

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		275	275	264	248	275	298	315	329	344
	kW		220	220	211	198	220	238	252	263	275
EFFICIENCY (%) @ 0,8 p.f.	4/4		93,0	93,0	92,9	92,0	93,2	93,5	93,6	93,6	93,5
	3/4		93,6	93,5	93,2	91,9	93,8	94,0	94,0	94,0	93,8
	2/4		93,8	93,4	92,8	91,0	93,9	93,9	93,9	93,8	93,6
EFFICIENCY (%) @ 1,0 p.f.	4/4		94,9	95,0	95,0	94,6	94,8	95,1	95,2	95,3	95,3
	3/4		95,4	95,4	95,2	94,4	95,3	95,5	95,5	95,6	95,5
	2/4		95,4	95,2	94,9	93,6	95,3	95,4	95,4	95,4	95,3
STAND-BY RATING (163/27)	kVA		303	303	290	273	303	328	347	362	378
STAND-BY EFFICIENCY (%) @ 0,8 p.f.			92,8	92,9	92,8	92,0	93,0	93,3	93,4	93,5	93,4
SHORT CIRCUIT RATIO (referred to class H rating)			0,71	0,78	0,88	1,05	0,59	0,65	0,69	0,72	0,75
REACTANCES (%) (referred to class H rating)											
Direct axis synchronous	x _d		242	219	195	163	291	263	249	238	228
Quadrature axis synchronous	x _q		100	91	81	68	121	109	103	98	95
Direct axis transient	x' _d		12,0	10,8	9,6	8,0	14,4	13,0	12,3	11,7	11,3
Direct axis subtransient	x'' _d		9,0	8,1	7,2	6,0	10,8	9,7	9,2	8,8	8,4
Quadrature axis subtransient	x'' _q		9,9	8,9	7,9	6,6	11,8	10,7	10,1	9,7	9,3
Negative sequence	x ₂		9,4	8,5	7,6	6,3	11,3	10,2	9,6	9,2	8,9
Zero sequence	x ₀		4,5	4,0	3,6	3,0	5,3	4,8	4,6	4,4	4,2

TIME CONSTANTS [s]

Open circuit (T' _{do})	0,939	Subtransient (T'' _d)	0,008
Transient (T' _d)	0,098	Armature (T _a)	0,011

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	Available on double bearing configuration (on request)
N-end bearing/Lubrication	6313 2Z C3 / Prelubricated
Weight [kg]	780
Inertia (J) [kgm ²]	2,56
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	0,010
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

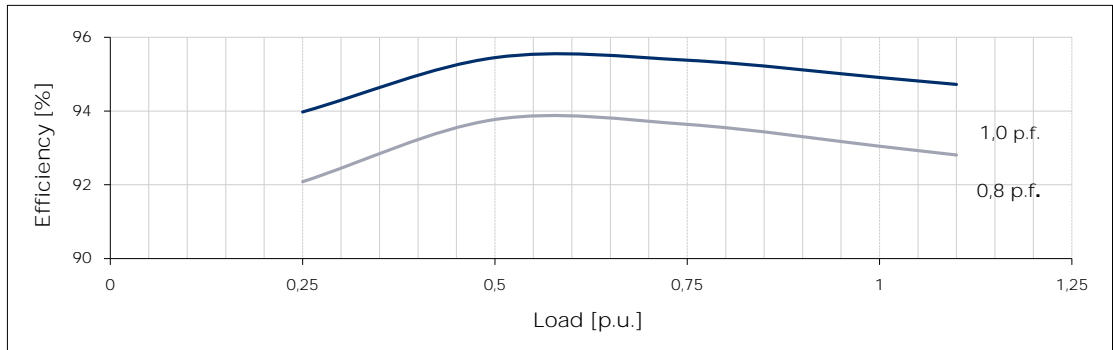
IEC 60034-1; BS 4999-5000; NEMA MG 1.32.
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THREE-PHASE SYNCHRONOUS GENERATOR
MXB-E 250 LA 4

