

Engineering motordata (WIN 782)

DC bus voltage	320 V DC
Nominal AC voltage	220 V AC (rms)
Rated voltage	173 V AC (rms)
Rated power	1.3 kW
Rated speed	4500 rpm
Rated torque	2.75 Nm
Rated current	5.25 A (rms)
Peak torque	10.5 Nm
Peak current	18.9 A (rms)
Stall torque	3.5 Nm
Stall current	5.2 A (rms)
No load speed	5420 rpm
EMF constant ±10%	40.5 V AC (rms) / 1000rpm
Theoretical torque constant ±10%	0.67 Nm / A (rms)
Torque constant ±10% @ rated load	0.52 Nm / A (rms)
Number of poles	10
Electrical time constant	2.89 ms
Winding terminal resistance	1.8 Ω
Rotary field terminal inductance	5.2 mH

Customs info

HS Code	85015220
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Mechanical motor data (setting 48)

Max mechanical speed	12000 rpm
Mech. time constant	0.72 ms
Thermal time constant	27 min
Rotor inertia	1.04 kgcm ²
Protection	IP64
Color	RAL 9005
Cooling	Convection
Motor-only mass	2 kg

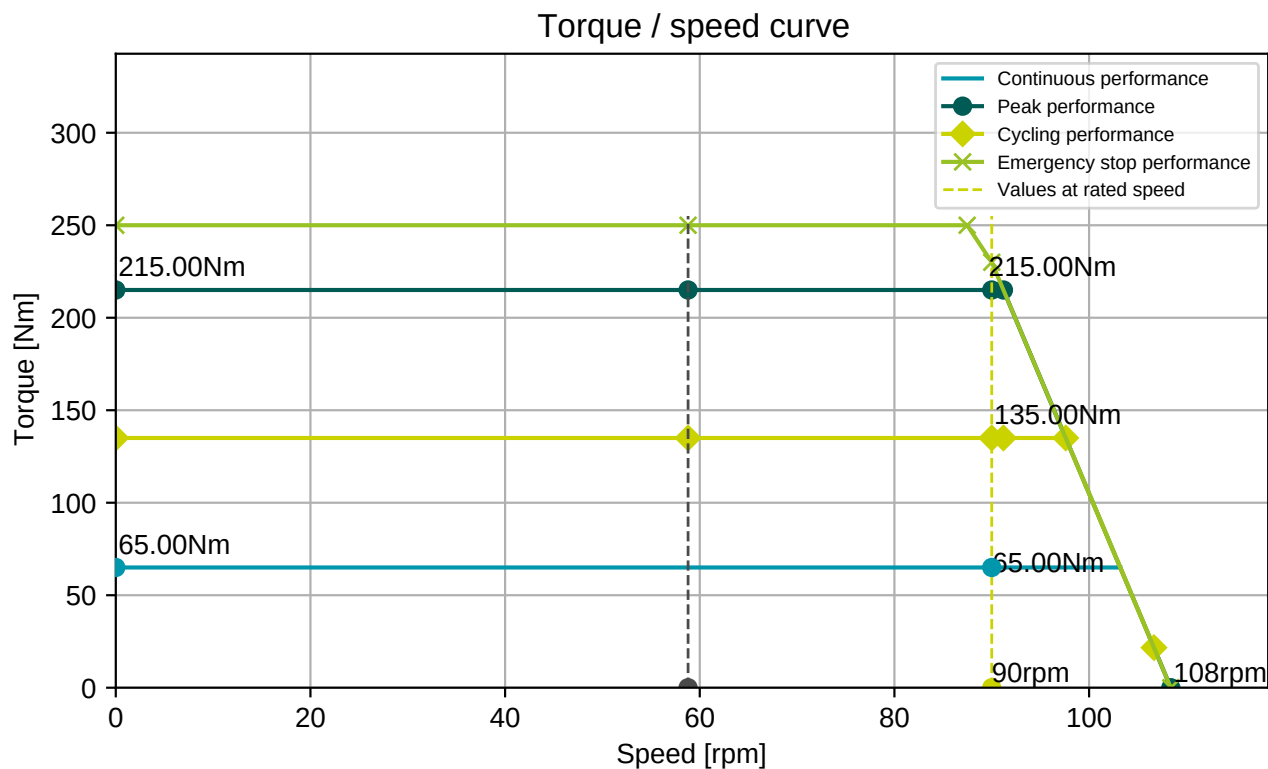
Sensors

Temperature	PT1000 {PT1000}
Feedback	EKM36 (HDSL) multi-turn, 17 + 12 bits

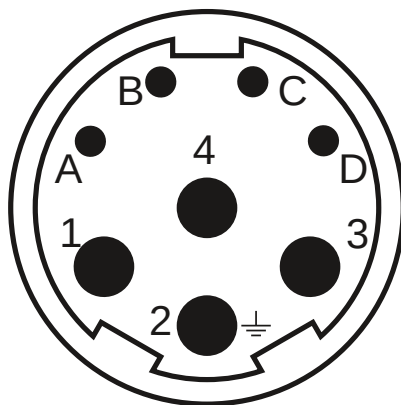
Gearbox engineering data		Gearbox mechanical data	
Gear ratio	50	Radial force for 20'000h	3950 N
Efficiency	92 %*	Radial force for 30'000h	3500 N
Torsional stiffness	35 Nm/arcmin	Max. radial force	3950 N
Number of stages	2	Axial force for 20'000h	8200 N
Rated output torque	65 Nm	Axial force for 30'000h	7200 N
Cycling output torque	135 Nm	Max. axial force	8200 N
Max output torque	215 Nm	Tilting moment for 20'000h	326 Nm
Emergency output torque	250 Nm	Tilting moment for 30'000h	289 Nm
Rated input speed	4500 rpm	Max. bending moment	18 Nm
Max input speed	10000 rpm	Output shaft design	Flange
Operating temperature	<-25; 90> °C	Mass	3.37 kg
Max. backlash	< 5 arcmin	Input inertia	0.212 kgcm ²
Service life	20000 h	Protection	IP65

