

ALTERNATOR ELECTRICAL DATA
LSA 53.2 VL8 / 4P

LS Reference: test1

Date: 12-19-2021

V6.08 - 08/2021

Main data:

C

Power:	2 467 kVA	1 974 kWe	2 052 kWm	1
Voltage:	3300 V	Frequency:	50 Hz	1
Rated voltage range:	+5% / -5%	Speed:	1500 rpm	1
Power factor - Lagging:	0,8			1
Nominal current:	432 A	Phases	3	
Insulation / Temperature rise:	H / H	Connexion	Star serial	1
Cooling:	IC01	Winding type:	p5/6	1
		Winding:	- 6 Wires	1
Ambient temperature:	40 °C			1
Altitude:	1000 m	Overspeed (rpm)	1800	1
Duty: Base Rating		Total Harmonic Distortion (THD)	< 1,5%	1

Efficiency (Base 1973,6 kWe)

IEC

	25%	50%	75%	100%	110%	
Power factor - Lagging: 0,8	95,07	96,44	96,47	96,18	96,03	1
Power factor - Lagging: 1	95,49	97,09	97,34	97,28	97,22	1

Reactances (%) - (Base 2467 kVA)

Unitary impedance (1 per unit) = 4,414268 ohms

		Unsaturated		Saturated			
		Unsaturated	Saturated	Unsaturated	Saturated		
	Direct axis	Quadrature axis					
Synchronous reactance	Xd	350	328	Xq	178	167	1
Transient reactance	X'd	37,7	32,0	X'q	178	167	1
Subtransient reactance	X''d	21,3	18,1	X''q	22,4	19,0	1
Negative sequence reactance	X2	21,8	18,6				
X0	14,2	Zero sequence reactance					1
XI	10,7	Stator leakage reactance					
Xr	29,4	Rotor leakage reactance					
Kc	0,30	Short-circuit ratio					1

Time constants (s)

		Direct axis		Quadrature axis		
		Direct axis	Saturated	Quadrature axis	Saturated	
Open circuit transient time constant	T'do	3,01		T'qo	NA	1
Short-circuit transient time constant	T'd	0,325		T'q	NA	1
Open circuit subtransient time constant	T''do	0,037		T''qo	0,151	1
Subtransient time constant	T''d	0,021		T''q	0,019	1
Ta	0,041	Armature time constant				1

Resistances (%)

Ra	1,7	Armature resistance	R0	4,7	Zero sequence resistance	1
X/R	10,7	X/R ratio (without unit)	R2	4,4	Negative sequence resistance	

Voltage accuracy: 0,25%

Maximum inrush current for a voltage dip of 15%: 1284 kVA

when starting an AC motor having a starting power factor between 0 and 0.4

Rating is provided for the specified temperature rise, by resistance measurement according to IEC60034-1

According to: I.E.C. 60034.1 - 60034.2 - NEMA MG 1-32

Products and materials shown in this catalogue may, at any time, be modified in order to follow the latest technological developments,

