

 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک						 		
	DATA SHEET FOR EXPANSION OF MV SWITCHGEAR								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادر کننده PEDCO	تسهیلات 120	رشته EL	نوع مدرک DT	سریال 0004	نسخه D03	شماره صفحه: ۱ از ۱۰

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

### DATA SHEETS FOR EXPANSION OF MV SWITCHGEAR

#### نگهداشت و افزایش تولید میدان نفتی بینک

D02	Apr.2023	AFC	H.Shakiba	M.Fakharian	A.M.Mohseni	
D02	Jul.2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D01	Mar.2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D00	Dec.2021	IFC	H.Shakiba	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	Client Approval

Class: 1

Client Doc. Number: F0Z-709021

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




 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEET FOR EXPANSION OF MV SWITCHGEAR								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه BK	بسته کاری GCS	صادرکننده PEDCO	تسهیلات 120	رشته EL	نوع مدرک DT	سریال 0004	نسخه D03	شماره صفحه: ۱۰ از ۱۲

### REVISION RECORD SHEET

Page	D00	D01	D02	D03	D04	Page	D00	D01	D02	D03	D04
1	X	X	X	X		51					
2	X	X	X	X		52					
3	X	X	X			53					
4	X	X	X			54					
5	X	X	X			55					
6	X	X	X			56					
7	X	X	X			57					
8	X	X	X			58					
9		X	X			59					
10		X	X			60					
11						61					
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 NISOC	تکهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	DATA SHEET FOR EXPANSION OF MV SWITCHGEAR								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۰ از ۳
	BK	GCS	PEDCO	120	EL	DT	0004	D03	

Technical Data For Expansion of 11 KV MV Switchgear				
Rev	Item	Description	Required	Vendor Data
Environmental Data				
D00	1.1	Name of Project / Plant	Binak Oilfield in Bushehr Province	
D02	1.2	Ambient Temperature (Min/Max)	Min ~ Max: +5 ~ +52°C	
D00	1.3	Max.Design Temperature:	50 °c	
D00	1.4	Max. Sun Temperature:	+ 85 °c	
D00	1.5	Max.Relative Humidity:	100%	
D00	1.6	Mean Sea Level:	12.5 m Above Sea Level	
D00	1.7	Seismic Factor:	0.3g	
D00	1.8	Max. Wind Velocity(Max)	120 km/hr	
2-Switchgear				
D00	2.1	Manufacturer	By Vendor	
D00	2.2	Standard(s)	IPS-M-EL-144(4), IPS-E-EL-100(1), BK-GNRAL-PEDCO-000-EL-SP-0005	
D00	2.3	Quantity	8 Feeders of Ongoing, Type C2 & C3	
D00	2.4	Service	Expansion of Exsiting MV Switchgear from Both Side	
D00	2.5	Tag Number	GCS-11-SWG-001A/B	