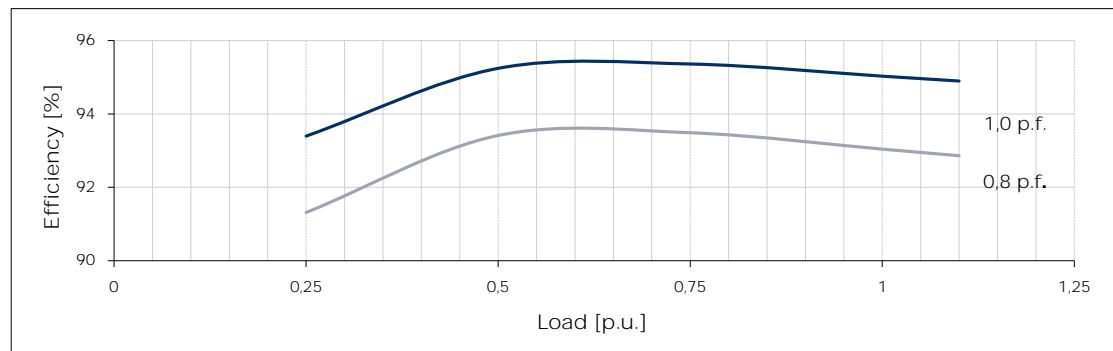
Typical efficiency curves

50 Hz - 1500 min⁻¹

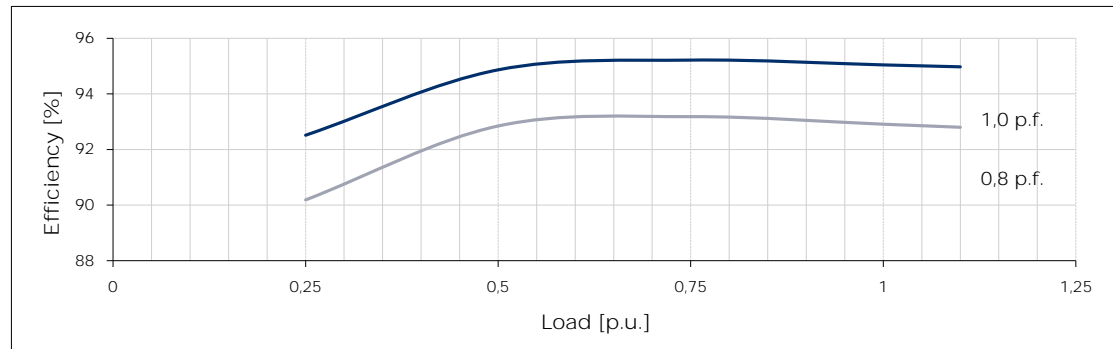
380 V



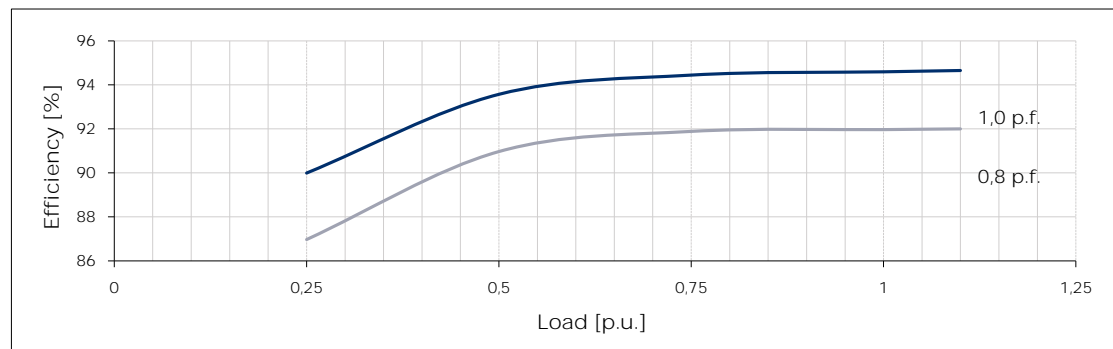
400 V



415 V



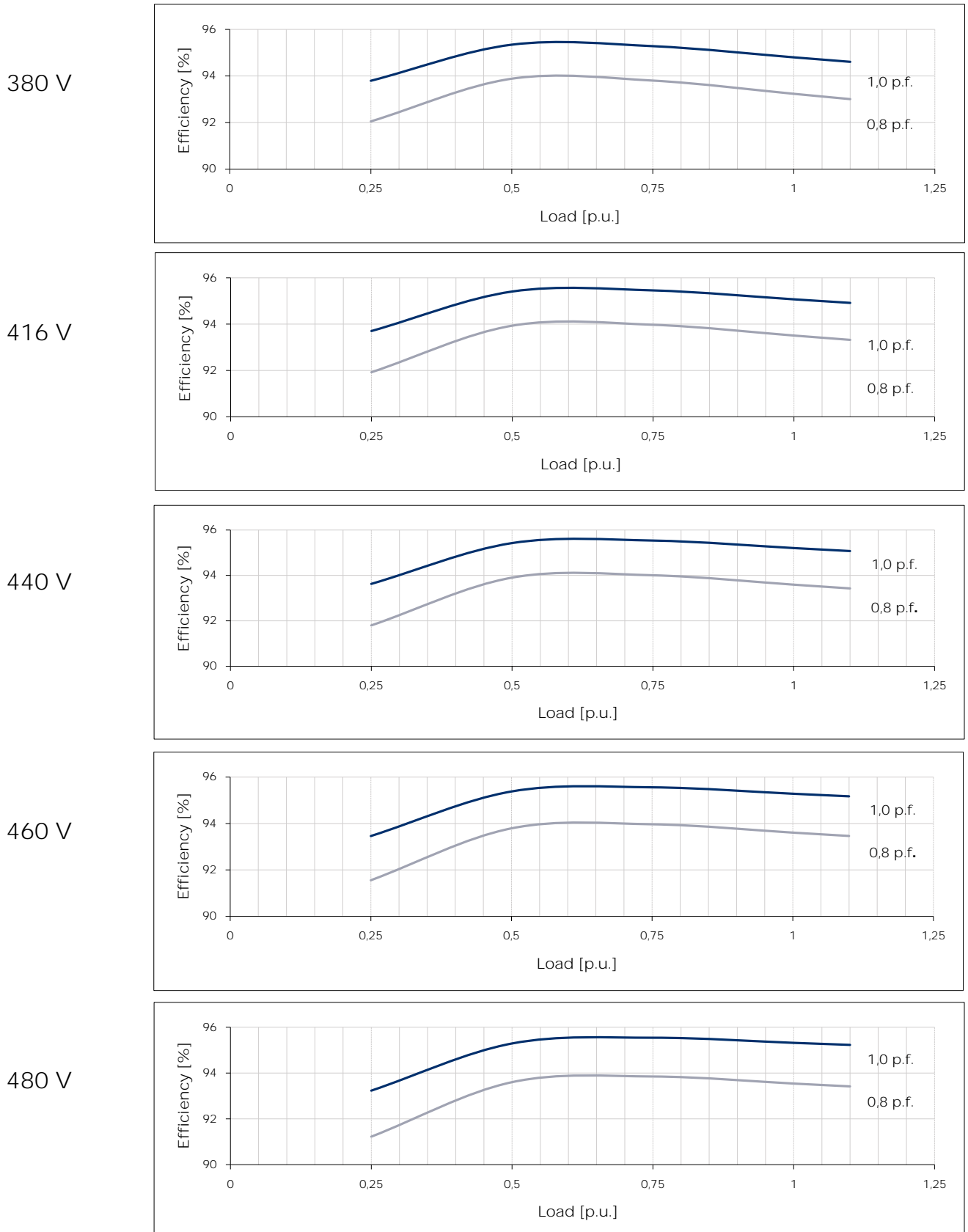
440 V



THREE-PHASE SYNCHRONOUS GENERATOR
MXB-E 250 LA 4

Typical efficiency curves

60 Hz - 1800 min⁻¹





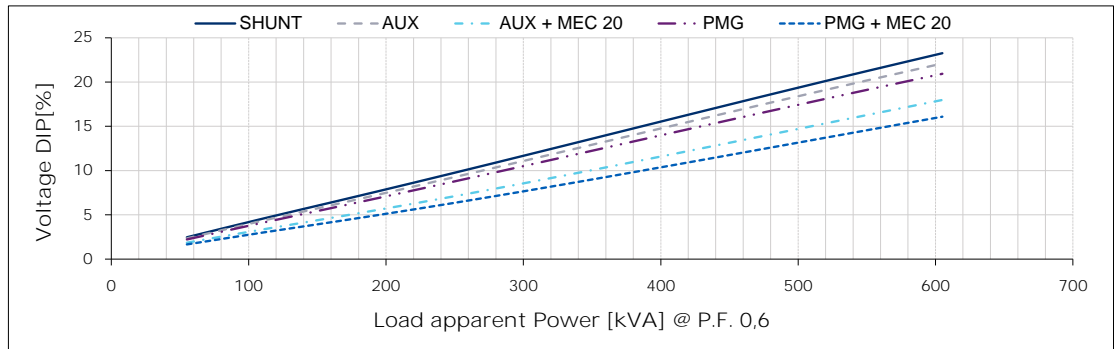
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THREE-PHASE SYNCHRONOUS GENERATOR MXB-E 250 LA 4

