

MAIN BUS-I

400R-89A1

MAIN BUS-II

PANTOGRAPH ISO.

400R-89A2

400R-89A2E

400R-52

400R-89BE1

400R-89B

400R-89BE2

400R-CT

400R-LA (390KV)

REACTOR BUSHING CT (BUS SIDE CT)

63MVAR REACTOR

REACTOR NEUTRAL CT

SCHEDULE OF EQUIPMENT

S.NO.	DESCRIPTION	SYMBOL	SYMBOL ABR.	QTY.
1	400KV, 2000A, 40KA FOR 1 SEC., 3-PH. SF6 CIRCUIT BREAKER WITHOUT CLOSING RESISTOR		52	01
2	400KV, 3150A, 40KA FOR 1 SEC., 3-PH. PANTOGRAPH ISOLATOR WITH ONE EARTH SWITCH		89 89E	01
3	400KV, 3150A, 40KA FOR 1 SEC., 3-PH. PANTOGRAPH ISOLATOR WITHOUT EARTH SWITCH		89	01
4	400KV, 3150A, 40KA FOR 1 SEC., 3-PH. CENTRE BREAK ISOLATOR WITH TWO EARTH SWITCH		89B 89BE1 & 89BE2	01
5	400KV, 3000A, 40KA FOR 1 SEC., 1-PH. CURRENT TRANSFORMER		CT	03
6	390KV, 10ka Class-3 SURGE ARRESTER		LA	03
7	63MVAR, 400KV REACTOR			01

400 KV, 3000 A CURRENT TRANSFORMER

Core No.	RATIO	Output Burden at Highest Tap	Min KPV	Max le	Max Rct	Acc Class	Purpose
1	3000-2000 -500/1	-	3000-2000 -500 V	20 mA at KPV AT HIGHEST TAP	15-10-2.5 OHM	PS	Busbar Differential
2	3000-2000 -500/1	-	3000-2000 -500 V	20 mA at KPV AT HIGHEST TAP	15-10-2.5 OHM	PS	LBB
3	3000-2000 -500/1	20 VA	-	-	-	0.2	Metering
4	3000-2000 -500/1	-	3000-2000 -500 V	20 mA at KPV AT HIGHEST TAP	15-10-2.5 OHM	PS	Reactor Differential
5	3000-2000 -500/1	-	3000-2000 -500 V	20 mA at KPV AT HIGHEST TAP	15-10-2.5 OHM	PS	Spare

BUS REACTOR

NAME OF CUSTOMER: KARNATAKA POWER TRANSMISSION CORPORATION LIMITED  
 NAME OF PROJECT: (INSTALLATION OF 1X63MVAR BUS REACTOR)



BHARAT HEAVY ELECTRICALS LIMITED  
 TRANSMISSION PROJECTS DIVISION

SINGLE LINE DIAGRAM FOR MODIFICATION WORKS  
 AT 400/220KV S/S GUTTUR

REV.	DATE	CHD.	APPD.	NAME	SIGN.	DATE
02	01.08.11	MM	RS	JUGENDRA	JUGENDRA	31.01.11
01	18.05.11	RK	DS	MM/DKM		

DRAWING REVISED AS PER KPTCL COMMENTS DATED 11.04.11  
 NGR AND 120 KV LA REMOVED. LOCATION OF CT CHANGED AS PER APPROVED LAUYOUT.

DEPT.	CODE
TBEM	422

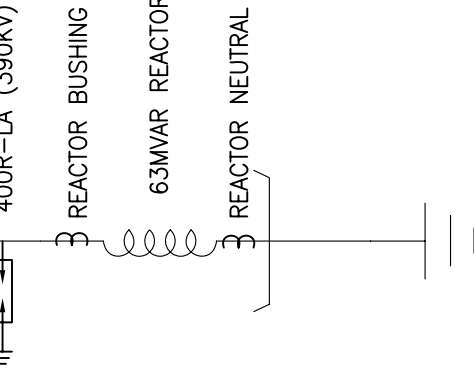
SCALE 1:500 W.O. No. 80009 DRG. No. TB-3-342-510-001A REV. 02

# MAIN BUS-I 400KV,50HZ, 3-PH, 2000A,40KA FOR 1SEC

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## SCHEDULE OF EQUIPMENT

S.NO.	DESCRIPTION	SYMBOL	ABR.	QTY.
1	400 KV, 2000A, 40 KA FOR 1 SEC, 3-PH SF6 CIRCUIT BREAKER WITHOUT CLOSING RESISTOR		52	01
2	400KV, 3150A, 40KA FOR 1 SEC, 3-PH. CENTRE BREAK ISOLATOR WITH one EARTH SWITCH		89 89E	02
3	400KV, 2000A, 40KA FOR 1 SEC., CURRENT TRANSFORMER		CT	03
4	390KV, 10KA Class-3 SURGE ARRESTER		LA	03
5	63MVAR, 400KV REACTOR			01



400 KV, 2000 A CURRENT TRANSFORMER

Core No.	RATIO	Output Burden at Highest Tap	Min KPv	Max le	Max Rct	Acc Class	Purpose
1	2000-1000/1	-	2000-1000 V	30 mA at KPv AT HIGHEST TAP	10-5 OHM	PS	Busbar Differential
2	2000-1000/1	-	2000-1000 V	30 mA at KPv AT HIGHEST TAP	10-5 OHM	PS	LBB
3	2000-1000-500/1	20 VA	-	-	-	0.2	Metering
4	2000-1000-500/1	-	2000-1000-500 V	30 mA at KPv AT HIGHEST TAP	10-5-2.5 OHM	PS	Reactor Differential
5	2000-1000-500/1	-	2000-1000-500 V	30 mA at KPv AT HIGHEST TAP	10-5-2.5 OHM	PS	Spare

## BUS REACTOR

NAME OF CUSTOMER: KARNATAKA POWER TRANSMISSION CORPORATION LIMITED  
NAME OF PROJECT: (INSTALLATION OF 1X63MVAR BUS REACTOR)



REV. DATE	REV. DATE	REV. DATE	REV. DATE	REV. DATE
02 01.08.11	01 18.05.11	MM/DKM/RS	MM/DKM/DS	MM/DKM/DS
NGR AND 120 KV LA REMOVED	DRAWING REVISED AS PER KPTCL COMMENTS DATED 11.04.11	CHECKED MM/DKM	APPROVED DS	DISTRIBUTION OF PRINTS

NAME	SIGN.	DATE
JUGENDRA	JUGENDRA	31.01.11
MM/DKM	-SD-	
DS	-SD-	

DEPT.	CODE
TBEM	422

INVENTORY NO.	SCALE 1:500	W.O. No.	80009	DRG. No.	TB-3-342-510-001	REV.	02
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NAME OF CUSTOMER	KARNATAKA POWER TRANSMISSION CORPORATION LIMITED	CARD CODE	
NAME OF PROJECT	(INSTALLATION OF 1X63MVAR BUS REACTOR)	NEXT SHEET	--
		SHEET No.	01
		REV.	02

BHARAT HEAVY ELECTRICALS LIMITED  
TRANSMISSION PROJECTS DIVISION  
SINGLE LINE DIAGRAM FOR MODIFICATION WORKS  
AT 400/220KV S/S TALAGUPPA