* at rated speed & torque

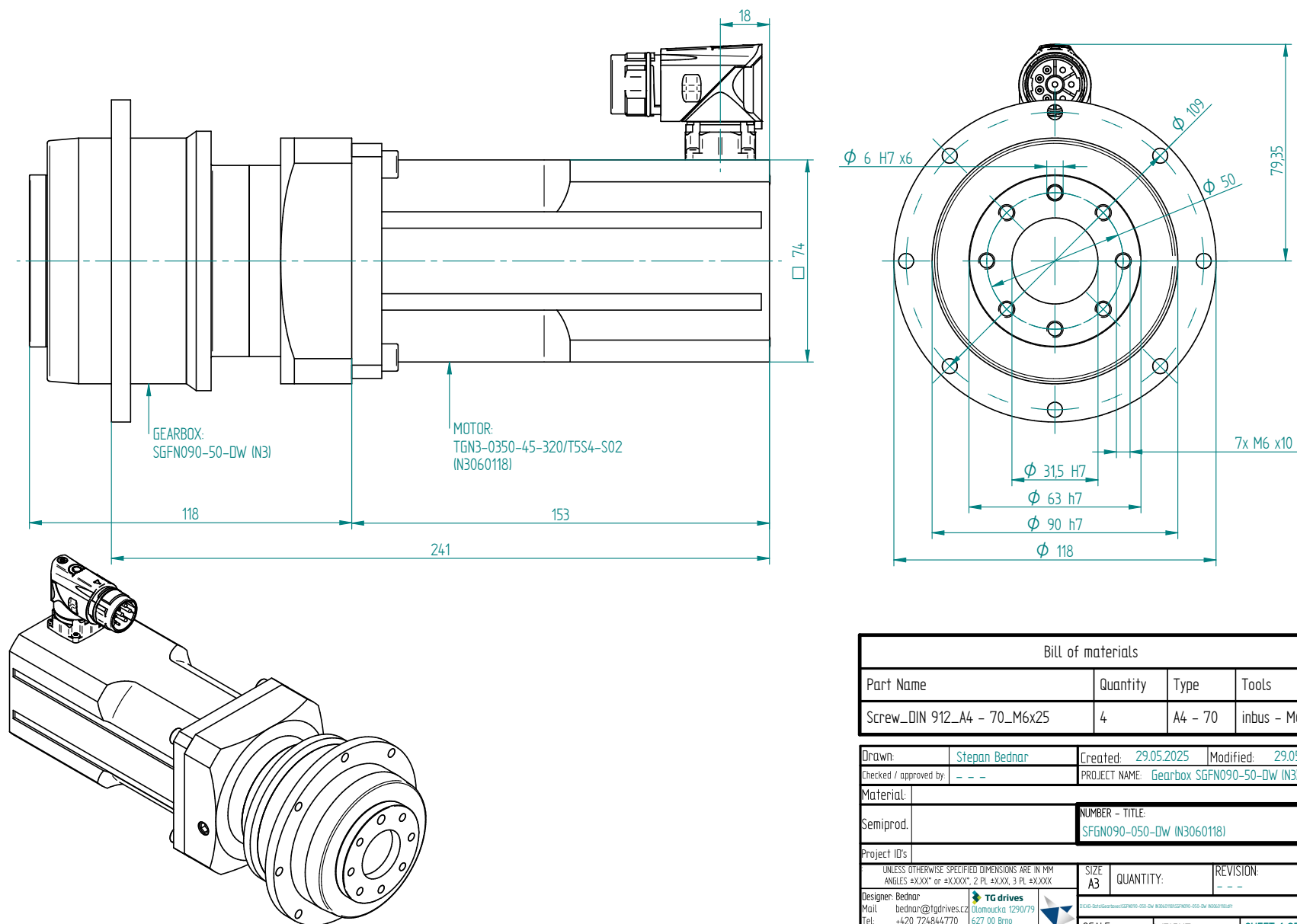
Lubrication		Actuator data	
Type	Standard	Rated speed	90 rpm
Lubricant	Castrol Optigear Synthetic	Rated torque	65.00 Nm
	800/150	Cycling torque	135.00 Nm
		Peak torque	215.00 Nm
		Emergency stop torque	250.00 Nm
		EMF constant ±10%	2025.0 V AC (rms) / 1000rpm
		Torque constant ±10% @ rated load	24.10 Nm / A (rms)
		Total mass	5.37 kg
		Output inertia	3130.0 kgcm ²


BGC110N00001216000

M23, 8 poles, rotary


Connector 1 (283)

