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JOB NO.		353		
STATUS		CONTRACT		
DISTRIBUTION				
REV.	DATE	ALTD	CHD	APPD

CUSTOMER		INDIAN OIL CORPORATION LIMITED PARADIP REFINERY CPP			
CUSTOMER CONSULTANT		ENGINEERS INDIA LIMITED			
		BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT NOIDA			
		KMG ATOZ SYSTEMS PVT. LTD. C-49, SECTOR-81, NOIDA- 201305 DIST. GAUTAM BUDH NAGAR (U.P)			
		HONEYWELL AUTOMATION INDIA LIMITED 56 & 57, HADAPSAR INDUSTRIAL ESTATE PUNE-411 013			
PACKAGE:-		LV SWITCHGEARS			
ATOZ JOB No: 2K10-765					REV.-02
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TITLE- FDS-ANNEXURE-C IP ADDRESSING FOR NUMERICAL RELAYS					
				DEPT.	SCALE NTS
				SIGN	
				DATE	
					BHEL DRG. NO. 110-PE-V0-353-506-E040
SHEET- OF-					REV.-02

Honeywell	PROJECT : IOCL PARADIP LT SWGR SCADA
	CUSTOMER : IOCL PARADIP
	CONSULTANT : ENGINEERS INDIA LTD
	END USER : IOCL PARADIP CPP
	CONTRACTOR :BHEL

FUNCTIONAL DESIGN SPECIFICATIONS

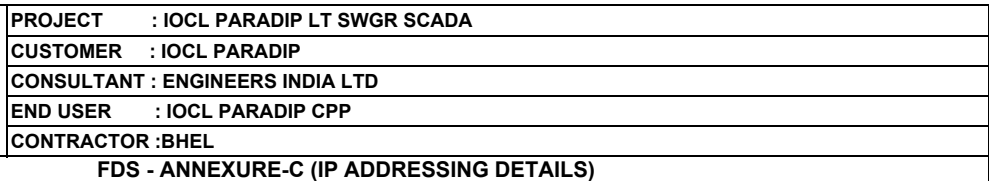
Annexure-C – IP Addressing Details

M/s IOCL PARADIP CPP LT AUTOMATION

PROJECT CODE -- D10T1065

2	19-Dec-2011	REVISED ISSUE	APPD. By	Praveen Agarwal	Project Manager	
1	8-Dec-2011	REVISED ISSUE	CHKD By	Arun Das	Engineering Manager	
0	24-Mar-2010	ORIGINAL ISSUE	PPD By	Kanchan Kulkarni	Project Engineer	
REV	DATE	DESCRIPTION		NAME	DESIGNATION	SIGN

FDS – ANNEXURE-C (IP ADDRESSING DETAILS)	DOC.NO. D10T1065-102C	REV. 2
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CONTENT LIST & REVISION STATUS SHEET

[illegible]

IP ADDRESSING DETAILS - EQUIPMENTS CONNECTED IN CPP CONTROL ROOM						
SR. NO	VOLTAGE	BOARD NAME	FEEDER DESCRIPTION	MODULE TYPE	MODEL NO	IP Address
1	--	PROCESS LAN	DATA CONCENTRATOR-1A (DC-1A)	Data Concentrator	D400	172.16.1.201
		STATION LAN				172.16.11.1
		STATION LAN				172.16.12.1
2	--	PROCESS LAN	DATA CONCENTRATOR-1B (DC-1B)	Data Concentrator	D400	172.16.1.202
		STATION LAN				172.16.11.2
		STATION LAN				172.16.12.2
3	--	PROCESS LAN	DATA CONCENTRATOR-2A (DC-2A)	Data Concentrator	D400	172.16.2.201
		STATION LAN				172.16.11.3
		STATION LAN				172.16.12.3
4	--	PROCESS LAN	DATA CONCENTRATOR-2B (DC-2B)	Data Concentrator	D400	172.16.2.202
		STATION LAN				172.16.11.4
		STATION LAN				172.16.12.4
3	--	STATION LAN	HMI WORKSTATION-1 (OWS-1)	Work Station	T3500	172.16.11.11
		STATION LAN				172.16.12.11
4	--	STATION LAN	PRINTER	Printer	CP1515N	172.16.11.21
5	--	STATION LAN	GPS	GPS	SERTEL	172.16.11.31

