


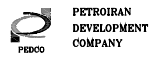
# ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR MV PANEL

NOTES

ABBREVIATION

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PEDCO-180-BL-L1-0001
BUFFERING MV SWITCHGEAR EXPANSION SINGLE LINE DIAGRAM	BK-GCS-PEDCO-180-BL-SL-0003

REV.	DATE	DESCRIPTION	CHECKED BY	DATE	BY	DATE	APPR.
D03	JUL.2022	IP1	ALMADAN	ALFAYSAHAN	ALMADRAGAD		
D02	APR.2022	IP1	ALMADAN	ALFAYSAHAN	ALMADRAGAD		
D01	MAR.2022	IP1	ALMADAN	ALFAYSAHAN	ALMADRAGAD		
D00	JAN.2022	IP1	ALMADAN	ALFAYSAHAN	ALMADRAGAD	01.04	
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	APVT.	

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION  
 PROJECT NO.: 071080  
 EPC CONTRACTOR:  BIRGAN ENERGY - DESIGN & INSPECTION COMPANIES  
 EPD/EPC CONTRACTOR (GC):  PETROIRAN DEVELOPMENT COMPANY  
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DRAWING TITLE: ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR MV PANEL  
 NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED  
 APPROVED FOR CONSTRUCTION BY: DATE:

SCALE	SIZE	DRAWING NO.	SHIBET NO.	REV.	BUDGET REF.	LOCATION	SIZE CLASS	SERIAL NO.	SHIBET	REVISION
N.T.S	A3	BK-GCS-PEDCO-180-BL-DG-0001	01 OF 06	D03	D08-078-9184	P	2	P	706040	01 OF 06

(VENDOR TITLE BLOCK)\*

ITEM No.	SYMBOLS	DESCRIPTION	ITEM No.	SYMBOLS	DESCRIPTION
01		VOLTAGE TRANSFORMER	20		THERMO SWITCH
02		CURRENT TRANSFORMER	21		OPERATING MECHANISM
03		CURRENT TRANSFORMER (RING TYPE)	22		SIGNAL LAMP
04		CORE BLANKED C.T.	23		DRAW OUT UNIT
05		CIRCUIT BREAKER	24		AMMETER
06		NORMALLY OPEN / CLOSE CONTACT	25		VOLTMETER
07		LIMIT SWITCH	26		AMMETER SWITCH
08		DISCONNECTOR (ISOLATOR)	27		VOLTMETER SWITCH
09		CONTACTOR	28		BUS BAR
10		START/STOP PUSH BUTTON	29		OPERATING BY TURNING
11		EARTHING SWITCH	30		THREE POSITION LATCH TYPE SELECTOR SWITCH
12		THERMAL RELAY	31		LATCH
13		COIL	32		KILO WATT HOUR METER
14			33		RELAY (NUMBER IN THE SYMBOLS INDICATES)
15		TWO POLE MINIATURE CIRCUIT BREAKER	34		FUSE GENERAL SYMBOL
16		TWO POLE EARTH LEAKAGE MINIATURE CIRCUIT BREAKER	35		ELECTRICAL HEATER
17		THREE POSITION SELECTOR SWITCH	36		CABLE NUMBER INDICATION
18		CABLE GLAND	37		TESTING TERMINAL
19		TERMINAL	38		OPERATING BY ELECTRIC MOTOR

**NOTES**

- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.
- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.
- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.

**ABBREVIATION**

A	AMPERE
M	MOTOR
AS	AMMETER SWITCH
CT	CURRENT TRANSFORMER
Hz	HERTZ
IP	DEGREE OF PROTECTION BY ENCLOSURE
KA	KILO AMPERE
KV	KILO VOLT
KW	KILO WATT
MV	MEDIUM VOLTAGE
VS	VOLTMETER SWITCH
VI	VOLTAGE TRANSFORMER
KVA	KILOVOLT-AMPERE
KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PEDCO-180-BL-11-0001
DISCONNECTOR SWITCHGEAR EXPANSION SINGLE LINE DIAGRAM	BK-GCS-PEDCO-180-BL-SL-0009

