



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DC CHARGER

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

پروژه

BK

بسته کاری

GCS

صادر کننده

PEDCO

تسهیلات

120

رشته

EL

نوع مدرک

DT

سریال

0002

نسخه

D04

شماره صفحه: ۱ از ۱۲

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

### DATA SHEETS FOR DC CHARGER

#### نگهداشت و افزایش تولید میدان نفتی بینک

D04	Oct.2024	AFC	H.Shakiba	M.Fakharian	M.Sadeghian	
D03	May.2023	AFC	H.Shakiba	M.Fakharian	A.M.Mohseni	
D02	Aug.2022	IFA	H.Shakiba	M.Fakharian	M.Mehrshad	
D01	Jan.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-709019

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



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DATA SHEETS FOR DC CHARGER



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D04	0002	DT	EL	120	PEDCO	GCS	BK

شماره صفحه: ۲ از ۱۲

REVISION RECORD SHEET

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4	X	X	X		
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شماره پیمان:

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D04	0002	DT	EL	120	PEDCO	GCS	BK

شماره صفحه: ۳ از ۱۲

## Technical Data For Industrial Battery &amp; Battery Charger for 110 VDC

Item	Description	Required	Vendor Data
<b>1-General</b>			
1.1	Name of Project / Plant	Binak Oilfield in Bushehr Province	
1.2	Manufacturer	By Vendor	
1.3	Manufacturer Model	By Vendor	
1.4	Average Ambient Temperature (Min/Max)	Min ~ Max: +5 ~ +52°C	
1.5	Max.Design Temperature:	52 °c	
1.6	Max. Sun Temperature:	+ 85 °c	
1.7	Max.Relative Humidity:	100%	
1.8	Mean Sea Level:	12.5 m above Sea Level	
1.9	Seismic Factor:	0.3g	
1.10	Max. Wind Velocity(Max)	120 km/hr	
1.12	Standard(s)	IEC,IPS-M-EL-174(2), IPS-E-EL-100(1)	
1.13	Quantity	1 Complete set (2×100% Charger) with commissioning and two years Spare Parts, Two battery bank(2×92cell), Battery Stand with special tools for Batteries, switch-fuse For Battery Banks: Exd IIC-T3 type.	
1.14	Service	110 VDC for LV & MV Switchgear	
1.15	Tag Number	GCS-110-CHG-001 & GCS-110-CHG-002	
1.16	Applicable SLD	BK-GCS-PEDCO-120-EL-SL-0006	
1.17	Applicable Specification	BK-GNRAL-PEDCO-000-EL-SP-0005	
1.18	Location	Indoor	
<b>2-Environment</b>			
2.1	Area classification	Safe Area	
2.2	Site Elevation	12.5 m	
2.3	Ambient Temperature	Min/Max: +5/52°C	
2.4	Relative Humidity	100%	
2.5	Atmosphere	Tropical & Dusty	
2.6	Building Temperature Control	Not Required	
2.7	Seismic Acceleration	0.3g	
<b>3.AC Input</b>			
3.1	Rectifiers Input Voltage	380/400/440v, 3-Ph , 4 wire , 50 Hz	
3.2	Max.allowable input voltage variation	±10%	
3.3	Max.allowable input frequency variation	±5%	
3.4	Network short circuit current (rms)	50KA	
3.5	Network short circuit current (Peak)	By Vendor	
3.6	Max. short circuit clearing time	1 sec	
3.7	Max. power consumption	By Vendor	
3.8	Input THDi% ( acc to IEEE-519 )	<10%	
<b>4.DC Output</b>			
4.1	Rated voltage	110 VDC	
4.2	Max. Allowable Voltage Variation	±1%	
4.3	Rated Output Current (Amp)	168 Amp	
4.4	Allowable Ripple voltage (r.m.s )	<1%	
4.5	Overall Efficiency	>90%	
4.6	Rectifier control voltage (Full Control)	12 Pulse	
4.7	Charger Topology	Parallel	
4.8	Rectifier Input Filter type	R.F.I & Surge Arrester	
4.9	Constant Voltage Control	Required	
4.10	Constant Current Control	Required	
4.11	Rectifier Over Load (%)	110% Continues	
4.12	Rectifiers Protection	Required	
4.13	MCCB for AC Inputs	Required	
4.14	MCCB for DC Output	Required	
4.15	Ultra Fast Fuse to Protect Thrusters	Required	



