Engineering motordata (WIN -100015)		
DC bus voltage	48	V DC
Nominal AC voltage	33	V AC (rms)
Rated voltage	31	V AC (rms)
Rated power	1.9	kW
Rated speed	3000	rpm
Rated torque	6.10	Nm
Rated current	40.52	A (rms)
Peak torque	23.4	Nm
Peak current	216.23	A (rms)
Stall torque	8.6	Nm
Stall current	54.62	A (rms)
No load speed	3460	rpm
EMF constant ±10%	9.5	V AC (rms) / 1000rpm
Theoretical torque constant ±10%	0.16	Nm / A (rms)
Torque constant ±10% @ rated load	0.15	Nm / A (rms)
Number of poles	10	
Electrical time constant	6.00	ms
Winding terminal resistance	0.02	Ω
Rotary field terminal inductance	0.12	mH

Customs info	
HS Code	85015220

Mechanical motor data (setting 48)		
Max mechanical speed	9000	rpm
Mech. time constant	0.69	ms
Thermal time constant	44	min
Rotor inertia	4.9	kgcm²
Protection	IP64	
Color	RAL 9005	
Cooling	Convection	
Motor-only mass	4	kg

Sensors	
Temperature	PT1000 {PT1000}
Feedback	EEM37 (HDSL) multi-turn, 17+12 bits

Gearbox engineering data		
Gear ratio	3	
Efficiency*	98	%
Torsional stiffness	21	Nm/arcmin
Number of stages	1	
Rated output torque	97	Nm
Cycling output torque	115	Nm
Max output torque	184	Nm
Emergency output torque	375	Nm
Rated input speed	2150	rpm
Max input speed	6500	rpm
Operating temperature	<-25; 90>	°C
Max. backlash	< 7	arcmin
Service life	20000	h

** at rated speed & torque*

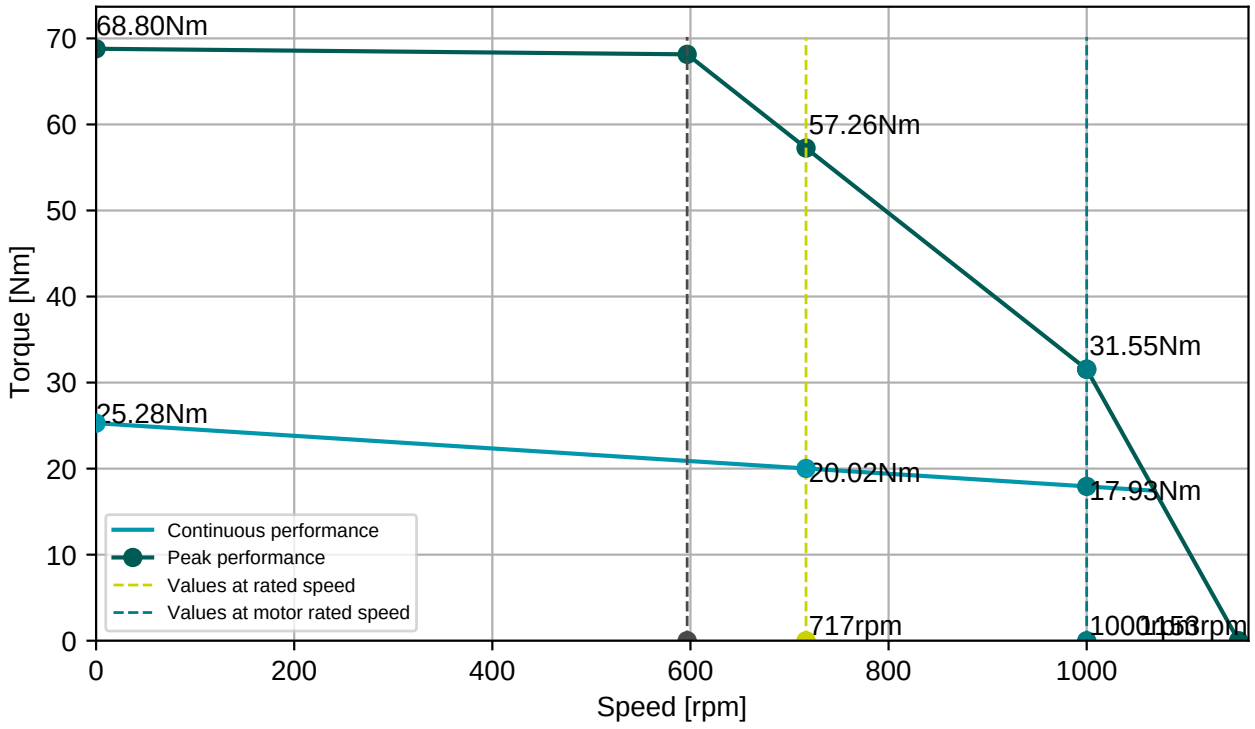
Lubrication	
Type	Standard
Lubricant	Grease (lifetime lubrication)