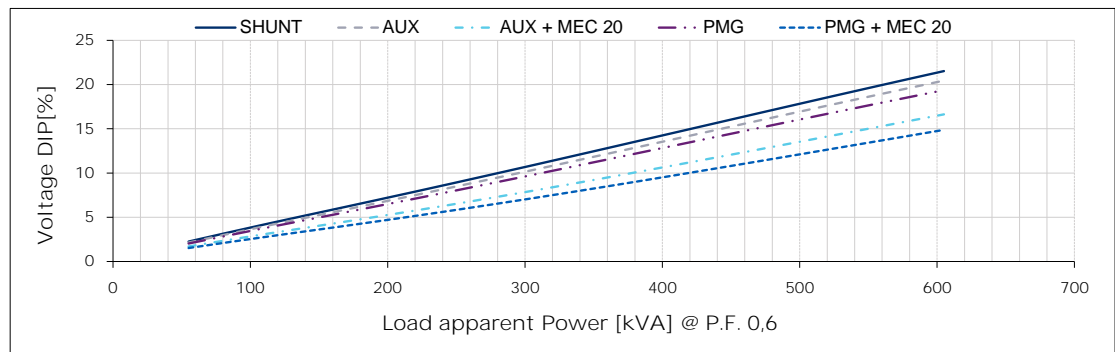
Typical voltage DIP curves

50 Hz - 1500 min⁻¹

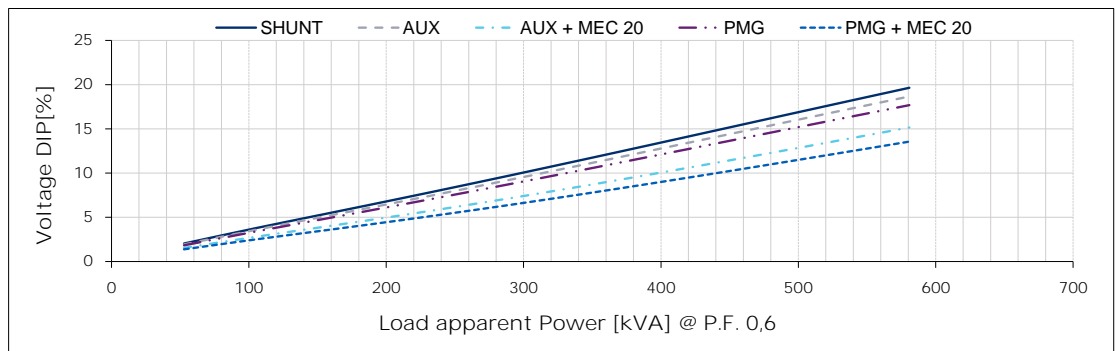
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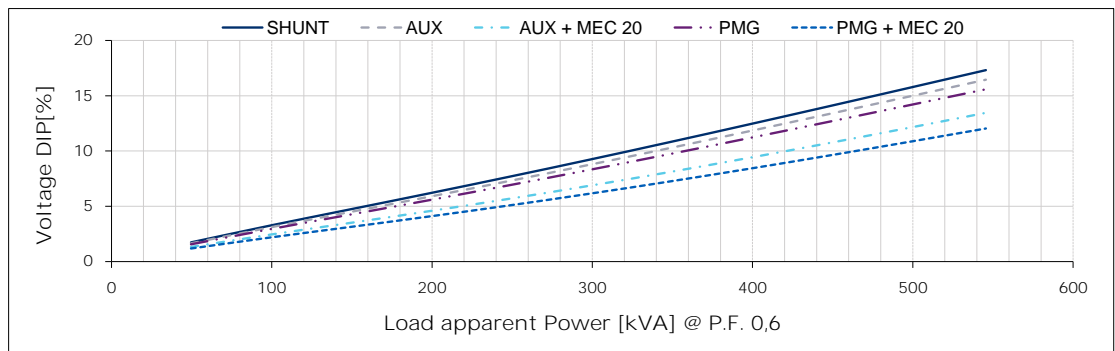
400 V



415 V



440 V





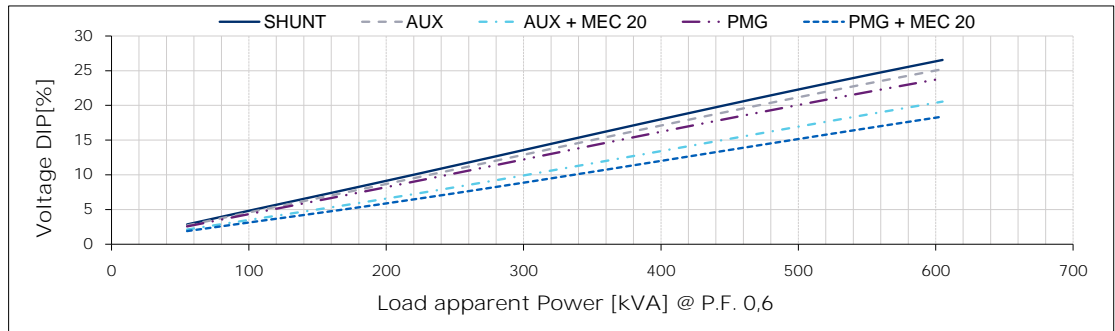
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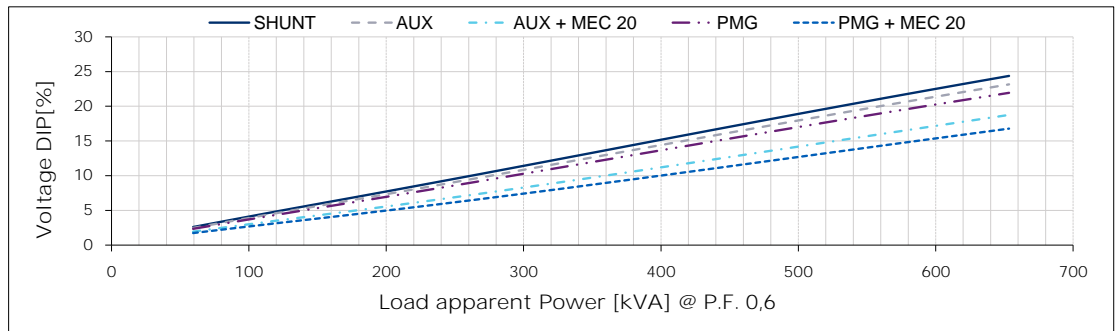
Typical voltage DIP curves