D03	JUL.2022	IP1	ALMADAN	M.F.KHABIRAN	M.MOHRBAHD								
D02	APR.2022	IP1	ALMADAN	M.F.KHABIRAN	M.MOHRBAHD								
D01	MAR.2022	IP1	ALMADAN	M.F.KHABIRAN	M.MOHRBAHD								
D00	JAN.2022	IP1	ALMADAN	M.F.KHABIRAN	M.MOHRBAHD								
REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.	REV.	DESCRIPTION	CHECKED	BY	DATE	REV.	APPR.
PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION							اسم و کلیه نسخ این نقشه و حق انحصاری منتهی به شرکت ملی حفاری خلیج فارس می باشد.						
PROJECT NO.: 071080							THE ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH THE COPYRIGHT THEREIN ARE THE SOLE PROPERTY OF N.I.S.O.C./ FIELDS						
EPC CONTRACTOR:			EPD/EPC CONTRACTOR (GC):										
BIRGAN ENERGY - DESIGN & INSPECTION COMPANIES			PETROIRAN DEVELOPMENT COMPANY										
DRAWING TITLE: ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR MV PANEL							BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS COMPRESSOR STATION						
DRAWING NO. BK-GCS-PEDCO-180-BL-DG-0001							SCALE: 1:1						
SHEET NO. 02 OF 06							DRAWING BY: / CHECKED BY: PROJECT ENG.						
REV. 003							DATE: /						
BUDGET REF. 008-078-9184							NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED						
LOCATION SIZE CLASS SERIAL NO. 06 OF 06							APPROVED FOR CONSTRUCTION BY: / DATE: /						
003							REVISION						

(VENDOR TITLE BLOCK)\*

ITEM No.	SYMBOLS	DESCRIPTION	ITEM No.	SYMBOLS	DESCRIPTION
39		LIGHTING ARRESTER OR SURGE ARRESTER	58		INSTANTANEOUS OVER CURRENT RELAY
40		AMMETER TRANSDUCER	59		AC TIME OVER CURRENT RELAY
41		VOLT TRANSDUCER	60		SENSITIVE EARTH FAULT RELAY
42		KILO WATT TRANSDUCER	61		INSTANTANEOUS EARTH FAULT RELAY
43		KILO VAR TRANSDUCER	62		AC INVERSE TIME EARTH FAULT RELAY
44		POWER FACTOR TRANSDUCER	63		TRIP COIL SUPERVISION RELAY
45		POWER FACTOR METER	64		LOCK OUT RELAY
46		WATT METER	65		TOO FREQUENT START RELAY
47		VAR METER	66		WINDING OVER TEMPERATURE RELAY
48		CLOSING COIL	67		LOCKED ROTOR RELAY
49		SHUNT TRIP	68		INTERTRIP RECEIVE RELAY
50		AUXILIARY RELAY	69		
51		AUXILIARY RELAY	70		
52		UNDER VOLTAGE RELAY	71		
53		INDUCED VOLTAGE RELAY	72		
54		POSITION SWITCH	73		
55		BEARING PROTECTIVE DEVICE	74		
56		REVERSE-PHASE OR PHASE- BALANCE CURRENT RELAY	75		
57		MACHINE THERMAL RELAY	76		

- NOTES**
- 1- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.
  - 2- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.
  - 3- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.

**ABBREVIATION**

A	AMPERE
M	MOTOR
AS	AMMETER SWITCH
CT	CURRENT TRANSFORMER
Hz	HERTZ
IP	DEGREE OF PROTECTION BY ENCLOSURE
KA	KILO AMPERE
KV	KILO VOLT
KW	KILO WATT
MV	MEDIUM VOLTAGE
VS	VOLTMETER SWITCH
VI	VOLTAGE TRANSFORMER
KVA	KILOVOLT-AMPERE
KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PEDCO-180-BL-L1-0001
BOILERBY BY SURVEILLANCE EXPANSION SINGLE LINE DIAGRAM	BK-GCS-PEDCO-180-BL-SL-0009

REV.	DESCRIPTION	BY	DATE	REV.	APPR.

