

Engineering motordata (WIN 978)

DC bus voltage	48 V DC
Nominal AC voltage	33 V AC (rms)
Rated voltage	25 V AC (rms)
Rated power	160 W
Rated speed	3000 rpm
Rated torque	0.51 Nm
Rated current	6.01 A (rms)
Peak torque	2.16 Nm
Peak current	27.5 A (rms)
Stall torque	0.54 Nm
Stall current	6 A (rms)
No load speed	5930 rpm
EMF constant ±10%	5.5 V AC (rms) / 1000rpm
Theoretical torque constant ±10%	0.09 Nm / A (rms)
Torque constant ±10% @ rated load	0.08 Nm / A (rms)
Number of poles	6
Electrical time constant	1.21 ms
Winding terminal resistance	0.99 Ω
Rotary field terminal inductance	1.2 mH

Customs info

HS Code	85015100
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Mechanical motor data (setting 48)

Max mechanical speed	12000 rpm
Mech. time constant	1.45 ms
Thermal time constant	12 min
Rotor inertia	0.07 kgcm ²
Protection	IP64
Color	RAL 9005
Cooling	Convection
Motor-only mass	0.9 kg
Max. axial force 20kh	48 N
Max. radial force 20kh	254 N*
Max. axial force 100kh	28 N
Max. radial force 100kh	149 N*