D00	2.6	Applicable SLD	BK-GCS-PEDCO-120-EL-SL-0001 BK-GCS-PEDCO-120-EL-SL-0003 BK-GCS-PEDCO-120-EL-DG-0001	
D00	2.7	Location	Indoor	
D00	2.8	Type and Construction	Metal Clad, Withdrawable	
D01	2.9	Rated Voltage & Variation	11 kV ± 10 %	
D00	2.10	Rated Frequency & Variation	50 Hz ± 5 %	
D00	2.11	No. of Phases	3 PH	
D02	2.12	Rated Insulation Levels between earth and phase • One Minute Power Frequency Withstand Voltage (RMS) • One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS) • Impulse Withstand Voltage (Peak)	28 KV 75 KV 2 KV	
D00	2.13	Rated Normal Current of Busbars	1600 A	
D01	2.14	Rated Short Time Current of Busbar	25 kA; 1 sec (Note 9.2)	
D00	2.15	Rated Peak Withstand Current	63 kA	
D01	2.16	Busbars: • Material • Main Horizontal Bus Cross Section Area • Main Vertical Bus Cross Sectional Area • Earth Bus Cross Sectional Area • Busbars Color & Joints	Copper (Flame Retardant Non-Hygrosopic) Vendor to Advise Vendor to Advise Vendor to Advise Silver Plated	
D00	2.17	Maximum Tolerable Temperature Rise	Acc. to IEC62271 IPS-M-EL-144(4)	
D00	2.18	Rated Voltage for Control And Protection Circuits	110 V DC	
D00	2.19	Rated Voltage for Space Heaters and Panel Lighting	400 / 230 VAC	
D00	2.20	Enclosure	Withdrawable Metal Clad, Compartmented	
D01	2.21	Degree of Protection by Enclosure	External: IP 42, Internal: IP 20, Internal partitions between functional units and shutters for bus bar & cable side: IP 4X	
D00	2.22	Installation	Floor Self-Standing, Side by Side	
D00	2.23	Rear / Front Access	Rear and Front Access	
D00	2.24	Top / Bottom Cable Entry	Cables: Bottom Entry	
D00	2.25	Sheet Steel Thickness, Fram & Walls	Minimum 2.5 mm	
D00	2.26	Paint	Electrostatic Powder	
D00	2.27	Color finish	RAL 7032	
D00	2.28	Routine Tests	Required (Withstand tests and reports as per IEC 62271-200 or IEC 298, IEC 60694, IPS-M-EL-144 (4) and Specification)	
D00	2.29	Type Tests	Test certificates of the SWGR type as per IEC62271-200 or IEC 298, IEC60694, and IPS-M-EL-144 (4)	
D00	2.30	Overall Dimensions (HxWxD) [mm]	Vendor to Advise	
D00	2.31	Total Weight [kg]	Vendor to Advise	
D00	2.32	Overall Dimensions of 1 Cubicle (HxWxD)	Vendor to Advise	
D00	2.33	Dynamic Load of One Cubicle [kg]	Vendor to Advise	
3.MV Circuit Breaker				
D00	3.1	Manufacturer	Vendor to Advise	
D00	3.2	Standard	IEC62271-100	
D00	3.3	Type	Vacuum	
D00	3.4	Fixed/ Withdrawable	Withdrawable	
D02	3.5	Rated Voltage	12 kV ± 10 %	
D00	3.6	Rated Frequency	50 Hz ± 5 %	

