

CONTINUOUS DUTY

4 poles
50 Hz - 1500 rpm / 60 Hz - 1800 rpm

AMBIENT TEMPERATURE TEMPERATURE RISE INSULATION CLASS POWER FACTOR		40°C H H 0,8	WINDING DATA										Winding code Number of leads Winding pitch	M0 12 2/3
			50 Hz					60 Hz						
FREQUENCY		Hz												
VOLTAGE	Connections	Star series	V	380	400	415	440	380	416	440	460	480		
		Star parallel	V	190	200	208	220	190	208	220	230	240		
RATING POWER		kVA	220	220	220	210	225	235	245	255	270			
		kW	176	176	176	168	180	188	196	204	216			
EFFICIENCY [%] @ 0,8 p.f.		4/4	92,8	93,2	93,1	93,2	92,7	93,0	93,3	93,4	93,9			
		3/4	93,4	93,6	93,5	93,5	93,7	94,0	94,1	94,2	94,4			
		2/4	93,6	93,7	93,6	93,5	94,1	94,3	94,4	94,4	94,4			
EFFICIENCY [%] @ 1 p.f.		4/4	94,3	94,6	94,5	94,6	94,2	94,4	94,7	94,8	95,2			
		3/4	94,8	94,9	94,8	94,8	95,0	95,2	95,3	95,4	95,6			
		2/4	95,0	95,0	94,9	94,9	95,4	95,5	95,6	95,6	95,6			
SHORT CIRCUIT RATIO		SCR	0,36	0,4	0,43	0,51	0,29	0,34	0,36	0,38	0,39			
REACTANCES [%]														
Direct axis synchronous		X _d	377	340	316	268	348	403	376	358	348			
Quadrature axis synchronous		X _q	209	189	176	149	257	224	209	199	193			
Direct axis transient		X' _d	31,7	28,6	26,6	22,6	38,9	33,9	31,6	30,1	29,2			
Direct axis subtransient		X'' _d	12,4	11,2	10,4	8,8	15,2	13,3	12,4	11,8	11,5			
Quadrature axis subtransient		X'' _q	14,8	13,4	12,4	10,6	18,2	15,9	14,8	14,1	13,7			
Negative sequence		X ₂	13,6	12,3	11,4	9,7	16,7	14,6	13,6	12,9	12,6			
Zero sequence		X ₀	3,0	2,7	2,5	2,1	3,6	3,2	2,9	2,8	2,7			
TIME CONSTANTS [s]														
Open circuit		T' _{do}	1											
Transient		T' _d	0,095											
Subtransient		T'' _d	0,011											
Armature		T _a	0,013											

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6218 2RS C3 / Prelubricated
N-end bearing/Lubrication	6313 2Z C3 / Prelubricated
Overspeed [r.p.m.]	2250
Inertia (J) [kgm ²]	Refer to B34 construction 1,89
Weight [kg]	Refer to B34 construction 660
Method of cooling	IC01
Cooling air required [m ³ /s] @ 50/60 Hz	0,42 / 0,52
Degree of protection	IP23
Types of construction available	B2 (SAE) - IM B34
Direction of rotation (Standard)	CW

OTHER DATA

Phase resistance [Ω] @ 20 °C - Star series	0,021
Overloads	10% for 1 hour every 12 hours
3-phase short circuit sustained current	-
Voltage regulation accuracy	± 0,5 % In steady state condition
Radio interference	EN 55011 - Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% - At no load

