

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته IN	نوع مدرک DT	سریال 0019	نسخه D04	شماره صفحه: 1 از 6

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER

نگهداشت و افزایش تولید میدان نفتی بینک

D04	FEB.2025	AFC	P.Hajisadeghi	M.Fakharian	S.Faramarzpour	
D03	OCT.2023	AFC	P.Hajisadeghi	M.Fakharian	S.Faramarzpour	
D02	MAY.2023	IFA	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D01	DEC.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-708939

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



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER

شماره پیمان:	پروژه	بسته کاری	صادر کننده	تهیهات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 2 از 6
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0019	D04	

REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X	X	X	65					
2	X	X	X	X	X	66					
3	X	X				67					
4	X	X				68					
5	X	X			X	69					
6	X	X	X	X	X	70					
7		X				71					
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 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 3 از 6
053 - 073 - 9184	BK	GCS	PEDCO	120	IN	DT	0019	D04	

REFERENCE DOCUMENTS :

Specification For Instrumentation	BK-GNRAL-PEDCO-000-IN-SP-0001
Process Basis Of Design	BK-GNRAL-PEDCO-000-PR-DB-0001
Piping Material Specification	BK-GCS-PEDCO-120-PI-SP-0001
Hazardous Area Classification Layout	BK-GCS-PEDCO-120-SA-PY-0002
Instrument & Control System Design Criteria	BK-GCS-PEDCO-120-IN-DC-0002
Symbol & Legend For PFD and P&ID	BK-GCS-PEDCO-120-PR-PI-0001
P&ID - Gas Compression Inlet Gas Pipeline (Binak)	BK-GCS-PEDCO-120-PR-PI-0002
P&ID - Gas Compression Inlet Gas Pipeline (Golghari)	BK-GCS-PEDCO-120-PR-PI-0003
P&ID - Slug Catcher System	BK-GCS-PEDCO-120-PR-PI-0004
P&ID - Gas Compression Inlet Knock Out Drum	BK-GCS-PEDCO-120-PR-PI-0005
P&ID - 1st Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0006
P&ID - 1st Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0007
P&ID - 1st Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0008
P&ID - 2nd Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0009
P&ID - 2nd Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0010
P&ID - 2nd Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0011
P&ID - 2nd Stage Gas Compression Discharge Drum	BK-GCS-PEDCO-120-PR-PI-0012
P&ID - Gas Compression Dehydration Package	BK-GCS-PEDCO-120-PR-PI-0013
P&ID - Lean Glycol Storage Tank	BK-GCS-PEDCO-120-PR-PI-0014
P&ID - Instrument & Plant Air System	BK-GCS-PEDCO-120-PR-PI-0015
P&ID - Nitrogen Generation System	BK-GCS-PEDCO-120-PR-PI-0016
P&ID - Close Drain System	BK-GCS-PEDCO-120-PR-PI-0017
P&ID - Corrosion Inhibitor Package	BK-GCS-PEDCO-120-PR-PI-0018
P&ID - Methanol Injection Package	BK-GCS-PEDCO-120-PR-PI-0019
P&ID - LP Flare System	BK-GCS-PEDCO-120-PR-PI-0020
P&ID - Oily Water Sewer	BK-GCS-PEDCO-120-PR-PI-0021
P&ID - Fuel Gas System	BK-GCS-PEDCO-120-PR-PI-0022
P&ID - Diesel Oil System	BK-GCS-PEDCO-120-PR-PI-0023
P&ID - Potable Water System	BK-GCS-PEDCO-120-PR-PI-0024
P&ID - Glycol Sump Drum	BK-GCS-PEDCO-120-PR-PI-0025
P&ID - Fire Water Network	BK-GCS-PEDCO-120-SA-PI-0001
P&ID - Total Flooding System For Extension of Existing Elect. Building	BK-GCS-PEDCO-120-SA-PI-0002

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض							
	احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							
DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER								
شماره پیمان: 053 - 073 - 9184	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	IN	DT	0019	D04
شماره صفحه: 4 از 6								

GENERAL NOTES:

- All transmitters shall have output short circuit & reverse polarity protection.
- Tag plate as per Specification for Instrumentation, shall be stainless steel 304 SS (VTC). Following details shall be engraved on them:
 - Tag Number
 - Range Limit
 - Service
 - Manufacture Model
- Sunshade to be considered for all transmitters.
- Each transmitter shall have a none-volatile EEPROM memory to be used for storing the configuration data and sensor linearization data. This data must be retained in the transmitter to be functional upon power up.
- Vendor shall identify and detail any deviation from the present instrument datasheet.
- All transmitters shall be equipped with internal diagnostics software.
- Push button for span and zero adjustment for all transmitters to be considered by vendor.
- Indicator scale output configuration for LT tag nos. to be linear.
- Environmental condition for field instrumentation of Binak oilfield shall be considered as per the following (According to "BK-GNRL-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: 50 (°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

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته IN	نوع مدرک DT	سریال 0019	نسخه D04	شماره صفحه: 5 از 6
DATA SHEETS FOR LEVEL TRANSMITTER (DPT TYPE)									
GENERAL DATA	1	Tag No.					SEE NEXT PAGE		
	2	P & ID No.					SEE NEXT PAGE		
	3	Equipment No.					SEE NEXT PAGE		
	4	Area Clacification					Zone 2, IIB T4		
	5	RFI Protection		Tropicalisation			NEEDED		NEEDED
OPERATING CONDITIONS	6	Fluid					SEE NEXT PAGE		
	7	Phase					SEE NEXT PAGE		
	8	Operating Pressure		Design Pressure (barg)		SEE NEXT PAGE		SEE PAGE 6,7	
	9	Operating Temperature		Design Temperature (°C)		SEE NEXT PAGE		SEE PAGE 6,7	
TRANSMITTER	10	Element Type					Differential Pressure		
	11	Process Connection					SEE NEXT PAGE		
	12	Element Material					SEE NEXT PAGE		
	13	Enclosure Material					Die-Cast Aluminium		
	14	Instrument Range					SEE NEXT PAGE		
	15	Write Protection					SEE NEXT PAGE (Note 2)		
	16	Power Supply					24 VDC-Loop powered		
	17	Output Signal					D04 (4-20 mA) SMART-HART communication protocol		
	18	Electrical Connection					ISO M20 x 1.5		
	19	Electrical Certification					Eex ia -IIB T4		
	20	Ingress Protection					IP-65 as minimum		
	21	Accuracy					+/- 0.1 % Full Scale		
	22	Repeatability					+/- 0.1% or better		
	23	Span and Zero Adjustment					Required		
	24	Over Range Protection					1.3 of F.S		
	DIAPHRAGM SEAL	25	Type					N/A	
26		Size (In)					N/A		
27		Fill Fluid					N/A		
28		Diaphragm Material					N/A		
29		Capillary Material					N/A		
30		Instrument Connection					N/A		
31		Capillary Length					N/A		
OPTIONS	32	Integral Indicator					Required		
	33	Mounting Brackets					Required, 2" Support Pipe		
	34	Manifold		Body Material		SEE NEXT PAGE		316SS	
	35	Connection					N/A		
	36	Manifold Model		Manifold Manufacturer		VTA		VTA	
	37	Local Indication Requirement					Required in Digital Display, LCD type		
	38	NACE Requirement		Manufacture		SEE NEXT PAGE			
PURCHASING DATA	39	Model		Order		will be finalized later		will be finalized later	
	40	Supplier		Manufacturer		will be finalized later		will be finalized later	
	41								
NOTES : VTA : VENDOR TO ADVISE (1) Reference Document: General Specification for Instrumentation "BK-GNRAL-PEDCO-000-IN-SP-0001" (2) The transmitters which shall be write protected are identified by note 2 in sheet 7. (Also see note 2 in sheet 7)									

DATA SHEETS FOR DIFF. PRESSURE TYPE LEVEL TRANSMITTER

شماره صفحه: 6 از 6

شماره پیمان:

053 - 073 - 9184

0594

مستطه کاری

صادر کننده

سهیلات

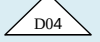
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درک

