







OWNER:  شرکت سست و سویی گستر ایرانیان (سهامی خاص)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
MC :  شرکت سست و سویی گستر ایرانیان (سهامی خاص)	I/O LIST FOR EMERGENCY INSTRUMENT AIR COMPRESSOR								
Owner Document Number: 17811-06B							Project	Area	Phase
	BU	20	VD	303	IN	LST	0084	Rev.: 04	Page 1 of 4

I/O LIST FOR EMERGENCY INSTRUMENT AIR COMPRESSOR

 شرکت سست و سویی گستر ایرانیان (سهامی خاص)	 Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT
Document Review		
Issue Purpose:	AFC	
Result Code: AP,AN,CM,RE,NC	AN	
Next Status : IFC,IFA,IFI,AFC,AB	AFC	
Responsible Department	MECHANICAL	
Commented Date	7/6/2022	
Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract.		

04	09/06/2022	Approved for Construction	KP	RB	JR	
03	10/02/2022	Approved for Construction	KP	RB	JR	
02	06/01/2022	Approved for Construction	WZ	KP	JR	
01	24/11/2021	For approval	WZ	KP	JR	
00	14/10/2021	For approval	WZ	KP	JR	
Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
					Class: 1	Phase: P

Inputs and Outputs List



1 LEGEND

SIGNAL TYPE	SIGNAL LEVEL	SCHEDULE total amount *	USED total amount *	SPARE total amount*	SPARE %	NOTES
AI Analog Inputs	4-20 mA	16	7	9	56%	
DI Digital Inputs	24 VDC	32	18	14	44%	
DO Digital Outputs	24 VDC	32	16	16	50%	
AI Analog Inputs	4-20 mA					No IO, only through PID controller

*Total amount considering redundant IOs. All IO's are redundant

In nitrogen compressor I/O List one DO has been considered to activation PID controller please clarify whether it is required in the air compressor I/O List or not?
 if it is required please explain function of this signal else design for both compressors shall be uniform.

TAG NUMBER	SERVICE DESCRIPTION	INSTRUMENT TYPE	LOCATION	CONTROL SYSTEM	I/O TYPE	SIGNAL TYPE	POWER SUPPLY	IS/NIS	CALIBRATED RANGE	ENG UNIT	STATE 0	STATE 1	SET POINT LL	SET POINT L	SET POINT H	SET POINT HH	FIELD NUMBER	PROTOCOL
PI7-71103	Compressor Inlet Air Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...13.5	bar(a)	-	-	6.9	-	-	8.6	BU-20-VD-303-PR-DWG-0066	HART
PI7-71104	Compressor Oil System Oil Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...5	bar(g)	-	-	1.5	-	-	-	BU-20-VD-303-PR-DWG-0066	HART
PI7-71107	Compressor Outlet Air Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...36	bar(a)	-	-	18.5	19 (load/start)	21 (Unload/Stop)	21.5	BU-20-VD-303-PR-DWG-0066	HART
TIT-71101	Compressor Inlet Air Temperature Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...80	°C	-	-	-	-	56	-	BU-20-VD-303-PR-DWG-0066	HART
TIT-71102	Compressor Upstream After-Cooler Air Temperature Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...200	°C	-	-	-	-	-	195	BU-20-VD-303-PR-DWG-0066	HART
FT-71101	Compressor Cooling Water Outlet Water Flow Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...5	m ³ /hr	-	-	-	-	2.3	-	BU-20-VD-303-PR-DWG-0066	HART
VT-71101	Compressor Vibration Level Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...25	mm/s	-	-	-	-	-	8	BU-20-VD-303-PR-DWG-0066	HART
PV-71101	PV-71101 I/P Actuator	I/P CONVERTER	FIELD	PID CONTROLLER	AO 4-20 mA (redundant)	ANALOG	LOOP POWERED	NIS	0...100	%	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0066	HART
XY-71101	Compressor Inlet Solenoid Valve	SOLENOID VALVE	FIELD	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Open	Closed	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XY-71102	Compressor Cooling Water Inlet Solenoid Valve	SOLENOID VALVE	FIELD	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Open	Closed	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71101	Compressor Start Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71102	Compressor Stop Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	-	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71103	Compressor Emergency Stop Button	ESD PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Emergency Stop	Normal	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71104	Compressor Lamptest Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Lampstest	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71105	Compressor Start Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	Start	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71106	Compressor Stop Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	-	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71107	Compressor Emergency Stop Button	ESD PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Emergency Stop	Normal	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71108	Compressor Lamptest Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Lampstest	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71109	Compressor Accept Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Accept	Accept	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
PB-71110	Compressor Reset Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Reset	Reset	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
HS-71101	Compressor Local/Off/Remote Switch	SWITCH	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off/Local	Remote	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71101	Compressor Operational Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Operational	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71102	Compressor Running Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71103	Compressor Common Alarm Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Alarm	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71104	Compressor Common Trip Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Trip	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71106	Compressor Operational Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Operational	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71107	Compressor Running Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71108	Compressor Common Alarm Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Alarm	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71109	Compressor Common Trip Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Trip	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
HM-71101	Compressor Hourmeter	HOURMETER	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Hourmeter	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
HS-71120-R	Compressor Reset ESD Relay	ESD RESET RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Normal	Reset	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
HS-71121-SO	Compressor Forced Shutdown	INTERFACE RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Normal	Forced Shutdown	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XS-71122-SI/SP	Compressor Main Motor Start/Stop	INTERFACE RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	Start	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XS-71123-SI/SP	Compressor Oil Heater ON/OFF	INTERFACE RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	On	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71124	Compressor Main Motor Running	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not_Running	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
VAL-71125	Compressor Main Motor Fault	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Fault	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XL-71126	Heater Running	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not_Running	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
VAL-71127	Heater Fault	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Fault	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
KCS-715	Time Synchronization	CONTACT	UCP	FCS	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
HS-715-SO-1	Emergency Shutdown Command	SIGNAL TO/FROM ESD	UCP	ESD	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	ESD	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
MAI-715-2	Common Alarm	SIGNAL TO/FROM ESD	UCP	ESD	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Alarm	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-
XS-715	Interlock Switch Stop Compressor	SIGNAL TO/FROM FCS	UCP	FCS	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	Not Stop	-	-	-	-	BU-20-VD-303-PR-DWG-0066	-