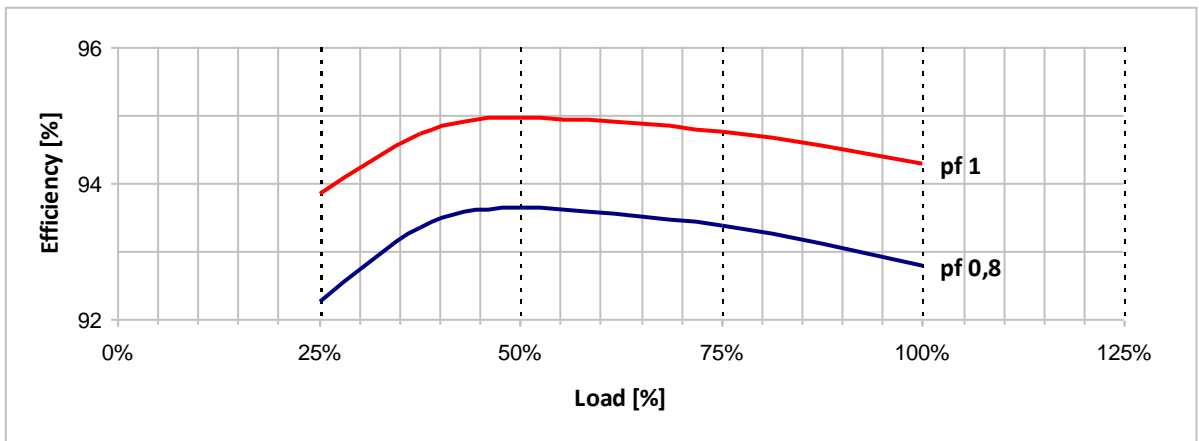
STANDARDS

IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

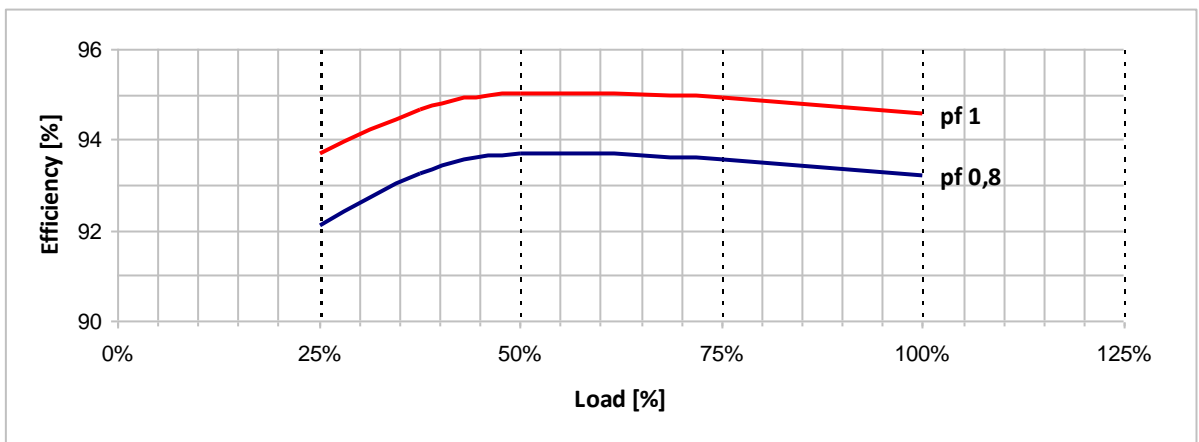
