

TD-201 Rev No. 00	Form No.	 	PRODUCT STANDARD PROJECT ENGINEERING & SYSTEMS DIVISION, HYDERABAD	ANNEXURE-2B to PY55295
				Rev No. 00
				Page 1 of 14
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company. ANNEXURE-2B TO PY55295 DRIVE CONTROL PHILOSOPHY PROJECT75MW VISAKH REFINERY MODERNIZATION PROJECT (VRMP) CUSTOMERM/S HINDUSTAN PETROLEUM CORPORATION LIMITED,VIZAG,A.P CONSULTANTENGINEERS INDIA LIMITED				

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COMPUTER FILE NAME

SIGN. AND DATE | REF. DRG. NO.

DRG. NO. PY-SC-4-M104-8121-01

SH. 01 OF 07

DRIVE CONTROL PHILOSOPHY

CUSTOMER:									
 HINDUSTAN PETROLEUM CORPORATION LIMITED									
CONSULTANT:									
 ENGINEERS INDIA LIMITED (EIL), NEW DELHI									
PROJECT: VISHAKHA REFINERY MODERNISATION PROJECT									
(1X59.3 MW GTG + 1X185 TPH HRSG + 1X15.5 MW STG)									
Bharat Heavy Electricals Ltd. Hyderabad									
DEPT.		UNTOL.	DIMS.	GR.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
CODE		G.M.F.					-N.A.-	-N.A.-	-N.A.-
TITLE							REV.		
DRIVE CONTROL PHILOSOPHY							00		
CARD CODE							DRG. NO: PY-SC-4-M104-8121-01		
N.A.							CUST. DRG. No:		
							SHT. No 01 NO. OF SHT. 09		

DOCUMENT REVIEW DETAILS	
1	No Comments
2	Proceed with manufacture/fabrication as per the commented document. Revised document required.
3	Document does not conform to basic requirements as marked. Resubmit for review.
☒	Retained for records.
Signature with Date 10-MAY-2018	
Name of Reviewer KARTIK RAMESH (C113)	
Transmittal No.	

NOTES

- ## LEGENDs

- ### Tag Numbering Philosophy:



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CHD/APPD	

REV.	DATE	ALTERED
		CHD/APPD
ZONE		

	REV.	DATE
	ZONE	

	ALTERED
	CHD/APPD

	REV.	DATE	ALTERE
			CHD/AP
	ZONE		

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PPD

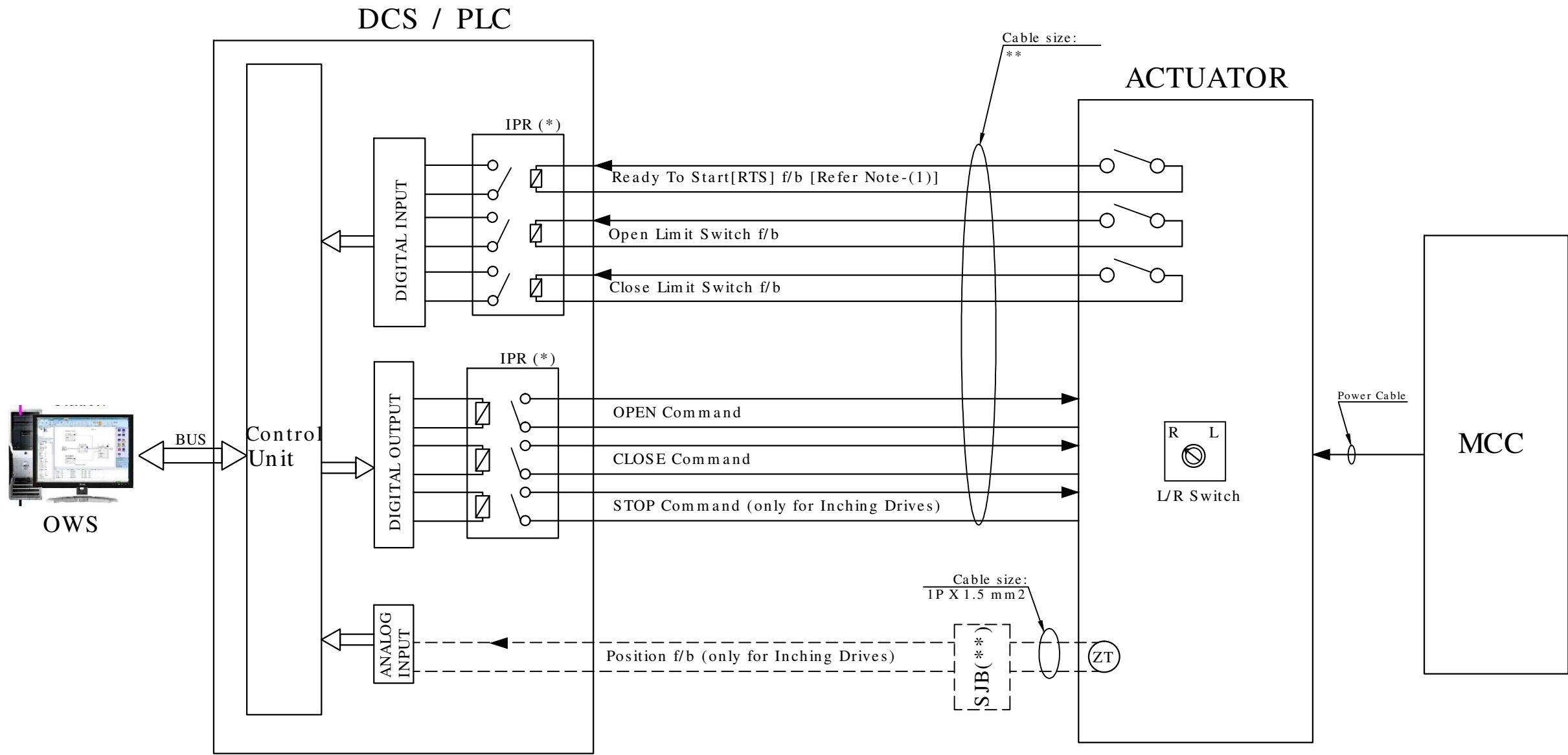
					BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				
DEPT.		UNTOOL. DIMS. GR.				SCALE		WEI	
CODE		G/M/F							
TITLE									
DRIVE CONTROL PULSOPROXY									

	NAME	SIGN.	DATE	NO. OF VAR.
DRN.	SONALIKA		21.03.18	
CHD.	KAMAL		21.03.18	
APPD.	ANAND		21.03.18	-N.A.-
WGT (KG)	REF. TO ASSY. DRG.	ITEM NO.		NO. OF ITEMS
	-N.A.-	-N.A.-		-N.A.-
CARD CODE	DRG. NO. PY-SC-4-M104-8121-01			REV.
	CUST. DRG. NO. _____			00

10-MAY-2018

KARTIK RAMESH (C119)

