



Tessler NR:

569-DB07-AIC-360-006

CLIENT NR:

PRD-AIC-LIS-044

CLIENT: TAKEDA/BAXALTA

PROJECT / AREA: BURITI EPCMV PROJECT

DETAIL DESIGN

BILL OF MATERIAL
EMS

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|-----|-----------|-------------------------|-------|-------|---------|
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| 0 | 30JUL2021 | ISSUED FOR CONSTRUCTION | MAB | MAF | RSP |
| A | 25JUN2021 | 90% BD ISSUE | MAB | MAF | RSP |
| REV | DATE | DESCRIPTION | EXEC. | CHECK | APPROV. |

Tessler NR **569-DB07-AIC-360-006**CLIENT NR: **PRD-AIC-LIS-044**

TITLE:

SHEET:

BILL OF MATERIAL EMSREV.:
0





2 de 8





NOTAS:





- 1) The current Bill of Material covers the necessary requirements for the EMS system of the BURITI Project.
- 2) The construction concepts detailed hereof consider the labor and materials to properly execute the design and design intent detailed in the drawings and specifications as delivered.
- 3) This list is delivered like an illustrative form for the principal activities that are required. The Contractor is responsible to comply with the specified design and design intent.
- 4) The Contractor is responsible to supervise and report in the delivered document if anomalies exist or any extra materials are required and their quantities.
- 5) The brands and specifications for the materials and equipment will not be changed nor modified unless it is approved in written by the Takeda/Baxalta; therefore the Contractor must consider lead times on the materials and equipment.
- 6) The Contractor is responsible for the means and methods required to comply with the design and design intent. The execution of the work must comply with country and Hemobrás safety regulations.
- 7) The Contractor must consider the quoting of all materials, miscellaneous, and consumables like screws, anchors, connection caps, lubricants, insulating tape, and any other material to complete the work according to the design and design intent.
- 8) The Contractor will be responsible for the order and cleaning of all construction and storage areas, removing as well any excess materials and trash generated during the working period.
- 9) IPS/Tessler does not assume any responsibility for the construction quantities that the Contractor states thereof; it is the responsibility of the Contractor to consider the proper quantities based on the design and design intent.
- 10) Failure to identify discrepancies or omissions immediately shall be understood to indicate the Contractor's acceptance and full compliance with the design and design intent.
- 11) Takeda/Baxalta, Takeda/Baxalta's Representative and Architect/Engineer of Record will not consider, for any purpose, any claim of the bidder for any error or omission in the bid.





REVISION 0 NOTES:





1. ADDED PDIT-A2041-02 & PDIT-A2025-03





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| Tessler NR: 569-DB07-AIC-360-006 | | | CLIENT NR: PRD-AIC-LIS-044 | | |
| TITLE: | | | | | SHEET: 3 de 8 |
| BILL OF MATERIAL EMS | | | | | REV.: 0 |
| ID | DESCRIPTION | UNIT | QTY | | |
| BUILDING 7A | | | | | |
| 1 | EMS PLC CONTROLLER PANEL, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. QUANTITY OF I/O: 78 ANALOG OUTPUT + 18 DISCRETE OUTPUT. TYPE: CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA MANUFACTURER: SIEMENS MODEL: SERIES S7-1517 I/O Rack ET200SP CAPACITY: 79 ANALOG OUTPUT + 18 DISCRETE OUTPUT DIMENSIONS: 800mm (W) x 600mm(H) x 200mm(D) MATERIAL: CARBON STEEL REMARKS: COLOR: RAL 7032 TAG EQUIPEMENT: CP-A2600-2 | Pc | 1 | | |
| 2 | TRANSMITTERS TYPE: FOR CLEANROOM MANUFACTURER: TESTO SEE DATA SHEET Nº PRD-AIC-DSH-001_0_INSTRUMENTS DATA SHEET-EMS | Pc | 55 | | |
| 4 | TOWER LIGHTS TYPE: LED Signal Tower CleanSIGN MANUFACTURER: Schemersal ace MODEL: C-49CLEA CAPACITY: CleanSIGN RGB-LEDs DIMENSIONS: 112mm(W) x 485mm (H) x 125mm(D) MATERIAL: PA - Nylon Polyamide REMARKS: Easy-to-clean and hygiene-compliant design enables smooth cleaning and disinfection TAG EQUIPEMENT: XA-A1004-01 XA-A1029-01 XA-A2002-01 XA-A2025-01 XA-A2036-01 XA-A2037-01 | Pc | 6 | | |
| 5 | ETHERNET TCP/IP MANAGED SWITCH - 6 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL TYPE: SCALANCE XC-200 managed MANUFACTURER: SIEMENS MODEL: XC206-2 CAPACITY: 6x 100 Mbps RJ45 ports; 2x 100 Mbps ST/BFOC ports; 1x console port DIMENSIONS: 60mm (W) x 147mm (H) x 125mm (D) MATERIAL: Polycarbonate (PC-GF10) / pressure die cast aluminum REMARKS: Layer 2 IE switch; IEC 62443-4-2 certified | Pc | 1 | | |