* Defined for point of action at ½ output shaft length

Sensors

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

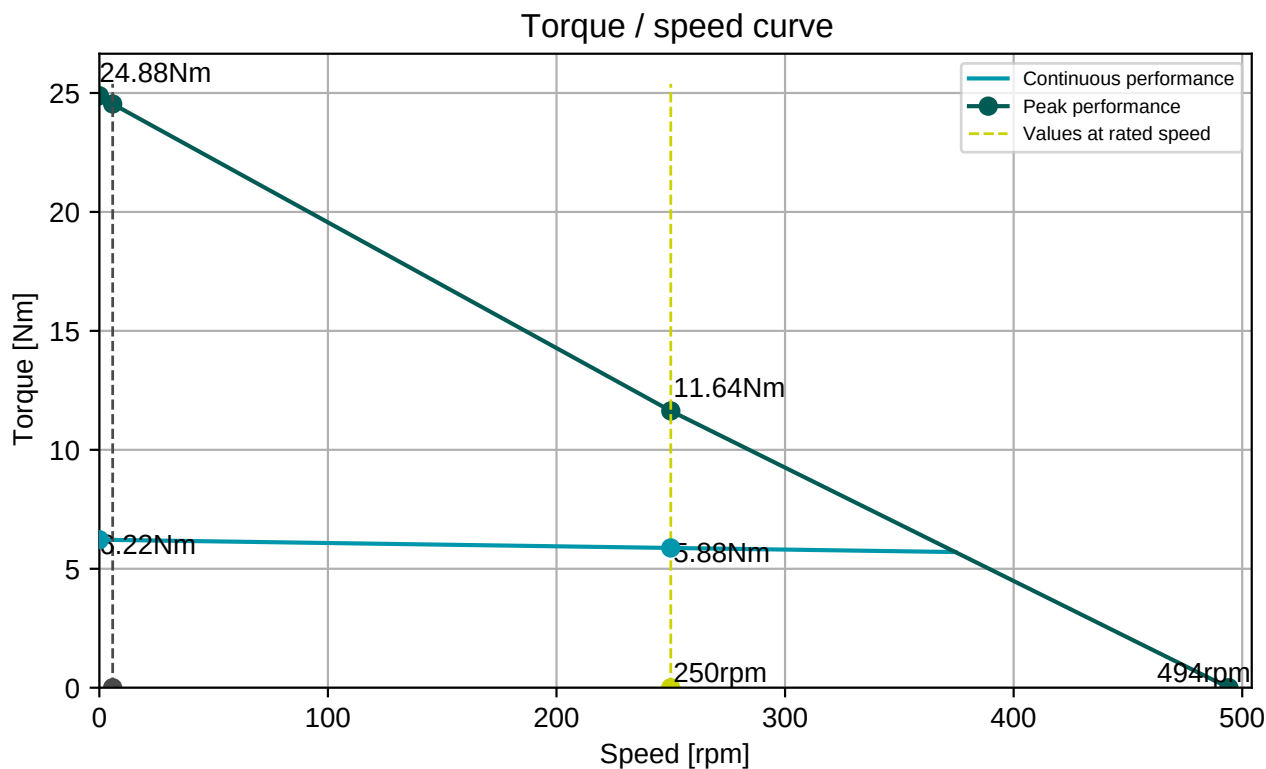
Brake

Braking torque	2.00 Nm
Voltage	24 V DC
Power @20°C	11.0 W
Current @20°C	0.46 A
Inertia	0.08 kgcm ²
Mass	0.20 kg

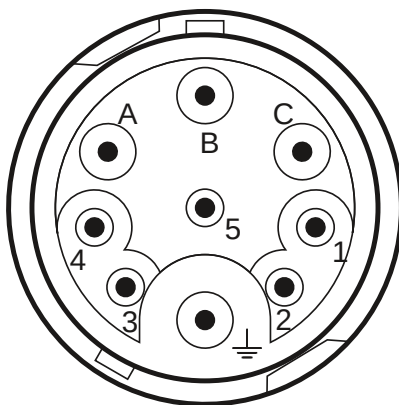
Gearbox engineering data		Gearbox mechanical data	
Gear ratio	12	Radial force for 20'000h	1050 N*
Efficiency	96 %*	Radial force for 30'000h	900 N*
Torsional stiffness	5.7 Nm/arcmin	Max. radial force	1650 N*
Number of stages	2	Axial force for 20'000h	1350 N
Rated output torque	24 Nm	Axial force for 30'000h	1000 N
Cycling output torque	33 Nm	Max. axial force	2100 N
Max output torque	48 Nm	Tilting moment for 20'000h	42 Nm
Emergency output torque	88 Nm	Tilting moment for 30'000h	36 Nm
Rated input speed	4500 rpm	Max. bending moment	12 Nm
Max input speed	13000 rpm	Output shaft design	Shaft key
Operating temperature	<-25; 90> °C	Mass	1.7 kg
Max. backlash	< 12 arcmin	Input inertia	0.121 kgcm ²
Service life	20000 h	Protection	IP54
* at rated speed & torque		* Defined for point of action at ½ output shaft length	

Lubrication	
Type	Standard
Lubricant	Grease (lifetime lubrication)

