

Three-Phase-Inductionmotor with Squirrel Cage Rotor

Operationing and Installation Data:

Rated-				
-power	P_N :	1850 kW	Torque class	: KL
-voltage	U_N :	11000 V	Connection	: Y
-frequency	f_N :	50 Hz	Class of rating	: S1
-current	I_N :	108 A	Absolute altitude	: <1000 m ab.s.l.
-speed	n_N :	2991 1/min	Coolant temperature	: 40 °C
-torque	M_N :	5908 Nm		
Power factor	$\cos \varphi$:	0.91	Therm. class (design/util.)	: F / B

Standard: EN60034-1/IEC34-1

Calculated Start-Up Data:

Motor voltage	U/U_N	1.00	0.80		
Locked rotor torque	M_A/M_N	0.50	0.28		
Pull-up torque	M_S/M_N	0.38	0.21		
Breakdown torque	M_K/M_N	2.50	1.39		
Locked-rotor current	I_A/I_N	5.60	4.17		
$\cos \varphi$ at $s=1$		0.10			

Calculated Partial Load Data:

P/P_N	1.25	1.00	0.75	0.50	
$\cos \varphi$	0.91	0.91	0.90	0.87	
η [%]	97.4	97.4	97.2	96.6	

Additional Technical Ratings and Information:

Moment of inertia (motor): 64.0 kgm²

Rotor material: E-CU

At coolant temperature 05°C: $P = 2128$ kW, $I = 126$ A

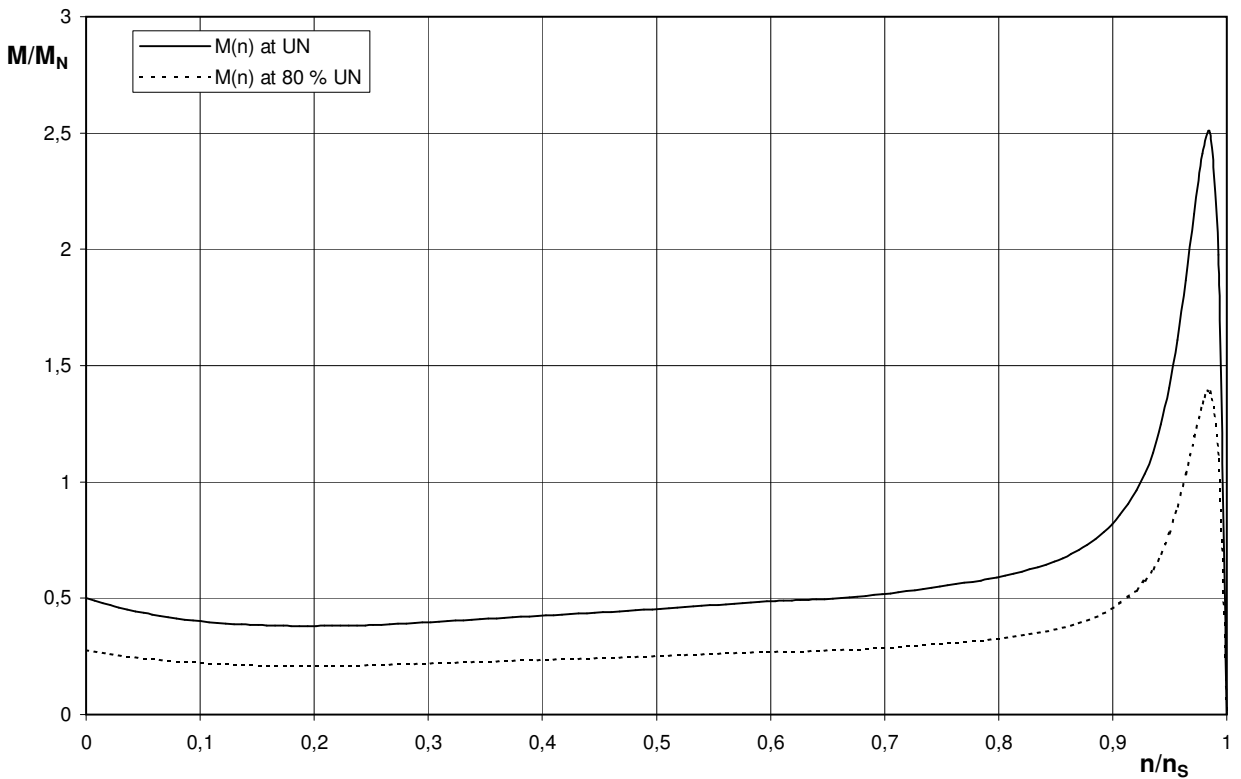
Locked-rotor time (cold / warm): 75 / 50 sec.

