

AMBIENT TEMPERATURE	40°C	WINDING DATA									
TEMPERATURE RISE	H	Winding code		MO							
INSULATION CLASS	H	Number of leads		12							
POWER FACTOR	0,8	Winding pitch		2/3							
FREQUENCY	Hz	50				60					
VOLTAGE	Star series	V	380	400	415	440	380	416	440	460	480
	Star parallel		190	200	208	220	190	208	220	230	240
RATING	kVA		200	200	192	180	200	217	229	240	250
	kW		160	160	154	144	160	174	183	192	200
EFFICIENCY (%) @ 0,8 p.f.	4/4		91,6	92,0	92,4	92,8	91,5	92,1	92,3	92,6	92,7
	3/4		92,8	93,1	93,3	93,5	92,7	93,1	93,3	93,5	93,6
	2/4		93,8	93,9	93,9	93,7	93,5	93,8	94,0	94,1	94,1
EFFICIENCY (%) @ 1,0 p.f.	4/4		93,7	94,1	94,5	94,9	93,5	94,0	94,2	94,4	94,6
	3/4		94,7	95,0	95,3	95,5	94,5	94,9	95,0	95,2	95,3
	2/4		95,5	95,6	95,7	95,6	95,2	95,4	95,6	95,6	95,7
STAND-BY RATING (163/27)	kVA		220	220	211	198	220	239	252	264	275
STAND-BY EFFICIENCY (%) @ 0,8 p.f.			91,1	91,6	92,0	92,5	91,0	91,7	92,0	92,2	92,3
SHORT CIRCUIT RATIO (referred to class H rating)			0,31	0,34	0,38	0,46	0,25	0,28	0,30	0,31	0,32
REACTANCES (%) (referred to class H rating)											
Direct axis synchronous	x _d		387	349	311	259	464	420	396	380	363
Quadrature axis synchronous	x _q		159	144	128	107	191	173	163	157	150
Direct axis transient	x' _d		25,9	23,4	20,9	17,4	31,1	28,2	26,6	25,5	24,4
Direct axis subtransient	x'' _d		17,4	15,7	14,0	11,7	20,8	18,9	17,8	17,1	16,3
Quadrature axis subtransient	x'' _q		19,1	17,2	15,4	12,8	22,9	20,8	19,6	18,8	18,0
Negative sequence	x ₂		18,2	16,5	14,7	12,2	21,9	19,8	18,7	17,9	17,1
Zero sequence	x ₀		7,3	6,6	5,9	4,9	8,7	7,9	7,5	7,2	6,8

TIME CONSTANTS [s]

Open circuit (T' _{do})	1,072	Subtransient (T'' _d)	0,008
Transient (T' _d)	0,103	Armature (T _a)	0,012

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	Available on double bearing configuration (on request)
N-end bearing/Lubrication	6313 2Z C3 / Prelubricated
Weight [kg]	541
Inertia (J) [kgm ²]	1,64
Overspeed [min ⁻¹]	2250
Method of cooling	IC 01
Cooling air required [m ³ /s] @ 50/60 Hz	1,7 / 2,1
Degree of protection	IP 23
Type of construction available	B2 (B34 on request)
Direction of rotation	CW

OTHER DATA

Phase resistance [Ω] @ 20 °C - Star series	0,023
Overloads	10% for 1 hour
3-phase short circuit current	>= 300% (3 I _n) with aux. winding or PMG
Voltage regulation accuracy	+/- 0,5 % (@ rated load, balanced and non-distorting, p.f. 0,8)
Radio interference	EN 55011 Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% (at no load)

STANDARDS

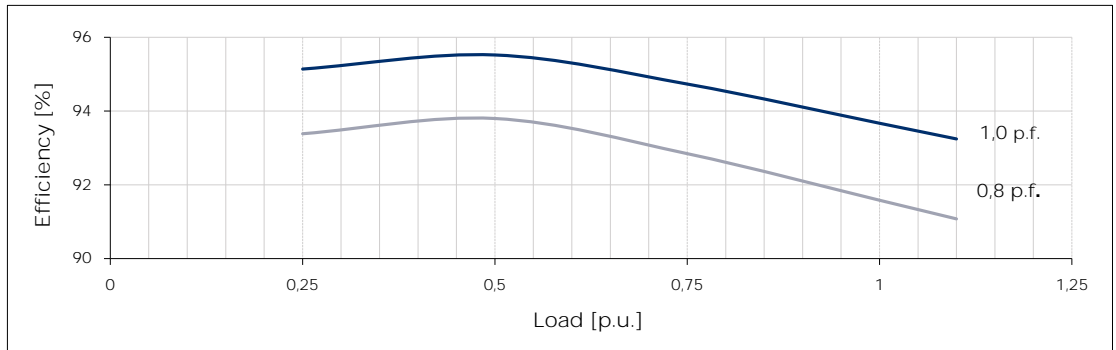
IEC 60034-1; BS 4999-5000; NEMA MG 1.32.
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THREE-PHASE SYNCHRONOUS GENERATOR
MXB-E 250 SB 4

