



Specification Sheet for WorldWide Electric FDD4112, 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	0.003Ω/PHASE @ 22°C WIRED AS HIGH WYE (SERIES STAR)							
ROTOR WINDING RESISTANCE	1.74Ω @ 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	2233 kg				2240 kg			
WEIGHT WOUND STATOR	947 kg				947 kg			
WEIGHT WOUND ROTOR	822 kg				778 kg			
WR ² INERTIA	18.6963 kgm ²				18.1529 kgm ²			
SHIPPING WEIGHTS in a crate	2328 kg				2329 kg			
PACKING CRATE SIZE	183 x 92 x 140 (cm)				183 x 92 x 140 (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	865	910	910	825	986	1043	1090	1138
X _d DIR. AXIS SYNCHRONOUS	2.83	2.69	2.50	2.02	3.23	3.05	2.92	2.80
X' _d DIR. AXIS TRANSIENT	0.15	0.14	0.13	0.10	0.17	0.16	0.15	0.14
X'' _d DIR. AXIS SUBTRANSIENT	0.10	0.10	0.09	0.07	0.12	0.11	0.10	0.10
X _q QUAD. AXIS REACTANCE	2.35	2.23	2.07	1.67	2.68	2.53	2.42	2.32
X'' _q QUAD. AXIS SUBTRANSIENT	0.27	0.26	0.24	0.19	0.31	0.29	0.28	0.27
X _L LEAKAGE REACTANCE	0.07	0.06	0.06	0.05	0.08	0.07	0.07	0.07
X ₂ NEGATIVE SEQUENCE	0.19	0.18	0.16	0.13	0.21	0.20	0.19	0.18
X ₀ ZERO SEQUENCE	0.03	0.03	0.03	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.	0.092 s							
T'' _d SUB-TRANSTIME CONST.	0.013 s							
T' _{do} O.C. FIELD TIME CONST.	3 s							
T _a ARMATURE TIME CONST.	0.032 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	793	834	834	756	865	910	910	825	890	938	938	850	910	955	955	865
kW Output	634	667	667	605	692	728	728	660	712	750	750	680	728	764	764	692
Efficiency, %	93.8	93.9	94.1	94.5	93.5	93.5	93.7	94.3	93.3	93.4	93.6	94.3	93.2	93.3	93.5	94.2
kW Input	676	711	709	640	740	779	777	700	763	803	802	721	781	819	817	735

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	904	956	999	1043	986	1043	1090	1138	1018	1077	1126	1175	1030	1090	1140	1190
kW Output	723	765	799	834	789	834	872	910	814	862	901	940	824	872	912	952
Efficiency, %	93.6	93.7	93.8	93.9	93.3	93.4	93.5	93.6	93.1	93.3	93.4	93.4	93.1	93.2	93.3	93.4
kW Input	773	816	852	889	845	893	933	973	875	923	964	1006	885	936	977	1019