Gearbox mechanical data		
Radial force for 20'000h*	1750	N
Radial force for 30'000h*	1500	N
Max. radial force*	2000	N
Axial force for 20'000h	2500	N
Axial force for 30'000h	2100	N
Max. axial force	3800	N
Tilting moment for 20'000h	101	Nm
Tilting moment for 30'000h	86	Nm
Max. bending moment	40	Nm
Output shaft design	Shaft key	
Mass	5.67	kg
Input inertia	2.361	kgcm²
Protection	IP54	

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

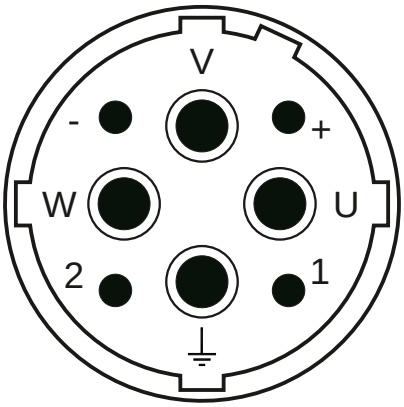
Actuator data		
Rated speed	717	rpm
Rated torque	20.02	Nm
Cycling torque	68.80	Nm
Peak torque	68.80	Nm
Emergency stop torque	70.20	Nm
EMF constant ±10%	28.5	V AC (rms) / 1000rpm
Torque constant ±10% @ rated load	0.44	Nm / A (rms)
Total mass	9.67	kg
Output inertia	65.3	kgcm²