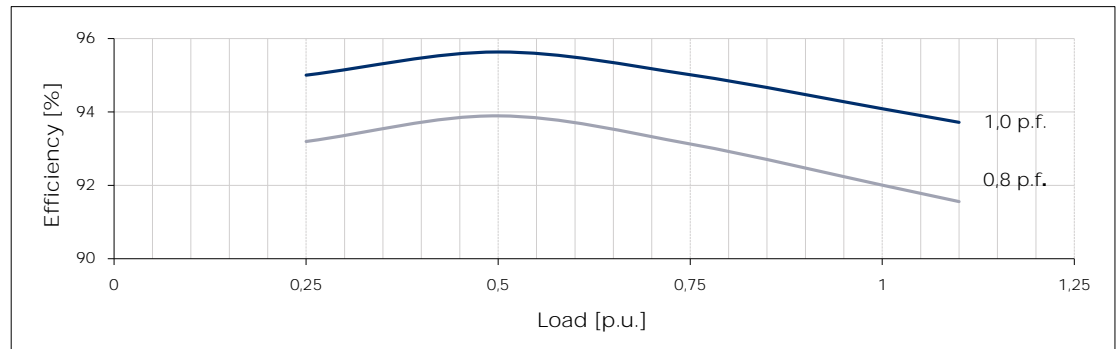
Typical efficiency curves

50 Hz - 1500 min⁻¹

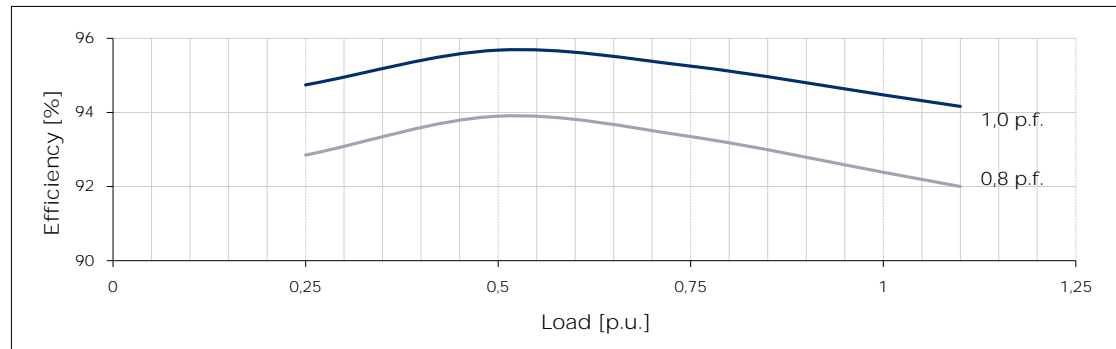
380 V



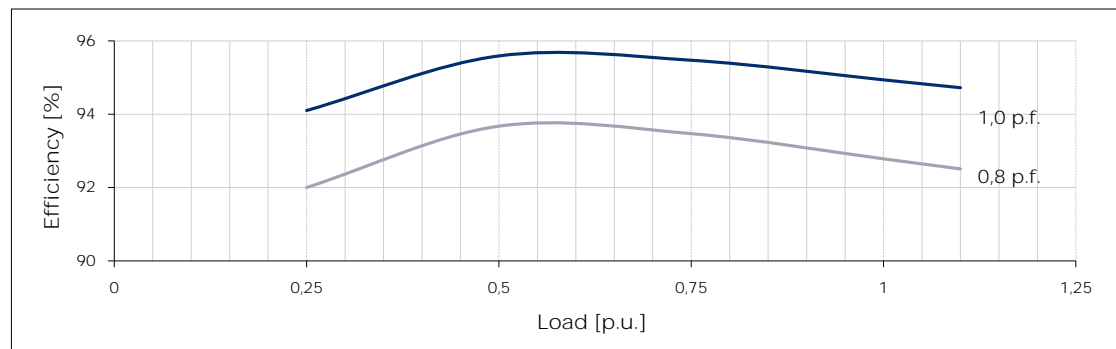
400 V



415 V



440 V

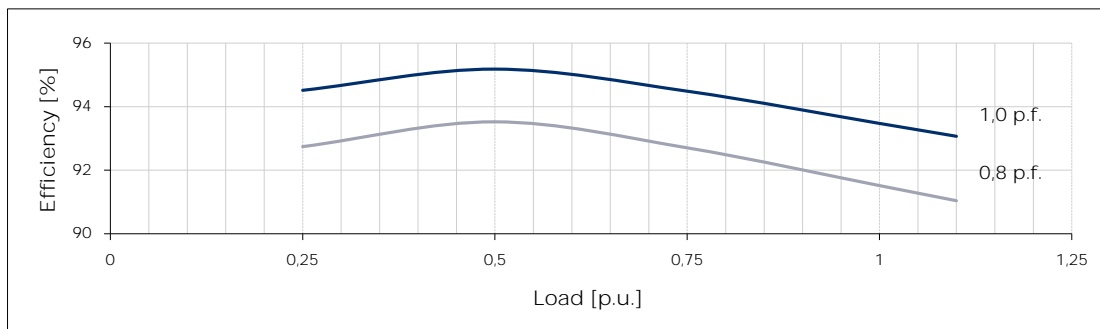


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MXB-E 250 SB 4

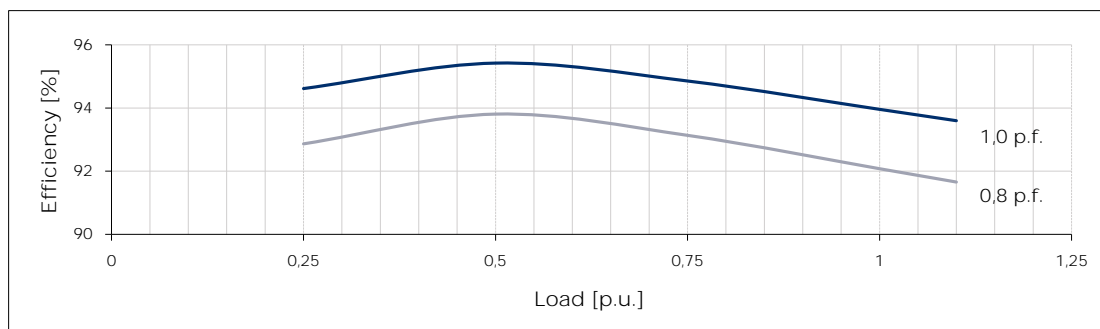
