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| **طرح نگهداشت و افزایش تولید 27 مخزن** |
| **DATA SHEETS FOR DISTRIBUTION & LIGHTING PANELS****نگهداشت و افزایش تولید میدان نفتی بینک** |
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| D01 | Jul. 2022 | IFA | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| D00 | May. 2022 | IFC | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **CLIENT Approval** |
| **Class:2** | **CLIENT Doc. Number: F0Z-709032** |
| **Status:** | **IDC: Inter-Discipline Check****IFC: Issued For Comment** **IFA: Issued For Approval****AFD: Approved For Design** **AFC: Approved For Construction** **AFP: Approved For Purchase****AFQ: Approved For Quotation** **IFI: Issued For Information****AB-R: As-Built for CLIENT Review** **AB-A: As-Built –Approved** |

**REVISION RECORD SHEET**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **PAGE** | **D00** | **D01** | **D02** | **D03** | **D04** |  | **PAGE** | **D00** | **D01** | **D02** | **D03** | **D04** |
| **1** | X | X |  |  |  | **51** |  |  |  |  |  |
| **2** | X | X |  |  |  | **52** |  |  |  |  |  |
| **3** | X | X |  |  |  | **53** |  |  |  |  |  |
| **4** | X | X |  |  |  | **54** |  |  |  |  |  |
| **5** | X | X |  |  |  | **55** |  |  |  |  |  |
| **6** | X |  |  |  |  | **56** |  |  |  |  |  |
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| **Technical Data Sheet for Distribution & Lighting Panels** |
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| **ITEM** | **DESCRIPTION** | **REQUIREMENT** | **SUPPLIER DATA** |
| **1** | **SITE CONDITION** |
| 1.1 | Location | Binak Oilfield in Bushehr Province | D01 |
| 1.2 | Max. Outdoor Ambient Temperature | 52°C |  |
| 1.3 | Min. Outdoor Ambient Temperature | 5°C |  |
| 1.4 | Direct Sunlight Temperature  | 85°C |  |
| 1.5 | Maximum Relative Outdoor Humidity | 100% |  |
| 1.6 | Altitude | 12.5 m Above Sea Level |  |
| 1.7 | Installation Method | Direct Buried Cable |  |
| **2** | **GENERAL INFORMATION** |
| 2.1 | Tag Numbers | GCS-400-NDP-01 (Process Area Normal Distribution Panel (Outdoor-Safe)) |  |
| GCS-400-EDP-01 (Process Area Emergency Distribution Panel (Outdoor-Safe)) |  |
| GCS-400-NDP-02 (Utility Area Normal Distribution Panel (Outdoor-Safe)) |  |
| GCS-400-EDP-02 (Utility Area Emergency Distribution Panel (Outdoor-Safe)) |  |
| GCS-400-NDP-CRM (Control Room Normal Distribution Panel (Indoor-Safe)) |  |
| GCS-400-EDP-CRM (Control Room Emergency Distribution Panel (Indoor-Safe)) |  |
| GCS-400-NDP-SWHVAC (Switchgear HVAC Panel (Indoor-Safe)) |  |
| 2.2 | Quantity | 1 Set of Each In Item 2.1 |  |
| 2.3 | Application Standard | IPS-E-EL-100, IPS-M-EL-143(3)IPS-M-EL-161(2) |  |
| 2.4 | Manufacturer | By Vendor |  |
| 2.5 | Related Document | Distribution & Lighting Panels Single Line Diagram (BK-GCS-PEDCO-120-EL-SL-0004) |  |
| **3** | **ELECTRICAL DATA** |
| 3.1 | System Voltage/ Frequency | 400V AC / 50Hz |  |
| 3.2 | Voltage Variation/ Frequency Variation | ±10 / ± 5% |  |
| 3.3 | Insulation Voltage | 0.6/1KV |  |
| 3.4 | Rated Power Frequency Withstand Voltage | 2.5 KV |  |
| 3.5 | Rated Impulse Withstand Voltage | 8 KV |  |
| 3.6 | No. of Phases / Wires | 3Ph+N+PE |  |
| 3.7 | Control Voltage | 230VAC (With Isolating Transformer if Any) |  |
| 3.8 | Space Heater Voltage | 230VAC |  |
| 3.9 | Internal/ External Voltage Supply | Internal |  |
| 3.10 | Main Bus-Bar Rating | According to SLD (Item 2.5) |  |
| 3.11 | Bus-Bars Material | Indoor: Heat Shrink CopperOutdoor: Silver Plated Copper |  |
| 3.12 | Bus Bar Insulation | Dielectric Insulation |  |
| 3.13 | Bus Bars Joints | Silver Plated |  |
| 3.14 | Earth Bus-Bar Size | By Vendor |  |
| 3.15 | Rated Short Circuit Current | According to SLD (Item 2.5) |  |
| 3.16 | Type Of System Grounding | TNS / Solid Earthed |  |
| **4** |  **ENCLOSURE DATA** |
| 4.1 | Enclosure Type | Wall Mounted , Fixed Type, Front Access | D01 |
