

TD-201 Rev No. 00	Form No.	 	PRODUCT STANDARD PROJECT ENGINEERING & SYSTEMS DIVISION, HYDERABAD	ANNEXURE-2A to PY55294
				Rev No. 00
				Page 1 of 13
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-2A TO PY55294 REFERENCE SCHEMES FOR 33kV GAS INSULATED SWITCHGEAR (These Schemes are FOR REFERENCE ONLY and may not cover all protection & operational aspects needed for safe and healthy operation of the system. These shall also be referenced for estimating DI/DOs of Numerical Relays for bid purpose and for preparing various schemes during detailed engineering. The Final Schemes shall be designed to meet all the requirements specified in the Main Specification and its Annexures-1A, 1B, 1C, 2A, 2B, 2C, 3, 4 & 6 without any price/time impact.) PROJECT 75MW VISAKH REFINERY MODERNIZATION PROJECT (VRMP) CUSTOMER M/S HINDUSTAN PETROLEUM CORPORATION LIMITED,VIZAG,A.P CONSULTANT ENGINEERS INDIA LIMITED				

33kV GAS INSULATED SWITCHBOARD SCHEMES STANDARDISED LOGICS

LEGEND:

I/C – INCOMER

B/C – BUS COUPLER

O/G – OUTGOING

NR – NUMERICAL RELAY

L/R – LOCAL/REMOTE SELECTOR SWITCH

TNC – TRIP-NEUTRAL-CLOSE SWITCH

86 – MASTER TRIP RELAY (LOCKOUT RELAY)

95 – TRIP CIRCUIT SUPERVISION RELAY

TCS – TRIP CIRCUIT SUPERVISION

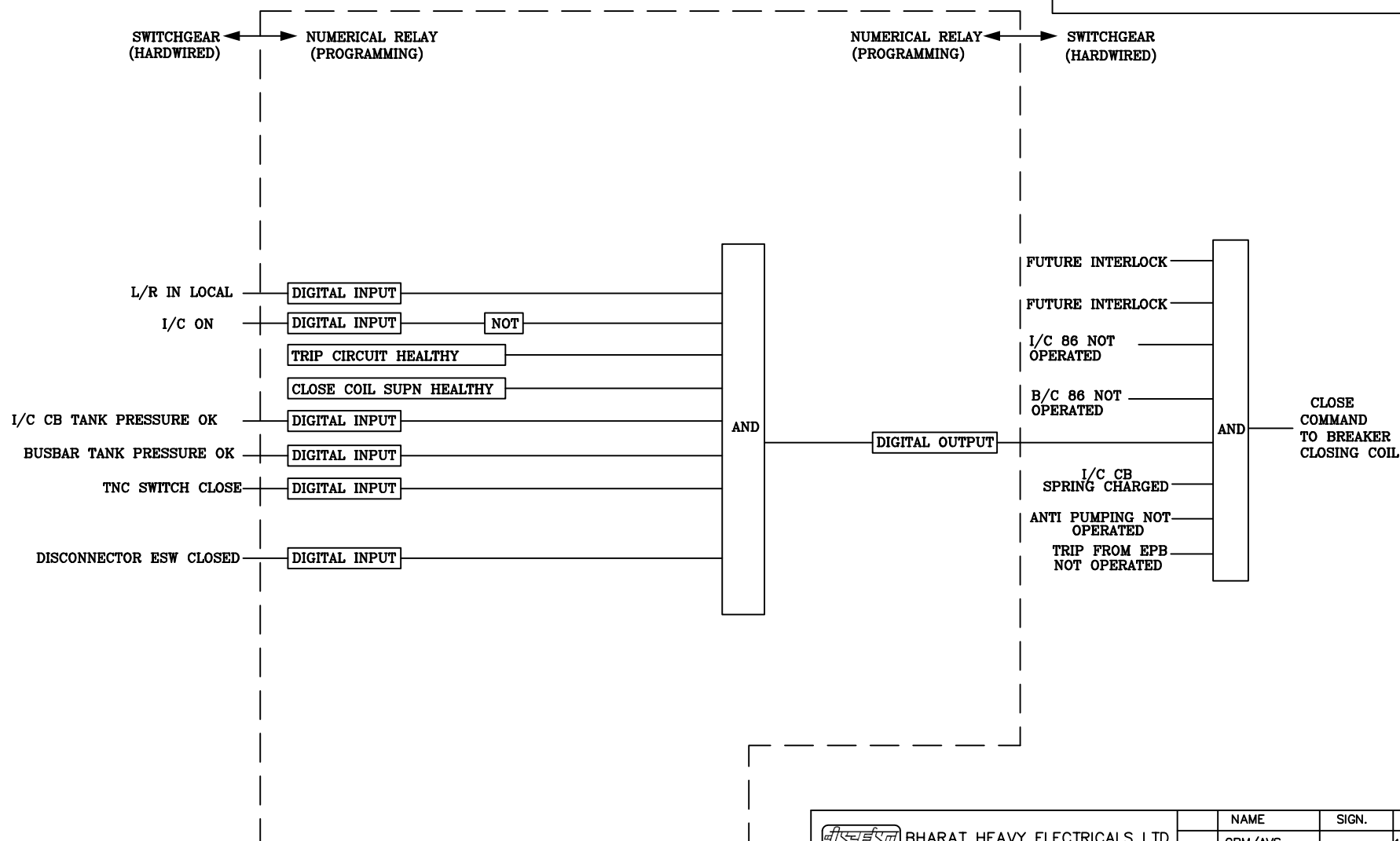
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			DRN.	GRM/AVS		10.05.2018	-N.A.-
			CHD.	P.SURESH		10.05.2018	
			APPD.	J.K.PATTANIK		10.05.2018	
DEPT.	UNTOL. DIMS. GR.		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG. -N.A.-	ITEM NO. -N.A.-	NO.OF ITEMS -N.A.-
CODE	G/M/F						
TITLE 33kv GIS SCHEMES STANDARDISED LOGICS				CARD CODE	DRAWING NO. PY-AZ-4-M104-8801-01		REV. 00
				N.A.	SHT. No 01	NO. OF SHT. 12	

