

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency
Three-Phase

Product code : 14325582

Catalog # : 05009ST3QIE404TC-W22

Frame	: 404/5TC	Locked rotor time	: 52s (cold) 29s (hot)
Output	: 50 HP (37 kW)	Temperature rise	: 80 K
Poles	: 8	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 60.2 A	Protection degree	: IP55
L. R. Amperes	: 433 A	Cooling method	: IC411 - TEFC
LRC	: 7.2x(Code H)	Mounting	: F-1
No load current	: 24.5 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 880 rpm	Noise level ²	: 60.0 dB(A)
Slip	: 2.22 %	Starting method	: Direct On Line
Rated torque	: 298 ft.lb	Approx. weight ³	: 1012 lb
Locked rotor torque	: 170 %		
Breakdown torque	: 260 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 34.6 sq.ft.lb		
Design	: B		

Output	25%		50%		75%		100%		Foundation loads	
Efficiency (%)	92.8	93.7	93.0	92.9	93.0	92.3	93.0	91.3	Max. traction	: 2212 lb
	92.0	92.0	91.8	91.8	92.2	92.2	91.7	91.8		
	93.5	92.8	92.4	92.4	91.7	91.7	90.2	91.0		
	92.8		92.4		91.7		91.0			
Power Factor	0.43	0.41	0.68	0.65	0.78	0.78	0.83	0.84	Max. compression	: 3224 lb
	0.39	0.36	0.63	0.60	0.76	0.73	0.82	0.80		
	0.50	0.46	0.74	0.71	0.82	0.80	0.85	0.84		
	0.43		0.68		0.78		0.83			

Losses at normative operating points (speed;torque), in percentage of rated output power

Losses (%)	P1 (0,9;1,0)	7.3	7.3	7.3	7.3	7.3	7.3	7.3
	P2 (0,5;1,0)	6.3	6.3	6.3	6.3	6.3	6.3	6.3
	P3 (0,25;1,0)	6.3	6.3	6.3	6.3	6.3	6.3	6.3
	P4 (0,9;0,5)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	P5 (0,5;0,5)	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	P6 (0,5;0,25)	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	P7 (0,25;0,25)	0.9	0.9	0.9	0.9	0.9	0.9	0.9

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	6316 C3	6314 C3
Sealing	:	Inpro/Seal	Inpro/Seal
Lubrication interval	:	20000 h	20000 h
Lubricant amount	:	34 g	27 g
Lubricant type	:	Mobil Polyrex EM	

Notes:

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	25/03/2024		Page 1 / 1	Revision