Typical efficiency curves

60 Hz - 1800 min⁻¹

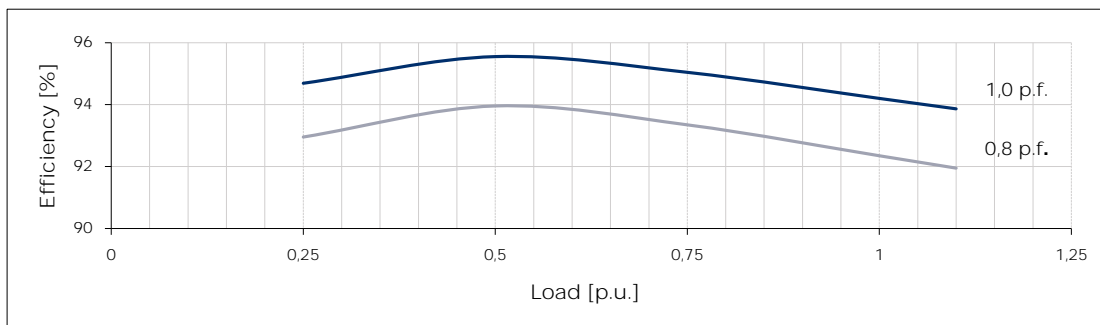
380 V



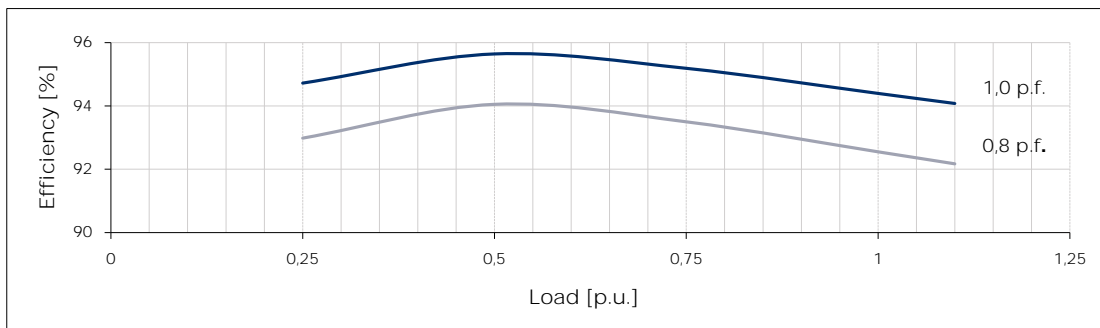
416 V



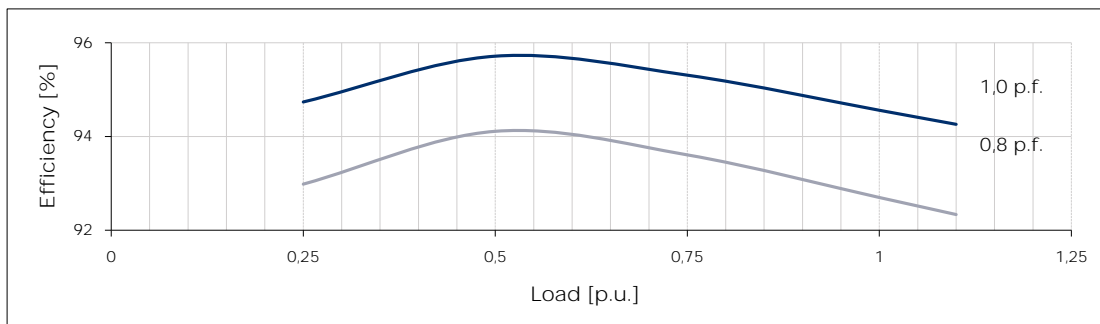
440 V



460 V



480 V





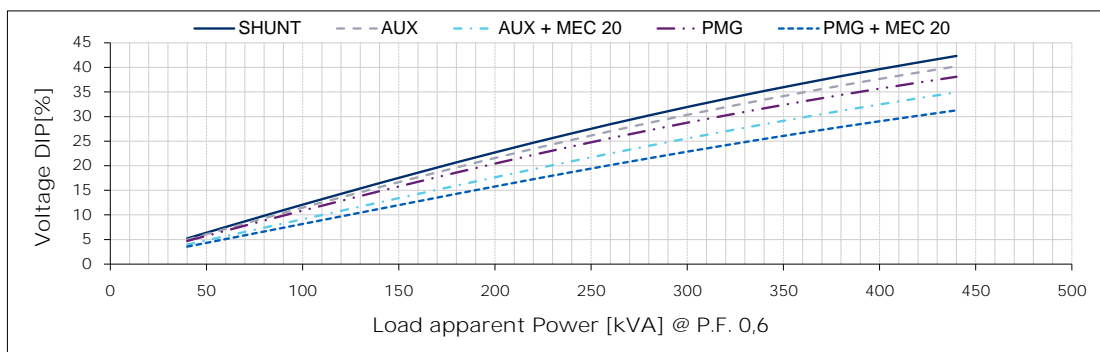
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Inspired solutions

THREE-PHASE SYNCHRONOUS GENERATOR MXB-E 250 SB 4

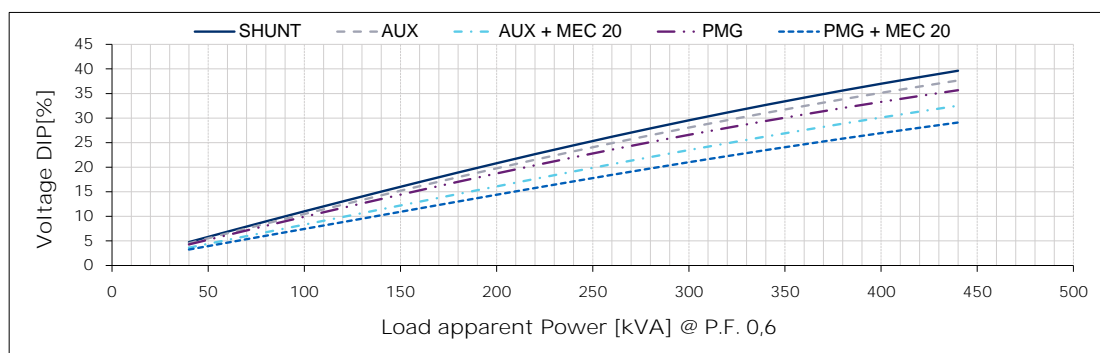
Typical voltage DIP curves

50 Hz - 1500 min⁻¹

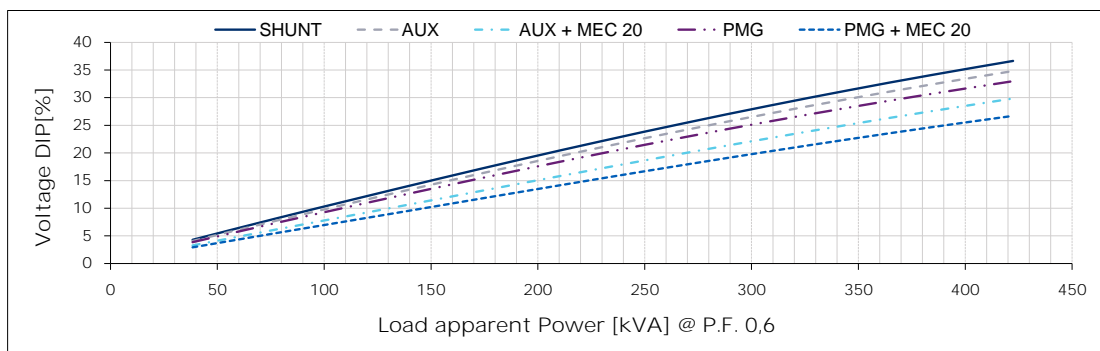
380 V



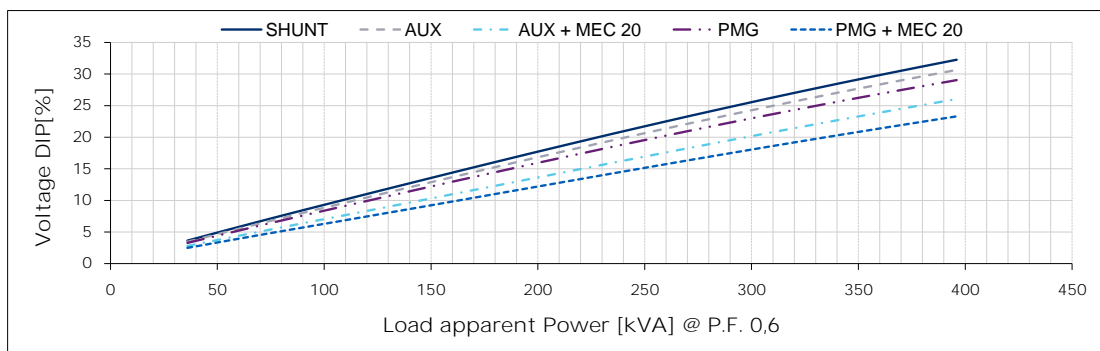
400 V



415 V



440 V





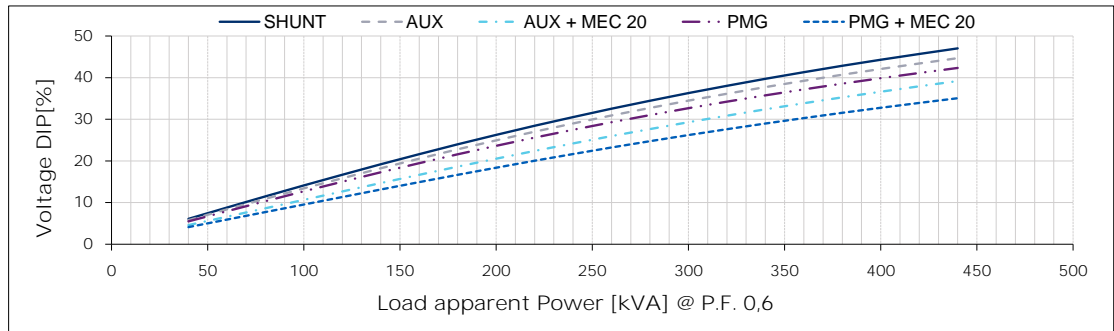
MarelliMotori
Inspired solutions

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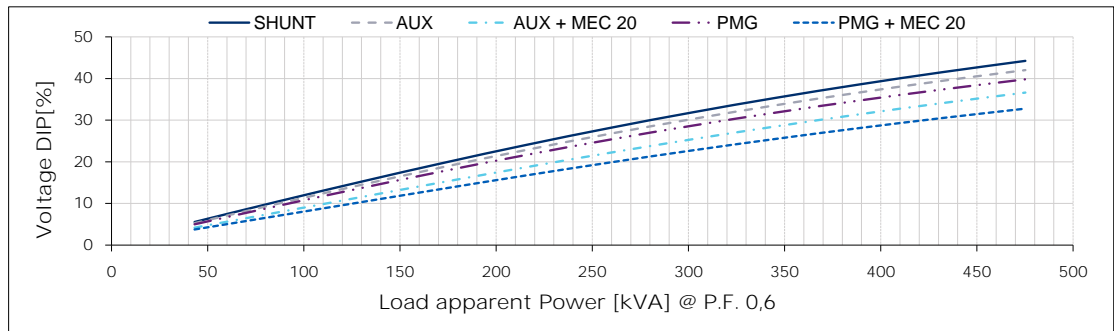
Typical voltage DIP curves

60 Hz - 1800 min⁻¹

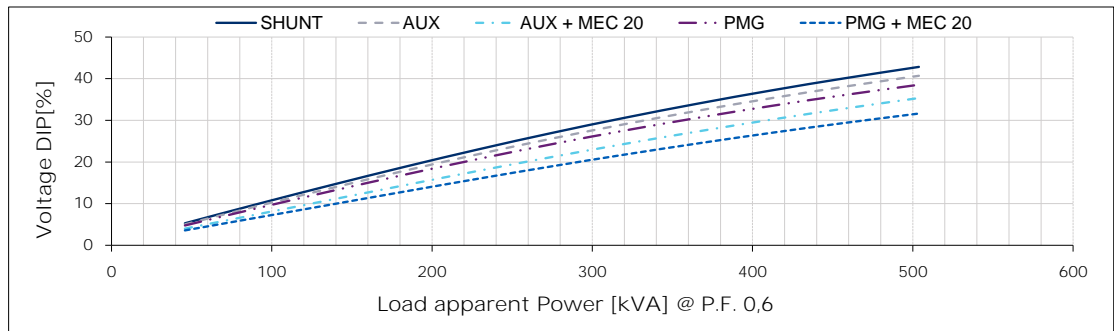
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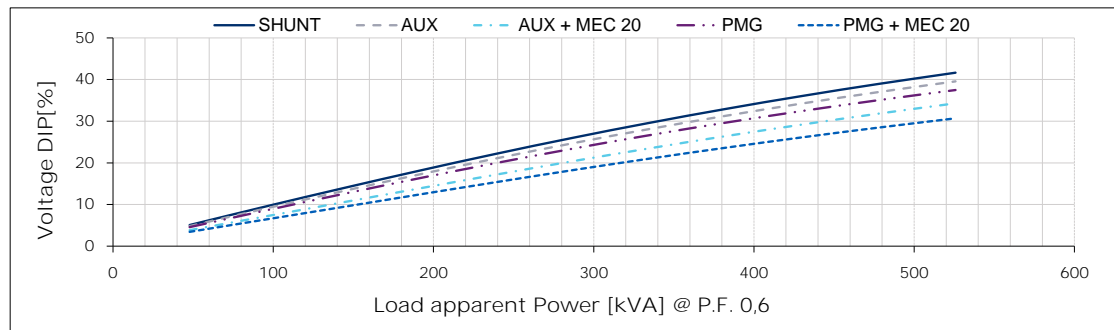
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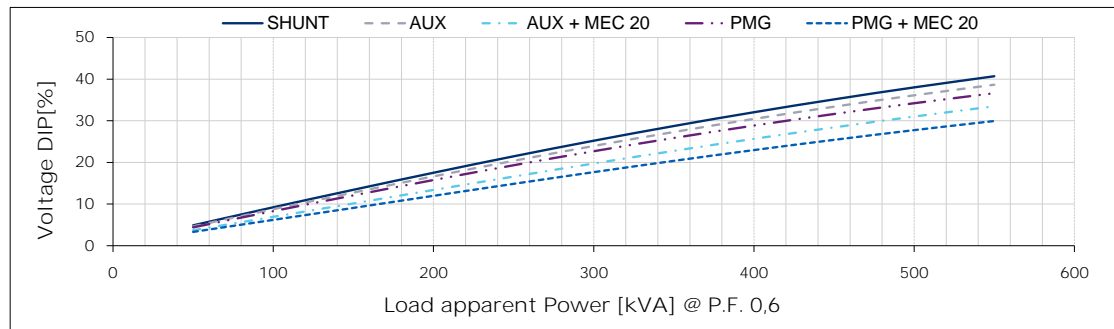
440 V