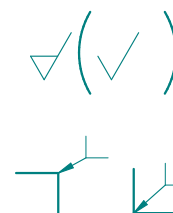
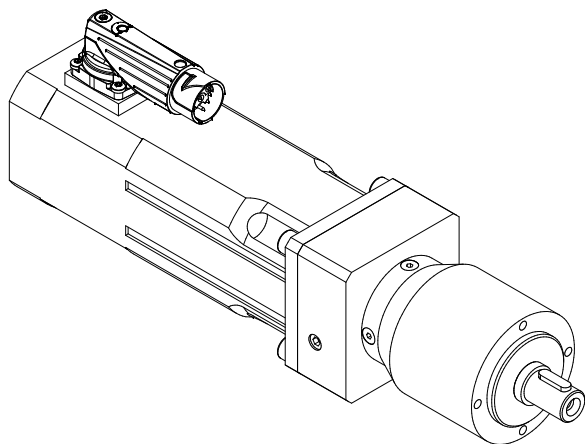
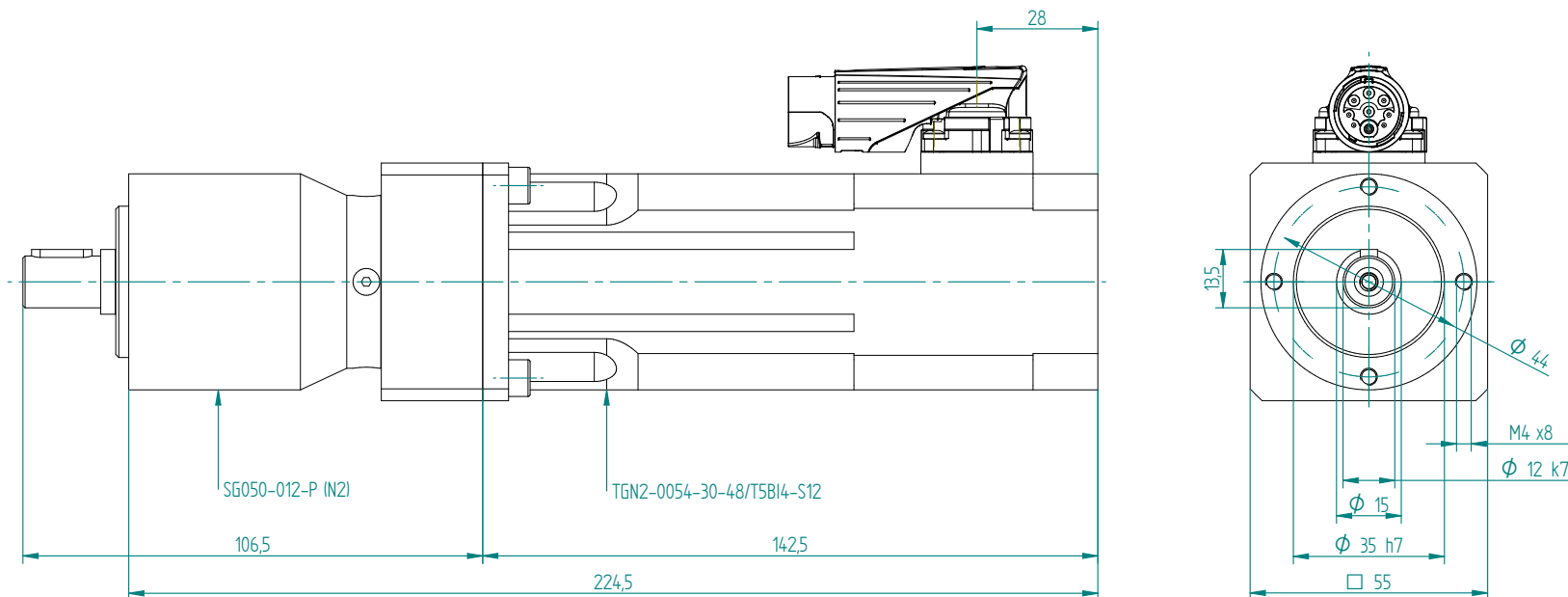
Actuator data	
Rated speed	250 rpm
Rated torque	5.88 Nm
Cycling torque	24.88 Nm
Peak torque	24.88 Nm
Emergency stop torque	25.92 Nm
EMF constant ±10%	66.0 V AC (rms) / 1000rpm
Torque constant ±10% @ rated load	0.98 Nm / A (rms)
Total mass	2.80 kg
Output inertia	27.5 kgcm ²


EGA201N00000800000

M15, 9 poles, rotary


Connector 1 (304)