 NISOC	تجهیزات و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 	
	DATA SHEET FOR EXPANSION OF MV SWITCHGEAR								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۴ از ۱۰
	BK	GCS	PEDCO	120	EL	DT	0004	D03	

Technical Data For Expansion of 11 KV MV Switchgear				
Rev	Item	Description	Required	Vendor Data
D00	3.7	No. Of Phases and Poles	3-Phase	
D00	3.8	Rated Insulation Levels between earth and phase	28 KV	
		• One Minute Power Frequency Withstand Voltage (RMS)	2 KV	
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	75 KV	
		• Impulse Withstand Voltage (Peak)		
D00	3.9	Rated Normal Current	630 A	
D00	3.10	Rated Short Time Current	25 kA	
D00	3.11	Rated Peak Withstand Current	62.5 kA	
D00	3.12	Rated Short Circuit Breaking Current	Vendor to Advise	
D00	3.13	Rated Short Circuit Making Current	Vendor to Advise	
D00	3.14	Maximum Tolerable Temperature Rise	Acc. to IEC62271-100	
D00	3.15	Design Temperature Rise	Acc. to IEC62271-100	
D00	3.16	Operating Mechanism	Motor & Hand operated Spring Charged Stored Energy Mechanism	
D00	3.17	Release type	Shunt Trip	
D00	3.18	Rated Operating Sequence	0-0.3S-CO-3MIN-CO	
D00	3.19	Rated Voltage of Auxiliary Equipment	110V DC	
D00	3.20	Rated Operating Voltage of Releases	110V DC	
D00	3.21	Rated Operating Voltage of Charging Motors	110V DC	
D00	3.22	Voltage Tolerances for Auxiliary Apparatus:		
		• Trip Circuit	70%-110%	
		• Close Circuit	85%-110%	
		• Motor Running	85%-110%	
		• Motor at the Instant of Start	70%-110%	
D00	3.23	Power consumption of Auxiliary Apparatus:[W]		
		• Trip Circuit	110V DC	
		• Closed Circuit	Vendor to Advise	
		• Charging motor		
		• Under voltage release		
		• Multifunction relay		
		• Transducers		
D00	3.24	1 C.B. Open/Close Auxiliary Contacts:		
		• No. Of Make Contacts	6	
		• No. Of Break Contacts	6	
		• Rated Voltage	110V DC	
		• Rated Current at 110V DC	VTA	
		• Breaking Current at 110V DC	VTA	
D00	3.25	Truck Position Auxiliary Contacts:		
		• No of Make Contacts	1NO + 1NC	
		• No of Break Contacts	1NO + 1NC	
		• Rated Voltage	110V DC	
		• Rated Current at 110V DC	VTA	
		• Breaking Current at 110V DC	VTA	
D00	3.26	Routine Tests	IEC62271-100	
D00	3.27	Type Tests	IEC62271-100	
4.MV Voltage Transformers				
D00	4.1	Manufacturers Name	Vendor to Advise	
D00	4.2	Standard	IEC60044-2	
D00	4.3	Type	Epoxy Cast Resin	
D00	4.4	Fixed Withdrawable	Withdrawable	
D00	4.5	Highest System Voltage	12 kV	
D00	4.6	Rated Frequency	50 Hz	
D00	4.7	No. of Phase	Single Phase	
D00	4.8	Rated Primary Voltage [kV]	11/√3 kV	
D00	4.9	Rated Secondary Voltage [V]	110/√3 V	
D00	4.10	Rated Insulation Levels between earth and phase	28 kV / √3	
		• One Minute Power Frequency Withstand Voltage (RMS)	2 kV / √3	
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	75 kV / √3	
		• Impulse Withstand Voltage (Peak)		
D00	4.11	System Earthing	TNS	
D00	4.12	Rated Voltage Factor	Vendor to Advise	
D00	4.13	Rated Burden	Vendor to Advise	
D00	4.14	Accuracy Class:		
		• for Protection (with separate Winding)	CL. 3P	
		• for Measuring (with separate Winding)	1.0	
D00	4.15	Insulation Class & Temperature Rise	Class E, Temp. Rise Class Y	

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	DATA SHEET FOR EXPANSION OF MV SWITCHGEAR								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۰ از ۵
	BK	GCS	PEDCO	120	EL	DT	0004	D03	