ALTERNATOR MAIN CURVES
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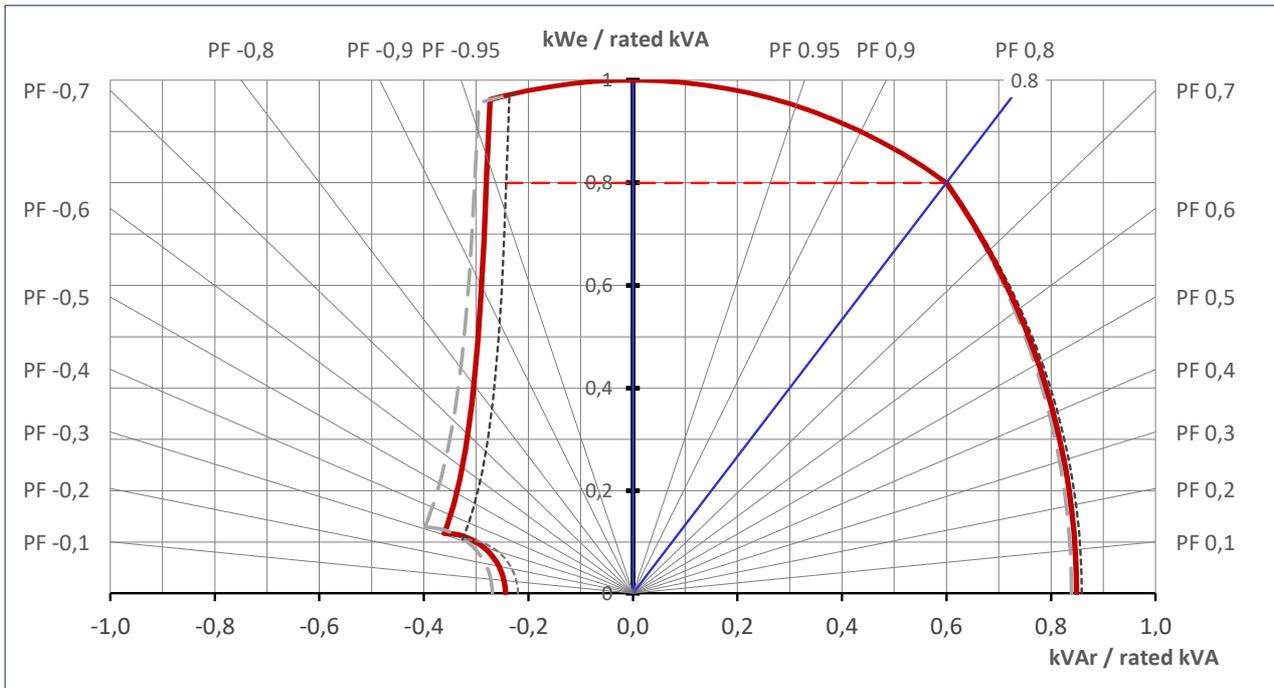
Date: 12-19-2021

2467kVA - 3300V - 50 Hz

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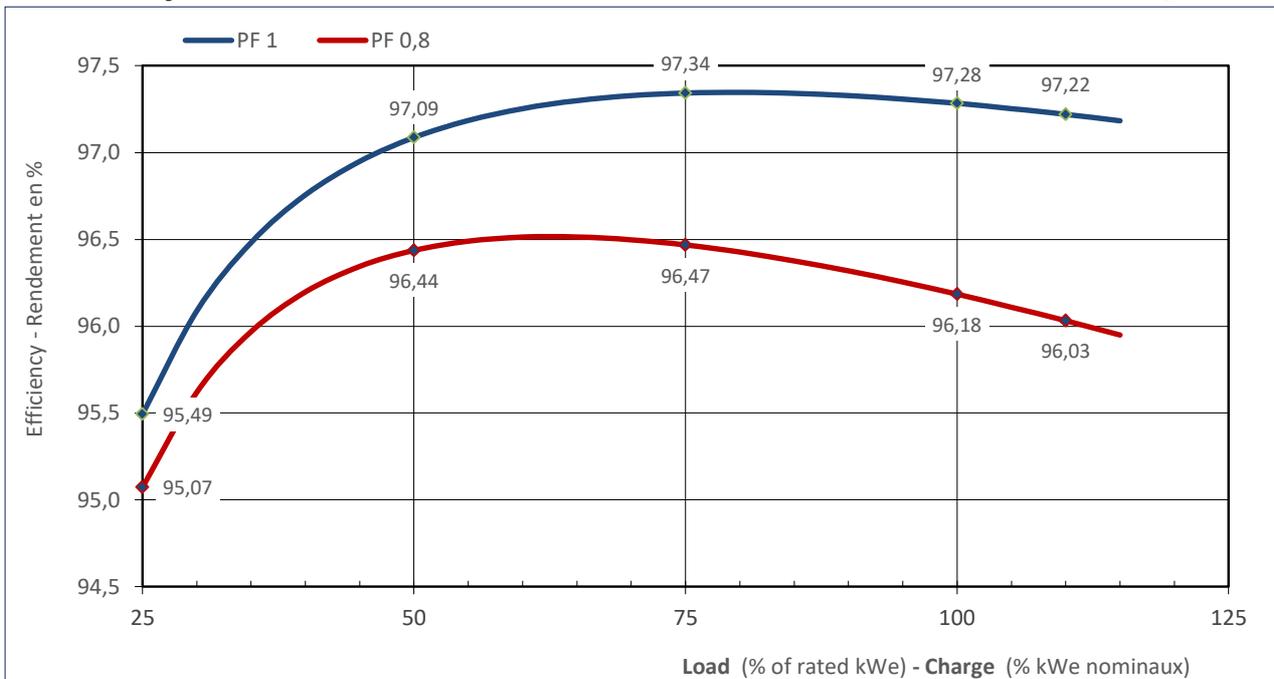
Capability Curve