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB I/C

CLOSING LOGIC FOR INCOMER – IN LOCAL MODE



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COMPUTER FILE NAME

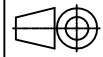
REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED		REV.	DATE	ALTERED		REV.	DATE	ALTERED	
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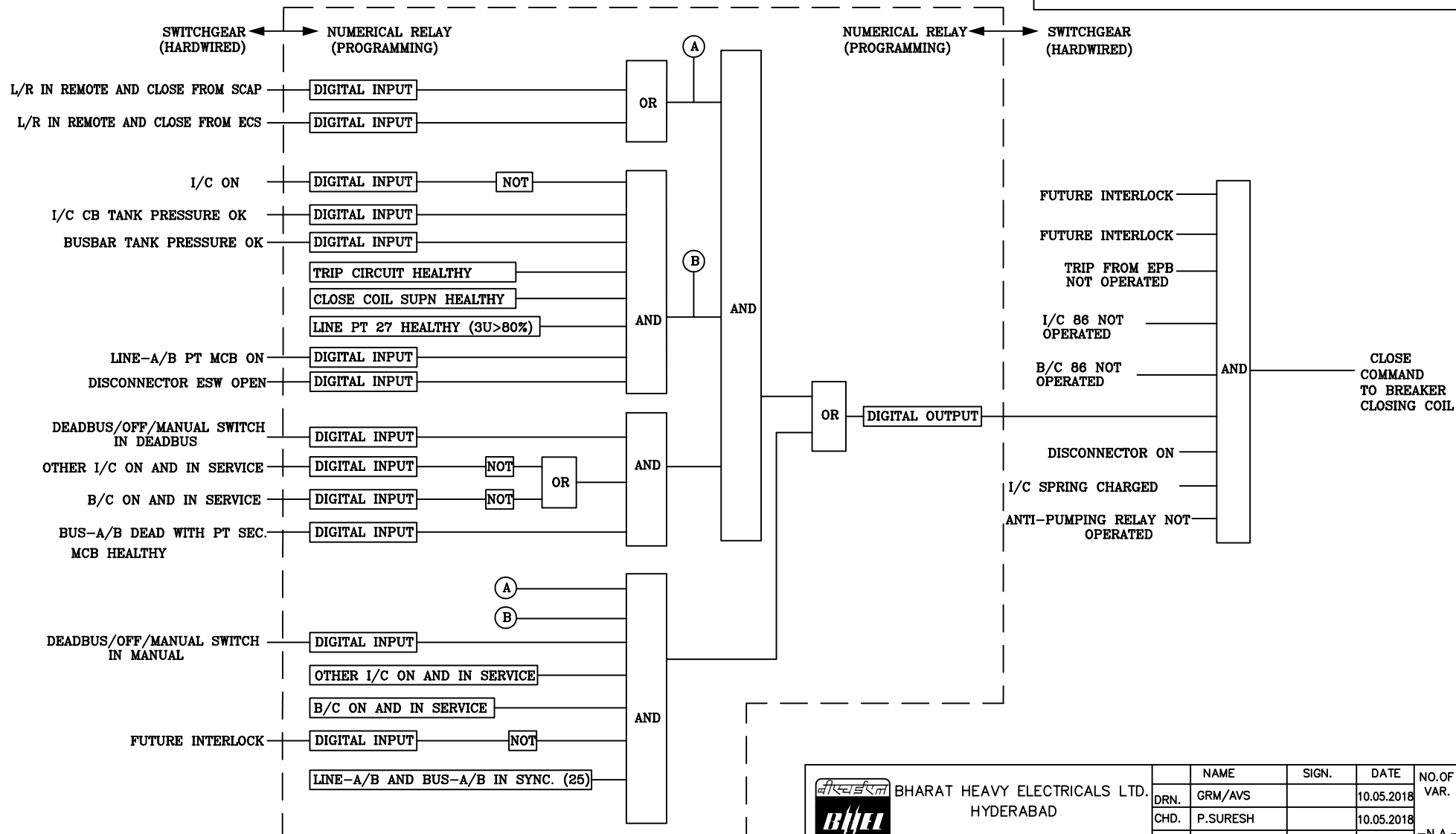
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	DEPT.	UNTOL. DIMS. GR.		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
	CODE	<i>G/M/F</i>				-N.A.-	-N.A.-	-N.A.-
TITLE 33kV GIS SCHEMES STANDARDISED LOGICS					CARD CODE N.A.	DRAWING NO. PY-AZ-4-M104-8801-01		REV. 00
					SHT. No	02	NO. OF SHT.	12

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB I/C

CLOSING LOGIC FOR INCOMER - IN REMOTE MODE



	BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				NAME	SIGN.	DATE	NO.OF VAR.
	DRN.	GRM/AVS		10.05.2018				
	CHD.	P.SURESH		10.05.2018				-N.A.-
	APPD.	J.K.PATTANIK		10.05.2018				
DEPT.	UNTOL. DIMS. GR.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS		
CODE	6/M/F			-N.A.-	-N.A.-	-N.A.-		
TITLE				CARD CODE	DRAWING NO.	REV.		
33kV GIS SCHEMES STANDARDISED LOGICS				N.A.	PY-AZ-4-M104-8801-01	00		
				SHT. No	03	NO. OF SHT.	12	

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COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