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نسخه

LEVEL TRANSMITTERS (DPT TYPE) LIST

Item No.	Tag No.	System	P&ID No. 	Equipment No.	Fluid	Phase	Design Pressure (barg)	Operating Pressure (barg)	Design Temp. (°C)	Operating Temp. (°C)	Process Connection (Note 4)	Instrument Range (mm)	Element Material	Density (Kg/m3)	Nace	Diaphragm Seal & Capillary Tube Requirement	5 WAY Manifold(1/2" NPT)/1/2" NPT)/ TUBE Requirement	Remark
1	LIT-2111	DCS	BK-GCS-PEDCO-120-PR-PI-0004-D10 (1 of 2)	V-2104	HC/WATER	L	F.V/9	5.5	85	(15.5 - 32)	2 x 1/2" NPT	4000	316 SS	846 ~ 1012	YES	NO	YES	
2	LIT-2112 (Note 2)	ESD (SIL RATED)	BK-GCS-PEDCO-120-PR-PI-0004-D10 (1 of 2)	V-2104	HC/WATER	L	F.V/9	5.5	85	(15.5 - 32)	2 x 1/2" NPT	4000	316 SS	846 ~ 1012	YES	NO	YES	
3	LIT-2119	DCS	BK-GCS-PEDCO-120-PR-PI-0005-D10	V-2105	HC/WATER	L	F.V/9	5.3	85	(19.23 - 37.17)	2 x 1/2" NPT	1200	316 SS	843 ~ 1012	YES	NO	YES	
4	LIT-2161 (Note 2)	ESD (SIL RATED)	BK-GCS-PEDCO-120-PR-PI-0014-D09	TK-2102	Lean Glycol	L	FULL OF LIQUID+160mbarg/-7	0.1	85	AMB	2 x 1/2" NPT	4200	316 SS	1100	NO	NO	YES	
5	LIT-2162	DCS	BK-GCS-PEDCO-120-PR-PI-0014-D09	TK-2102	Lean Glycol	L	FULL OF LIQUID+160mbarg/-7	0.1	85	AMB	2 x 1/2" NPT	4400	316 SS	1100	NO	NO	YES	
6	LIT-2221	DCS	BK-GCS-PEDCO-120-PR-PI-0017-D09 (2 of 2)	V-2202	HC/WATER	L	F.V/6	0.5	85	AMB	2 x 1/2" NPT	2400	316 SS	842.6 ~ 1012	YES	NO	YES	
7	LIT-2251	DCS	BK-GCS-PEDCO-120-PR-PI-0020-D09 (2 of 2)	V-2201	HC/WATER	L	F.V/6	0.5	85	36	2 x 1/2" NPT	800	316 SS	843 ~ 1012	YES	NO	YES	
8	LIT-2281	DCS	BK-GCS-PEDCO-120-PR-PI-0023-D08	V-2206	Diesel Oil	L	ATM+FULL OF WATER	ATM	85	AMB	2 x 1/2" NPT	2200	316 SS	850	NO	NO	YES	LI-2281 field mounted remote indicator shall be considered by vendor
9	LIT-2291	DCS	BK-GCS-PEDCO-120-PR-PI-0024-D08	TK-2209	Potable Water	L	ATM+FULL OF WATER	ATM	85	AMB	2 x 1/2" NPT	2500	316 SS	1024	NO	NO	YES	LI-2291 field mounted remote indicator shall be considered by vendor
10	LIT-2293	DCS	BK-GCS-PEDCO-120-PR-PI-0025-D09	V-2107	Glycol	L	F.V/3.5	ATM	85	AMB	2 x 1/2" NPT	1000	316 SS	1100	NO	NO	YES	
11	LIT-2301	DCS	BK-GCS-PEDCO-120-SA-PI-0001-D06 (1 of 2)	TK-2301-A	Fire Water	L	FULL OF WATER	1	85	AMB	2 x 1/2" NPT	11000	316 SS	1000	NO	NO	YES	
12	LIT-2302	DCS	BK-GCS-PEDCO-120-SA-PI-0001-D06 (1 of 2)	TK-2301-B	Fire Water	L	FULL OF WATER	1	85	AMB	2 x 1/2" NPT	11000	316 SS	1000	NO	NO	YES	

NOTE:

(1) G: GAS L: LIQUID

(2) Transmitters shall be smart type with 4~20 mA HART communication protocol. If smart type transmitters are selected for ESD application they shall be configured as "write protected".

(3) Instrument range shall be finalized & filled by vendor.

(4) LT connection to Vessel and required accessories to be considered as per Hook up drawing.