Interface for BI-DIRECTIONAL DRIVE



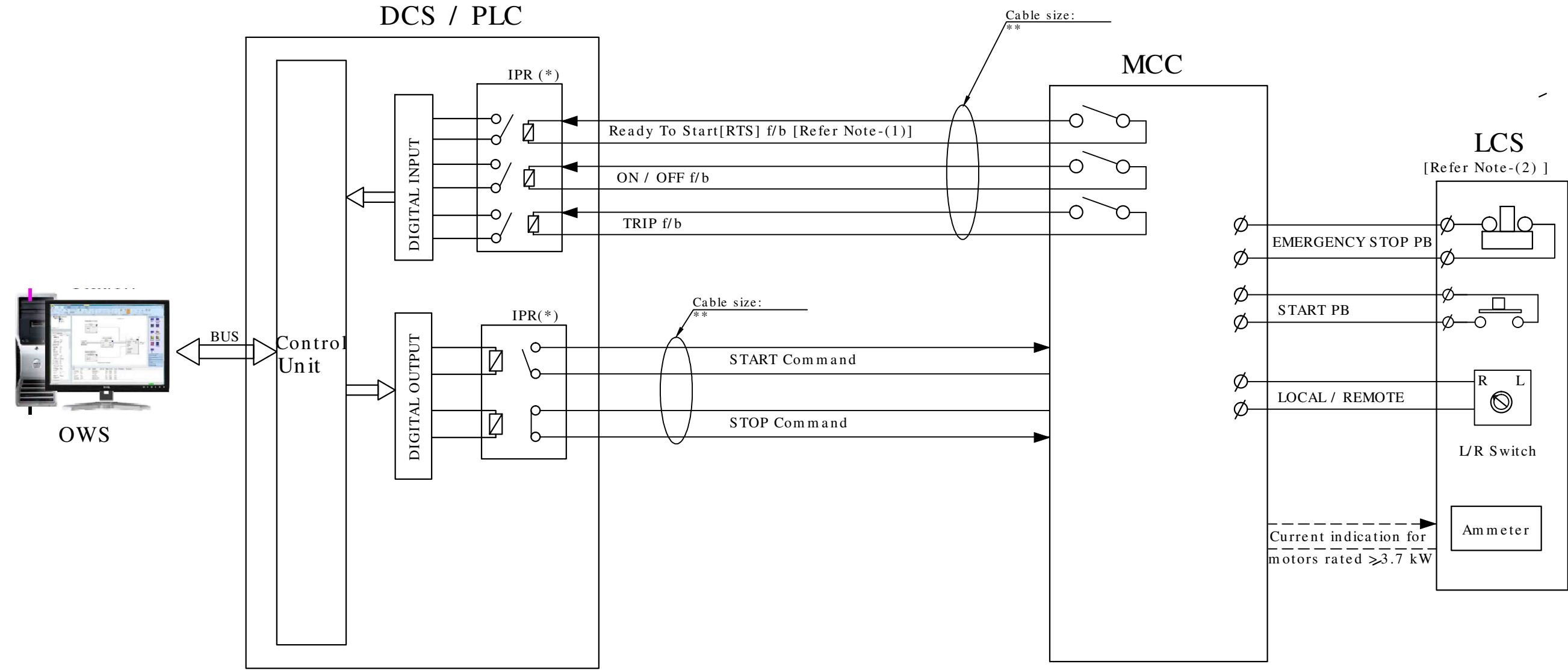
(*) -> Interrogation voltage for commands & feedbacks shall be 24V DC and same shall be powered from ACTUATOR and PLC/DCS respectively.

(**) -> For exact size of the cable, refer C&I Cable schedules.

DOCUMENT REVIEW DETAILS			
REV.	DATE	ALTERED	CHD/APPD
1		No Comments	
2		Proceed with manufacture/fabrication as per the commented document. Revised document required.	
3		Document does not conform to basic requirements as marked. Resubmit for review.	
R		Retained for Records.	
V		Void.	
Signature with Date 10-MAY-2018			
Name of Reviewer KARTIK RAMESH (C113)			
Transmitted No.			

BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				NAME	SIGN.	DATE	NO. OF VAR.
DEPT.	UNTOL. DIMS.	GR.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
CODE	SCALE	SCALE	SCALE	SCALE	SCALE	SCALE	SCALE
TITLE	DRIVE CONTROL PHILOSOPHY			CARD CODE	DRG. NO: PY-SC-4-M104-8121-01	REV.	
					CUST. DRG. No:		
					SHT. No 03	NO. OF SHT. 09	

Interface for UNI-DIRECTIONAL LT DRIVE (Contactor operated)

