





OWNER:  شرکت ست و سوسی توید ایرانیان (سهامی خاص)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT							
MC :  شرکت ست و سوسی توید ایرانیان (سهامی خاص)	I/O LIST FOR NITROGEN GAS BOOSTER								
Owner Document Number: 17811-06A	Project BU	Area 20	Phase VD	Unit 303	Dis. IN	Doc. LST	Seq. 0034	Contract No : 52-98/445	
								Rev.: 03	Page 1 of 4

I/O LIST FOR NITROGEN GAS BOOSTER

Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
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	
						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	13	3	19%	
DI Digital Inputs	24 VDC	32	17	15	47%	
DO Digital Outputs	24 VDC	32	17	15	47%	
AO Analog Outputs	4-20 mA					No IO, only through PID controller

*Total amount considering redundant I/O, all I/O is redundant.

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	PID NUMBER	PROTOCOL
PIT-10153	Compressor Inlet Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...13.5	bar(a)	-	-	6.5	-	6.9	-	BU-20-VD-303-PR-DWG-0013	HART
PIT-10154	Compressor Oil System Oil Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...35	bar(g)	-	-	1.5	-	-	-	BU-20-VD-303-PR-DWG-0013	HART
PIT-10156	Compressor 1st Stage Downstream Intercooler Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...36	bar(a)	-	-	15	-	-	-	BU-20-VD-303-PR-DWG-0013	HART
PIT-10157	Compressor 1st Stage Downstream Intercooler Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...36	bar(a)	-	-	15.5	-	-	-	BU-20-VD-303-PR-DWG-0013	HART
PIT-10158	Compressor Outlet Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...36	bar(a)	-	-	-	22 (Load/Start)	23 (Unload/Stop)	-	BU-20-VD-303-PR-DWG-0013	HART
PIT-10159	Compressor Outlet Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1...36	bar(a)	-	-	21	-	23.5	-	BU-20-VD-303-PR-DWG-0013	HART
TIT-10151	Compressor Inlet Nitrogen Temperature Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...80	°C	-	-	-	-	56	-	BU-20-VD-303-PR-DWG-0013	HART
TIT-10152	Compressor 1st Stage Nitrogen Temperature	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...200	°C	-	-	-	-	160	-	BU-20-VD-303-PR-DWG-0013	HART
TIT-10153	Compressor 1st Stage Nitrogen Temperature	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...200	°C	-	-	-	-	170	-	BU-20-VD-303-PR-DWG-0013	HART
TIT-10154	Compressor 1st Stage Downstream Intercooler Nitrogen Temperature Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...80	°C	-	-	-	-	50	-	BU-20-VD-303-PR-DWG-0013	HART
TIT-10155	Compressor Upstream After-Cooler Nitrogen Temperature Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...200	°C	-	-	-	-	140	-	BU-20-VD-303-PR-DWG-0013	HART
FIT-10151	Compressor Cooling Water Outlet Water Flow Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0...20	m ³ /hr	-	-	13	-	-	-	BU-20-VD-303-PR-DWG-0013	HART
VT-10151	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-0013	HART
PV-10151	PV-10151 VP Actuator	VP CONVERTER	FIELD	PID CONTROLLER	AO 4-20 mA (redundant)	ANALOG	LOOP POWERED	NIS	0...100	%	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART
XV-10151	Compressor Inlet Solenoid Valve	SOLENOID VALVE	FIELD	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Open	Closed	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XV-10152	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-0013	-
PB-10151	Compressor Start Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Start	Start	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10152	Compressor Stop Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	Normal	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10153	Compressor Emergency Stop Button	ESD PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Emergency Stop	Normal	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10154	Compressor Lamptest Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Lamptest	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10155	Compressor Start Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Start	Start	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10156	Compressor Stop Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	Normal	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10157	Compressor Emergency Stop Button	ESD PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Emergency Stop	Normal	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10158	Compressor Lamptest Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Lamptest	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10159	Compressor Accept Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Accept	Accept	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
PB-10160	Compressor Reset Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Reset	Reset	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
HS-10151	Compressor Local/Off/Remote Switch	SWITCH	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off/Local	Remote	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10151	Compressor Operational Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Operational	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10153	Compressor Running Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10153	Compressor Common Alarm Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Alarm	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10154	Compressor Common Trip Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Trip	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10156	Compressor Operational Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Operational	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10157	Compressor Running Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10158	Compressor Common Alarm Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Alarm	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XL-10159	Compressor Common Trip Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Common Trip	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
HM-10151	Compressor Hourmeter	HOURMETER	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Hourmeter	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
HS-10120-R	Compressor Reset ESD Relay	INTERFACE RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	Reset	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
HS-10121-SD	Compressor Forced Shutdown	INTERFACE RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Normal	Forced Shutdown	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XS-10122-S7/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-0013	-
XS-10123-S7/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-0013	-
XL-10124	Compressor Main Motor Running	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Running	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XAL-10125	Compressor Main Motor Fault	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Fault	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XV-10126	Heater Running	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Running	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
XAL-10127	Heater Fault	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Fault	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
KCS-108	Time Synchronization	CONTACT	UCP	FCS	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-
HS-108-SD-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-0013	-
XAL-108-2	Common Alarm	SIGNAL TO/FROM ESD	UCP	ESD	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Alarm	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0013	-