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| Tessler NR: 569-DB07-AIC-360-006 | | | CLIENT NR: PRD-AIC-LIS-044 | | |
| TITLE: | | | | | SHEET: 4 de 8 |
| BILL OF MATERIAL EMS | | | | | REV.: 0 |
| ID | DESCRIPTION | UNIT | QTY | | |
| 6 | 2 CHANNEL PARTICLE SENSOR TYPE: Airmet® IIs MANUFACTURER: PMS MODEL: 510 CAPACITY: 0.5 and 5.0 µm 1.0 CFM (28.3 LPM) Flow rate DIMENSIONS: 89mm (W) x 135mm (H) x 96mm (D) MATERIAL: Enclosure Stainless Steel REMARKS: TO BE USED OFF-LINE | Pc | 1 | | |
| MATERIAL - 7A | | | | | |
| 1 | GALVANIZED STEEL CONDUIT, WITH MALE THREAD NPT TYPE ENDS NOMINAL DIAMETER OF 21MM (3/4"), IN SECTIONS OF 3 METERS, | SECTION | 370 | | |
| 2 | 90° CURVE IN APPARENT GALVANIZED IRON Ø3/ | Pc | 121 | | |
| 3 | CONDUIT CONICAL BOX TERMINAL Ø3/4" | Pc | 121 | | |
| 4 | CONDUIT CONICAL BOX "LL" Ø3/4" WITH FRONT ACCESS TO MIRROR | Pc | 121 | | |
| 5 | FLEXIBLE METAL DUCT Ø 3/4" WITHOUT PVC COVER | M | 121 | | |
| 6 | ANALOGUE SIGNAL CABLE, BARE COPPER CONDUCTORS, CLASS 2 ACCORDING TO NBR NM-280, PVC INSULATION 105°C, INSULATION VOLTAGE 300V, IDENTIFICATION OF PAIRS: BLACK AND WHITE NUMBERED. TWISTED PAIRS WITH 50mm PITCH, TOTAL SEPARATOR TO THE ASSEMBLY IN NON-HYGROSCOPIC TAPE WITH INDIVIDUAL ELECTROSTATIC SHIELDING IN ALUMINUM TAPE + POLYESTER WITH DRAIN WIRE IN ELECTRIC CONTACT WITH THE TAPE. EXTERNAL COVER IN PVC 70°C ANTI-FLAMES IN BLACK. PERFECTLY CYLINDRICAL (1P#1.0mm2+Sh), POLYRON OR SIMILAR MANUFACTURER | M | 1200 | | |
| 7 | ANALOG SIGNAL MULTICABLE, BARE COPPER CONDUCTORS, CLASS 2 ACCORDING TO NBR NM-280, PVC INSULATION 105°C, INSULATION VOLTAGE 300V, IDENTIFICATION OF PAIRS: BLACK AND WHITE NUMBERED. TWISTED PAIRS WITH 50mm PITCH, TOTAL SEPARATOR TO THE ASSEMBLY IN NON-HYGROSCOPIC TAPE WITH INDIVIDUAL ELECTROSTATIC SHIELDING IN ALUMINUM TAPE + POLYESTER WITH DRAIN WIRE IN ELECTRIC CONTACT WITH THE TAPE. EXTERNAL COVER IN PVC 70°C ANTI-FLAMES IN BLACK. PERFECTLY CYLINDRICAL (2P#1.0mm2+Sh), POLYRON OR SIMILAR MANUFACTURER | M | 700 | | |
| 8 | ANALOG SIGNAL MULTICABLE, BARE COPPER CONDUCTORS, CLASS 2 ACCORDING TO NBR NM-280, PVC INSULATION 105°C, INSULATION VOLTAGE 300V, IDENTIFICATION OF PAIRS: BLACK AND WHITE NUMBERED. TWISTED PAIRS WITH 50mm PITCH, TOTAL SEPARATOR TO THE ASSEMBLY IN NON-HYGROSCOPIC TAPE WITH INDIVIDUAL ELECTROSTATIC SHIELDING IN ALUMINUM TAPE + POLYESTER WITH DRAIN WIRE IN ELECTRIC CONTACT WITH THE TAPE. EXTERNAL COVER IN PVC 70°C ANTI-FLAMES IN BLACK. PERFECTLY CYLINDRICAL (3P#1.0mm2+Sh), POLYRON OR SIMILAR MANUFACTURER | M | 300 | | |