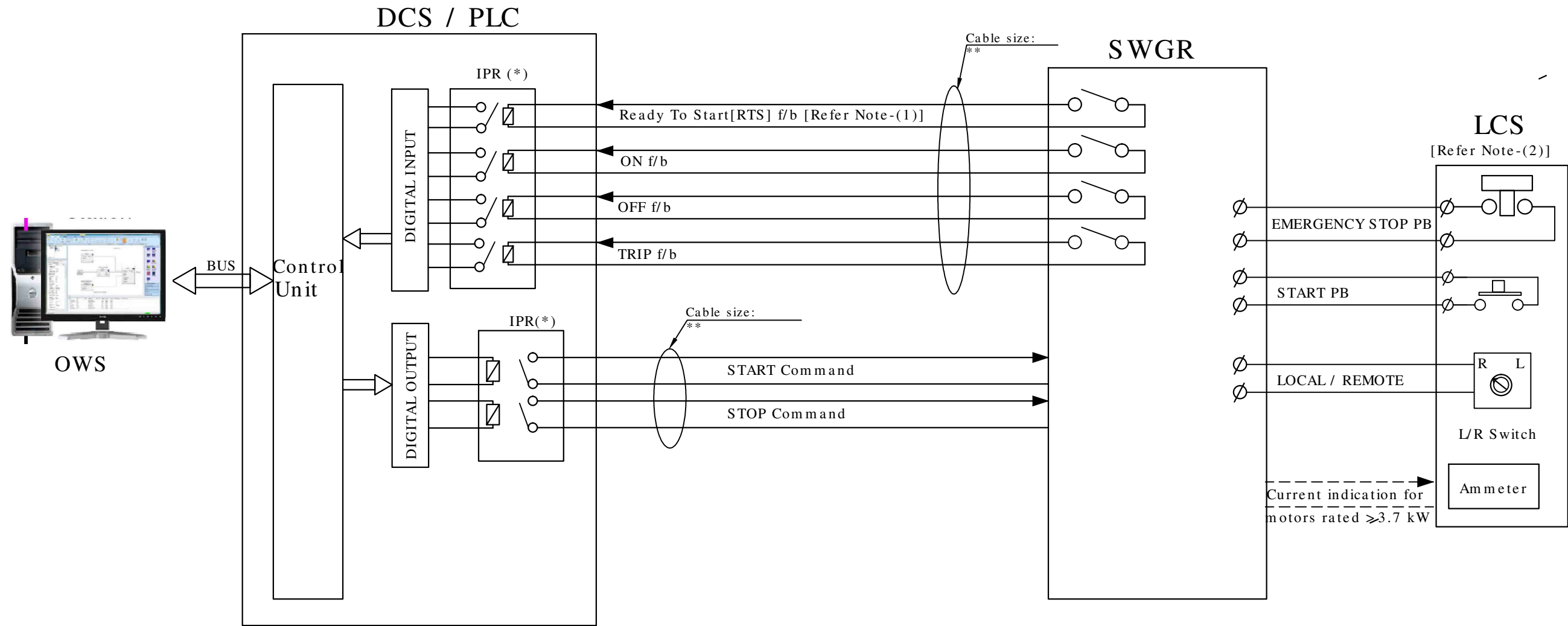


(*) -> Interrogation voltage for commands shall be 110V DC and same shall be powered from MCC.
(**) -> For exact size of the cable, C&I Cable schedules are to be referred.
(@) -> Start command shall be Momentary type / pulse type and STOP command shall be continous type.

DOCUMENT REVIEW DETAILS			
1	2	3	4
No Comments	Proceed with manufacture / fabrication as per the commented document. Revised document required.	Document does not conform to basic requirements as marked. Resubmit for review.	Retained for records.
			Void.
Signature with Date 10-MAY-2018			
Name of Reviewer KARTIK RAMESH (C113)			
Transmit No.			