---	Umax	+ 5%	3 465	V
—	Un		3 300	V
---	Umin	- 5%	3 135	V



Efficiency Curves

According to: IEC



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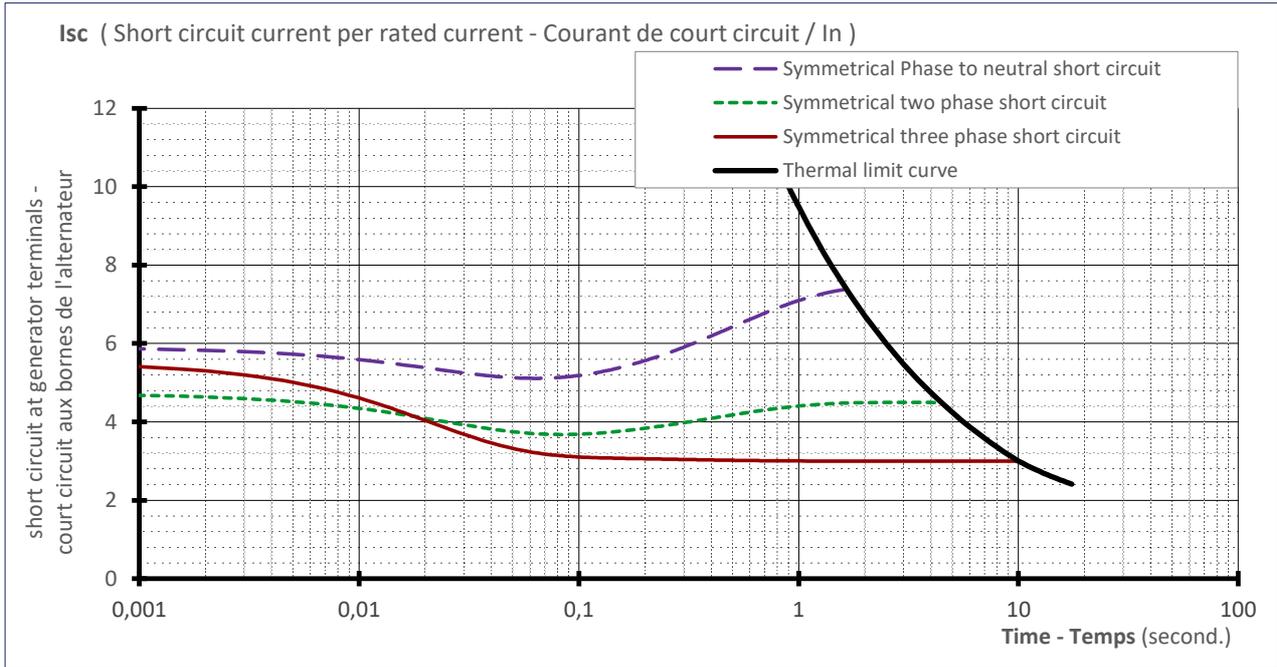
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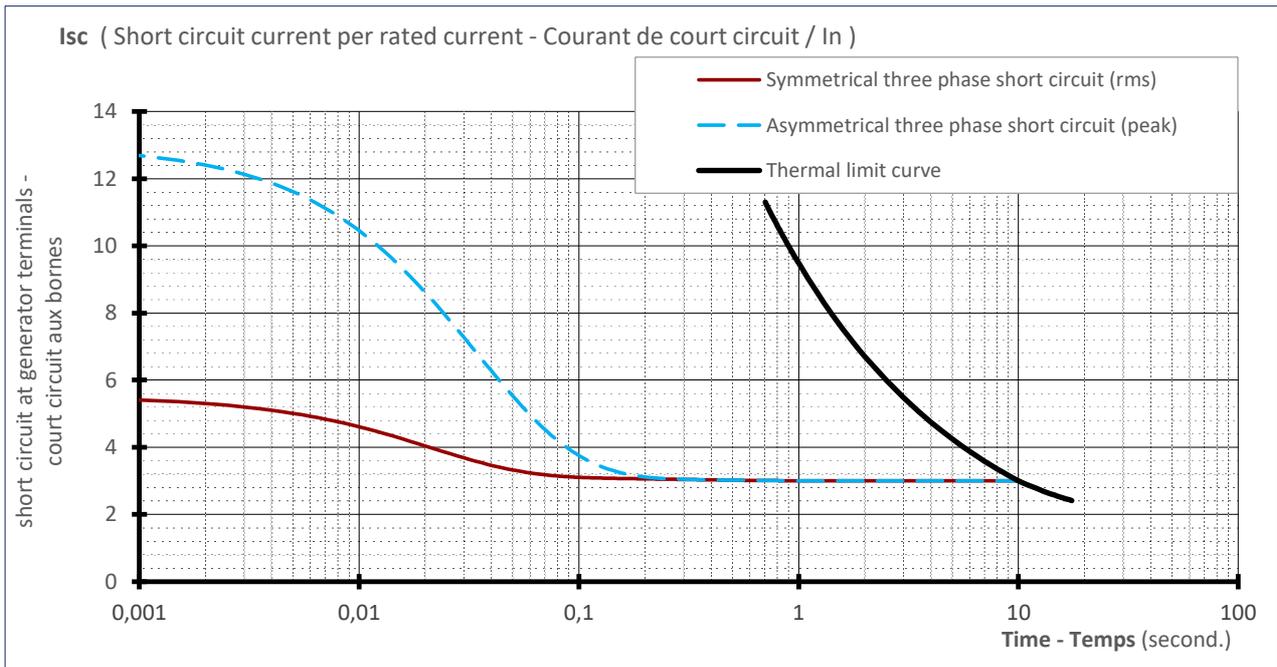
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Stator Current decrement curves

