

Technical data sheet for UPS AC

General		
1.1	Project Name:	Auramine concentrate plant
1.2	Country of destination:	Georgia
1.3	Main specification Doc. No.:	MCC design
1.4	Related list of attachment	typical wiring diagrams
1.5	Switchgear Type	as per vendor standard
1.6	Communication protocol	Ethernet IP for DCS, IEC 61850
1.7	Communication interface	RS485
1.8	Signal exchange described in	-
INDIVIDUAL SITE CONDITIONS		
2.1	Individual site conditions	-
2.2	Location Type	indoor
2.3	Climatic condition - indoor	3K3 (Based on IEC 60721, no solar radiation)
2.4	Special climatic conditions	As per IEC 60271
2.5	Classification of biological conditions	As per IEC 60271
2.6	Classification of chemically active substances	As per IEC 60271
2.7	Classification of mechanical conditions	As per IEC 60271
2.8	Pollution (IEC 61439)	pollution degree 3 (industrial)
2.9	Altitude	< 1000m
2.10	EMC environment	Environment A
2.11	EMC compatibility level acc to. IEC 61000-2-4	class 3
2.12	Seismic zone	class 9
ELECTRICAL RATING OF UPS		
3.1	Voltage: Normal operation	380V +/- 5%
3.2	Voltage: Post fault operation	380V +/- 10%
3.3	Frequency: Normal operation	50 Hz +/- 0.2%
3.4	Frequency: Post fault operation	50 Hz +/- 0.4%
3.5	Phase	3 Phase, 3 wire
3.6	System Fault Level	25 kA for 1 Sec
3.7	Aux. supply for panel lighting and space heater	220 V, 1-Ph AC
MECHANICAL DATA OF UPS AND GENERAL DESIGN		
4.1	Equipment tag no.:	BE01-UPS-03
4.2	Configuration	Double, separate by-pass
4.3	Rating	20 kVA
4.4	Output	380V, 3 Ph
4.5	Output Frequency	50 Hz +/- 0.1%
4.6	Rectifier Type	6 / 12 pulse heavy duty Thyristor rectifier bridges
4.7	Type of inverter	IGBT
4.8	Galvanic Isolation transformer at input	Required. (Dry type)
4.9	Mounting	Free Standing, Floor Mounted
4.10	Access	as per vendor standard
4.11	Degree of protection (For Rectifiers, Batteries & ACDBs)	Min. IP 41 (door closed) Min. IP 20 (door open)
4.12	Cable entry	Top
4.13	Gland Plate	3 mm Thick
4.14	Paint shade	RAL 7035
4.15	Earth Bus	as per vVendor

4.16	Type of Meters	as per ups specification
4.17	Accuracy Class	Class-1.0
4.18	Fault Diagnostic Unit	Required
AC distribution board		
5.1	ACDB Tag no.	BE01-DB-015
5.2	Type	Non-Compartmentalized
5.3	Incomer rating (Amp)	As per UPS DB SLD
5.4	Outgoing Feeder Details	to be discussed
5.5	Spare Feeders	20%
5.6	MCB type	to be discussed
Manufacturers data		
6.1	Make	ABB
6.2	Type designation	POWERLINE DPA
6.3	Rating (in kVA)	20
6.4	Output Voltage (Rated)	380 V
6.5	Steady state output voltage	+/- 1% of rated voltage
6.6	Output voltage adjustment range at rated load	+/- 5% of rated voltage
6.7	Output voltage distortion(Dynamic) under 100% load change	+/- 4% of rated voltage
6.8	Output voltage/phase angles (for 3 phase only)	
	For 100% unbalance load	1200 +/- 5%
	For balanced, linear load	1200 +/- 2%
6.9	Maximum recovery time to reach steady state after 100% load variations	25 msec
6.10	Frequency variation limit for inverter during steady state	+/- 0.1% of rated frequency
6.11	Limit of frequency for inverter to be phase locked with mains	+/- 6% of rated frequency
6.12	Harmonic distortion at inverter output at rated load	
	For linear load	Less than 4%
	For non-linear load	Less than 5%
6.13	Overload capacity & duration	
	For 105% load	Continuously
	For 125% load	10 minutes
	For 150% load	1 minute
	Short circuit capacity & duration	200% for 100 msec
6.14	Maximum allowable rating of Outgoing feeder (in Amp)	to be discussed
6.15	Inverter	
	Rating	as per vendor standard
	No. of phase(s)	3 - Phase
	Type	6 / 12 pulse IGBT (Insulated Gate Bipolar Transistor)
	Input DC voltage:	as per vendor standard
	Nominal	as per vendor standard
	Range	as per vendor standard
6.16	Static Switches	
	No. of static switches in the UPS system	as per vendor standard

	Current rating at specified ambient temperature:	as per vendor standard
	Continuous	as per vendor standard
	Short Time	as per vendor standard
	Type of static switch	Thyristorised
	Transfer Time:	no tmore than 0,5msec
	Synchronised mode	0.5 msec
	Unsynchronised mode	20 msec
6.17	Rectifier	
	Current rating	as per vendor standard
	Type of rectifier	6 / 12 pulse heavy duty thyristor rectifier bridges
	Output voltage range under:	as per vendor standard
	Float charging condition	as per vendor standard
	Boost charging condition	as per vendor standard
	Output voltage accuracy under specified input	+/- 1% of rated voltage
	Maximum ripple content on DC side with battery:	
	Connected	Less than 5%
	Disconnected	Less than 1%
	Maximum harmonic content in input current	28% for 6 pulse 12% for 12 pulse
	Input transformer rating	as per vendor standard
6.18	Bypass transformer with solid state voltage stabilizer	
	Make	as per vendor standard
	Type designation	as per vendor standard
	Rating	as per vendor standard
	Voltage ratio	380 V
	Accuracy of stabilizer	as per vendor standard
	Type of control	as per vendor standard
	Servo control	as per vendor standard
	Type of cooling	AN
	Type of stabilizer	as per vendor standard
	Short circuit impedance	< 4 %
6.19	AC distribution board	
	Tag no.	BE01-DB-015
	Make	as per vendor standard
	Type designation	as per vendor standard
	Rating (Amp)	s
	Degree of protection	IP 41
	No. of outgoing Feeder / rating of each	as per UPS DB SLD