Torque / speed curve

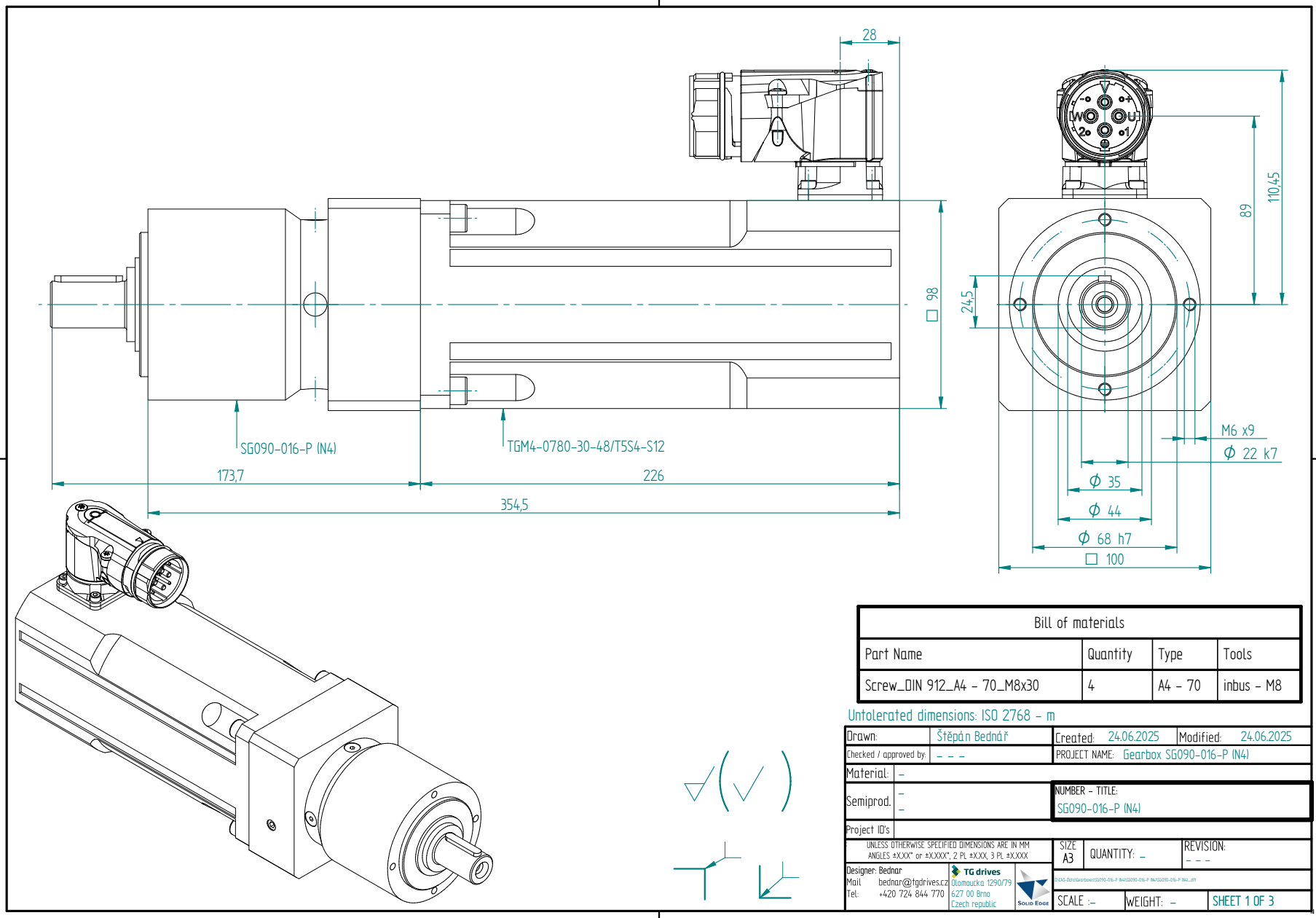


CEA271N00000051000

M40, 8 poles, rotary base



Connector 1 (151)	
U	U
V	V
W	W
PE	PE
+	Brake+
-	Brake-
1	Therm+
2	Therm-



Bill of materials			
Part Name	Quantity	Type	Tools
Screw_DIN 912_A4 - 70_M8x30	4	A4 - 70	inbus - M8

Untolerated dimensions: ISO 2768 - m

Drawn:	Štěpán Bednář	Created: 24.06.2025	Modified: 24.06.2025
Checked / approved by:	- - -	PROJECT NAME: Gearbox SG090-016-P (N4)	
Material:	-		
Semiprod.	- -	NUMBER - TITLE: SG090-016-P (N4)	
Project ID's			

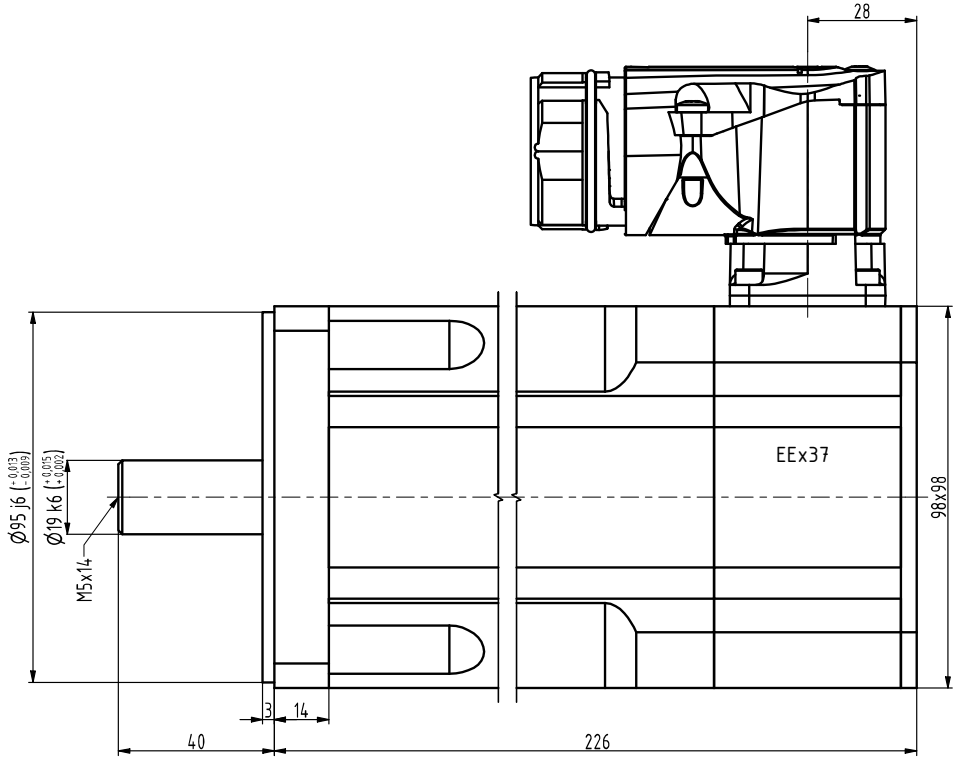
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM
ANGLES ±X,XX° or ±X,XXX", 2 PL ±X,XX, 3 PL ±X,XXX