60 Hz - 1800 min⁻¹

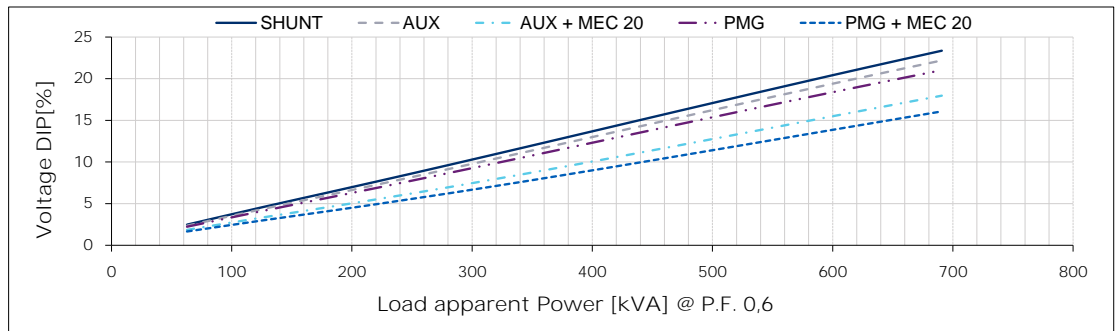
380 V



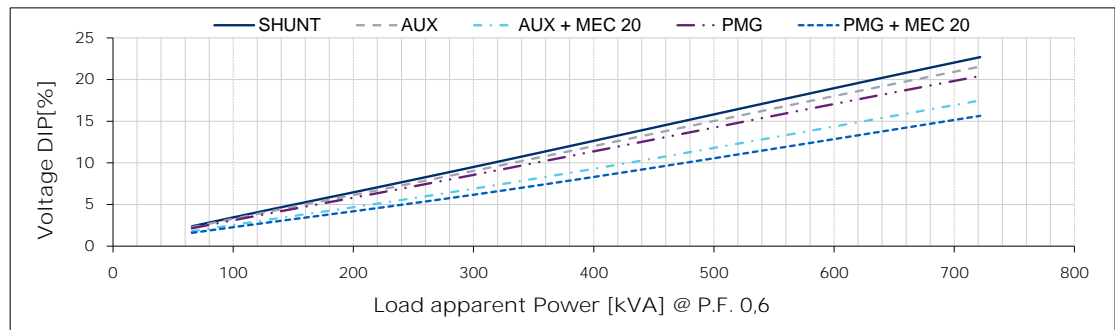
416 V



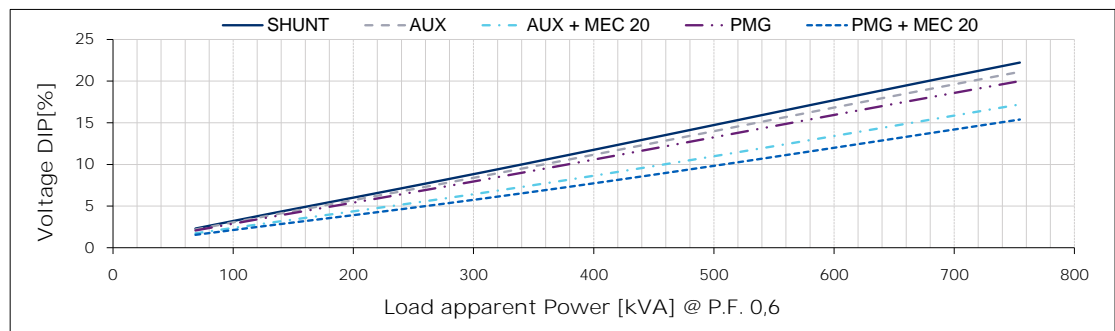
440 V



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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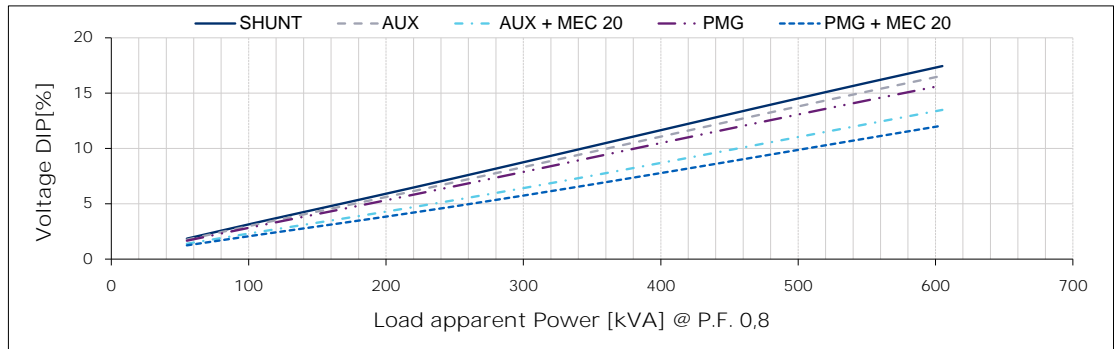
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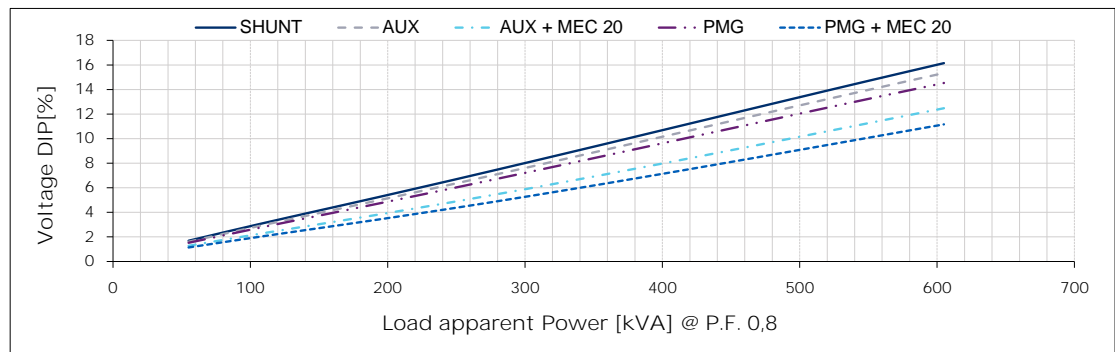
Typical voltage DIP curves

