPLICATION: TEMPERATURE; SPECIFICATION: IEC 61508/61511; OEM P/N: KFUT-GUT-1.D; ANALOG INPUT; SIL2; 20 TO 90 VDC/48 TO 253 VAC; 2W-2; 5VA/2; 2W-3VA; RTD; PT100; IP20; TA;-20 TO 60 DEGREE C; 40X119 X 115MM; PEPPER L & FUCHS TEMPERATURE CONVERTER; INPUT (PT100-1000 & NI100-1000) THERMOCOUPLES AND POTENTIOMETER; OUTPUT: 3 OUTPUT - OUTPUT I; II (RELAYOUTPUT) & OUTPUT III (ANALOG CURRENT OUTPUT)	FUL	V1	EA	20	40
711918	POWER SUPPLY:I/P 100-240 VAC;24 VDC;4 A	POWER SUPPLY: INPUT: 100-240 VAC; OUTPUT VOLTAGE: 24 VDC; OUTPUT CURRENT: 4 A; MOUNTING: DIN RAIL; MANUF P/N: 2938837; REFERENCE NO: MINI-PS-100-240AC/24DC/4; BURNER PANELS	C&I	V1	EA	30	60

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715357	MODULE:ETHERNET SWITCH;FAST ETHERNET	MODULE: TYPE: ETHERNET SWITCH; APPLICATION: FAST ETHERNET; SPECIFICATION: IEC : 61850-3 IEEE : 1613; SUPPL P/N: PM-7200-8SFP; OPTICAL FIBRE PORTS	C&I	V1	EA	20	40
719827	BOARD PC:CIAT CONNECT 2	BOARD, PRINTED CIRCUIT: TYPE: CIAT CONNECT 2; DATASHEET IS REQUIRED WITH QUOTATION; THE CONNECT TWO CONTROL MODULE CONSISTS OF ONE CONTROL AND DISPLAY PANEL FITTED ON THE UNIT; COMPATIBLE WITH AQUACIAT FREE COOLING; IT IS FITTED AS STANDARD ON WATER CHILLERS (OR WATER HEATER) EQUIPPED ONE OR TWO REFRIGERATED CIRCUIT AND SCROLL COMPRESSORS	C&I	V1	EA	10	20
725682	MODULE COMM:03034KTQ;SWIT CHPROCESSING	MODULE, COMMUNICATION: TYPE: SWITCHPROCESSING; APPLICATION: OTN; HARDWARE: CCT BOARD; OEM P/N: 03034KTQ; MODEL NO: TMB3EFS801; 8-PORT 100M FE	C&I	V1	EA	10	20

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737789	MODULE:EC BOS 8;24 VDC;WD 110 X LG 171.1	MODULE: TYPE: EC BOS 8; POWER SOURCE: 24 VDC; APPLICATION: PROCESING PLANT DATA; DIMENSIONS: WD 110 X LG 171.1 MM; SPECIFICATION: ETHERNET OR WIRELESS; MANUF P/N: EC-NPB-ZWAVE, EC-NPB-SRM; 34 POINT IO; PROCESSOR TI AM3352 1000 MHZ ARM; CORTEX -A8; MEMORY 1 GB DDR3 SDRAM; EC-NET 4 4,1 OR LATER; EC-NET ACCESS 2.4.445 OR LATER; CONSUMPTION 24 VA (24 VAC) 24 W (24 VDC)	C&I	V1	EA	4	8
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no material number	AMPLIFIER:2 CHANNEL ISOLATING SWITCHING	AMPLIFIER: TYPE: PROPORTIONAL CONTROL CARD; INPUT: 12-30VDC; OUTPUT: 0.5-12.6 A; POWER: 24 VDC; MANUF P/N: EHCD-AM005XXXU; SPECIFICATION: HYDAC POWER AMPLIFIER DIGITAL, UNIVERSAL, UP TO 2 SOLENOIDS FOR DUAL-CHANNEL PRESSURE OR NEEDLE VALVE CONTROL; APPLICATION: FOR MILL GRINDER AND COUNTER PRESSURE CONTROL; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER AND THAT THE OPERATING/USER MANUAL IS PROVIDED	C&I	V1	EA	10	20
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no material number	HMI Screen used on the BFP vorecon control panel	DISPLAY UNIT: TYPE: TOUCH; SPECIFICATION: PANELVIEW PLUS 600 COLOR UNIT; SCREEN SIZE: 5,7 INCH WITH DISPLAY AREA 115W X 86H MM; DISPLAY TYPE: COLOR ACTIVE-MATRIX TFT; DISPLAY RESOLUTION: 20 X 240, 18 BIT COLOR GRAPHICS; APPLICATION: HMI SCREEN USED ON THE BFP VORECON PLC CONTROL PANEL; MANUF P/N: 2711P-K6C20D B	C&I	V1	EA	10	20
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