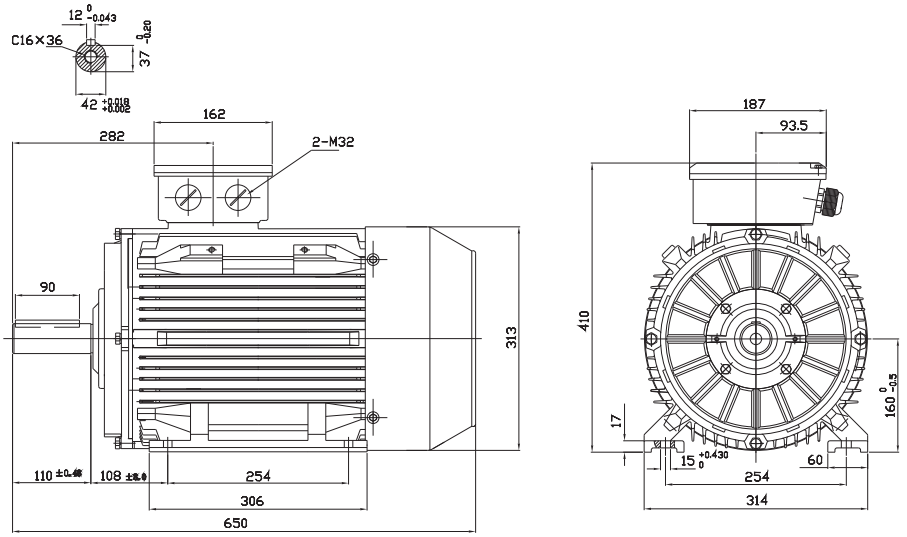
Data sheet for three-phase squirrel-cage motor

Type T3C 160L-6 | **Cod.** R1600611,0B3B5G0000T | **Mounting position**

IM	B3
IM	1001



Electrical data			
Rated motor power	11		Kw
Rated motor speed	960		min^{-1} 50Hz
	1155		min^{-1} 60Hz
Rated motor frequency	50		Hz
Rated motor voltage(+/-10%)	400		VΔ/50Hz
	690		VY/50Hz
	480		VΔ/60Hz
	830		VY/60Hz
Rated motor torque	109.42		Nm (Mn)
Rated motor current	20.69	VΔ/50Hz	A (In)
	11.96	VY/50Hz	A (In)
Starting motor current	7.3		xIn
Starting motor torque	2.5		xMn
Breakdown motor torque	2.8		xMn
Starting			D.O.L.
Efficiency class	IE3		
Efficiency	50Hz	60Hz	
	90.3	91.9	100% load
	91.2	92.6	75% load
	88.5	91.2	50% load
Power factor cosφ	0.85	0.85	100% load

General data			
Frame size	160		
Mounting	B3		
Weight	155.68		Kg
Casing material	Cast iron		
Protection	IP	55	
Insulation class/Temperature rise	F	/	B
Tropicalization	Yes		
Vibration class	N		
Duty	S1		
Direction of rotation	Bidirectional		
Method of cooling	IC	411	
Cable entry	2-M32x1,5+1M16x1,5		
Standards	IEC/DIN/ISO/VDE/EN		
Execute at Standard	IEC 60034-1		
Feet removable	Yes		
Paintwork	RAL	7024	dark grey
Thermal protections	PTC 150°C		Standard

Site conditions	
Ambient temperature	from -20°C to +40°C
Altitude above sea level	1000 m

Mechanical data						
Noise level	LpA	61	dB(A)	Bearing DE side	-	
	LwA	70	dB(A)	Bearing NDE side	-	
Moment of inertia	0.12093		Kgm^2	Average bearing lifetime	40000	h
Bearings type			NSK	Relubrication interval L1 DE bearing	24000	h
Lubricants for bearings	See installation and maintenance manual page 12			Relubrication interval L1 NDE bearing	24000	h
				Compensation ring	NDE SIDE	standard

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Type T3C 160L-6	Output 11 kW	Voltage 400/690 V	Current A	Frequency 50 Hz	Kind of test			
Duty S1	Connection method Δ / Y	Poles 6 P	Speed r/min	Basic temp. 95 ℃				