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| Tessler NR: 569-DB07-AIC-360-006 | | | CLIENT NR: PRD-AIC-LIS-044 | | |
| TITLE: BILL OF MATERIAL EMS | | | | | SHEET: 5 de 8 |
| | | | | | REV.: 0 |
| ID | DESCRIPTION | UNIT | QTY | | |
| 7 | CONDUIT CONNECTOR PLATE Ø3/4" | Pc | 740 | | |
| 8 | RAWLPLUG NYLON HEX NUT Ø3/8" WITH HEX SCREW | Pc | 1500 | | |
| 9 | HEX NUT FLAT ROUND WASHER Ø 3/8" | Pc | 1000 | | |
| 10 | CLAMP TYPE "D" IRON STEEL GALVANIZED Ø3/4" WITH HEX BOLT AND FLAT WASHER | Pc | 250 | | |
| 11 | THREADED ROAD (Ø 3/8") 10mm X 3000mm LENGHT | SECTION | 80 | | |
| 12 | COPPER CABLE, FOR POWER SYSTEM, VOLTAGE CLASS 0.6/1kV-90oC, 5 CONDUCTORS, CONSTITUTED OF ELECTROLYTIC COPPER WIRE, CLASS 5 STRIPING, W/ INSULATION IN HEPR RUBBER COMPOUND AND FAMBLE PVC COVER (5C# 1.5mm2). REFERENCE: EPROTENAX GSETTE, MANUFACTURER: PRYSMIAN OR PIRELLI | M | 300 | | |
| 13 | COPPER CABLE, FOR POWER SYSTEM, VOLTAGE CLASS 0.6/1kV-90oC, TRIPOLAR, CONSTITUTED OF ELECTROLYTIC COPPER WIRE, CLASS 5 STRIPING, W/ INSULATION IN HEPR RUBBER COMPOUND AND FAMBLE PVC COVER (3C# 2.5mm2). REFERENCE: EPROTENAX GSETTE, MANUFACTURER: PRYSMIAN OR PIRELLI | M | 2000 | | |