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## DATA SHEETS FOR DC CHARGER

شماره پیمان:

پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	PEDCO	120	EL	DT	0002	D04

شماره صفحه: ۴ از ۱۲

## Technical Data For Industrial Battery &amp; Battery Charger for 110 VDC

Item	Description	Required	Vendor Data
4.16	Charger Output Fuse	Required	
4.17	AC Input Voltmeter	Required	
4.18	AC Input Ammeter	Required	
4.19	Charger DC Voltmeter	Required	
4.20	Charger DC Ammeter	Required	
4.21	Charger DC LC Filter	Required	
4.22	Load Current Ammeter	Required	
4.23	Charger Selector Switch	Required	
4.24	Battery Low DC Alarm (Indicator & Dry Contact)	Required	
4.25	Load Low DC Alarm (Indicator & Dry Contact)	Required	
4.26	Load Hi DC Alarm (Indicator & Dry Contact)	Required	
4.27	Batteries Disconnected (Indicator)	Required	

## 5. Battery Charger Cabinet

5.1	Type	Flat face	
5.2	Construction	Floor Mounted, Free Standing	
5.3	Ingress protection class	IP42	
5.4	Access for maintenance	Front	
5.5	Body material	Carbon Steel Sheet	
5.6	Thickness of body material	Min.2 mm	
5.7	Finish color	RAL 7032	
5.8	Cable entrance	Bottom and Cable Gland	
5.9	Bottom closing method	By Vendor	
5.10	Cooling method	Natural	
5.11	Space Heater	Required	
5.12	Illumination	Required	
5.13	Noise Level	60dBA	
5.14	Wiring	Power and Control Min.2.5mm <sup>2</sup> , Metering Min.1.5mm <sup>2</sup>	
5.15	Nameplate	English Black in White Background	
5.16	Earthing System	IT	

Note1: Data shown are typical; manufacturer shall provide his own data

Note2: The blank items shall be filled by battery manufacture

## 6. Batteries

6.1	Manufacturer	By Vendor	
6.2	Manufacturer Model	By Vendor	
6.3	Standard	IEC 60623, IEEE 1115 2014	
6.4	Quantity	1 Complete set (2x50% Battery Bank)	
6.5	Service	110 VDC for LV & MV Switchgear	
6.6	Applicable Specification	BK-GNRAL-PEDCO-000-EL-SP-0005	
6.7	Location	Indoor	
6.8	Battery requirements	By Vendor	
6.9	Battery type	Nickel-Cadmium (IEC60623)	
6.10	Battery charging method	Constant Voltage-Dual Rate and Current Limit with Float/Auto/Equalize/Initial Mode charging	
6.11	Back-up time	8 Hr	
6.12	Emergency Mode Voltage for each cell (Activated by Battery Room Fan Failure)	1.35 V ± 0.01 V	
6.13	Battery float charging voltage	1.42 V/Cell	
6.14	Battery Equalize charging voltage ( 0-30Hr Timer and Reset Push Button are required)	1.47/Cell	
6.15	Battery boost charging voltage ( 0-30Hr Timer and Reset Push Button are required)	1.55~1.65 V/Cell	
6.16	Battery initial charging voltage ( 0-30Hr Timer and Returnable Switch are required)	1.75 V/Cell	



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شماره پیمان:

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D04	0002	DT	EL	120	PEDCO	GCS	BK