| 4.2 | Degree of Protection | Indoor: IP 42, Outdoor: IP 54 |  |
| 4.3 | Cable Entry | Bottom via Gland |  |
| 4.4 | Outgoing Feeder | Cable, Bottom |  |
| 4.5 | Material | Painted Sheet Steel |  |
| 4.6 | Finish Color | RAL 7032 |  |
| 4.7 | Dimensions (HxWxD) | By Vendor |  |
| 4.8 | Sheet Steel Thickness (Body/Frame) | Free Standing: 2mm/2mmWall Mounted: 1.5mm/2mm |  |
| 4.9 | Painting | For Corrosive & Hot Atmosphere  |  |
| 4.10 | Thickness | Min. 60μ |  |
| 4.11 | Type | Epoxy Powder Elector Static |  |
| 4.12 | Weight | By Vendor |  |
| **5** | **CIRCUIT BREAKERS** |
| 5.1 | Manufacturer / Type | By Vendor |  |
| 5.2 | Rated Operating Voltage | 690V AC |  |
| 5.3 | Service Voltage | 400V AC |  |
| 5.4 | Incoming Circuit Breaker Type | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| 5.5 | Internal Protections for MCCB | According to“BK-GCS-PEDCO-120-EL-SL-0004”, Thermal Over Load (49) & Instantaneous O/C 50) are Required |  |
| 5.6 | Incoming C.B Aux. Switches | Yes |  |
| 5.7 | Incoming C.B Trip Switches | Yes |  |
| 5.8 | Rated Current | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| 5.9 | Outgoing Circuit Breakers Type | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| **6** | **LV FUSES** |
| 6.1 | Manufacturer | By Vendor |  |
| 6.2 | Type Designation | gG | D01 |
| 6.3 | Rated Voltage | 690V |  |
| 6.4 | Service Voltage | 400V |  |
| 6.5 | Rated Current | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| **7** | **CURRENT TRANSFORMERS** |
| 7.1 | Manufacturer / Type | By Vendor |  |
| 7.2 | Rated Secondary Current | 5A, 1A, According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| 7.3 | Accuracy Class | Metering: 1.0, Protection: 5P10 |  |
| **8** | **AMMETERS** |
| 8.1 | Manufacturer / Type | By Vendor |  |
| 8.2 | Operating Range | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| 8.3 | Accuracy Class | 1.5 |  |
| **9** | **VOLTMETERS** |
| 9.1 | Manufacturer / Type | By Vendor |  |
| 9.2 | Operating Range | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| 9.3 | Accuracy Class | 1.5 |  |
| **10** | **CONTACTORS** |
| 10.1 | Manufacturer / Type | By Vendor |  |
| 10.2 | Rated Voltage | 400V AC |  |
| 10.3 | Coil Voltage | 230V AC |  |
| 10.4 | Duty | AC3 |  |
| 10.5 | Aux. Switches | Yes |  |
| 10.6 | Rated Current | According to“BK-GCS-PEDCO-120-EL-SL-0004” |  |
| **11** | **PHOTOCELL** |
| 11.1 | Constructed | 5A,230 V,50Hz |  |
| 11.2 | Degree of Protection | IP55 ,Heavy Duty Type |  |
| 11.3 | Operation Type | Fail Safe & Adjustable |  |
| **12** | **LABLE** |
| 12.1 | Language | English |  |
| 12.2 | Material | Stainless Steel-Screwed/Reverted |  |
| 12.3 | Main Label (Front / Back) | Engraved / Black Font-White Background |  |
| **13** | **PANEL WIRING** |
| 13.1 | Manufacturer | By Vendor |  |
| 13.2 | Type  | CU/PVC |  |
| 13.3 | Power Wire Color | R: Red, S: Yellow, T: Blue, Neutral: BlackPH: Red, Neutral: Black |  |
| 13.4 | Signal Wire Color(Voltage Presence Indicator) | Red (L1), Green (L2), Yellow (L3) |  |
| **14** | **PANEL TERMINAL**  |
| 14.1 | Manufacturer | By Vendor |  |
| 14.2 | Model NO. | By Vendor |  |
| 14.3 | Type | Solderless Clamp Type-Flame Retardant |  |
| 14.4 | Rated Voltage | According to IEC |  |
| 14.5 | Size | Min. 4sqmm & AS Per SLD |  |
| 14.6 | Color | Neutral (Blue) / PE (Green/ Yellow) |  |
| **15** | **ACCESSORIES** |
| 15.1 | Panel Lighting | Yes |  |
| 15.2 | Space Heater with Thermostat | Yes |  |
| 15.3 | Door Key | Yes |  |
| 15.4 | Gland Plate (Undrilled) | Yes |  |
| 15.5 | Gland Plate Type (Normal/Non-Magnetic) | Normal |  |
| 15.6 | Terminal Lugs | Yes |  |
| 15.7 | Commissioning Spare Parts | Yes |  |
| 15.8 | Two Year Operation Spare Parts | Yes |  |
| 15.9 | Routine Test | Witnessed & Report |  |
| 15.10 | Type Test Certificate (if Required) | Certificate |  |

Note 1: All required accessories shall be considered by vendor.