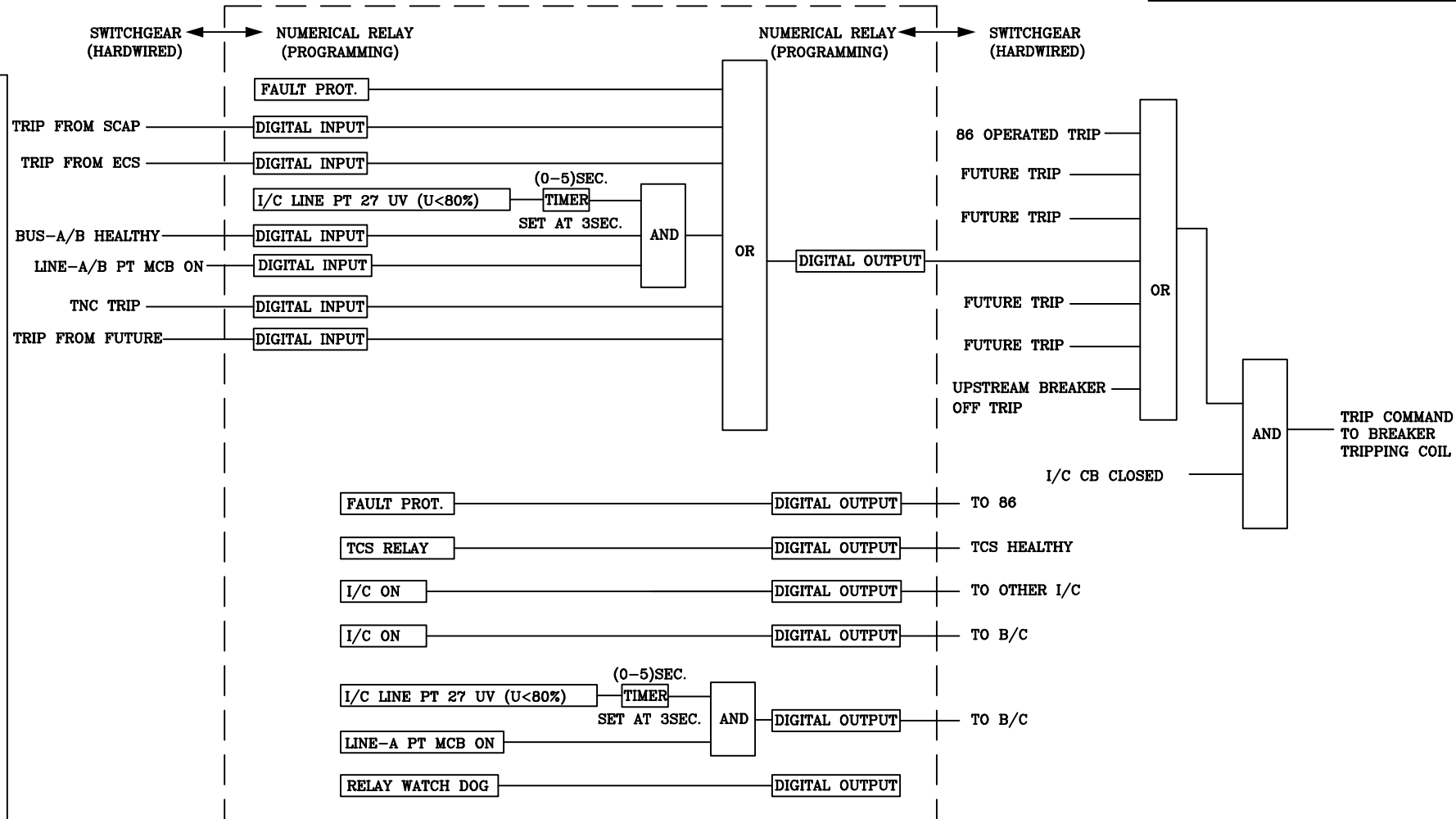
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		CHD/APPD			CHD/APPD			CHD/APPD
ZONE			ZONE			ZONE		

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB I/C

TRIPPING LOGIC FOR INCOMER – IN LOCAL & REMOTE MODE



COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

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GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED		REV.	DATE	ALTERED		REV.	DATE	ALTERED	
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ZONE				ZONE				ZONE			

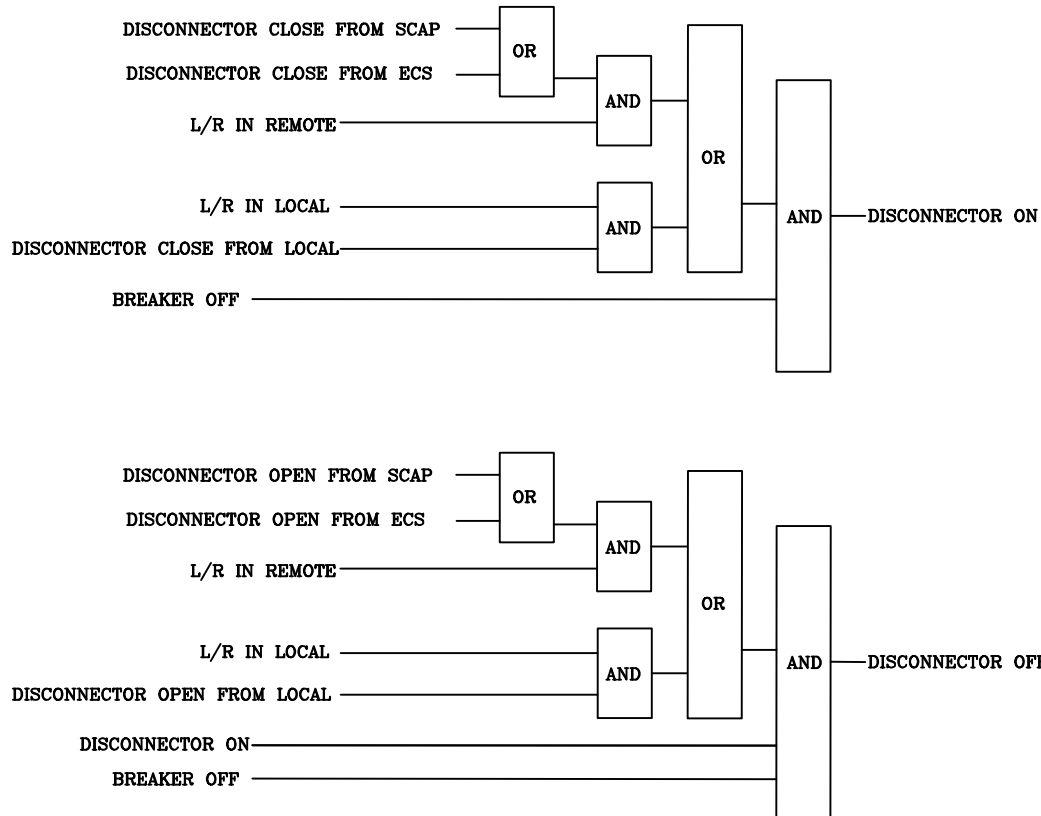
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				DRN.	GRM/AVS		10.05.2018	
				CHD.	P.SURESH		10.05.2018	
				APPD.	J.K.PATTANIK		10.05.2018	
DEPT.	UNTOL. DIMS. GR. G/M/F		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG. -N.A.-		ITEM NO. -N.A.-	NO.OF ITEMS -N.A.-
CODE								
TITLE 33kV GIS SCHEMES STANDARDISED LOGICS				CARD CODE N.A.	DRAWING NO. PY-AZ-4-M104-8801-01			REV. 00
					SHT. No. 04		NO. OF SHT. 12	