Symmetrical phase to neutral short-circ	—	initial	2 533	A	5,9 x In	In = 432 A
Symmetrical two phase short-circuit	- - -	max	2 021	A	4,7 x In	
Symmetrical three phase short-circuit	—	value	2 337	A	5,4 x In	
Thermal Limit	—					



Asymmetrical three phase short-circuit — IP 5 427 A 12,6 x In



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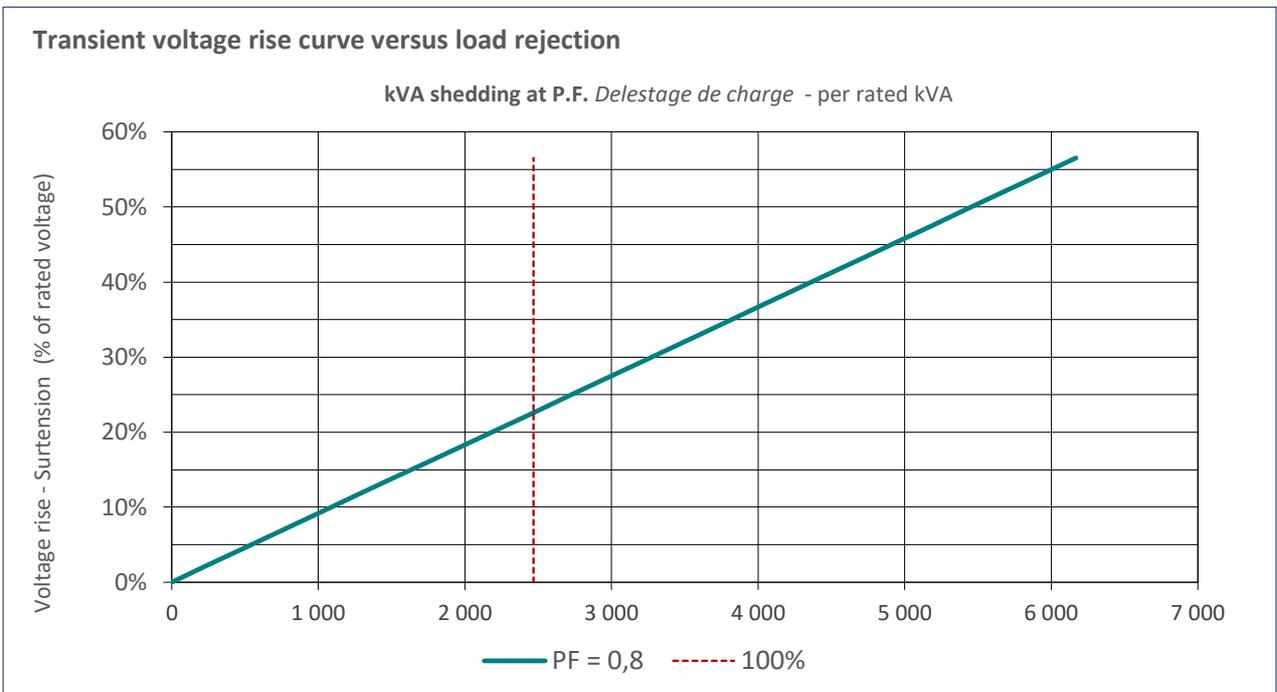
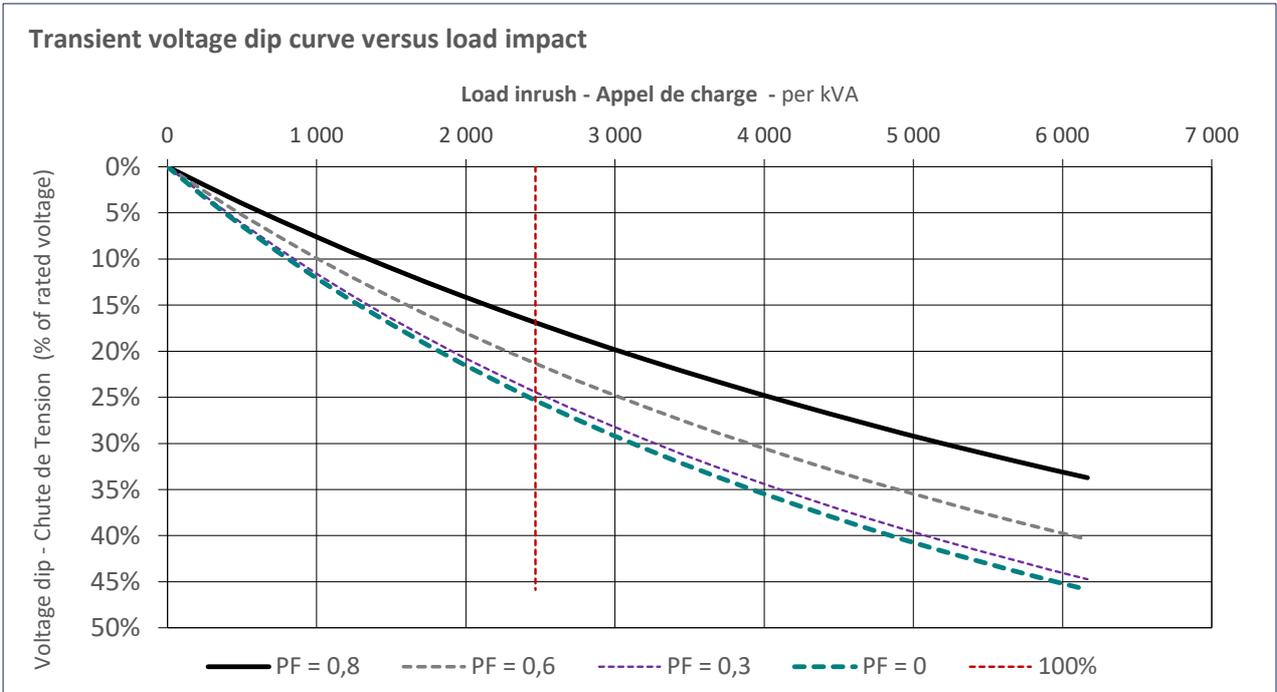
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Transient Voltage Variation



