

|                                                                                                  |                                                                                                          |           |            |         |      |          |       |                                                                                                                                                                           |                    |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------|------------|---------|------|----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br><br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |         |      |          |       | <br> |                    |
|                                                                                                  | DATA SHEET FOR LEVEL SWITCH                                                                              |           |            |         |      |          |       |                                                                                                                                                                           |                    |
| شماره پیمان:                                                                                     | پروژه                                                                                                    | بسته کاری | صادر کننده | تجهیزات | رشته | نوع مدرک | سریال | نسخه                                                                                                                                                                      | شماره صفحه: 1 از 6 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                       | GCS       | PEDCO      | 120     | IN   | DT       | 0008  | D02                                                                                                                                                                       |                    |

## طرح نگهداشت و افزایش تولید 27 مخزن

### DATA SHEET FOR LEVEL SWITCH

#### نگهداشت و افزایش تولید میدان نفتی بینک

| D02  | FEB.2024 | AFC                       | P.Hajisadeghi | M.Fakharian | S.Faramarzpour |                 |
|------|----------|---------------------------|---------------|-------------|----------------|-----------------|
| D01  | SEP.2022 | IFA                       | P.Hajisadeghi | M.Fakharian | M.Mehrshad     |                 |
| D00  | APR.2022 | IFC                       | P.Hajisadeghi | M.Fakharian | M.Mehrshad     |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by:  | Checked by: | Approved by:   | CLIENT Approval |

Class: : 1

CLIENT Doc. Number: F9Z-708929

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



NISOC

تکده‌داشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## DATA SHEET FOR LEVEL SWITCH

|                  |       |           |            |         |      |          |       |      |                    |
|------------------|-------|-----------|------------|---------|------|----------|-------|------|--------------------|
| شماره پیمان:     | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: 2 از 6 |
| 053 - 073 - 9184 | BK    | GCS       | PEDCO      | 120     | IN   | DT       | 0008  | D02  |                    |