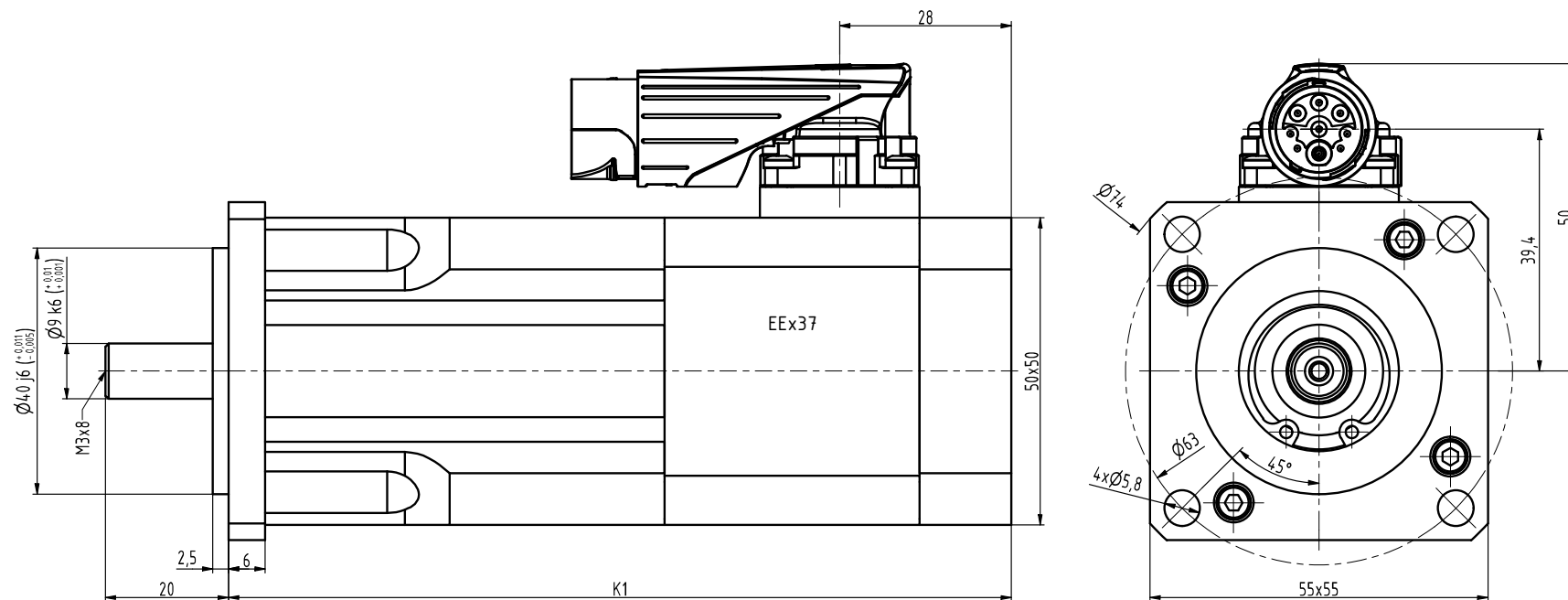
A	U
B	V
C	W
PE	PE
1	Brake+
2	Brake-
3	+Us/DSL+
4	GND/DSL-



Bill of materials			
Part Name	Quantity	Type	Tools
Screw_DIN 912_A4 - 70_M5x16	4	A4 - 70	inbus - M5