شماره صفحه: ۱۲ از ۵

## Technical Data For Industrial Battery &amp; Battery Charger for 110 VDC

Item	Description	Required	Vendor Data
6.17	Battery nominal voltage	1.2 V/Cell	
6.18	Final discharge voltage per cell(V)	1.14 V/Cell	
6.19	Rated capacity of each cell at 20 °C	Min 325 Ah	
6.20	Re-charging time to 90% Rated Capacity	8 Hours	
6.21	Required battery ampere-hour (C5)	325Ah , SBLE Type	
6.22	Total quantity of cells	184	
6.23	No. of battery banks	2	
6.24	No. of batteries per each bank	92	
6.25	Battery cell dimension (W × D × H )	By Vendor	
6.26	Battery cell weight	By Vendor	
6.27	Batteries shall be performed from SAFT,ALCAD Batteries	Required	
6.28	All type of Batteries and Battery accessories shall be original and approved by Iranian representative	Required	
6.29	Rate of H2 production during charging	Liter/Cell	
6.30	Required air volume of exchange in battery room	m <sup>3</sup> /Hours	
6.31	Required air volume of electrolyte	By Vendor	
6.32	Composition of electrolyte	By Vendor	
6.33	Required volume of electrolyte	Liter	
6.34	Required Max. charging current	By Vendor	

## 7.Data sheet for Battery

7.1	Battery Discharging Rate	Medium Rate	
7.2	Container	Plastic	
7.3	Construction	Vented	

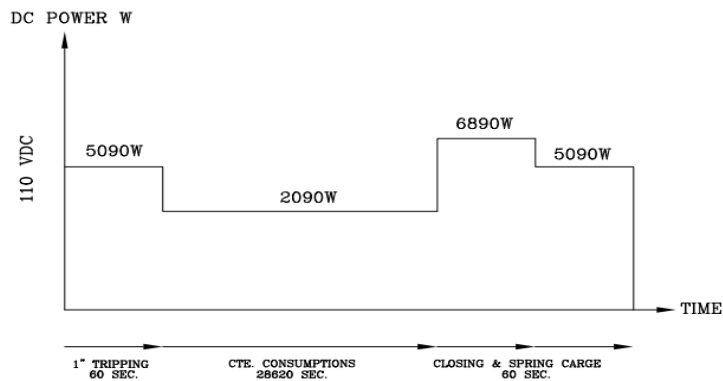
## 8.Accessories &amp; Special Tools

8.1	Thermometer	Required	
8.2	Hydrometer	Required	
8.3	Voltmeter	Required	
8.4	Battery Racks	Required (Seismic Factor:0.3g)	
8.5	Flame Arrester	Required	
8.6	Stand Type	By Vendor	

Note1:Data shown are typical

Note2:The blank items shall be filled by battery manufacture

## 9.Load Profile Graph



9.1	T1 :1 Min	
9.2	I1 :5090 W	
9.3	T2 : 7Hr , 58 Min	
9.4	I2 : 2090 W	
9.5	T3 : 1 Min	
9.6	I3 : 6890 W	
9.7	T4 : 1 Min	
9.8	I4 : 5090 W	



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## DATA SHEETS FOR DC CHARGER

شماره پیمان:

پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	PEDCO	120	EL	DT	0002	D04

شماره صفحه: ۱۲ از ۶

## Technical Data For Industrial Battery &amp; Battery Charger for 110 VDC

Item	Description	Required	Vendor Data
<b>10.Data Sheet for Distribution Board</b>			
10.1	Standard	IEC,IPS-M-EL-174(2), IPS-E-EL-100(1)	
10.2	Quantity	1 Complete set	
10.3	Service	DC Distribution Panel	
<b>11.Mechanical specification</b>			
11.1	Mounting type	Floor Mounted, Free Standing	
11.2	Body martial	Carbon Steel Sheet	
11.3	Thickness	Min.2 mm	
11.4	Access for maintenance	Front	
11.5	Protection class	IP42	
11.6	Illumination	Required	
11.7	Space heater	Required	
11.8	Weight	By Vendor	
11.9	Dimensions	By Vendor	
11.10	Name plate	English Black in White Background	
11.12	Finished color	RAL 7032	
<b>12.Electrical Specification</b>			
12.1	Rated incoming voltage	110 VDC	
12.2	Rated insulation voltage	By Vendor	
12.3	Wiring	Power and Control Min.2.5mm <sup>2</sup> , Metering Min.1.5mm <sup>2</sup> ,	
<b>13.Incoming</b>			
13.1	Incoming Cables Size & Tag no.	BK-GCS-PEDCO-120-EL-SL-0006	
13.2	Entry Side	Bottom by Cable Gland	
13.3	Cable Entry	Via Removable Gland Plate	
13.4	Incoming Circuit breaker	MCCB	
14.3	Terminal Type and quantity	By Vendor	
13.5	Circuit breaker construction	Fix	
<b>14.Outgoing</b>			
14.1	Outgoing cable size and tag no.	BK-GCS-PEDCO-120-EL-SL-0006	
14.2	Entry side	Bottom by Cable Gland	
<b>15.Data Sheet for Distribution Board</b>			
15.1	Cable entry	Via Removable Gland Plate	
15.2	Outgoing circuit breaker	MCCB	
15.3	Circuit breaker constructor	Fix	
<b>16.Indicating lights , Alarms and Accessories</b>			
16.1	Battery Low DC alarm	Required ,With Dry Contacts	
16.2	Load Low DC alarm	Required ,With Dry Contacts	
16.3	Load Hi DC alarm	Required ,With Dry Contacts	
16.4	Batteries disconnected	Required	
16.5	Battery voltmeter	Required	
16.6	Battery ammeter	Required	
16.7	Load voltmeter	Required	
16.8	Load ammeter	Required	
16.9	Cable gland	Required	
16.10	Removable gland plate	Required	
<b>17.Tests ( Factory Acceptance test and Site Acceptance Test shall be performed By the Vendor )</b>			
17.1	Visual Inspection & Dimensional Check	Required	
17.2	Performance and Function Test	Required	
17.3	Sequence , Operation and Logic Test	Required	
17.4	Dielectric Strength Test	Required	
17.5	Output Voltage and Ripple Check	Required	
17.6	Charger Voltage Adjustment Test	Required	
17.7	THDi% Check	Required	



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## DATA SHEETS FOR DC CHARGER

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شماره صفحه: ۱۲ از ۱۷

## Technical Data For Industrial Battery &amp; Battery Charger for 110 VDC

Item	Description	Required	Vendor Data
17.8	Output Regulation / Adjustments Test	Required	
17.9	Alarms Check	Required	
17.10	Autonomy Test	Required	
17.11	Current Limit Test	Required	
17.12	Short Circuit test	Required	
17.13	Other Tests shall be performed in Accordance with IEC60146 (Battery Charger Testing)	Required	
17.14	Hardware and Software for Communication, Programming or Setting up the CPU or MPU Boards (If Required),	Required	
<b>18. Accessories And Special Tools</b>			
18.1	MIMIC Panel With LED To Show Operation Condition (shall be finalized by vendor) .	Required	
18.2	Commissioning and two years spare parts shall be provided	Required	
18.3	The Accuracy of all meters shall be better than 1.5%	Required	
18.4	On load break switch-fuse For Battery Banks:Exd type IIC-T3	Required	
18.5	Training	The Supplier /Vendor shall be assumed the maintenance and repair training course at least for 5 People	
18.6	Battery Room Fan failure (Activated by external Signal )	Required	
<b>19. Electromagnetic Compatibility (EMC)</b>			

## NOTE:

1. All DC-UPS units shall comply with the requirements for EMC as defined in IEC 62040-2, in order to ensure: Conducted emissions in both, the power supply input and output of the DC-UPS are controlled within acceptable limits; Any electromagnetic disturbance generated by the UPS and its individual components do not exceed a level which would affect the correct operation of both, radio and telecommunications equipment; The DC-UPS has an adequate level of intrinsic immunity to external electromagnetic- and conducted disturbance to enable it to operate as intended.