Typical efficiency curves

50 Hz - 1500 rpm

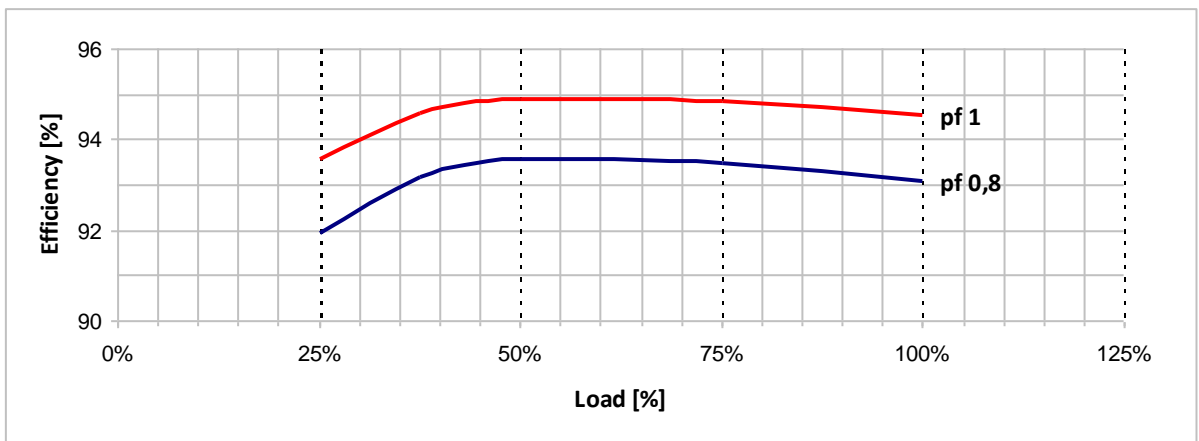
380 V



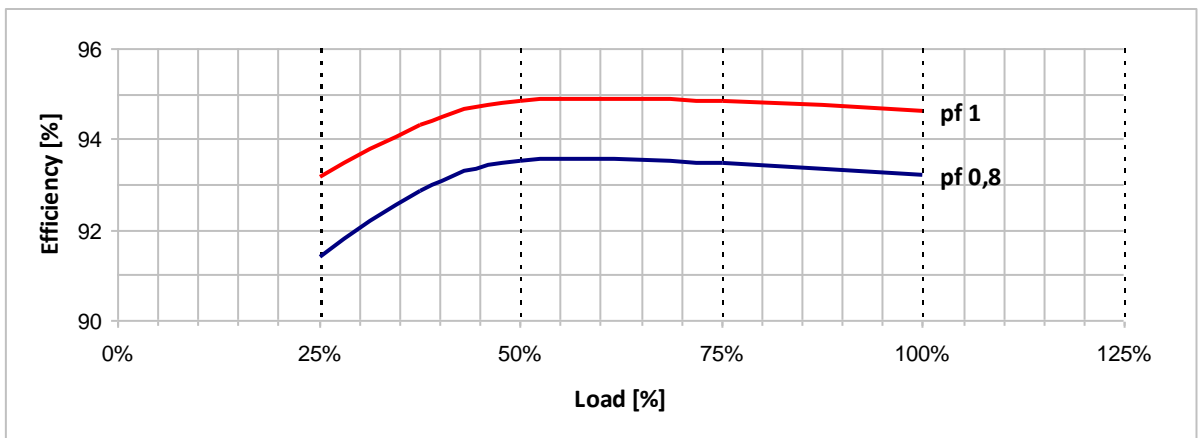