460 V



480 V



For P.F. different from 0,6 the following simplified formula can be used: $\Delta V @ P.F. = \Delta V @ 0,6 \cdot \sin(\arccos(P.F.))/0,8$

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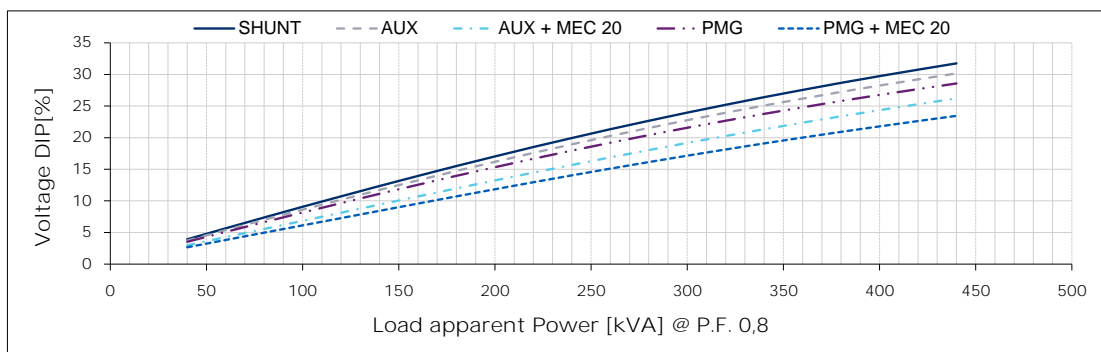
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THREE-PHASE SYNCHRONOUS GENERATOR MXB-E 250 SB 4

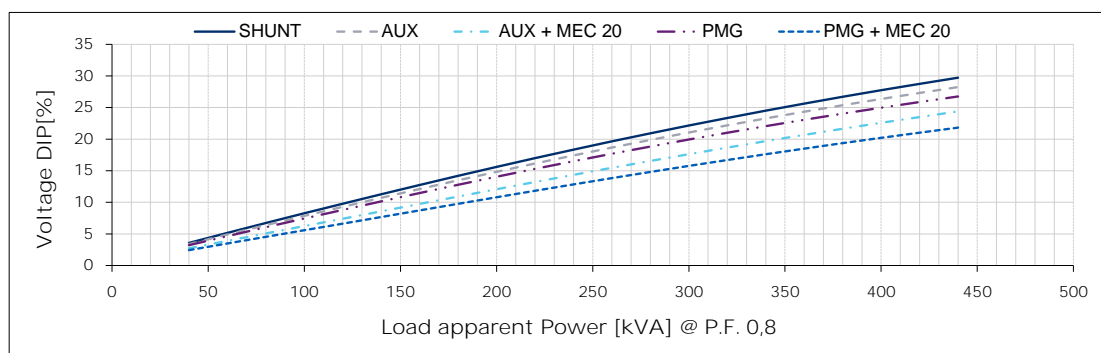
Typical voltage DIP curves

50 Hz - 1500 min⁻¹

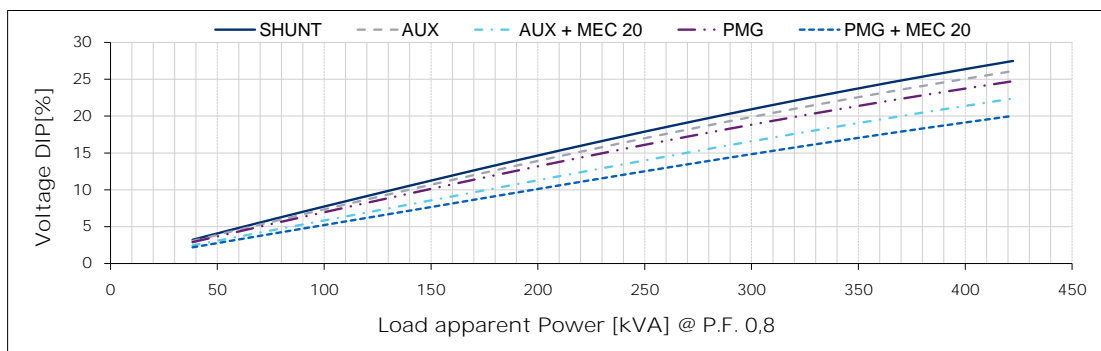
380 V



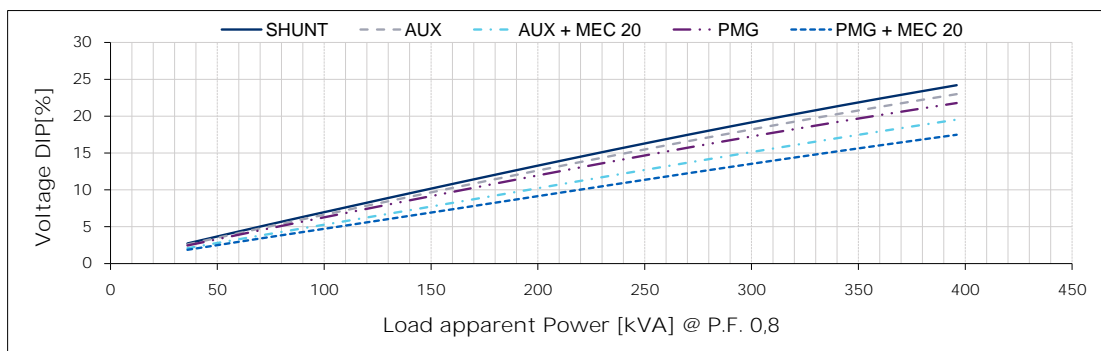
400 V



415 V



440 V





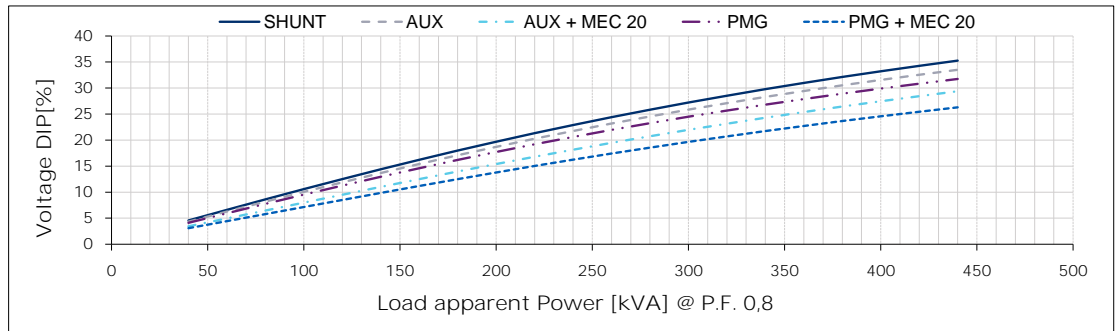
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THREE-PHASE SYNCHRONOUS GENERATOR MXB-E 250 SB 4