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION

PROJECT NO.: 071080

EPC CONTRACTOR: BIRGAN ENERGY - DESIGN & INSPECTION COMPANIES

EPD/EPIC CONTRACTOR (GC): PETROIRAN DEVELOPMENT COMPANY

BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS COMPRESSOR STATION

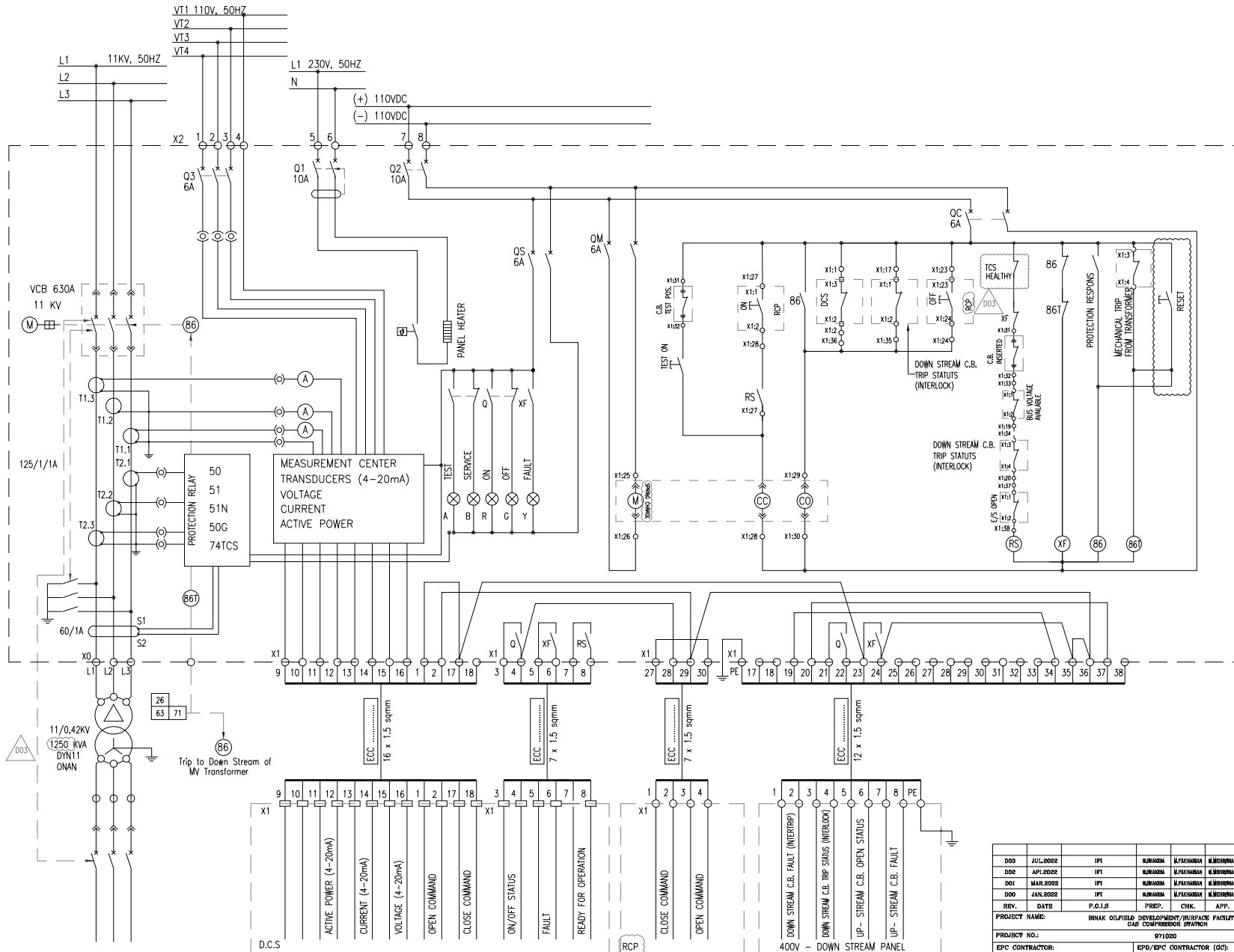
DATE: SCALE: DRAWING BY: CHECKED BY: PROJECT ENG.