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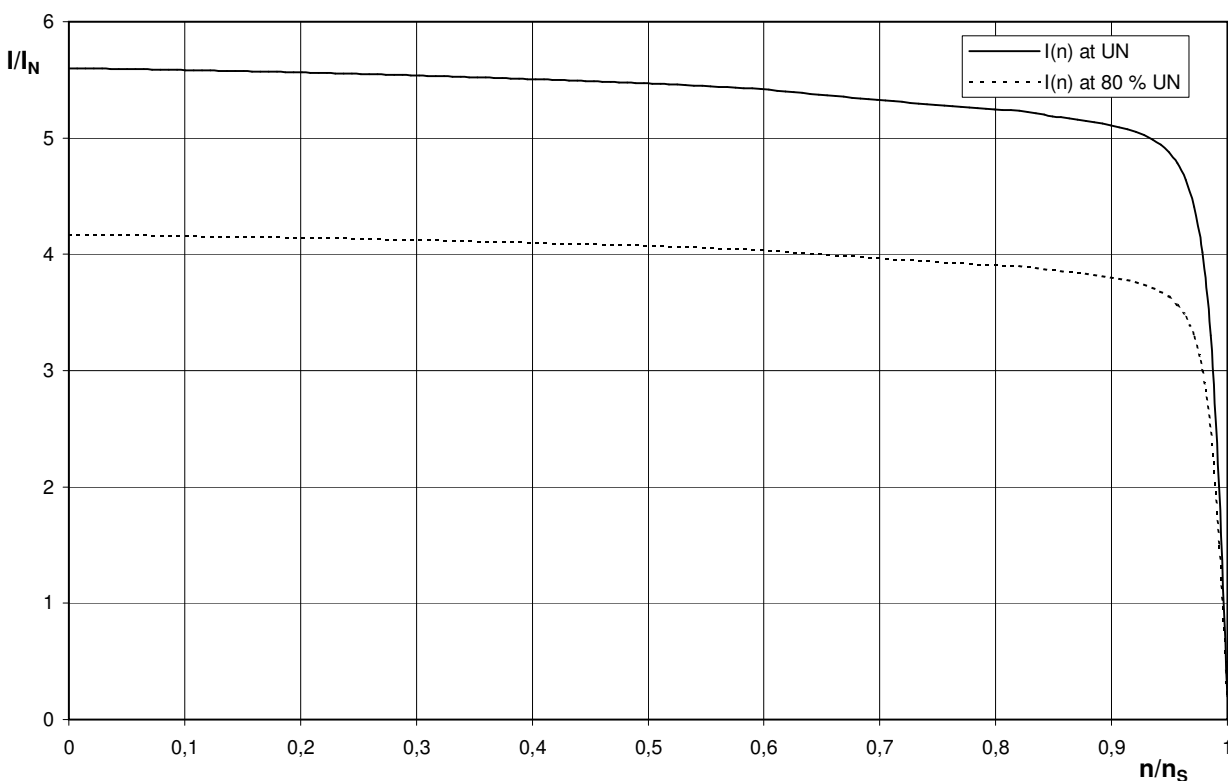