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| Tessler NR: 569-DB07-AIC-360-006 | | | CLIENT NR: PRD-AIC-LIS-044 | | |
| TITLE: | | | | SHEET: | 6 de 8 |
| BILL OF MATERIAL EMS | | | | REV.: | 0 |
| ID | DESCRIPTION | UNIT | QTY | | |
| BUILDING 7B | | | | | |
| 1 | EMS PLC CONTROLLER PANEL, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. QUANTITY OF I/O: 101 ANALOG OUTPUT + 12 DISCRETE OUTPUT. TYPE: LED CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA MANUFACTURER: SIEMENS MODEL: SERIES S7-1517 I/O Rack ET200SP CAPACITY: 101 ANALOG OUTPUT + 12 DISCRETE OUTPUT DIMENSIONS: 800mm (W) x 600mm(H) x 200mm(D) MATERIAL: CARBON STEEL REMARKS: COLOR: RAL 7032 TAG EQUIPEMENT: CP-B2600-4 | Pc | 1 | | |
| 2 | TRANSMITTERS TYPE: FOR CLEANROOM MANUFACTURER: TESTO SEE DATA SHEET Nº PRD-AIC-DSH-002_0_INSTRUMENTS DATA SHEET-EMS | Pc | 71 | | |
| 4 | TOWER LIGHTS TYPE: LED Signal Tower CleanSIGN MANUFACTURER: Schemersal ace MODEL: C-49CLEA CAPACITY: CleanSIGN RGB-LEDs DIMENSIONS: 112mm(W) x 485mm (H) x 125mm(D) MATERIAL: PA - Nylon Polyamide REMARKS: Easy-to-clean and hygiene-compliant design enables smooth cleaning and disinfection TAG EQUIPEMENT: XA-B2005-01 XA-B2007-01 XA-B2039-01 XA-B2048-01 | Pc | 6 | | |
| 5 | ETHERNET TCP/IP MANAGED SWITCH - 6 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL TYPE: SCALANCE XC-200 managed MANUFACTURER: SIEMENS MODEL: XC206-2 CAPACITY: 6x 100 Mbps RJ45 ports; 2x 100 Mbps ST/BFOC ports; 1x console port DIMENSIONS: 60mm (W) x 147mm (H) x 125mm (D) MATERIAL: Polycarbonate (PC-GF10) / pressure die cast aluminum REMARKS: Layer 2 IE switch; IEC 62443-4-2 certified | Pc | 1 | | |