IP ADDRESSING DETAILS - LT SWBD EQUIPMENTS CONNECTED IN DATA CONCENTRATOR PROCESS LAN-1					
Sr. No.	Feeder No.	Bay Name	Ethernet Switch Details		IP Address
			Make	Model	
415V UB PMCC-1_0DB					
1	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.161
2	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (6UTP 2SMFO)	GE	ML1200	172.16.1.162
3	1	HDTD FUEL OIL PUMP-A	GE	F650	172.16.1.1
4	2	HSFO PUMP-A	GE	F650	172.16.1.2
5	3	SPARE	GE	F650	172.16.1.3
6	4	UB MCC1 #1HC	GE	F650	172.16.1.4
7	5	UB MCC2 #2HC	GE	F650	172.16.1.5
8	6	SPARE	GE	F650	172.16.1.6
9	7	BUS PT A	GE	F650	172.16.1.7
10	8	INCOMER-A FROM 0DBT01	GE	F650	172.16.1.8
11	9	BUS COUPLER	GE	F650	172.16.1.9
12	10	INCOMER-B FROM 0DBT02	GE	F650	172.16.1.10
13	11	BUS PT B	GE	F650	172.16.1.11
14	12	UB MCC1 #1HC	GE	F650	172.16.1.12
15	13	UB MCC2 #2HC	GE	F650	172.16.1.13
16	14	SPARE	GE	F650	172.16.1.14
17	15	SPARE	GE	F650	172.16.1.15
18	16	HDTD FUEL OIL PUMP-C	GE	F650	172.16.1.16
415V UB PMCC- 2_0DC					
19	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.163
20	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (6UTP 2SMFO)	GE	ML1200	172.16.1.164
21	1	HDTD FUEL OIL PUMP-B	GE	F650	172.16.1.17
22	3	HSFO PUMP-B	GE	F650	172.16.1.18
23	4	UB MCC3 #3HC	GE	F650	172.16.1.19
24	5	UB MCC4 #4HC	GE	F650	172.16.1.20
25	6	BUS PT A	GE	F650	172.16.1.21
26	7	INCOMER-A FROM 0DCT01	GE	F650	172.16.1.22
27	8	BUS COUPLER	GE	F650	172.16.1.23
28	9	INCOMER-B FROM 0DCT02	GE	F650	172.16.1.24
29	10	BUS PT B	GE	F650	172.16.1.25
30	11	UB MCC3 #3HC	GE	F650	172.16.1.26
31	12	UB MCC4 #4HC	GE	F650	172.16.1.27
32	13	SPARE	GE	F650	172.16.1.28
33	15	NAPTHA FORWARDING PUMP (HRSG)	GE	F650	172.16.1.29
34	16	SPARE	GE	F650	172.16.1.30
35	17	HSD FORWARDING PUMP (HRSG)	GE	F650	172.16.1.31
36	18	NAPTHA FORWARDING PUMP (HRSG)	GE	F650	172.16.1.32
415V STG PMCC-1_4DA					
37	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.165
38	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (6UTP 2SMFO)	GE	ML1200	172.16.1.166
39	1	CONDENSER EXTRACTION PUMP	GE	F650	172.16.1.33
40	2	ST MCC1	GE	F650	172.16.1.34
41	3	SPARE	GE	F650	172.16.1.35
42	4	HSD FORWARDING PUMP (HRSG)	GE	F650	172.16.1.36
43	5	BUS PT A	GE	F650	172.16.1.37
44	6	INCOMER-A FROM TRF 4DAT01	GE	F650	172.16.1.38
45	7	BUS COUPLER1	GE	F650	172.16.1.39
46	8	INCOMER-B FROM TRF 4DAT02	GE	F650	172.16.1.40
47	9	BUS PT B	GE	F650	172.16.1.41
48	10	ST MCC1	GE	F650	172.16.1.42
49	11	NAPTHA FORWARDING PUMP (HRSG)	GE	F650	172.16.1.43
50	12	CONDENSER EXTRACTION PUMP	GE	F650	172.16.1.44
51	13	BUS COUPLER2	GE	F650	172.16.1.45
52	14	INCOMER-C FROM PCC#0EA	GE	F650	172.16.1.46
53	15	BUS PT C	GE	F650	172.16.1.47
54	23	LUBE OIL PUMP DRIVER MOTOR	GE	F650	172.16.1.48
55	24	SPARE	GE	F650	172.16.1.49