Insulation resistance	(MΩ)	Phase vs.Phase	Phase vs.Ground	DC Resistance determination(Ω)		over loading test	160% of Rated torque.for 15S	Pass
	Cold state			Line R	Value		150% of Rated current.for 120S	Pass
	Hot state	300		R_{UW}	0,5096		Inter-turns insulation test	
High-voltage	1760 V for 60 S			R_{UV}	0,5094		130% of Rated voltage.for 180	Pass
	Phase vs.Phase		Pass	R_{VW}	0,50102		Over speed test	
	Phase vs.Ground		Pass	Ambient.	32 ℃		120% of Rated max.frequency.for 120S	Pass

Item			Result	Standard value	Tolerance (%)
Efficiency	100%Pn	(%)	90,52		
	75%Pn	(%)	91,168		
	50%Pn	(%)	90,684		
Power factor			0,763		
Temperature rise of stator winding	0 S	(K)	50		
	30/90 S	(K)	50		
Slip		(%)	2,2795		
Locked current		(A)	174,5		
Locked rotor current /Rated current			7,59		
Locked torque		(Nm)	292,7		
Locked rotor torque/Rated torque			2,7		
Maximum torque		(Nm)	280,2		
Breakdown torque/Rated torque			2,59		
Pull-up torque		(Nm)	161,1		
Pull-up torque/Rated torque			1,49		
Noise Lp (A)		dB			
Vibrancy		(mm)			
Bearing temperature rise		(K)	85		
Vibration Test					
Displacement		(μm)			
velocity		(mm/s)			
Acceleration		(m/s^2)			

Reference temp R	(Ω)	0,93934	Hot state temp. (℃) 71,1
Three-phase R deviation	(%)	1,12	Middle part of enclosure temp.(℃) 120,6
No-load current	(A)	11,77	Temp. of frame (℃) 70
No-load current deviation	(%)	1,98	Temp. of Airin-N (℃) 120,5
No-load input power	(W)	392,62	Temp. of Airout-D (℃) 71,1
Full-load input current	(A)	22,98	Environment humidity (%)
Full-load input power	(W)	12152	Degree of protection (IP) IP55
Core loss	(W)	251,18	Insulation class F
Friction and wind age loss(W)		18,904	
StatorI2Rloss	(W)	468,99	Cold checking test
RotorI2Rloss	(W)	260,59	50 Hz 400/690 V No-load test data
Stary-load loss	(W)	152,71	No-load current (A)
wastage summation	(W)	1152,4	No-load power (W) 392,62
Output	(W)	11000	50 Hz V Locked test data
Rated torque	(N.m)	108,29	Locked current (A)
Full-load speed	(r/min)	977,21	Locked power: (W)