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

APPROVED FOR CONSTRUCTION BY: DATE:

SCALE	SIZE	DRAWING NO.	SHIBET NO.	REV.	BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHIBET	REVISION
N.T.S	A3	BK-GCS-PEDCO-180-BL-DG-0001	03 OF 06	003	008-078-9184	P	2	P	706040	03 OF 06	003

(VENDOR TITLE BLOCK)\*\*



TRANSFORMER OUTGOING: TYPE C2

- NOTES**
- 1- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.
  - 2- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.
  - 3- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.
  - 4- IN THE CASE OF MECHANICAL TRIP OF TRANSFORMER, SIGNAL RELAY 86 SHALL BE SENT TO DOWNSTREAM. IN OTHER WORDS VCB & ACB SHALL BE TRIPPED.
  - 5- FOR FIRE WATER PUMP WHICH WILL BE FED FROM 11/3.3 KV TRANSFORMER, A VOLTMETER SHALL BE CONSIDERED ON 3.3 SWITCHGEAR.
  - 6- VOLTAGE & CURRENT SAMPLE FOR CAPACITOR BANKS OF COMPRESSORS SHALL BE CONSIDERED BY VENDOR.
  - 7- CIRCUIT LIGHTING AND SOCKET SHALL BE CONSIDERED SEPARATELY MCB BY VENDOR.

**ABBREVIATION**

A	AMPERE
M	MOTOR
AS	AMMETER SWITCH
CT	CURRENT TRANSFORMER
Hz	HERTZ
IP	DEGREE OF PROTECTION BY ENCLOSURE
KA	KILO AMPERE
KV	KILO VOLT
KW	KILO WATT
MV	MEDIUM VOLTAGE
VS	VOLTMETER SWITCH
VI	VOLTAGE TRANSFORMER
KVA	KILOVOLT-AMPERE
KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PBDCO-180-BL-L1-0001
DIFFERENTIAL PROTECTIVE EXPANSION TRIPPER LINE DIAGRAM	BK-GCS-PBDCO-180-BL-SL-0009

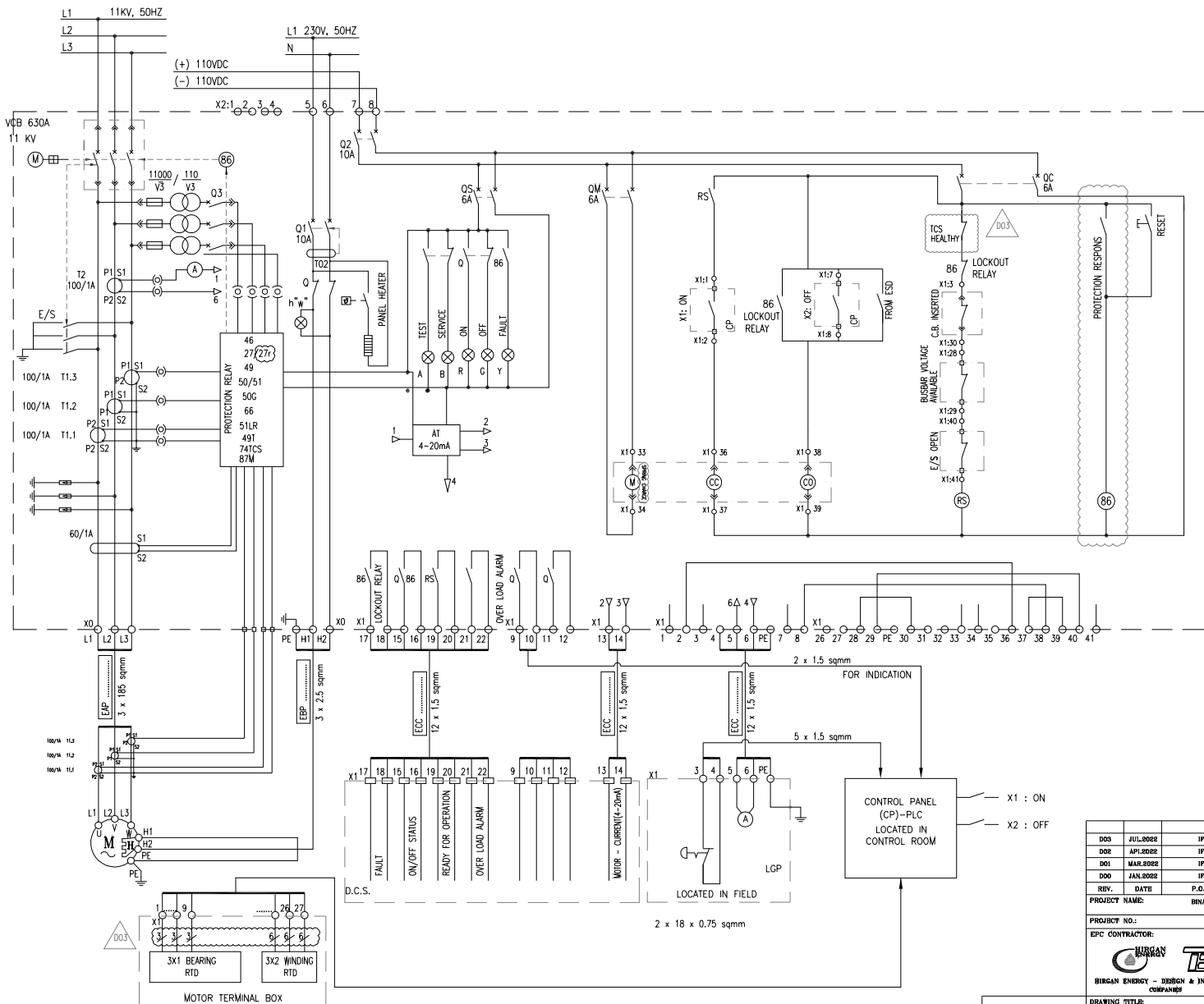
REV.	DESCRIPTION	CHECKED	BY	DATE	REV. APPR.
D03	JUL.2022	IP1	ALMADAN	M.FUKHARAH	M.MICROHAD
D02	API.2022	IP1	ALMADAN	M.FUKHARAH	M.MICROHAD
D01	MAR.2022	IP1	ALMADAN	M.FUKHARAH	M.MICROHAD
D00	JAN.2022	IP1	ALMADAN	M.FUKHARAH	M.MICROHAD