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DISCONNECTOR

DISCONNECTOR LOGIC – IN LOCAL & REMOTE MODE



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COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

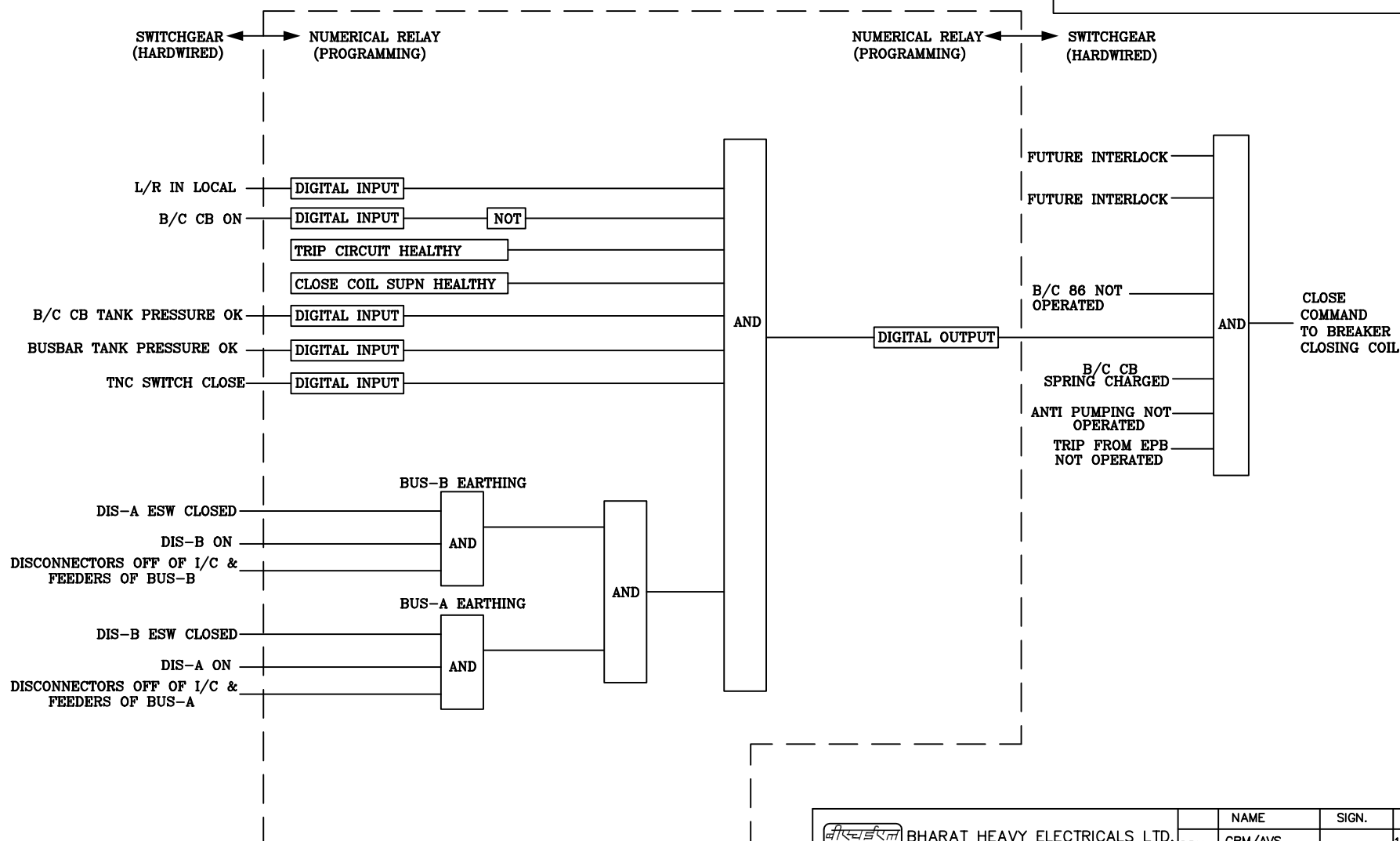
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				APPD.	J.K.PATTANIK		10.05.2018	-N.A.-
DEPT.	UNTOL. DIMS. GR. G/M/F		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.		ITEM NO.	NO.OF ITEMS
CODE					-N.A.-		-N.A.-	-N.A.-
TITLE HT GIS SCHEMES STANDARDISED LOGICS				CARD CODE	DRAWING NO.			REV.
				N.A.	PY-AZ-4-M104-8801-01			00
					SHT. No	05	NO. OF SHT.	12

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB B/C

CLOSING LOGIC FOR BUS COUPLER - IN LOCAL MODE

BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD

NAME	SIGN.	DATE	NO.OF VAR.
DRN. GRM/AVS		10.05.2018	
CHD. P.SURESH		10.05.2018	-N.A.-
APPD. J.K.PATTANIK		10.05.2018	
REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS	REV.
-N.A.-	-N.A.-	-N.A.-	00
SHT. No 06	NO. OF SHT. 12		

DEPT. CODE
UNTOL. DIMS. GR. 6/M/F
SCALE
WEIGHT (KG)
TITLE
33kV GIS SCHEMES
STANDARDISED LOGICS

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COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
ZONE		CHD/APPD	ZONE		CHD/APPD	ZONE		CHD/APPD

(ALL DIMENSIONS ARE IN mm)

DRG. NO.