400 V



415 V



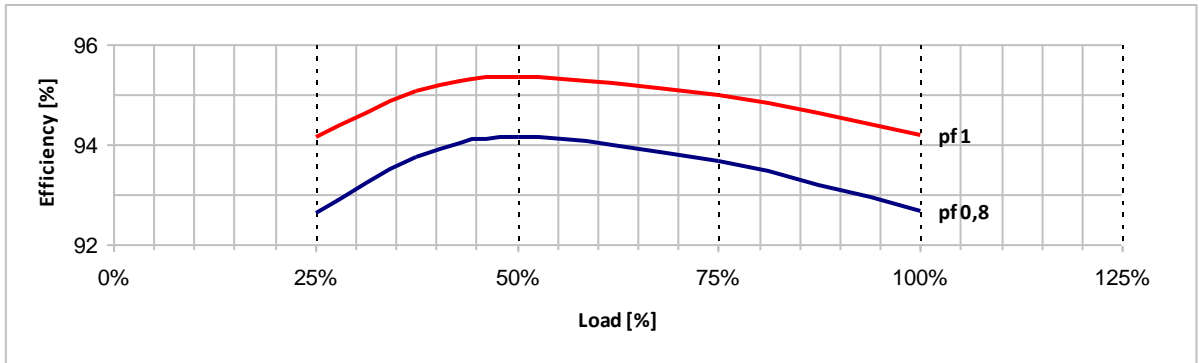
440 V



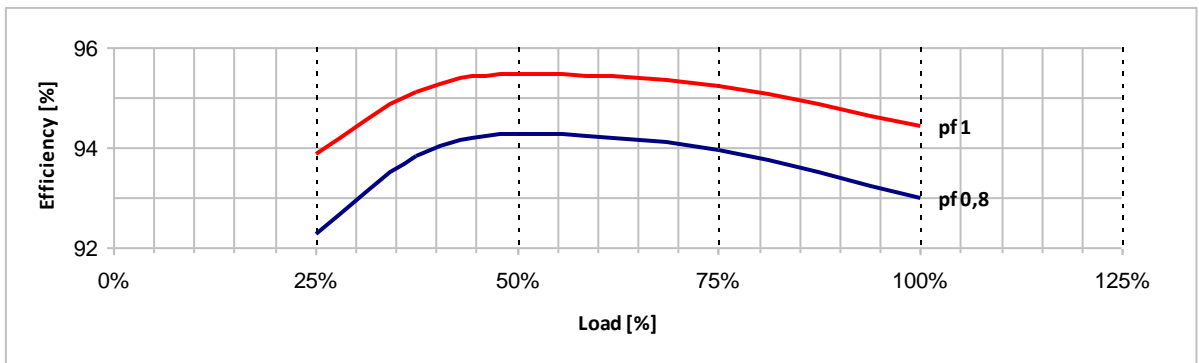
Typical efficiency curves