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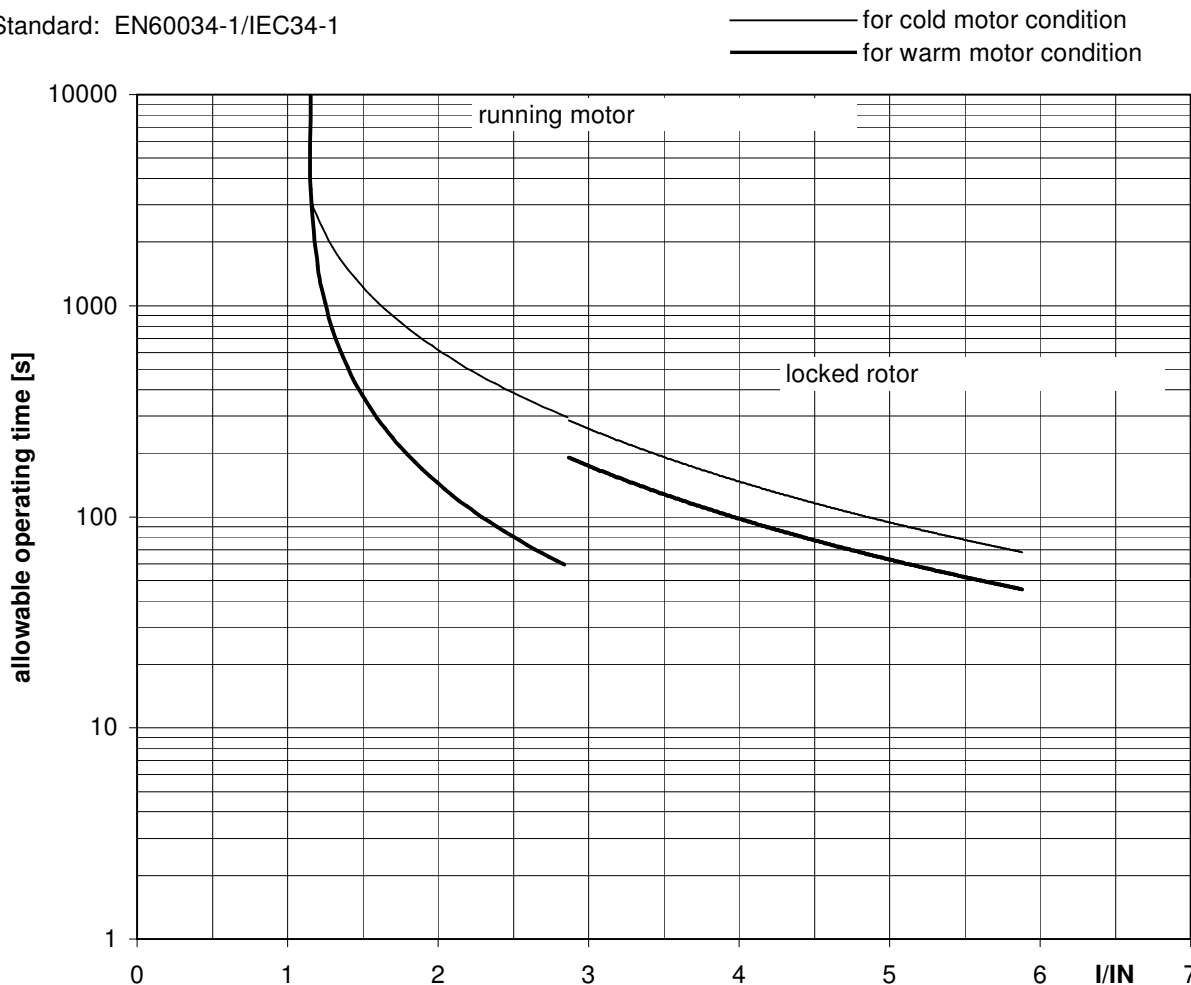


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Thermal copper time constant (short-term load variation):	24.5 min
Thermal time constant (long-term load variation):	90 min
Thermal time constant for cooling down (standstill):	360 min