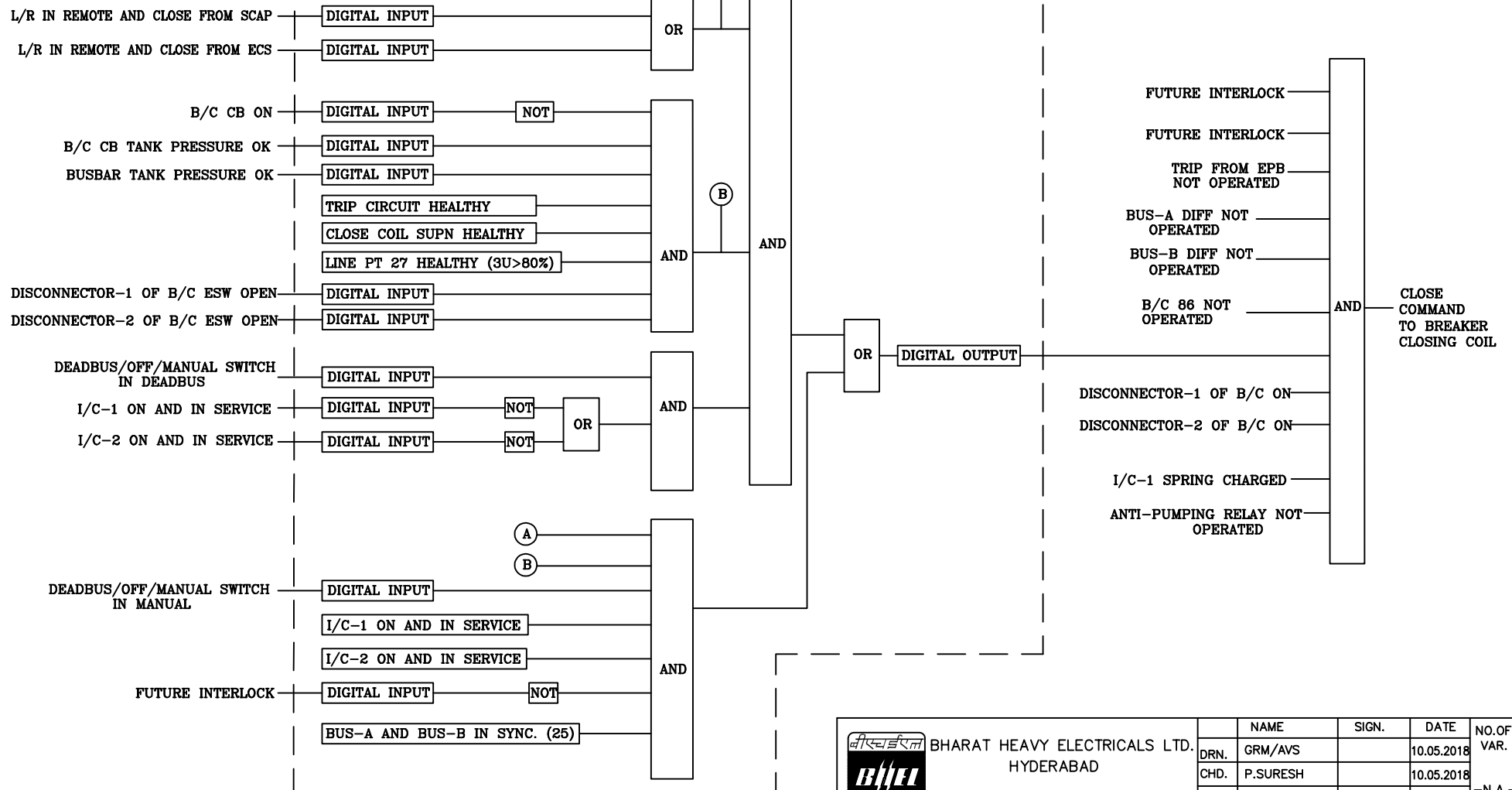
SH. 07 OF 12

**SWITCHGEAR
(HARDWIRED)**

NUMERICAL RELAY (PROGRAMMING)

NUMERICAL RELA
(PROGRAMMING)

➤ **SWITCHGEAR
(HARDWIRED)**



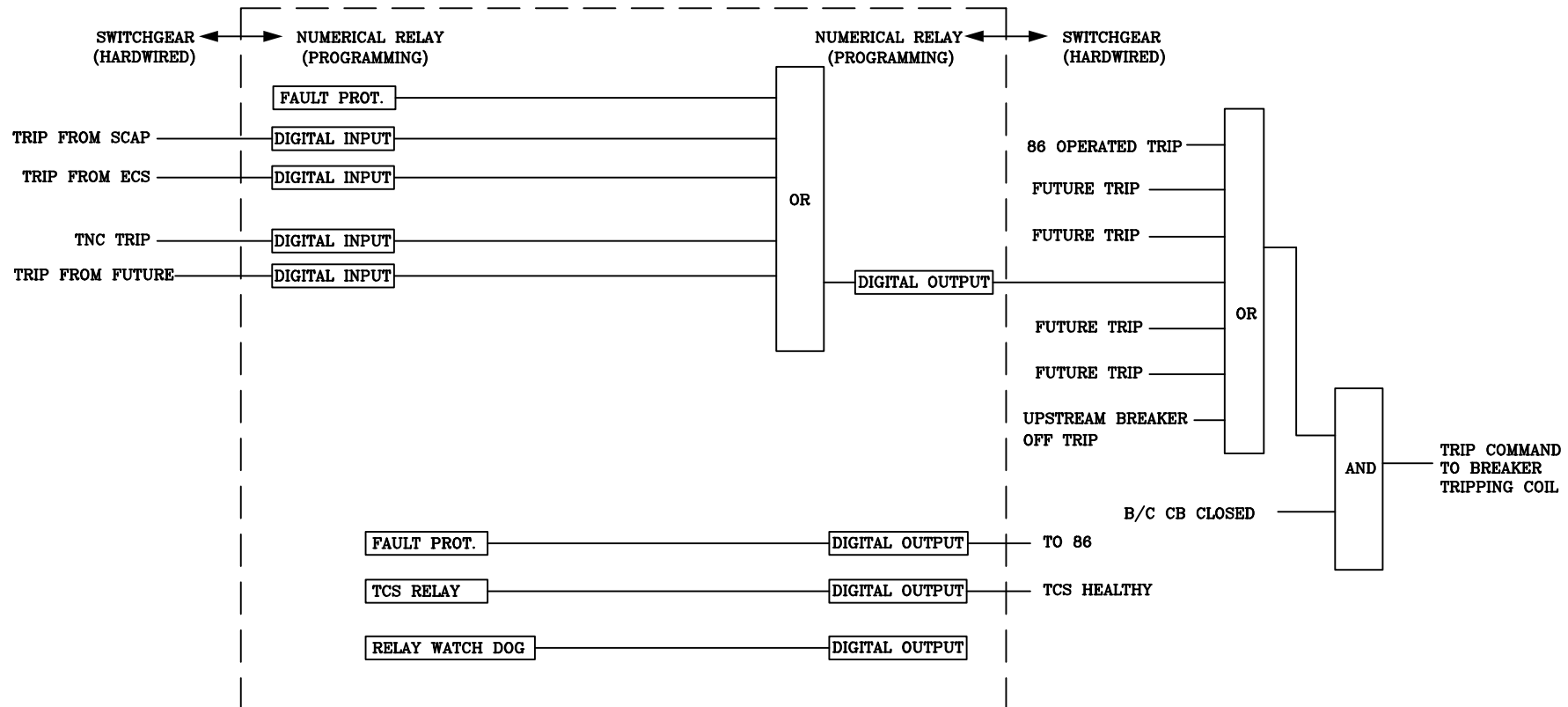
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				APPD.	J.K.PATTANIK		10.05.2018	
DEPT.	UNTOL. DIMS. GR.		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG. -N.A.-		ITEM NO. -N.A.-	NO.OF ITEMS -N.A.-
CODE	G/M/F							
TITLE 33kv GIS SCHEMES STANDARDISED LOGICS					CARD CODE N.A.	DRAWING NO.		REV. 00
						PY-AZ-4-M104-8801-01		
					SHT. No	07	NO. OF SHT.	12