50 Hz - 1500 min⁻¹

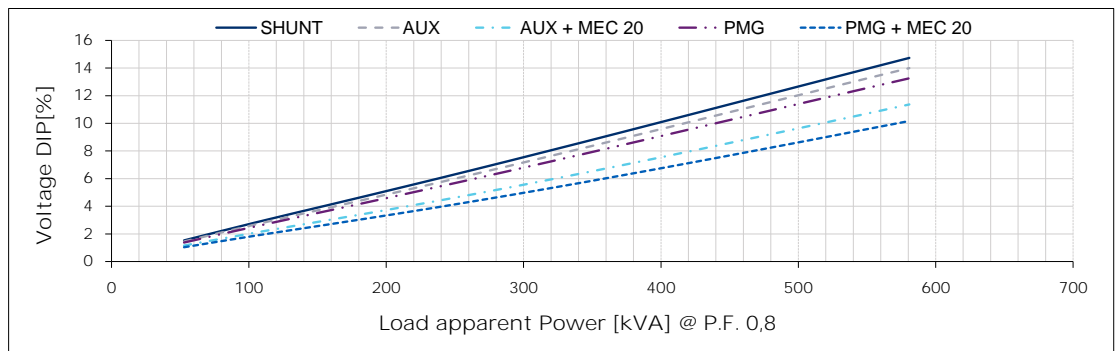
380 V



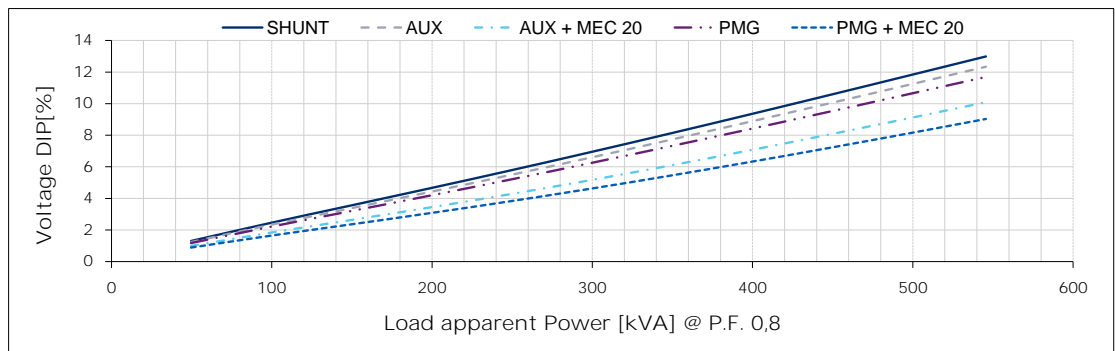
400 V



415 V



440 V





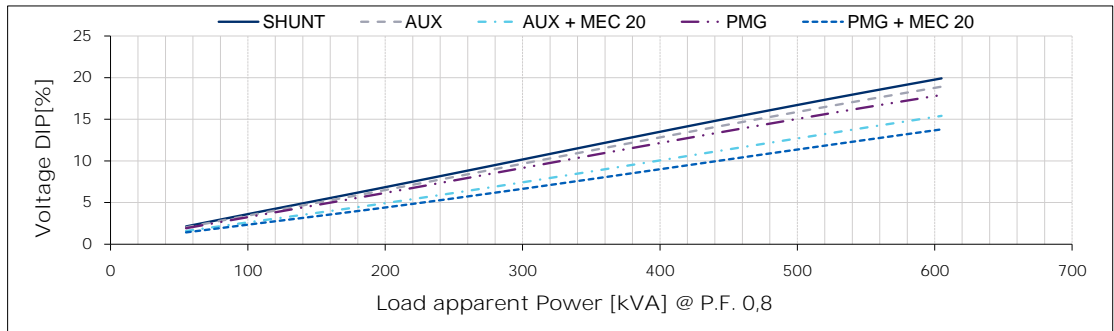
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THREE-PHASE SYNCHRONOUS GENERATOR MXB-E 250 LA 4

