



**Toase-eh Park Sanati Gohar Ofogh
Petrochemical Co.
CONCEPTUAL, BASIC and DETAIL DESIGN ENGINEERING OF STYRENE PARK OFFSITE**



Document Title: I/O-list

Document No.: EI027-HSE-VD – IN– LST– 005- R0

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No.	Signal Name : ANALOGUE INPUT	Tag. No.	Content of signal	SIGNAL Type	Scale Range	Unit	From	To	IS/NIS	Remarks
1	Compressor Suction pressure transmitter	PIT-RU0001A-01	4 to 20mA / 2-wire	AI	-1.0 to 24.0	barG	Field	RU0001	IS	
2	Discharge pressure transmitter	PIT-RU0001A-03	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	
3	Oil header Compressor pressure transmitter	PIT-RU0001A-02	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	
4	Upstream oil filter pressure transmitter	PIT-RU0001A-05	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	
5	Downstream oil filter pressure transmitter	PIT-RU0001A-06	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	
6	Pressure transmitter oil separator	PIT-RU0001A-04	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	
7	Compressor Suction temperature transmitter	TIT-RU0001A-01	4 to 20mA / 2-wire	AI	-50.0 to 150.0	°C	Field	RU0001	IS	
8	Oil Separator temperature transmitter	TIT-RU0001A-03	4 to 20mA / 2-wire	AI	-50.0 to 150.0	°C	Field	RU0001	IS	
9	Oil header compressor temperature transmitter	TIT-RU0001A-02	4 to 20mA / 2-wire	AI	-50.0 to 150.0	°C	Field	RU0001	IS	
10	Compressor slide valve position transmitter	ZIT-RU0001A-01	4 to 20mA / 2-wire	AI	0.0 to 100.0	%	Field	RU0001	IS	
11	Compressor Suction pressure transmitter	PIT-RU0001B-01	4 to 20mA / 2-wire	AI	-1.0 to 24.0	barG	Field	RU0001	IS	(Unit B)
12	Discharge pressure transmitter	PIT-RU0001B-03	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	(Unit B)
13	Oil header Compressor pressure transmitter	PIT-RU0001B-02	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	(Unit B)
14	Upstream oil filter pressure transmitter	PIT-RU0001B-05	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	(Unit B)
15	Downstream oil filter pressure transmitter	PIT-RU0001B-06	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	(Unit B)
16	Pressure transmitter oil separator	PIT-RU0001B-04	4 to 20mA / 2-wire	AI	-1.0 to 40.0	barG	Field	RU0001	IS	(Unit B)
17	Compressor Suction temperature transmitter	TIT-RU0001B-01	4 to 20mA / 2-wire	AI	-50.0 to 150.0	°C	Field	RU0001	IS	(Unit B)
18	Oil Separator temperature transmitter	TIT-RU0001B-03	4 to 20mA / 2-wire	AI	-50.0 to 150.0	°C	Field	RU0001	IS	(Unit B)
19	Oil header compressor temperature transmitter	TIT-RU0001B-02	4 to 20mA / 2-wire	AI	-50.0 to 150.0	°C	Field	RU0001	IS	(Unit B)
20	Compressor slide valve position transmitter	ZIT-RU0001B-01	4 to 20mA / 2-wire	AI	0.0 to 100.0	%	Field	RU0001	IS	(Unit B)
21	Chiller level transmitter	LIT-RU0001A-01	4 to 20mA / 2-wire	AI	0.0 to 100.0	%	Field	RU0001	IS	
22	Chiller level transmitter	LIT-RU0001B-01	4 to 20mA / 2-wire	AI	0.0 to 100.0	%	Field	RU0001	IS	(Unit B)
23	Compressor motor amperage	II-RU0001A-01	4 to 20mA / 2-wire	AI	0 to 200	Amp	MCC	RU0001	NIS	Amperage convertor towards 4-20mA located in MCC
24	Compressor motor amperage	II-RU0001B-01	4 to 20mA / 2-wire	AI	0 to 200	Amp	MCC	RU0001	NIS	Amperage convertor towards 4-20mA located in MCC (outside vendor scope of supply)
25	Compressor A motor winding U temperature	PTC-RU0001A-13	PTC		0 to 150	°C	Field	MCC		
26	Compressor A motor winding V temperature	PTC-RU0001A-14	PTC		0 to 150	°C	Field	MCC		
27	Compressor A motor winding W temperature	PTC-RU0001A-15	PTC		0 to 150	°C	Field	MCC		
28	Compressor B motor winding U temperature	PTC-RU0001B-13	PTC		0 to 150	°C	Field	MCC		(Unit B)
29	Compressor B motor winding V temperature	PTC-RU0001B-14	PTC		0 to 150	°C	Field	MCC		(Unit B)
30	Compressor B motor winding W temperature	PTC-RU0001B-15	PTC		0 to 150	°C	Field	MCC		(Unit B)



