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

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	kgcm²
Protection	IP64	
Color	RAL 9005	
Cooling	Convection	
Motor-only mass	2	kg
Max. axial force 20kh	59	N
Max. radial force 20kh*	311	N
Max. axial force 100kh	35	N
Max. radial force 100kh*	182	N

** Defined for point of action at ½ output shaft length*

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

Gearbox engineering data		
Gear ratio	50	
Efficiency*	94	%
Torsional stiffness	79	Nm/arcmin
Number of stages	2	
Rated output torque	148	Nm
Cycling output torque	175	Nm
Max output torque	280	Nm
Emergency output torque	600	Nm
Rated input speed	4000	rpm
Max input speed	10000	rpm
Operating temperature	<-25; 90>	°C
Max. backlash	< 5	arcmin
Service life	20000	h

** at rated speed & torque*

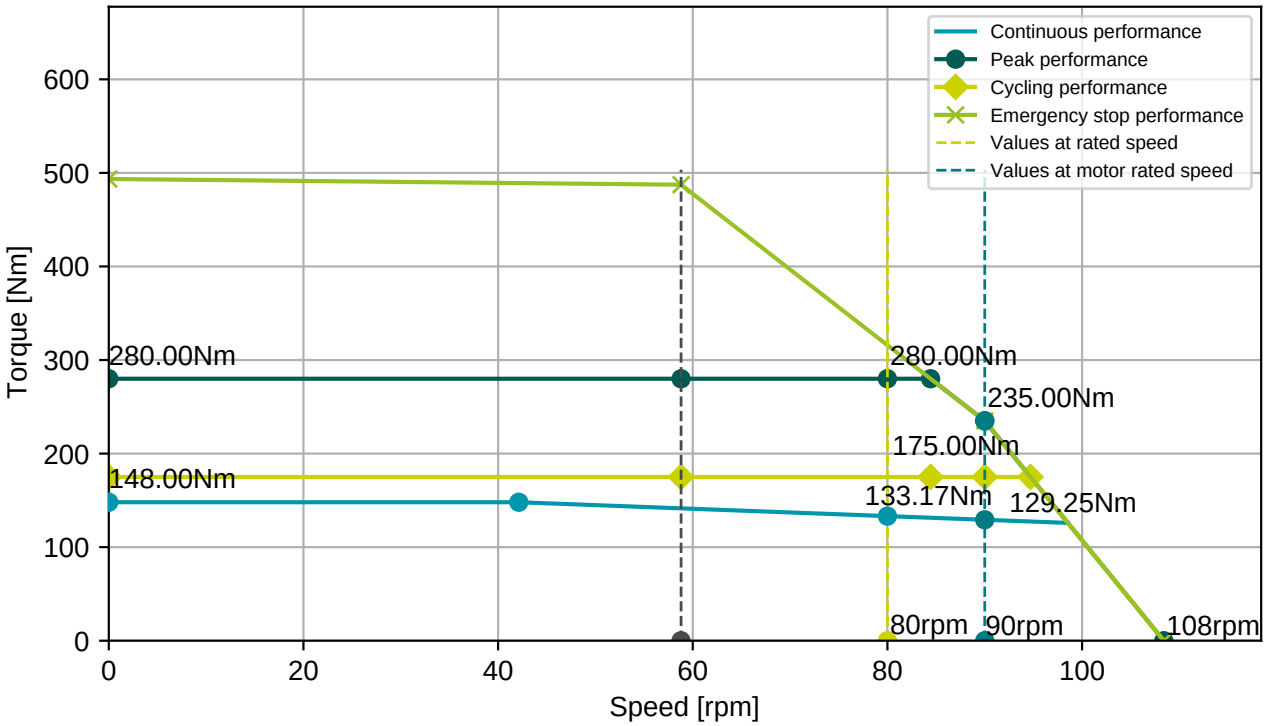
Lubrication	
Type	Standard
Lubricant	Castrol Optigear Synthetic 800/150

Gearbox mechanical data		
Radial force for 20'000h*	4900	N
Radial force for 30'000h*	4350	N
Max. radial force*	4900	N
Axial force for 20'000h	9500	N
Axial force for 30'000h	8400	N
Max. axial force	9500	N
Tilting moment for 20'000h	475	Nm
Tilting moment for 30'000h	422	Nm
Max. bending moment	38	Nm
Output shaft design	Smooth shaft	
Mass	7.98	kg
Input inertia	0.324	kgcm²
Protection	IP65	

** Defined for point of action at ½ output shaft length*

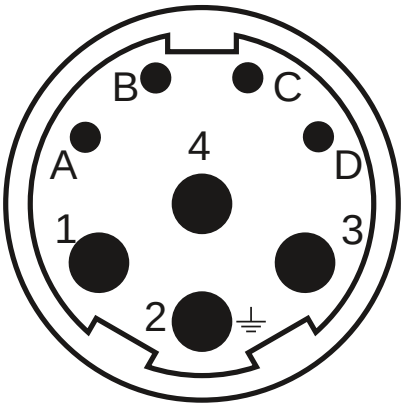
Actuator data		
Rated speed	80	rpm
Rated torque	133.17	Nm
Cycling torque	175.00	Nm
Peak torque	280.00	Nm
Emergency stop torque	525.00	Nm
EMF constant ±10%	2025.0	V AC (rms) / 1000rpm
Torque constant ±10% @ rated load	24.62	Nm / A (rms)
Total mass	9.98	kg
Output inertia	3410.0	kgcm²

Torque / speed curve

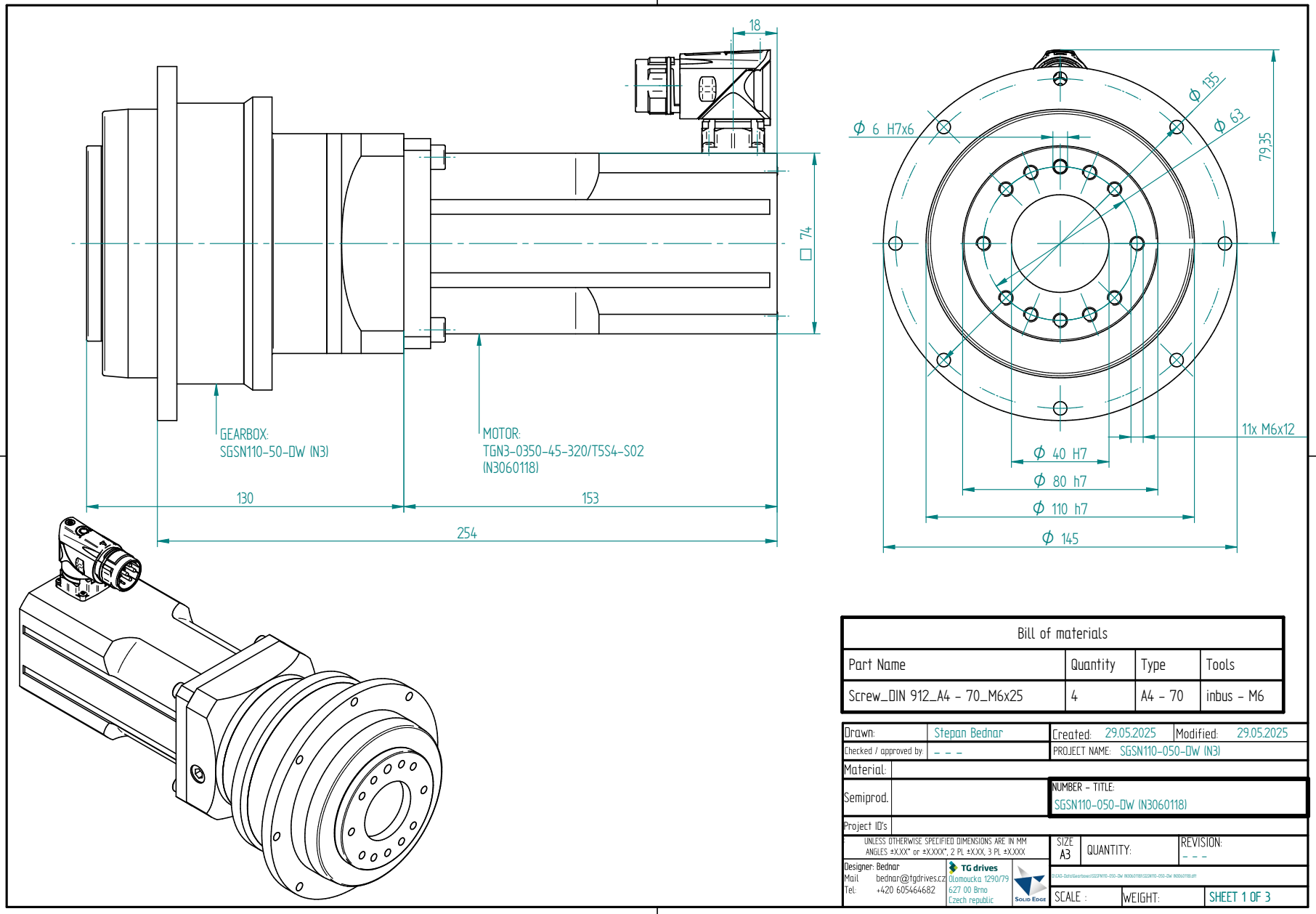


BGC110N00001216000

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+

