


 Gachsaran Polymer Industries Company شرکت صنایع پتروشیمی گچساران	Gachsaran Polymer Industries Company HDPE Plant I/O List		
			
PO No: GPIC-PT-MA-PO-000-3029	Document Number: VD-GPIC-MA-3029-3029-0045	Rev. 01	Page 1 of 5


EL:
 It seems that start and stop commands from UCP to MCC have been deleted from this document!
 It is not acceptable and all required signals between UCP and MCC shall be considered in this document, otherwise, the responsibility of any consequences is by vendor.

EL(repeated comment):
 Winding RTD signals shall be added for all MV motors (from motor RTD terminal Box to MCC).


I/O List

Code1	<input type="checkbox"/> No Comment/ Approved (Applicable Only for "FOR REVIEW" and "For Approval" Documents) No comment and the document are released for Manufacturing.
Code2	<input type="checkbox"/> No Comment/ Approved with Note(s) Vendor/Sub-Contractor shall correct, revise and resubmit the document. The document is released for Manufacturing if changes incorporated.
Code3	<input checked="" type="checkbox"/> Commented Vendor/Sub-Contractor shall correct, revise and resubmit the document by the date specified. The document shall be revised under the Status of "R: Revised Issue". All corrected documents shall be resubmitted before starting the Manufacturing Process.
Code 4	<input type="checkbox"/> Not Accepted (Rejected) Vendor/Sub-Contractor shall re-work / re-design / re-specify the contents of the document according to the comments / reasons for rejection. All corrected documents shall be resubmitted before starting the manufacturing. Vendor/Sub-Contractor shall not proceed with subsequent works of Material Supply or Manufacturing until receiving Code1/Code2 or No Code from PURCHASER. Vendor/Sub-Contractor shall resubmit the document with the same revision within 6 working days after receiving comments.
No code	<input type="checkbox"/> No Code (Applicable Only for "For Information" Documents and "As Built DWGs") Document has been submitted for PURCHASER's Information (FI). Consistency, completeness and correctness of document content is in Vendor/Sub-Contractor's responsibility.

Above checking results by EIED shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing.

 Energy Industries Engineering & Design co.	Date: Nov. 19, 2025
	Dept.: MA
	Signature: F.Hamooni

05					
04					
03					
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01	3-Nov-25	IFR	A.M	F.T	A.M
00	8-Jul-25	IFR	A.M	F.T	A.M
Rev.	DATE	PURPOSE OF ISSUE	PREPARED	CHECKED	APPROVED

	Document No.: VD-GPIC-MA-3029-0045																
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>BY</th> <th>APP</th> <th>DATE</th> <th>P.O.I</th> </tr> <tr> <td>00</td> <td>EAD</td> <td>IMA</td> <td>09/07/2025</td> <td>IFR</td> </tr> <tr> <td>01</td> <td>EAD</td> <td>IMA</td> <td>03/11/2025</td> <td>IFR</td> </tr> </table>	NO.	BY	APP	DATE	P.O.I	00	EAD	IMA	09/07/2025	IFR	01	EAD	IMA	03/11/2025	IFR	
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I/O List																	
FOR PROJECT: <u>Gachsan Polymer Industries Company (GPIC)</u> P.O No.: <u>HDPE</u> ITEM: <u>PK-6101</u> SITE: <u>GPIC DD MA REQ 000 3029</u> SERVICE: <u>Propylene Refrigeration Package</u>																	