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION  
 PROJECT NO.: 071030  
 EPD/EPIC CONTRACTOR (GC): PETROIRAN DEVELOPMENT COMPANY

APPROVED FOR CONSTRUCTION BY: _____ DATE: _____ BUDGET RSP, LOCATION, SIZE, CLASS, SERIAL NO., SHEET REVISION N.T.S. A3 BK-GCS-PBDCO-180-BL-DG-0001 04 OF 06 D03 008-078-9184 P 2 P 706040 04 OF 06 D03	

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.
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MOTOR OUTGOING: TYPE C3

NOTES

- 1- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.
- 2- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.
- 3- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.
- 4- VOLTAGE & CURRENT SAMPLE FOR CAPACITOR BANKS OF COMPRESSORS SHALL BE CONSIDERED BY VENDOR.
- 5- CIRCUIT LIGHTING AND SOCKET SHALL BE CONSIDERED SEPARATELY MCB BY VENDOR.

ABBREVIATION

A	AMPERE
M	MOTOR
AS	AMMETER SWITCH
CT	CURRENT TRANSFORMER
H <sub>z</sub>	HERTZ
IP	DEGREE OF PROTECTION BY ENCLOSURE
KA	KILO AMPERE
KV	KILO VOLT
KW	KILO WATT
MV	MEDIUM VOLTAGE
VS	VOLTMETER SWITCH
VI	VOLTAGE TRANSFORMER
KVA	KILOVOLT-AMPERE
KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-DCS-PECCO-180-BL-L1-0001
BUDGET BFP SURFACE EXPANSION SINGLE LINE DIAGRAM	BK-DCS-PECCO-180-BL-SL-0009