Bharat Heavy Electricals Ltd. Hyderabad				NAME	SIGN.	DATE	NO. OF VAR.
DEPT.	UNTOL.	DIMS.	GR.	DRN.	SONALIKA	21.03.18	
CODE				CHD.	KAMAL	21.03.18	-N.A.-
				APPD.	ANAND	21.03.18	-N.A.-
TITLE				REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS	REV.
DRIVE CONTROL PHILOSOPHY				-N.A.-	-N.A.-	-N.A.-	00
CARD CODE				DRG. NO: PY-SC-4-M104-8121-01			
N.A.				CUST. DRG. No:			
				SHT. No 04		NO. OF SHT. 09	

Interface for UNI-DIRECTIONAL LT & HT DRIVE (Breaker operated)



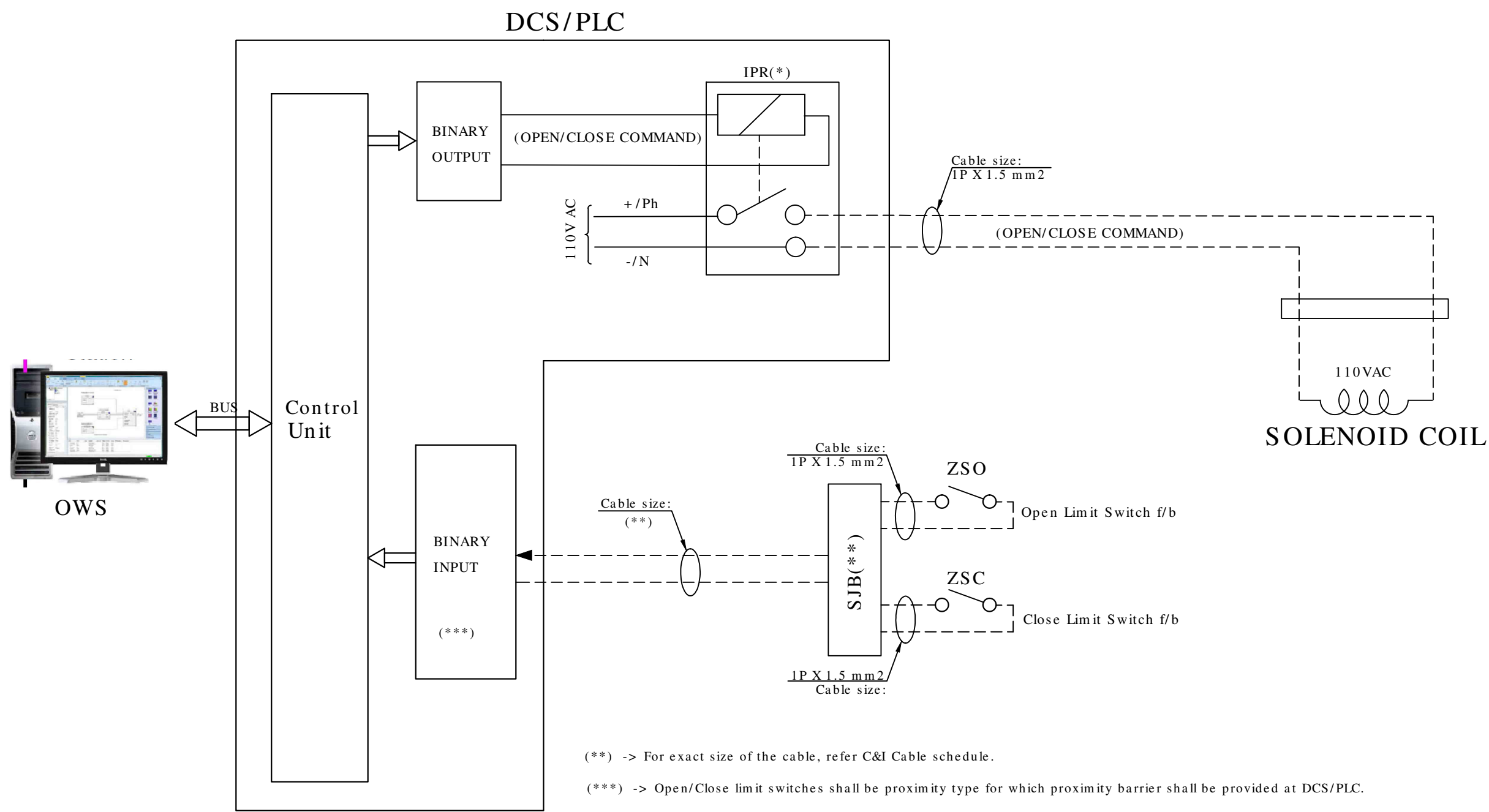
(*) -> Interrogation voltage for commands shall be 110V DC and same shall be powered from MCC.