2. A serial link communication protocol shall be considered for sending alarms and indications to DCS by vendor.



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شماره صفحه: ۱۲ از ۸

## Technical Data For Industrial Battery &amp; Battery Charger for 24 VDC

Item	Description	Required	Vendor Data
<b>1-General</b>			
1.1	Name of Project / Plant	Binak Oilfield in Bushehr Province	
1.2	Manufacturer	By Vendor	
1.3	Manufacturer Model	By Vendor	
1.4	Average Ambient Temperature (Min/Max)	Min ~ Max: +5 ~ +52°C	
1.5	Max.Design Temperature:	52 °c	
1.6	Max. Sun Temperature:	+ 85 °c	
1.7	Max.Relative Humidity:	100%	
1.8	Mean Sea Level:	12.5 m above Sea Level	
1.9	Seismic Factor:	0.3g	
1.10	Max. Wind Velocity(Max)	120 km/hr	
1.12	Standard(s)	IEC,IPS-M-EL-174(2), IPS-E-EL-100(1)	
1.13	Quantity	1 Complete set (2×100% Charger) with commissioning and two years Spare Parts, Two battery bank(2×20cell), Battery Stand with special tools for Batteries, switch-fuse For Battery Banks: Exd IIC-T3 type.	
1.14	Service	24 VDC for F&G System	
1.15	Tag Number	GCS-24-CHG-001 & GCS-24-CHG-002	
1.16	Applicable SLD	BK-GCS-PEDCO-120-EL-SL-0006	
1.17	Applicable Specification	BK-GNRAL-PEDCO-000-EL-SP-0005	
1.18	Location	Indoor	
<b>2-Environment</b>			
2.1	Area classification	Safe Area	
2.2	Site Elevation	12.5 m	
2.3	Ambient Temperature	Min/Max: +5/52°C	
2.4	Relative humidity	100%	
2.5	Atmosphere	Tropical & Dusty	
2.6	Building Temperature Control	Not Required	
2.7	Seismic Acceleration	0.3g	
<b>3.AC Input</b>			
3.1	Rectifiers Input Voltage	380/400/440v, 3-Ph , 4 wire , 50 Hz	
3.2	Max.allowable input voltage variation	±10%	
3.3	Max.allowable input frequency variation	±5%	
3.4	Network short circuit current (rms)	50KA	
3.5	Network short circuit current (Peak)	By Vendor	
3.6	Max. short circuit clearing time	1 sec	
3.7	Max. power consumption	By Vendor	
3.8	Input THDi% ( acc to IEEE-519 )	<10%	
<b>4.DC Output</b>			
4.1	Rated voltage	24 VDC	
4.2	Max. Allowable Voltage Variation	±1%	
4.3	Rated Output Current (Amp)	636 Amp	D04
4.4	Allowable Ripple voltage (r.m.s )	<1%	
4.5	Overall Efficiency	>90%	
4.6	Rectifier control voltage (Full Control)	12 Pulse	
4.7	Charger Topology	Parallel	
4.8	Rectifier Input Filter type	R.F.I & Surge Arrester	
4.9	Constant Voltage Control	Required	
4.10	Constant Current Control	Required	
4.11	Rectifier Over Load (%)	110% Continues	
4.12	Rectifiers Protection	Required	
4.13	MCCB for AC Inputs	Required	
4.14	MCCB for DC Output	Required	
4.15	Ultra Fast Fuse to Protect Thrusters	Required	