TAG	SERVICE	PID DWG No.	TYPE	FROM	TO	DESCRIPTION	Engineering units	LOCATION	IB No.	SIGNAL CATEGORY	SIGNAL	RELAY OUTPUT	POWER SUPPLY	TYPE	SERIAL	I5/NIS	RACK	SLOT	CHANNEL	STATES	STATES1
Card Type: Digital IN/ 16																					
Card Type: Digital OUT/ 16																					
YH-6101B	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	LCP-6101A	COMPRESSOR -A- RUNNING		COMP SKID	LCP-6101A	DO	24VDC	WET CONTACT	PW400	H		NIS	2	6	0	OFF	ON
YH-6101B	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	LCP-6101A	COMPRESSOR -A- AVAILABLE/FAULT		COMP SKID	LCP-6101A	DO	24VDC	WET CONTACT	PW400	H		NIS	2	6	1	OFF	ON
YH-6101B	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	LCP-6101B	COMPRESSOR -B- RUNNING		COMP SKID	LCP-6101A	DO	24VDC	WET CONTACT	PW400	H		NIS	2	6	2	OFF	ON
YH-6101B	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	LCP-6101B	COMPRESSOR -B- AVAILABLE/FAULT		COMP SKID	LCP-6101A	DO	24VDC	WET CONTACT	PW400	H		NIS	2	6	3	OFF	ON
XA-61195	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	UCP-6101	ENCLOSURE FANS ON/OFF - 1		UCP-6101	UCP-6101	DO	24VDC	WET CONTACT	PW400	H		NIS	2	6	4	OFF	ON
						SPARE				DO	24VDC		PW400				2	6	5		
						SPARE				DO	24VDC		PW400				2	6	6		
						SPARE				DO	24VDC		PW400				2	6	7		
						SPARE				DO	24VDC		PW400				2	6	8		
						SPARE				DO	24VDC		PW400				2	6	9		
						SPARE				DO	24VDC		PW400				2	6	10		
						SPARE				DO	24VDC		PW400				2	6	11		
						SPARE				DO	24VDC		PW400				2	6	12		
						SPARE				DO	24VDC		PW400				2	6	13		
						SPARE				DO	24VDC		PW400				2	6	14		
						SPARE				DO	24VDC		PW400				2	6	15		
Card Type: Digital OUT/ 16																					
XV-61111	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	FIRLD	COMPRESSOR -A- SLIDE VALVE UNLOAD SOV		COMP SKID	IB-UEV-61112	DO	24VDC	WET CONTACT	PW400	H		NIS	2	7	0	OFF	ON
XV-61112	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	FIRLD	COMPRESSOR -A- SLIDE VALVE LOAD SOV		COMP SKID	IB-UEV-61112	DO	24VDC	WET CONTACT	PW400	H		NIS	2	7	1	OFF	ON
XV-61121	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	FIRLD	COMPRESSOR -B- SLIDE VALVE UNLOAD SOV		COMP SKID	IB-UEV-61122	DO	24VDC	WET CONTACT	PW400	H		NIS	2	7	2	OFF	ON
XV-61122	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	FIRLD	COMPRESSOR -B- SLIDE VALVE LOAD SOV		COMP SKID	IB-UEV-61122	DO	24VDC	WET CONTACT	PW400	H		NIS	2	7	3	OFF	ON
XV-61151	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	FIRLD	OIL RECOVERY VALVE SOV - COMPRESSOR DISCHARGE		VESSELS SKID	IB-UEV-61152	DO	24VDC	WET CONTACT	PW400	H		NIS	2	7	4	OFF	ON
XV-61152	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	FIRLD	OIL RECOVERY VALVE SOV - CHILLER RECOVERY		VESSELS SKID	IB-UEV-61152	DO	24VDC	WET CONTACT	PW400	H		NIS	2	7	5	OFF	ON
						SPARE				DO	24VDC		PW400				2	7	6		
						SPARE				DO	24VDC		PW400				2	7	7		
						SPARE				DO	24VDC		PW400				2	7	8		
XA-61101	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	DCS	COMPRESSOR -A- TRIP COMPRESSOR		UCP-6101	UCP-6101	DO	24VDC	DRY CONTACT	PW400	H		NIS	5	7	6	OFF	ON
XA-61102	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	DCS	COMMON -A- ALARM COMPRESSOR		UCP-6101	UCP-6101												
XA-61103	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	DCS	COMPRESSOR -B- TRIP COMPRESSOR		UCP-6101	UCP-6101												
XA-61104	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	DCS	COMMON -B- ALARM COMPRESSOR		UCP-6101	UCP-6101												
UA-61199	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	DCS	PLC FAULT		UCP-6101	UCP-6101												
UA-61114	Propylene	VD-GPIC-MA-3029-3029-0015	BOOL	UCP-6101	DCS	INTERLOCK ACTIVATED		UCP-6101	UCP-6101												

612

DOR

622

652


Repeated comment: Redundancy shall be considered for critical I/O and closed loops. In this case DIR, DOR, AIR, AOR shall be mentioned in this column instead of DI, DO, AI, AO.

These signals are not in the P&ID and shall be added to P&ID if they are required.