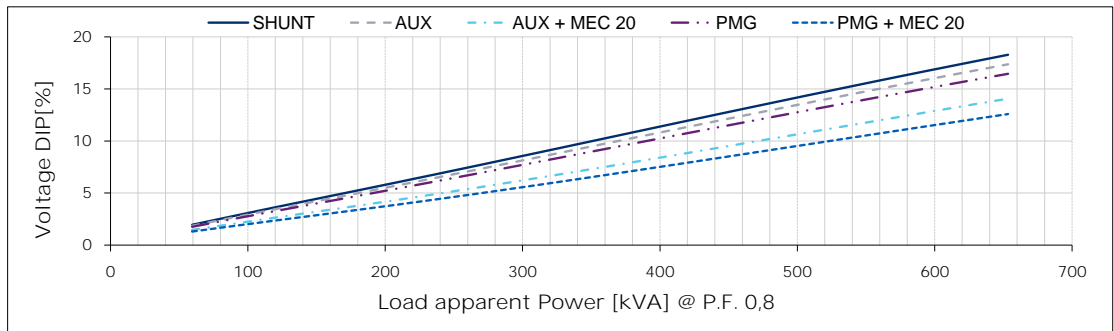
Typical voltage DIP curves

60 Hz - 1800 min⁻¹

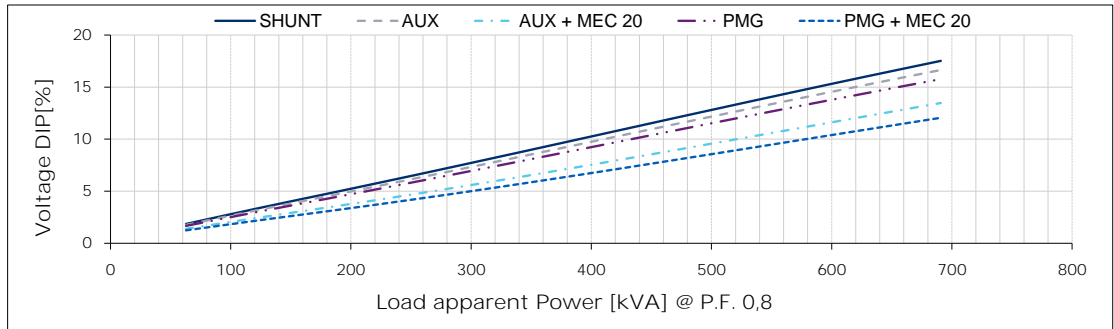
380 V



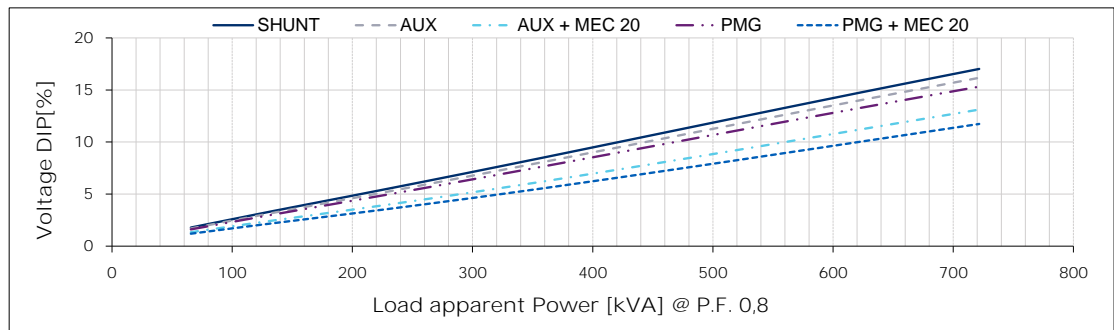
416 V



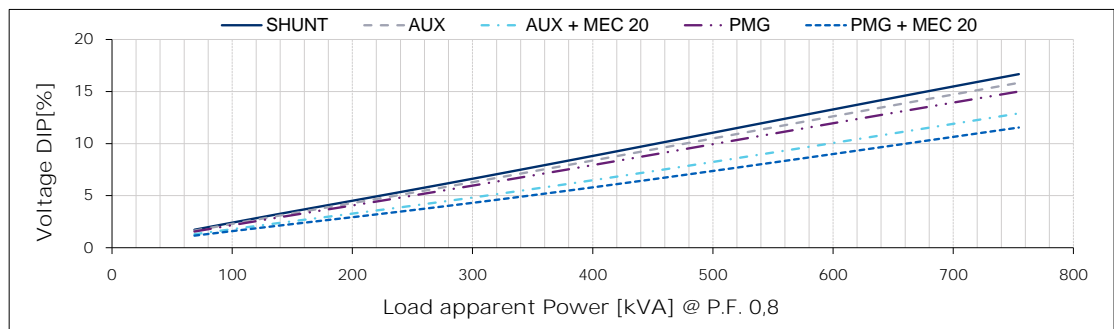
440 V



460 V



480 V

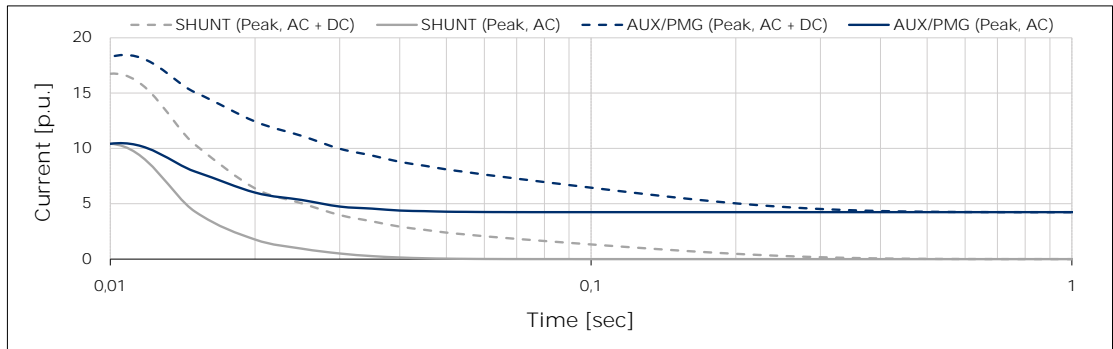


THREE-PHASE SYNCHRONOUS GENERATOR
MXB-E 250 LA 4

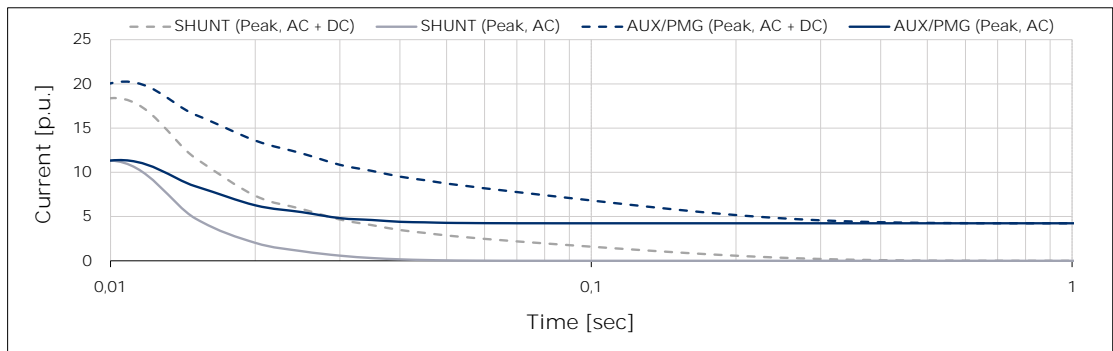
Typical 3-phase short circuit decrement curves