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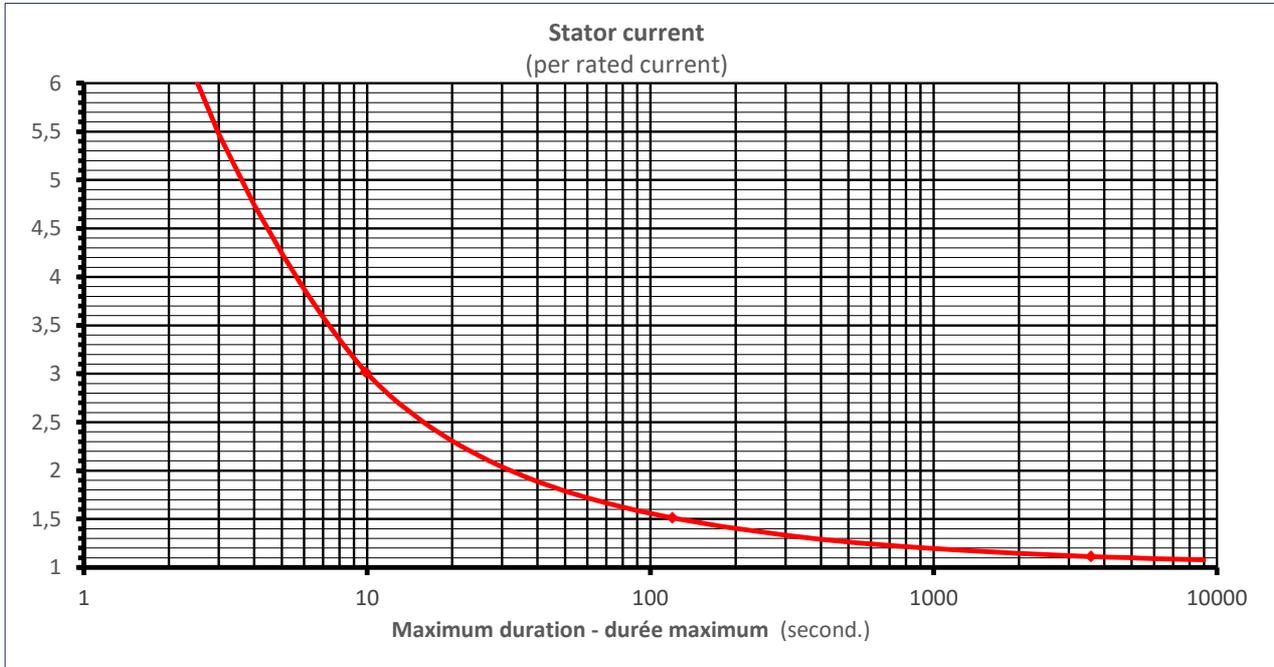
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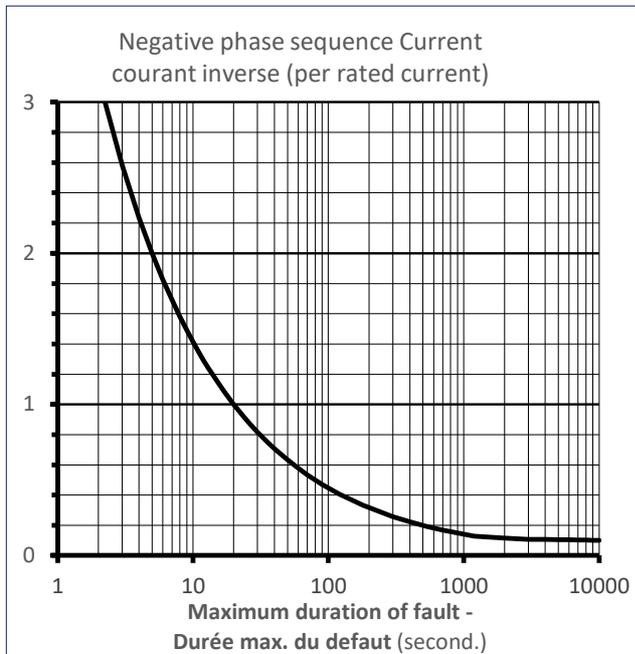
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Thermal Damage Curve



Unbalance Load Curve



Stator Earth Fault Current