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB B/C

TRIPPING LOGIC FOR BUSCOUPLER – IN LOCAL & REMOTE MODE



COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

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GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
		CHD /APPD			CHD /APPD			CHD /APPD
ZONE			ZONE			ZONE		
								

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				DRN.	GRM/AVS		10.05.2018	
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				APPD.	J.K.PATTANIK		10.05.2018	-N.A.-
DEPT.	UNTOL. DIMS. GR. G/M/F		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG. -N.A.-		ITEM NO. -N.A.-	NO.OF ITEMS -N.A.-
CODE								
TITLE 33kv GIS SCHEMES STANDARDISED LOGICS				CARD CODE	DRAWING NO. PY-AZ-4-M104-8801-01			REV. 00
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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

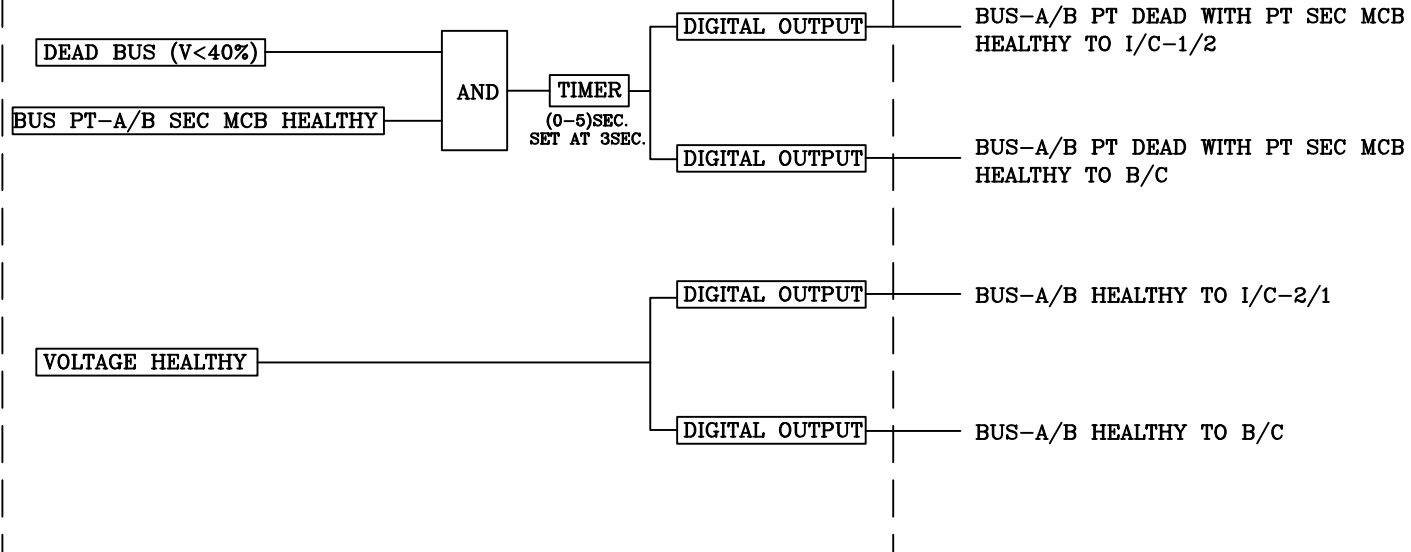
BUS PT

SWITCHGEAR
(HARDWIRED)

NUMERICAL RELAY
(PROGRAMMING)

NUMERICAL RELAY
(PROGRAMMING)

SWITCHGEAR
(HARDWIRED)



COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED		REV.	DATE	ALTERED		REV.	DATE	ALTERED	
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ZONE				ZONE				ZONE			

