



## Specification Sheet for WorldWide Electric FDD3112, Three-Phase

CONTROL SYSTEM	P.M.G.-EXCITED							
AUTOMATIC VOLTAGE REGULATOR	AGR321				AGR341			
VOLTAGE REGULATION	$\pm 0.5\%$				$\pm 1.0\%$			
	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	0.0039 $\Omega$ /PHASE @ 22°C WIRED AS HIGH WYE (SERIES STAR)							
ROTOR WINDING RESISTANCE	1.6 $\Omega$ @ 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	1985 kg				2030 kg			
WEIGHT WOUND STATOR	865 kg				865 kg			
WEIGHT WOUND ROTOR	760 kg				716 kg			
WR <sup>2</sup> INERTIA	16.7816 kgm <sup>2</sup>				16.2382 kgm <sup>2</sup>			
SHIPPING WEIGHTS in a crate	2023 kg				2045 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 <sup>3</sup> /sec, 4619 CFM				2.63 m <sup>3</sup> /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	710	750	750	680	810	855	895	938
X <sub>d</sub> DIR. AXIS SYNCHRONOUS	2.73	2.60	2.42	1.95	3.12	2.94	2.82	2.71
X' <sub>d</sub> DIR. AXIS TRANSIENT	0.17	0.16	0.15	0.12	0.20	0.18	0.18	0.17
X'' <sub>d</sub> DIR. AXIS SUBTRANSIENT	0.12	0.12	0.11	0.09	0.14	0.13	0.13	0.12
X <sub>q</sub> QUAD. AXIS REACTANCE	2.27	2.16	2.01	1.62	2.59	2.44	2.34	2.25
X'' <sub>q</sub> QUAD. AXIS SUBTRANSIENT	0.28	0.27	0.25	0.20	0.32	0.30	0.29	0.28
X <sub>L</sub> LEAKAGE REACTANCE	0.10	0.09	0.09	0.07	0.11	0.11	0.10	0.10
X <sub>2</sub> NEGATIVE SEQUENCE	0.20	0.20	0.18	0.15	0.23	0.22	0.21	0.20
X <sub>0</sub> 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' <sub>d</sub> TRANSIENT TIME CONST.	0.106 s							
T'' <sub>d</sub> SUB-TRANSTIME CONST.	0.013 s							
T' <sub>do</sub> O.C. FIELD TIME CONST.	2.91 s							
T <sub>a</sub> ARMATURE TIME CONST.	0.035 s							
SHORT CIRCUIT RATIO	1/X <sub>d</sub>							

### 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	697	733	733	664	760	800	800	725	785	825	825	745	800	840	840	760
kW Output	558	586	586	531	608	640	640	580	628	660	660	596	640	672	672	608
Efficiency, %	93.9	94.0	94.1	94.5	93.6	93.6	93.8	94.3	93.4	93.5	93.7	94.3	93.3	93.4	93.6	94.2
kW Input	594	624	623	562	650	684	682	615	672	706	704	632	686	719	718	645

### 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	790	840	878	917	865	916	958	1000	897	948	992	1035	905	958	1000	1045
kW Output	632	672	702	734	692	733	766	800	718	758	794	828	724	766	800	836
Efficiency, %	93.7	93.8	93.9	93.9	93.4	93.5	93.6	93.6	93.2	93.4	93.4	93.5	93.2	93.3	93.4	93.5
kW Input	674	716	748	781	741	784	819	855	770	812	850	886	777	821	857	894