Technical Data For Expansion of 11 KV MV Switchgear						
Rev	Item	Description	Required		Vendor Data	
5.MV Current Transformers						
D00	5.1	Manufacturer's Name	Vendor to Advise			
D00	5.2	Standard	IEC60044-1			
D00	5.3	Type	Dry Type			
D00	5.4	Highest System Voltage	11 kV			
D00	5.5	Rated Frequency	50 Hz			
D00	5.6	Rated Secondary Current:	1 A / 5 A According to SLD			
D00	5.7	Rated Continuous Thermal Current:	1.2 x Rated primary current			
D00	5.8	Rated Short Time, Current:	25 kA, 1 Sec			
D00	5.9	Rated Dynamic Current:	63 kA			
D00	5.10	Rated Burden	Vendor to Advise			
D00	5.11	Rated Transformation Ratio and No. of Cores	According to Single Line Diagram			
	5.12	Accuracy Class: • Measuring • Protection	Class 1: Class 1FS5 Class X: where required Class 5P20 protections			
D00	5.13	Routine Tests	IEC60044-1			
D00	5.14	Type Tests	IEC60044-1			
D01	5.15	Rated Insulation Levels between earth and phase	28 kV / $\sqrt{3}$			
		• One Minute Power Frequency Withstand Voltage (RMS)	2 kV / $\sqrt{3}$			
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	75 kV / $\sqrt{3}$			
		• Impulse Withstand Voltage (Peak)				
6.Earth Switch						
D00	6.1	Manufacturer's Name	Vendor to Advise			
D00	6.2	Manufacturer's Type Designation	Vendor to Advise			
D00	6.3	Standard	IEC62271-102			
D00	6.4	Type	Make Proof			
D00	6.5	Number Of Phase	3			
D00	6.6	Frequency	50 Hz			
D00	6.7	Rated Voltage	11 kV			
D00	6.8	Rated Lighting Impulse Withstand Voltage	75 kV			
D00	6.9	Rated 1 Minute Power Frequency Voltage	28 kV			
D00	6.10	Rated Short Time (1s) Current	25 kA			
D00	6.11	Rated Peak Withstand Current	62.5 kA			
D00	6.12	Rated Short Circuit Making Current	62.5 kA			
D00	6.13	Actuation Mechanism	Pre-tension Spring			
D00	6.14	No. of Auxiliary Contacts (Min.)	2NO + 2NC			
D00	6.15	Aux. Contacts Rated Voltage	110V DC			
D00	6.16	Aux. Contacts Rated Current	1A			
D00	6.17	Interlocks	According (but not limited) to Appendix B of IPS-M-EL-144 (4) specifically: To prevent closure of Earth Switch when CB is not in Test or withdraw position To prevent Insertion of CB when Earth Switch is connected. To prevent connection of Earth Switch when upstream Switch is not open i.e. electromagnetic coil (only for incoming)			
D00	6.18	Routine Tests	IEC62271-102			
D00	6.19	Type Tests (Certificates)	IEC62271-102			
7.Motor Feeder Protection Relay						
D00	7.1	Manufacturer's Name	Vendor to Advise			
D00	7.2	Manufacturer's Type Designation	Vendor to Advise			
D00	7.3	Type	Digital Multi-Function Relay + Display with adjustment Menu			
D00	7.4	Installation	Flush Mounted			
D02	7.5	Included Protection (ANSI Codes)	50, 51, 46, 51LR, 49, 66, 50G, 51G, 26, 87M, 86 (Separate Relay)			
D00	7.6	Rated Current [A]	5			
D00	7.7	Rated Frequency [Hz]	50 Hz			
D00	7.8	Burden [VA]	Vendor to Advise			
D00	7.9	Overload Capability Of Current Path	100xIn < 1 Sec.			
D00	7.10	Rated Voltage Auxiliary Voltage [V]	110V DC			
D00	7.11	Auxiliary Voltage Permissible Range [V]	Min. $\pm$ 15% of Un			
D00	7.12	Power Consumption [W]	Vendor to Advise			
D00	7.13	Trip Relay Contacts	2NO + 2NC at least			
D00	7.14	Alarm Relay Contacts	2NO + 2NC at least			
D00	7.15	Auxiliary Contacts Ratings • Contacts Voltage Rating [V] • Contacts Rated Continuous Current	110V DC Vendor to Advise			
D00	7.16	Ingress Protection	IP42			
D00	7.17	Routine Tests	IEC 255			
D00	7.18	Type Tests (Certificates)	IEC 255			



سطح الارض

### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



شماره پیمان:

0542

کادی

اداره کنندہ

میهنات

شبهه

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شماره صفحه: ۶ از ۱۰

### Technical Data For Expansion of 11 KV MV Switchgear

Rev	Item	Description	Required	Vendor Data
<b>8. Transformer Feeder Protection Relay</b>				
D01	8.1	Manufacturer's Name	Vendor to Advise	
D01	8.2	Manufacturer's Type Designation	Vendor to Advise	
D01	8.3	Type	Digital Multi-Function Relay + Display with adjustment Menu	
D01	8.4	Installation	Flush Mounted	
D01	8.5	Included Protection (ANSI Codes)	50, 51, 51N,50G (Separate Relay)	
D01	8.6	Rated Current [A]	5	
D01	8.7	Rated Frequency [Hz]	50 Hz	
D01	8.8	Burden [VA]	Vendor to Advise	
D01	8.9	Overload Capability Of Current Path	100xin < 1 Sec.	
D01	8.10	Rated Voltage Auxiliary Voltage [V]	110V DC	
D01	8.11	Auxiliary Voltage Permissible Range [V]	Min. ± 15% of Un	
D01	8.12	Power Consumption [W]	Vendor to Advise	
D01	8.13	Trip Relay Contacts	2NO + 2NC at least	
D01	8.14	Alarm Relay Contacts	2NO + 2NC at least	
D01	8.15	Auxiliary Contacts Ratings • Contacts Voltage Rating [V] • Contacts Rated Continuous Current	110V DC Vendor to Advise	
D01	8.16	Ingress Protection	IP42	
D01	8.17	Routine Tests	IEC 255	
D01	8.18	Type Tests (Certificates)	IEC 255	
<b>9. Notes</b>				
D00	9.1	According to "BK-GCS-PEDCO-120-EL-SL-0003", in the extension of existing MV switchgear, there are only 8 outgoing feeder for 11 KV switchgear & no extension is required for incoming & outgoing.		
D01	9.2	The rated short time current of busbar & rated peak withstand current will be rechecked after power system study.		
D01	9.3	Minimum conductor sizes shall be 2.5 mm2 for protection (CT/PT) and bonding conductors and 1.5 mm2 for control and signal wiring.		
D01	9.4	Accessories required for proper and safe operation of the switchgear shall be supplied by vendor		

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	<b>DATA SHEET FOR EXPANSION OF MV SWITCHGEAR</b>							
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	EL	DT	0004	D03
شماره صفحه: ۱۰ از ۲۰								

Technical Data for Starter Panel of Fire Water Pump						
Rev	Item	Description	Required	Vendor Data		
Environmental Data						
D00	1.1	Name of Project / Plant	Binak Oilfield in Bushehr Province			
D02	1.2	Ambient Temperature (Min/Max)	Min ~ Max: +5 ~ +52°C			
D00	1.3	Max.Design Temperature:	50 °c			
D00	1.4	Max. Sun Temperature:	+ 85 °c			
D00	1.5	Max.Relative Humidity:	100%			
D00	1.6	Mean Sea Level:	12.5 m Above Sea Level			
D00	1.7	Seismic Factor:	0.3g			
D00	1.8	Max. Wind Velocity(Max)	120 km/hr			
2-Switchgear						
D00	2.1	Manufacturer	By Vendor			
D00	2.2	Standard(s)	IPS-M-EL-144(4), IPS-E-EL-100(1), BK-GNRAL-PEDCO-000-EL-SP-0005			