60 Hz - 1800 rpm

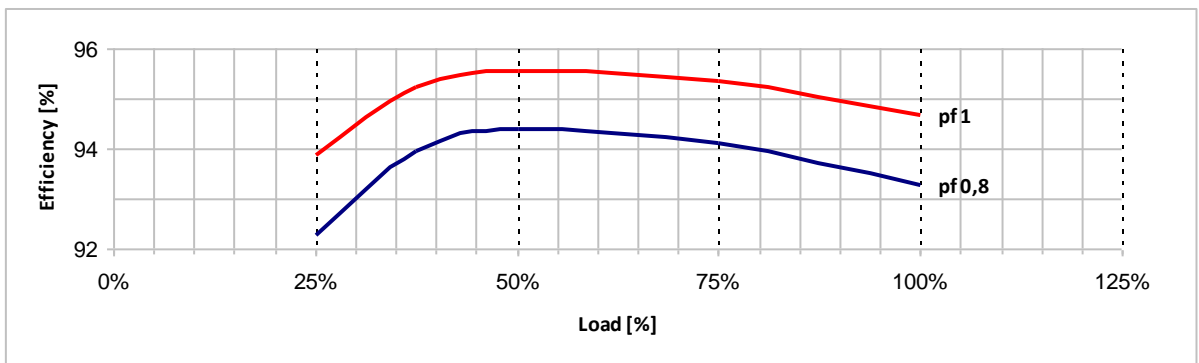
380 V



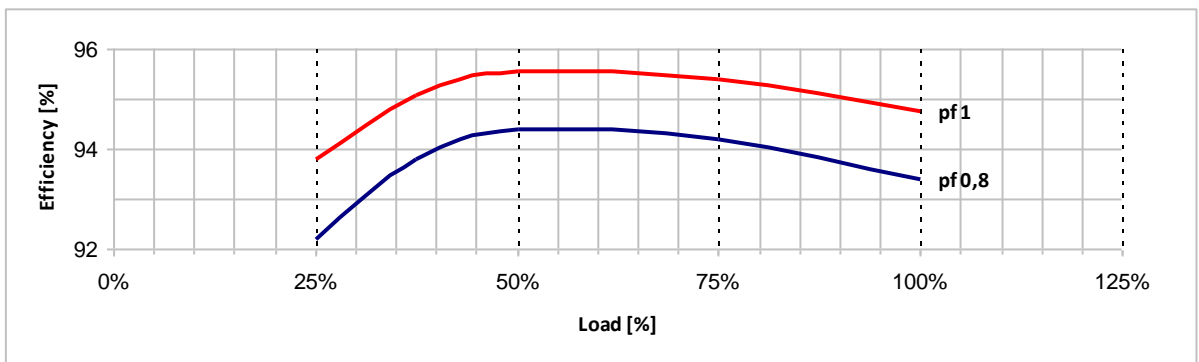
416 V