IP ADDRESSING DETAILS - LT SWBD EQUIPMENTS CONNECTED IN DATA CONCENTRATOR PROCESS LAN-1					
Sr. No.	Feeder No.	Bay Name	Ethernet Switch Details		IP Address
			Make	Model	
415V STG PMCC-2_5DA					
56	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.167
57	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (6UTP 2SMFO)	GE	ML1200	172.16.1.168
58	1	CONDENSER EXTRACTION PUMP	GE	F650	172.16.1.50
59	2	ST MCC2	GE	F650	172.16.1.51
60	3	SPARE	GE	F650	172.16.1.52
61	4	HSD FORWARDING PUMP (HRSG)	GE	F650	172.16.1.53
62	5	BUS PT A	GE	F650	172.16.1.54
63	6	INCOMER-A FROM 5DAT01	GE	F650	172.16.1.55
64	7	BUS COUPLER1	GE	F650	172.16.1.56
65	8	INCOMER-B FROM 5DAT01	GE	F650	172.16.1.57
66	9	BUS PT B	GE	F650	172.16.1.58
67	10	ST MCC2	GE	F650	172.16.1.59
68	11	NAPTHA FORWARDING PUMP (HRSG)	GE	F650	172.16.1.60
69	12	CONDENSER EXTRACTION PUMP	GE	F650	172.16.1.61
70	13	FIRE BOOSTER PUMP	GE	F650	172.16.1.62
71	14	INCOMER-C FROM PCC#0EA	GE	F650	172.16.1.63
72	15	BUS PT C	GE	F650	172.16.1.64
73	23	LUBE OIL PUMP DRIVER MOTOR	GE	F650	172.16.1.65
74	24	SPARE	GE	F650	172.16.1.66
415V UB MCC-1_1HC					
75	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.169
76	55	BUS PT	GE	F650	172.16.1.67
77	56	INCOMER-A UB PMCC-1 #0DB	GE	F650	172.16.1.68
78	57	BUS COUPLER	GE	F650	172.16.1.69
79	58	INCOMER-B UB PMCC-1 #0DB	GE	F650	172.16.1.70
80	59	BUS PT	GE	F650	172.16.1.71
81	121	BUS COUPLER	GE	F650	172.16.1.72
82	122	BUS PT	GE	F650	172.16.1.73
83	123	INCOMER-C PCC-1 #0EB	GE	F650	172.16.1.74
415V UB EMG PCC_0EB.					
84	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.170
85	1	UB MCC1 EMG SEC	GE	F650	172.16.1.75
86	2	UB MCC3 EMG SEC	GE	F650	172.16.1.76
87	3	SPARE	GE	F650	172.16.1.77
88	5	BUS PT A	GE	F650	172.16.1.78
89	6	DG INCOMER FROM UB EMG DG	GE	F650	172.16.1.79
90	6	DG INCOMER FROM UB EMG DG	GE	F650	172.16.1.80
91	7	BUS COUPLER	GE	F650	172.16.1.81
92	8	INCOMER FROM TRF 0EB T01	GE	F650	172.16.1.82
93	9	BUS PT B	GE	F650	172.16.1.83
94	11	UB MCC2 EMG SEC	GE	F650	172.16.1.84
95	12	UB MCC4 EMG SEC	GE	F650	172.16.1.85
415V UB MCC-2_2HC					
96	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.171
97	55	BUS PT	GE	F650	172.16.1.86
98	56	INCOMER-A UB PMCC-1 #0DB	GE	F650	172.16.1.87
99	57	BUS COUPLER	GE	F650	172.16.1.88
100	58	INCOMER-B UB PMCC-1 #0DB	GE	F650	172.16.1.89
101	59	BUS PT	GE	F650	172.16.1.90
102	121	BUS COUPLER	GE	F650	172.16.1.91
103	122	BUS PT	GE	F650	172.16.1.92
104	123	INCOMER-C PCC-1 #0EB	GE	F650	172.16.1.93
415V ESP PCC-1 # 1DB					
105	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE)	---	---	172.16.1.172
106	1	FEEDER-1	---	---	172.16.1.94
107	2	FEEDER-2	---	---	172.16.1.95
108	3	FEEDER-3	---	---	172.16.1.96