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شماره صفحه: ۱۲ از ۹

## Technical Data For Industrial Battery &amp; Battery Charger for 24 VDC

Item	Description	Required	Vendor Data
4.16	Charger Output Fuse	Required	
4.17	AC Input Voltmeter	Required	
4.18	AC Input Ammeter	Required	
4.19	Charger DC Voltmeter	Required	
4.20	Charger DC Ammeter	Required	
4.21	Charger DC LC Filter	Required	
4.22	Load Current Ammeter	Required	
4.23	Charger Selector Switch	Required	
4.24	Battery Low DC Alarm (Indicator & Dry Contact)	Required	
4.25	Load Low DC Alarm (Indicator & Dry Contact)	Required	
4.26	Load Hi DC Alarm (Indicator & Dry Contact)	Required	
4.27	Batteries Disconnected (Indicator)	Required	
<b>5. Battery Charger Cabinet</b>			
5.1	Type	Flat face	
5.2	Construction	Floor Mounted, Free Standing	
5.3	Ingress protection class	IP42	
5.4	Access for maintenance	Front	
5.5	Body material	Carbon Steel Sheet	
5.6	Thickness of body material	Min.2 mm	
5.7	Finish color	RAL 7032	
5.8	Cable entrance	Bottom and Cable Gland	
5.9	Bottom closing method	By Vendor	
5.10	Cooling method	Natural	
5.11	Space Heater	Required	
5.12	Illumination	Required	
5.13	Noise level	60dBA	
5.14	Wiring	Power and Control Min.2.5mm <sup>2</sup> , Metering Min.1.5mm <sup>2</sup>	
5.15	Nameplate	English Black in White Background	
5.16	Earthing System	IT	

Note1: Data shown are typical; manufacturer shall provide his own data

Note2: The blank items shall be filled by battery manufacture

<b>6. Batteries</b>			
6.1	Manufacturer	By Vendor	
6.2	Manufacturer Model	By Vendor	
6.3	Standard	IEC 60623, IEEE 1115 2014	
6.4	Quantity	1 Complete set (2x50% Battery Bank)	
6.5	Service	24 VDC for F&G System	
6.6	Applicable Specification	BK-GNRAL-PEDCO-000-EL-SP-0005	
6.7	Location	Indoor	
6.8	Battery requirements	By Vendor	
6.9	Battery type	Nickel-Cadmium (IEC60623)	
6.10	Battery charging method	Constant Voltage-Dual Rate and Current Limit with Float/Auto/Equalize/Initial Mode charging	
6.11	Back-up time	24Hr	
6.12	Emergency Mode Voltage for each cell (Activated by Battery Room Fan Failure)	1.35 V ± 0.01 V	
6.13	Battery float charging voltage	1.42 V/Cell	
6.14	Battery Equalize charging voltage ( 0-30Hr Timer and Reset Push Button are required)	1.46/Cell	
6.15	Battery boost charging voltage ( 0-30Hr Timer and Reset Push Button are required)	1.55~1.65 V/Cell	
6.16	Battery initial charging voltage ( 0-30Hr Timer and Returnable Switch are required)	1.75 V/Cell	
6.17	Battery nominal voltage	1.2 V/Cell	



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سطح الارض

احداث ردیف توکام گاز در ایستگاه جمع آوری بینک



## DATA SHEETS FOR DC CHARGER

شماره پیمان:

پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	PEDCO	120	EL	DT	0002	D04

شماره صفحه: ۱۰ از ۱۲

## Technical Data For Industrial Battery &amp; Battery Charger for 24 VDC

Item	Description	Required	Vendor Data
6.18	Final discharge voltage per cell(V)	1.14 V/Cell	
6.19	Rated capacity of each cell at 20 °C	Min 1150Ah	
6.2	Re-charging time to 90% Rated Capacity	24 Hours	
6.21	Required battery ampere-hour (C5)	1400Ah , SBLE Type	D04
6.22	Total quantity of cells	40	
6.23	No. of battery banks	2	
6.24	No. of batteries per each bank	20	
6.25	Battery cell dimension (W × D × H )	By Vendor	
6.26	Battery cell weight	By Vendor	
6.27	Batteries shall be performed from SAFT,ALCAD Batteries	Required	
6.28	All type of Batteries and Battery accessories shall be original and approved by Iranian representative	Required	
6.29	Rate of H2 production during charging	Liter/Cell	
6.3	Required air volume of exchange in battery room	m <sup>3</sup> /Hours	
6.31	Required air volume of electrolyte	By Vendor	
6.32	Composition of electrolyte	By Vendor	
6.33	Required volume of electrolyte	Liter	
6.34	Required Max. charging current	By Vendor	