(**) -> For exact size of the cable, refer C&I Cable schedules are to be referred.

(@) -> Start command shall be Momentary type / pulse type and STOP command shall be continous type.

DOCUMENT REVIEW DETAILS										BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				NAME	SIGN.	DATE	NO.OF VAR.
1	No Comments									DRN.	SONALIKA		21.03.18				
2	Proceed with manufacture / fabrication as per the commented document. Revised document required.									CHD.	KAMAL		21.03.18				-N.A.-
3	Document does not conform to basic requirements as marked. Resubmit for review.									APPD.	ANAND		21.03.18				-N.A.-
Signature with Date 10-MAY-2018										DEPT.	UNTOL. DIMS. GR.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS	REV.
Name of Reviewer KARTIK RAMESH (C113)										CODE	5/M/F			-N.A.-	-N.A.-	-N.A.-	00
Transmitted No.										TITLE				DRG. NO: PY-SC-4-M104-8121-01			
										CARD CODE				CUST. DRG. No:			
														SHT. No 05		NO. OF SHT. 09	

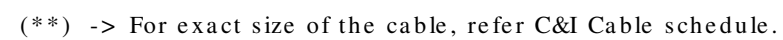
Interface for Solenoid (110VAC) operated ON-OFF valve



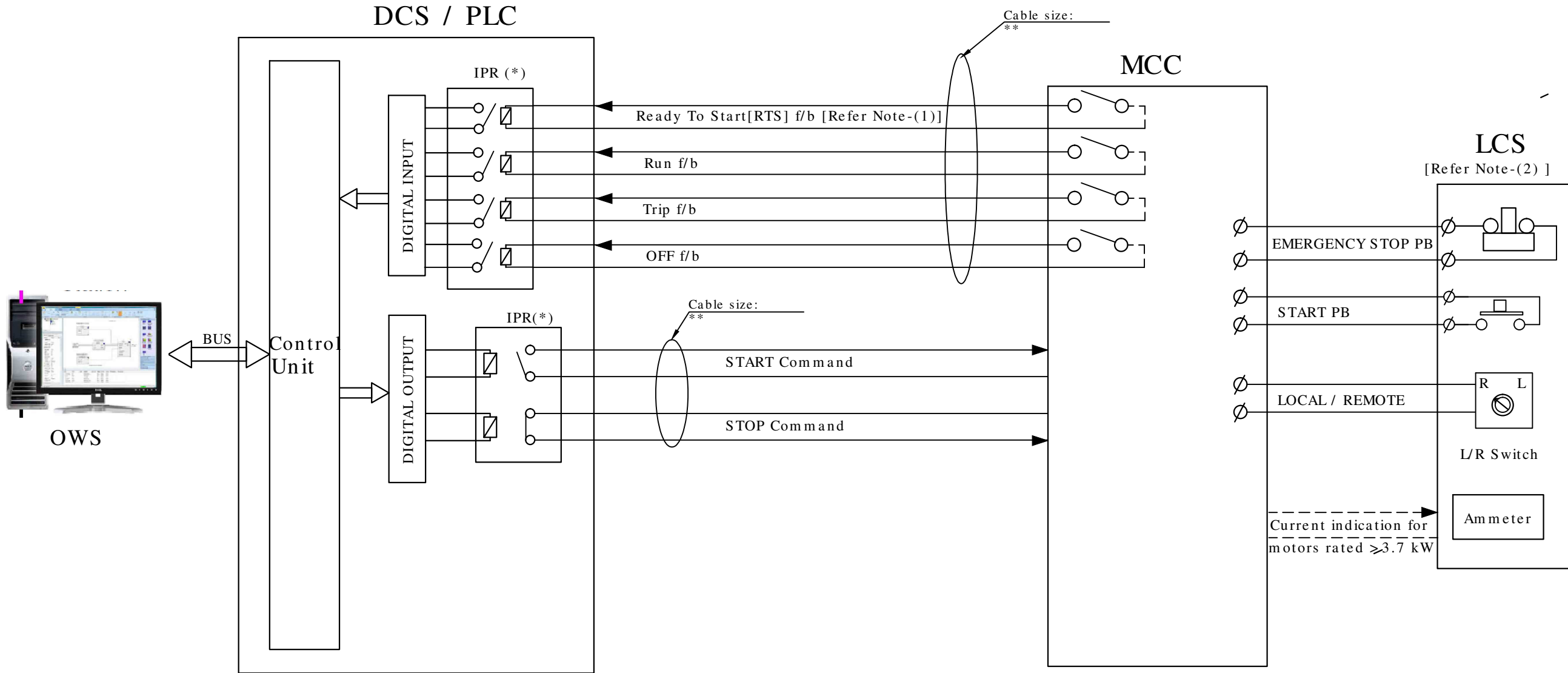
(**) -> For exact size of the cable, refer C&I Cable schedule.
(***) -> Open/Close limit switches shall be proximity type for which proximity barrier shall be provided at DCS/PLC.

DOCUMENT REVIEW DETAILS										Bharat Heavy Electricals Ltd. Hyderabad																									
REV.			DATE			ALTERED			CHD/APPD	REV.			DATE			ALTERED			CHD/APPD																
1			2			3				4			5			6																			
No Comments										DRN. SONALIKA 21.03.18																									