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35	Compressor capacity load Return solenoid valve	SOV-RU0001A-01D	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	
36	Compressor capacity unload supply solenoid valve	SOV-RU0001A-01A	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	
37	Compressor capacity load supply solenoid valve	SOV-RU0001A-01C	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	
38	Compressor capacity unload Return solenoid valve	SOV-RU0001A-01E	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	
39	Compressor capacity load Return solenoid valve	SOV-RU0001B-01D	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	(Unit B)
40	Compressor capacity unload supply solenoid valve	SOV-RU0001B-01A	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	(Unit B)
41	Compressor capacity load supply solenoid valve	SOV-RU0001B-01C	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	(Unit B)
42	Compressor capacity unload Return solenoid valve	SOV-RU0001B-01E	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	(Unit B)
43	Hot gas solenoid valve	SOV-RU0001A-03	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	
44	Evaporator oil drain line.	SOV-RU0001A-02	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	
45	Hot gas solenoid valve	SOV-RU0001B-03	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	(Unit B)
46	Evaporator oil drain line.	SOV-RU0001B-02	24Vdc / **W	DO	1 = Energized	Status	RU0001	Field	NIS	(Unit B)
47	Oil heater temp. control switch	TS-RU0001A-01A	24Vdc / **D	DI	1 = Low Temp.	Status	Field	RU0001	NIS	
48	Oil heater Surface and box temp. control switch	TS-RU0001A-01B	24Vdc / **D	DI	1 = Low Temp.	Status	Field	RU0001	NIS	
49	Oil heater temp. control switch	TS-RU0001B-01A	24Vdc / **D	DI	1 = Low Temp.	Status	Field	RU0001	NIS	(Unit B)
50	Oil heater Surface and box temp. control switch	TS-RU0001B-01B	24Vdc / **D	DI	1 = Low Temp.	Status	Field	RU0001	NIS	(Unit B)
51	Oil separator level switch	LS-RU0001A-01	24Vdc / **D	DI	1 = Low Level	Status	Field	RU0001	NIS	
52	Oil separator level switch	LS-RU0001B-01	24Vdc / **D	DI	1 = Low Level	Status	Field	RU0001	NIS	(Unit B)
53	Compressor A running lamp	XL-RU0001A-06	24Vdc / <=1W	DO	1 = Running	Status	RU0001	RU0001A-LCP-01	NIS	
54	Compressor B running lamp	XL-RU0001B-06	24Vdc / <=1W	DO	1 = Running	Status	RU0001	RU0001B-LCP-01	NIS	(Unit B)
55	Oil pump running lamp	HLR-RU0001A-06	24Vdc / <=1W	DO	1 = Running	Status	RU0001	RU0001A-LCP-01	NIS	
56	Oil pump running lamp	HLR-RU0001B-06	24Vdc / <=1W	DO	1 = Running	Status	RU0001	RU0001B-LCP-01	NIS	(Unit B)



