Specification Sheet for WorldWide Electric BBD3112

CONTROL SYSTEM	SELF-EXCITED				P.M.G.-EXCITED			
AUTOMATIC VOLTAGE REGUALTOR	AGR460 (STD)		AGR440 (OPT)		AGR321		AGR341	
VOLTAGE REGULATION	± 1.0 %				± 0.5 %		± 1.0 %	
	WITH 4% ENGINE GOVERNING							
SUSTAINED SHORT CIRCUIT	NONE – SELF-EXCITED MACHINES CANNOT SUPPLY A SHORT-CIRCUIT CURRENT				SEE SHORT-CIRCUIT DECREMENT CURVES			
INSULATION SYSTEM	CLASS H							
PROTECTION	IP23							
RATED POWER FACTOR	0.8							
STATOR WINDING	DOUBLE LAYER CONCENTRIC							
WINDING PITCH	TWO-THIRDS							
NUMBER OF WINDING LEADS	12							
STATOR WINDING RESISTANCE	0.181Ω/PHASE @ 22°C WIRED AS HIGH WYE (SERIES STAR)							
ROTOR WINDING RESISTANCE	0.59Ω @ 22°C							
EXCITER STATOR RESISTANCE	21Ω @ 22°C							
EXCITER ROTOR RESISTANCE	0.071Ω/PHASE @ 22°C							
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. Consult the factory for others.							
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%							
MAXIMUM OVERSPEED	2250 Rev/Min							
BEARING DRIVE END	BALL. 6312 - 2RS. (ISO)							
BEARING NON-DRIVE END	BALL. 6309 - 2RS. (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	271 kg				280 kg			
WEIGHT WOUND STATOR	75 kg				75 kg			
WEIGHT WOUND ROTOR	78.95 kg				70.58 kg			
WR² INERTIA	0.3987 kgm^2				0.3667 kgm^2			
SHIPPING WEIGHTS in a crate	294 kg				301 kg			
PACKING CRATE SIZE	97 x 57 x 96 (cm)				97 x 57 x 96 (cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF < 2%				TIF < 50			
COOLING AIR	0.216 m^3/sec, 458 CFM				0.281 m^3/sec, 595 CFM			
HIGH WYE (SERIES STAR), VAC	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
LOW WYE (PARALLEL STAR), VAC	190/110	200/115	208/120	220/127	208/120	220/127	230/133	240/138
HIGH (SERIES) DELTA, VAC	220/110	230/115	240/120	254/127	240/120	254/127	266/133	277/138
KVA BASE RATING FOR REACTANCE VALUES	42.5	42.5	42.5	30.0	50.0	52.5	52.5	55.0
Xd DIR. AXIS SYNCHRONOUS	2.42	2.19	2.03	1.27	3.03	2.84	2.60	2.50
X'd DIR. AXIS TRANSIENT	0.19	0.17	0.16	0.10	0.22	0.21	0.19	0.18
X''d DIR. AXIS SUBTRANSIENT	0.12	0.11	0.10	0.06	0.15	0.14	0.13	0.12
Xq QUAD. AXIS REACTANCE	1.12	1.01	0.94	0.59	1.40	1.31	1.20	1.16
X''q QUAD. AXIS SUBTRANSIENT	0.16	0.14	0.13	0.08	0.14	0.13	0.12	0.12
X_L LEAKAGE REACTANCE	0.08	0.08	0.07	0.04	0.10	0.09	0.09	0.08
X_2 NEGATIVE SEQUENCE	0.14	0.13	0.12	0.08	0.14	0.13	0.12	0.12
X_0 ZERO SEQUENCE	0.10	0.09	0.08	0.05	0.10	0.09	0.09	0.08
REACTANCES ARE SATURATED.	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED.							
T'd TRANSIENT TIME CONST.	0.025 s							
T''d SUB-TRANSTIME CONST.	0.006 s							
T'do O.C. FIELD TIME CONST.	0.65 s							
Ta ARMATURE TIME CONST.	0.005 s							
SHORT CIRCUIT RATIO	1/Xd							

50Hz RATINGS

Class	F				H				Standby							
Temp Rise	105°C R/R (40°C)				125°C R/R (40°C)				150°C R/R (40°C)				163°C R/R (27°C)			
High Wye (Series Star) Voltage	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
Low Wye (Parallel Star) Voltage	190	200	208	220	190	200	208	220	190	200	208	220	190	200	208	220
High (Series) Delta Voltage	220	230	240	254	220	230	240	254	220	230	240	254	220	230	240	254
KVA Output	37.5	37.5	37.5	27.0	42.5	42.5	42.5	30.0	45.0	45.0	45.0	31.7	46.8	46.8	46.8	33.0
kW Output	30.0	30.0	30.0	21.6	34.0	34.0	34.0	24.0	36.0	36.0	36.0	25.4	37.4	37.4	37.4	26.4
Efficiency, %	87.3	87.7	88.0	88.9	86.6	87.1	87.4	88.8	86.2	86.8	87.1	88.7	86.0	86.6	86.9	88.6
kW Input	34.4	34.2	34.1	24.3	39.3	39.0	38.9	27.0	41.8	41.5	41.3	28.6	43.5	43.2	43.1	29.8

60Hz RATINGS

Class	F				H				Standby							
Temp Rise	105°C R/R (40°C)				125°C R/R (40°C)				150°C R/R (40°C)				163°C R/R (27°C)			
High Wye (Series Star) Voltage	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
Low Wye (Parallel Star) Voltage	208	220	230	240	208	220	230	240	208	220	230	240	208	220	230	240
High (Series) Delta Voltage	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
KVA Output	45.0	46.3	46.3	48.0	50.0	52.5	52.5	55.0	53.1	55.0	55.0	58.1	55.0	56.3	56.3	60.0
kW Output	36.0	37.0	37.0	38.4	40.0	42.0	42.0	44.0	42.5	44.0	44.0	46.5	44.0	45.0	45.0	48.0
Efficiency, %	87.7	88.1	88.4	88.6	87.1	87.5	87.9	88.1	86.7	87.2	87.7	87.8	86.5	87.1	87.5	87.6
kW Input	41.0	42.0	41.9	43.3	45.9	48.0	47.8	49.9	49.0	50.5	50.2	52.9	50.9	51.7	51.5	54.8