Proceed with manufacture/fabrication as per the commented document. Revised document required.										CHD. KAMAL 21.03.18																									
Document does not conform to basic requirements as marked. Resubmit for review.										APPD. ANAND 21.03.18																									
Retained for records.										REF. TO ASSY. DRG. -N.A.-																									
Signature with Date 10-MAY-2018										ITEM NO. -N.A.-																									
Name of Reviewer KARTIK RAMESH (C113)										DRG. NO: PY-SC-4-M104-8121-01																									
Transmitted No.										CUST. DRG. No: -N.A.-																									
										SHT. No 06 NO. OF SHT. 09																									

DCS

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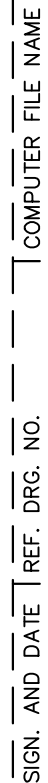
Interface for DC Drive



(*) -> Interrogation voltage for commands shall be 110V DC and same shall be powered from MCC.
(**) -> For exact size of the cable, C&I Cable schedules are to be referred.
(@) -> Start command shall be Momentary type / pulse type and STOP command shall be continous type.

DOCUMENT REVIEW DETAILS			
1	NO COMMENTS	2	PROCEED WITH MANUFACTURE / FABRICATION AS PER THE COMMENTED DOCUMENT. REVISED DOCUMENT REQUIRED.
3	DOCUMENT DOES NOT CONFORM TO BASIC REQUIREMENTS AS MARKED. RESUBMIT FOR REVIEW.	4	RETAINED FOR RECORDS.
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1	No Comments.		
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3	Document does not conform to basic requirements as marked. Resubmit for review.	ZONE	
R	Retained for records.		V Void.