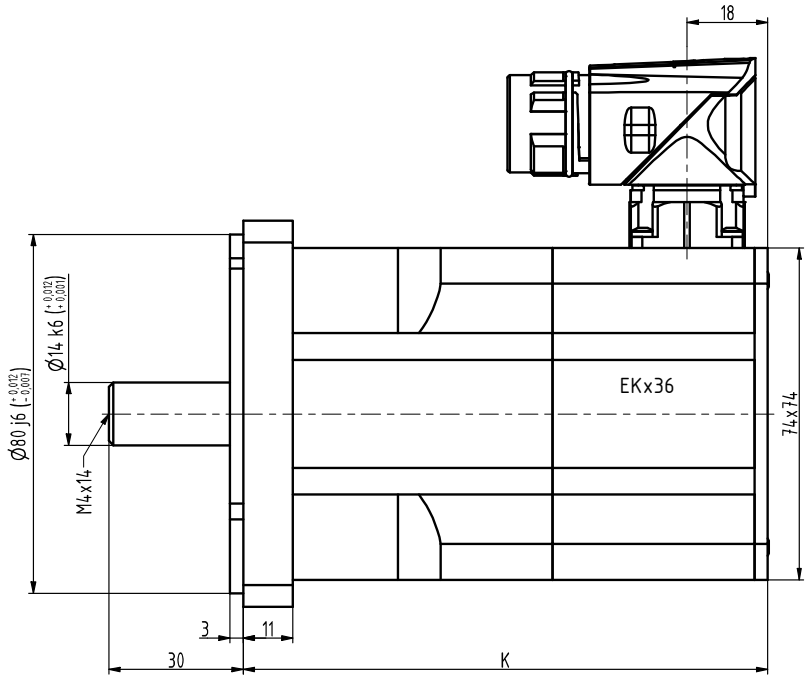


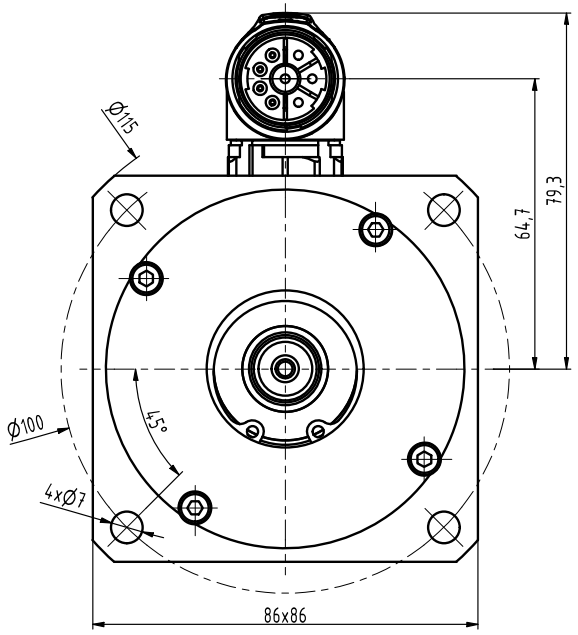
Bill of materials			
Part Name	Quantity	Type	Tools
Screw_DIN 912_A4 - 70_M6x25	4	A4 - 70	inbus - M6

Drawn:	Stepan Bednar	Created: 29.05.2025	Modified: 29.05.2025
Checked / approved by:	- - -	PROJECT NAME: SGSN110-050-DW (N3)	
Material:			
Semiprod.		NUMBER - TITLE: SGSN110-050-DW (N3060118)	
Project ID's			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM
ANGLES ±X.XX° or ±X.XXX", 2 PL ±X.XX, 3 PL ±X.XXX