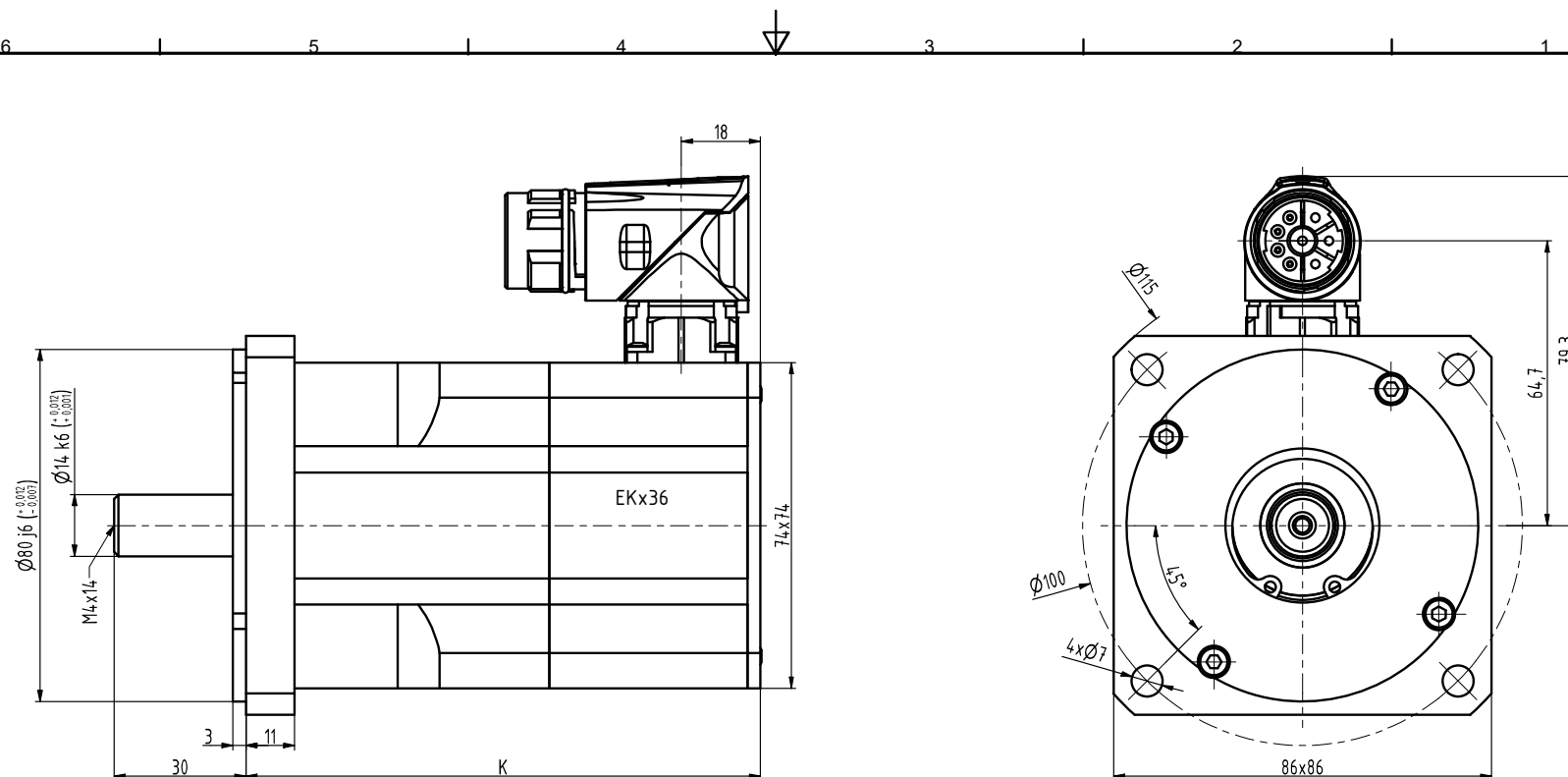
1	U
4	V
3	W
2	PE
A	Brake+
B	Brake-
C	GND/DSL-
D	+Us/DSL+



Bill of materials				
Part Name		Quantity	Type	Tools
Screw_DIN 912_A4 - 70_M6x25		4	A4 - 70	inbus - M6