## 7.Data sheet for Battery

7.1	Battery Discharging Rate	Medium Rate	
7.2	Container	Plastic	
7.3	Construction	Vented	

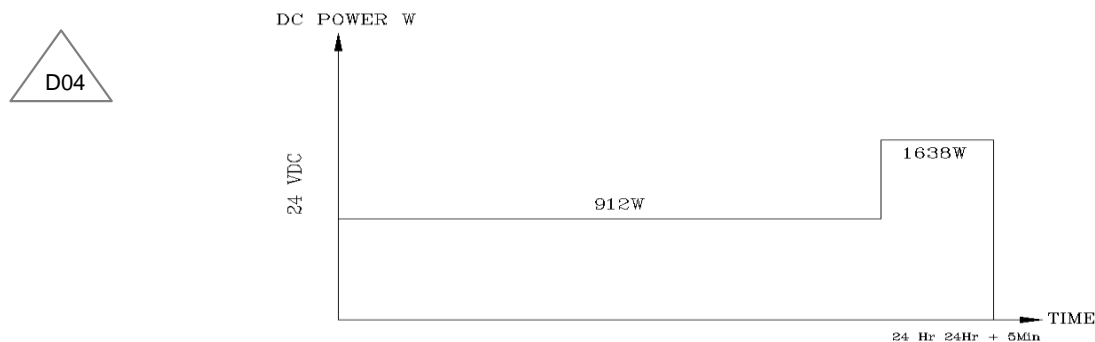
## 8.Accessories &amp; Special Tools

8.1	Thermometer	Required	
8.2	Hydrometer	Required	
8.3	Voltmeter	Required	
8.4	Battery Racks	Required (Seismic Factor:0.3g)	
8.5	Flame Arrester	Required	
8.6	Stand Type	By Vendor	

Note1:Data shown are typical

Note2:The blank items shall be filled by battery manufacture

## 9.Load Profile Graph



9.1	T1 :24 H	
9.2	I1 :912 W	
9.3	T2 : 5 Min	
9.4	I2 : 1638 W	

## 10.Data Sheet for Distribution Board

10.1	Standard	IEC,IPS-M-EL-174(2), IPS-E-EL-100(1)
10.2	Quantity	1 Complete set
10.3	Service	DC Distribution Panel



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## DATA SHEETS FOR DC CHARGER




شماره پیمان:

پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
BK	GCS	PEDCO	120	EL	DT	0002	D04