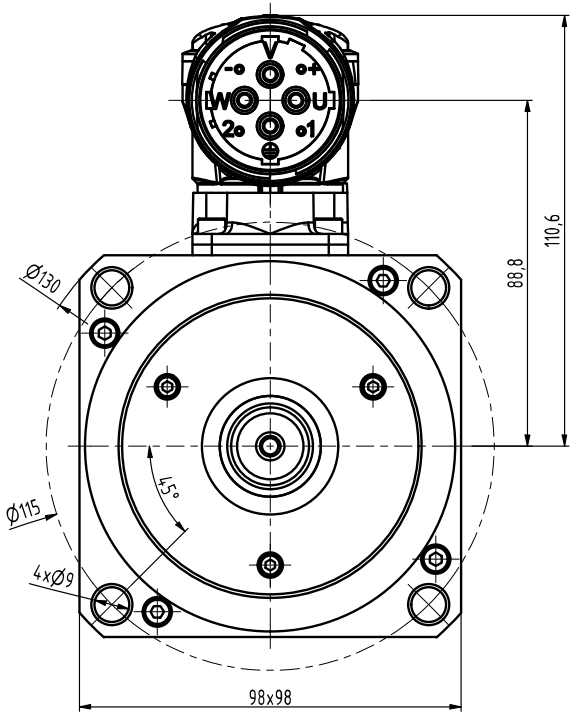
SIZE A3 | QUANTITY: - | REVISION: - - -

Designer: Bednar
Mail bednar@tgdrives.cz
Tel: +420 724 844 770

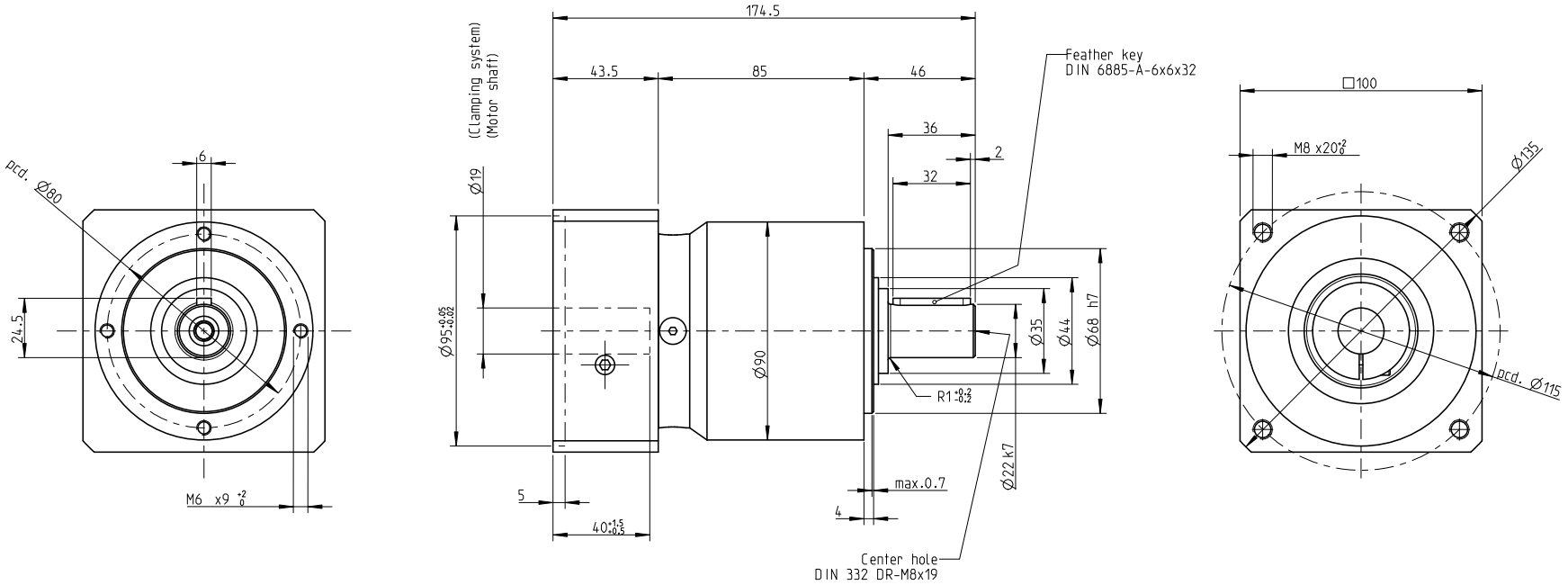
TG drives
Olomoucka 1290/79
627 00 Brno
Czech republic

SCALE :- | WEIGHT: - | SHEET 1 OF 3





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.					
TECHNOL.	SCHVÁLIL Ošlejšek	22.03.2023	STARÝ V.	Č.V.	
NÁZEV					
Motor M4-0780			M4123 05 Z		
			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 SG090

TGN4, TGH4, TGT4

Listů List