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57	Unit A start PB	HST-RU0001A-01	Dry contact	DI	1 = Start	Pulse	RU0001A-LCP-01	RU0001	NIS	
58	Unit A stop PB	HSP--RU0001A-01	Dry contact	DI	0 = Stop	Pulse	RU0001A-LCP-01	RU0001	NIS	
59	Unit B start PB	HST-RU0001B-01	Dry contact	DI	1 = Start	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
60	Unit B stop PB	HSP--RU0001B-01	Dry contact	DI	0 = Stop	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
61	Oil pump auto select SW	HSC--RU0001A-06A	Dry contact	DI	1 = Auto	Pulse	RU0001A-LCP-01	RU0001	NIS	
62	Oil pump Manual select SW	HSC--RU0001A-06B	Dry contact	DI	1 = Manual	Pulse	RU0001A-LCP-01	RU0001	NIS	
63	Oil pump start PB	HST-RU0001A-06	Dry contact	DI	1 = Start	Pulse	RU0001A-LCP-01	RU0001	NIS	
64	Oil pump stop PB	HSP--RU0001A-06	Dry contact	DI	0 = Stop	Pulse	RU0001A-LCP-01	RU0001	NIS	
65	Oil pump auto select SW	HSC--RU0001B-06A	Dry contact	DI	1 = Auto	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
66	Oil pump Manual select SW	HSC--RU0001B-06B	Dry contact	DI	1 = Manual	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
67	Oil pump start PB	HST-RU0001B-06	Dry contact	DI	1 = Start	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
68	Oil pump stop PB	HSP--RU0001B-06	Dry contact	DI	0 = Stop	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
69	UNIT A Remote / local select SW-Local	HSC--RU0001A-01	Dry contact	DI	1 =Local	Pulse	RU0001A-LCP-01	RU0001	NIS	
70	UNIT B Remote / local select SW-Local	HSC--RU0001B-01	Dry contact	DI	1 =Local	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
71	Compressor A capacity control load select SW	HS--RU0001A-02A	Dry contact	DI	1 = Load	Pulse	RU0001A-LCP-01	RU0001	NIS	
72	Compressor A capacity control unload select SW	HS--RU0001A-02B	Dry contact	DI	1 = Unload	Pulse	RU0001A-LCP-01	RU0001	NIS	
73	Compressor A capacity Control Local/Auto select. SW	HS--RU0001A-01	Dry contact	DI	1 =Local	Pulse	RU0001A-LCP-01	RU0001	NIS	
74	Compressor B capacity control load select SW	HS--RU0001B-02A	Dry contact	DI	1 = Load	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
75	Compressor B capacity control unload select SW	HS--RU0001B-02B	Dry contact	DI	1 = Unload	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
76	Compressor B capacity Control Local/Auto select. SW	HS--RU0001B-01	Dry contact	DI	1 =Local	Pulse	RU0001B-LCP-01	RU0001	NIS	(Unit B)
77	Lamp test PB	HS-RU0001A-03	Dry contact	DI	1 = Test	Pulse	RU0001A-LCP-01	RU0001	NIS	
78	Local panel Emergency stop PB	HSS-RU0001A-01	Dry contact	DI	0 = Emergency stop	Pulse	RU0001A-LCP-01	RU0001	NIS	
79	Unit A ready to start lamp	XL-RU0001A-05	24Vdc / <=1W	DO	1 = Ready	Status	RU0001	RU0001A-LCP-01	NIS	
80	Unit A Common alarm lamp	XA-RU0001A-01	24Vdc / <=1W	DO	1 = Alarm	Status	RU0001	RU0001A-LCP-01	NIS	
81	Unit A Common trip lamp	XA-RU0001A-02	24Vdc / <=1W	DO	1 = Trip	Status	RU0001	RU0001A-LCP-01	NIS	
82	Unit B ready to start lamp	XL-RU0001B-05	24Vdc / <=1W	DO	1 = Ready	Status	RU0001	RU0001B-LCP-01	NIS	(Unit B)
83	Unit B Common alarm lamp	XA-RU0001B-01	24Vdc / <=1W	DO	1 = Alarm	Status	RU0001	RU0001B-LCP-01	NIS	(Unit B)
84	Unit B Common trip lamp	XA-RU0001B-02	24Vdc / <=1W	DO	1 = Trip	Status	RU0001	RU0001B-LCP-01	NIS	(Unit B)
85	Lamp test PB	HS-RU0001B-03	Dry contact	DI	1 = Test	Pulse	RU0001A-LCP-01	RU0001	NIS	
86	Local panel Emergency stop PB	HSS-RU0001B-01	Dry contact	DI	0 = Emergency stop	Pulse	RU0001A-LCP-01	RU0001	NIS	