شماره صفحه: ۱۱ از ۱۲

## Technical Data For Industrial Battery &amp; Battery Charger for 24 VDC

Item	Description	Required	Vendor Data
<b>11.Mechanical specification</b>			
11.1	Mounting type	Floor Mounted, Free Standing	
11.2	Body material	Carbon Steel Sheet	
11.3	Thickness	Min.2 mm	
11.4	Access for maintenance	Front	
11.5	Protection class	IP42	
11.6	Illumination	Required	
11.7	Space heater	Required	
11.8	Weight	By Vendor	
11.9	Dimensions	By Vendor	
11.10	Name plate	English Black in White Background	
11.12	Finished color	RAL 7032	
<b>12.Electrical Specification</b>			
12.1	Rated incoming voltage	24 VDC	
12.2	Rated insulation voltage	By Vendor	
12.3	Wiring	Power and Control Min.2.5mm <sup>2</sup> , Metering Min.1.5mm <sup>2</sup> ,	
<b>13.Incoming</b>			
13.1	Incoming Cables Size & Tag no.	BK-GCS-PEDCO-120-EL-SL-0006	
13.2	Entry Side	Bottom by Cable Gland	
13.3	Cable Entry	Via Removable Gland Plate	
13.4	Incoming Circuit breaker	MCCB	
14.3	Terminal Type and quantity	By Vendor	
13.5	Circuit breaker construction	Fix	
<b>14.Outgoing</b>			
14.1	Outgoing cable size and tag no.	BK-GCS-PEDCO-120-EL-SL-0006	
14.2	Entry side	Bottom by Cable Gland	
<b>15.Data Sheet for Distribution Board</b>			
15.1	Cable entry	Via Removable Gland Plate	
15.2	Outgoing circuit breaker	MCCB	
15.3	Circuit breaker constructor	Fix	
<b>16.Indicating lights , Alarms and Accessories</b>			
16.1	Battery Low DC alarm	Required ,With Dry Contacts	
16.2	Load Low DC alarm	Required ,With Dry Contacts	
16.3	Load Hi DC alarm	Required ,With Dry Contacts	
16.4	Batteries disconnected	Required	
16.5	Battery voltmeter	Required	
16.6	Battery ammeter	Required	
16.7	Load voltmeter	Required	
16.8	Load ammeter	Required	
16.9	Cable gland	Required	
16.10	Removable gland plate	Required	
<b>17.Tests ( Factory Acceptance test and Site Acceptance Test shall be performed By the Vendor )</b>			
17.1	Visual Inspection & Dimensional Check	Required	
17.2	Performance and Function Test	Required	
17.3	Sequence , Operation and Logic Test	Required	
17.4	Dielectric Strength Test	Required	
17.5	Output Voltage and Ripple Check	Required	
17.6	Charger Voltage Adjustment Test	Required	
17.7	THDi% Check	Required	
17.8	Output Regulation / Adjustments Test	Required	
17.9	Alarms Check	Required	
17.10	Autonomy Test	Required	
17.11	Current Limit Test	Required	

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	<b>DATA SHEETS FOR DC CHARGER</b>								
شماره پیمان:	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: ۱۲ از ۱۲
	BK	GCS	PEDCO	120	EL	DT	0002	D04	

Technical Data For Industrial Battery & Battery Charger for 24 VDC			
Item	Description	Required	Vendor Data
17.12	Short Circuit test	Required	
17.13	Other Tests shall be performed in Accordance with IEC60146 (Battery Charger Testing)	Required	
17.14	Hardware and Software for Communication, Programming or Setting up the CPU or MPU Boards (If Required),	Required	
<b>18. Accessories And Special Tools</b>			
18.1	MIMIC Panel With LED To Show Operation Condition (shall be finalized by vendor) .	Required	
18.2	Commissioning and two years spare parts shall be provided	Required	
18.3	The Accuracy of all meters shall be better than 1.5%	Required	
18.4	On load break switch-fuse For Battery Banks:Exd type IIC-T3	Required	
18.5	Training	The Supplier /Vendor shall be assumed the maintenance and repair training course at least for 5 People	
18.6	Battery Room Fan failure (Activated by external Signal )	Required	
<b>19. Electromagnetic Compatibility (EMC)</b>			
<b>NOTE:</b>			
1. All DC-UPS units shall comply with the requirements for EMC as defined in IEC 62040-2, in order to ensure:Conducted emissions in both, the power supply input and output of the DC- UPS are controlled within acceptable limits;Any electromagnetic disturbance generated by the UPS and its individual components do not exceed a level which would affect the correct operation of both, radio and telecommunications equipment;The DC-UPS has an adequate level of intrinsic immunity to external electromagnetic- and conducted disturbance to enable it to operate as intended.			
2. A serial link communication protocol shall be considered for sending alarms and indications to DCS by vendor.			