## REVISION RECORD SHEET

| Page | D00 | D01 | D02 | D03 | D04 | Page | D00 | D01 | D02 | D03 | D04 |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1    | X   | X   | X   |     |     | 65   |     |     |     |     |     |
| 2    | X   | X   | X   |     |     | 66   |     |     |     |     |     |
| 3    | X   | X   | X   |     |     | 67   |     |     |     |     |     |
| 4    | X   | X   |     |     |     | 68   |     |     |     |     |     |
| 5    | X   | X   |     |     |     | 69   |     |     |     |     |     |
| 6    | X   | X   | X   |     |     | 70   |     |     |     |     |     |
| 7    |     |     |     |     |     | 71   |     |     |     |     |     |
| 8    |     |     |     |     |     | 72   |     |     |     |     |     |
| 9    |     |     |     |     |     | 73   |     |     |     |     |     |
| 10   |     |     |     |     |     | 74   |     |     |     |     |     |
| 11   |     |     |     |     |     | 75   |     |     |     |     |     |
| 12   |     |     |     |     |     | 76   |     |     |     |     |     |
| 13   |     |     |     |     |     | 77   |     |     |     |     |     |
| 14   |     |     |     |     |     | 78   |     |     |     |     |     |
| 15   |     |     |     |     |     | 79   |     |     |     |     |     |
| 16   |     |     |     |     |     | 80   |     |     |     |     |     |
| 17   |     |     |     |     |     | 81   |     |     |     |     |     |
| 18   |     |     |     |     |     | 82   |     |     |     |     |     |
| 19   |     |     |     |     |     | 83   |     |     |     |     |     |
| 20   |     |     |     |     |     | 84   |     |     |     |     |     |
| 21   |     |     |     |     |     | 85   |     |     |     |     |     |
| 22   |     |     |     |     |     | 86   |     |     |     |     |     |
| 23   |     |     |     |     |     | 87   |     |     |     |     |     |
| 24   |     |     |     |     |     | 88   |     |     |     |     |     |
| 25   |     |     |     |     |     | 89   |     |     |     |     |     |
| 26   |     |     |     |     |     | 90   |     |     |     |     |     |
| 27   |     |     |     |     |     | 91   |     |     |     |     |     |
| 28   |     |     |     |     |     | 92   |     |     |     |     |     |
| 29   |     |     |     |     |     | 93   |     |     |     |     |     |
| 30   |     |     |     |     |     | 94   |     |     |     |     |     |
| 31   |     |     |     |     |     | 95   |     |     |     |     |     |
| 32   |     |     |     |     |     | 96   |     |     |     |     |     |
| 33   |     |     |     |     |     | 97   |     |     |     |     |     |
| 34   |     |     |     |     |     | 98   |     |     |     |     |     |
| 35   |     |     |     |     |     | 99   |     |     |     |     |     |
| 36   |     |     |     |     |     | 100  |     |     |     |     |     |
| 37   |     |     |     |     |     | 101  |     |     |     |     |     |
| 38   |     |     |     |     |     | 102  |     |     |     |     |     |
| 39   |     |     |     |     |     | 103  |     |     |     |     |     |
| 40   |     |     |     |     |     | 104  |     |     |     |     |     |
| 41   |     |     |     |     |     | 105  |     |     |     |     |     |
| 42   |     |     |     |     |     | 106  |     |     |     |     |     |
| 43   |     |     |     |     |     | 107  |     |     |     |     |     |
| 44   |     |     |     |     |     | 108  |     |     |     |     |     |
| 45   |     |     |     |     |     | 109  |     |     |     |     |     |
| 46   |     |     |     |     |     | 110  |     |     |     |     |     |
| 47   |     |     |     |     |     | 111  |     |     |     |     |     |
| 48   |     |     |     |     |     | 112  |     |     |     |     |     |
| 49   |     |     |     |     |     | 113  |     |     |     |     |     |
| 50   |     |     |     |     |     | 114  |     |     |     |     |     |
| 51   |     |     |     |     |     | 115  |     |     |     |     |     |
| 52   |     |     |     |     |     | 116  |     |     |     |     |     |
| 53   |     |     |     |     |     | 117  |     |     |     |     |     |
| 54   |     |     |     |     |     | 118  |     |     |     |     |     |
| 55   |     |     |     |     |     | 119  |     |     |     |     |     |
| 56   |     |     |     |     |     | 120  |     |     |     |     |     |
| 57   |     |     |     |     |     | 121  |     |     |     |     |     |
| 58   |     |     |     |     |     | 122  |     |     |     |     |     |
| 59   |     |     |     |     |     | 123  |     |     |     |     |     |
| 60   |     |     |     |     |     | 124  |     |     |     |     |     |
| 61   |     |     |     |     |     | 125  |     |     |     |     |     |
| 62   |     |     |     |     |     | 126  |     |     |     |     |     |
| 63   |     |     |     |     |     | 127  |     |     |     |     |     |
| 64   |     |     |     |     |     | 128  |     |     |     |     |     |



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEET FOR LEVEL SWITCH

|                  |       |           |            |         |      |          |       |      |                    |
|------------------|-------|-----------|------------|---------|------|----------|-------|------|--------------------|
| شماره پیمان:     | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: 3 از 6 |
| 053 - 073 - 9184 | BK    | GCS       | PEDCO      | 120     | IN   | DT       | 0008  | D02  |                    |

D02

**REFERENCE DOCUMENTS :**

Specification For Instrumentation  
Process Basis Of Design  
Piping Material Specification  
Hazardous Area Classification Layout  
Instrument & Control System Design Criteria

BK-GNRAL-PEDCO-000-IN-SP-0001-D04  
BK-GNRAL-PEDCO-000-PR-DB-0001-D04  
BK-GCS-PEDCO-120-PI-SP-0001-D02  
BK-GCS-PEDCO-120-SA-PY-0002-D00  
BK-GCS-PEDCO-120-IN-DC-0002-D01