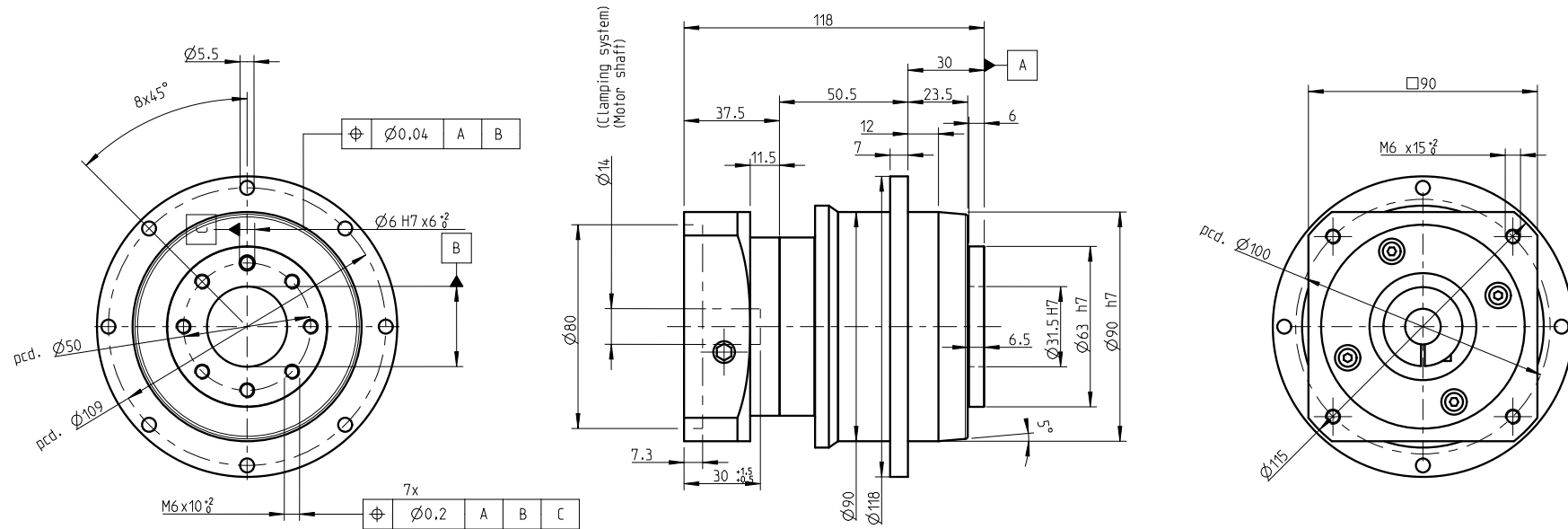
Drawn:	Stepan Bednar	Created:	29.05.2025	Modified:	29.05.2025
Checked / approved by:	- - -	PROJECT NAME:	Gearbox SGFN090-50-DW (N3)		
Material:					
Semiprod.	NUMBER - TITLE: SGFN090-050-DW (N3060118)				
Project ID's					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM ANGLES ±XXX° or ±XXXX°; 2 PL ±XXXX; 3 PL ±XXXX		SIZE A3	QUANTITY:	REVISION: - - -	
Designer: Bednar Mail: bednar@tgdrives.cz Tel: +420 724844770		 Glanovska 1290/79 627 00 Brno Czech republic			
SCALE :		WEIGHT:		SHEET 1 OF 3	

0040-300



TYP	K
N3-0115	99
N3-0205	117
N3-0280	135
N3-0350	153
N3-0420	171
N3-0480	189

INDEX	ZNAČKA	DATUM	PODPIS	
ZN.MAT.			T.O.	H.MOTNOST kg
ROZM.-POLOT.				MEŘ.
POM. ZAŘ.				ČSN
VYPR. Ošlejšek	NORM.REF.			POZN.
PŘEKR. Ošlejšek 30.05.20201				Č. KUSOVNIKU
TECHNOL.	SCHVÁLIL Ošlejšek	27.10.2017	STARÝ V.	Č.V.
NAZEV	Motor N3			N3119 06 Z_S4_S1
				Listů List



INDEX	ZMENA	DATUM	PODPIS		
ZMMAT.			T.O.	HMOTNOST kg	MĚR.
ROZM.-POLOT.					
ROZM. ZAR.				ČSN	TRČ.
VYPR.	NORM. REF.			POZN.	Č. KUSOVNÍKU
PŘEKR.					
TECHNOL.	SCHVÁLIL.	12.9.2020	STARÝ V.	Č.V.	
NÁZEV				TGN3, TGH3, TGT3	
Gearbox SGFN090				Listů	List