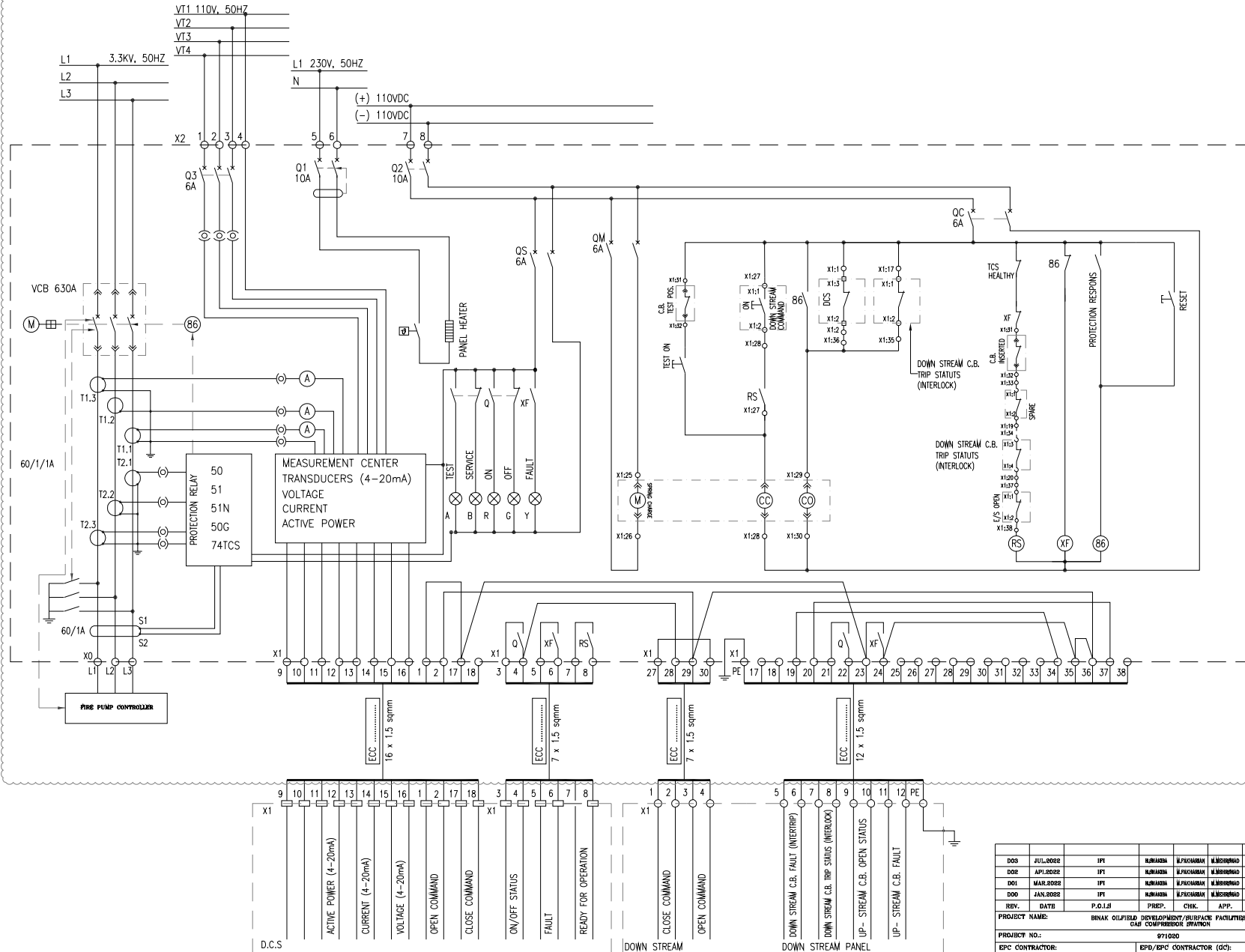
REV.	DESCRIPTION	BY	DATE	REV. APPR.					
001	JUL.2022	IP1	ALMADAN	ALFUKHARIN	ALMADRAD				
002	API.2022	IP1	ALMADAN	ALFUKHARIN	ALMADRAD				
003	MAR.2022	IP1	ALMADAN	ALFUKHARIN	ALMADRAD				
004	JAN.2022	IP1	ALMADAN	ALFUKHARIN	ALMADRAD	01.14			

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION									
PROJECT NO.: 071080									
EPC CONTRACTOR: <b>BIRGAN ENERGY - DESIGN &amp; INSPECTION COMPANIES</b>					EPC/EPCC CONTRACTOR (GC): <b>PETROIRAN DEVELOPMENT COMPANY</b>				
BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS COMPRESSOR STATION									
DATE: SCALE: DRAWING BY: CHECKED BY: PROJECT ENG.									

DRAWING TITLE: ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR MV PANEL										
APPROVED FOR CONSTRUCTION BY: DATE:										
SCALE:	SHEET:	DRAWING NO.	SHIBET NO.	REV.	BUDGET BFP.	LOCATION	SIZE	CLASS	SERIAL NO.	SHIBET REVISION
N.T.S	A3	BK-DCS-PECCO-180-BL-DG-0001	06 01 06	003	008-078-9184	P	2	P	706040	06 01 06 003