IP ADDRESSING DETAILS - LT SWBD EQUIPMENTS CONNECTED IN DATA CONCENTRATOR PROCESS LAN-1					
Sr. No.	Feeder No.	Bay Name	Ethernet Switch Details		IP Address
			Make	Model	
415V ESP PCC-2 # 2DB					
109	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE)	---	---	172.16.1.173
110	1	FEEDER-1	---	---	172.16.1.97
111	2	FEEDER-2	---	---	172.16.1.98
112	3	FEEDER-3	---	---	172.16.1.99
415V ESP PCC-3 # 3DB					
113	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE)	---	---	172.16.1.174
114	1	FEEDER-1	---	---	172.16.1.100
115	2	FEEDER-2	---	---	172.16.1.101
116	3	FEEDER-3	---	---	172.16.1.102
415V ESP PCC-4 # 4DB					
117	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE)	---	---	172.16.1.175
118	1	FEEDER-1	---	---	172.16.1.103
119	2	FEEDER-2	---	---	172.16.1.104
120	3	FEEDER-3	---	---	172.16.1.105

IP ADDRESSING DETAILS - LT SWBD EQUIPMENTS CONNECTED IN DATA CONCENTRATOR PROCESS LAN					
Sr. No.	Feeder/ No.	Bay Name	Ethernet Switch Details		IP Address
			Make	Model	
415V UB MCC -3_3HC					
1	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.2.161
2	55	BUS PT	GE	F650	172.16.2.1
3	56	INCOMER-A PMCC-1	GE	F650	172.16.2.2
4	57	BUS COUPLER	GE	F650	172.16.2.3
5	58	INCOMER-B PMCC-1	GE	F650	172.16.2.4
6	59	BUS PT	GE	F650	172.16.2.5
7	121	BUS COUPLER	GE	F650	172.16.2.6
8	122	BUS PT	GE	F650	172.16.2.7
9	123	INCOMER-C PCC-1	GE	F650	172.16.2.8
415V GT PMCC-3 # 3DA					
10	--	ETHERNET SWITCH	---	---	172.16.2.162
11	--	ETHERNET SWITCH	---	---	172.16.2.163
12	1	FEEDER-1	---	---	172.16.2.9
13	2	FEEDER-2	---	---	172.16.2.10
14	3	FEEDER-3	---	---	172.16.2.11
15	4	FEEDER-4	---	---	172.16.2.12
16	5	FEEDER-5	---	---	172.16.2.13
17	6	FEEDER-6	---	---	172.16.2.14
18	7	FEEDER-7	---	---	172.16.2.15
19	8	FEEDER-8	---	---	172.16.2.16
20	9	FEEDER-9	---	---	172.16.2.17
21	10	FEEDER-10	---	---	172.16.2.18
22	11	FEEDER-11	---	---	172.16.2.19
23	12	FEEDER-12	---	---	172.16.2.20
24	13	FEEDER-13	---	---	172.16.2.21
25	14	FEEDER-14	---	---	172.16.2.22
26	15	FEEDER-15	---	---	172.16.2.23
27	16	FEEDER-16	---	---	172.16.2.24
28	17	FEEDER-17	---	---	172.16.2.25
29	18	FEEDER-18	---	---	172.16.2.26
30	19	FEEDER-19	---	---	172.16.2.27
415V GT PMCC-1 # 1DA					
31	--	ETHERNET SWITCH	---	---	172.16.2.164
32	--	ETHERNET SWITCH	---	---	172.16.2.165
33	1	FEEDER-1	---	---	172.16.2.28
34	2	FEEDER-2	---	---	172.16.2.29
35	3	FEEDER-3	---	---	172.16.2.30
36	4	FEEDER-4	---	---	172.16.2.31
37	5	FEEDER-5	---	---	172.16.2.32