D00	2.3	Quantity	1 Feeder of Outgoing, Type C3			
D00	2.4	Service	Expansion of Exsiting MV Switchgear from Both Side			
D00	2.5	Tag Number	GCS-3.3-SWG-001			
D00	2.6	Applicable SLD	BK-GCS-PEDCO-120-EL-SL-0001 BK-GCS-PEDCO-120-EL-SL-0003 BK-GCS-PEDCO-120-EL-DG-0001			
D00	2.7	Location	Indoor			
D00	2.8	Type and Construction	Metal Clad, Withdrawable			
D01	2.9	Rated Voltage & Variation	3.6 kV ± 10 %			
D00	2.10	Rated Frequency & Variation	50 Hz ± 5 %			
D00	2.11	No. of Phases	3 PH			
D02	2.12	Rated Insulation Levels between earth and phase	10 KV			
		• One Minute Power Frequency Withstand Voltage (RMS)	40 KV			
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	2 KV			
		• Impulse Withstand Voltage (Peak)				
D00	2.13	Rated Normal Current of Busbars	630 A			
D01	2.14	Rated Short Time Current of Busbar	25 kA; 1 sec (Note 8.2)			
D00	2.15	Rated Peak Withstand Current	63 kA			
D01	2.16	Busbars:	Copper (Flame Retardant Non-Hygroscopic) Vendor to Advise Vendor to Advise Vendor to Advise Silver Plated			
		• Material				
		• Main Horizontal Bus Cross Section Area				
		• Main Vertical Bus Cross Sectional Area				
		• Earth Bus Cross Sectional Area				
D00	2.17	Maximum Tolerable Temperature Rise	Acc. to IEC62271 IPS-M-EL-144(4)			
D00	2.18	Rated Voltage for Control And Protection Circuits	110 V DC			
D00	2.19	Rated Voltage for Space Heaters and Panel Lighting	400 / 230 VAC			
D00	2.20	Enclosure	Withdrawable Metal Clad, Compartmented			
D01	2.21	Degree of Protection by Enclosure	External: IP 42, Internal: IP 20, Internal partitions between functional units and shutters for bus bar & cable side: IP 4X			
D00	2.22	Installation	Floor Self-Standing, Side by Side			
D00	2.23	Rear / Front Access	Rear and Front Access			
D00	2.24	Top / Bottom Cable Entry	Cables: Bottom Entry			
D00	2.25	Sheet Steel Thickness, Fram & Walls	Minimum 2.5 mm			
D00	2.26	Paint	Electrostatic Powder			
D00	2.27	Color finish	RAL 7032			
D00	2.28	Routine Tests	Required (Withstand tests and reports as per IEC 62271-200 or IEC 298, IEC 60694, IPS-M-EL-144 (4) and Specification)			
D00	2.29	Type Tests	Test certificates of the SWGR type as per IEC62271-200 or IEC 298, IEC60694, and IPS-M-EL-144 (4)			
D00	2.30	Overall Dimensions (HxWxD) [mm]	Vendor to Advise			
D00	2.31	Total Weight [kg]	Vendor to Advise			
D00	2.32	Overall Dimensions of 1 Cubicle (HxWxD)	Vendor to Advise			
D00	2.33	Dynamic Load of One Cubicle [kg]	Vendor to Advise			
3.MV Circuit Breaker						
D00	3.1	Manufacturer	Vendor to Advise			
D00	3.2	Standard	IEC62271-100			
D00	3.3	Type	Vacuum			
D00	3.4	Fixed/ Withdrawable	Withdrawable			
D00	3.5	Rated Voltage	3.3 kV ± 10 %			
D00	3.6	Rated Frequency	50 Hz ± 5 %			