Designer: Bednar Mail bednar@tgdrives.cz Tel: +420 605464682	TG drives Olomoucka 1290/79 627 00 Brno Czech republic	SIZE A3	QUANTITY:	REVISION: - - -
		SCALE :	WEIGHT:	SHEET 1 OF 3





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

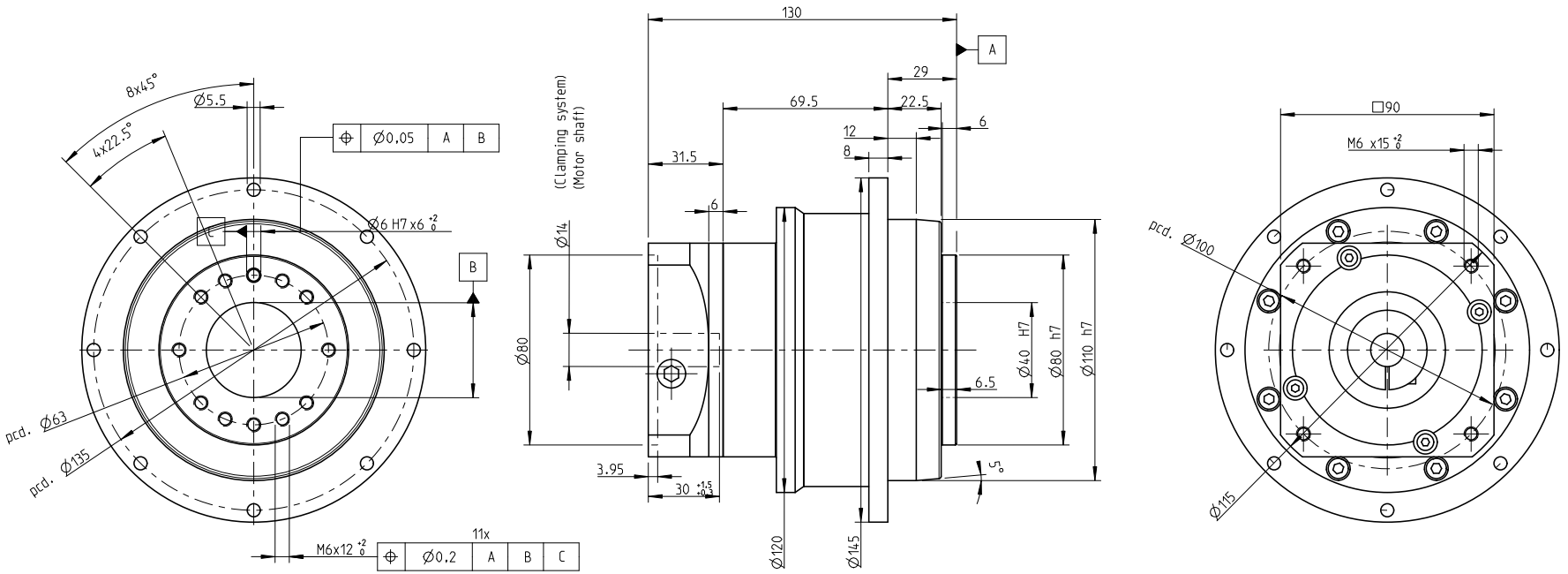
INDEX	ZMĚNA	DATUM	PODPIS

ZN.MAT.		T.O.	HMOTNOST kg	MĚŘ.	
ROZM.-POLOT.					
POM. ZAŘ.			ČSN	TŘ.Č.	
VYPR. Ošlejšek	NORM.REF.		POZN.	Č. KUSOVNÍKU	
PŘEKR. Ošlejšek 30.05.20201					
TECHNOL.	SCHVÁLIL Ošlejšek	27.10.2017	STARÝ V.	Č.V.	

NÁZEV
Motor N3

N3119 06 Z_S4_S1

Listů List



INDEX	ZMĚNA	DATUM	PODPIS		
ZM.MAT.			T.O.	HMOTNOST kg	MĚŘ.
ROZM.-POLOT.					
ROZM. ZAŘ.				ČSN	TŘ.Č.
VYPR.		NORM. REF.		POZN.	Č. KUSOVNÍKU
PŘEKR.					
TECHNOL.		SCHVÁLIL.	12.9.2020	STARÝ V.	Č.V.
NÁZEV					
Gearbox SGSN110				TGN3, TGH3, TGT3	
				Listů	List