Mechanical check: Complete assembly, Flexible rotating, Correct Direction。

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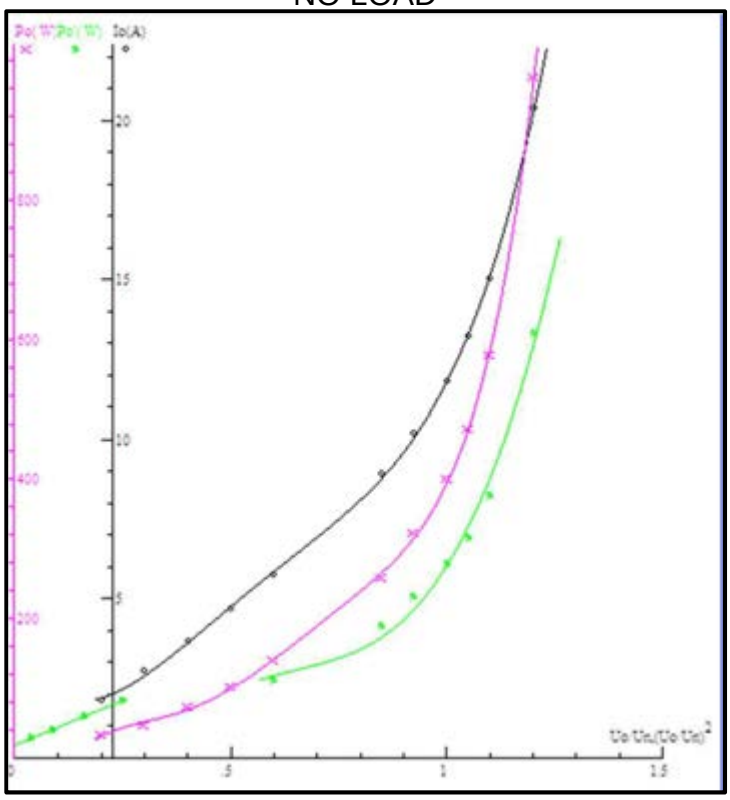
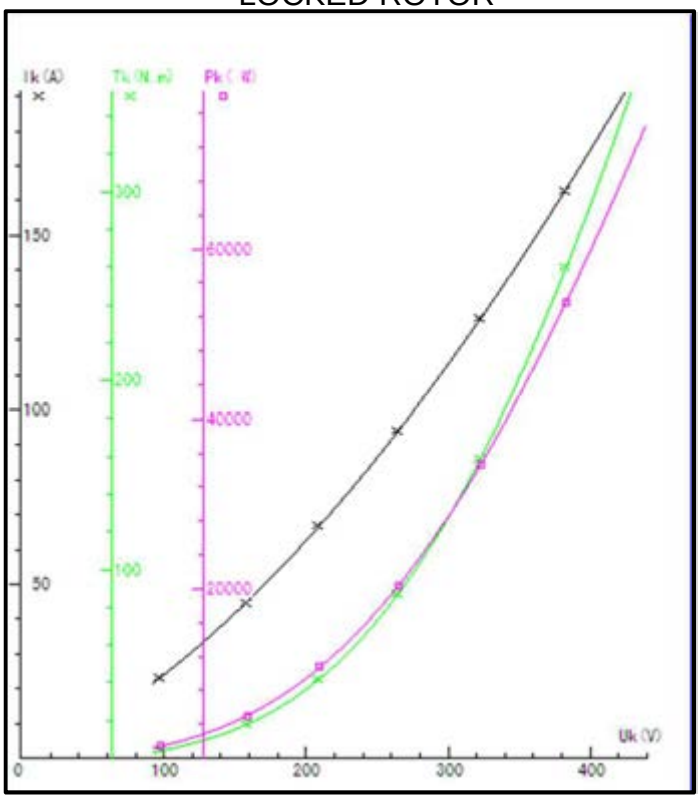


LOCKED ROTOR



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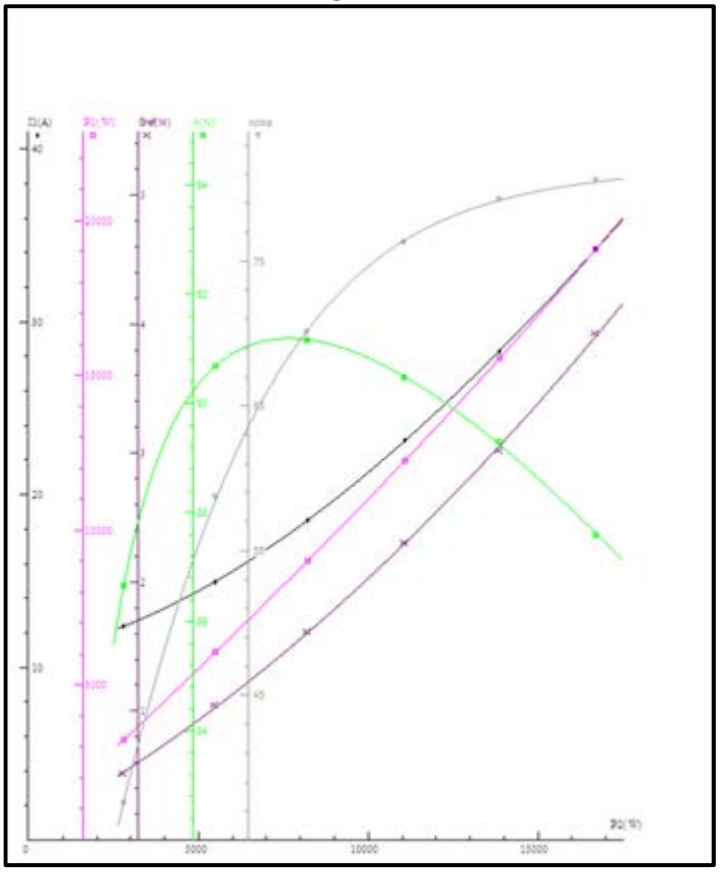

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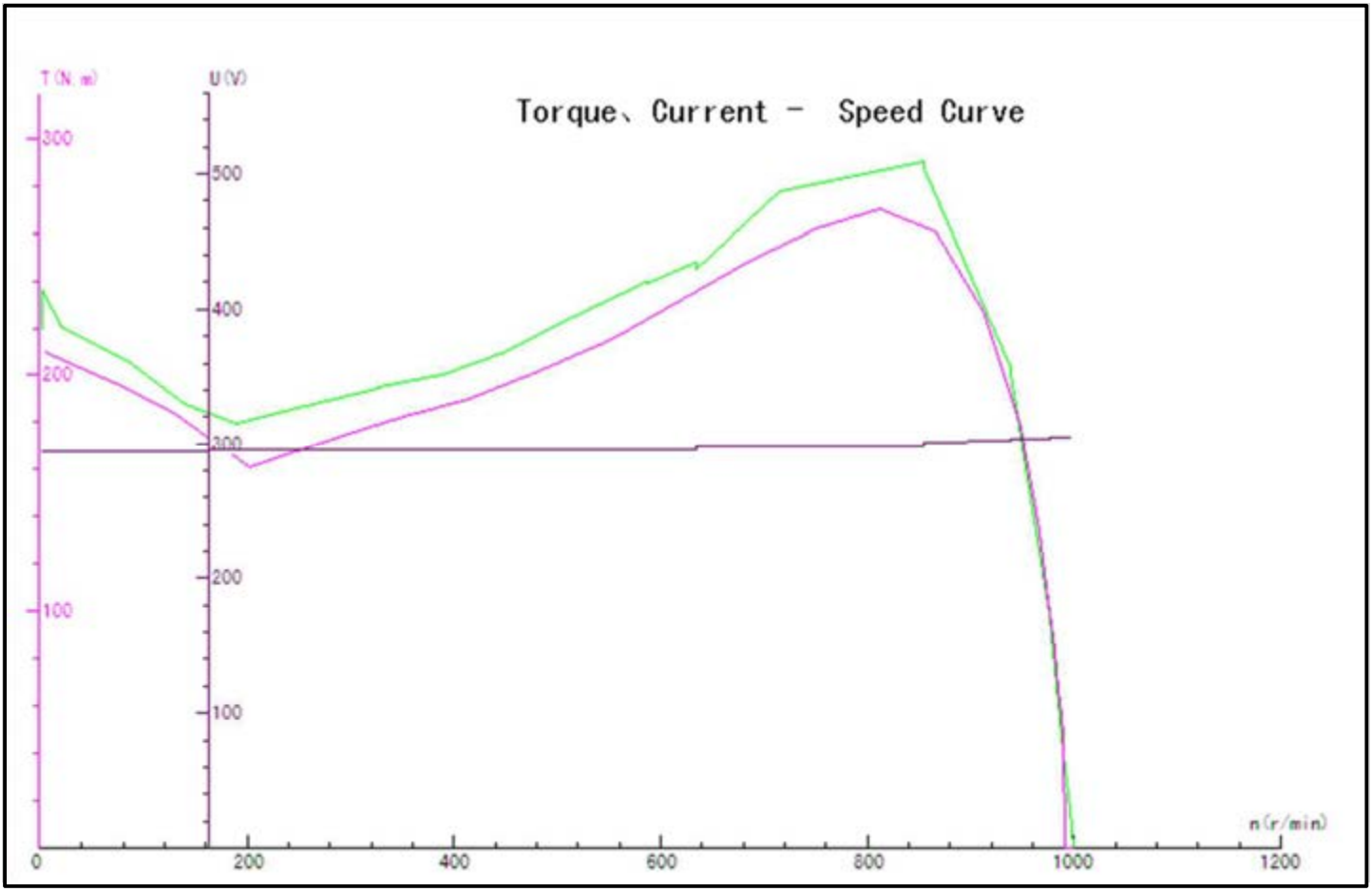

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