Symbol & Legend For PFD and P&ID  
P&ID - Gas Compression Inlet Gas Pipeline (Binak)  
P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)  
P&ID - Slug Catcher System  
P&ID - Gas Compression Inlet Knock Out Drum  
P&ID - 1st Stage Gas Compression Suction Drums  
P&ID - 1st Stage Gas Compression Compressors  
P&ID - 1st Stage Gas Compression Air Coolers  
P&ID - 2nd Stage Gas Compression Suction Drums  
P&ID - 2nd Stage Gas Compression Compressors  
P&ID - 2nd Stage Gas Compression Air Coolers  
P&ID - 2nd Stage Gas Compression Discharge Drum  
P&ID - Gas Compression Dehydration Package  
P&ID - Lean Glycol Storage Tank  
P&ID - Instrument & Plant Air System  
P&ID - Nitrogen Generation System  
P&ID - Close Drain System  
P&ID - Corrosion Inhibitor Package  
P&ID - Methanol Injection Package  
P&ID - LP Flare System  
P&ID - Oily Water Sewer  
P&ID - Fuel Gas System  
P&ID - Diesel Oil System  
P&ID - Potable Water System  
P&ID - Glycol Sump Drum  
P&ID - Fire Water Network  
P&ID - Total Flooding System For Extension of Existing Elect. Building

BK-GCS-PEDCO-120-PR-PI-0001-D04  
BK-GCS-PEDCO-120-PR-PI-0002-D06  
BK-GCS-PEDCO-120-PR-PI-0003-D06  
BK-GCS-PEDCO-120-PR-PI-0004-D06  
BK-GCS-PEDCO-120-PR-PI-0005-D06  
BK-GCS-PEDCO-120-PR-PI-0006-D06  
BK-GCS-PEDCO-120-PR-PI-0007-D06  
BK-GCS-PEDCO-120-PR-PI-0008-D06  
BK-GCS-PEDCO-120-PR-PI-0009-D06  
BK-GCS-PEDCO-120-PR-PI-0010-D06  
BK-GCS-PEDCO-120-PR-PI-0011-D06  
BK-GCS-PEDCO-120-PR-PI-0012-D06  
BK-GCS-PEDCO-120-PR-PI-0013-D06  
BK-GCS-PEDCO-120-PR-PI-0014-D06  
BK-GCS-PEDCO-120-PR-PI-0015-D06  
BK-GCS-PEDCO-120-PR-PI-0016-D06  
BK-GCS-PEDCO-120-PR-PI-0017-D06  
BK-GCS-PEDCO-120-PR-PI-0018-D07  
BK-GCS-PEDCO-120-PR-PI-0019-D06  
BK-GCS-PEDCO-120-PR-PI-0020-D06  
BK-GCS-PEDCO-120-PR-PI-0021-D05  
BK-GCS-PEDCO-120-PR-PI-0022-D06  
BK-GCS-PEDCO-120-PR-PI-0023-D06  
BK-GCS-PEDCO-120-PR-PI-0024-D06  
BK-GCS-PEDCO-120-PR-PI-0025-D06  
BK-GCS-PEDCO-120-SA-PI-0001-D04  
BK-GCS-PEDCO-120-SA-PI-0002-D02

IPS Construction and Installation Standard for Level instruments  
IPS Engineering and Design Standard for Level instruments  
IPS Material and Equipment Standard for Level instruments

IPS-C-IN-140  
IPS-E-IN-140  
IPS-M-IN-140

|                                                                                                              |                                                                                                                                 |       |           |            |         |      |          |       |                                                                                               |                    |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------|-----------|------------|---------|------|----------|-------|-----------------------------------------------------------------------------------------------|--------------------|
| <div></div> <div>NISOC</div> | <div>نگهداشت و افزایش تولید میدان نفتی بینک</div> <div>سطح الارض</div> <div>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</div> |       |           |            |         |      |          |       | <div></div> |                    |
|                                                                                                              | DATA SHEET FOR LEVEL SWITCH                                                                                                     |       |           |            |         |      |          |       |                                                                                               |                    |
|                                                                                                              | شماره پیمان:                                                                                                                    | پروژه | بسته کاری | صادر کننده | تسهيلات | رشته | نوع مدرک | سريال | نسخه                                                                                          | شماره صفحه: 4 از 6 |
| 053 - 073 - 9184                                                                                             | BK                                                                                                                              | GCS   | PEDCO     | 120        | IN      | DT   | 0008     | D02   |                                                                                               |                    |