38	6	FEEDER-6	---	---	172.16.2.33
39	7	FEEDER-7	---	---	172.16.2.34
40	8	FEEDER-8	---	---	172.16.2.35
41	9	FEEDER-9	---	---	172.16.2.36
42	10	FEEDER-10	---	---	172.16.2.37
43	11	FEEDER-11	---	---	172.16.2.38
44	12	FEEDER-12	---	---	172.16.2.39
45	13	FEEDER-13	---	---	172.16.2.40
46	14	FEEDER-14	---	---	172.16.2.41
47	15	FEEDER-15	---	---	172.16.2.42
48	16	FEEDER-16	---	---	172.16.2.43
49	17	FEEDER-17	---	---	172.16.2.44
50	18	FEEDER-18	---	---	172.16.2.45
51	19	FEEDER-19	---	---	172.16.2.46

IP ADDRESSING DETAILS - LT SWBD EQUIPMENTS CONNECTED IN DATA CONCENTRATOR PROCESS LAN					
Sr. No.	Feeder/ No.	Bay Name	Ethernet Switch Details		IP Address
			Make	Model	
415V EMG PCC_0EA					
52	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.2.166
53	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (6UTP 2SMFO)	GE	ML1200	172.16.2.167
54	28	ACE-LDB(CCR-BLDG)	GE	F650	172.16.2.47
55	29	ACE-LDB(ESP-BLDG)	GE	F650	172.16.2.48
56	30	SPARE	GE	F650	172.16.2.49
57	31	EMG SEC STG PMCC-1(#4 DA)	GE	F650	172.16.2.50
58	32	EMG SEC GT PMCC-1(#1 DA)	GE	F650	172.16.2.51
59	33	EMG SEC GT PMCC-2(#2 DA)	GE	F650	172.16.2.52
60	34	SPARE	GE	F650	172.16.2.53
61	35	SPARE	GE	F650	172.16.2.54
62	36	BUS PT	GE	F650	172.16.2.55
63	37	INCOMER-A FROM TRF 0EAT01	GE	F650	172.16.2.56
64	38	BUS COUPLER	GE	F650	172.16.2.57
65	39	INCOMER-B FROM TRF 0EAT02	GE	F650	172.16.2.58
66	40	BUS PT	GE	F650	172.16.2.59
67	41	EMG SEC STG PMCC-2	GE	F650	172.16.2.60
68	42	EMG SEC GT PMCC-3	GE	F650	172.16.2.61
69	43	SPARE	GE	F650	172.16.2.62
70	44	ACW PUMP FOR BLACK START	GE	F650	172.16.2.63
71	45	ACE-LDB CCR BLDG	GE	F650	172.16.2.64
72	46	ACE-LDB ESP BLDG	GE	F650	172.16.2.65
415V GT PMCC-2 # 2DA					
73	--	ETHERNET SWITCH	---	---	172.16.2.168
74	--	ETHERNET SWITCH	---	---	172.16.2.169
75	1	FEEDER-1	---	---	172.16.2.66
76	2	FEEDER-2	---	---	172.16.2.67
77	3	FEEDER-3	---	---	172.16.2.68
78	4	FEEDER-4	---	---	172.16.2.69
79	5	FEEDER-5	---	---	172.16.2.70
80	6	FEEDER-6	---	---	172.16.2.71
81	7	FEEDER-7	---	---	172.16.2.72
82	8	FEEDER-8	---	---	172.16.2.73
83	9	FEEDER-9	---	---	172.16.2.74
84	10	FEEDER-10	---	---	172.16.2.75
85	11	FEEDER-11	---	---	172.16.2.76
86	12	FEEDER-12	---	---	172.16.2.77
87	13	FEEDER-13	---	---	172.16.2.78
88	14	FEEDER-14	---	---	172.16.2.79
89	15	FEEDER-15	---	---	172.16.2.80
90	16	FEEDER-16	---	---	172.16.2.81
91	17	FEEDER-17	---	---	172.16.2.82
92	18	FEEDER-18	---	---	172.16.2.83
93	19	FEEDER-19	---	---	172.16.2.84