 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 <b>شماره صفحه: ۱۰ از ۸</b>	
	<b>DATA SHEET FOR EXPANSION OF MV SWITCHGEAR</b>							نسخه	D03
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		
	BK	GCS	PEDCO	120	EL	DT	0004		

Technical Data for Starter Panel of Fire Water Pump				
Rev	Item	Description	Required	Vendor Data
D00	3.7	No. Of Phases and Poles	3-Phase	
D00	3.8	Rated Insulation Levels between earth and phase	10 KV	
		• One Minute Power Frequency Withstand Voltage (RMS)	2 KV	
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	40 KV	
		• Impulse Withstand Voltage (Peak)		
D00	3.9	Rated Normal Current	630 A	
D00	3.10	Rated Short Time Current	10 kA	
D00	3.11	Rated Peak Withstand Current	62.5 kA	
D00	3.12	Rated Short Circuit Breaking Current	Vendor to Advise	
D00	3.13	Rated Short Circuit Making Current	Vendor to Advise	
D00	3.14	Maximum Tolerable Temperature Rise	Acc. to IEC62271-100	
D00	3.15	Design Temperature Rise	Acc. to IEC62271-100	
D00	3.16	Operating Mechanism	Motor & Hand operated Spring Charged Stored Energy Mechanism	
D00	3.17	Release type	Shunt Trip	
D00	3.18	Rated Operating Sequence	0-0.3S-CO-3MIN-CO	
D00	3.19	Rated Voltage of Auxiliary Equipment	110V DC	
D00	3.20	Rated Operating Voltage of Releases	110V DC	
D00	3.21	Rated Operating Voltage of Charging Motors	110V DC	
D00	3.22	Voltage Tolerances for Auxiliary Apparatus:	70%-110%	
		• Trip Circuit	85%-110%	
		• Close Circuit	85%-110%	
		• Motor Running	70%-110%	
D00	3.23	Power consumption of Auxiliary Apparatus:[W]	110V DC	
		• Trip Circuit	Vendor to Advise	
		• Closed Circuit		
		• Charging motor		
D00	3.24	• Under voltage release		
		• Multifunction relay		
		• Transducers		
		1 C.B. Open/Close Auxiliary Contacts:		
D00	3.24	• No. Of Make Contacts	6	
		• No. Of Break Contacts	6	
		• Rated Voltage	110V DC	
		• Rated Current at 110V DC	VTA	
D00	3.25	• Breaking Current at 110V DC	VTA	
		Truck Position Auxiliary Contacts:	1NO + 1NC	
		• No of Make Contacts	1NO + 1NC	
		• No of Break Contacts	110V DC	
D00	3.25	• Rated Voltage	VTA	
		• Rated Current at 110V DC	VTA	
		• Breaking Current at 110V DC		
D00	3.26	Routine Tests	IEC62271-100	
D00	3.27	Type Tests	IEC62271-100	
4.MV Voltage Transformers				
D00	4.1	Manufacturers Name	Vendor to Advise	
D00	4.2	Standard	IEC60044-2	
D00	4.3	Type	Epoxy Cast Resin	
D00	4.4	Fixed Withdrawable	Withdrawable	
D00	4.5	Highest System Voltage	3.6 kV	
D00	4.6	Rated Frequency	50 Hz	
D00	4.7	No. of Phase	Single Phase	
D00	4.8	Rated Primary Voltage [kV]	3.3/√3 kV	
D00	4.9	Rated Secondary Voltage [V]	110/√3 V	
D00	4.10	Rated Insulation Levels between earth and phase	10 kV / √3	
		• One Minute Power Frequency Withstand Voltage (RMS)	2 kV / √3	
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	40 kV / √3	
		• Impulse Withstand Voltage (Peak)		
D01	4.11	System Earthing	TNS by Resistor	
D00	4.12	Rated Voltage Factor	Vendor to Advise	
D00	4.13	Rated Burden	Vendor to Advise	
D00	4.14	Accuracy Class:	CL. 3P	
		• for Protection (with separate Winding)	1.0	
D00	4.15	• for Measuring (with separate Winding)		
		Insulation Class & Temperature Rise	Class E, Temp. Rise Class Y	

 <b>NISOC</b>	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک								
	<b>DATA SHEET FOR EXPANSION OF MV SWITCHGEAR</b>								
شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۹ از ۱۰
	BK	GCS	PEDCO	120	EL	DT	0004	D03	