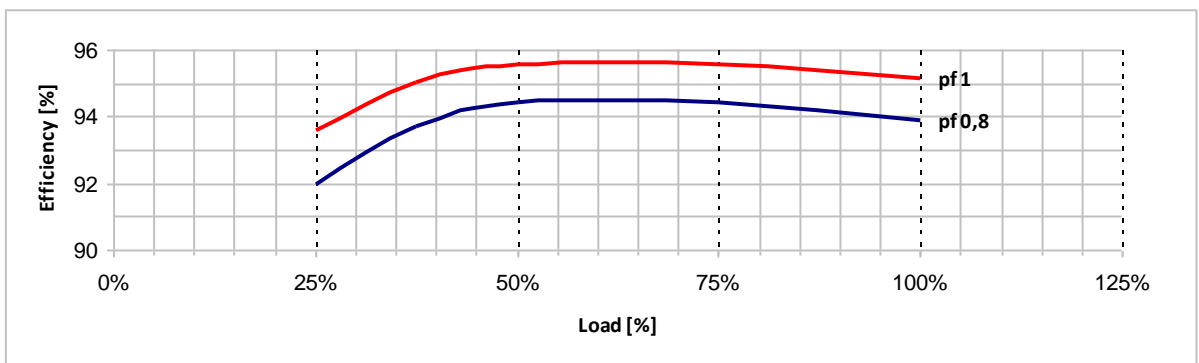
440 V



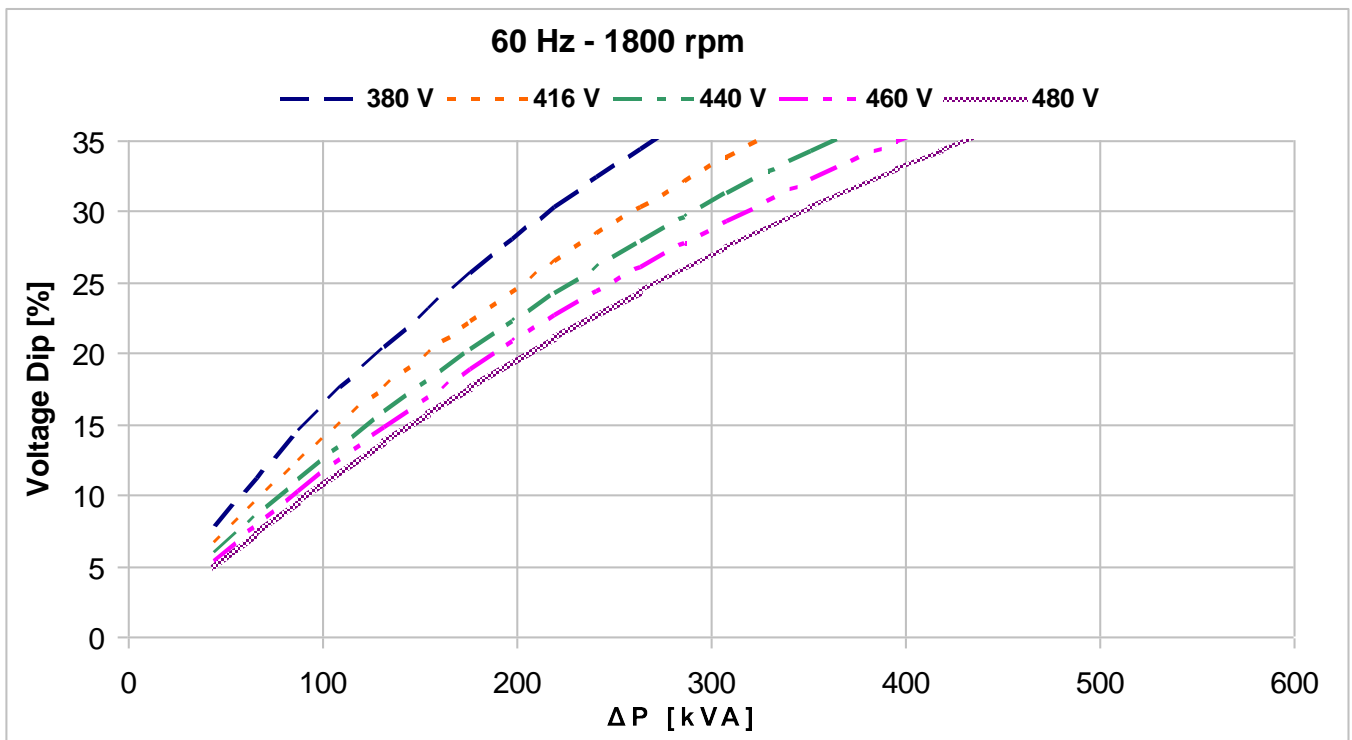
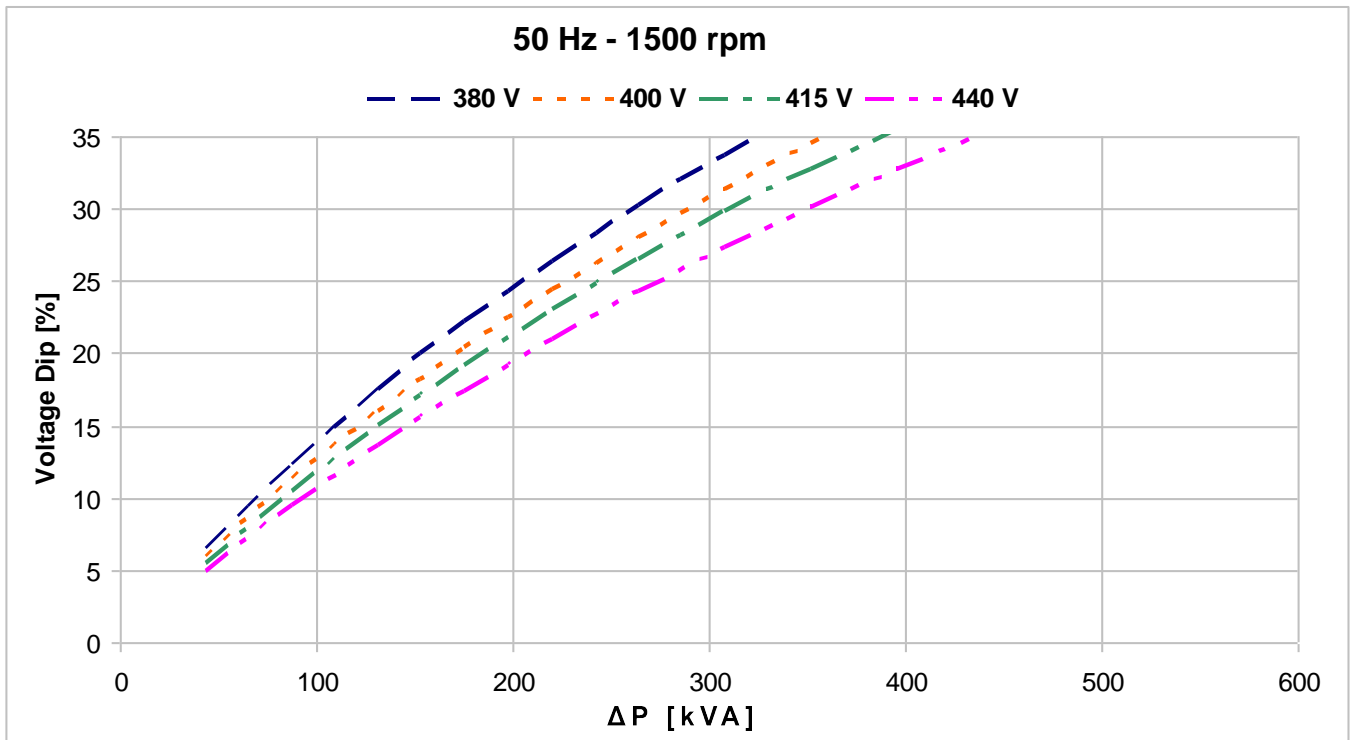
460 V