Refer attached file



DOCUMENT REVIEW DETAILS

- ☐ 1 No Comments.
- ☐ 2 Proceed with manufacture / fabrication as per the commented document. Revised document required.
- ☐ 3 Document does not conform to basic requirements as marked. Resubmit for review.

☒ Retained for Records. ☐ Void.

Signature with Date **10-MAY-2018**

Name of Reviewer **KARTIK RAMESH (C113)**

Transmittal No. _____

COMMENT SHEET

DOC. NO.	B016		--
	JOB NO.	TR. NO.	S.NO

PROJECT: VRMP PROJECT, VIZAG
NAME OF PACKAGE: CPP package

CLIENT: M/s HPCL-Vizag
CONTRACTOR: M/s BHEL

SL. NO.	COMMENT/ OBSERVATION	RESOLUTION / ACTION
1	DRAWING / DOCUMENT TITLE : Drive control philosophy DOCUMENT NUMBER: PY-SC-4-M104-8121-01 R 00 CATEGORY/CODE: R	
1	Control supply for MV switchboards (Contactor operated motor feeders) is 110V DC. Accordingly please check the type of stop pushbutton in LCS in sheet 4.	
2	The exact schematic of VFD shall be reviewed as part of respective VFD drawings. However 220V DC supply shall be corrected as 110V DC in sheet 9.	

NOTE: CONTRACTOR IS OBLIGED TO FURNISH THIS SHEET (DULY FILLED UP WITH RESOLUTION TO ALL EIL COMMENTS) ALONGWITH REVISED DRAWINGS

Contractor shall strictly submit the documents to Instrumentation discipline as per approved DCI and tender VDR (Instrumentation). The above document does not pertain to Instrumentation. Electrical comments with review code is attached.

DOCUMENT REVIEW DETAILS	
☐	No Comments.
☐	Proceed with manufacture / fabrication as per the commented document. Revised document required.
☐	Document does not conform to basic requirements as marked. Resubmit for review.
☒	Retained for Records
Comments By: (SIGN/ DATE): 10/05/18	
Department: Electrical	
Signature with Date: 10 MAY 2018	
Name of Reviewer: KARTIK RAMESH (C113)	
Transmittal No.	

Name: SAI

ENGINEERS INDIA LIMITED, NEW DELHI

Please refer attached file

	DOCUMENT REVIEW DETAILS
☐ 1	No Comments.
☐ 2	Proceed with manufacture / fabrication as per the commented document. Revised document required.
☐ 3	Document does not conform to basic requirements as marked. Resubmit for review.
☒ R	Retained for Records.
☐ V	Void.
Signature with Date 10-MAY-2018	
Name of Reviewer KARTIK RAMESH (C113)	
Transmittal No. _____	

COMMENT SHEET

DOC. NO.	B016		--
	JOB NO.	TR. NO.	S.NO

PROJECT: VRMP PROJECT, VIZAG
NAME OF PACKAGE: CPP package

CLIENT: M/s HPCL-Vizag
CONTRACTOR: M/s BHEL

SL. NO.	COMMENT/ OBSERVATION	RESOLUTION / ACTION
1	DRAWING / DOCUMENT TITLE : Drive control philosophy DOCUMENT NUMBER: PY-SC-4-M104-8121-01 R 00 CATEGORY/CODE:	
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NOTE: CONTRACTOR IS OBLIGED TO FURNISH THIS SHEET (DULY FILLED UP WITH RESOLUTION TO ALL EIL COMMENTS) ALONGWITH REVISED DRAWINGS

DOCUMENT REVIEW DETAILS	
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☐	Proceed with manufacture / fabrication as per the commented document. Revised document required.
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☒	Retained for Records
Comments By: ☐ SIGN/ DATE): 10/05/18 Department: Electrical	
Name of Reviewer: KARTIK RAMESH (C113)	
Transmittal No.	

Name: SAI

ENGINEERS INDIA LIMITED, NEW DELHI