



Specification Sheet for WorldWide Electric FDD5112, Three-Phase

CONTROL SYSTEM	P.M.G.-EXCITED							
AUTOMATIC VOLTAGE REGULATOR	AGR321				AGR341			
VOLTAGE REGULATION	± 0.5 %				± 1.0 %			
	WITH 4% ENGINE GOVERNING							
SUSTAINED SHORT CIRCUIT	SEE SHORT-CIRCUIT DECREMENT CURVES							
INSULATION SYSTEM	CLASS H							
PROTECTION	IP23							
RATED POWER FACTOR	0.8							
STATOR WINDING	DOUBLE LAYER LAP							
WINDING PITCH	TWO-THIRDS							
NUMBER OF WINDING LEADS	6							
STATOR WINDING RESISTANCE	0.0024/PHASE @ 22°C WIRED AS HIGH WYE (SERIES STAR)							
ROTOR WINDING RESISTANCE	1.92Ω @ 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. 6228 (ISO)							
BEARING NON-DRIVE END	BALL. 6319 (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	2394 kg				2395 kg			
WEIGHT WOUND STATOR	1021 kg				1021 kg			
WEIGHT WOUND ROTOR	885 kg				841 kg			
WR ² INERTIA	20.611 kgm ²				20.068 kgm ²			
SHIPPING WEIGHTS in a crate	2601 kg				2622 kg			
PACKING CRATE SIZE	194 x 92 x 147 (cm)				194 x 92 x 147 (cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF < 2%				TIF < 50			
COOLING AIR	2.18 m ³ /sec, 4619 CFM				2.63 m ³ /sec, 5573 CFM			
HIGH WYE (SERIES STAR), VAC	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
KVA BASE RATING FOR REACTANCE VALUES	950	1000	1000	910	1083	1145	1197	1250
X _d DIR. AXIS SYNCHRONOUS	2.62	2.49	2.31	1.87	2.99	2.82	2.70	2.59
X' _d DIR. AXIS TRANSIENT	0.13	0.13	0.12	0.10	0.15	0.14	0.14	0.13
X'' _d DIR. AXIS SUBTRANSIENT	0.10	0.09	0.08	0.07	0.11	0.10	0.10	0.10
X _q QUAD. AXIS REACTANCE	2.18	2.07	1.92	1.56	2.49	2.35	2.25	2.16
X'' _q QUAD. AXIS SUBTRANSIENT	0.25	0.24	0.22	0.18	0.28	0.27	0.26	0.25
X _L LEAKAGE REACTANCE	0.06	0.06	0.06	0.05	0.07	0.07	0.07	0.06
X ₂ NEGATIVE SEQUENCE	0.17	0.16	0.15	0.12	0.20	0.19	0.18	0.17
X ₀ ZERO SEQUENCE	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
REACTANCES ARE SATURATED. VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED.								
T' _d TRANSIENT TIME CONST.	0.097 s							
T'' _d SUB-TRANSTIME CONST.	0.014 s							
T' _{do} O.C. FIELD TIME CONST.	3.18 s							
T _a ARMATURE TIME CONST.	0.034 s							
SHORT CIRCUIT RATIO	1/X _d							

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
High (Series) Delta Voltage	220	230	240	254	220	230	240	254	220	230	240	254	220	230	240	254
KVA Output	871	917	917	834	950	1000	1000	910	980	1030	1030	938	1000	1050	1050	955
kW Output	697	734	734	667	760	800	800	728	784	824	824	750	800	840	840	764
Efficiency, %	94.5	94.5	94.6	95.0	94.2	94.2	94.4	94.8	94.1	94.1	94.3	94.8	94.0	94.0	94.2	94.7
kW Input	737	776	775	702	807	849	847	768	833	876	874	792	851	894	892	807

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
High (Series) Delta Voltage	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
KVA Output	990	1049	1097	1146	1083	1145	1197	1250	1118	1180	1236	1290	1130	1195	1250	1305
kW Output	792	839	878	917	866	916	958	1000	894	944	989	1032	904	956	1000	1044
Efficiency, %	94.3	94.4	94.5	94.5	94.1	94.2	94.2	94.3	93.9	94.0	94.1	94.2	93.9	94.0	94.1	94.1
kW Input	840	889	929	970	921	972	1017	1060	953	1004	1051	1096	963	1017	1063	1109