#### GENERAL NOTES:

- 1 - Vendor to follow materials indicated in the Data Sheets, related wetted parts, these materials can be as minimum and shall be verified by vendor.
- 2 - For level switches suitable sunshades shall be supplied by vendor.
- 3 - Vendor design shall be in accordance with : "Specification For Instrumentation, Doc. No. BK-GNRAL-PEDCO-000-IN-SP-0001" and all related spec.s for level switches.
- 4 - Vendor shall specify dead band of switches at quotation stage for client approval.
- 5 - Calibration scale shall be provided in switch to indicate exact set-point setting of switch.
- 6 - Vendor shall provide calibration certificate, factory visual and dimensional inspection report, hydrostatic pressure test certification, and mechanical test report.
- 7 - Level switches shall be fabricated according to IPS-M-IN-140.
- 8 - Level switches shall be provided with a stainless steel 304 SS (VTC) nameplate permanently fastened to the instrument. Following details shall be engraved on them:

- Tag Number
- Manufacturer model and serial number
- Service
- Contact rating
- Electrical classification and certification agency name and code
- Project Information

- 9 - Environmental condition for field instrumentation of Binak oilfield shall be considered as per the following (According to "BK-GNRAL-PEDCO-000-PR-DB-0001: Process Basis Of Design":

Maximum ambient temperature: 50 (°C)  
 Minimum ambient temperature: -5 (°C)  
 Maximum steel surface exposed to sun: 85 (°C)  
 Maximum summer dry bulb: - (°C)  
 DB/RH for Summer HVAC Design: 41 °C / 61 %  
 DB FOR Winter HVAC Design: 6 °C

#### Relative Humidity:

- Maximum Design relative humidity (%): 100
- Minimum Design relative humidity (%): 0

- 10- Internal stilling well should be supplied by the Vendor, and should have an inside diameter of at least 25mm larger than the displacer or float diameter.  
 The stilling well shall be open at the bottom end, and should have a vent hole located above the maximum level.



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## DATA SHEET FOR LEVEL SWITCH

|                  |       |           |            |         |      |          |       |      |                    |
|------------------|-------|-----------|------------|---------|------|----------|-------|------|--------------------|
| شماره پیمان:     | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: 5 از 6 |
| 053 - 073 - 9184 | BK    | GCS       | PEDCO      | 120     | IN   | DT       | 0008  | D02  |                    |