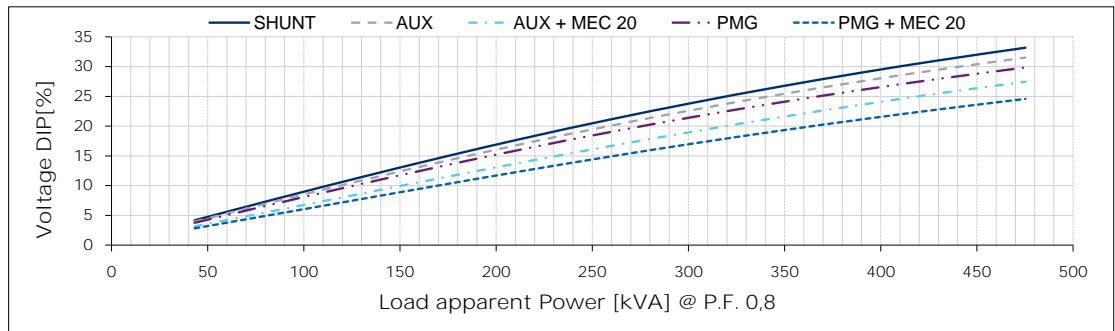
Typical voltage DIP curves

60 Hz - 1800 min⁻¹

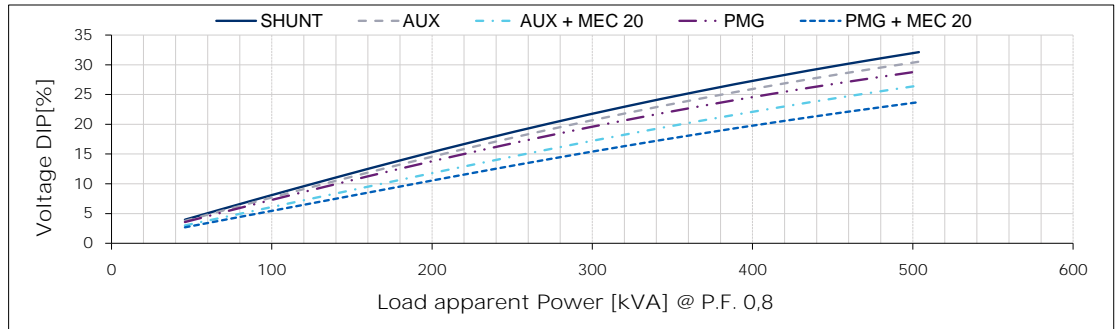
380 V



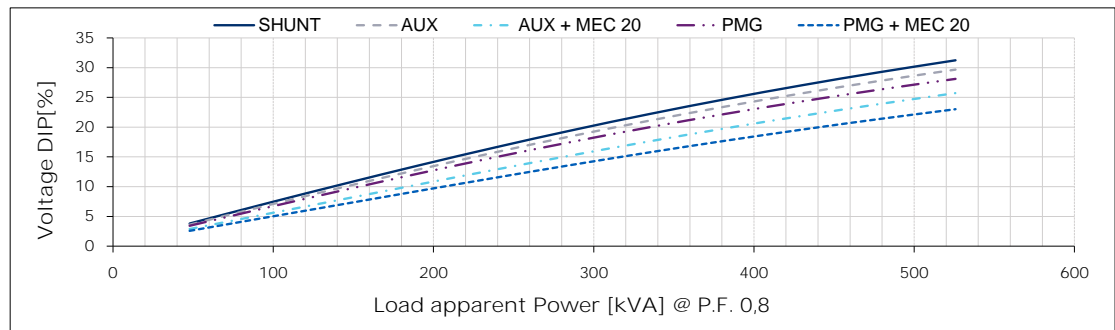
416 V



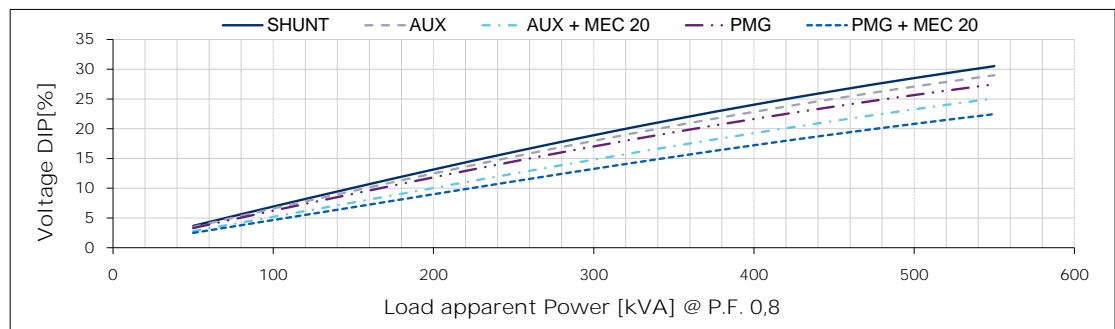
440 V



460 V



480 V

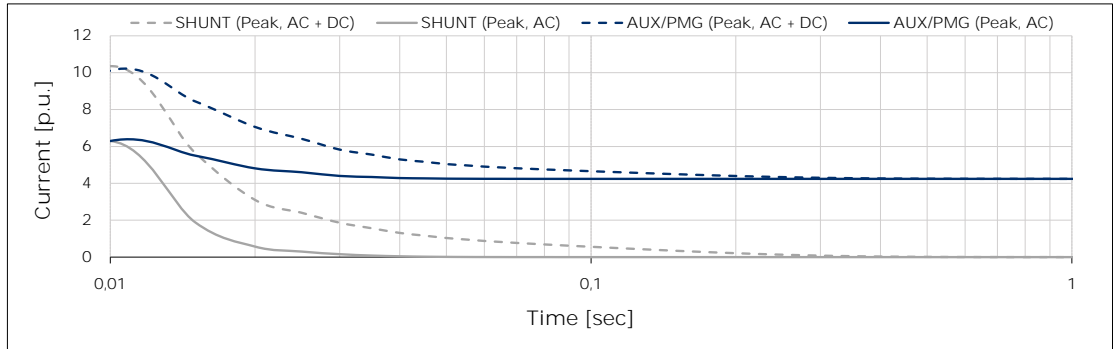


THREE-PHASE SYNCHRONOUS GENERATOR
MXB-E 250 SB 4