IP ADDRESSING DETAILS - LT SWBD EQUIPMENTS CONNECTED IN DATA CONCENTRATOR PROCESS LAN					
Sr. No.	Feeder/ No.	Bay Name	Ethernet Switch Details		IP Address
			Make	Model	
415V STATION PCC_0DA					
94	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.2.170
95	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (6UTP 2SMFO)	GE	ML2400	172.16.1.171
96	28	ACN LDB	GE	F650	172.16.2.85
97	29	ACN LDB	GE	F650	172.16.2.86
98	30	ACN LDB	GE	F650	172.16.2.87
99	31	SPARE	GE	F650	172.16.2.88
100	32	AC&VENT MCC #0SB	GE	F650	172.16.2.89
101	33	STATION Serv. MCC	GE	F650	172.16.2.90
102	34	66kV GIS	GE	F650	172.16.2.91
103	35	SPARE	GE	F650	172.16.2.92
104	36	FOR IOCL USE	GE	F650	172.16.2.93
105	37	BUS PT A	GE	F650	172.16.2.94
106	38	INCOMER-A FROM 0DAT01	GE	F650	172.16.2.95
107	39	BUS COUPLER	GE	F650	172.16.2.96
108	40	INCOMER-B FROM 0DAT02	GE	F650	172.16.2.97
109	41	BUS PT B	GE	F650	172.16.2.98
110	42	FOR IOCL USE	GE	F650	172.16.2.99
111	43	66kV GIS	GE	F650	172.16.2.100
112	44	AC&VENT MCC #0SB	GE	F650	172.16.2.101
113	45	STATION Serv. MCC	GE	F650	172.16.2.102
114	46	SPARE	GE	F650	172.16.2.103
115	47	ACN LDB	GE	F650	172.16.2.104
116	48	ACN LDB	GE	F650	172.16.2.105
117	49	ACN LDB	GE	F650	172.16.2.106
415V UB MCC - 4_4HC					
118	--	ETHERNET SWITCH (NUMERICAL RELAY INTERFACE) (14UTP 2SMFO)	GE	ML2400	172.16.1.172
119	55	BUS PT	GE	F650	172.16.2.107
120	56	INCOMER-A FROM UB PMCC-2 #0DC	GE	F650	172.16.2.108
121	57	BUS COUPLER	GE	F650	172.16.2.109
122	58	INCOMER-B FROM UB PMCC-2 #0DC	GE	F650	172.16.2.110
123	59	BUS PT	GE	F650	172.16.2.111
124	121	BUS COUPLER	GE	F650	172.16.2.112
125	122	BUS PT	GE	F650	172.16.2.113
126	123	INCOMER-C FROM UB PCC-1 #0EB	GE	F650	172.16.2.114