50 Hz - 1500 min⁻¹

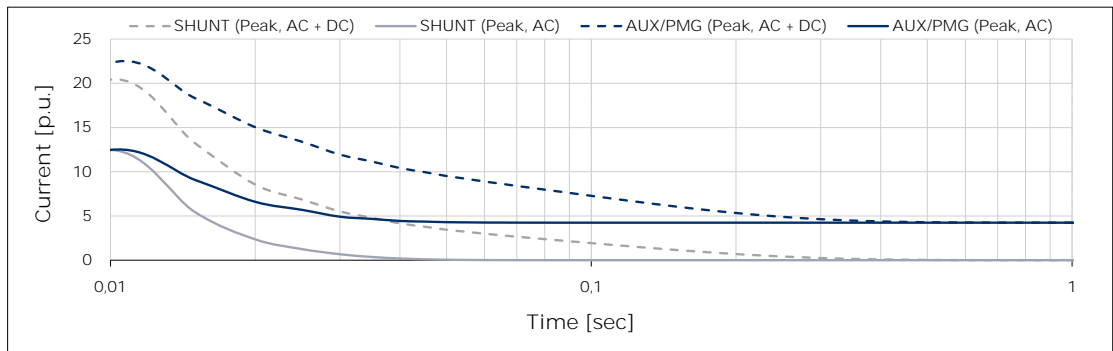
380 V



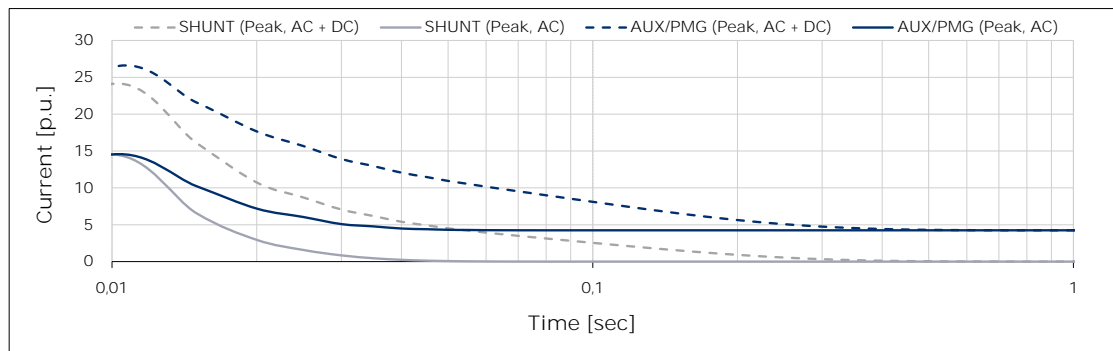
400 V



415 V



440 V





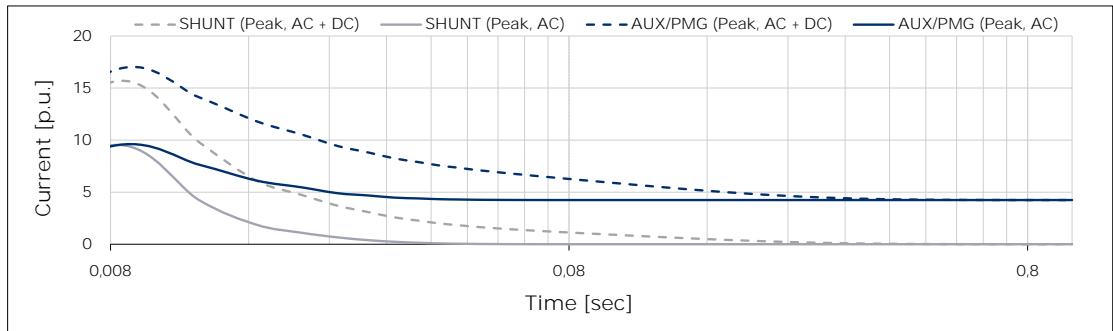
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THREE-PHASE SYNCHRONOUS GENERATOR
MXB-E 250 LA 4

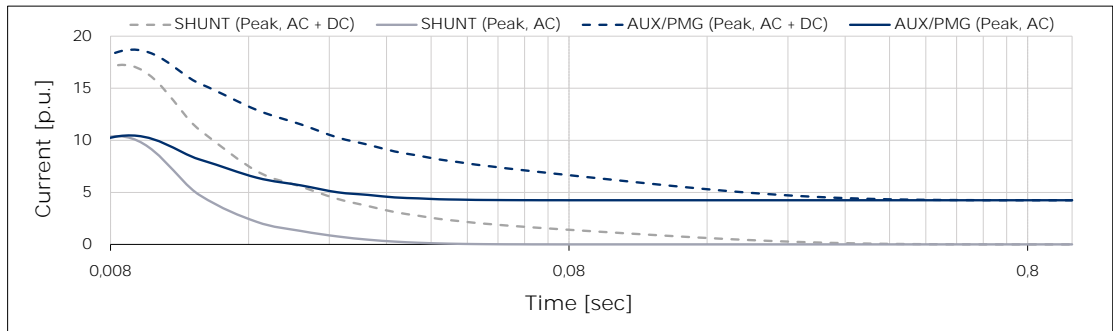
Typical 3-phase short circuit decrement curves