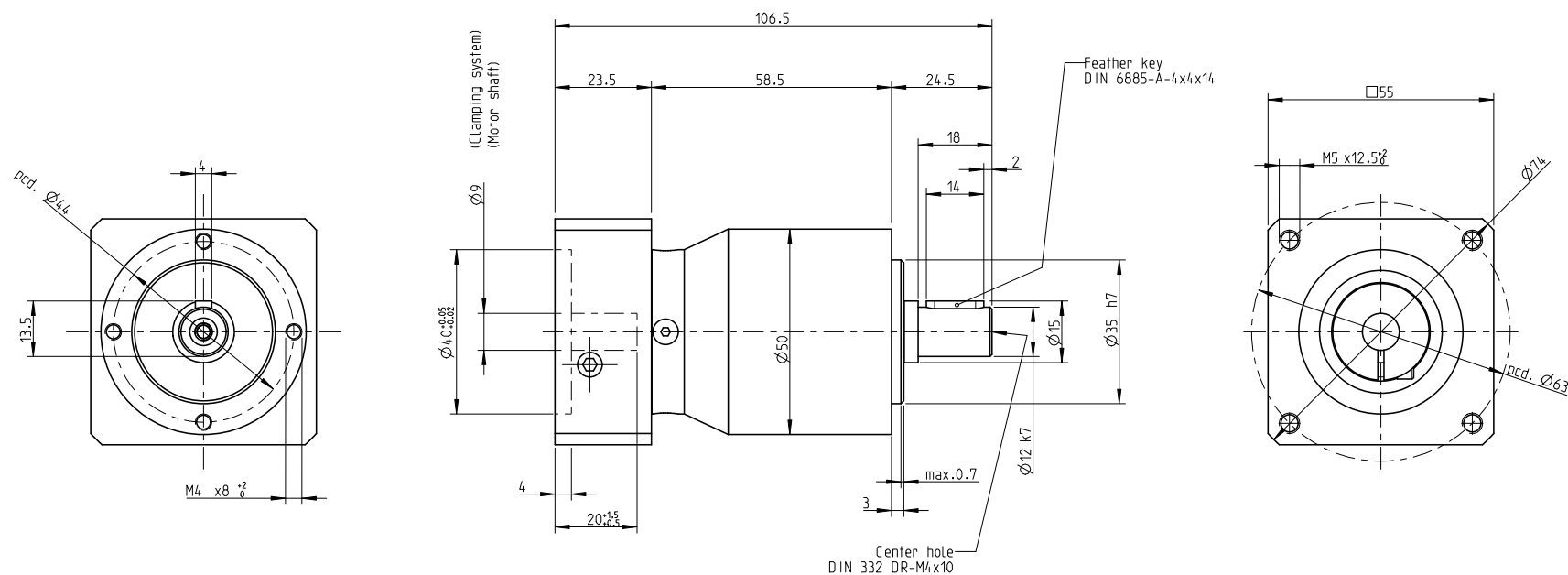
Untolerated dimensions: ISO 2768 - m

Drawn:	Stepan Bednar	Created:	23.06.2025	Modified:	23.06.2025
Checked / approved by:	---	PROJECT NAME:	Gearbox SG050-012-P (IN2)		
Material:	-	NUMBER - TITLE: SG050-012-P (IN2)			
Semiprod.	-				
Project ID's	-				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM ANGLES ±XXX° or ±XXXX°, 2 PL ±XXX, 3 PL ±XXXX		SIZE A3	QUANTITY: -	REVISION: ---	
Designer: Bednar	 TG drives Udomoucka 759/79 627 00 Brno Czech republic		SHEET 1 OF 3		
Email Tel:	bednar@tgdrives.cz +420 724 844 770	SCALE: - WEIGHT: -			



TYP	K1
N2-0028	127,5
N2-0054	142,5
N2-0075	157,5
N2-0095	172,5

INDEX	ZNAČKA	DATUM	PODPIS	
ZN.MAT.				HMOTNOST kg
ROZM.-POLOH.				TRČ.
POM. ZAR.				Č. KUSOVNIKU
VYPR. Ošlejšek	NORM.REF.			Č.V.
PREKR.				
TECHNOL.	SCHVÁLIL Ošlejšek	01.07.2021	STARÝ V.	
NAZEV	Motor N2			
	N2068 05 B Z_I_S1			
	Listů List			



INDEX	ZMĚNA	DATUM	PODPIS		
				HMOTNOST kg	MĚŘ.
ZM.MAT.			T.O.		
ROZM.-POLOT.				ČSN	TR.Č.
ROZM. ZAR.				POZN.	Č. KUSOVNÍKU
VYPR.	NORM. REF.				
PŘEKR.					
TECHNOL.	SCHVÁLIL.	12.9.2020	STARÝ V.	Č.V.	
NÁZEV	Gearbox SG050			TGN2, TGT2, TGH2	
				Listů List	