



Technical Data Sheet for AvK-Alternators

FM 7.3-5

Date:	09/10/13	Customer:	GENERIC DATASHEET only
Project No.:		AvK Reference:	dig130i_4_50_3300

Object data:

Site:		Prime Mover:	
Application:	Stationary Power Plant	Manufacturer:	

Generator data:

Generator:	DIG 130 i/4	Poles:	4	Standards:	IEC 60034
Rated power:	2600 kVA	2080 kWe	2155 kWm		
Power factor:	0.80				
Power at pf 1,0	2099 kVA	2099 kWe	2155 kWm		
Rated voltage:	3.3 kV				
Speed:	1500 1/min				
Frequency:	50 Hz			Voltage range / frequency range:	
Rated current:	454.9 A			Zone A according IEC 60034-1 (dU = +/-5%, df = +/-2%)	
Winding pitch:	ca. 5/6				
Insulation class:	Stator: Class F	Rotor: Class F		Temperature rise:	F
Ambient temperature:	40 ° C		Environment:	Standard environment	
Site altitude:	1000 m				
Enclosure:	IP23		Filter:		
Cooling:	IC 01 - Open-circuit ventilation				
Coolant:	Ambient Air	Temperature	40 ° C	Temperature Air inlet	40 ° C
		Coolant:		generator:	
		Cooling air vol.:	3.0 m³/s	Cooling water quantity:	n/a
Moment of inertia (I):	97 kgm²	Weight:	6900 Kg	Losses (environment):	75 KW
				Losses (cooling):	n/a

Wires:	4 terminals, starpoint connected in terminal box
Operation mode:	Single mode
Regulators:	
Voltage regulator:	DECS 100

Electrical data: (acc. IEC)

Efficiencies:	110%	100%	75%	50%	25%
Power factor 0.8	96,33	96,5	96,5	96	94
Power factor 0.9	96,8	96,95	96,85	96,3	94,15
Power factor 1.0	97,27	97,4	97,2	96,6	94,3

Reactances and time constants

	unsaturated	saturated		unsaturated	saturated				
X_d	2.70	2.43 p.u.	X_q	1.35	1.32 p.u.	$T_{d0'}$	3 s	$T_{d0''}$	0.02412 s
X_d'	0.320	0.320 p.u.	X_q'	1.35	1.32 p.u.	$T_{d'}$	0.36 s	$T_{q0'}$	0.3 s
X_d''	0.219	0.199 p.u.	X_q''	0.219	0.219 p.u.	$T_{d''}$	0.015 s	$T_{q0''}$	0.18493 s
X_2	0.230	0.209 p.u.	X_0	0.066	0.060 p.u.	T_a	0.09 s	$T_{q'}$	0.3 s
X_{1s}	n.a.	0.119 p.u.						$T_{q''}$	0.03 s

Short circuit ratio saturated: 0.41	Z_n 4.188 Ohm
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Short circuit data:

Initial short circuit current (3-phase):	I_k''	2286 A	
Max. peak current (3-phase):	I_s	5819 A	
Sustained short circuit current:	I_k	1365 A	Minimum 3 x rated current for max.10 s
Initial short circuit torque:	M_{k2}	108.1 kNm	
	M_{k3}	64.9 kNm	
Max. faulty synchron moment:	M_f	232.4 kNm	
Rated kVA torque:	M_{SN}	16.55 kNm	
Rated torque	M_N	13.24 kNm	
Shaft torque	M_{Sh}	13.72 kNm	

Load application:

max. load application: 1219 kVA (corresponds to 46,88 % from 2600 kVA) for Power factor 0.4 15% transient voltage drop	Power: 2600 kVA Power factor: 0.8 transient voltage drop: -24.2 %
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Remarks:

Nenndaten / nominal data

DIG 130 i/4

Rating S_N : **2600 kVA**

p.f. **0.80**

Bemessungsleistung

Leistungsfaktor $\cos \varphi$:

Nominal voltage U_N : **3.30 kV**

Nominal current I_N : **455 A**

Bemessungsspannung

Bemessungsstrom

Frequency f_N : **50 Hz**

Speed n : **1500 min⁻¹**

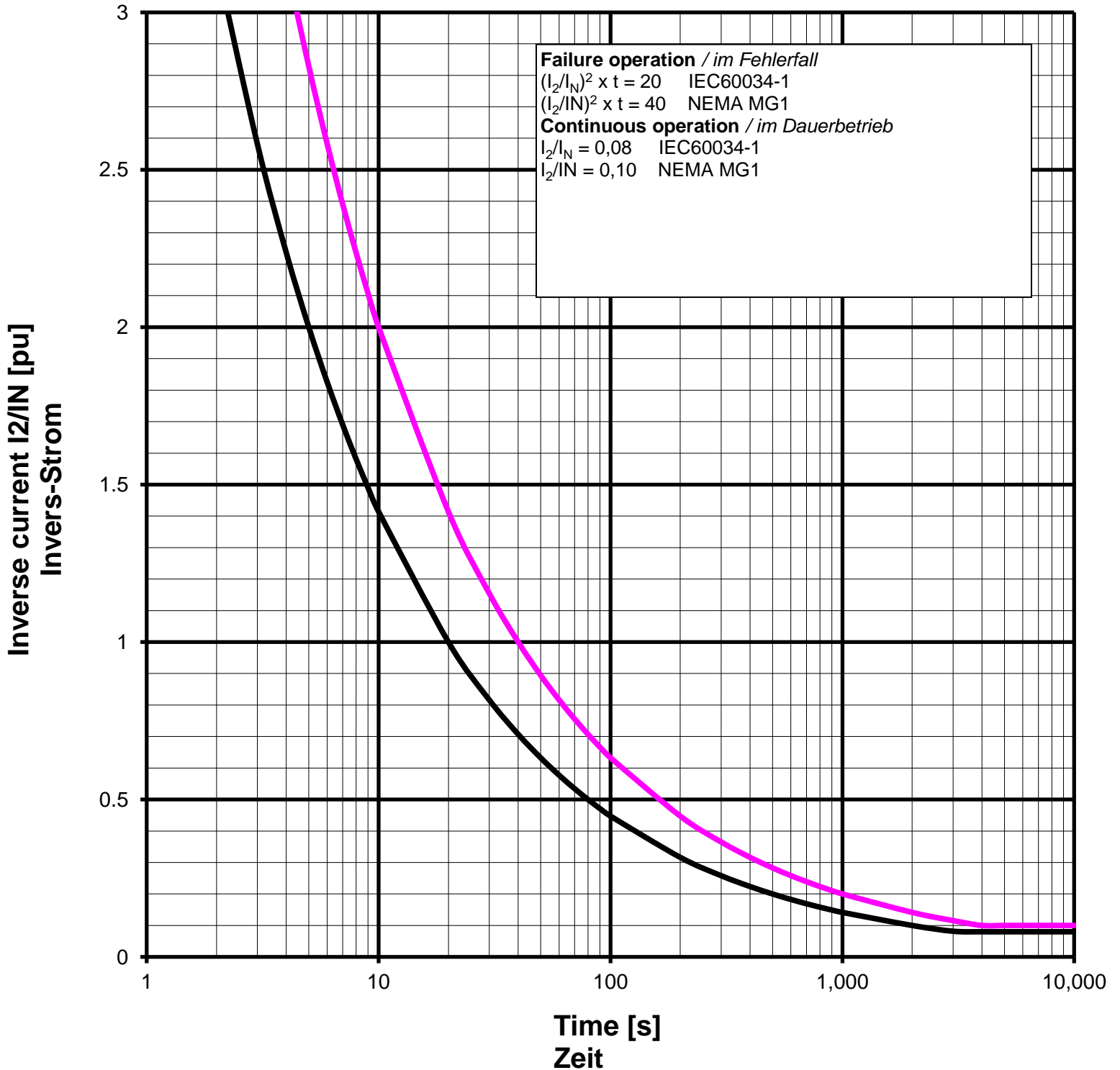
Frequenz

Drehzahl

Protection: **IP23**

Schutzart

Inverse current or unbalanced negative sequence current



Remarks / Notizen: