







OWNER:  شرکت سست و سویی گیس ایران (سهامی خاص)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
MC :  شرکت سست و سویی گیس ایران (سهامی خاص)	<b>I/O LIST FOR NITROGEN GAS BOOSTER</b>								
	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
Owner Document Number: 17811-06A	BU	20	VD	303	IN	LST	0034	Rev.: 05	Page 1 of 4

## I/O LIST FOR NITROGEN GAS BOOSTER

 شرکت سست و سویی گیس ایران (سهامی خاص)	 Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT
<b>Document Review</b>		
Issue Purpose:	AFC	
Result Code: AP,AN,CM,RE,NC	AP	
Next Status : IFC,IFA,IFI,AFC,AB	-	
Responsible Department	MECHANICAL	
Commented Date	7/25/2022	
<b>Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract.</b>		

05	07/07/2022	Approved for Construction	KP	RB	JR	
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
<b>AI</b> Analog Inputs	4-20 mA	16	13	3	19%	
<b>DI</b> Digital Inputs	24 VDC	32	17	15	47%	
<b>DO</b> Digital Outputs	24 VDC	32	17	15	47%	
<b>AO</b> Analog Inputs	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	PAID NUMBER	PROTOCOL	
PI-10153	Compressor Inlet Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0. 12.5	bar(a)	-	-	6.5	-	-	6.5	BU-20-VD-303-PR-DWG-0013	HART	
PI-10154	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-0013	HART	
PI-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	
PI-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	
PI-10158	Compressor Outlet Nitrogen Pressure Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	1. 36	bar(a)	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
PI-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	
TI-10151	Compressor Inlet Nitrogen Temperature Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0. 80	°C	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
TI-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	
TI-10153	Compressor 1st Stage Nitrogen Temperature	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0. 200	°C	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
TI-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	
TI-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	
FT-10151	Compressor Cooling Water Outlet Water Flow Transmitter	TRANSMITTER	FIELD	PLC	AI 4-20 mA (redundant)	ANALOG	LOOP POWERED	IS	0. 20	m³/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 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-0013	HART	
XY-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	HART	
XY-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	HART	
PB-10151	Compressor Start Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	Start	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
PB-10152	Compressor Stop Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
PB-10154	Compressor Lamptest Pushbutton	PUSHBUTTON	LP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Lampstest	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
PB-10155	Compressor Start Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	Start	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
PB-10156	Compressor Stop Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Stop	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
PB-10158	Compressor Lamptest Pushbutton	PUSHBUTTON	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Lampstest	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
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	HART	
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	HART	
XL-10151	Compressor Operational Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Operational	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
XL-10152	Compressor Running Lamp	LAMP	LP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
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	HART	
XL-10156	Compressor Operational Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Operational	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
XL-10157	Compressor Running Lamp	LAMP	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
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	HART	
HM-10151	Compressor Hourmeter	HOURMETER	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	Hourmeter	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
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	HART	
XS-10122-57NP	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	HART	
XS-10123-57OP	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	HART	
XS-10128-PID	PID control active	INTERFACE RELAY	UCP	PLC	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Off	On	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
YAL-10125	Compressor Main Motor Fault	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Fault	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
XL-10126	Heater Running	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Not Running	Running	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
YAL-10127	Heater Fault	CONTACT	UCP	PLC	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Fault	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
XCS-108	Time Synchronization	CONTACT	UCP	FCS	DI 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	-	-	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	
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	HART	
XAL-108-2	S/D Status	SIGNAL TO/FROM ESD	UCP	ESD	DO 24VDC (redundant)	DIGITAL	24 VDC	NIS	-	-	Alarm	Healthy	-	-	-	-	BU-20-VD-303-PR-DWG-0013	HART	