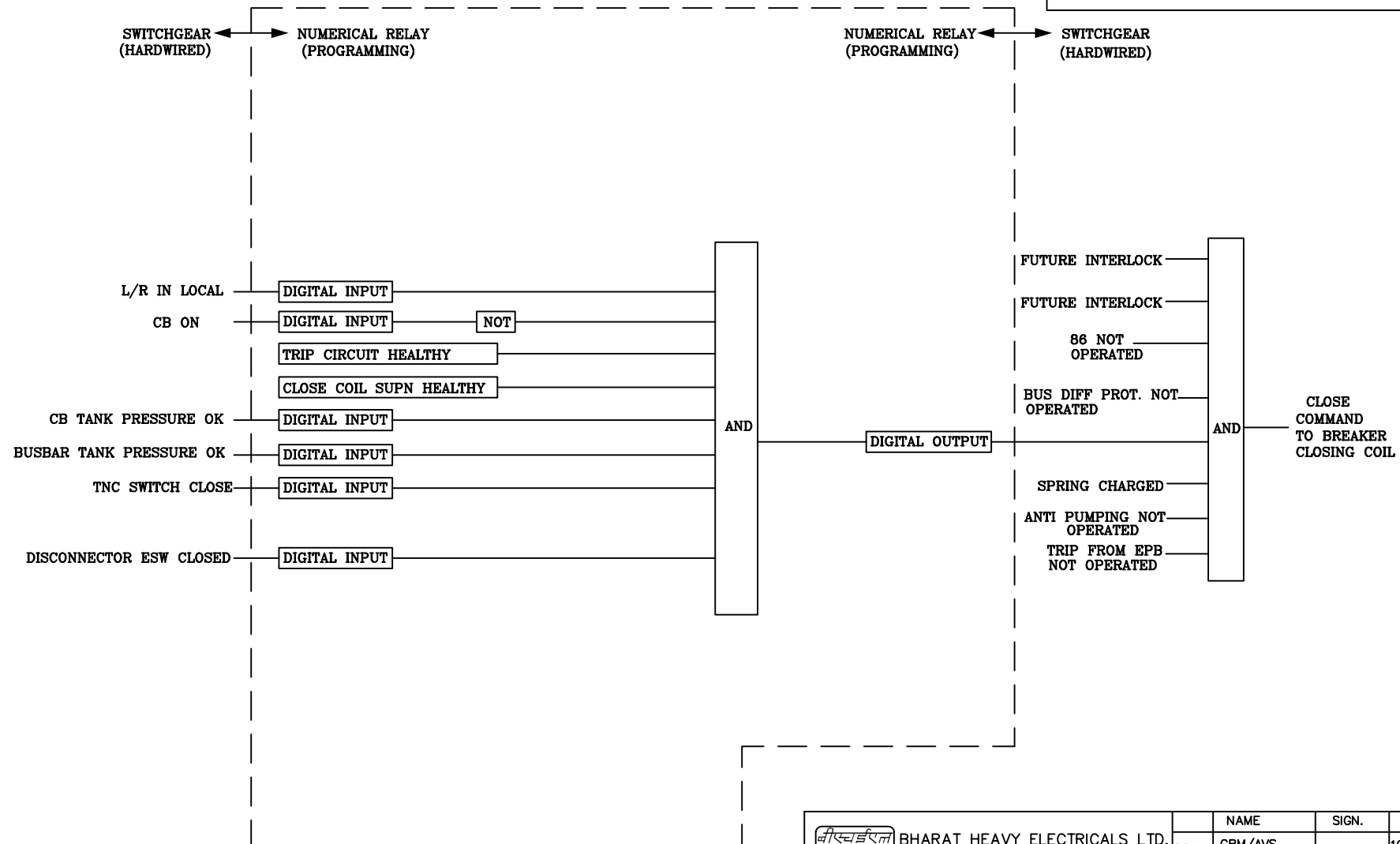
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					CHD.	P.SURESH		10.05.2018	
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DEPT.	UNTOL. DIMS. GR.		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.		ITEM NO.	NO.OF ITEMS	
CODE	G/M/F				—N.A.—		—N.A.—	—N.A.—	
TITLE 33kV GIS SCHEMES STANDARDISED LOGICS					CARD CODE	DRAWING NO.			REV.
					N.A.	PY—AZ—4—M104—8801—01			00
						SHT. No	09	NO. OF SHT	12

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB 0/G

CLOSING LOGIC FOR OUTGOING FEEDERS - IN LOCAL MODE



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COMPUTER FILE NAME

REF. DRG. NO.

SIGN. AND DATE

INVENTORY NO

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
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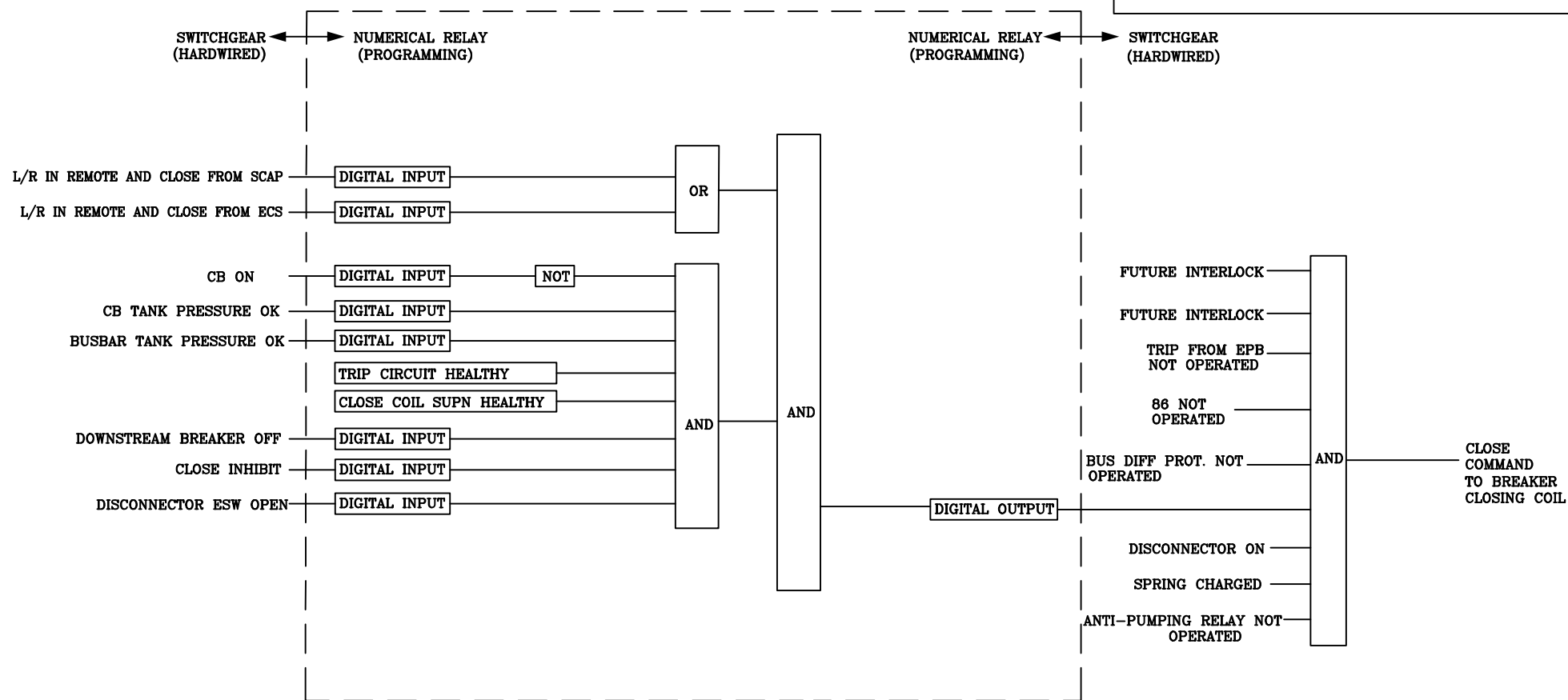
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CODE									
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					N.A.				
					SHT. No		10	NO. OF SHT.	