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87	Compressor RU0001A-M-01 motor start command	XST-RU0001A-01	Dry contact	DO	1 = Start	Pulse	RU0001	MCC		
88	Compressor RU0001A-M-01 motor stop command	XSP-RU0001A-01	Dry contact	DO	0= Stop	Pulse	RU0001	MCC		
89	Compressor RU0001A-M-01 motor running status	XL-RU0001A-01	Dry contact	DI	1 = Running	Status	MCC	RU0001		
90	Compressor RU0001A-M-01 motor fault status	XF-RU0001A-01	Dry contact	DI	0= Fault	Status	MCC	RU0001		
91	Compressor RU0001B-M-01 motor start command	XST-RU0001B-01	Dry contact	DO	1 = Start	Pulse	RU0001	MCC		(Unit B)
92	Compressor RU0001B-M-01 motor stop command	XSP-RU0001B-01	Dry contact	DO	0= Stop	Pulse	RU0001	MCC		(Unit B)
93	Compressor RU0001B-M-01 motor running status	XL-RU0001B-01	Dry contact	DI	1 = Running	Status	MCC	RU0001		(Unit B)
94	Compressor RU0001B-M-01 motor fault status	XF-RU0001B-01	Dry contact	DI	0= Fault	Status	MCC	RU0001		(Unit B)
95	Oil pump RU0001A-P-01 motor start command	XST-RU0001A-02	Dry contact	DO	1 = Start	Pulse	RU0001	MCC		
96	Oil pump RU0001A-P-01 motor stop command	XSP-RU0001A-02	Dry contact	DO	0= Stop	Pulse	RU0001	MCC		
97	Oil pump RU0001A-P-01 motor running status	XL-RU0001A-03	Dry contact	DI	1 = Running	Status	MCC	RU0001		
98	Oil pump RU0001A-P-01 motor fault status	XF-RU0001A-03	Dry contact	DI	0= Fault	Status	MCC	RU0001		
99	Oil pump RU0001B-P-01 motor start command	XST-RU0001B-02	Dry contact	DO	1 = Start	Pulse	RU0001	MCC		(Unit B)
100	Oil pump RU0001B-P-01 motor stop command	XSP-RU0001B-02	Dry contact	DO	0= Stop	Pulse	RU0001	MCC		(Unit B)
101	Oil pump RU0001B-P-01 motor running status	XL-RU0001B-03	Dry contact	DI	1 = Running	Status	MCC	RU0001		(Unit B)
102	Oil pump RU0001B-P-01 motor fault status	XF-RU0001B-03	Dry contact	DI	0= Fault	Status	MCC	RU0001		(Unit B)
103	Separator oil heater RU0001A-H-01 On command	XS-RU0001A-01B	Dry contact	DO	1 = On	Pulse	RU0001	MCC		
104	Separator oil heater RU0001A-H-01 Off command	XS-RU0001A-01C	Dry contact	DO	0= Off	Pulse	RU0001	MCC		
105	Separator oil heater RU0001A-H-01 Running status	XL-RU0001A-02	Dry contact	DI	1 = On	Status	MCC	RU0001		
106	Separator oil heater RU0001A-H-01 fault status	XF-RU0001A-02	Dry contact	DI	0= Fault	Status	MCC	RU0001		
107	Separator oil heater RU0001B-H-01 On command	XS-RU0001B-01B	Dry contact	DO	1 = On	Pulse	RU0001	MCC		(Unit B)
108	Separator oil heater RU0001B-H-01 Off command	XS-RU0001B-01C	Dry contact	DO	0= Off	Pulse	RU0001	MCC		(Unit B)
109	Separator oil heater RU0001B-H-01 Running status	XL-RU0001B-02	Dry contact	DI	1 = On	Status	MCC	RU0001		(Unit B)
110	Separator oil heater RU0001B-H-01 fault status	XF-RU0001B-02	Dry contact	DI	0= Fault	Status	MCC	RU0001		(Unit B)
111	ESD trip signal to package A	ESD-RU0001A-02	Dry contact	DI	0 = Trip	Pulse	Plant ESD	RU0001		
112	UCP ESD trip signal	ESD-RU0001A-01	Dry contact	DI	0 = Trip	Pulse	RU0001	RU0001		
113	ESD trip signal to package B	ESD-RU0001B-02	Dry contact	DI	0 = Trip	Pulse	Plant ESD	RU0001		(Unit B)