60 Hz - 1800 min⁻¹

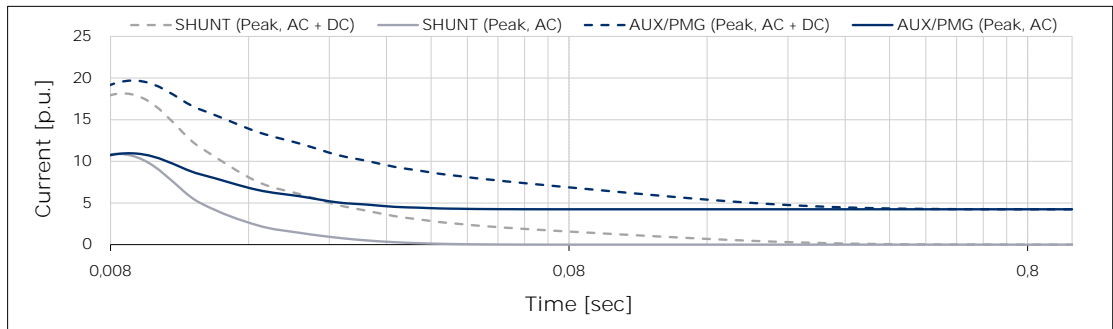
380 V



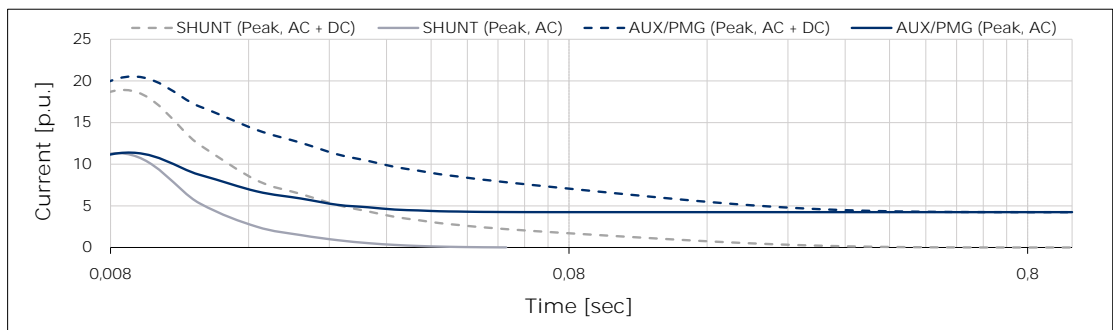
416 V



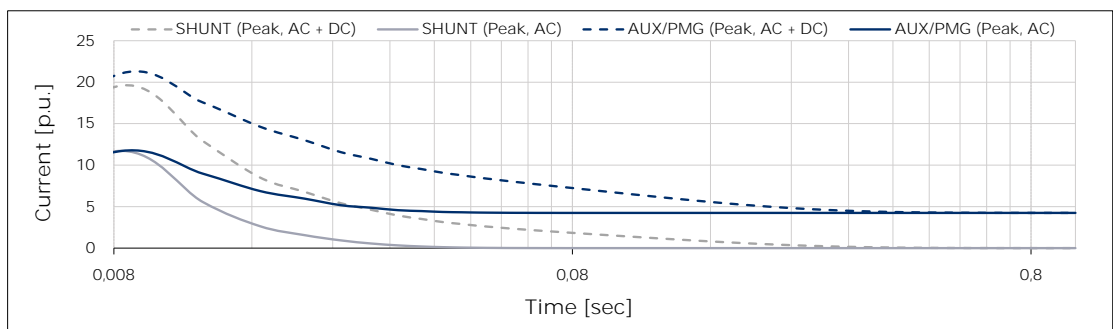
440 V



460 V



480 V



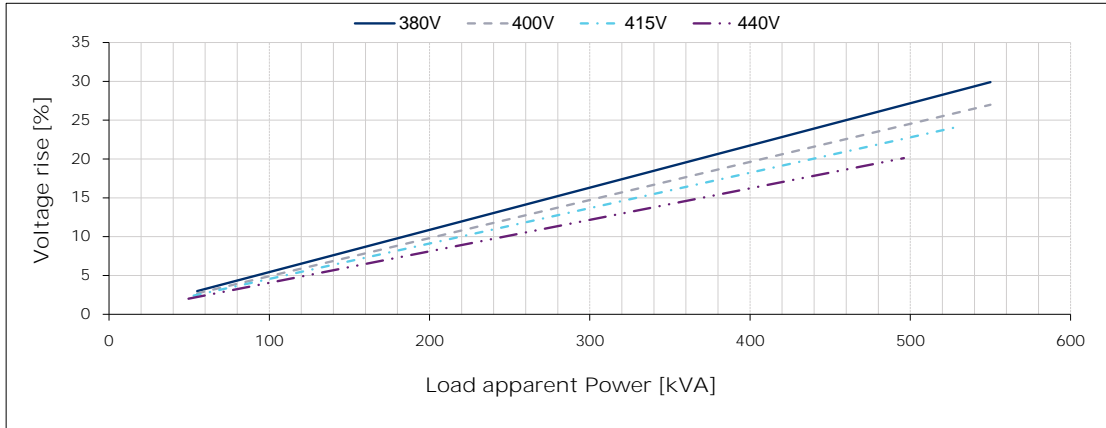
Above curves are based on a three-phase short circuit
For other type of short circuit use the following multiplication factors

	2 phase	1 phase
Instantaneous (max)	0,81	1,03
Continuous	1,50	1,83

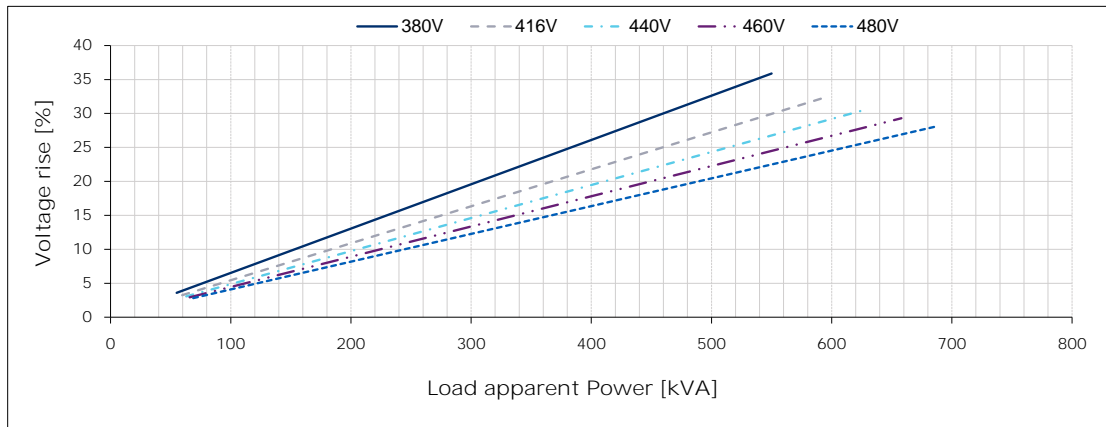
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Typical load rejection curves

50 Hz - 1500 min-1



60 Hz - 1800 min-1



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