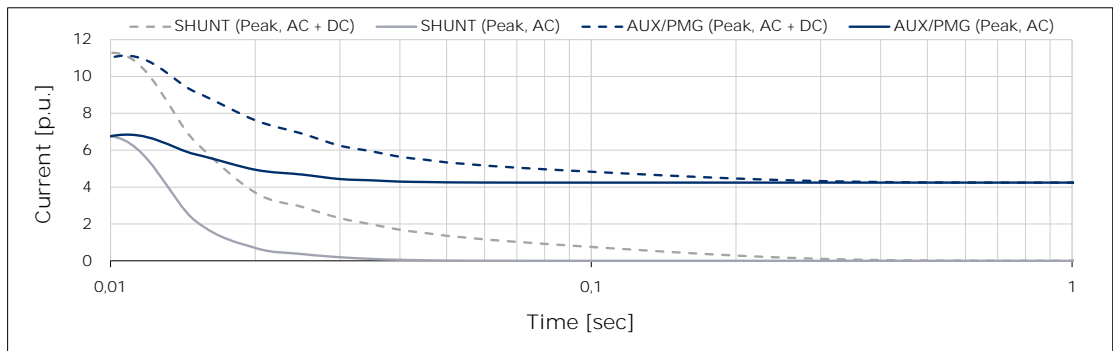
Typical 3-phase short circuit decrement curves

50 Hz - 1500 min⁻¹

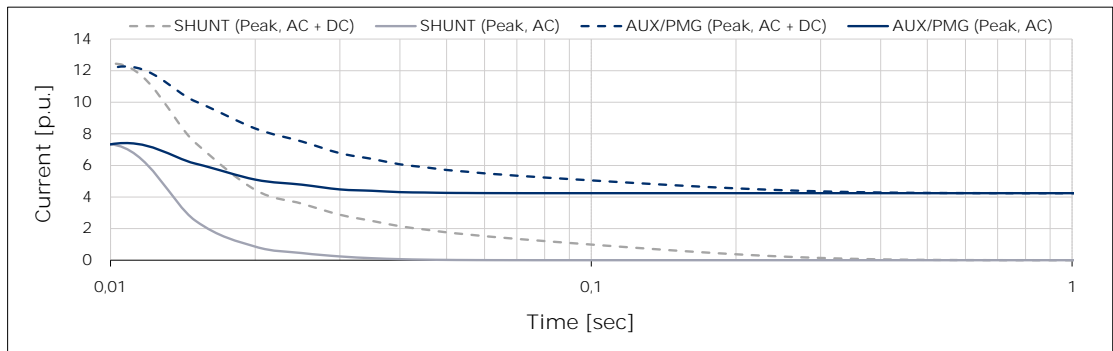
380 V



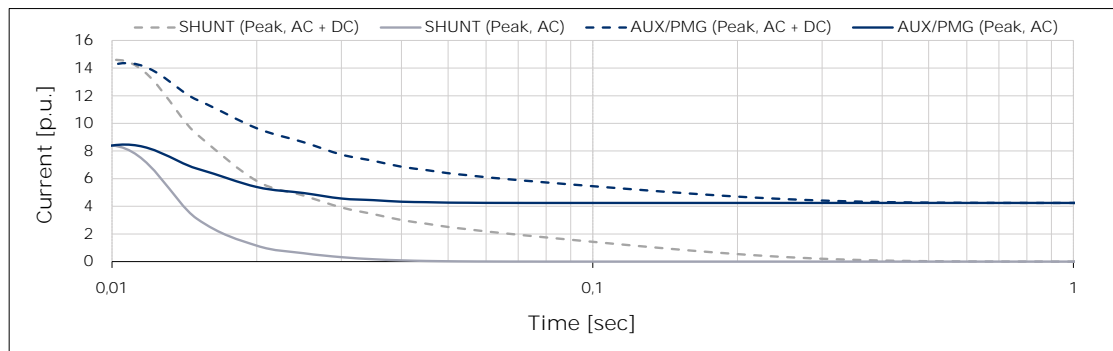
400 V



415 V



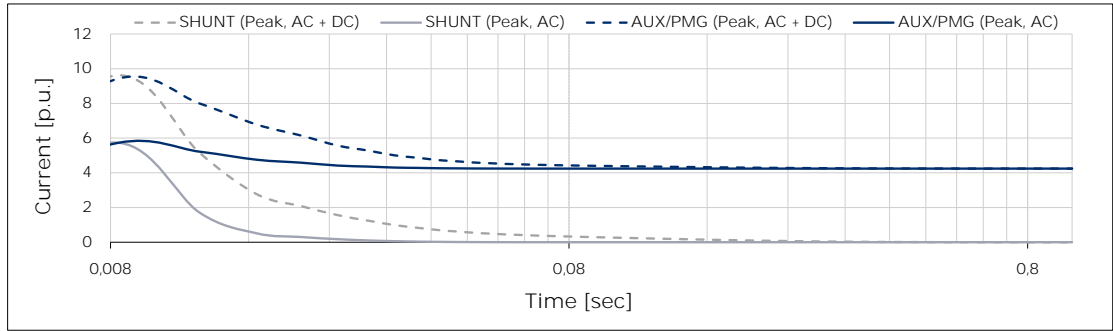
440 V



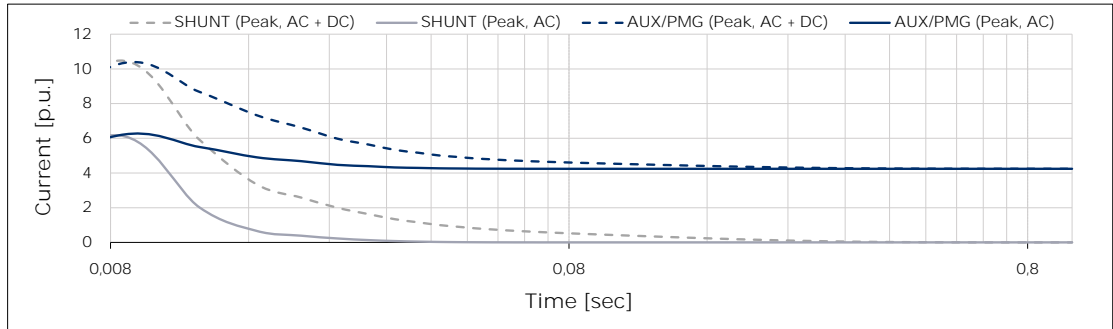
Typical 3-phase short circuit decrement curves