PLC I/O LIST
COUNT IS PER UNIT

- AI : Analog Input
- AO : Analog Output
- H : Hardware
- S : Serial
- DI : Digital Input
- DO : Digital Output
- DCS : Data Control Center
- MCC : Motor Control Center
- UCP-6101 : Unit Control Panel
- UCP : Local Control Station
- PLC : Programmable Logic Controller
- PW400 : POWER SUPPLY 400 W

This I/O List is a document containing list of instrumentation which serve as input or output of control system.

				Document No.: VD-GPIC-MA-3029-0045	
NO.	BY	APP	DATE	P.O.I	
00	EAD	IMA	09/07/2025	IFR	
01	EAD	IMA	03/11/2025	IFR	

I/O List

FOR PROJECT: Gachsaran Polymer Industries Company (GPIC)
 P.O No.: HDPE ITEM: PK-6101
 SITE: GPIC DD MA REQ 000 3029
 SERVICE: Propylene Refrigeration Package

Repeated comment: Redundancy shall be considered for critical I/O and closed loops. In this case DIR, DOR, AIR, AOR shall be mentioned in this column instead of DI, DO, AI, AO.

TAG	SERVICE	PID DWG No.	TYPE	FROM	TO	DESCRIPTION	Engineering units	LOCATION	IB No.	SIGNAL CATEGORY	SIGNAL TYPE	RELAY	OUTPUT/POWER SUPPLY	RACK	SLOT	CHANNEL			
Card Type: Digital IN/ 16																			
Card Type: Analog IN/ 8																			
TAG	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -A- SUCTION PRESSURE	Bar	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	8	2
PT-61111	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -A- OIL SUPPLY PRESSURE	Bar	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	8	3
TT-61111	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -A- SUCTION TEMPERATURE	C	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	8	4
VT-61111	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -A- CASING VIBRATION	G	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	8	5
ZT-61111	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -A- SLIDE VALVE POSITION	%	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	8	6
						SPARE				AI	4-20mA	-					2	8	7
						SPARE				AI	4-20mA	-					2	8	7
Card Type: Analog IN/ 8																			
TAG	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -B- SUCTION PRESSURE	Bar	COMP SKID	JB-UJA-61121	AI	4-20mA	-	PW400	H	S	IS	2	9	0
PT-61121	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -B- OIL SUPPLY PRESSURE	Bar	COMP SKID	JB-UJA-61121	AI	4-20mA	-	PW400	H	S	IS	2	9	1
TT-61121	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -B- SUCTION TEMPERATURE	C	COMP SKID	JB-UJA-61121	AI	4-20mA	-	PW400	H	S	IS	2	9	2
VT-61121	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -B- CASING VIBRATION	G	COMP SKID	JB-UJA-61121	AI	4-20mA	-	PW400	H	S	IS	2	9	3
ZT-61121	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR -B- SLIDE VALVE POSITION	%	COMP SKID	JB-UJA-61121	AI	4-20mA	-	PW400	H	S	IS	2	9	4
						SPARE				AI	4-20mA	-					2	9	5
						SPARE				AI	4-20mA	-					2	9	6
						SPARE				AI	4-20mA	-					2	9	7
Card Type: Analog IN/ 8																			
TAG	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMMON DISCHARGE PRESSURE	Bar	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	0
PT-61131	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COALESCE ELEMENT OUTLET PRESSURE	Bar	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	1
PT-61132	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	OIL FILTER SUPPLY PRESSURE	Bar	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	2
PT-61133	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	OIL SUPPLY PRESSURE	Bar	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	3
PT-61134	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	OIL SEPARATOR TEMPERATURE	C	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	4
TT-61131	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	OIL SEPARATOR TEMPERATURE	C	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	5