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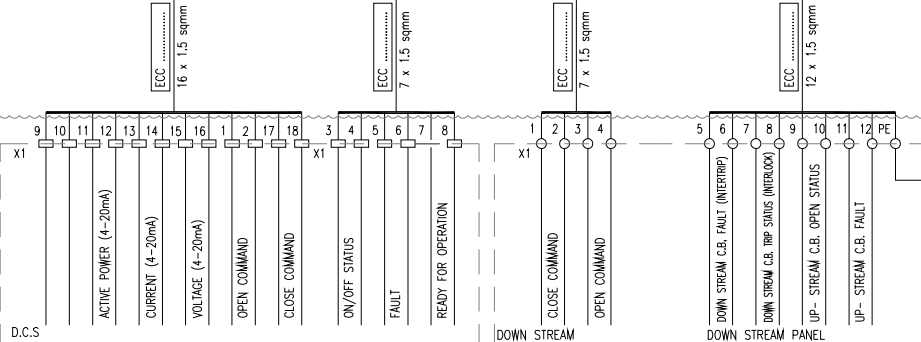
FEEDER OUTGOING: TYPE C5

- NOTES**
- 1- MAX. TWO WIRES SHOULD BE CONNECTED TO ONE TERMINAL.
  - 2- PANEL HEATER SHOULD BE INSTALLED IN SUITABLE POSITION.
  - 3- THE BURDEN OF C.T. & V.T. SHOULD BE FINALIZED BY PANEL MANUFACTURE.
  - 4- IN THE CASE OF MECHANICAL TRIP OF TRANSFORMER, SIGNAL RELAY 86 SHALL BE SENT TO DOWNSTREAM. IN OTHER WORDS VCB & ACB SHALL BE TRIPPED.
  - 5- FOR FIRE WATER PUMP WHICH WILL BE FED FROM 11/3.3 KV TRANSFORMER. A VOLTMETER SHALL BE CONSIDERED ON 3.3 SWITCHGEAR.
  - 6- VOLTAGE & CURRENT SAMPLE FOR CAPACITOR BANKS OF COMPRESSORS SHALL BE CONSIDERED BY VENDOR.
  - 7- CIRCUIT LIGHTING AND SOCKET SHALL BE CONSIDERED SEPARATELY MCB BY VENDOR.

**ABBREVIATION**

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M	MOTOR
AS	AMMETER SWITCH
CT	CURRENT TRANSFORMER
HZ	HERTZ
IP	DEGREE OF PROTECTION BY ENCLOSURE
KA	KILO AMPERE
KV	KILO VOLT
KW	KILO WATT
MV	MEDIUM VOLTAGE
VS	VOLTMETER SWITCH
VI	VOLTAGE TRANSFORMER
KVA	KILOVOLT-AMPERE
KWH	KILOWATT-HOUR
VCB	VACUUM CIRCUIT BREAKER
TCS	TRIP COIL SUPERVISION
KVAR	KILOVAR
SWGR	SWITCH GEAR

REFERENCE DRAWING	DRG. No.
ELECTRICAL LOAD LIST	BK-GCS-PBDCO-180-BL-L1-0001
DISPERSED BY SWITCHGEAR EXPANSION SINGLE LINE DIAGRAM	BK-GCS-PBDCO-180-BL-SL-0009



REV.	DESCRIPTION	CHECKED	BY	DATE	REV.	APPR.
D03	JUL.2022	IP1	ALMADAN	M.FUKHARAB	M.MOHRABAD	
D02	API.2022	IP1	ALMADAN	M.FUKHARAB	M.MOHRABAD	
D01	MAR.2022	IP1	ALMADAN	M.FUKHARAB	M.MOHRABAD	
D00	JAN.2022	IP1	ALMADAN	M.FUKHARAB	M.MOHRABAD	01,04

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS COMPRESSOR STATION  
 PROJECT NO.: 071080  
 EPC CONTRACTOR: MURBAN ENERGY - DESIGN & INSPECTION COMPANIES  
 EPD/EPIC CONTRACTOR (GC): PETROIRAN DEVELOPMENT COMPANY

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BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS COMPRESSOR STATION

DRAWING TITLE: ELECTRICAL TYPICAL SCHEMATIC DIAGRAMS FOR MV PANEL				NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED			
APPROVED FOR CONSTRUCTION	BY:	DATE:					
BUDGET RSP.	LOCATION	SIZE	CLASS	SERIAL NO.	SHIBET	REVISION	
N.T.S	A3	BK-GCS-PBDCO-180-BL-DG-0001	06	01	06	003	008-078-9184 P 2 P 706040 06 01 06 008