480 V



Locked rotor motor starting curves (*)



$$\Delta P = P_n \times \frac{I_s/I_n}{\cos \varphi_n \times \eta_n}$$

(*): A coefficient of 0,85 must be applied to the voltage dip if the load has a power factor equal or greater than 0,8.

THREE-PHASE SYNCHRONOUS GENERATOR
MJB 250 LA 4
4 POLES
50 Hz-1500 min⁻¹ / 60 Hz-1800 min⁻¹
STAND BY DUTY (163/27)

AMBIENT TEMPERATURE	27°C	WINDING DATA		
TEMPERATURE RISE	163K	Winding code M0		
INSULATION CLASS	H	Number of leads 12		
POWER FACTOR	0,8	Winding pitch 2/3		

FREQUENCY	Hz	50				60					
		VOLTAGE	Star series Star parallel	V	380	400	415	440	380	416	440
RATING		kVA	240	240	240	230	250	260	270	280	295
		kW	192	192	192	184	200	208	216	224	236
EFFICIENCY (%) @ 0,8 p.f.	4/4		92,5	93,0	92,8	93,0	92,1	92,5	92,8	92,9	93,6
EFFICIENCY (%) @ 1,0 p.f.	4/4		94,0	94,4	94,3	94,4	93,7	94,0	94,3	94,4	94,9
SHORT CIRCUIT RATIO			0,33	0,37	0,39	0,46	0,26	0,31	0,33	0,35	0,36
REACTANCES (%)											
Direct axis synchronous	x _d		410	370	345	295	515	445	415	395	380
Quadrature axis synchronous	x _q		230	205	190	165	285	250	230	220	210
Direct axis transient	x' _d		34,6	31,2	29,0	24,7	43,2	37,5	34,8	33,0	32,0
Direct axis subtransient	x'' _d		13,5	12,2	11,4	9,7	16,9	14,7	13,6	12,9	12,5
Quadrature axis subtransient	x'' _q		16,2	14,6	13,6	11,6	20,2	17,6	16,3	15,5	15,0
Negative sequence	x ₂		14,9	13,4	12,5	10,6	18,6	16,1	15,0	14,2	13,7
Zero sequence	x ₀		3,3	2,9	2,7	2,3	4,1	3,5	3,3	3,1	3,0

TIME CONSTANTS [s]

Open circuit (T' _{do})	1	Subtransient (T'' _d)	0,011
Transient (T' _d)	0,095	Armature (T _a)	0,013

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6218 2RS C3 / Prelubricated
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Weight (IM B34) [kg]	660
Inertia (J) (IM B34) [kgm ²]	1,89
Overspeed [min ⁻¹]	2250
Method of cooling	IC 01
Cooling air required [m ³ /s] @ 50/60 Hz	0,42 / 0,52
Degree of protection	IP23
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Overloads	-
3-phase short circuit current	-
Voltage regulation accuracy	+/- 0,5 % (in steady state condition)
Radio interference	EN 55011 Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% (at no load)

STANDARDS

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