60 Hz - 1800 min⁻¹

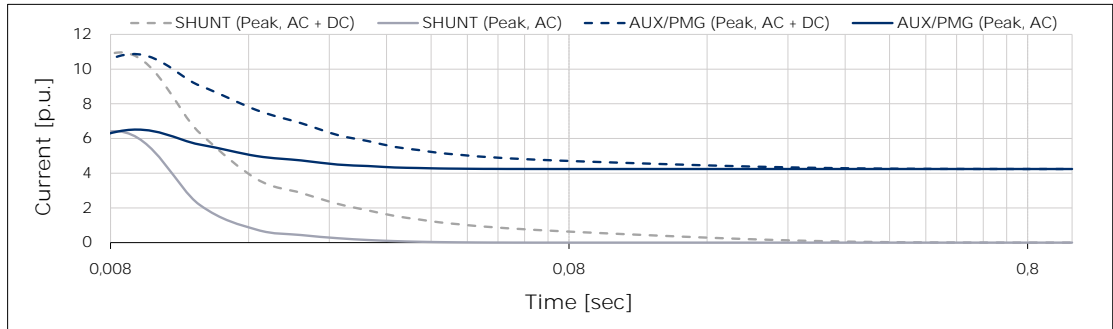
380 V



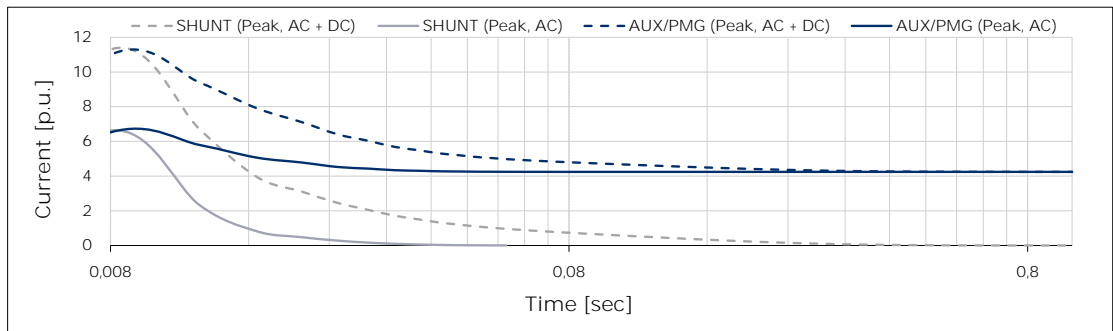
416 V



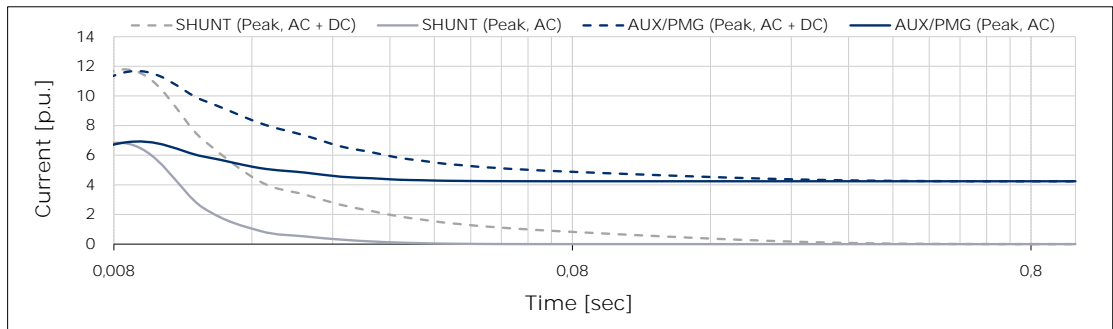
440 V



460 V



480 V



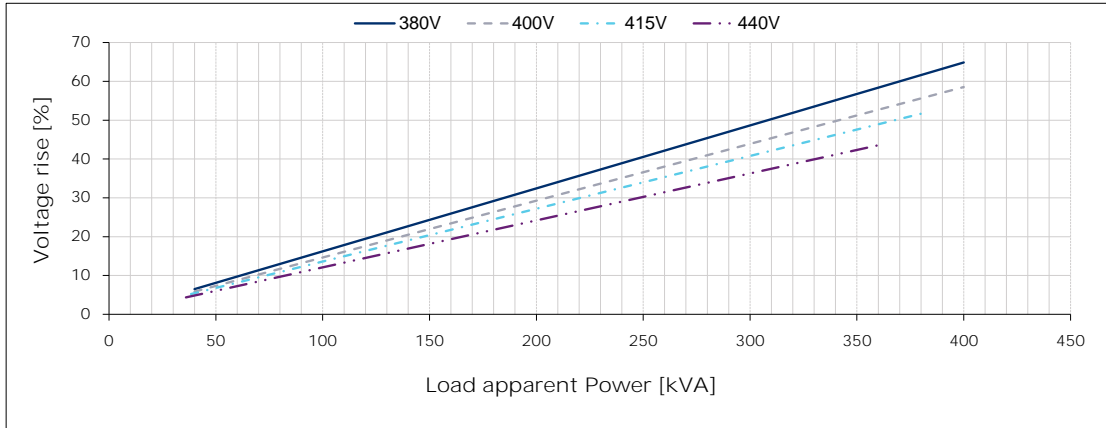
Above curves are based on a three-phase short circuit
For other type of short circuit use the following multiplication factors

	2 phase	1 phase
Instantaneous (max)	0,98	1,23
Continuous	1,50	1,83

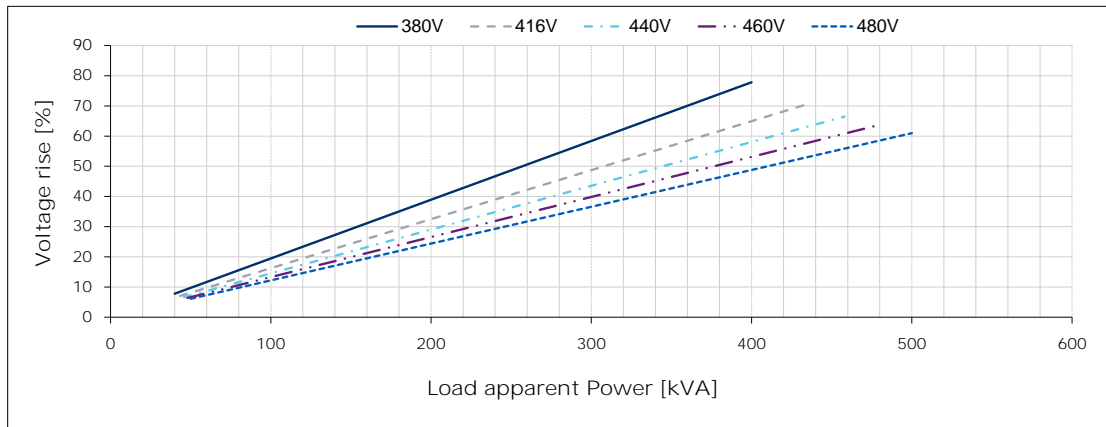
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Typical load rejection curves

50 Hz - 1500 min-1



60 Hz - 1800 min-1



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