



Specification Sheet for WorldWide Electric EDD4112, Three-Phase

CONTROL SYSTEM	SELF-EXCITED				P.M.G.-EXCITED			
AUTOMATIC VOLTAGE REGULATOR	AGR440				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 LAP							
WINDING PITCH	TWO-THIRDS							
NUMBER OF WINDING LEADS	12							
STATOR WINDING RESISTANCE	0.005Ω/PHASE @ 22°C WIRED AS HIGH WYE (SERIES STAR)							
ROTOR WINDING RESISTANCE	1.77Ω @ 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. 6220 (ISO)							
BEARING NON-DRIVE END	BALL. 6314 (ISO)							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	1393 kg				1395 kg			
WEIGHT WOUND STATOR	657 kg				657 kg			
WEIGHT WOUND ROTOR	563 kg				535 kg			
WR ² INERTIA	8.0068 kgm ²				7.7289 kgm ²			
SHIPPING WEIGHTS in a crate	1485 kg				1485 kg			
PACKING CRATE SIZE	166 x 87 x 124 (cm)				166 x 87 x 124 (cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF < 2%				TIF < 50			
COOLING AIR	1.035 m ³ /sec, 2202 CFM				1.312 m ³ /sec, 2780 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	500	500	500	500	575	594	625	644
X _d DIR. AXIS SYNCHRONOUS	3.02	2.72	2.53	2.25	3.52	3.25	3.13	2.96
X' _d DIR. AXIS TRANSIENT	0.16	0.14	0.13	0.12	0.17	0.16	0.15	0.14
X'' _d DIR. AXIS SUBTRANSIENT	0.11	0.10	0.09	0.08	0.12	0.11	0.11	0.10
X _q QUAD. AXIS REACTANCE	2.48	2.24	2.08	1.85	2.87	2.65	2.55	2.41
X'' _q QUAD. AXIS SUBTRANSIENT	0.27	0.25	0.23	0.20	0.31	0.29	0.28	0.26
X _L LEAKAGE REACTANCE	0.05	0.04	0.04	0.04	0.06	0.06	0.05	0.05
X ₂ NEGATIVE SEQUENCE	0.19	0.17	0.16	0.14	0.22	0.20	0.20	0.19
X ₀ ZERO SEQUENCE	0.10	0.09	0.08	0.07	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.	0.08 s							
T'' _d SUB-TRANSTIME CONST.	0.012 s							
T' _{do} O.C. FIELD TIME CONST.	2.2 s							
T _a ARMATURE TIME CONST.	0.018 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
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	450	495	450	450	500	550	500	500	515	575	515	515	530	590	530	530
kW Output	360	396	360	360	400	440	400	400	412	460	412	412	424	472	424	424
Efficiency, %	94.8	94.7	95.0	95.1	94.5	94.3	94.8	94.9	94.4	94.1	94.7	94.9	94.2	94.0	94.6	94.8
kW Input	380	418	379	379	423	467	422	421	436	489	435	434	450	502	448	447

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	519	538	563	588	575	594	625	644	588	625	655	675	606	644	673	694
kW Output	415	430	450	470	460	475	500	515	470	500	524	540	485	515	538	555
Efficiency, %	94.7	94.8	94.9	94.9	94.5	94.6	94.6	94.7	94.4	94.4	94.5	94.5	94.3	94.3	94.4	94.4
kW Input	438	454	475	496	487	502	529	544	498	530	554	571	514	546	570	588