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB 0/G

CLOSING LOGIC FOR OUTGOING FEEDERS – IN REMOTE MODE



SIGN. AND DATE REF. DRG. NO. COMPUTER FILE NAME

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GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261

INVENTORY NO	REV	DATE	ZONE	ALTERED	CHD / APPD	REV	DATE	ZONE	ALTERED	CHD / APPD	REV	DATE	ZONE	ALTERED	CHD / APPD

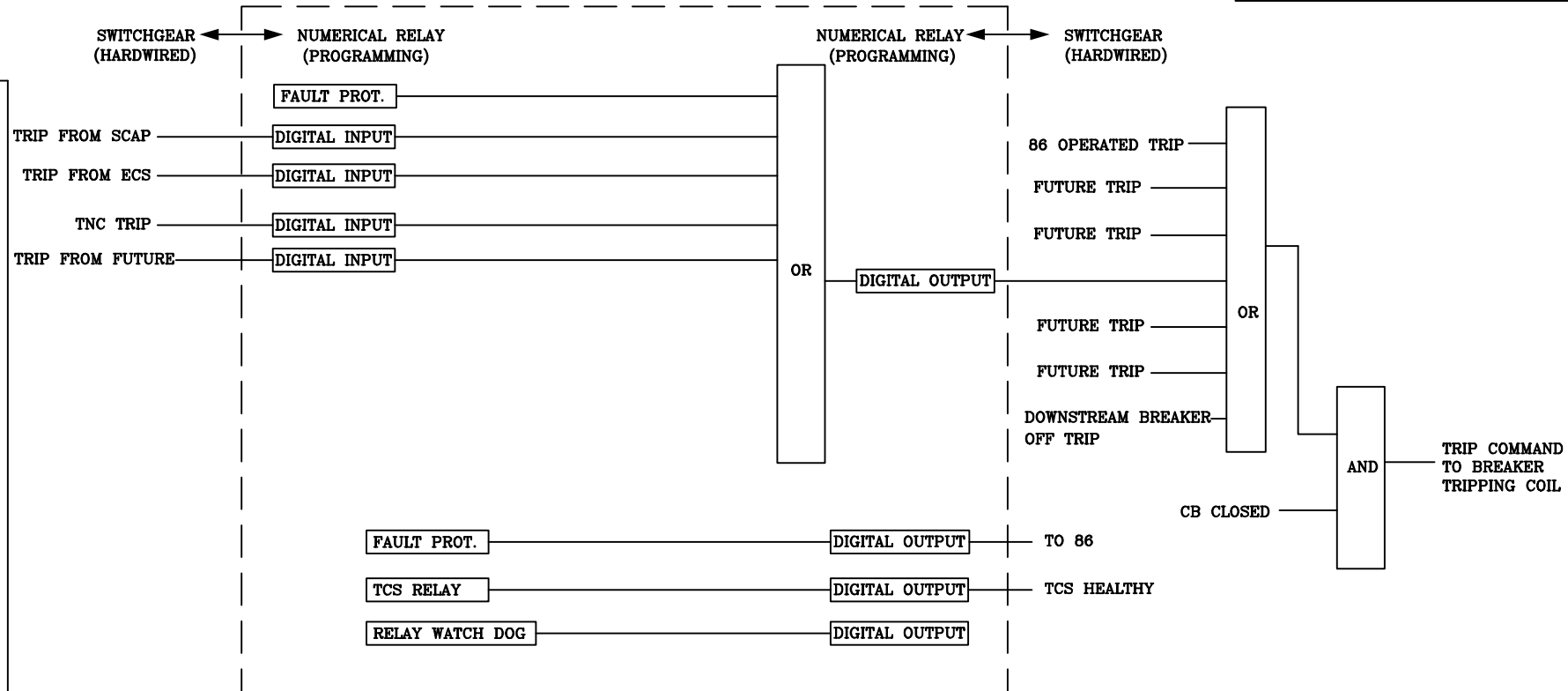
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				CHD.	P.SURESH		10.05.2018	
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DEPT.	UNTOL. DIMS. GR.		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.		ITEM NO.	NO.OF ITEMS
CODE	G/M/F				-N.A.-		-N.A.-	-N.A.-
TITLE 33kV GIS SCHEMES STANDARDISED LOGICS				CARD CODE	DRAWING NO. PY-AZ-4-M104-8801-01			REV. 00
				N.A.	SHT. No 11		NO. OF SHT. 12	

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

VCB 0/G

TRIPPING LOGIC FOR INCOMER – IN LOCAL & REMOTE MODE



COMPUTER FILE NAME

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SIGN. AND DATE

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REV.	DATE	ALTERED		REV.	DATE	ALTERED		REV.	DATE	ALTERED	
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ZONE				ZONE				ZONE			

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