## LEVEL SWITCH

|                      |    |                                                       |                                                        |                         |
|----------------------|----|-------------------------------------------------------|--------------------------------------------------------|-------------------------|
| GENERAL DATA         | 1  | Tag No.                                               | SEE PAGE 6                                             |                         |
|                      | 2  | P & ID No.                                            | SEE PAGE 6                                             |                         |
|                      | 3  | Service                                               | SEE PAGE 6                                             |                         |
|                      | 4  | Equipment No.                                         | SEE PAGE 6                                             |                         |
|                      | 5  | Area Classification                                   | ZONE 2, IIB T4                                         |                         |
|                      | 6  |                                                       |                                                        |                         |
| OPERATING CONDITIONS | 7  | Upper Fluid                                           | Lower Fluid                                            | SEE PAGE 6              |
|                      | 8  | Upper Phase                                           | Lower Phase                                            | SEE PAGE 6              |
|                      | 9  | Operating Pressure                                    | Design Pressure (barg)                                 | SEE PAGE 6              |
|                      | 10 | Operating Temperature                                 | Design Temperature (°C)                                | SEE PAGE 6              |
|                      | 11 | Upper Density                                         | Lower Density (kg/m <sup>3</sup> )                     | SEE PAGE 6              |
|                      | 12 |                                                       |                                                        | SEE PAGE 6              |
| BODY/GAGE            | 13 |                                                       |                                                        |                         |
|                      | 14 | Body/Cage Material                                    | SEE PAGE 6                                             |                         |
|                      | 15 | Head Orientation                                      | Top                                                    |                         |
|                      | 16 | Connection Size & Rating                              | SEE PAGE 6                                             |                         |
|                      | 17 | Flange Material                                       | SEE PAGE 6                                             |                         |
|                      | 18 | Length of Center To Center (C-C)                      | Set Point (mm)                                         | N.A SEE PAGE 6 (Note 1) |
| DISPLACER / FLOAT    | 19 | Mounting                                              | Internal                                               |                         |
|                      | 20 |                                                       |                                                        |                         |
|                      | 21 | Type                                                  | SEE PAGE 6                                             |                         |
|                      | 22 | Insertion Depth                                       | VTA                                                    |                         |
|                      | 23 | Displacer or Float Material                           | 316 S.S                                                |                         |
| SWITCH               | 24 | Setting                                               | Adjustable / Internal                                  |                         |
|                      | 25 | Differential Gap (Fixed/Adj)                          | Fixed                                                  |                         |
|                      | 26 | Type                                                  | Snap Acting with Hermetically Sealed (write protected) |                         |
|                      | 27 | Quantity                                              | 2 x DPDT                                               |                         |
|                      | 28 | Setpoint                                              | SEE PAGE 6                                             |                         |
|                      | 29 | Ingress Protection                                    | IP-65 as minimum                                       |                         |
|                      | 30 | Electrical Certificate                                | EExd IIB,T4                                            |                         |
|                      | 31 | Electrical Connection                                 | ISO M20 x 1.5                                          |                         |
|                      | 32 | Contact Rating                                        | 10A @ 110 VAC                                          |                         |
|                      | 33 | Load Type                                             | Inductive                                              |                         |
|                      | 34 | Case Material                                         | VTA                                                    |                         |
| OPTIONS              | 35 | Contacts (Open / Close)                               | Normally Close                                         |                         |
|                      | 36 | On Level (Incr. / Decr.)                              | SEE PAGE 6                                             |                         |
|                      | 37 | ACCURACY                                              | 1% OF SPAN                                             |                         |
|                      | 38 | Tag Name Plate                                        | Required                                               |                         |
|                      | 39 | Cable Gland                                           | Required                                               |                         |
| PURCHASING DATA      | 40 | Vent/Drain Valve                                      | N.A                                                    |                         |
|                      | 41 | NACE Requirement (As per MR0175/ISO 15156 Compliance) | SEE PAGE 6                                             |                         |
|                      | 42 | Model                                                 | Manufacture                                            | Will be finalized later |
|                      | 43 | Supplier                                              | Order                                                  | Will be finalized later |
|                      | 44 |                                                       |                                                        |                         |

VTA : VENDOR TO ADVISE

(1) The location for installation will be finalized by process and mechanical departments.

(2) Safety area classification shall be hold until to be finalized in Doc.: Hazardous Area Classification Layout BK-GCS-PEDCO-120-SA-PY-0002.



**NISOC**

تکهداشت و افزایش تولید عیدان نفتی بینک  
سطح الارضی

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## DATA SHEET FOR LEVEL SWITCH

|                  |      |    |    |     |       |     |    |                  |
|------------------|------|----|----|-----|-------|-----|----|------------------|
| 053 - 073 - 9384 | 0008 | DT | IN | 120 | PEDCO | GCS | BK | 053 - 073 - 9384 |
|------------------|------|----|----|-----|-------|-----|----|------------------|

## D02 LEVEL SWITCH LIST

[illegible]

**NOTE:** (1) G: GAS

L: LIQUID

NA: NOT APPLICABLE