Technical Data for Starter Panel of Fire Water Pump				
Rev	Item	Description	Required	Vendor Data
5.MV Current Transformers				
D00	5.1	Manufacturer's Name	Vendor to Advise	
D00	5.2	Standard	IEC60044-1	
D00	5.3	Type	Dry Type	
D00	5.4	Highest System Voltage	3.6 kV	
D00	5.5	Rated Frequency	50 Hz	
D00	5.6	Rated Secondary Current:	1 A / 5 A According to SLD	
D00	5.7	Rated Continuous Thermal Current:	1.2 x Rated primary current	
D00	5.8	Rated Short Time, Current:	10 kA, 1 Sec	
D00	5.9	Rated Dynamic Current:	63 kA	
D00	5.10	Rated Burden	Vendor to Advise	
D00	5.11	Rated Transformation Ratio and No. of Cores	According to Single Line Diagram	
D00	5.12	Accuracy Class: • Measuring • Protection	Class 1: Class 1FS5 Class X: where required Class 5P20 protections	
D00	5.13	Routine Tests	IEC60044-1	
D00	5.14	Type Tests	IEC60044-1	
D01	5.15	Rated Insulation Levels between earth and phase	10 kV / $\sqrt{3}$	
		• One Minute Power Frequency Withstand Voltage (RMS)	2 kV / $\sqrt{3}$	
		• One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)	40 kV / $\sqrt{3}$	
		• Impulse Withstand Voltage (Peak)		
6.Earth Switch				
D00	6.1	Manufacturer's Name	Vendor to Advise	
D00	6.2	Manufacturer's Type Designation	Vendor to Advise	
D00	6.3	Standard	IEC62271-102	
D00	6.4	Type	Make Proof	
D00	6.5	Number Of Phase	3	
D00	6.6	Frequency	50 Hz	
D00	6.7	Rated Voltage	3.3 kV	
D00	6.8	Rated Lighting Impulse Withstand Voltage	40 kV	
D00	6.9	Rated 1 Minute Power Frequency Voltage	10 kV	
D00	6.10	Rated Short Time (1s) Current	10 kA	
D00	6.11	Rated Peak Withstand Current	62.5 kA	
D00	6.12	Rated Short Circuit Making Current	62.5 kA	
D00	6.13	Actuation Mechanism	Pre-tension Spring	
D00	6.14	No. of Auxiliary Contacts (Min.)	2NO + 2NC	
D00	6.15	Aux. Contacts Rated Voltage	110V DC	
D00	6.16	Aux. Contacts Rated Current	1A	
D00	6.17	Interlocks	According (but not limited) to Appendix B of IPS-M-EL-144 (4) specifically:  To prevent closure of Earth Switch when CB is not in Test or withdraw position  To prevent Insertion of CB when Earth Switch is connected. To prevent connection of Earth Switch when upstream Switch is not open i.e. electromagnetic coil (only for incoming)	
D00	6.18	Routine Tests	IEC62271-102	
D00	6.19	Type Tests (Certificates)	IEC62271-102	
7.Motor Feeder Protection Relay				
D00	7.1	Manufacturer's Name	Vendor to Advise	
D00	7.2	Manufacturer's Type Designation	Vendor to Advise	
D00	7.3	Type	Digital Multi-Function Relay + Display with adjustment Menu	
D00	7.4	Installation	Flush Mounted	
D00	7.5	Included Protection (ANSI Codes)	50, 51,, 50G, 51G,, 86 (Separate Relay)	
D00	7.6	Rated Current [A]	5	
D00	7.7	Rated Frequency [Hz]	50 Hz	
D00	7.8	Burden [VA]	Vendor to Advise	
D00	7.9	Overload Capability Of Current Path	100xIn < 1 Sec.	
D00	7.10	Rated Voltage Auxiliary Voltage [V]	110V DC	
D00	7.11	Auxiliary Voltage Permissible Range [V]	Min. ± 15% of Un	
D00	7.12	Power Consumption [W]	Vendor to Advise	
D00	7.13	Trip Relay Contacts	2NO + 2NC at least	
D00	7.14	Alarm Relay Contacts	2NO + 2NC at least	
D00	7.15	Auxiliary Contacts Ratings • Contacts Voltage Rating [V] • Contacts Rated Continuous Current	110V DC Vendor to Advise	
D00	7.16	Ingress Protection	IP42	
D00	7.17	Routine Tests	IEC 255	
D00	7.18	Type Tests (Certificates)	IEC 255	



سطح الارض

### احداث ردیف تراکم گاز در ایستگاه جمع آوری پینک

## DATA SHEET FOR EXPANSION OF MV SWITCHGEAR



شماره پیمان:

پروژہ

مستطه کاری

صادر کنندہ

تسهيلات

رشته

نوع مدرک

سریال

سخه

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شماره صفحه: ۱۰ از ۱۰

### Technical Data for Starter Panel of Fire Water Pump

Rev	Item	Description	Required	Vendor Data
<b>8. Notes</b>				
D00	8.1	According to "BK-GCS-PEDCO-120-EL-SL-0003", in the extension of existing MV switchgear, there is only 1 outgoing feeder for 3.3 KV switchgear & no extension is required for incoming & outgoing.		
D01	8.2	The rated short time current of busbar & rated peak withstand current will be rechecked after power system study.		
D01	8.3	Minimum conductor sizes shall be 2.5 mm <sup>2</sup> for protection (CT/PT) and bonding conductors and 1.5 mm <sup>2</sup> for control and signal wiring.		
D01	8.4	Accessories required for proper and safe operation of the switchgear shall be supplied by vendor		