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|---|--|---------|--|--|-------------------|
| Tessler NR: 569-DB07-AIC-360-006 | | | CLIENT NR: PRD-AIC-LIS-044 | | |
| TITLE: | | | | | SHEET: 7 de 8 |
| BILL OF MATERIAL EMS | | | | | REV.: 0 |
| ID | DESCRIPTION | UNIT | QTY | | |
| MATERIAL - 7B | | | | | |
| 1 | GALVANIZED STEEL CONDUIT, WITH MALE THREAD NPT TYPE ENDS NOMINAL DIAMETER OF 21MM (3/4"), IN SECTIONS OF 3 METERS, | SECTION | 220 | | |
| 2 | 90° CURVE IN APPARENT GALVANIZED IRON Ø3/ | Pc | 70 | | |
| 3 | CONDUIT CONICAL BOX TERMINAL Ø3/4" | Pc | 70 | | |
| 4 | CONDUIT CONICAL BOX "LL" Ø3/4" WITH FRONT ACCESS TO MIRROR | Pc | 70 | | |
| 5 | FLEXIBLE METAL DUCT Ø 3/4" WITHOUT PVC COVER | M | 70 | | |
| 6 | ANALOGUE SIGNAL CABLE, BARE COPPER CONDUCTORS, CLASS 2 ACCORDING TO NBR NM-280, PVC INSULATION 105°C, INSULATION VOLTAGE 300V, IDENTIFICATION OF PAIRS: BLACK AND WHITE NUMBERED. TWISTED PAIRS WITH 50mm PITCH, TOTAL SEPARATOR TO THE ASSEMBLY IN NON-HYGROSCOPIC TAPE WITH INDIVIDUAL ELECTROSTATIC SHIELDING IN ALUMINUM TAPE + POLYESTER WITH DRAIN WIRE IN ELECTRIC CONTACT WITH THE TAPE. EXTERNAL COVER IN PVC 70°C ANTI-FLAMES IN BLACK. PERFECTLY CYLINDRICAL (1P#1.0mm2+Sh), POLYRON OR SIMILAR MANUFACTURER | M | 2200 | | |
| 7 | ANALOG SIGNAL MULTICABLE, BARE COPPER CONDUCTORS, CLASS 2 ACCORDING TO NBR NM-280, PVC INSULATION 105°C, INSULATION VOLTAGE 300V, IDENTIFICATION OF PAIRS: BLACK AND WHITE NUMBERED. TWISTED PAIRS WITH 50mm PITCH, TOTAL SEPARATOR TO THE ASSEMBLY IN NON-HYGROSCOPIC TAPE WITH INDIVIDUAL ELECTROSTATIC SHIELDING IN ALUMINUM TAPE + POLYESTER WITH DRAIN WIRE IN ELECTRIC CONTACT WITH THE TAPE. EXTERNAL COVER IN PVC 70°C ANTI-FLAMES IN BLACK. PERFECTLY CYLINDRICAL (2P#1.0mm2+Sh), POLYRON OR SIMILAR MANUFACTURER | M | 400 | | |
| 8 | ANALOG SIGNAL MULTICABLE, BARE COPPER CONDUCTORS, CLASS 2 ACCORDING TO NBR NM-280, PVC INSULATION 105°C, INSULATION VOLTAGE 300V, IDENTIFICATION OF PAIRS: BLACK AND WHITE NUMBERED. TWISTED PAIRS WITH 50mm PITCH, TOTAL SEPARATOR TO THE ASSEMBLY IN NON-HYGROSCOPIC TAPE WITH INDIVIDUAL ELECTROSTATIC SHIELDING IN ALUMINUM TAPE + POLYESTER WITH DRAIN WIRE IN ELECTRIC CONTACT WITH THE TAPE. EXTERNAL COVER IN PVC 70°C ANTI-FLAMES IN BLACK. PERFECTLY CYLINDRICAL (3P#1.0mm2+Sh), POLYRON OR SIMILAR MANUFACTURER | M | 600 | | |
| 9 | CONDUIT CONNECTOR PLATE Ø3/4" | Pc | 400 | | |
| 10 | RAWLPLUG NYLON HEX NUT Ø3/8" WITH HEX SCREW | Pc | 700 | | |
| 9 | HEX NUT FLAT ROUND WASHER Ø 3/8" | Pc | 550 | | |
| 10 | CLAMP TYPE "D" IRON STEEL GALVANIZED Ø3/4" WITH HEX BOLT AND FLAT WASHER | Pc | 130 | | |
| 11 | THREADED ROAD (Ø 3/8") 10mm X 3000mm LENGHT | SECTION | 40 | | |

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| Tessler NR: 569-DB07-AIC-360-006 | | | CLIENT NR: PRD-AIC-LIS-044 | | |
| TITLE: BILL OF MATERIAL EMS | | | | | SHEET: 8 de 8 |
| | | | | | REV.: 0 |
| ID | DESCRIPTION | UNIT | QTY | | |
| 12 | COPPER CABLE, FOR POWER SYSTEM, VOLTAGE CLASS 0.6/1kV-90oC, 5 CONDUCTORS, CONSTITUTED OF ELECTROLYTIC COPPER WIRE, CLASS 5 STRIPING, W/ INSULATION IN HEPR RUBBER COMPOUND AND FAMBLE PVC COVER (5C#1.5mm2). REFERENCE: EPROTENAX GSETTE, MANUFACTURER: PRYSMIAN OR PIRELLI | M | 200 | | |
| 13 | COPPER CABLE, FOR POWER SYSTEM, VOLTAGE CLASS 0.6/1kV-90oC, TRIPOLAR, CONSTITUTED OF ELECTROLYTIC COPPER WIRE, CLASS 5 STRIPING, W/ INSULATION IN HEPR RUBBER COMPOUND AND FAMBLE PVC COVER (3C# 2.5mm2). REFERENCE: EPROTENAX GSETTE, MANUFACTURER: PRYSMIAN OR PIRELLI | M | 3000 | | |