TT-61132	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	OIL SUPPLY TEMPERATURE	C	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	6
LT-61131	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	OIL SEPARATOR LEVEL	%	COMP SKID	JB-UJA-61111	AI	4-20mA	-	PW400	H	S	IS	2	10	7
						SPARE				AI	4-20mA	-					2	10	7
Card Type: Analog IN/ 8																			
TAG	Propylene	VD-GPIC-MA-3029-3029-0014	FLOAT/REAL	DCS	UCP-6100	CHILLER TUBE OUTLET TEMPERATURE	C	VESSELS SKID	JB-UJA-61141	AI	4-20mA	-	PW400	H	S	IS	2	11	0
TIC-61101	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	CHILLER LEVEL	%	VESSELS SKID	JB-UJA-61141	AI	4-20mA	-	PW400	H	S	IS	2	11	1
LT-61151	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	CHILLER LEVEL	%	VESSELS SKID	JB-UJA-61141	AI	4-20mA	-	PW400	H	S	IS	2	11	2
						SPARE				AI	4-20mA	-	PW400	H	S	IS	2	11	3
PT-61141	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	ECONOMIZER TUBESIDE PRESSURE	Bar	COMP SKID	JB-UJA-61141	AI	4-20mA	-	PW400	H	S	IS	2	11	4
TT-61141	Propylene	VD-GPIC-MA-3029-3029-0016	FLOAT/REAL	FIELD	UCP-6101	ECONOMIZER TUBESIDE TEMPERATURE	Bar	COMP SKID	JB-UJA-61141	AI	4-20mA	-	PW400	H	S	IS	2	11	5
TT-61190	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	UCP-6101	UCP-6101	UNIT CONTROL PANEL TEMPERATURE	C	UCP-6101	UCP-6101	AI	4-20mA	-	PW500	H	S	NIS	2	11	6
						SPARE				AI	4-20mA	-					2	11	7
						SPARE				AI	4-20mA	-					2	11	7
Card Type: Analog IN/ 8																			
TAG	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR MOTOR -A- BEARING TEMP DE	C	COMP -A- SKID	MOTOR JB	AI	4-20mA	-	PW400	H	S	IS	2	12	0
TE-61117	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR MOTOR -A- BEARING TEMP NDE	C	COMP -A- SKID	MOTOR JB	AI	4-20mA	-	PW400	H	S	IS	2	12	1
TE-61118	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR MOTOR -B- BEARING TEMP DE	C	COMP -B- SKID	MOTOR JB	AI	4-20mA	-	PW400	H	S	IS	2	12	2
TE-61127	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR MOTOR -B- BEARING TEMP NDE	C	COMP -B- SKID	MOTOR JB	AI	4-20mA	-	PW400	H	S	IS	2	12	3
TE-61128	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	FIELD	UCP-6101	COMPRESSOR MOTOR -B- BEARING TEMP NDE	C	COMP -B- SKID	MOTOR JB	AI	4-20mA	-	PW400	H	S	IS	2	12	4
						SPARE				AI	4-20mA	-	PW400	H	S	IS	2	12	5
IT-61111	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	MCC	UCP-6101	COMPRESSOR -A- MOTOR CURRENT	AMPS	MCC	UCP-6101	AI	4-20mA	-	PW400	H	S	IS	2	12	6
IT-61121	Propylene	VD-GPIC-MA-3029-3029-0016	FLOAT/REAL	MCC	UCP-6102	COMPRESSOR -B- MOTOR CURRENT	AMPS	MCC	UCP-6102	AI	4-20mA	-	PW400	H	S	IS	2	12	7
Card Type: Analog OUT 4																			
TAG	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	UCP-6101	UCP-6101	HOT GAS BYPASS CONTROL VALVE	%	VESSELS SKID	JB-UJA-61141	AO	4-20 mA	-	-	H	S	IS	2	13	0
YP1-61151	Propylene	VD-GPIC-MA-3029-3029-0015	FLOAT/REAL	UCP-6101	UCP-6101	CHILLER LEVEL CONTROL VALVE	%	VESSELS SKID	JB-UJA-61141	AO	4-20 mA	-	-	H	S	IS	2	13	1
TPY1-61141	Propylene	VD-GPIC-MA-3029-3029-0016	FLOAT/REAL	UCP-6102	UCP-6102	ECONOMIZER TEMPERATURE CONTROL VALVE	%	VESSELS SKID	JB-UJA-61141	AO	4-20 mA	-	-	H	S	IS	2	13	2
						SPARE				AO	4-20 mA	-	-	H	S	IS	2	13	3

- PLC I/O LIST
 COUNT IS PER UNIT
- AI : Analog Input
 - AO : Analog Output
 - H : Hardwire
 - S : Serial
 - DI : Digital Input
 - DO : Digital Output
 - DCS : Data Control Center
 - MCC : Motor Control Center
 - UCP-6101 : Unit Control Panel
 - UCP : Local Control Station
 - PLC : Programmable Logic Controller
 - PW400 : POWER SUPPLY 400 W
- This IO List is a document containing list of instrumentation which serve as input or output of control system.

Native file (Excel) shall be submitted with PDF file in all the next revisions.